Installation Instructions and Owner's Manual

SIMPLY SOFT®
Professional Water Treatment Products

Water Softening System

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Pre-installation Instructions

Description of the water softener system

This water softener system includes a brine (salt) tank and a resin (media) tank with a backwashing control valve. Incoming water flows into the control valve and is directed down through the ion exchange softening resin. This resin exchanges the hardness ions for softer ions. The softened water then returns to the control valve where it is directed into the service lines.

Periodically the control valve will go through a regeneration cycle. The frequency of this regeneration process will depend on the size of water softener, incoming water quality and amount of water used. This cycle is factory preset to begin at 2:00 A.M. At this time the control valve will draw the brine solution out of the salt tank and flush both the accumulated hardness and excess salt to the drain. The control valve will then put fresh water back into the salt tank to make brine for the next regeneration cycle.

Water Quality

The water should be tested to determine the concentration, or levels of the items listed below:

Hardness - Hardness in drinking water is defined as those minerals that dissolve in water having a positive electrical charge (cat ions). The primary components of hardness are calcium (Ca++) and magnesium (Mg++) ions. But dissolved iron (Fe++) and manganese (Mn++) also contribute to total "adjusted" hardness. Hardness produces scale, soap scum and white mineral deposits which shorten the life of water using appliances, plumbing and fixtures. Water that has less than 1 grain of hardness is considered to be "soft" water.

pH - A measurement of the acidity of the water. pH is reported on a scale from 0 to 14. Neutral water has a pH of 7.0, lower values indicate acidic water. If your pH is below 6.8 you may consider installing an acid neutralizer before the water softener to elevate the pH.

Iron - A naturally occurring metallic element. Iron levels in excess of 0.3 milligrams/liter (mg/l) combine with oxygen causing orange or red (rust) stains on plumbing fixtures. Iron exists in some water sources in clear water (ferrous) state, red water (ferric) state or bacterial form. Iron levels that exceed 2.0 mg/l require special ion exchange resin for reduction, or if bacterial or ferric (red water) iron is present or iron level exceeds 4.0 mg/l, an iron filter should be installed ahead of this water softener.

Manganese - A naturally occurring metallic element. Manganese levels as low as 0.05 milligrams/liter (mg/l) can combine with oxygen to cause dark brown or black staining on fixtures. Additionally, manganese can cause an odor in the water similar to a "rotten egg" smell. This water softener may reduce manganese as well as iron; however, an iron filter may be required in some cases.

Tannin - A naturally occurring humic acid. Tannin is caused by water passing through decaying vegetation. Coffee and Tea are prime examples of tannin in water. Tannin levels as low as 0.5 milligrams per liter can cause a yellow discoloration in water. Consult your dealer for a system designed to remove both tannin and hardness.

Hydrogen Sulfide - A naturally occurring gas. Hydrogen sulfide, more commonly referred to as sulfur gas, causes a distinct odor similar to "rotten eggs." Due to its gaseous nature, hydrogen sulfide must be tested at the well site within 1 minute of drawing the sample. If sulfur is present additional equipment will be required. The OXY3 iron filter can typically treat up to 2 milligrams per liter of sulfur gas.

Pre-installation Instructions (cont.)

Location Considerations

The proper location to install the water softener system will ensure optimum performance and satisfactory water quality. The following factors should be considered in selecting the location of the equipment.

1. The water softener should be installed after the pressure tank on a private well system or after the water meter on municipal water. Operating pressure of the softener must be limited to within 30 – 100 psi range.
2. The water softener should be installed as close as possible (preferably within 15') to an adequate floor or laundry drain capable of handling the backwash cycle volume and flow rate (refer to unit specifications).
3. All water conditioning equipment should be installed prior to the water heater. Water temperatures exceeding 100°F can damage the internal components of the control valve and filter tank. Install with at least 10' of pipe before the water heater to prevent thermal damage to the equipment. An expansion tank may need to be installed in the line to the water heater in order to allow for thermal expansion and comply with local plumbing codes.
4. The water softener should not be subject to freezing temperatures.
5. Ensure that any cartridge or in-line type filter installed prior to the water softener does not restrict the water flow and pressure available for backwash and interfere with normal operation.
6. Appliances requiring extended periods of continuous or high flow water use (i.e. geothermal heat pumps, swimming pools, lawn irrigation, outside hose bibs, etc.) should bypass the water softener. (see installation diagram Fig. 1).

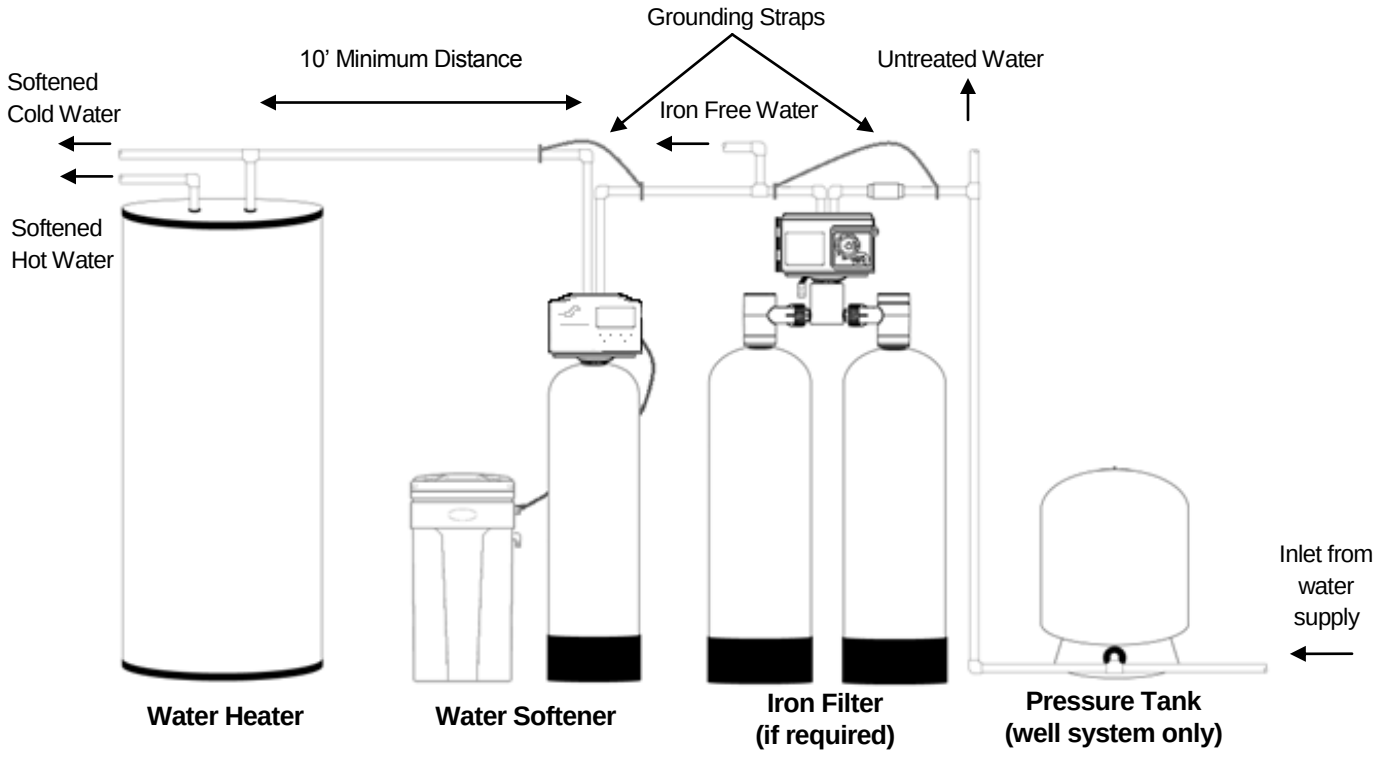
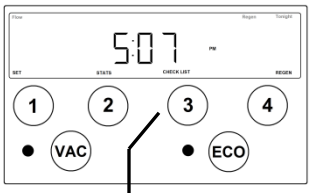


FIGURE 1: Typical Installation

Prerecorded Basic Installation

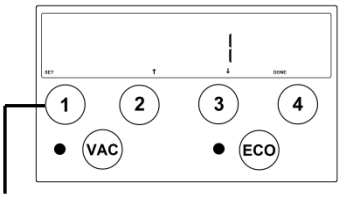
The circuit board has been programmed with installation steps in the memory. These steps include audible clock and hardness setting as well as basic installation instructions. If the basic installation steps are not clear, or there are any questions regarding the installation process, the detailed installation process should be followed.

These installation steps may be accessed from the Home Screen by pressing and releasing the 'CHECKLIST' button. To repeat the previous instructions, press the '↓' button. To advance to the next step press the '↑' button. When finished with all instructions press the 'DONE' button to return to the Home Screen.



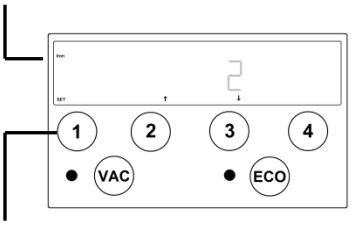
"Home" screen displays current time-of-day.

Press and release 'CHECKLIST' button to access a list of time-saving installation steps.



"Step 1: Be sure to set both iron and hardness."
These settings may be accessed immediately by pressing the SET button.

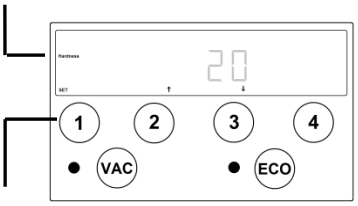
Press 'SET' button to set incoming iron concentration.



Ensure the **Iron** indicator is illuminated on the left side of the display and using the '↑' and '↓' buttons set the incoming iron concentration.

NOTE: While a water softener can be reasonably expected to remove small amounts of clear water iron, for best performance an iron filter should be considered.

Press 'SET' button to set incoming hardness level.



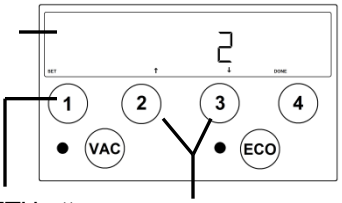
Ensure the **Hardness** indicator is illuminated on the left side of the display and using the '↑' and '↓' buttons set the incoming hardness level.

NOTE: This softener is set to calculate hardness as grains per gallon (gpg). If your water hardness is reported in milligrams per liter (mg/l) or parts per million (ppm) divide these results by 17.1 to convert to grains per gallon.

Press 'SET' button to return to CHECKLIST.

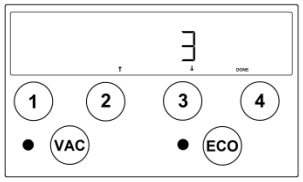
"Step 2: The time of day must be set."
If not set previously, the time may be set by pressing the SET button. (refer to setting time)

Prerecorded Basic Installation (cont.)



Press 'SET' button to set time of day.

Press '↑' button to advance to next step on CHECKLIST.
Press '↓' button to repeat previous step.
When finished press 'DONE' to return to Home Screen.



"Step 3: Take extreme care to be sure the unit is NOT installed backwards. Turn bypass valve to BYPASS position.

"Step 4: Connect drain line. Do NOT use vinyl tubing or ½" CPVC.

"Step 5: Avoid overhead drain line installations.

"Step 6: Drain line must NOT exceed 15' in length.

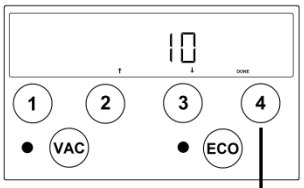
"Step 7: Connect 3/8" tubing between control valve and salt tank.

"Step 8: Add 3 gallons of water to brine tank.

"Step 9: Add at least 40 pounds of water softener salt to brine tank.

"Step 10: DO NOT TAKE ANY ACTION UNTIL YOU HAVE LISTENED TO THE REMAINING INSTRUCTIONS.

- **A. Advance control to BACKWASH**
- **B. Crack open the inlet side of the bypass valve**
- **C. Allow unit to slowly fill—pushing air out drain line**
- **D. When a constant stream of water is discharged to drain, advance control valve to RAPID RINSE and fully open bypass valve. Allow system to complete this step.**



Pressing 'DONE' button returns display to Home Screen.

Detailed Installation Instructions

STEP 1: Carefully remove all components from packaging. DO NOT DISCARD PACKAGING until all water softener components and fittings have been located.

STEP 2: Using the coupling nuts, attach bypass valve to the inlet/outlet of the control valve.

STEP 3: Place unit at desired installation position.

STEP 4: Shut off water at main supply. Relieve pressure by opening nearest faucet. On private well systems, turn off power to pump and drain pressure tank. SHUT OFF POWER OR FUEL SUPPLY TO WATER HEATER.

STEP 5: Cut main supply line as required to fit plumbing to inlet and outlet of bypass valve. DO NOT PLUMB INLET AND OUTLET BACKWARDS. Piping should be supported. Do not apply heat to any fitting attached to the bypass or control valve.

STEP 6: Use the provided polyethylene tubing (**NO VINYL TUBING**) to run drain line from control valve discharge fitting to floor drain or sump pit capable of handling the backwash rate of the softener (refer to specifications and flow rate). **DISCHARGE END OF THE DRAIN LINE MUST BE FIRMLY SECURED!** There must be an air gap at the end of the drain line to prevent siphoning of waste water and meet plumbing code. Total length of drain line should be 15' or less. AVOID OVERHEAD DRAINS.

STEP 7: Connect one end of the 3/8" brine line to the control valve quick connect fitting. Insert the other end of the brine line through the hole in the brine tank and into the quick connect fitting on the safety brine valve. Remove the quick connect collet retainer clip (if included) before inserting the brine line into each fitting, press the tube in very firmly and replace the retainer clip behind the collet. **NOTE: THE BRINE TUBING SHOULD BE INSERTED 5/8" INTO THE FITTING. <u>DO NOT</u> PUT SALT INTO THE BRINE TANK AT THIS TIME.**

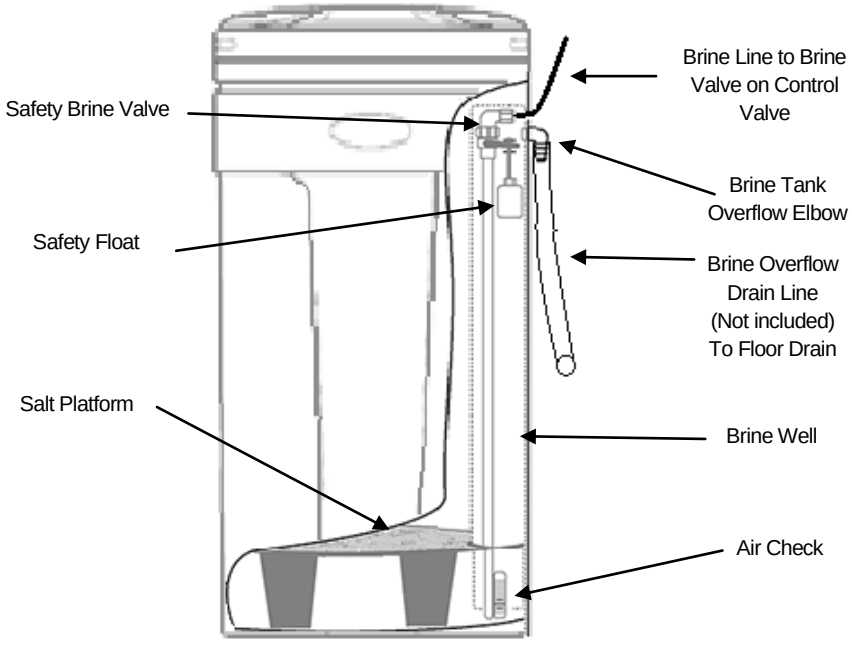


FIGURE 3: Brine Tank Components

Detailed Installation Instructions

STEP 8: Add 4 gallons of water to the brine tank. **DO NOT ADD SALT TO THE BRINE TANK AT THIS TIME.**

STEP 9: Install overflow tubing from overflow elbow on brine tank to floor drain. Tubing must be lower than overflow elbow at all times. **DO NOT CONNECT DRAIN LINE FROM SOFTENER CONTROL VALVE TO BRINE TANK OVERFLOW. DO NOT CONNECT BRINE TANK DRAIN LINE TO THE SOFTENER DRAIN LINE.**

STEP 10: Plug the softener into an un-switched electrical outlet. Ensure control valve is in the "Service" position (time of day is displayed on the screen {refer to page 8 for Home Screen Display}). Place bypass valve in the "Bypass" position (refer to Figure 4 below). Open main supply valve or turn on power to pump on private well systems.

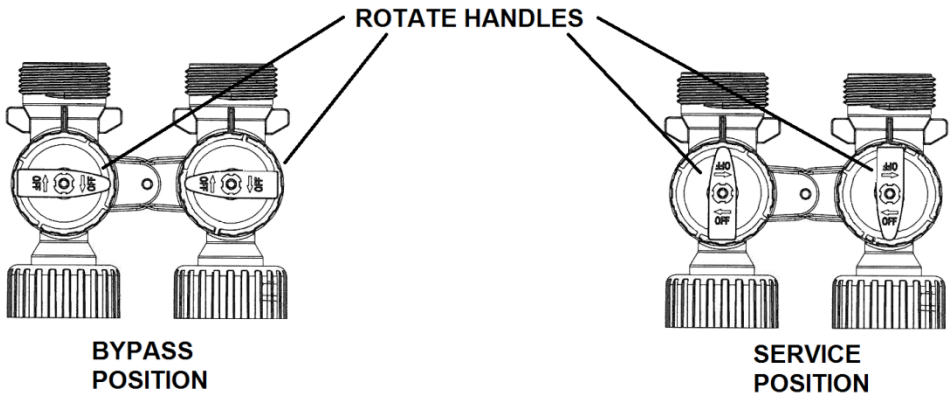


FIGURE 4: Bypass Valve Operation

STEP 11: Using the REGEN button, advance the control valve to the backwash position (refer to pages 9 and 10 for operation).

STEP 12: Refer to Figure 4 bypass valve operation. Rotate the INLET knob of the bypass valve ¼ of the way to Service allowing unit to fill slowly. Filling the mineral tank with the control valve in the backwash position will force any trapped air to the drain. When all air has been purged from the system and only water is running to the drain advance the control valve to the BRINE DRAW cycle. Fully rotate both the inlet and outlet knobs of the bypass valve to the "Service" position.

STEP 13: Verify that the water level in the brine tank is dropping. Allow water level to drop below the salt grid before continuing. If the water level does not drop, refer to page 17 for Troubleshooting. After verifying water level is dropping advance control valve to the fast rinse position by press the NEXT button. Wait 1 minute and press the NEXT button again to advance the control valve to the service position.

STEP 14: Check for leaks and correct as necessary.

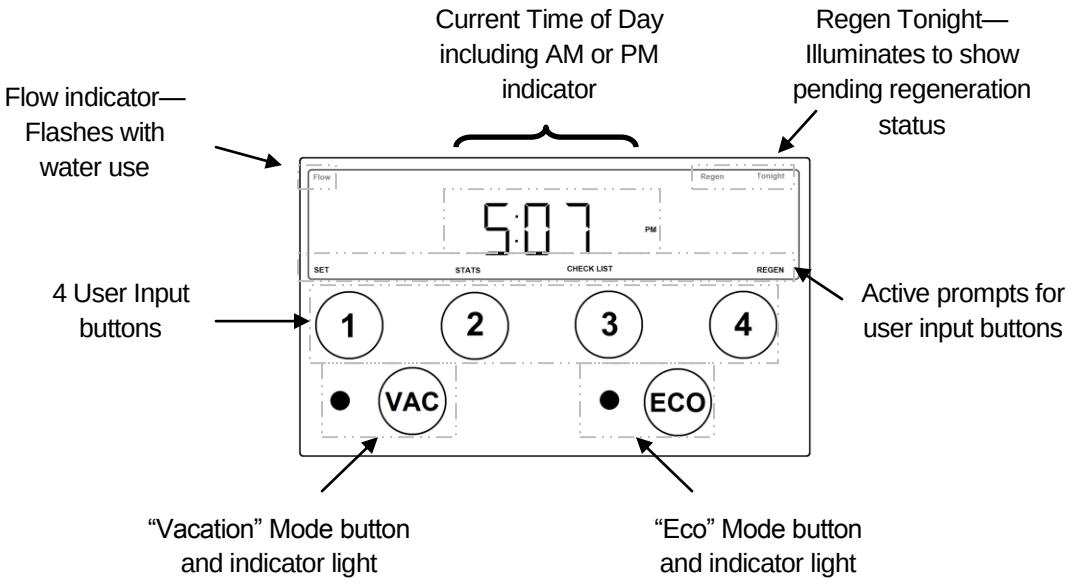
STEP 15: Turn power or fuel supply back on to water heater.

STEP 16: Set the hardness & iron concentrations on the control valve (refer to timer operation for instruction).

STEP 17: Set the current time of day on the timer (note AM and PM).

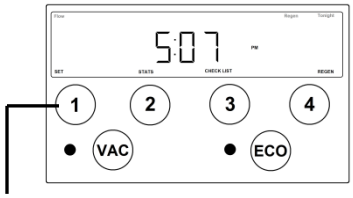
STEP 18: Add at least 40 lbs of water softener salt to the brine tank.

Display and Operation - Home Screen



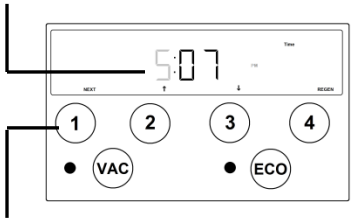
The active prompts displayed at the bottom of the circuit board indicate the function of each user button.

Display and Operation - Setting Time



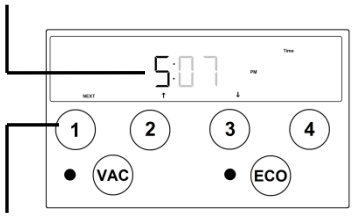
"Home" screen displays current time-of-day.

Press 'SET' button to access time set screen.



Using '↑' and '↓', set the current time-of day hours. Note the AM and PM indicator and set the time accordingly.

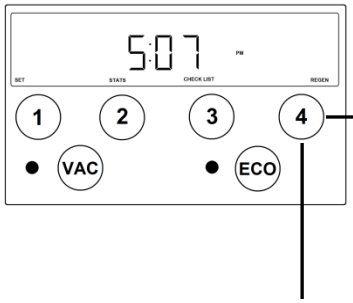
Press 'NEXT' button to set current minutes.



Using '↑' and '↓', set the current minutes.

Press 'NEXT' button to save changes and return to 'Home' screen.

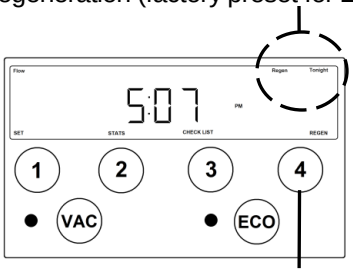
Initiating Regeneration



Momentarily pressing and releasing the 'REGEN' button will cause the Regen Tonight indicator to illuminate on the top left side of the display. The regeneration process will begin at the next programmed time-of-regeneration (factory preset for 2:00 AM)

Pressing and HOLDING the 'REGEN' button for approximately 3 seconds will initiate an immediate regeneration.

NOTE: The regeneration cycle will disable the 'Regen Tonight' indicator (if illuminated). The regeneration cycle will also reset the gallons remaining until next regeneration and the days override interval.

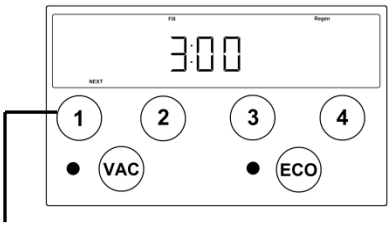


Momentarily pressing and releasing the 'REGEN' button again will cancel the delayed regeneration cycle.

Regeneration Process

The following regeneration cycles are listed in the factory programmed sequence. Each cycle in the regeneration process may be advanced without waiting for the programmed cycle duration, for installation, troubleshooting, or maintenance purposes.

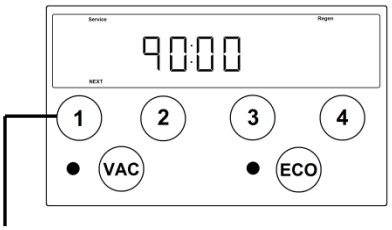
Cycle: **BRINE FILL**



Press 'NEXT' button to advance to Service Cycle.

1. The Fill and Regen indicators will be illuminated on the display.
2. The control valve will advance to the brine fill position and start adding water to the brine tank.
3. The cycle duration will begin to count down on the display once the control valve is in the proper position. The cycle duration is dictated by either the programmed salt dosage setting or the ECO calculated salt dosage (if activated).
4. This cycle occurs 90 minutes prior to the scheduled regeneration time. (Regeneration is factory preset at 2:00 AM, so Brine Fill cycle would occur at 12:30 AM)
5. Treated (soft) water is still available during this cycle.

Cycle: **SERVICE**

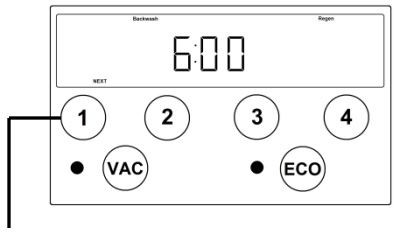


Press 'NEXT' button to advance to Backwash Cycle.

1. The Service and Regen indicators will be illuminated on the display.
2. The control valve will advance to the Service (Home) position.
3. The cycle duration will begin to count down on the display once the control valve is in the proper position.
4. This cycle allows the fresh water that has been added to the brine tank sufficient time to dissolve the salt to make saturated brine.
5. Treated (soft) water is still available during this cycle.

Regeneration Process (continued)

Cycle: **BACKWASH**

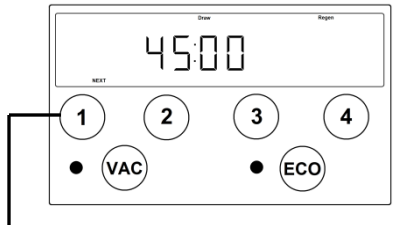


Press 'NEXT' button to advance to Brine Draw Cycle.

1. The Backwash and Regen indicators will be illuminated on the display.
2. The control valve will advance to the Backwash position.
3. The cycle duration will begin to count down on the display once the control valve is in the proper position.
4. Water will flow up through the resin and out the drain flushing accumulated solids and preparing the resin for the brine cycle.
5. Softening systems with a single mineral tank will have an internal bypass to allow untreated (hard) water for service during this cycle.

NOTE: The initial fill process should be performed while the control is in the backwash position to prevent air from being trapped in the media tank.

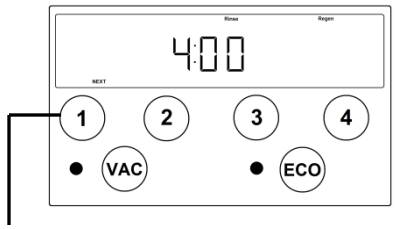
Cycle: **DRAW**



Press 'NEXT' button to advance to Rapid Rinse Cycle.

1. The Draw and Regen indicators will be illuminated on the display.
2. The control valve will advance to the Brine Draw position.
3. The cycle duration will begin to count down on the display once the control valve is in the proper position.
4. Water will flow through the injector causing suction to draw the brine solution out of the salt tank. The brine solution will flow down through the resin and out the drain.
5. Softening systems with a single mineral tank will have an internal bypass to allow untreated (hard) water for service during this cycle.

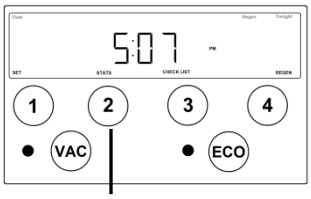
Cycle: **RINSE**



Press 'NEXT' button to return control to the HOME position.

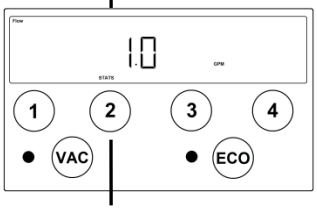
1. The Rinse and Regen indicators will be illuminated on the display.
2. The control valve will advance to the Rapid Rinse position.
3. The cycle duration will begin to count down on the display once the control valve is in the proper position.
4. Water will flow down through the resin and out the drain flushing the remaining salt from the brine cycle and preparing the resin for the softening process.
5. Softening systems with a single mineral tank will have an internal bypass to allow untreated (hard) water for service during this cycle.

Display and Operation - Stats



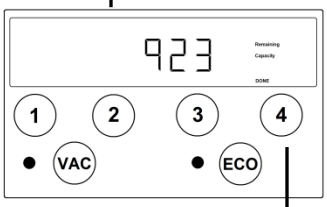
"Home" screen displays current time-of-day.
The flow indicator will flash if water is being used.
The "Regen Tonight' indicator will be illuminated if the softener is queued for regeneration.

Pressing 'STATS' button advances screen to current flow rate.



"Current Flow" screen displays the flow rate that is currently being treated by the softener (if any). The word FLOW is displayed on top left corner of screen whether water is being used or not. Display registers flow rate in gallons per minute.

Pressing 'NEXT' button advances screen to volume remaining.

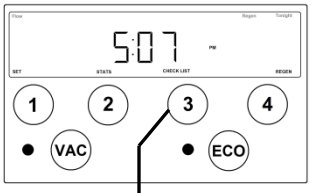


"Volume remaining" screen displays the number of gallons that can be treated before the scheduled regeneration cycle.
NOTE: Due to the reserve capacity, the softener may still provide softened water even with zero gallons displayed.

Pressing 'DONE' button returns display to Home Screen.

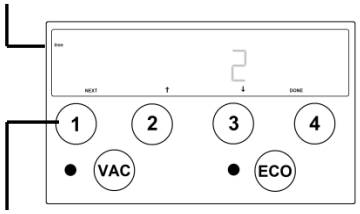
Display and Operation – Installer Settings – Cycles

The installer settings provide access to the water softener cycle times. The factory settings have been programmed for maximum efficiency. Altering the factory programmed cycles will affect the softeners performance. NOTE: Extreme caution must be taken when adjusting the water softener cycles. Decreasing a cycle time or completely deleting the cycle may cause the softener to stop functioning.



"Home" screen displays current time-of-day.

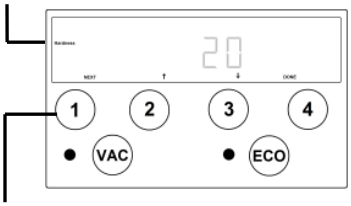
Press and HOLD 'CHECKLIST' button for approximately 3 seconds to access installer settings.



Ensure the **Iron** indicator is illuminated on the left side of the display and using the '↑' and '↓' buttons set the incoming iron concentration.
NOTE: While a water softener can be reasonably expected to remove small amounts of clear water iron, for best performance an iron filter should be considered.

Display and Operation – Installer Settings – Cycles (continued)

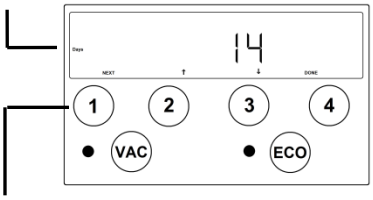
Press 'NEXT' button to set incoming HARDNESS level.



Ensure the **Hardness** indicator is illuminated on the left side of the display and using the '↑' and '↓' buttons set the incoming hardness level.

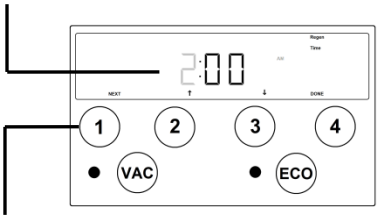
NOTE: This softener is set to calculate hardness as grains per gallon (gpg). If your water hardness is reported in milligrams per liter (mg/l) or parts per million (ppm) divide these results by 17.1 to convert to grains per gallon.

Press 'NEXT' button to set regeneration DAYS OVERRIDE interval



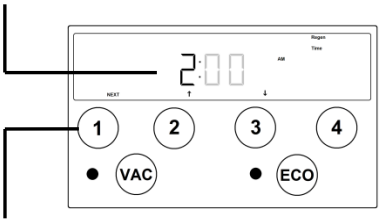
Using '↑' and '↓', set the desired day override interval. The regeneration day override function will cause the softener to regenerate after a designated period of no regeneration cycles. The override interval will reset after every regeneration cycle whether initiated manually or by volume. The day override function will be disabled if the VACATION mode is active.

Press 'NEXT' button to set REGENERATION TIME hours.



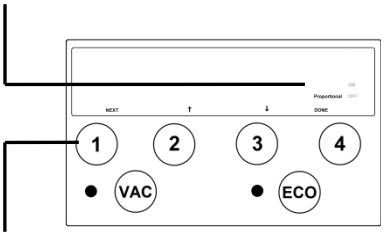
Ensure the **Regen Time** indicator is illuminated. Using '↑' and '↓', set the desired time of regeneration hours. Note the AM and PM indicator and set the time accordingly.

Press 'NEXT' button to set REGENERATION TIME minutes.



Ensure the **Regen Time** indicator is illuminated. Using '↑' and '↓', set the desired time of regeneration minutes.

Press 'NEXT' button to set PROPORTIONAL BRINING.

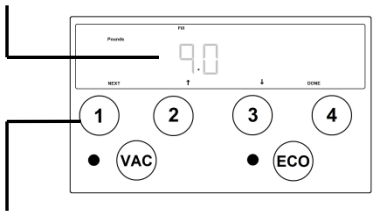


Using '↑' and '↓', the Proportional Brining function can be set to ON or OFF. This feature can also be manually toggled on or off with the ECO button on the face of the front panel. (See additional information on Proportional Brining in the ECO section of the instruction manual.)

CAUTION: Changing the cycle durations will affect the water softener's performance and efficiency. The following settings should only be altered by a knowledgeable water treatment professional.

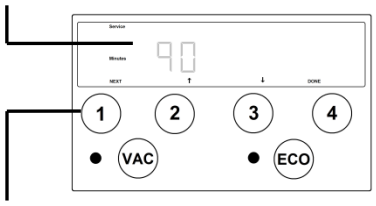
Press 'NEXT' button to set cycle #1 duration.

Display and Operation – Installer Settings – Cycles (continued)



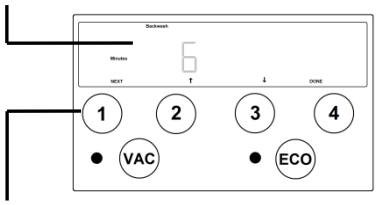
Ensure the **Pounds** and **Fill** indicators are illuminated. Using '↑' and '↓', set the desired amount of salt to be used during the regeneration cycle.

Press 'NEXT' button to set cycle #2 duration.



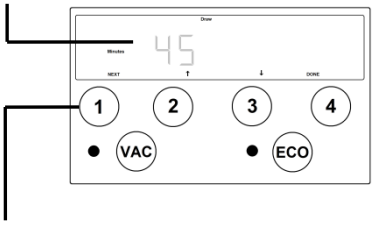
Ensure the **Service** and **Minutes** indicators are illuminated. Using '↑' and '↓', set the desired length of time to allow fresh water in brine tank to dissolve salt to make saturated brine.
NOTE: Minimum recommended time is 90 minutes.

Press 'NEXT' button to set cycle #3 duration.



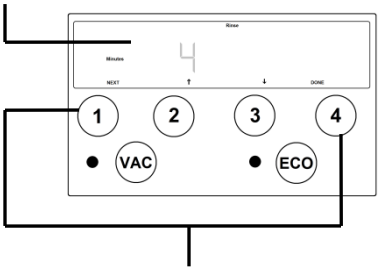
Ensure the **Backwash** and **Minutes** indicators are illuminated. Using '↑' and '↓', set the desired length of time for BACKWASH cycle

Press 'NEXT' button to set cycle #4 duration.



Ensure the **Draw** and **Minutes** indicators are illuminated. Using '↑' and '↓', set the desired length of time for BRINE DRAW cycle.

Press 'NEXT' button to set cycle #5 duration.

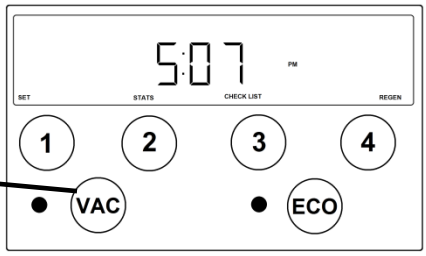


Ensure the **Rinse** and **Minutes** indicators are illuminated. Using '↑' and '↓', set the desired length of time for RINSE cycle.

After all cycles have been set press either 'NEXT' or 'DONE' button to return to Home Screen.

Vacation Mode

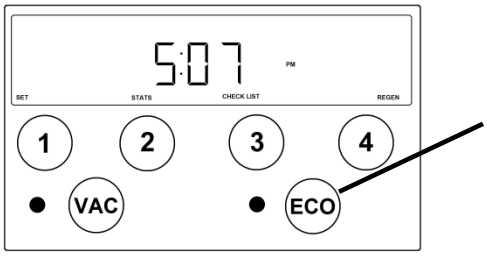
The VACATION mode may be activated or deactivated by pressing the VAC button on the front panel. The red LED light will be illuminated when the vacation mode is activated.



Once activated, the vacation mode will prevent the water softener from regenerating. This may be used if the house will not be occupied for an extended period of time. The vacation mode is initiated by pressing the VAC button on the front panel. There will be a 30 minute delay from the time the button is pressed until the vacation mode is active to allow time for last minute water use.

The vacation mode will automatically deactivate once the water softener detects normal water use.

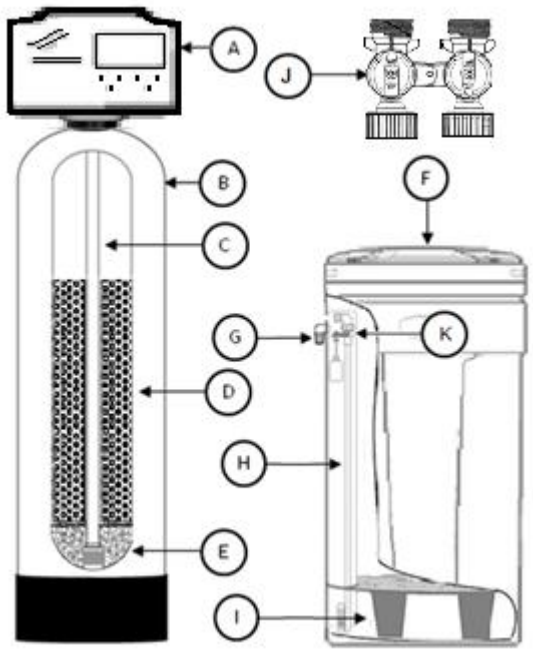
ECO Mode



The ECO mode may be activated or deactivated by pressing the ECO button on the front panel. The green LED light will be illuminated when the ECO mode is activated.

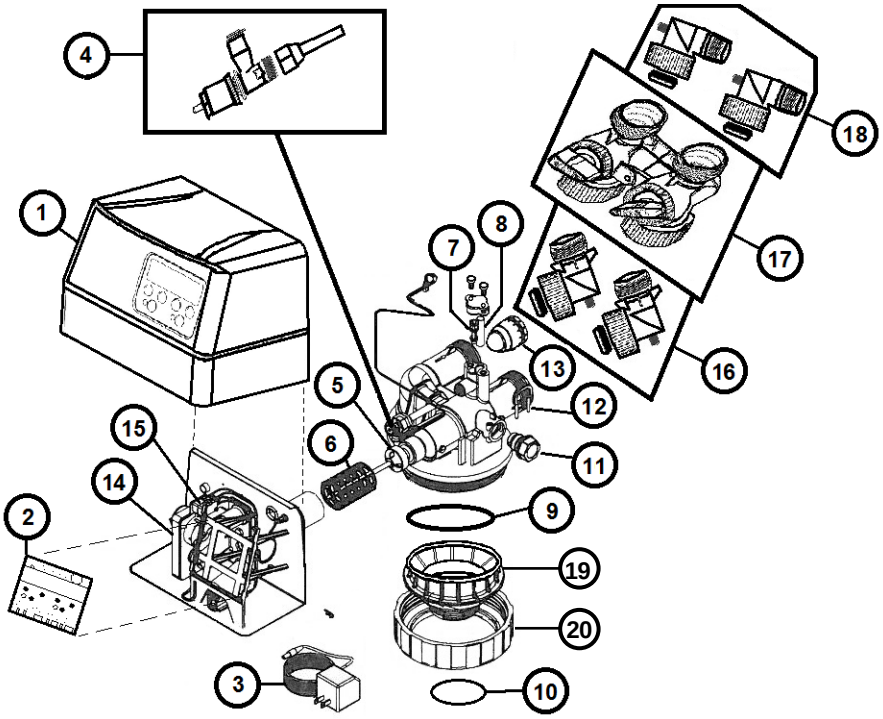
The revolutionary ECO mode is a forward-looking feature that uses water usage history and a process called proportional brining to ensure adequate softening capacity for future estimated water use. The water softener stores historical daily water use data. If the next day's anticipated water use requires more softening capacity than is currently available, the softener will initiate a regeneration process using a fractional portion of the programmed salt setting. This partial salt regeneration recovers only the depleted portion of the softening capacity. This proportional regeneration will save in both salt consumption and water use by using lower salt settings and fewer regeneration cycles.

Component Parts Breakdown



Ref	Description	Model Number		
		XTS30	XTS45	XTS60
A	Control Valve w/ bypass	XTS30 Vlv Assy W/BP	XTS45 Vlv Assy W/BP	XTS60 Vlv Assy W/BP
B	Mineral Tank	MTP0948GR	MTP1054GR	MTP1248GR
C	Distributor	D100S-48	D100S-54	D100S-48
D	Resin	Qty 2 H05P	Qty 3 H05P	Qty 4 H05P
E	1/4" X 1/8" Gravel	Qty 1 QC20	Qty 1 QC20	Qty 1 QC20
F	Brine Tank Assy.	BTSQ1833ASSY	BTSQ1833ASSY	BTSQ1833ASSY
G	Overflow Fitting	BT-OVERFLO	BT-OVERFLO	BT-OVERFLO
H	Safety Brine Valve	SBV14ASSY	SBV14ASSY	SBV14ASSY
I	Salt Platform	BTSG18SQ	BTSG18SQ	BTSG18SQ
J	Bypass	BP 213	BP 213	BP 213

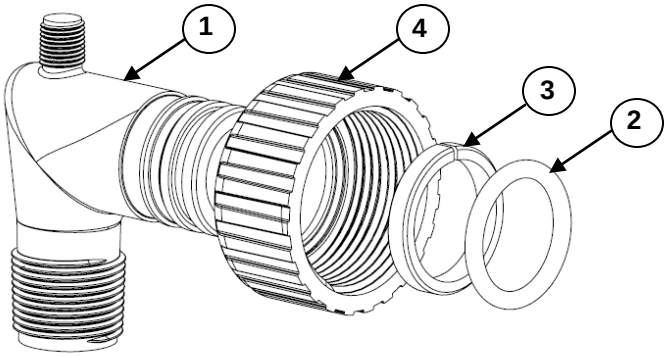
Control Valve Parts Breakdown



REF #	Part Number	Description
1	FCC-955	Sterling Front Cover
2	PCB-3486	Circuit Board (specify unit model)
3	DC-12	DC Adaptor with cord
4	BV910	Brine Valve Assembly
5	CAB945	Piston and Rod Assembly
6	TSS900	Seal Cartridge Assembly
7	RVS932	Injector Assembly w/o-rings
8	FS165	Injector Filter Screen
9	OR344	Valve to Tank Adaptor O-Ring
10	OR337	Tank O-ring
11	FC901	Drain Fitting

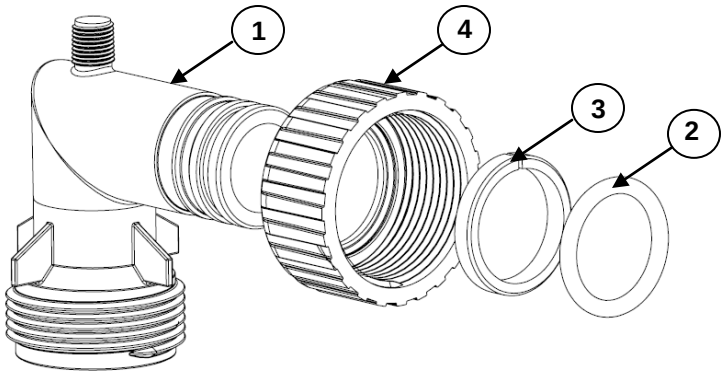
REF #	Part Number	Description
12	FC103	Drain Fitting Retainer Clip
13	FM205	Turbine Flow Meter
14	MCA945	Motor and Cam Assembly (includes nut micro switches)
15	7779K420-MICRO	Micro Switch (2 required)
16	EBA910	90° Bypass Elbow
17	BP 213	Bypass Valve
18	EBA975	¾" NPT Elbow (includes nut and o-ring)
	EBA900	1" NPT Elbow (includes nut and o-ring)
	EBA915	1 ½" NPT Elbow (includes nut and o-ring)
19	TAF131	Tank Attachment
20	TN101	Tank Nut

Installation Fitting Assemblies



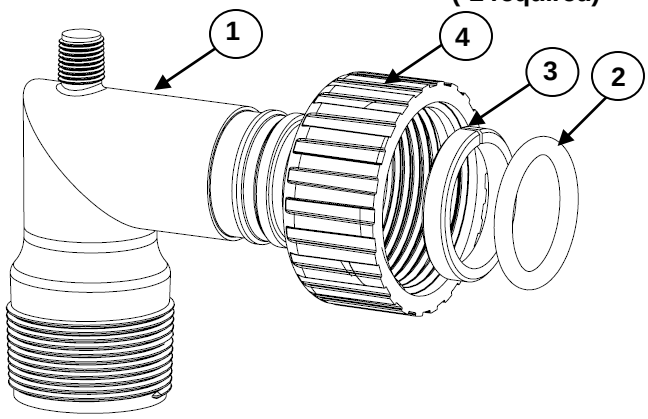
1” PVC MALE NPT ELBOW			
Ref	**Part #**	**Description**	**Qty**
	EBA900	1” Elbow Assembly	1*
1	EB100	1” Elbow	1
2	OR324	O-ring, -324	1
3	C 101	Split Ring Retainer	1
4	C 102	Connector Nut	1

(*2 required)



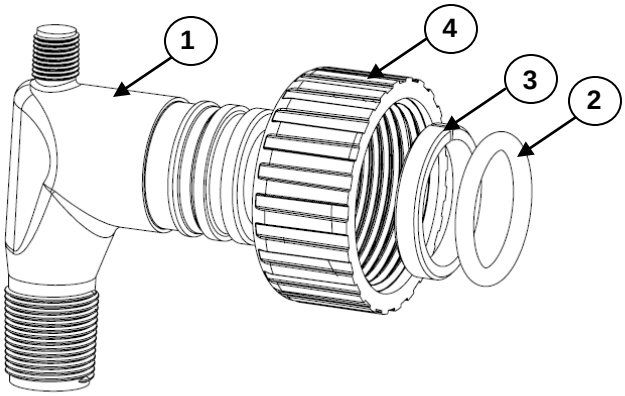
90 DEGREE BYPASS ELBOW			
Ref	**Part #**	**Description**	**Qty**
	EBA910	90° Bypass Elbow Assembly	1*
1	EB175	Bypass Elbow	1
2	OR324	O-ring, -324	1
3	C 101	Split Ring Retainer	1
4	C 102	Connector Nut	1

(*2 required)



1-1/2” PVC MALE NPT ELBOW			
Ref	**Part #**	**Description**	**Qty**
	EBA915	1-1/2” Elbow Assembly	1*
1	EB150	1.5” Elbow	1
2	OR324	O-ring, -324	1
3	C 101	Split Ring Retainer	1
4	C 102	Connector Nut	1

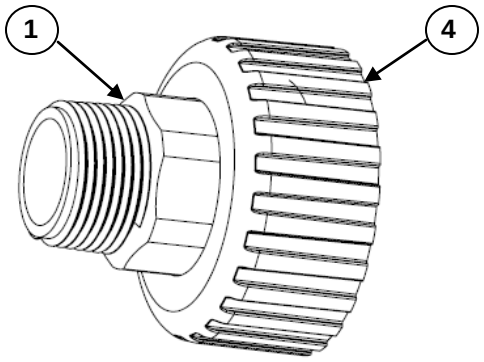
(*2 required)



¾” PVC MALE NPT ELBOW			
Ref	**Part #**	**Description**	**Qty**
	EBA975	3/4” Elbow Assembly	1*
1	EB750	3/4” Elbow	1
2	OR324	O-ring, -324	1
3	C 101	Split Ring Retainer	1
4	C 102	Connector Nut	1

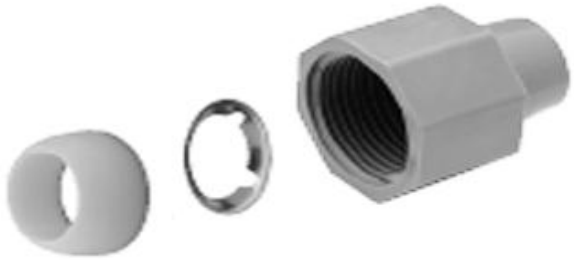
(*2 required)

Installation Fitting Assemblies (cont.)



1” STRAIGHT FITTING			
Ref	**Part #**	**Description**	**Qty**
	TC204-1	1” Straight Fitting Assembly	1*
1	TC101-1	1” Straight	1
2	OR324	O-ring, -324 (not shown)	1
3	C 101	Split Ring Retainer (not shown)	1
4	C 102	Connector Nut	1

(*2 required)



3/4” QUICK CONNECT			
Ref	**Part #**	**Description**	**Qty**
	QFNCR4	3/4” Quick Connect Assembly	1*

(*2 required)

Troubleshooting

PROBLEM	CAUSE	SOLUTION
1. Softener fails to regenerate	A. Electrical service to unit has been interrupted	A. Ensure permanent electrical service to unit (switch, circuit breaker, plug, etc.)
	B. Faulty timer motor or micro switch	B. Replace defective component
	C. Defective drive motor or micro switch	C. Replace defective component
	D. Improper unit configuration	D. Meter cable unplugged (FSM) or no tabs pushed outward on the skipper wheel (FS)
2. Softener delivers hard water	A. Bypass valve is open	A. Close bypass valve
	B. No salt in brine tank or salt is "bridged"	B. Verify salt is not "bridged" and add salt to brine tank and maintain salt level above water level
	C. Injectors or screen plugged	C. Clean or replace injectors and screen
	D. Insufficient water flowing into brine tank	D. Check brine tank fill time and clean brine line flow control
	E Leak at distributor tube	E. Check length of distributor tube and pilot tube o-ring
	F. Internal valve leak	F. Replace piston and seals/spacer kit
	G. Flow meter obstructed	G. Clean flow meter
	H. Softener not regenerating	H. See Problem 1 above
	I. Flow rate exceeds rated service flow	I. Verify the softener is properly sized
3. Unit uses too much salt	A. Improper configuration	A. Verify proper salt setting, meter setting (FSM), skipper wheel setting (FS)
	B. Excessive water in brine tank	B. See Problem # 7
4. Loss of water pressure	A. Softener too small for application	A. Check application requirements and resize water softener as required
	B. Foreign material buildup in plumbing system or water softener	B. Clean or replace plumbing, as necessary, additional treatment equipment may be required
5. Loss of resin through drain line	A. Air in water system	A1. Check for low water table conditions in well
		A2. Check for positive seal on brine line connections
	B. Drain line flow control is too large	B. Ensure proper drain line flow control is installed
6. Iron in softened water	A. Iron exceeds recommended parameters or iron bacteria is present	A. Test incoming water supply and install OXY Series iron filter prior to softener, as needed
	B. Iron fouled resin	B. Check and lengthen backwash, brine draw and brine fill times. Increase frequency of regeneration. Use resin cleaner in brine tank.
7. Excessive water level in brine tank	A. Restricted drain flow control	A. Clean drain line flow control
	B. Drain line too long or installed overhead or restricted	B. Verify drain line is not restricted or improperly installed
	C. Vinyl drain line was used	C. Replace drain line with rigid or semi-rigid material with no kinks and as few elbows as possible
	D. Brine valve sticking (soft water)	D. Replace brine valve assembly
	E. Injector/screen plugged (hard water)	E. Clean or replace injectors and screen
	F. Improper configuration	F. Verify the salt setting
	G. Either end of the brine line is not fully inserted	G. Ensure brine line in inserted at least 5/8" into fittings

Troubleshooting (continued)

PROBLEM	CAUSE	SOLUTION
8. Salty water after regeneration	A. Injectors or screen plugged	A. Clean or replace injectors and screen
	B. Restricted drain flow control	B. Clean drain line flow control
	C. Brine valve sticking	C. Replace brine valve assembly
	D. Brine tank is overfilled	D. See Problem # 7
	E. Rinse cycle too short	E. Lengthen rinse cycle
9. Water leaks to drain continuously	A. Foreign material in control valve	A. Remove and inspect piston and seal kit. Replace as necessary
	B. Drive motor stopped during regeneration cycle	B. Check for obstruction in piston and seals. Replace drive motor. Inspect condition of power head gears
	C. Control valve continuously cycling	C. See Problem #10
	D. Internal valve seal leak	D. Replace seals and/or piston
10. Control valve continuously cycling	A. Faulty homing switch	A. Replace homing switch

TEN YEAR LIMITED WARRANTY

WARRANTY – Simply Soft warrants this water conditioner against any defects that are due to faulty material or workmanship during the warranty period. This warranty does not include damage to the product resulting from accident, neglect, misuse, misapplication, alteration, installation or operation contrary to printed instructions, or **damage caused by freezing, fire, flood, or Acts of God. From the original date of consumer purchase, we will repair or replace, at our discretion, any part found to be defective within the warranty period described below. Purchaser is responsible for any shipping cost to our facility and any local labor charges.**

- **One year on the entire water conditioner**
- **Five years on the control valve**
- **Ten years on the mineral tank**

GENERAL CONDITIONS – Should a defect or malfunction occur, contact the dealer that you purchased the product from. If you are unable to contact the dealer, contact Simply Soft @ (317) 290-2500. We will require a full description of the problem, model number, date of purchase, and selling dealer's business name and address.

We assume no warranty liability in connection with this water conditioner other than specified herein. This warranty is in lieu of all other warranties, expressed or implied, including warranties of fitness for a particular purpose. We do not authorize any person or representative to assume for us any other obligations on the sale of this water conditioner.

FILL IN AND KEEP FOR YOUR RECORDS

Original Purchaser	**Date of Purchase**	**Model #**	
Address of Original Installation		**City**	**State**
Dealer Purchased From	**Dealer Address**	**City**	**State**

Simply Soft

6610 Guion Road PO Box 681430 Indianapolis, IN