Owners Manual

NovoSoft 485HE

(For models before August 2019)

Upflow Softener Manual

IAPMO R & T Certified against CSA B483.1

IAPMO R & T Certified against NSF/ANSI 44

1. Page 22 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 IAPMO 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.

Canada West
855 Park St.
Unit 1
Regina, SK S4N 6M1

Canada East
490 Pinebush Rd.
Unit 1
Cambridge, ON N1T 0A5

U.S.A.
56 Lightcap Rd.
Pottstown, PA 19464

9760 Mayflower Park Drive,
Suite 110
Carmel, IN 46032

4645 McDowell Rd. W
Suite 106
Phoenix, AZ 85035

Table of Contents

READ THIS PAGE FIRST

BEFORE STARTING INSTALLATION

- Read this manual thoroughly to become familiar with the appliance and its capabilities before installing or operating the new appliance. 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 new appliance.
- 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.
- **WARNING!:** Do not use water that is microbiologically unsafe without adequate disinfection before or after this system.
- Do not install this appliance where it may be exposed to wet weather, direct sunlight, or temperatures outside of the range specified above.
- This appliance 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 device.
- This appliance is capable of operating at temperatures between 40°F and 110°F (4°C - 43°C). Do not use this appliance on hot water supplies.
- Avoid pinched o-rings during installation by applying (provided with install kit) IAPMO certified lubricant to all seals.
- It is not uncommon for sediment, precipitated iron or hardness to be present in water supplies. Precipitated minerals or sediments can cause damage to the seals and piston. This is considered a harsh environment and the seals and piston would not be covered by warranty stated or otherwise.
- It is recommended to regularly inspect and service the control valve on an annual basis. Cleaning and or replacement of piston, seals, and or spacers may be necessary depending on how harsh the conditions are. An Annual Maintenance kit is available for this purpose
- 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.

EFFICIENCY STATEMENT

This product is efficiency rated according to IAPMO/ANSI 44. The stated efficiencies are valid only at the specified salt dosages and maximum service flow rate.

PERFORMANCE DATA SHEET							
Model Number	485HE-75C	485HE-100C	485HE-75	485HE-100	485HE-150	485HE-200	485HE-300
Qty High Capacity Resin	0.75 ft3	1.0 ft3	0.75 ft3	1.0 ft3	1.5 ft3	2.0 ft3	3.0 ft3
Rated Service Flow (gpm)	7.5	12.1	7.5	11.0	11.2	12.4	12.9
Pressure Drop at Rated Service Flow (psi)	7.0	15.0	9.0	15.0	15.0	15.0	15.0
Rated Softening Capacity (grains)	9,609 @ 2.25lbs	13,269 @ 3lbs	10,222 @3lbs	13,269 @ 3lbs	20,443 @ 4.5lbs	27,258 @ 6lbs	40,887 @ 9lbs
Efficiency (grains/lb salt)	4,271	4,543	4,543	4,543	4,543	4,543	4,543
Max. Flow Rate to Drain (gpm)	2.0	2.4	1.5	2.0	2.4	3.5	5.0
Working Pressure	Min. 20 - Max. 125 psi						
Operating Temperature	40°F and 110°F (4°C - 43°C)						

These softeners conform to IAPMO/ANSI 44 for the specific performance claims as verified and substantiated by test data. These models are efficiency rated. The efficiency rating is valid only at the stated salt dose and maximum service flow rate. They have a demand initiated regeneration (D.I.R.) feature that complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in their operation. These softeners have a rated softener efficiency of not less than 3350 grains of total hardness exchange per pound of salt (based on sodium chloride) and shall not deliver more salt than their listed ratings. The rated salt efficiency is measured bylaboratory tests described in IAPMO/ANSI Standard 44. These tests represent the maximum possible efficiency that the systems can achieve. Operational efficiency is the actual efficiency after the system has been installed. It is typically less than the efficiency due to individual application factors including water hardness, water usage, and other contaminants that reduce the softener's capacity. These systems are not intended for use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. For best results, use plain, white block salt. Refer to Installation/ operation manual and warranty for further details on installation, parts and service, maintenance and further restrictions or limitations to the use of the product.

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.

Precision Brining: Precision brining means that your conditioner calculates the exact amount of brine required to regenerate saving up to 30% more salt
When your conditioner regenerates it will display 2 numbers for capacity 1 will be total capacity the other will be 70 % of capacity. The unit counts down to the end of the 70% then calculates how much of the 30% you used (your reserve) it then adjusts the brine amount accordingly and regenerates that evening. This feature means that your capacity will always be different after every regeneration therefore maximizing your salt use.

Brine Pre-Fill%: This is the percentage of the water that will be added to the brine tank after a regeneration. The default is 70%. The remaining amount of water will be added just prior to the regeneration and will be proportional to the amount of capacity left in the system.

Soft Water Recharge for High Usage: Should you reach the 70% capacity and then go beyond the 30% before it is time to regenerate the conditioner will do a quick regeneration to restore limited capacity to get it through the remainder of the day.

System Refresh: If you are away for an extended period of time the Conditioner does a refresh cycle to prevent any chance of bacterial growth or stagnation inside the conditioner.

Scrolling Diagnostics: By pressing any button to light the LCD display the unit will automatically begin scrolling important information for diagnostic purposes

Date and Time

Total Gallons and Remaining Gallons

Number of People: in the household as programmed at install

Reserve Capacity: calculated as 75 gallons per person

Estimated Days to Next: estimation of days to the next regeneration based on current consumption, hardness and capacity

Last Regeneration: the date of the last regeneration cycle by the conditioner

Total Regenerations: this is the total number of times the conditioner has regenerated

Total Gallons: total gallons treated by the conditioner

Over Run Total: – how many times Soft water recharge was required due to high usage

Current Flow Rate: will only display if treated water is running otherwise it would read 0

Peak Flow: maximum flow that has gone through the conditioner.

Delayed Regen OFF: – generally only used after servicing.

Regen Time: This is the time of day that the conditioner is scheduled to regenerate

Refill Time: The current calculated refill time for makeup brine (displays up to 70% of total brine required)

Valve Mode: current valve setting EG. Softener UF (up flow)

To stop the scrolling you can unlock the board as directed and press the down arrow to stop the scrolling. You can then use the down arrow to go to each of the diagnostics as required.

SPECIFICATION

***NOTE**

Clean water application for municipal or city supplies only.

Specifications	485HE-75C	485HE-100C	485HE-75	485HE-100	485HE-150	485HE-200	485HE-300
	15010450	15010451	15010452	15010453	15010454	15010455	15010456
Optional Settings - High Efficiency*							
Salt Used - Per Regeneration	2.3 lbs	3.0 lbs	2.3 lbs	3.0 lbs	4.5 lbs	6.0 lbs	9.0 lbs
Water Used - Regeneration	22.7 gal	28.3 gal	22.6 gal	31.6 gal	44.3 gal	60.9 gal	102.2 gal
Hardness Removal - Grains	11,250	15,000	11,250	15,000	22,500	30,000	45,000
Factory Settings - Standard Capacity							
Salt Used - Per Regeneration	4.5 lbs	6.0 lbs	4.5 lbs	6.0 lbs	9.0 lbs	12.0 lbs	18.0 lbs
Water Used - Regeneration	40.5 gal	48.6 gal	34.0 gal	43.4 gal	62.7 gal	87.1 gal	139.2 gal
Hardness Removal - Grains	18,750	25,000	18,750	25,000	37,500	50,000	75,000
Optional - High Capacity							
Salt Used - Per Regeneration	7.5 lbs	10.0 lbs	7.5 lbs	10.0 lbs	15.0 lbs	20.0 lbs	30.0 lbs
Water Used - Regeneration	56.1 gal	69.5 gal	49.6 gal	64.3 gal	90.3 gal	124.6 gal	196.2 gal
Hardness Removal - Grains	22,500	30,000	22,500	30,000	45,000	60,000	90,000
Resin Quantity - Cubic Feet	0.75 ft	1.0 ft	0.75 ft	1.0 ft	1.5 ft	2.0 ft	3.0 ft
Tank Size	9x35	10x35	8x44	9x48	10x54	12x52	14x65
Tank Jacket / Media Loaded	Yes	Yes	Yes	Yes	Yes	No	No
Brine Tank / Cabinet Size (Inches)	16.5 x 19.3 x 43.3	16.5 x 19.3 x 43.3	18.1 x 34.5	18.1 x 34.5	18.1 x 34.5	20.3 x 37.4	23.0 x 40.5
Salt Storage Capacity	175 lbs	175 lbs	240 lbs	240 lbs	240 lbs	350 lbs	420 lbs
Flow Rate @ 15 psi Pressure Drop	11.6 gpm	12.0 gpm	10.4 gpm	11.0 gpm	11.2 gpm	12.2 gpm	12.6 gpm
Flow Rate @ 25 psi Pressure Drop	15.6 gpm	16.0 gpm	14.3 gpm	15.0 gpm	15.1 gpm	16.2 gpm	16.6 gpm
Back Wash Flow Rate	2.0 gpm	2.4 gpm	1.5 gpm	2.0 gpm	2.4 gpm	3.5 gpm	5.0 gpm
Shipping Weight	93 lbs	110 lbs	105 lbs	122 lbs	155 lbs	172 lbs	244 lbs
Regeneration Type	Counter Current / Up Flow						
Maximum Efficiency	5,060 grains /lb salt						
Plumbing Connections	¾" and 1" connections						
Resin Type	Aquafine 8% High Capacity Ion Exchange Resin						
Electrical Requirements	Input 120V 60 Hz - Output 12V 650mA						
Water Temperature	Min 39 - Max. 100 degrees Fahrenheit						
Water Pressure	Min. 20 - Max. 125 psi						

*Choose **HIGH EFFICIENCY** to minimize salt usage. Your system will regenerate a little more often but your salt usage can be reduced by 20% compared to the **STANDARD** setting. Choose **STANDARD** when you need to maximize your capacity but still operate the system with good efficiency. Choose ****IRON & MN** if you have problem water containing Iron, Manganese or hardness in excess of 50 gpg. The high salt setting will be needed since these minerals are more difficult to clean out of the resin bed. Note: A resin cleaner will also need to be periodically added to the brine tank to insure proper operation.

See page 25: Res-Up® Feeder Installation Instructions

CAUTION!

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

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

See page_? - PROBLEM WATER KIT

****NOTE**

SET HARDNESS
This value is the maximum compensated water hardness in grains per gallon of the raw water supply. It is used to calculate the system capacity. If Ferrous Iron is present add 4 gpg for every 1 ppm of Ferrous Iron, 8 gpg for Ferrous Manganese.

UNPACKING / INSPECTION OF TWIN TANK MODEL

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.

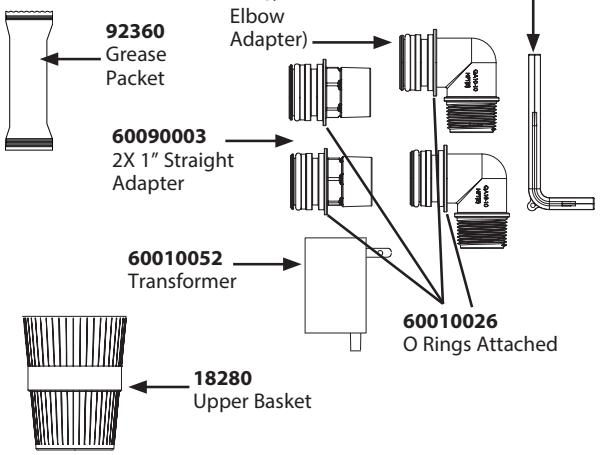
What is included in the box?

For Models 75,100,150, 200, you will expect the following:

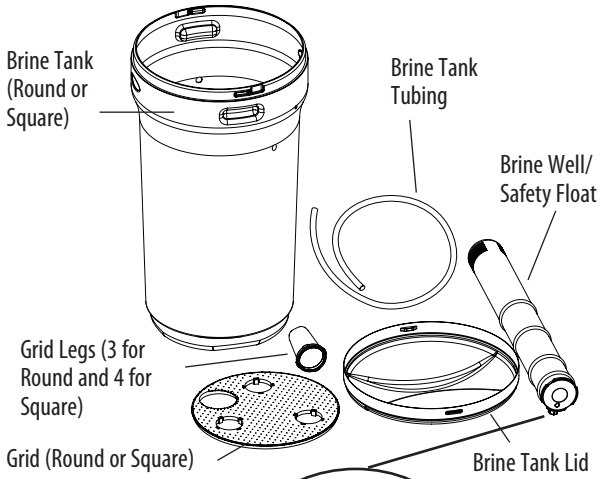
1. Control Valve*
2. Tank
3. Parts Box
4. Owners Manual
5. Drain Hose & Clamp (Not included in some brands)
6. Brine Tank Assembly

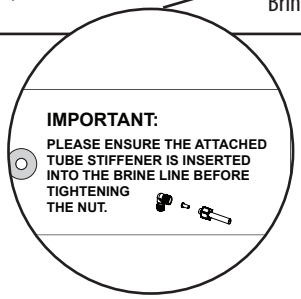
***All units (75, 100, 150, 200) are pre assembled with control valve installed on the tank, no assembly required.**

3. Parts Box

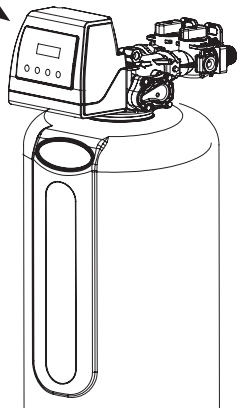


6. Brine Tank Assembly (Round Brine Tank Shown))

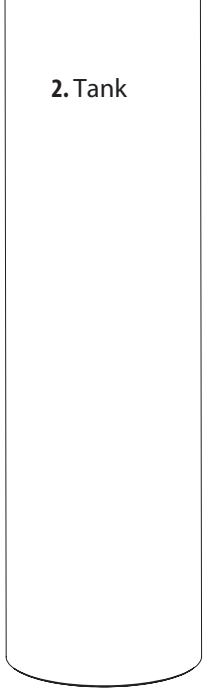




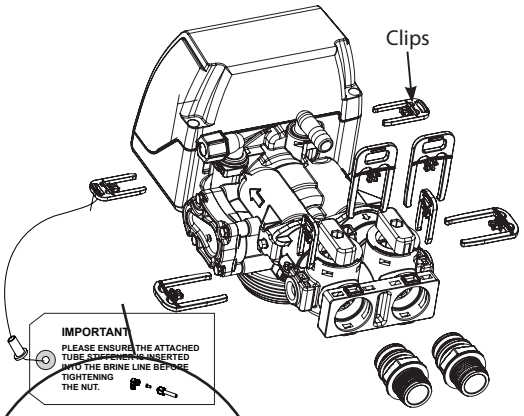
1. Control Valve

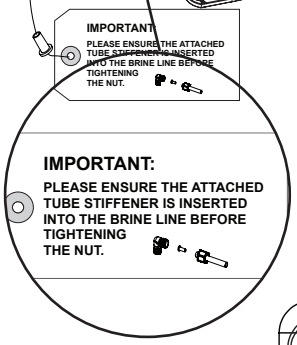


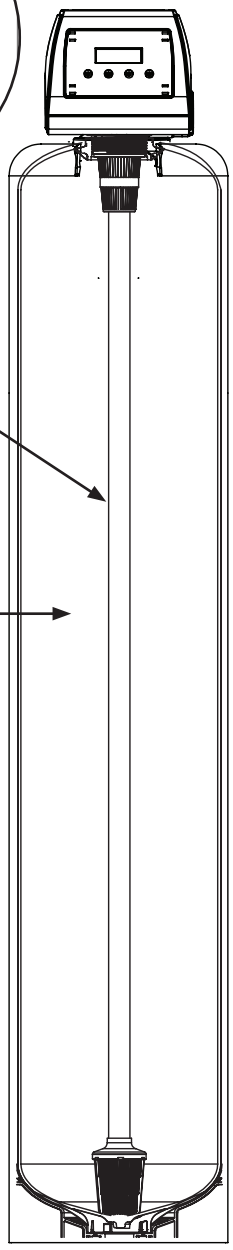
2. Tank



There are 8 Red clips. Please check to make sure you have all of them.







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.

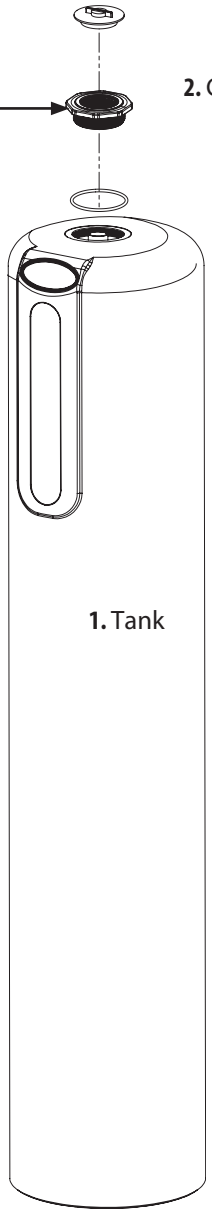
For Model 300 the media and Control Valve is packaged separately in carton and bags

What is included with 300 model?

1. Tank (Model 300 will get an Adapter and Oring attached to the tank)
2. Control Valve with Parts Box
3. Media Boxes (Qty 3 for 300)
4. Drain Line and Hose Clamp (Not Included with some models))
5. Brine Tank Assembly

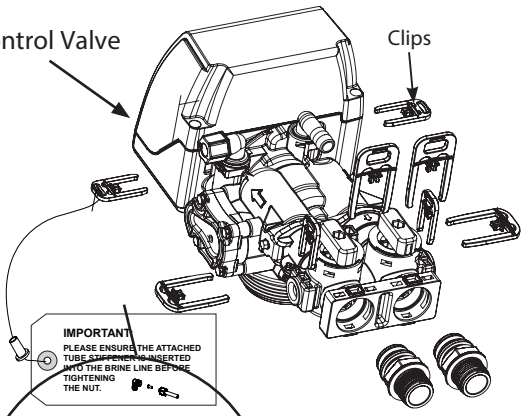
There are 8 Red clips. Please check to make sure you have all of them.

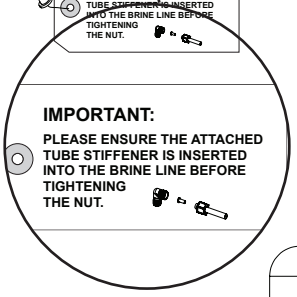
Model 300 will get Adaptor and Oring Shown



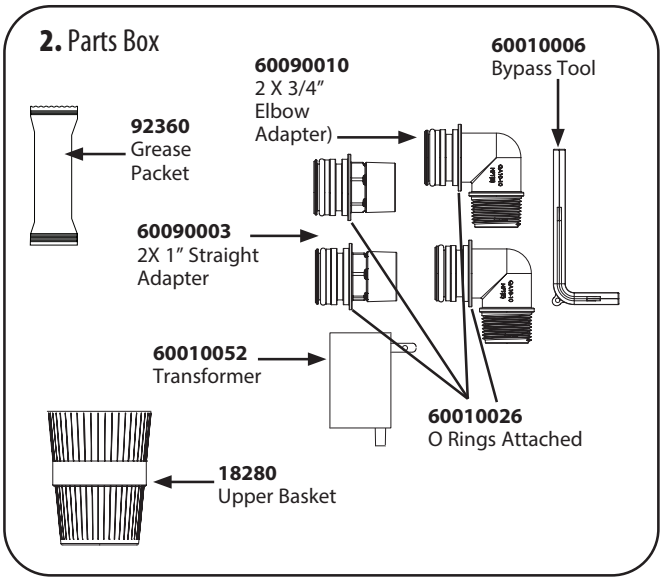
1. Tank

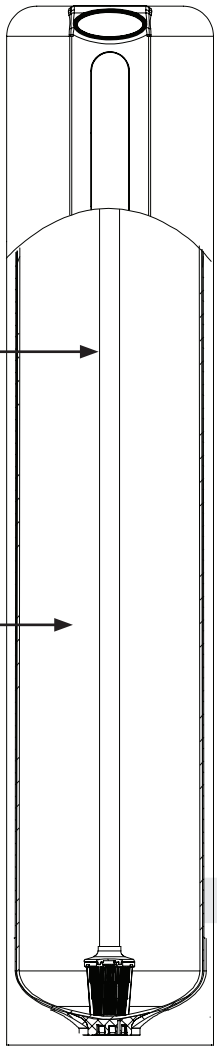
2. Control Valve



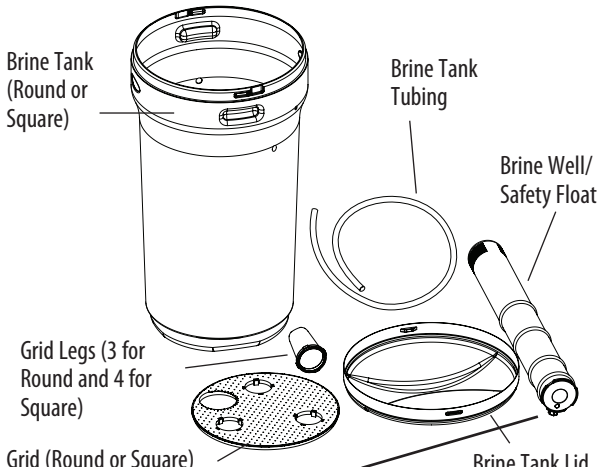


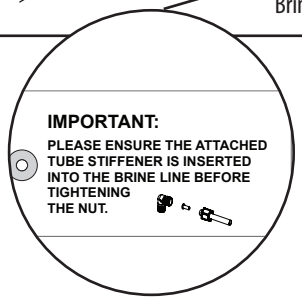
2. Parts Box

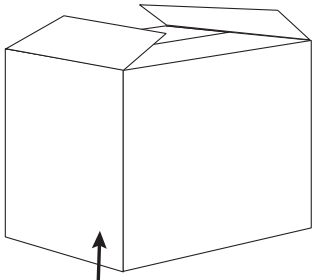




5. Brine Tank Assembly (Round Brine Tank Shown))



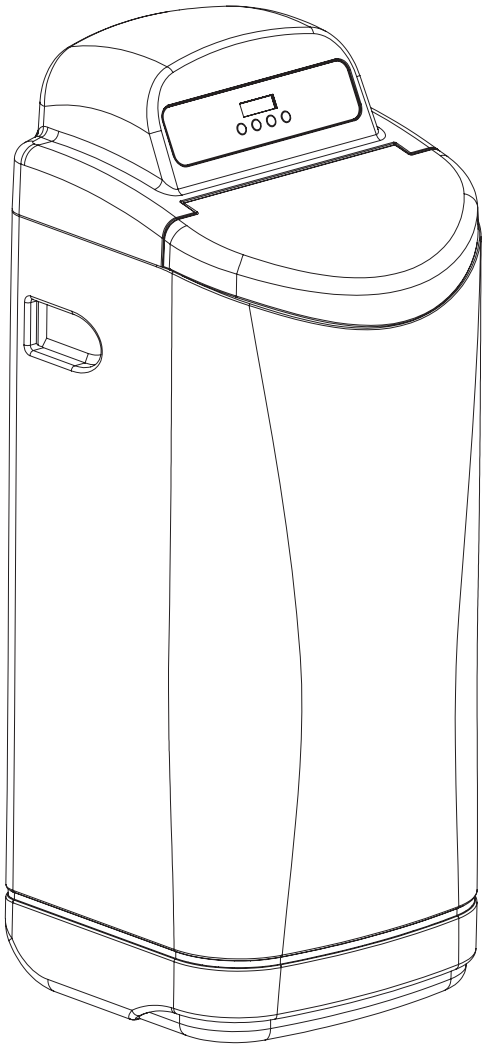


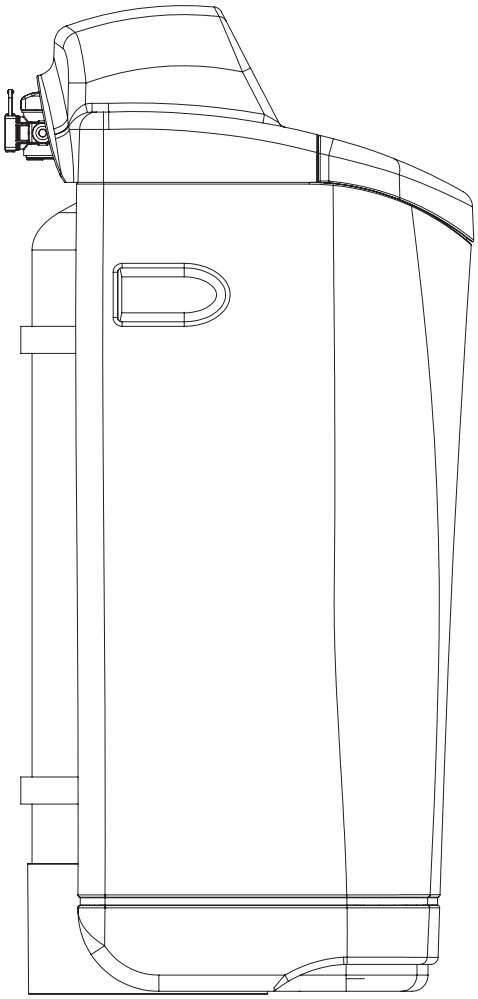


3. Media Box - X3

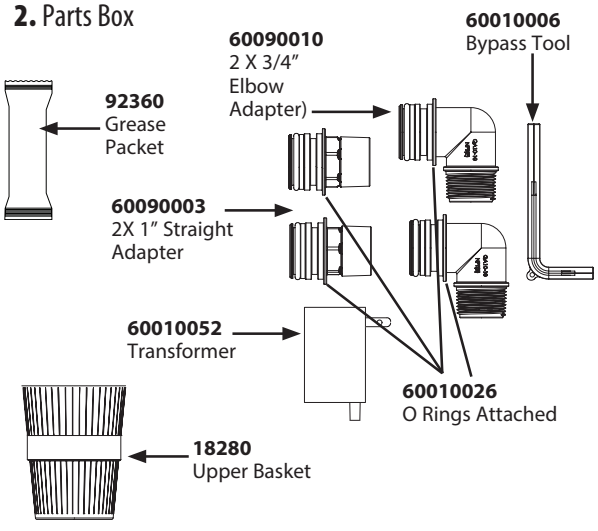
UNPACKING / INSPECTION OF CABINET MODEL

1. Cabinet with Valve attached
2. Parts Box
3. Drain Line and Hose Clamp





2. Parts Box



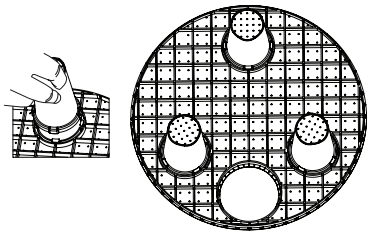
NOTE

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.

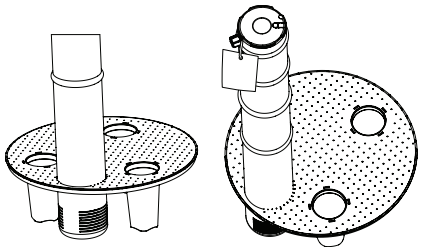
ASSEMBLING BRINE TANK*

Assembling Brine Tank

a) Attach the three brine grid legs to grid plate. The legs will snap on to the tabs of the salt plate making a "click" sound. For square brine tank there are four legs.)

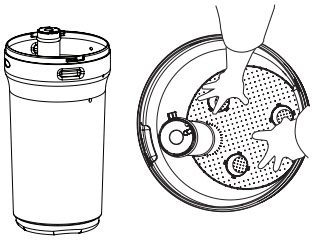


b) Insert the brine well assembly inside the grid plate as well below.

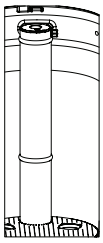


c) Drop the brine grid with brine well inside the brine tank such that the nut fitting faces the hole on the brine tank. Then press the grid evenly inside the brine tank until the brine grid legs touches the bottom of the brine tank.

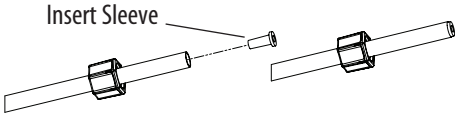
IMPORTANT:
IT IS IMPORTANT TO ALIGN THE HANDLE TO THE BRINE WELL AS SHOWN



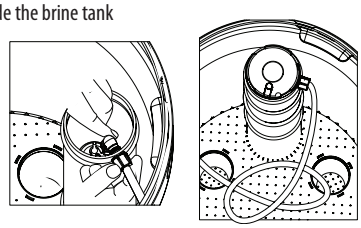
The hole in the brine tank should line up with the brine line as shown



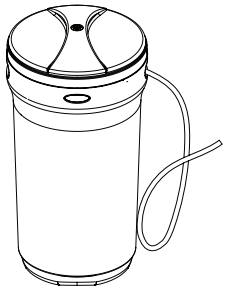
d) Take the brine tube and insert the nut and plastic sleeve as shown below.



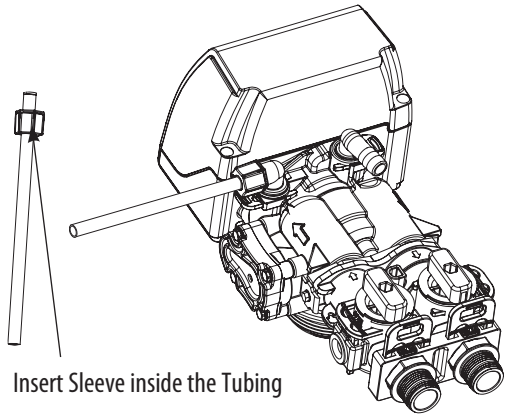
e) Insert the tube in the float assembly elbow and hand tighten the nut. In many cases the brine line already come installed from the factory. Leave the other end of the brine line tube inside the brine tank



f) For installation of brine tank at the installation site, pull the other end of the brine tube from the hole on the brine tank. The completed assembly is shown below.



Attaching Brine Tubing to the Brine Line of the Valve



Insert Sleeve inside the Tubing

***NOTE**

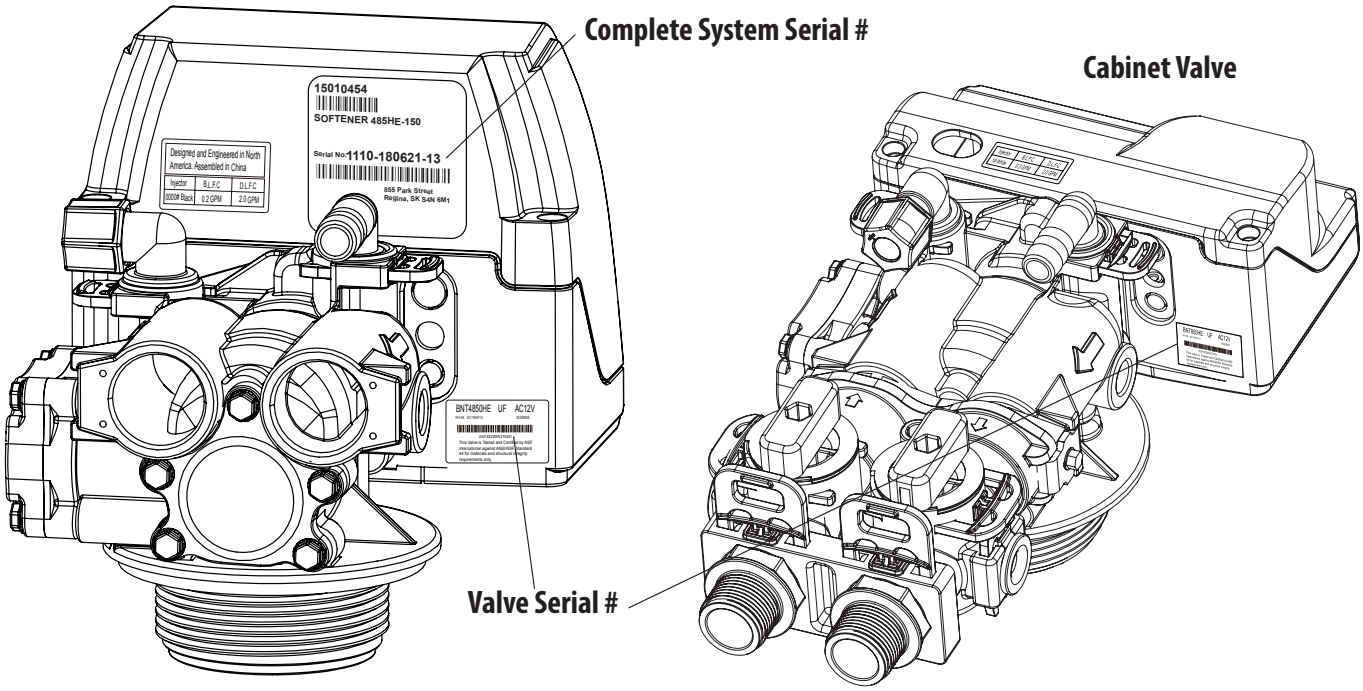
Resin Cleaner
An approved resin cleaner MUST be used on a regular basis if your water supply contains iron.

See page 25 - Res-Up® Feeder Installation Instructions

CHECK VALVE TYPE AND VALVE SERIAL

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 #:

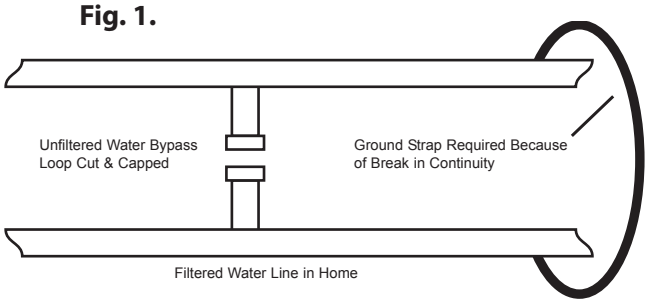
Date Code Canature Valve				
22018421Y	**M**	**4**	**L**	**0001**
PART NUMBER	YEAR (2016)	MONTH (APR)	DAY of MONTH (21)	BATCH NUMBER

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 New System*

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

Do not turn the conditioner 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 conditioner. To maintain full valve flow, 3/4" or 1" pipes to and from the conditioner fittings are recommended. You should maintain the same, or larger, pipe size as the water supply pipe, up to the conditioner 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 conditioner 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 conditioner unit is initially placed in service, the conditioner tank may have been laid on its side during transit. If this occurs, backwash the conditioner to "reclassify" the media.

***NOTE**

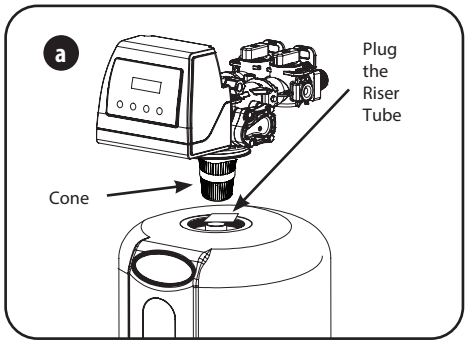
Due to transportation and climatic conditions all connections including the valve to the tank need to be checked at time of installation and tightened if necessary.

PREPARATIONS

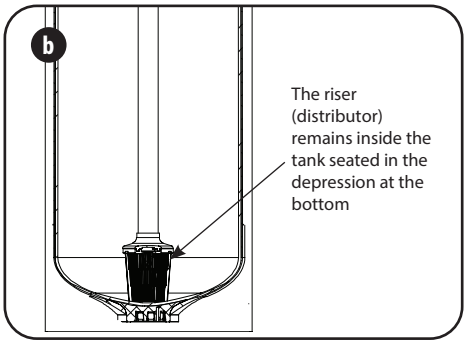
Media Installation (When Necessary). The 485HE-300 comes unloaded, media is shipped with separate media in pails or boxes. Models lower than 2 CF of media come loaded with media and this step can be skipped for new installation.

CAUTION!

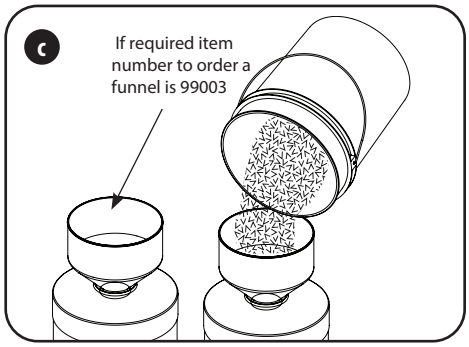
The unit should be depressurized before installing or replacing media



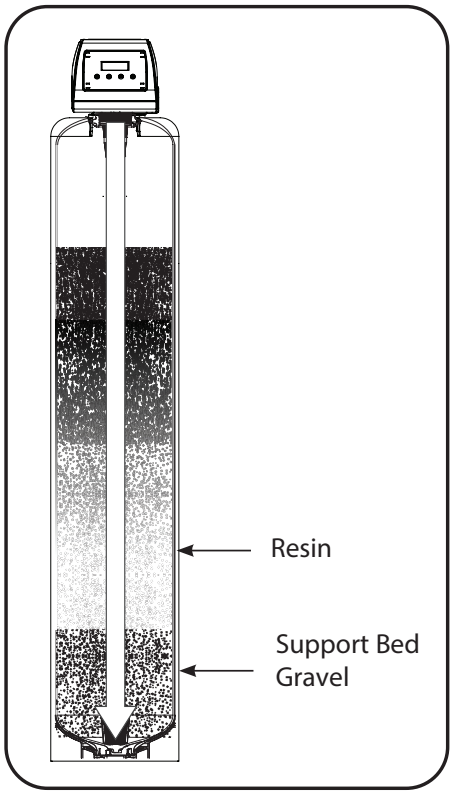
a) Temporarily plug the open end at the top of the riser (distribution) tube with tape.

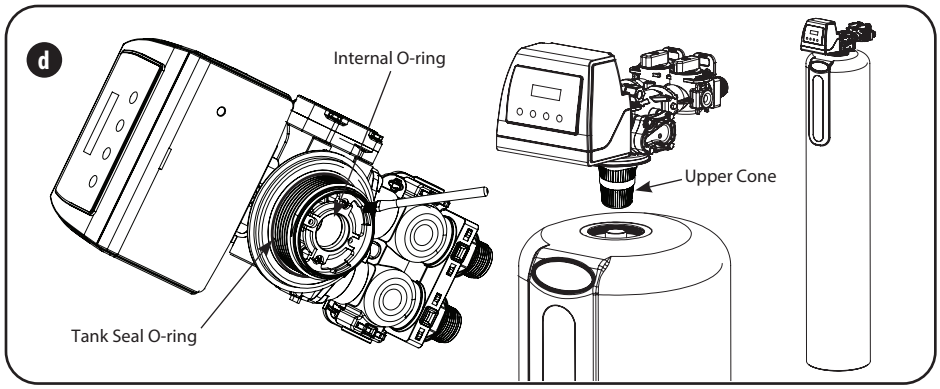


b) Ensure the bottom of the riser tube remains seated in the depression at the bottom of the tank. Fill tank one quarter full of water to protect distribution tube during gravel installation.

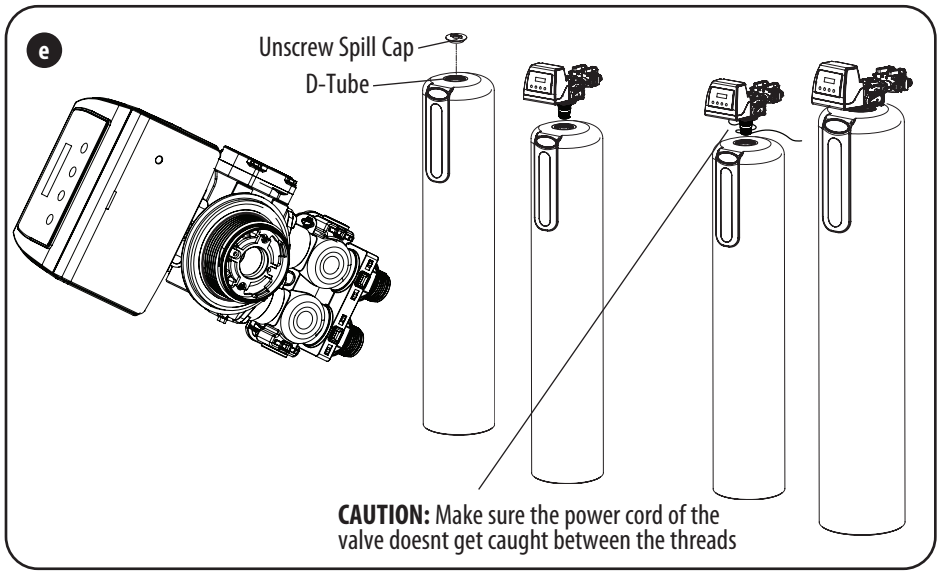


c) "Fill the gravel support bed first. A large funnel (sold separately part #99003) makes filling the tank much easier. Tip: You can make a funnel using a 1 gallon (4 litre) container by cutting the bottom off. Slowly add the gravel and level it by shaking the tank. Depending on the type of system, add the resin or media next, leveling it in the same manner.





d) Apply the supplied lubricant (silicone grease part #92360) to the internal o-ring at the bottom of the control valve. Attach the upper cone to the control valve. Apply lubricant to larger o-ring on the bottom of the valve that seals with the tank threads.



e) Remove tape from top of riser tube. Carefully position valve over riser tube, inserting riser into the internal o-ring. Turn the valve onto the threads of the tank until secure. **Note: Make sure the quick connect power cord is not yet connected to prevent the cord getting caught between the threads of the tank and valve**.

CAUTION!

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

CAUTION!

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

PREPARATIONS

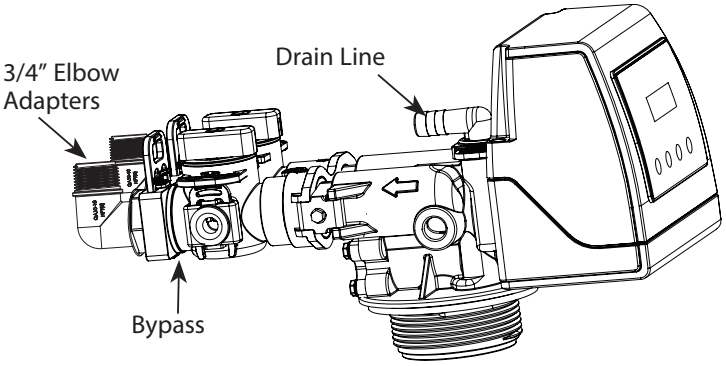
Planning Your Installation

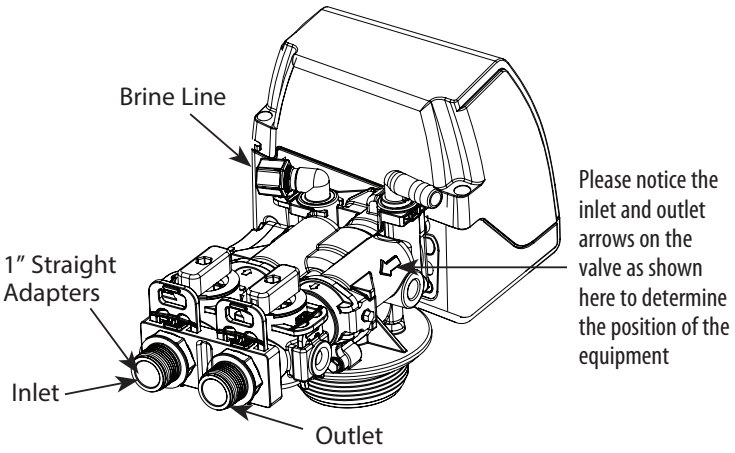
Select the location of your conditioner tank with care. Various conditions which contribute to proper location are as follows:

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 17**. A new water line is often required to be connected to supply untreated water to the inlet of the water conditioner and to the outside faucets.
3. Locate as close as possible to the water supply source.
4. Locate as close as possible to a floor or laundry tub drain.
5. Locate in correct relationship to other water conditioning equipment. if closer than 10 feet please install check valve in accordance with local plumbing codes.
6. Conditioners should be located in the supply line before the water heater. Temperatures above 110°F (43°C) will cause damage to conditioners.
7. Do not install a conditioner or conditioner in a location where freezing temperatures occur. Freezing may cause permanent damage to this type of equipment and will void the factory warranty.
8. Allow sufficient space around the unit for easy servicing.
9. Keep the conditioner out of direct sunlight. The sun''s heat may soften and distort plastic parts.

INSTALLATION STEPS

1. Determine the best location for your water conditioner, bearing in mind the location of your water supply lines, drain line and 120 volt AC electrical outlet. Subjecting the conditioner to freezing or temperatures above 43°C (110°F) will void the warranty.





2. 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 conditioner 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.
3. Apply Teflon Tape and Orings to the fittings
4. Connect Conditioner 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.
5. **Drain Line connection:** Attach 1/2" ID, 5/8" OD drain hose to the hose barb and tighten securely with a hose clamp. Run the drain line to a floor drain or a laundry drain. Complete any necessary plumbing.

INSTALLATION STEPS

6. ***Using the Allen Key (included), place the unit in the bypass position**. Slowly turn on the main water supply. At the nearest cold treated water tap nearby remove the faucet screen, open the faucet and let water run a few minutes or until the system is free of any air or foreign material resulting from the plumbing work.

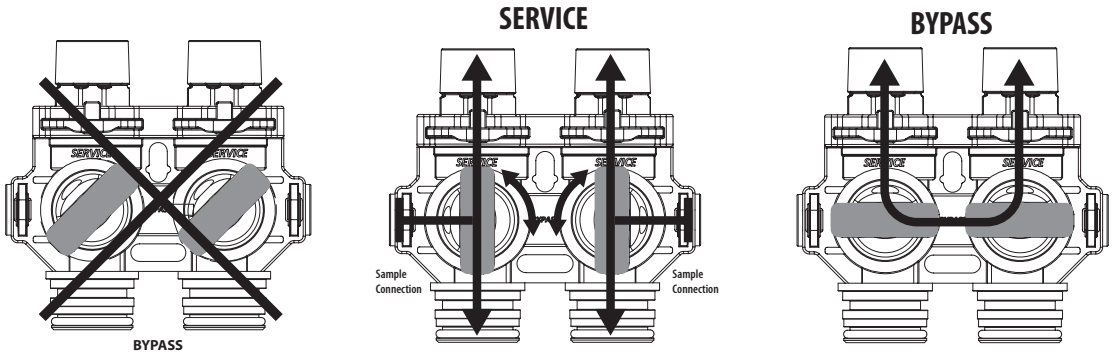
*Automatic Water Bypass

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. See 'STARTUP & PROGRAMMING', pages 16 & 19 for more info on Regeneration Programming.

*Manual Water Bypass

In case of an emergency such as conditioner maintenance, you can isolate your water conditioner from the water supply using the bypass valve located at the back of the control. In normal operation the bypass is open with the ON/OFF knobs in line with the INLET and OUTLET pipes. To isolate the conditioner, simply rotate the knobs clockwise (as indicated by the word BYPASS and arrow) until they lock. You can use your water related fixtures and appliances as the water supply is bypassing the conditioner . However, the water you use will be hard. To resume treated service, open the bypass valve by rotating the knobs counterclockwise. **Please make sure bypass knobs are completely open otherwise the unconditioned water could bypass through the valve.**



7. Make sure there are no leaks in the plumbing system before proceeding. Close the water tap when water runs clean.
8. Open the brine tank salt lid and add water until there is approximately 3" (75 mm) of water in the tank. Do not add salt to the brine tank at this time.

NOTE

If the plumbing system is used as the ground leg of the electric supply, continuity should be maintained by installing ground straps around any nonconductive plastic piping used in installation. - **See page 14**

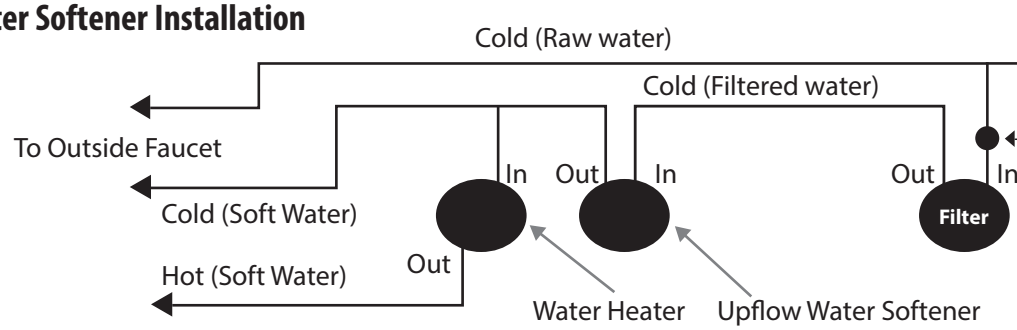
NOTE

Before starting installation, **read page 24**, **Plumbing System Clean-Up**, for instructions on some procedures that may need to be performed first.

WATER SOFTENER INSTALLATION

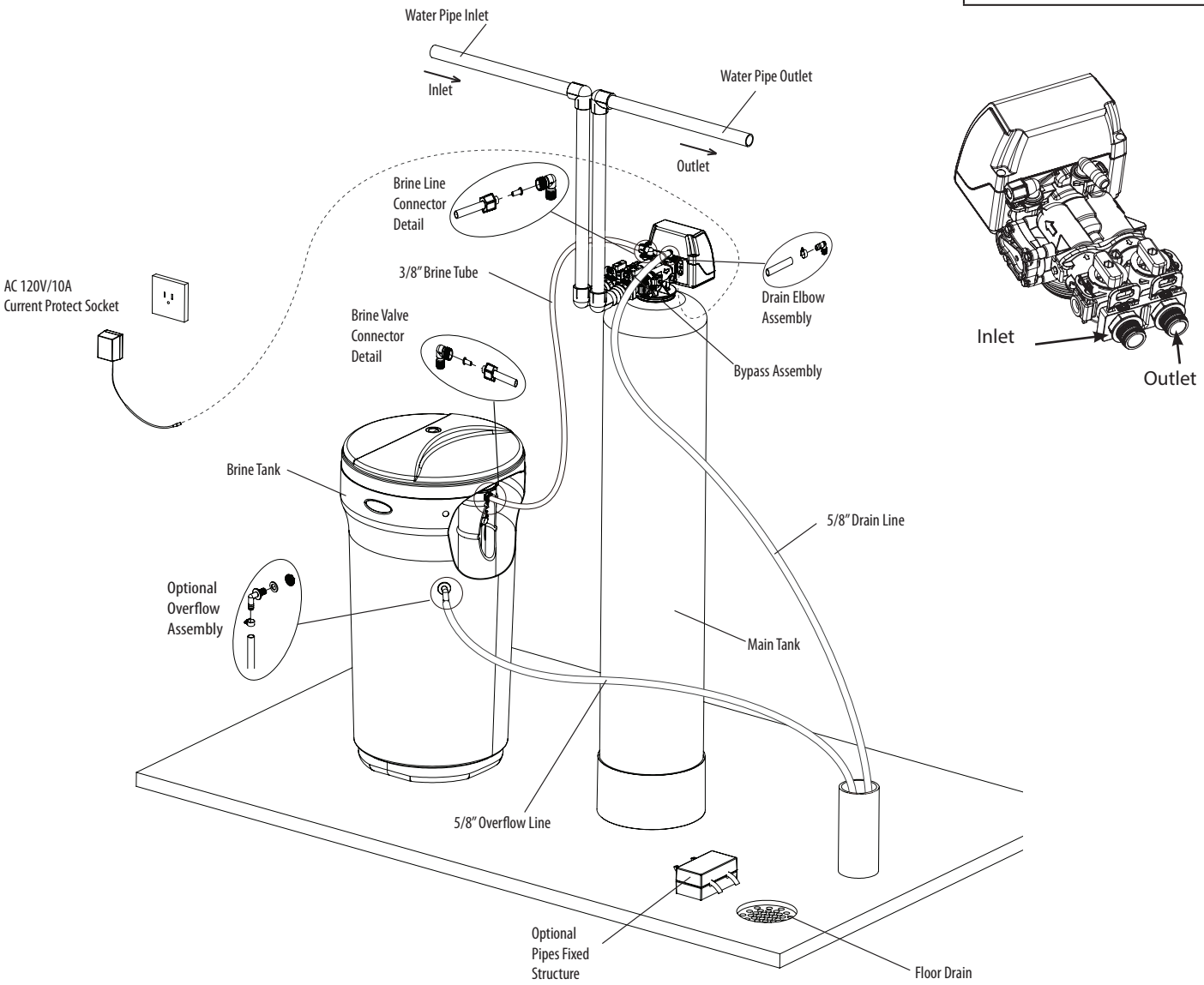
Connect Softener to the HousePlumbing Any solder joints near the valve must be done before connecting any piping to the valve. Always leave at least 6" (152 mm) between the valve and joints when soldering pipes that are connected to the valve. Failure to do this could cause damage to the valve.

Water Softener Installation



***NOTE**

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

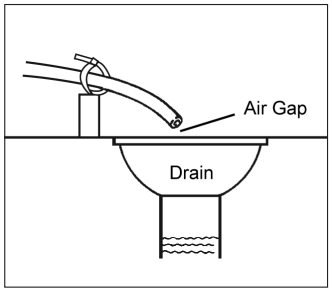


NOTE

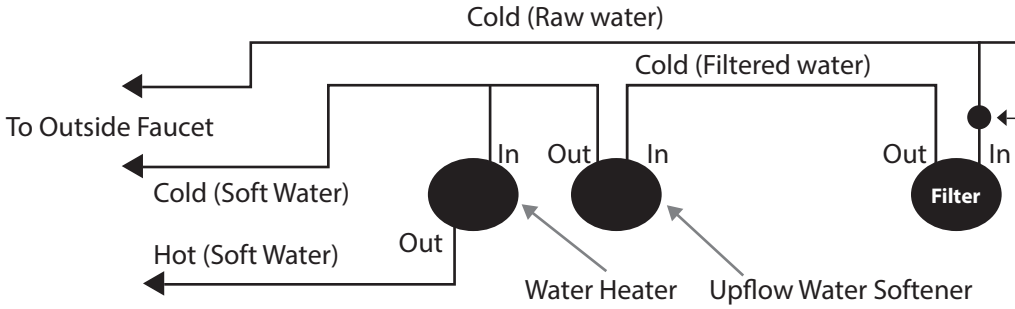
Waste connections or drain outlet shall be designed and constructed to provide for connection to the sanitary waste system through an air-gap of 2 pipe diameters or 1 inch (22 mm) whichever is larger.

⚠ 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.

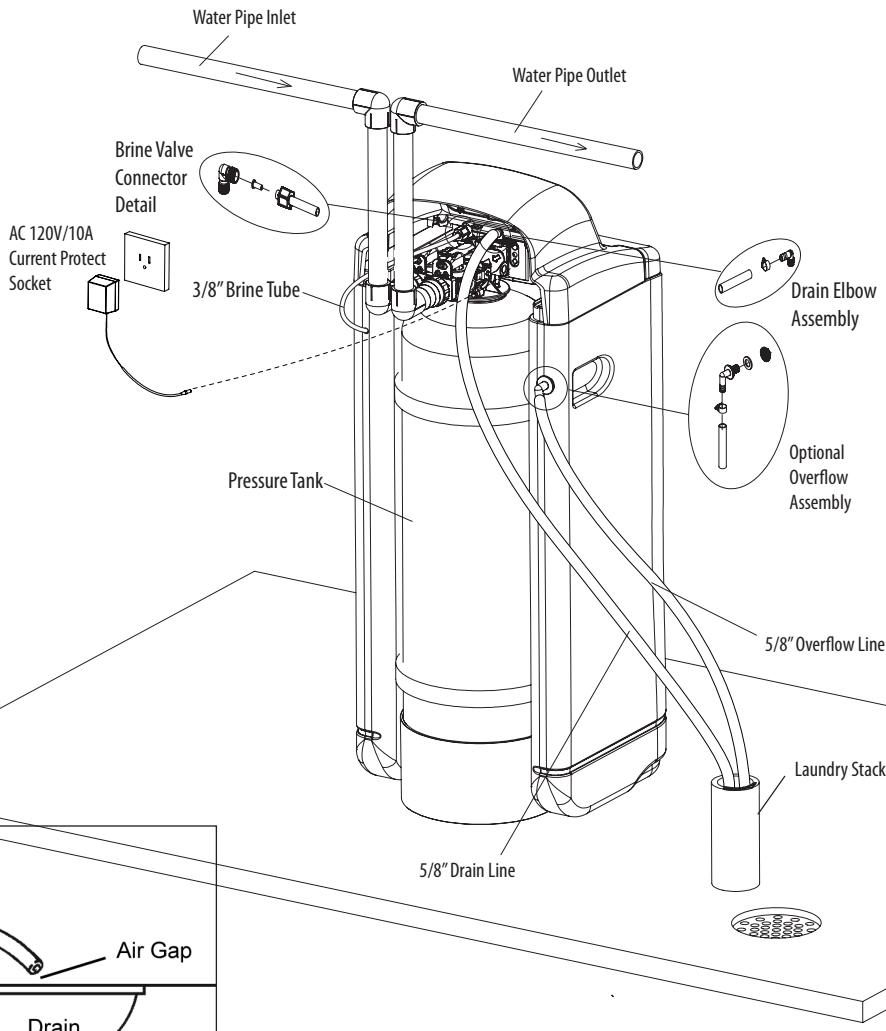


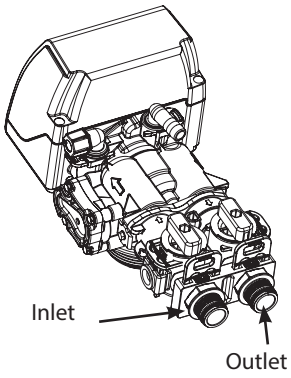
CABINET WATER SOFTENER INSTALLATION

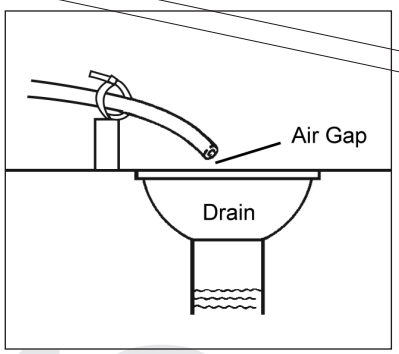


***NOTE**

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







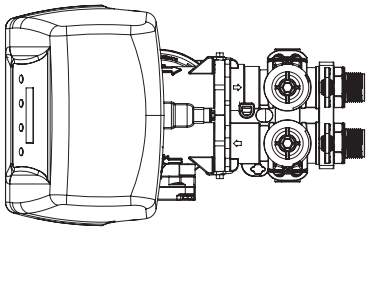
NOTE

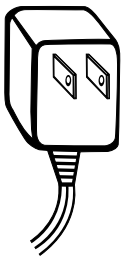
Waste connections or drain outlet shall be designed and constructed to provide for connection to the sanitary waste system through an air-gap of 2 pipe diameters or 1 inch (22 mm) whichever is larger.

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 & PROGRAMMING





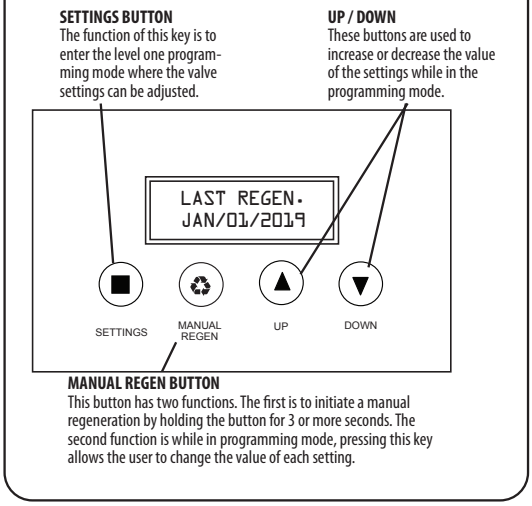
STEP 1. Connect the Transformer to the Valve

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

The control valve is controlled with simple, user-friendly electronics displayed on an LCD screen. When power is connected, the screen will show the following information in sequence:

1. Date & Time
2. Regeneration Days (Time interval between backwashes)
3. Remaining Days (days left before backwash begins)
4. Regeneration Time (Time of day when backwash starts)
5. Last Regeneration Date (Last date when system backwashed)
6. Current Flow Rate (GPM) (flow rate of water being currently used)
7. Peak Flow Rate (GPM) (Max recorded flow rate of the water)

Key Pad Configuration



STEP 2. Add Water to Brine Tank

Open the brine tank /cabinet salt lid and add water as per the info below. Do not add salt to the brine tank at this time.

BRINE TANK MODEL – Water to be Added at the Time of Installation:

BTR-100 (18.1" x 34.7") - 2.5 US Gallons **BTR-145** (20.3 x 37.4) - 3.25 US Gallons
BTR-200 (23.0" x 40.5") - 5.5 US Gallons

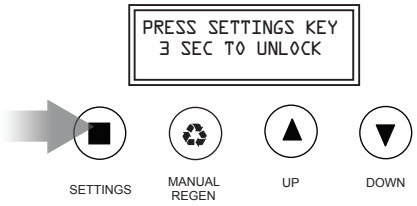
STEP 3. Manually Regenerate the Valve

3a. 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.

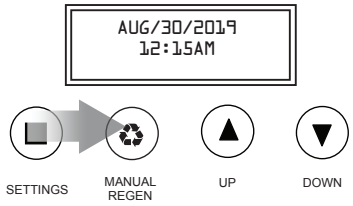
3b. Plug in the valve. Allow the valve to continue its cycles until complete and back in service. Allow the valve to stay in each position for 2 - 3 minutes to purge air from the system and the valve. Failure to properly purge the system may result in unsatisfactory performance. This process can be performed 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 23**.

STEP 4. PROGRAMMING YOUR CONDITIONER

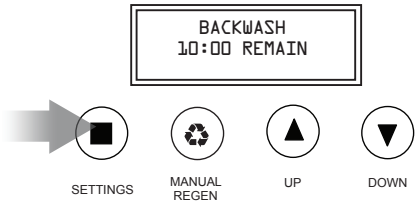
This unit is factory set for the correct size, you are required to program the date, the time, the number of people in the home and the correct hardness setting. Please review **Compensated Hardness Calculation** (See page 22) before entering the hardness number from your water analysis.



1. The display will read **"PRESS SETTINGS KEY ■ 3 SEC TO UNLOCK"**.
2. After 3 seconds, the display will beep confirming unlock.



3. Press and hold **MANUAL REGEN** ♻ to start Manual Regeneration process

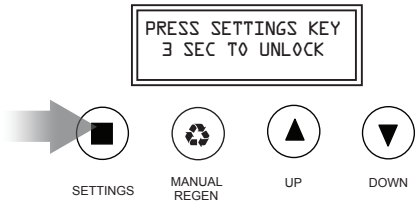


4. The display will read time remaining. **ALLOW TO FINISH FULL CYCLE.**

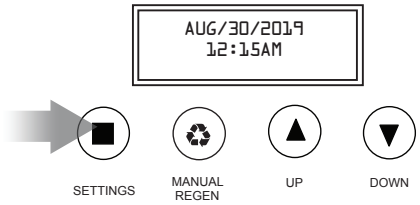
Please call Canature WaterGroup before attempting to change any Level 2 values as this can affect the performance of your unit. (See page 41for Level 2 Programming)

STARTUP & PROGRAMMING (CONTINUED)

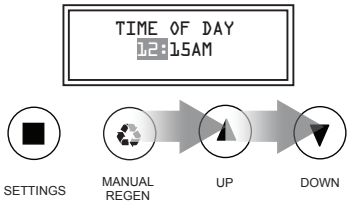
Level 1 PROGRAMMING:



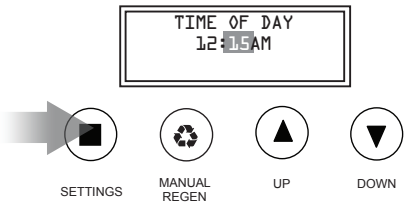
1. The display will read **"PRESS SETTINGS KEY ■ 3 SEC TO UNLOCK"**.
2. After 3 seconds, the display will beep confirming unlock.



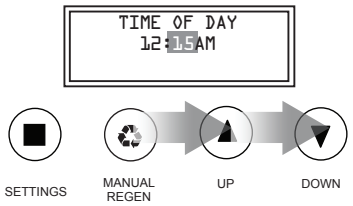
3. Press **SETTINGS** ■ until you hear beep.



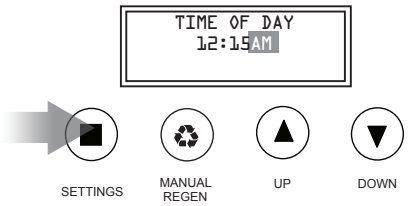
4. Now press **UP** ▲ or **DOWN** ▼ key to change the hour value to current time.



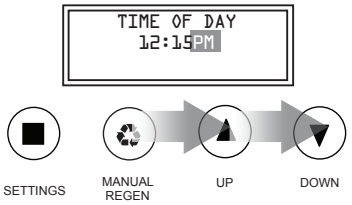
5. Press **SETTINGS** ■ once to highlight the value.



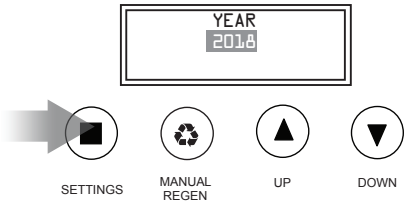
6. Now press **UP** ▲ or **DOWN** ▼ key to change the minute value to current time.



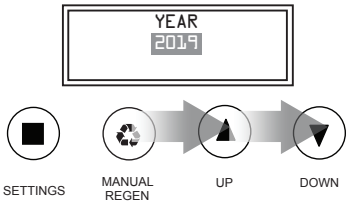
7. Press **SETTINGS** ■ once to highlight the value.



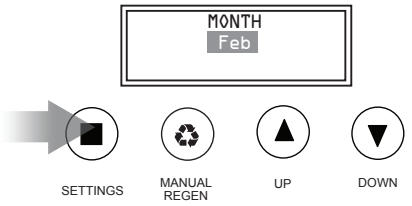
8. Now press **UP** ▲ or **DOWN** ▼ key to change the AM/PM values to current time.



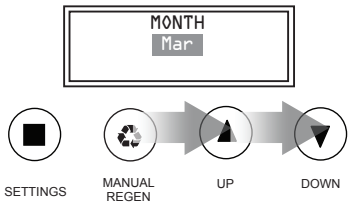
7. Press **SETTINGS** ■ once to highlight the value.



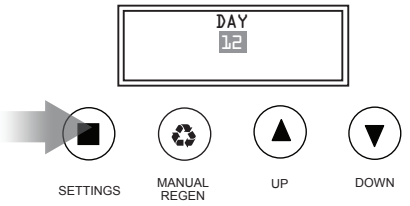
8. Now press **UP** ▲ or **DOWN** ▼ key to change the YEAR value to current year.



9. Press **SETTINGS** ■ once to highlight the current month.



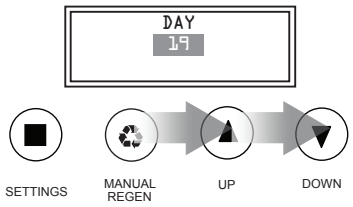
10. Now press **UP** ▲ or **DOWN** ▼ key to change the MONTH value to desired month.



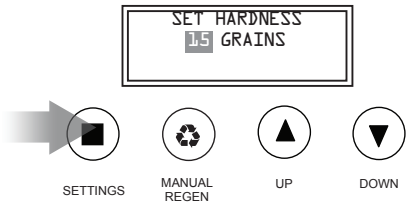
11. Press **SETTINGS** ■ once to highlight DAY #.

STARTUP & PROGRAMMING (CONTINUED)

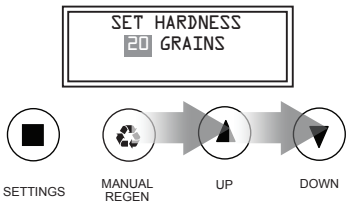
Level 1 PROGRAMMING: - CONTINUED



12. Now press **UP** ▲ or **DOWN** ▼ key to change the DAY value to desired day.



13. Press **SETTINGS** ■ once to highlight value.



14. Now press **UP** ▲ or **DOWN** ▼ key to change HARDNESS value.
**See calculation below:*

*Calculating Compensated Hardness for Water where Iron or Manganese is Present

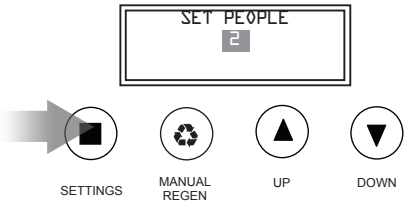
From your water analysis.

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.

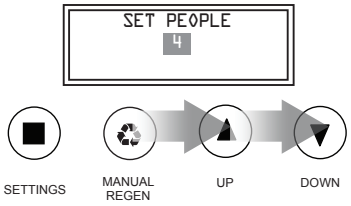
EG
Iron = 0.5 ppm x 4 = 2.0 gpg
Mang = 0.3 x 8 = 2.4 gpg (always round up) = 3.0 gpg

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

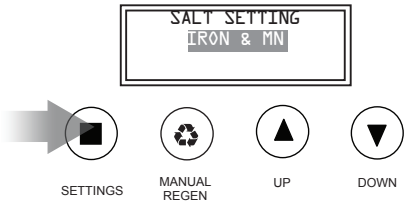
Iron _____ x 4 + Manganese x 8 _____ + Hardness = Total Hardness _____ ***(Enter this amount)***



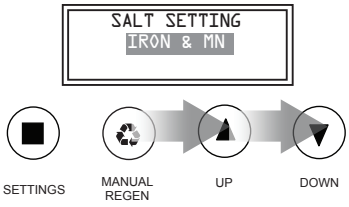
15. Press **SETTINGS** ■ once to highlight value.



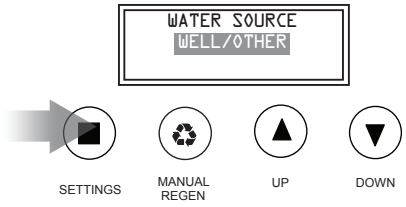
16. Now press **UP +** ▲ or **DOWN -** ▼ key to change # of PEOPLE.



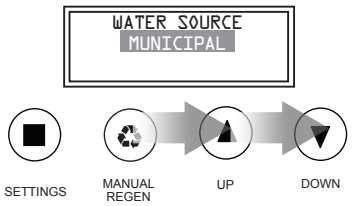
17. FACTORY SET DO NOT ADJUST!



18. FACTORY SET DO NOT ADJUST!

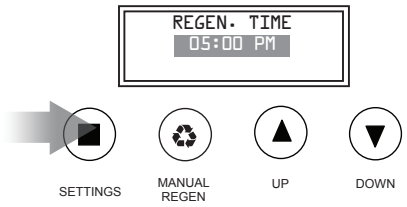


19. FACTORY SET DO NOT ADJUST!

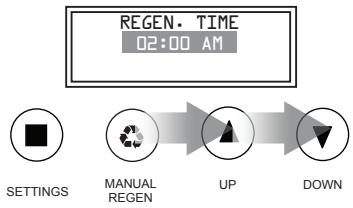


20. FACTORY SET DO NOT ADJUST!

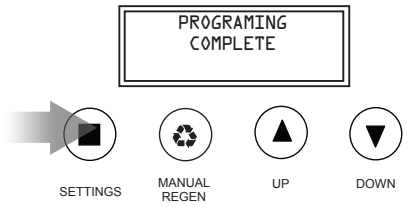
STARTUP & PROGRAMMING (CONTINUED)



21. Press **SETTINGS** ■ once to highlight value.



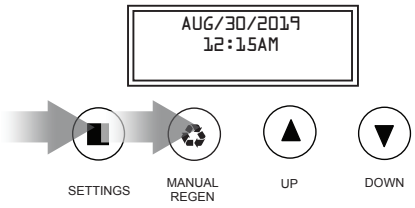
22. Now press **UP** ▲ or **DOWN** ▼ keys to change REGEN. TIME.



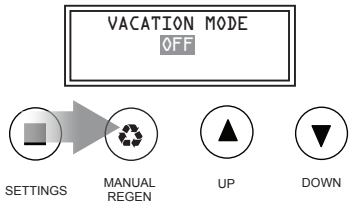
21. Press **SETTINGS** ■ once to COMPLETE PROGRAMING.

SETTING VACATION MODE

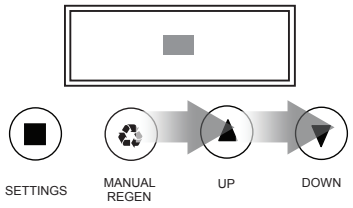
This function may be activated during a prolonged absence, such as a vacation for more than 2 weeks. The system will perform a brief backwash and rinse based on advanced setting. The purpose is to keep the water fresh in the softener tank and plumbing system.



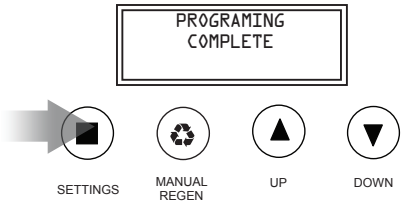
1. To set VACATION MODE, press & hold **SETTINGS** ■ and **MANUAL REGEN** ♻ until you hear a beep.



2. Press **MANUAL REGEN** ♻ to VACATION MODE setting.



3. Now press **UP** ▲ or **DOWN** ▼ keys to change to change to ON.

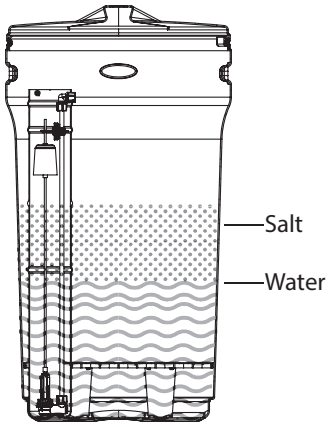


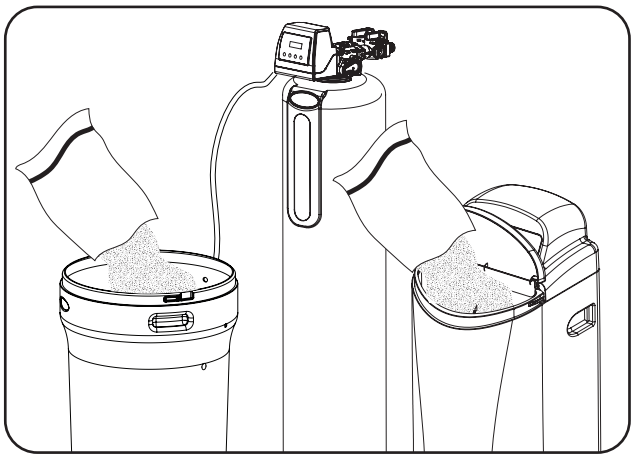
4. Press **SETTINGS** ■ once to **COMPLETE PROGRAMING**.

STARTUP & PROGRAMMING (CONTINUED)

*Add Salt to the Brine Tank/Cabinet

Put 40 kgs of crystal water conditioner 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

NEW SOUNDS

You may notice new sounds as your water conditioner 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.

***NOTE**

RESIN CLEANER

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

See page 26 - Res-Up® Feeder Installation Instructions

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 should probably be replaced.

Dishwasher

Consult owners' handbook and follow manufacturer's instructions.

Toilet Flush Tanks

Prior to commencing installation of the conditioner 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. See inspection and replacement of **Piston Assembly and Seal and Spacer Kit, page 29**.
- The injectors should be cleaned/inspected or replaced every year depending on the water quality and use. See **Clean Injector Assembly, page 29.**
- The media should be replenished or replaced depending of inlet water quality and water consumption. Check with your water treatment expert on the media bed change frequency.
- Maintenance Kit (60010307) should be used for servicing control on an annual basis. The maintenance kit consists of piston assembly, seals and spacers, injectors.

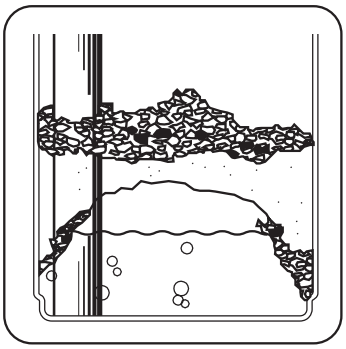
Maintenance of your new water conditioner requires very little time or effort but it is essential. Regular maintenance will ensure many years of efficient and trouble free operation.

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 conditioner .



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.

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

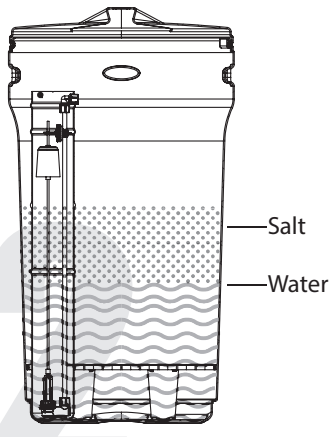
Checking the Salt Level

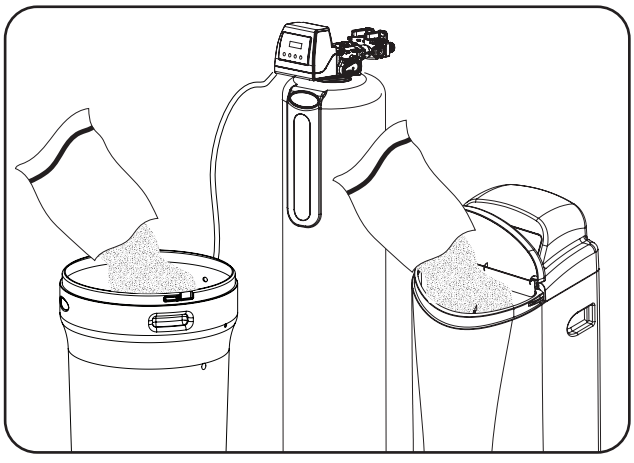
Check the salt level monthly. Remove the lid from the cabinet or brine tank, make sure salt level is always above the brine level.

Add Salt to the Brine Tank/Cabinet

Put 40 kgs of crystal water conditioner 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

Care of Your Conditioner

To retain the attractive appearance of your new water conditioner , clean occasionally with a mild soap solution. Do not use abrasive cleaners, ammonia or solvents. Never subject your conditioner to freezing or to temperatures above 43°C (110°F).

Resin Cleaner

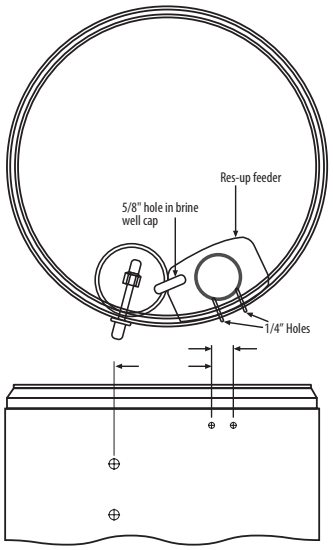
An approved resin cleaner MUST be used on a regular basis if your water supply contains iron. The amount of resin cleaner and frequency of use is determined by the quantity of iron in your water (consult your local representative or follow the directions on the resin cleaner package).

RES-UP® FEEDER INSTALLATION INSTRUCTIONS (OPTIONAL)

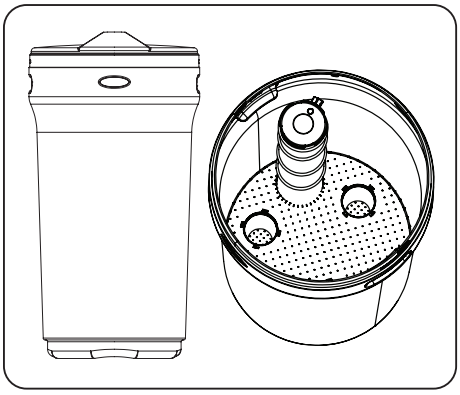
Res-Up Feeders attach to your brine tank and automatically dispense the Res-Up cleaner into the brine solution where it cleans the resin during the regeneration cycle.

The feeder hooks onto the tube inside your brine tank and you just pour some chemical in it and your water conditioner should last significanly longer. A res-up feeder is essential if your raw water contains measurable amounts of iron.

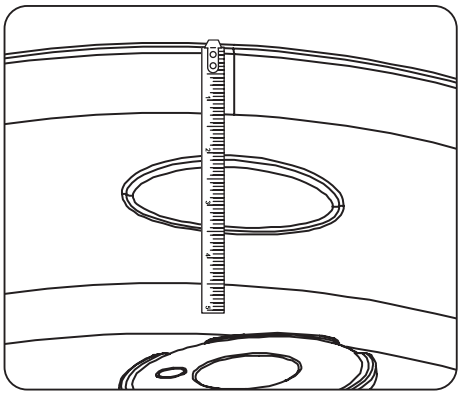
Res-up Feeder Bottle (Chemical sold Separately)
The 12 cc feeder (Part # 33010) is for conditioners up to 64,000 grains (2 ft3 of resin).
The 30 cc feeder (Part # 33018) is for larger conditioners over 64,000 grains.
Pro-Res Care Chemicals
Item #45147 Pro-ResCare - Gallon
Item #45148 Pro-ResCare - Quart



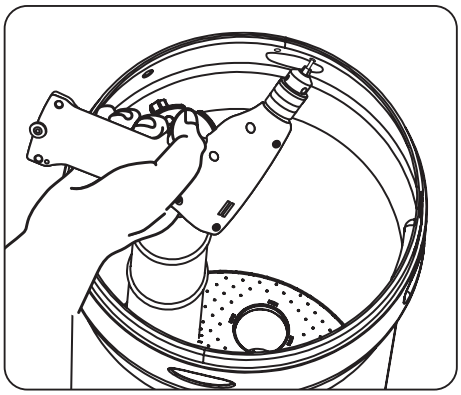
Install Resup Feeder



1. Install the grid and brine well inside the tank.

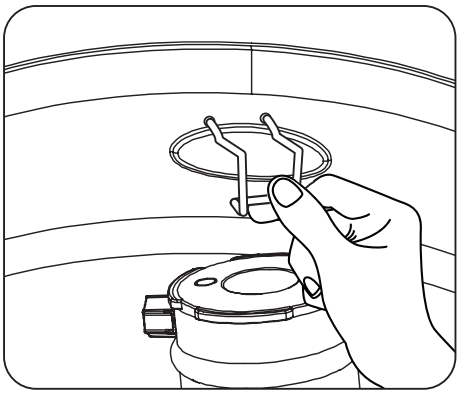


2. Measure 2 inches from the top of the tank beside the oblong molding.

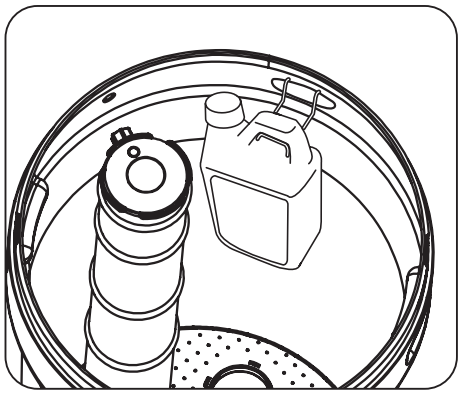


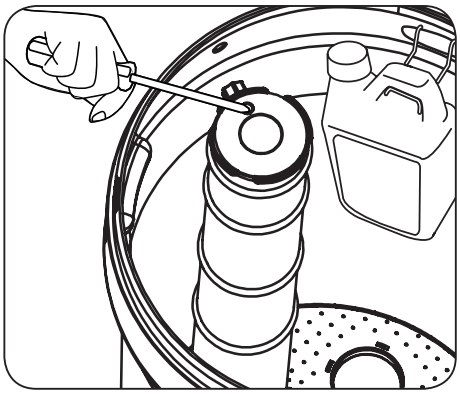
3. Mark the location of the holder and drill.

RES-UP® FEEDER INSTALLATION INSTRUCTIONS (OPTIONAL)

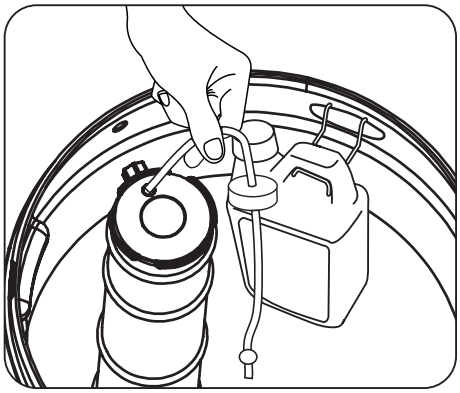


4. IInstall the holder and the Res Care Solution





5. Take off the small hole cover on the Brine Well lid.

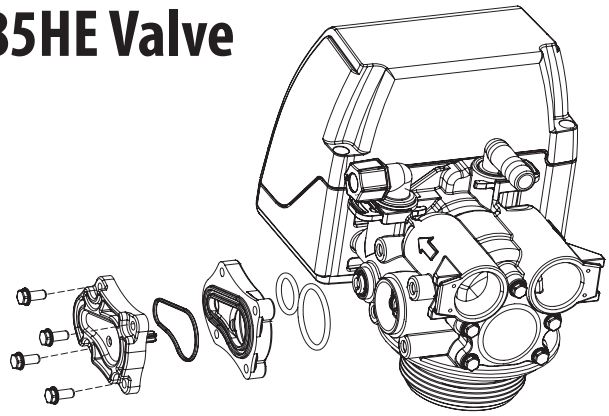


6. Take off the cover of the Res care bottle . Insert the wick, making sure it touches the bottom of the bottle. Insert the other end of the tube completely into the hole in the brine well cap. Automatic feeding will start in a few hours.

PROBLEM WATER INJECTOR KIT

IMPORTANT!: If the water source this water softener is being applied on is not municipal water and contains up to 2.0 mg/l/ppm of ferrous (Clear Water) iron and/or up to .75 mg/l/ppm of manganese, the enclosed **Problem Water Injector Kit** needs to be installed into the control valve following these instructions. You will need to make **3 programing changes.** In the main user settings: **1.** Salt Setting set to Iron/MN. **2.** Water Source set to Well/Other. **3.** Iron & MN capacity requires additional adjustments see instructions below. **FAILURE TO DO THIS WILL RESULT IN UNSATISFACTORY OPERATION OF THIS EQUIPMENT AND VOID ANY IMPLIED PERFORMANCE WARRANTY.**

85HE Valve



Replace injectors with correct number and color corresponding to your equipment size.

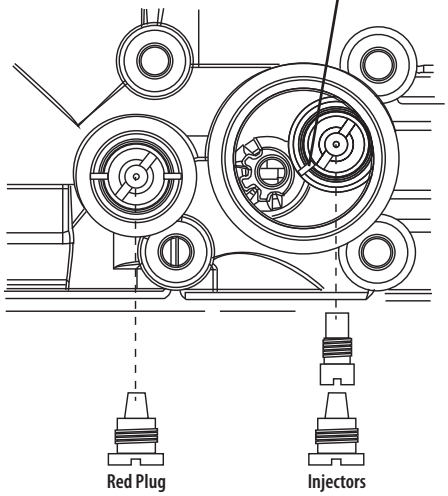
***NOTE**: Remember to properly lubricate ALL O Rings with Silicone Lubricant - supplied.

Size CF	Color
75	#1 WHITE
100	#1 WHITE
150	#1 WHITE
200	#2 BLUE
250	#2 BLUE
300	#3 YELLOW

IMPORTANT

The injector cage must be lined up and inserted properly to avoid crushing when the injector cap is re-installed. Markings on the cage and valve body must line up.

Injector Configuration Upflow

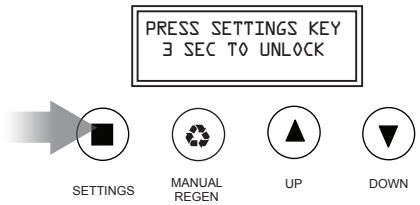


CAUTION!

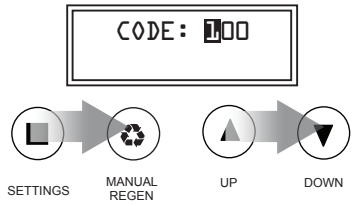
DO NOT over tighten injectors. Snug tight only.

Programming Change Required

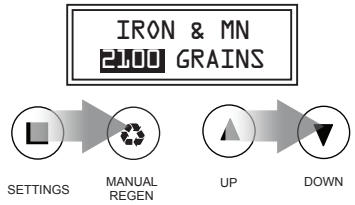
Change the iron/MN capacity settings in the second level programming from 2,500 grains per pound of salt to 2,100 grains per pound of salt.



1. The display will read **"PRESS SETTINGS KEY (■) 3 SEC TO UNLOCK"**.
2. After 3 seconds, the display will beep confirming unlock.



3. Press & hold **DOWN** arrow button.
4. Enter code 100 using **UP** arrow button. Press **MANUAL REGEN** three times to accept code.



5. Press **MANUAL REGEN** to advance past **IRON & MN LBS** to **IRON & MN GRAINS.**
6. Press **DOWN** arrow to change 2500 to 2100. Press **MANUAL REGEN** until past **PROGRAMMING COMPLETE.**

IMPORTANT

This change is necessary to compensate for the injector conversion

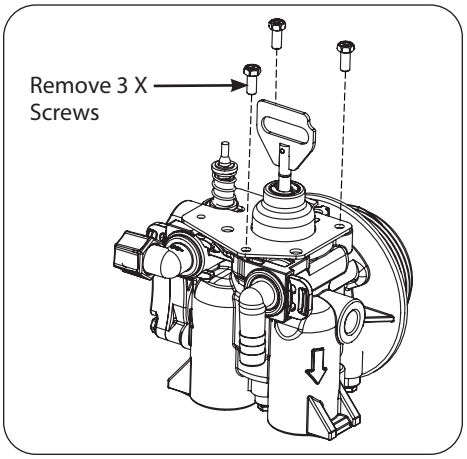
TROUBLE SHOOTING GUIDE

Problem	Possible Solutions
LEVEL 1 **Recommended for the home owner**	**** IMPORTANT **** **before attempting any trouble shooting be sure to test the water or have the water tested. The tests should include the raw water, the hot treated water, and the cold treated water.**
Delivers untreated Water	Bypass is closed bypassing raw water past the unit - Return bypass valve to the open position to service the home - **See page 16**
Delivers untreated Water	Bypass loop in the homes plumbing - Close outlet valve only on conditioner bypass, open nearest conditioned water line, if no water flow then there is not a bypass in the plumbing if there is water flow then there is a hidden bypass in the plumbing (contact plumber)
Delivers untreated water	No salt or low salt level - Fill salt to above the water level in the salt tank low salt will affect the conditioners capacity. - **See Page 23**
Delivers untreated water	Not programmed correctly for current application - Verify programming correct hardness level and amount of people in the home if necessary. - **See page 21**
Excessive water in the salt tank	Refer to Maintenance **Page 24** cleaning the injectors and cleaning the salt tank
Not regenerating automatically, not metering water flow	Check diagnostics for last regeneration - **See page 4** Open nearest conditioned water outlet and check if gallons is counting down, if not counting down see level 2 meter not counting down **
Not using salt	Injectors or injector screen plugged Clean and or replace injectors and screen - **See page 29** Salt Bridged in salt tank - **See page 24**
Not regenerating automatically - Alarms	Caused by a power outage or brown out during regeneration – unplug power for 30 seconds then re-connect if alarm continues - **See Level 2 ****
Unit regenerates but does not use salt	Clean and or replace injectors - **See Maintenance on page 24**
Unit regenerates but does not use salt	**Drain line flow control is plugged** – clean drain line flow control to ensure there are no kinks, or restrictions in the drain line - **See page 33**
Using too much salt or more salt than expected	**Check programming** – is the unit set properly for salt efficiency, is the programming correct for hardness and people.
Alarms after regeneration	Caused by a power outage or brown out during regeneration – unplug power for 30 seconds then reconnect if alarm continues - **See Level 2 ****
Alarms after regeneration	**Corroded or damaged rear circuit** – replace circuit **see page 33**
Discolored water	**Result of city / town supply being contaminated** – check with local authority to see if there has been water main activity in your area if there has been then simply manually regenerate the unit a couple of times in a row to clear the color.
Discolored water	**Iron Bleed through** – if there are small amounts of iron in your raw water supply eventually it will build up in the resin and could result in bleed through. – review settings to compensate for iron in the water - **See page 21** - Contact your dealer or local plumbing supply store to obtain an approved resin cleaner. Use resin cleaner to clean the resin as directed. For permanent maintenance if required add in an automatic feeder - **See page 25**
Excessive pressure loss	**Check unit specifications** - peak or continuous service flow rates maybe exceeding capacity causing the unit to be restrictive due to size - **See page – 4 **** contact your dealer if necessary.
Problem	**Possible Solutions**
LEVEL 2 – **recommended for qualified service technician only**	
Not drawing brine solution	Injectors or injector screen plugged Clean and or replace injectors and screen - **See page 29** Drain line flow control plugged or drain line restricted - **See page 33** Safety float assembly seating prematurely – clean or replace safety float and clean brine tank - **See page 11 and page 24** Loose connections between control valve and safety float allowing unit to draw air - **See Page 12**
No water in salt tank	**Loose connections between control valve and safety float** allowing unit to draw air - **See Page 11** **Refill time not set correctly** for unit size water not coming above the grid plate. **Refill control button plugged** causing no refill – clean and or replace refill control button - **See page 29**

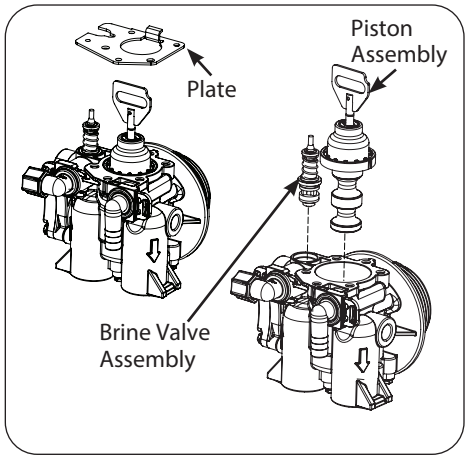
TROUBLE SHOOTING GUIDE

Problem	Possible Solutions
No water in salt tank	**Loose connections between control valve and safety float** allowing unit to draw air - **See Page 11** **Refill time not set correctly** for unit size water not coming above the grid plate. **Refill control button plugged** causing no refill – clean and or replace refill control button - **See page 29**
**** Not regenerating automatically Alarms ****	**Jammed piston** - replace piston and seal assembly - **See page 29** **Defective or damaged circuit** - replace circuit **See page 33** **Loose or corroded connections** between the 2 circuits – reconnect securely or replace - **See page 33**
Conditioner initiates regeneration but alarms after a few seconds	**Drive motor defective** replace motor - **See page 31** **Defective transformer** replace transformer - **See page 19**
Internal valve leak **- Running to the drain constantly**	Replace piston and seal assemblies - **See page 29**
Not drawing brine no problem with injectors or drain	
****Meter not counting down ****	Check diagnostics for last regeneration - **See page 4** Check that meter cable is plugged into the meter assembly - **See page 31** Check that meter cable is reading the meter by moving a fridge magnet (or similar magnet) across it rapidly for a few seconds you should be able to see the gallons change. Be sure there is no debris caught in the the turbine If the meter cable is good, and no debris caught then replace the meter assembly - **See page 31**
Leaking past distributor tube	**Contact Technical services for additional trouble shooting information: 877-288-9888**
Alarms after regeneration or after manual regeneration	**Damaged or missing sensor magnet on brine gear** – replace as required - **See page 36** or send in for repair to nearest office. **Corroded or damaged rear circuit –** replace as required - **See page 33**
Excessive pressure loss	**Check unit specifications -** peak or continuous service flow rates maybe exceeding capacity causing the unit to be restrictive due to size - **See Page – 4 **** contact technical services for clarification if this is suspected – **877-288-9888**
Excessive pressure loss	**Upper distributor cone plugged with foreign material –** remove valve, remove upper distributor cone and clean then replace and put valve back on unit - **See page 14**
Excessive pressure loss	**Chlorine degradation of resin** – excessive amounts of chlorine or chloramine can damage softening resins and break it down causing excessive pressure loss – replace media bed and add in chlorine removal system to protect softener.

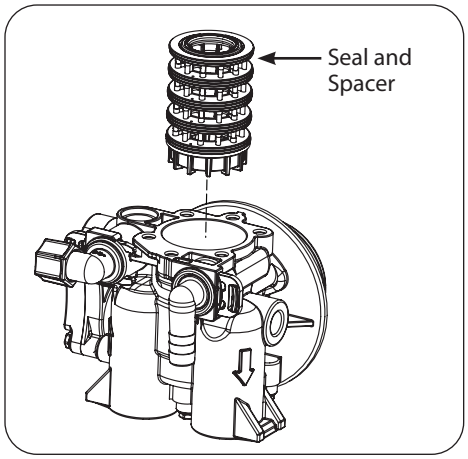
INSPECTION AND REPLACEMENT OF PISTON ASSEMBLY AND SEAL AND SPACER KIT



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 (# 92360) and put back in.

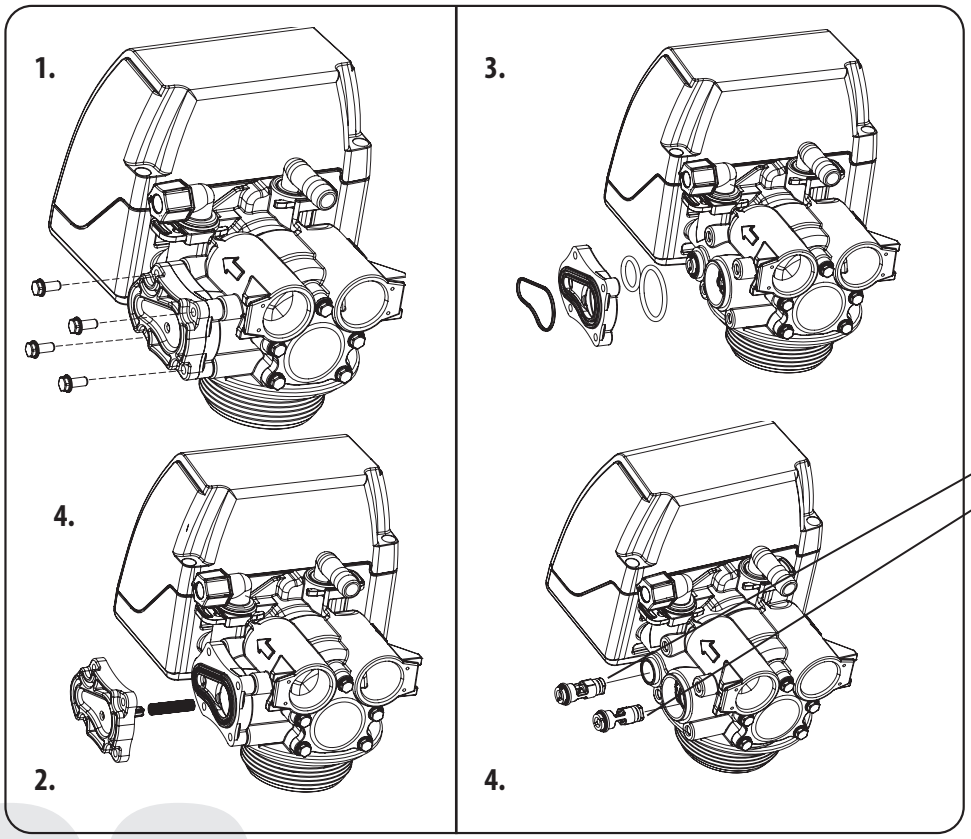


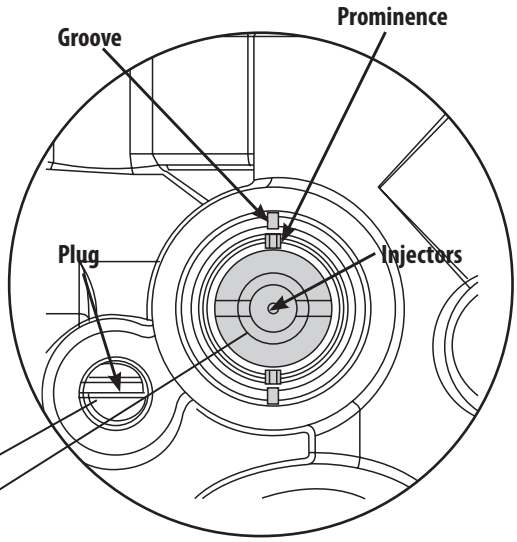
5. Replace piston assembly followed by timer assembly.
6. Replace the piston assembly and reverse following steps in this section

CAUTION!

DO NOT use petroleum based grease products.

CLEAN INJECTOR ASSEMBLY



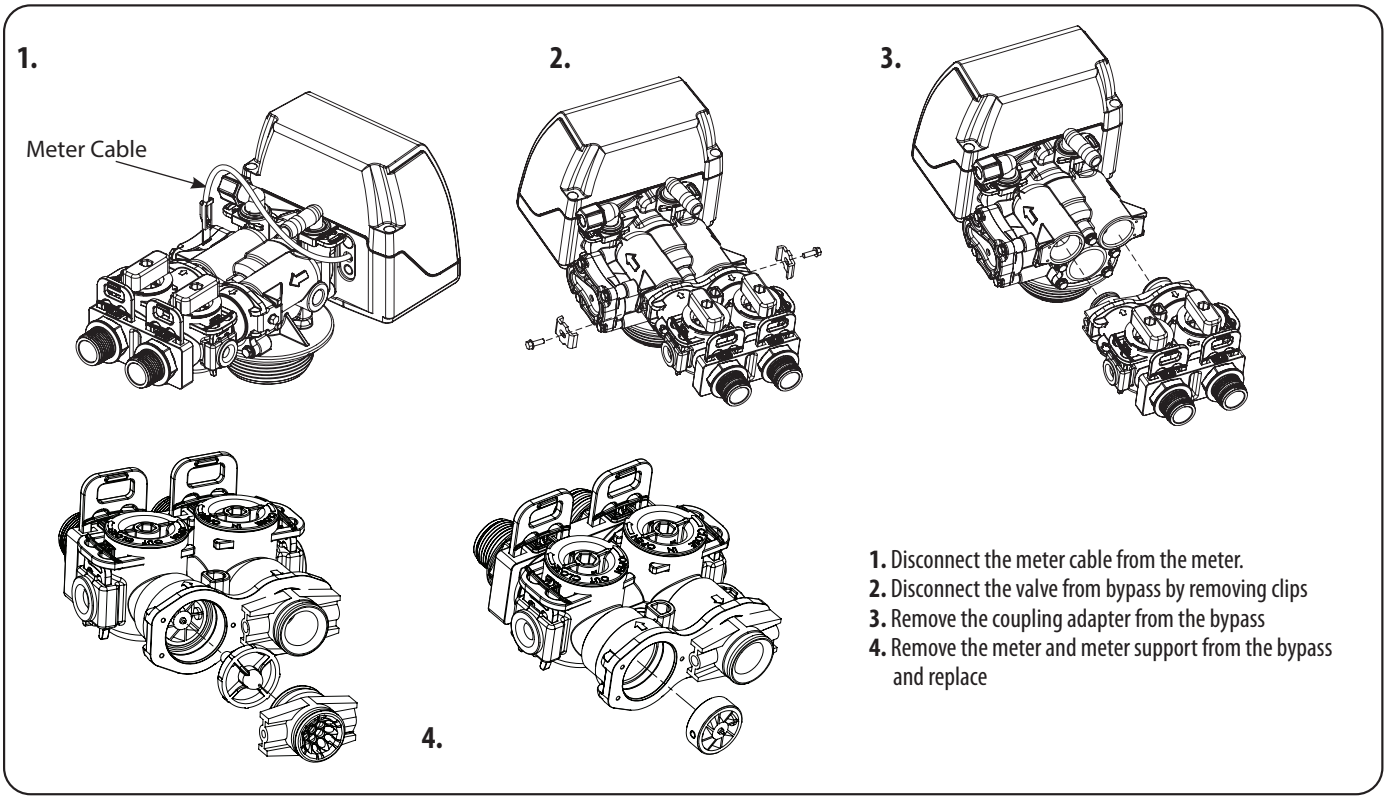


PLEASE NOTE: Make sure the two prominences on the injector are aligned to the grooves on the valve body.

1. Remove four screws of the injector cap.
2. Pull the Injector Cap Out
3. Remove the injector assembly, oring and screen,
4. Clean the injectors and replace cap

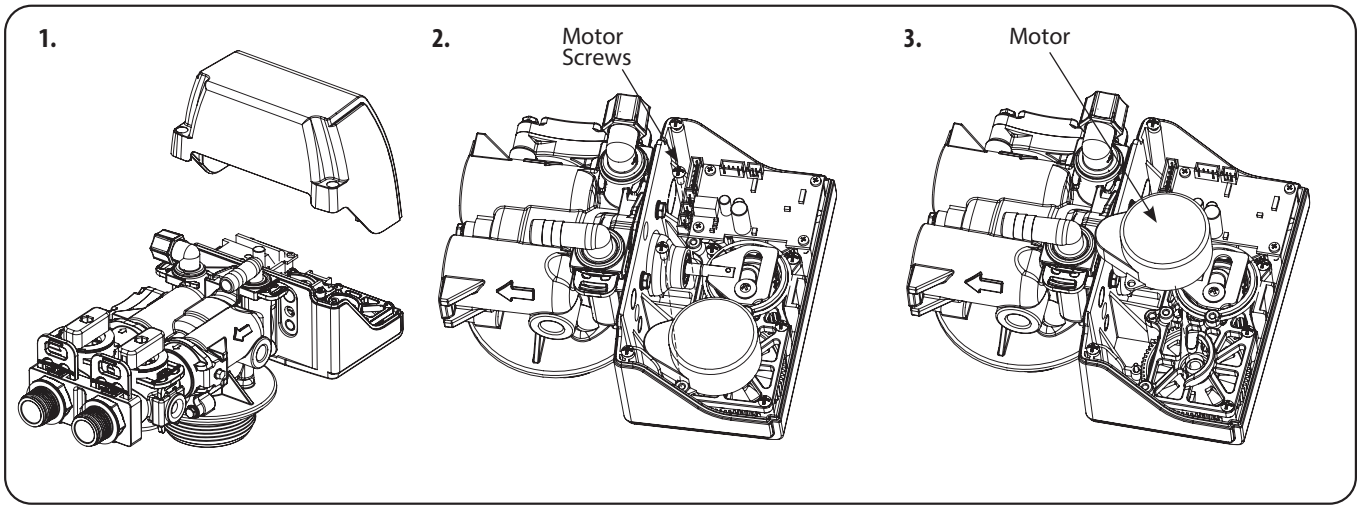
THE FOLLOWING 'REPLACEMENT SECTION', PAGES 31 TO 34 CONTAIN CONTENT THAT SHOULD ONLY BE USED BY A QUALIFIED SERVICE TECHNICIAN:

REPLACE METER ASSEMBLY



1. Disconnect the meter cable from the meter.
2. Disconnect the valve from bypass by removing clips
3. Remove the coupling adapter from the bypass
4. Remove the meter and meter support from the bypass and replace

REPLACE MOTOR

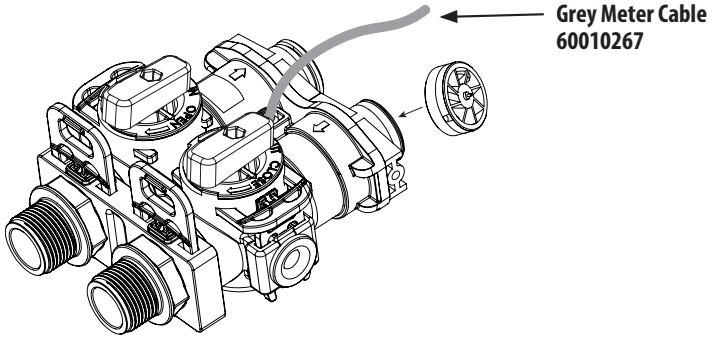


1. Pull the powerhead cover
2. Remove all connections from the circuit board
3. Remove the motor screws and pull the motor out from powerhead

REPLACING THE BYPASS AND METER CABLE

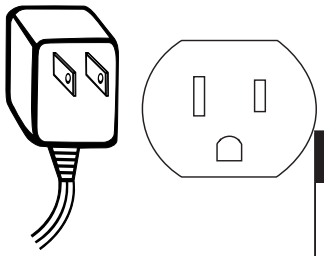
If valve is manufactured before March 20th, 2018, and customer wishes to replace or service impeller on bypass. Customer can order 60010238. If customer wishes to replace to new design, then follow the steps below.

60095101	Bypass comes with Meter and Grey Meter Cable



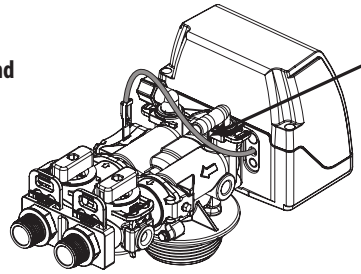
Step 1

Unplug the power from the wall socket.



Step 2*

Remove 2 screws and clips from bypass.



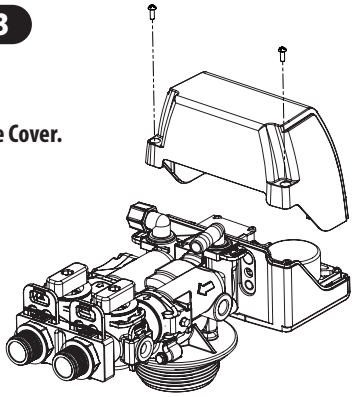
Disconnect the meter cable from the bypass.

***NOTE**

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

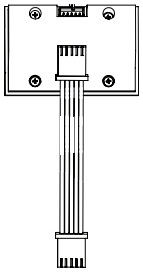
Step 3

Remove Cover.



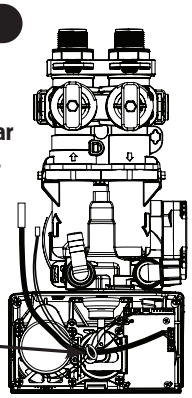
Step 4

Disconnect the cables from the front PCB display.



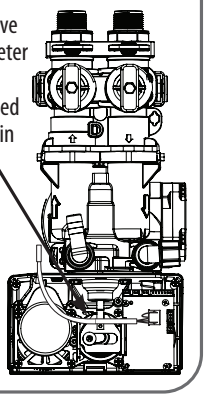
Step 5

Disconnect the cables from the rear PCB display.



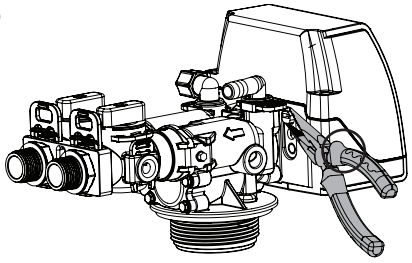
Cut the tie that fastens the wires

Remove the meter cable attached on Main PCB.



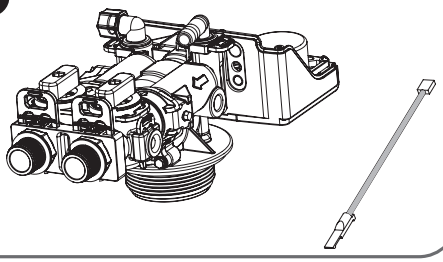
Step 6

Remove strain relief with pliers.

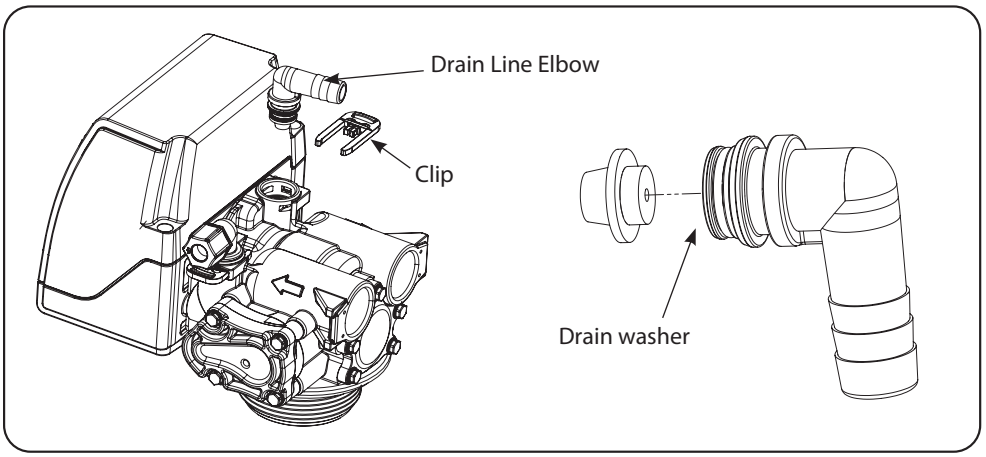


Step 7

Replace the old cable with the new Cable.



REPLACE DRAIN LINE FLOW CONTROL

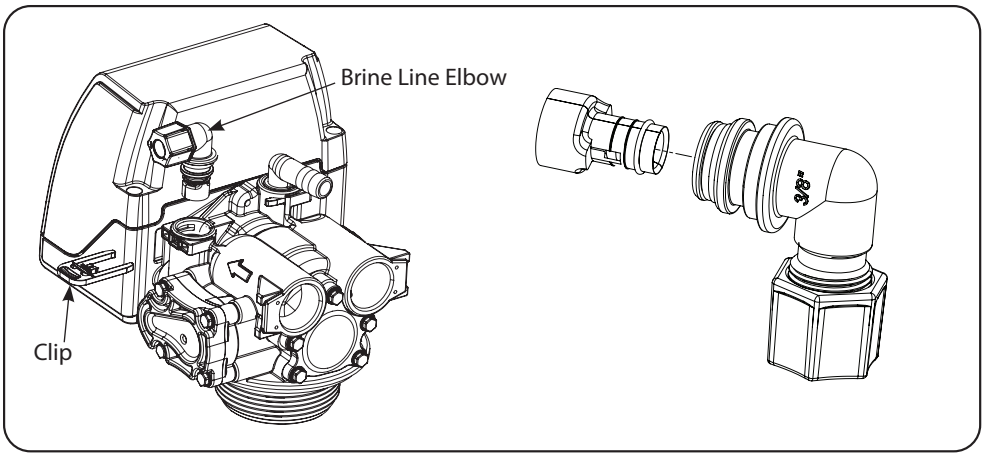


1. Pull the drain line clip and remove the drain line elbow and washer
2. Clean/replace drain line washer

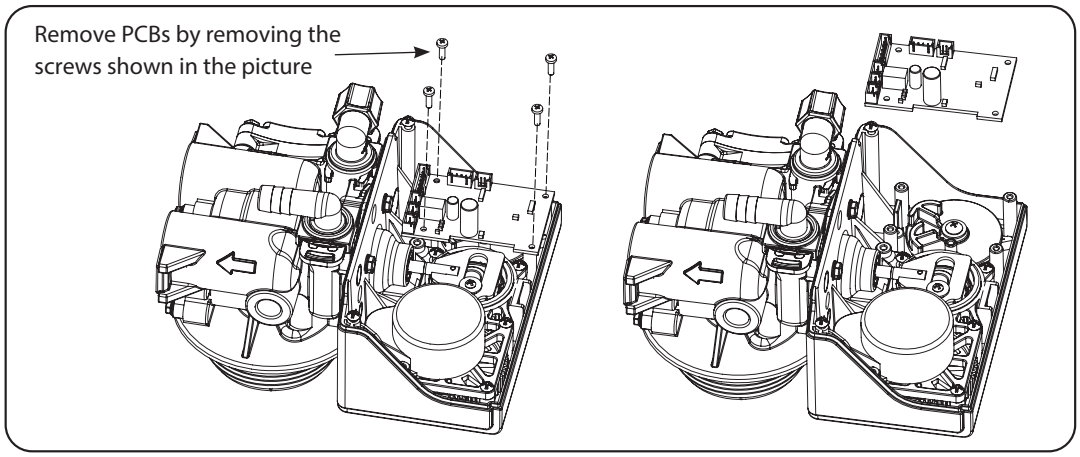
NOTE

Be sure to shut off any bypass line.

REPLACE BRINE LINE FLOW CONTROL

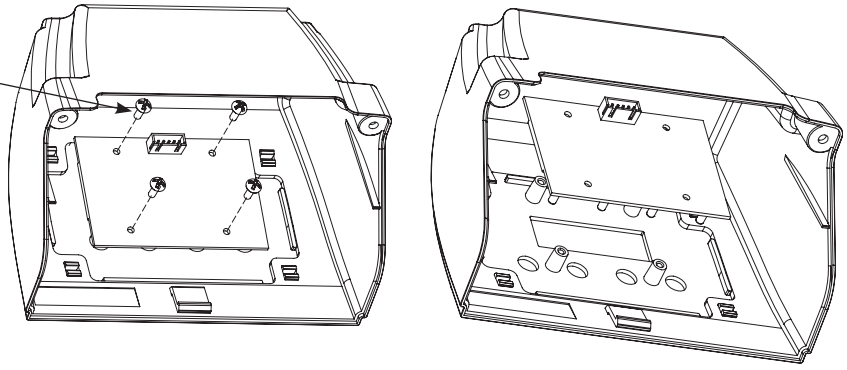


REPLACING PCBS



DISPLAY REPLACEMENT

Remove Display by removing the screws shown in the picture



AFTER SERVICING

1. Reconnect drain line

2. Return bypass or inlet valve to normal in service position. Water Pressure will automatically build in the conditioner

3. Check for leaks at all sealed areas. Check Drain seal with the control in the backwash position

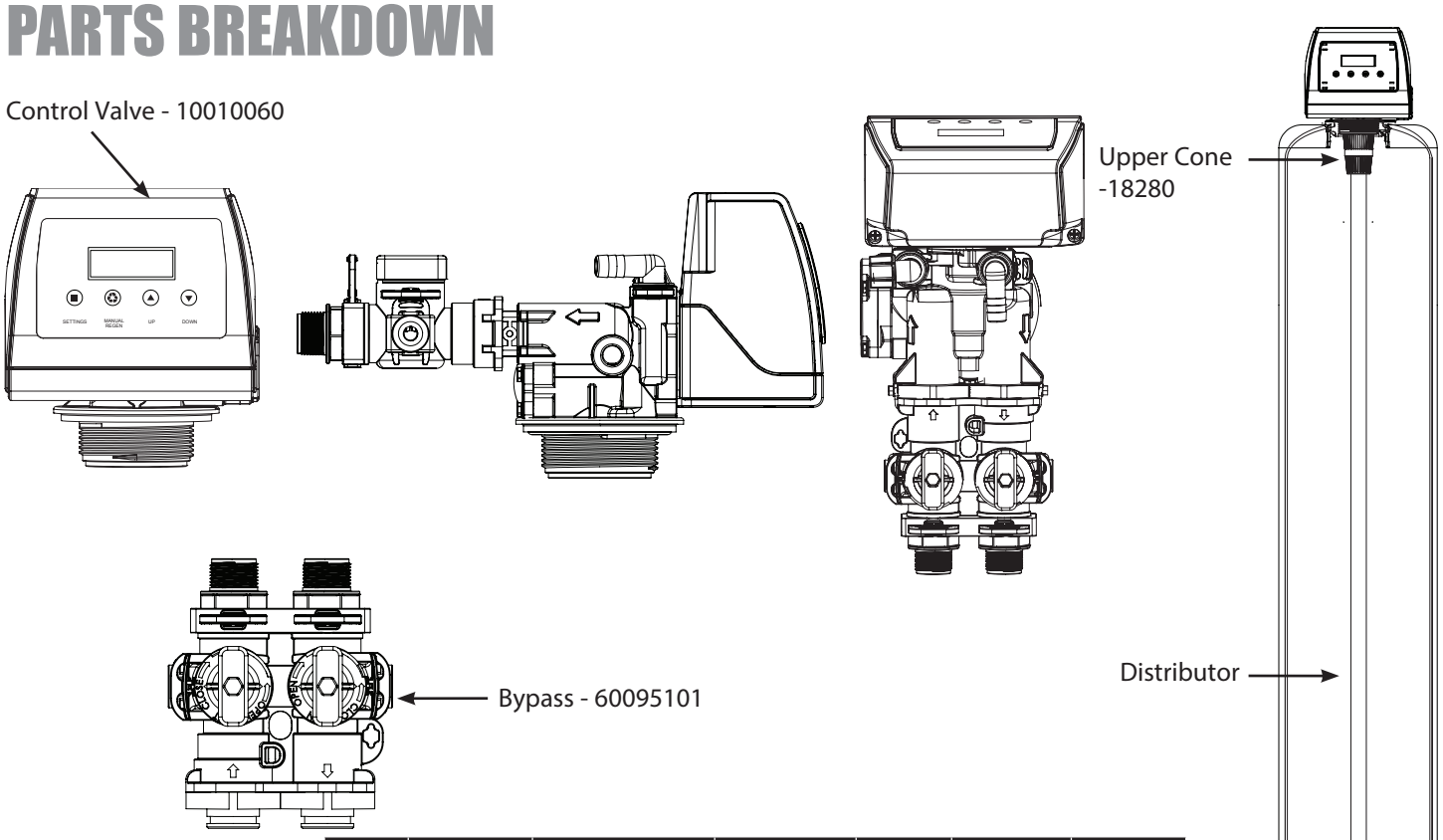
4. Plug electrical cord into outlet

5. Set Time of Day and cycle the control valve manually to assure proper function. Make sure control valve is returned to the In Service position

NOTE

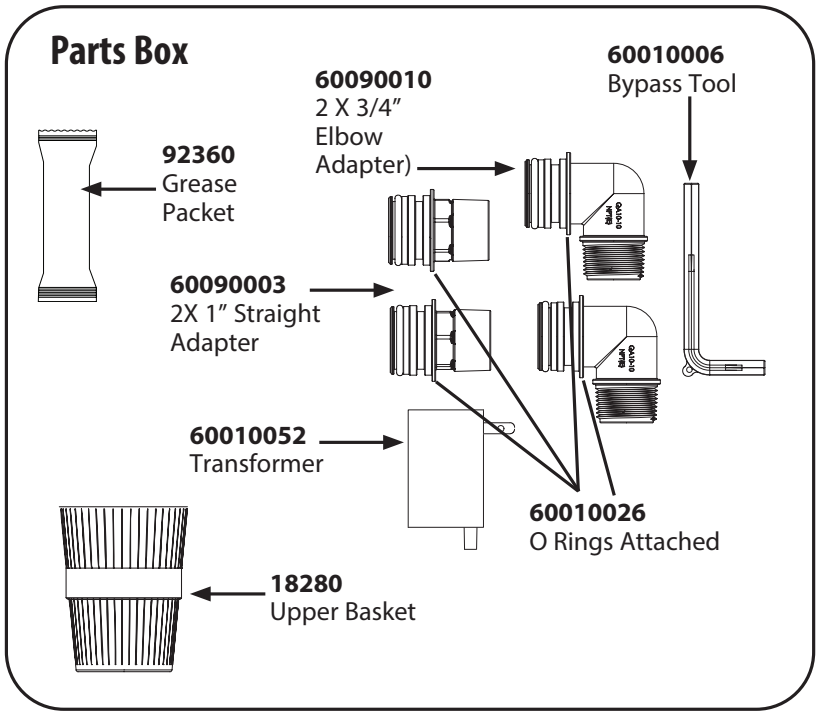
Be sure to shut off any bypass line.

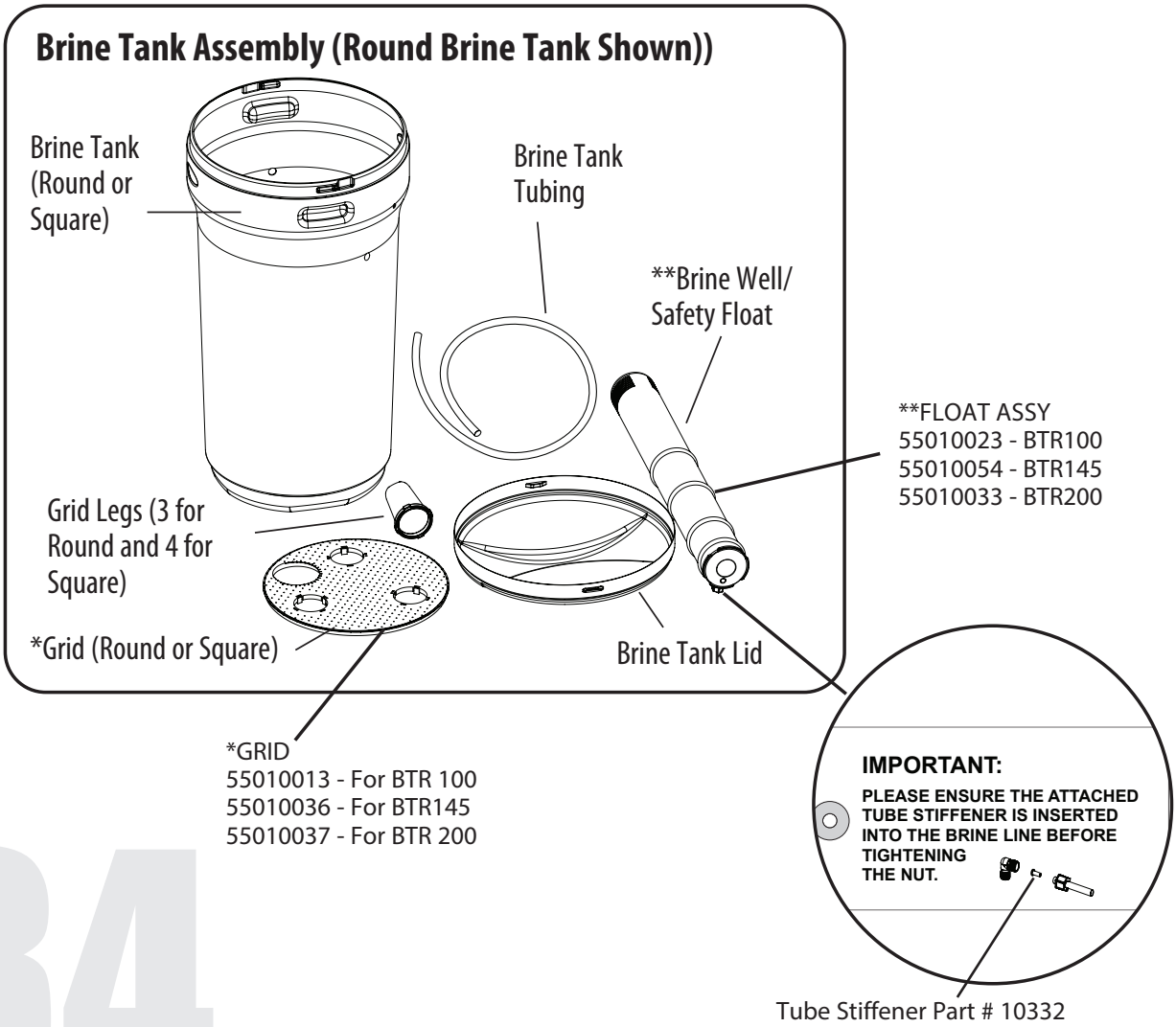
PARTS BREAKDOWN



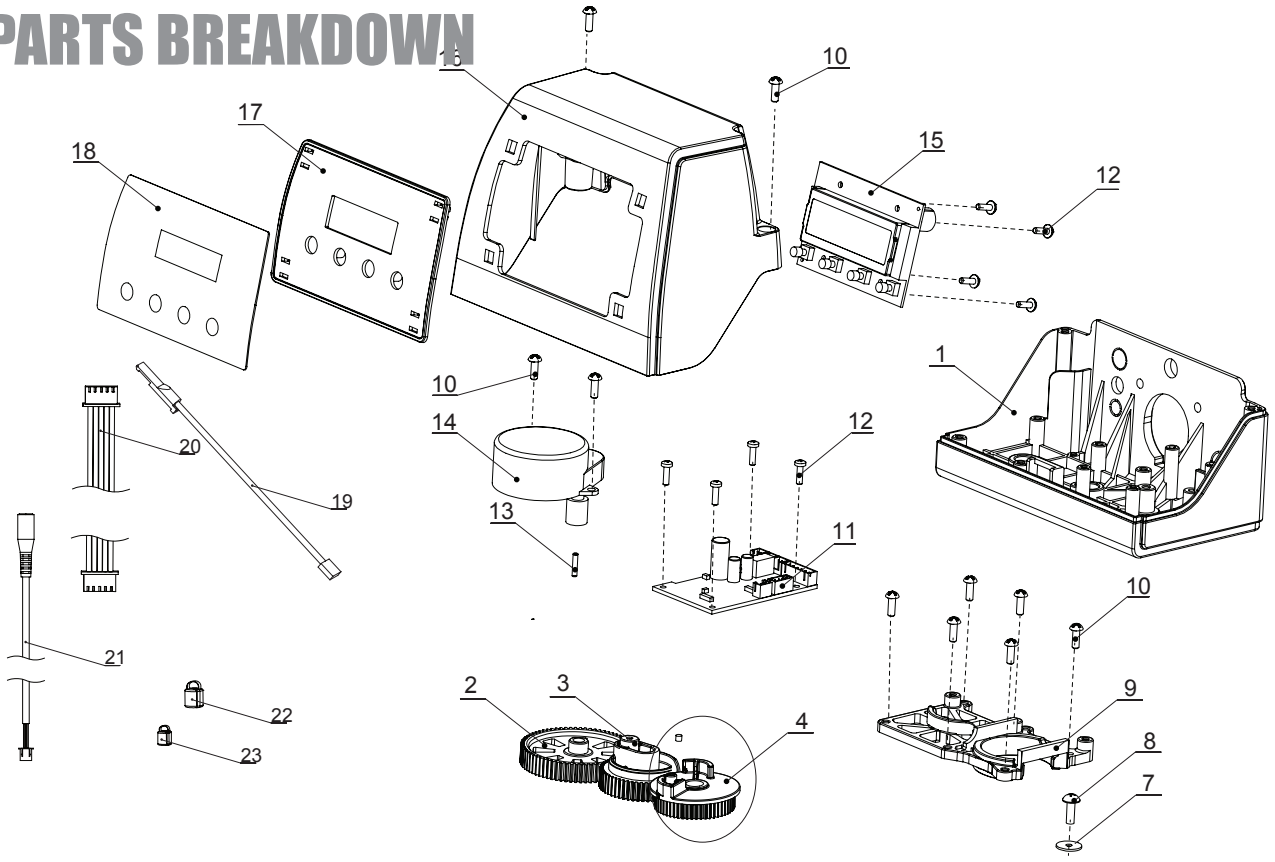
Model	Mineral Tank Size	Tank #	Distributor#	Valve #	Media Bed #	Brine Tank
Softener Upflow (Single Tank)						
75	8 x 44	25020051	50010019	10010060	95600	30020006
100	9 x 48	25020052	50010006		95601	30020006
150	10 x 54	25020053	50010005		95606	30020006
200	12 x 52	25010058	50010005		95609	30020010
250	13 x 54	25010064	50010010		95610	30020010
300	14 x 65	25030001 and 50040039	50010010		95604	30020032
75C	9 x 35	25010028	50010020		95600	N/A
100C	10 x 35	25010043	50010020		95601	N/A

PARTS BREAKDOWN





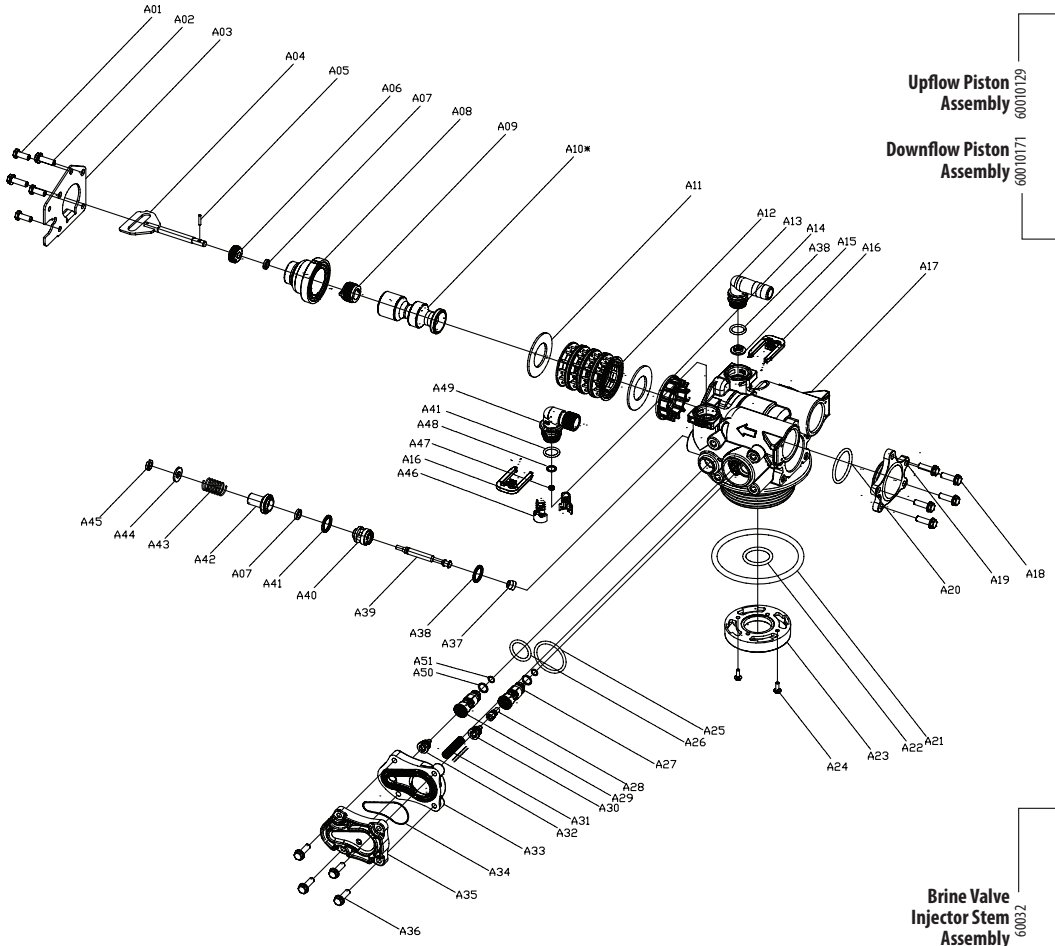
PARTS BREAKDOWN



Power head parts list

No.	Part #	Description	Qty
23	60010331	Power Cable Clip	1
22	60010330	Meter Cable Clip	1
21	60010124	Power Cable	1
20	60010240	Display-PCB cable	1
19	60010267	Meter Cable, Grey	1
18	80080164	485HE Face Label	1
17	60095662	Bnt485 Display Plate(White)	1
16	60010309	Bnt485 Housing(White)	1
15	60021979	Bnt85HE Display (After Aug.15, 2019)	1
14	92393	Bnt85 Motor	1
13	60095658	Motor Pin	1
12	60010673	Screw-ST2.9×10	8
11	60021982	Main Pcb, (DF) (After Aug. 15, 2019)	
	60021981	Main Pcb, (UF) (After Aug. 15, 2019)	
10	60010574	Screw-ST3.5x13	10
9	60010573	Bnt85HE Mounting Plate	1
8	60010575	Screw-4.2×12	1
4	60095102	Gear, Brine, 85HE(UF)	1
	60095103	Gear, Brine, 85HE(DF)	
3	92391	Main Gear, 85HE	1
2	92389	Bnt85 Drive Gear	1
1	60095077	Bnt485 Base(White)	1
	60010371	Complete Powerhead,485UF	
	60010372	Complete Powerhead,485DF	
	60010052	Transformer, 12V	

PARTS BREAKDOWN



Upflow Piston Assembly 60010129

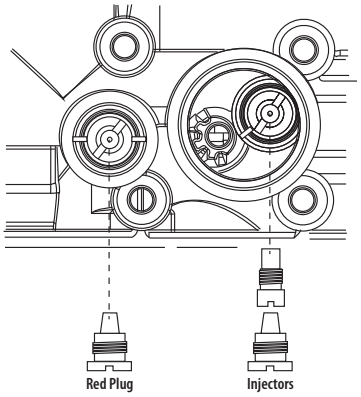
Downflow Piston Assembly 60010171

Valve Body Parts List

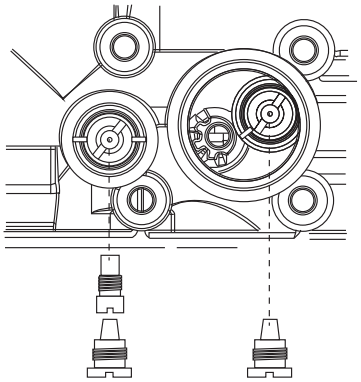
No.	Part #	Description	Qty
A01	60010075	Screw-M5x12(Hexagon)	3
A02	60010076	Screw-M5x16(Hexagon With Washer)	2
A03	60010645	End Plug Retainer	1
A04	60095056	BNT85HE Rod	1
A05	60010647	Piston Pin	1
A06	60010344	BNT85HE Quad Ring Plug Cover	1
A07		Quad Ring	2
A08		BNT85HE End Plug	1
A09	60095058	BNT85HE Piston Retainer	1
A10	60095075, 60095059	BNT85HE Piston(Up flow and Downflow)	1
A11	13242-02	Seal	5
A12	14241	Spacer	8
A13	60010229	Drain Fitting-B	1
A14	60095060	BNT85HE Spacer	1
A16	60010069	Secure Clip-s	2
A17	60095061	BNT85HE Valve Body	1
A18	60010596	Screw-M5x12(Hexagon With Washer)	5
A19	60095063	BNT85 End Cover	1
A20	60095614	O-Ring-C30×2.65	1
A21	60010077	O-Ring-C78.74×5.33	1
A22	60010080	O-Ring-C25×3.55	1
A23	60010599	Valve Bottom Connector	1
A24	60010099	Screw-ST2.9X13(Large Washer)	2
A25	60010190	O-Ring-C32×3	1
A26	60010189	O-Ring-C18×3	1
A27	60010174	BNT85HE Injector Fixed Sleeve	1
A29	60010175	Injector Plug Body	1
A31	10227	Injector Screen	1
A32	60095076	Injector Plug	1
A33	60010193	BNT85HE Injector Cover Body	1
A34	60010195	O-Ring-C40×2.65	1
A35	60010194	BNT85HE Injector Cover Cap	1
A36	60010196	Screw-M5×25(Hexagon with Washer)	4
A37	60032	Seal Mat	1
A38		O-Ring-C12×2	3
A39		Injector Stem	1
A40		Injector Spacer	1
A41		O-Ring-C12.5×1.8	1
A42		Injector Cap	1
A43		Injector Screen	1
A44		Spacer Washer	1
A45		Retaining Ring	1
A46	60010173	BNT85HE BLFC Fixed Sleeve	2
A47		BLFC(optional)	1
A48	60010188	O-Ring-C8×1	1
A49	60010172	BNT85HE Brine Line Elbow	1
A50	60010186	O-Ring-C12.5×1.5	2
A51	60010187	O-Ring-C8×1.5	2
A52	60010191	Ball, Seal	

Brine Valve Injector Stem Assembly 60032

Injector Configuration Upflow



Injector Configuration Downflow



Item #s For All Injector Assemblies and Brine Line and Drain Line Washers

Injector Assemblies A28 and A30

Part #	Part Description
60010110	BLFC BUTTON #2 0.3GPM A32
60010082*	BLFC BUTTON #2 0.7GPM A32
60010128	BLFC BUTTON 0.2GPM
60010601	INJECTOR SET #0000 BLACK THROAT
60010602	NOZZLE #0000 BLACK THROAT
60010603	INJECTOR SET #000 GREY THROAT
60010604	NOZZLE #000 GREY THROAT
60010605	INJECTOR SET #00 VIOLET THROAT
60010606	NOZZLE #00 VIOLET THROAT
60010607	INJECTOR SET #0 RED THROAT
60010608	NOZZLE #0 RED THROAT
60010609*	INJECTOR SET #1 WHITE THROAT
60010610*	NOZZLE #1 WHITE THROAT
60010611	INJECTOR SET #2 BLUE THROAT
60010612	NOZZLE #2 BLUE THROAT

A47 · 60010127 · 60010126 · 60010035 · 60010034 · 60010033 · 60010032

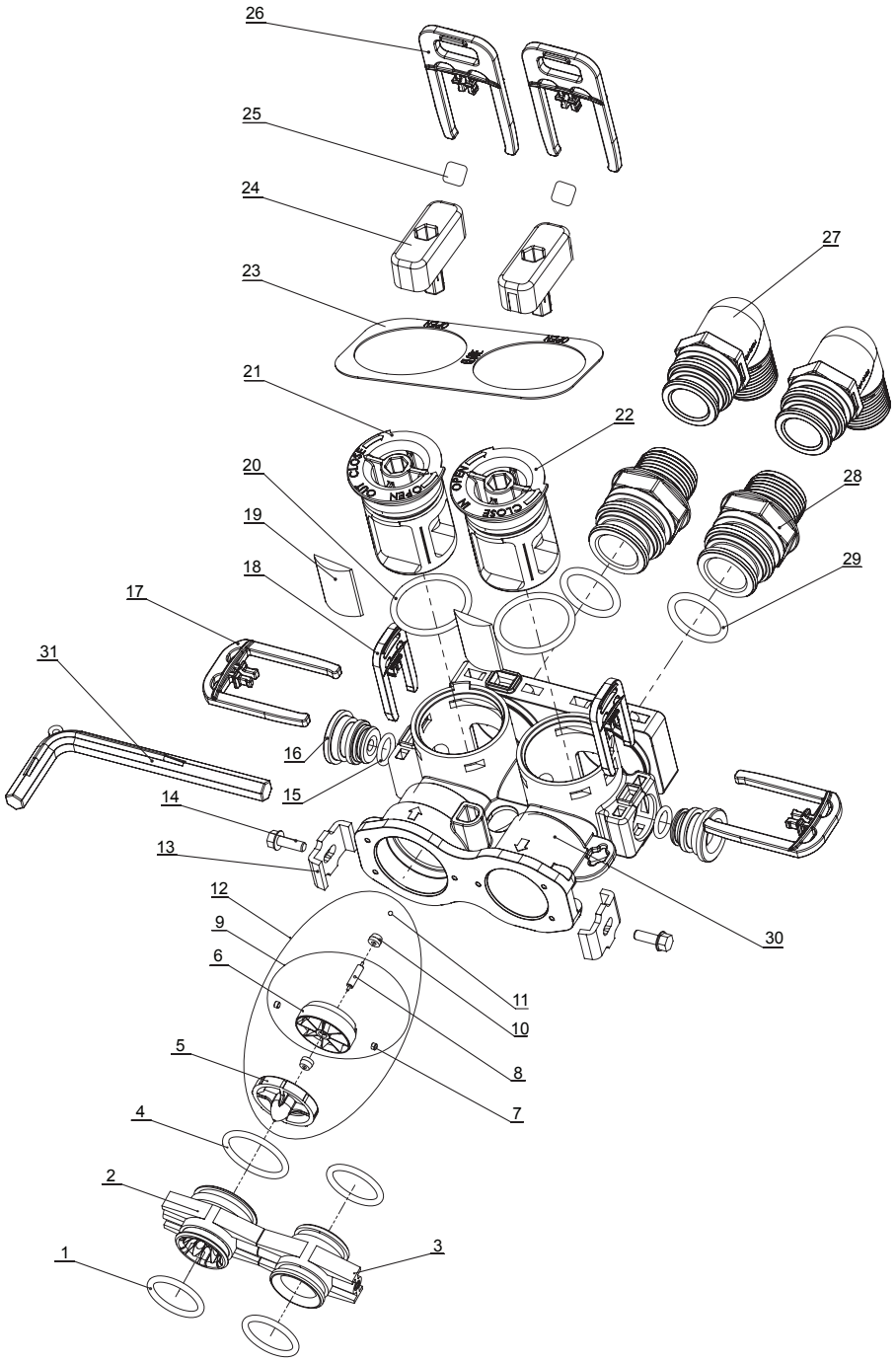
*** Default**

Injector Assemblies A28 and A30

Part #	Part Description
60010613	INJECTOR SET #3 YELLOW THROAT
60010614	NOZZLE #3 YELLOW THROAT
60010685	INJECTOR SET #4 GREEN THROAT
60010686	NOZZLE #4 GREEN THROAT
60010131	DLFC #1 1.5GPM
60010132	DLFC #2 2.0GPM
60010133	DLFC #3 2.4GPM
60010135	DLFC #5 3.5GPM
60010041	DLFC #6 4GPM
60010169	DLFC #7 5GPM
60010136	DLFC #A 5.0GPM
60010137	DLFC #B 7.0GPM
60010138	DLFC #C 11.0GPM

60010031 · 60010686 · A15

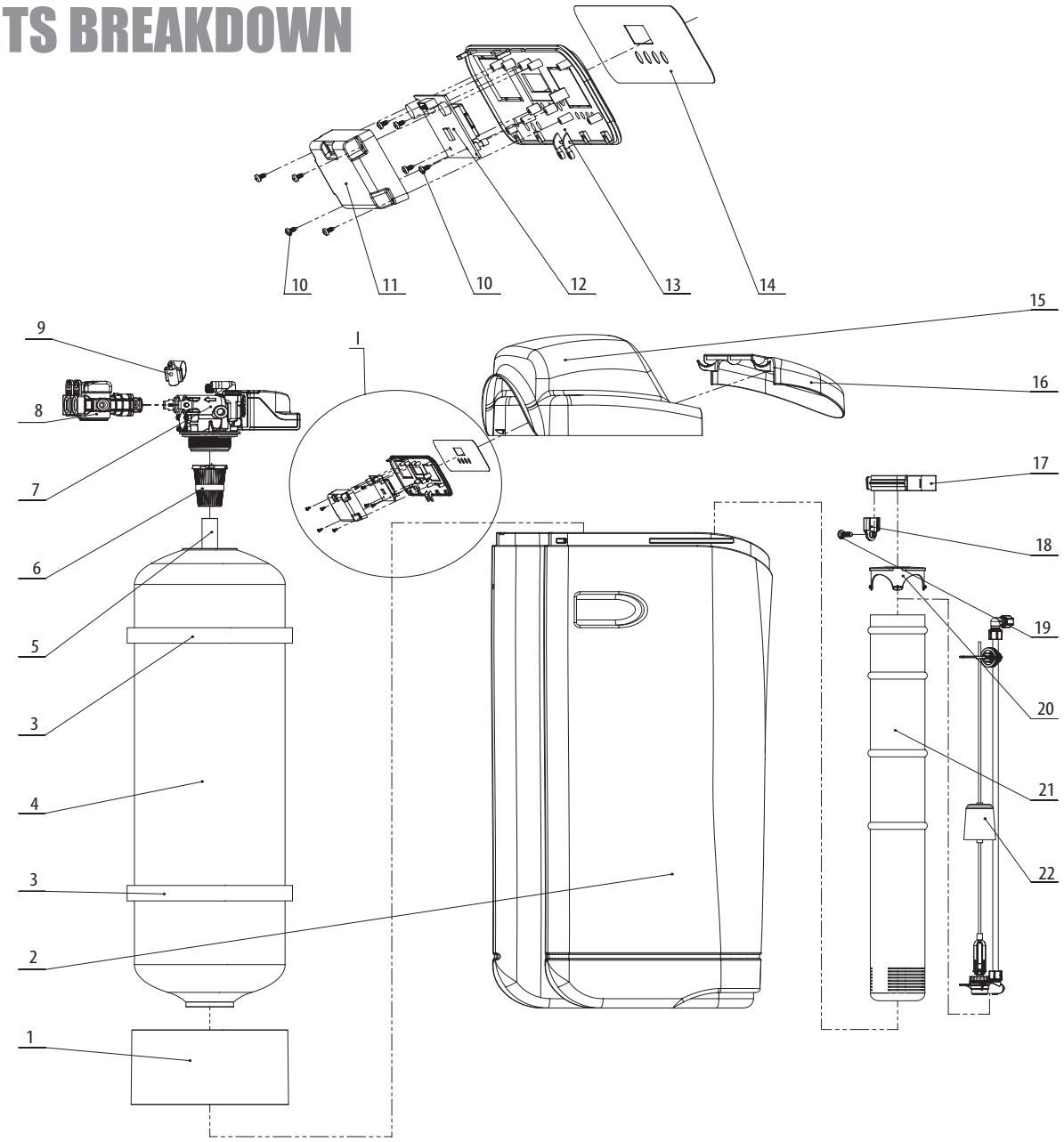
PARTS BREAKDOWN



Bypass Parts List

No.	Part #	Description	Qty
32	60010267	Grey Meter Cable cc	1
31	60010006	Bypass Tool	1
30		063 Bypass Body	1
29	60010026	O-ring on Inlet and Outlet	2
28	60010019	Straight 1" NPT Inlet and Outlet	2
27	60010023	Elbow 3/4" NPT Inlet and Outlet	2
26	60010025	Secure Clip Inlet and Outlet	2
25	60010740	Direction Indication Label	2
24	60010740	Bypass Knob	2
23	60010740	Bypass Indication Plate	1
22	60010740	Bypass Shaft(Inlet)	1
21	60010740	Bypass Shaft(Outlet)	1
20	60095614	O-ring(30×2.65)	2
19	60010740	Shaft Seal	2
18	60010069	Plug Clip(Red)	2
17	60010740	Shaft Clip(Red)	2
16	60010209	Bypass Plug	2
15	60010044	O-ring(12×2)	2
14	60010126	Screw M4×12	2
13	60010046	SS Clip	2
12	*60010308 * Manufactured date After March 20th 2018 60010238 for before March 20th 2018	Meter Spare Parts	1
11		Bush Ball	1
10		Bush	2
9		Meter Assy	1
8		Impeller Pin	1
7		Magnet	2
6		Impeller	1
5		Impeller Support	1
4	60010102	O-ring(27×3)	1
3	60010079	Valve-Bypass Connector(Inlet)	1
2	60010101	Valve-Bypass Connector(Outlet)	1
1	60010562	O-ring(23×3)	3

PARTS BREAKDOWN



Cabinet Parts List

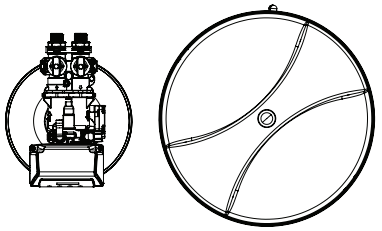
No.	Part #	Description	Qty
22	55010023	0435 Brine Valve Assembly	1
21	55010010	0435 Brine Well	1
20	55020002	4" Brine Well Cap	1
19		Plastic Screw M8×20	1
18		Hoop Clinch	1
17	60010362	4" Brine Well Clamp	1
16	85010132	Salt Lid(CS5)	1
15		High Cover(CS5)	1
14	80080015	Control Plate Label	1
13	80080021	Control Plate(CS5)	1
12	60010180	85HE Display Board	1
11		Transparent Back Cover	1

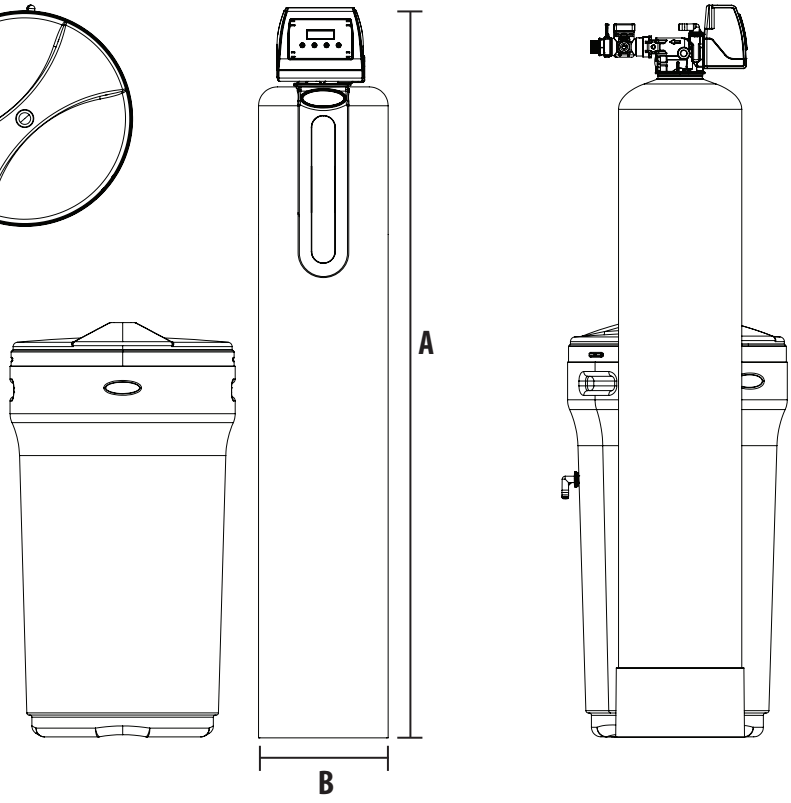
No.	Part #	Description
10		Screw 2.9×6.5
9	302171	Drain Line Clamp
8	60095097-1	Canature Bypass Valve C/W Me
7	10010061	Control Valve Assembly(CS5
6	18280	Top Cone
5	50010020	D-Tube(35")
4	205020019	Tank 09x35 (No Base) Model 7
	205020020	Tank 10x35 (No Base) Model 1
3		Pressure Tank Protection 9"
		Pressure Tank Protection 10
2	25020019	TANK ASSY CS5H-1035
	25020020	TANK ASSY CS5H-1035
1	50010011	9" Tank Base
	50010013	10" Tank Base

SYSTEM DIMENSIONS

Twin Tank Model

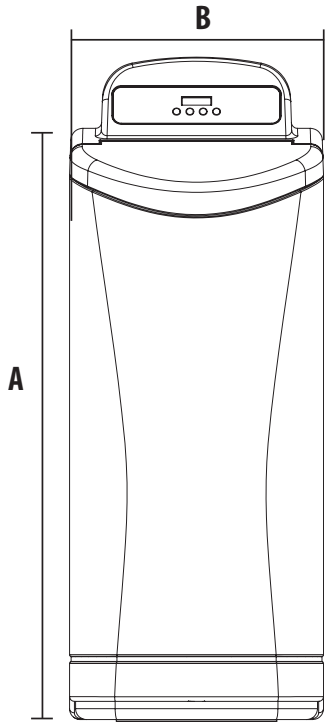
	A	B
0844	49.98″	8″
0948	53.98″	9″
1054	59.98″	10″
1252	57.98″	12″
1354	59.98″	13″
1465	70.98″	14″

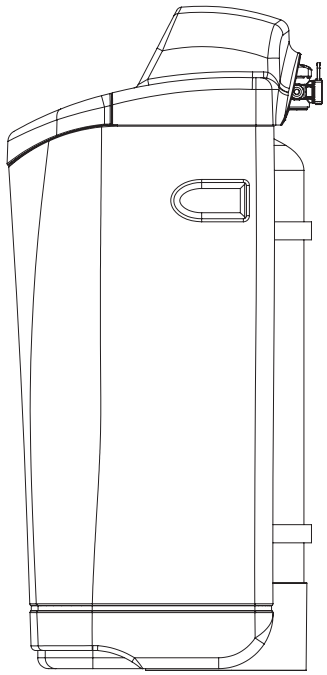




	75C	100C
A	43.31″	43.31″
B	16.54″	16.54″

Cabinet Model



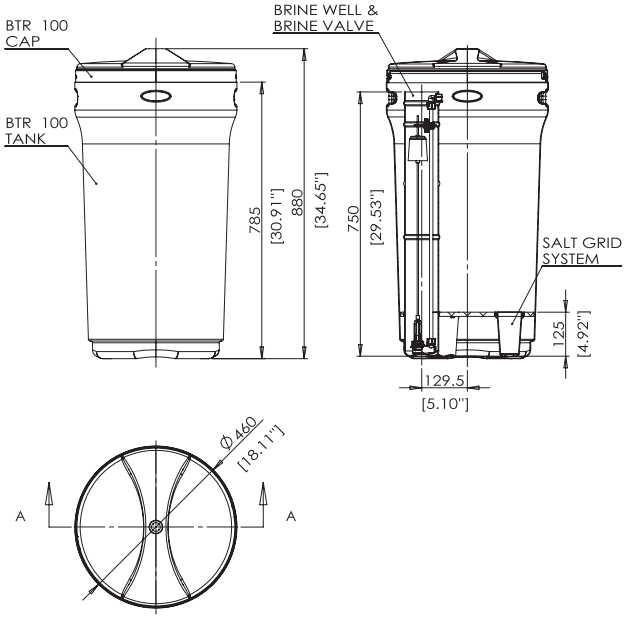


BRINE TANK DIMENSIONS

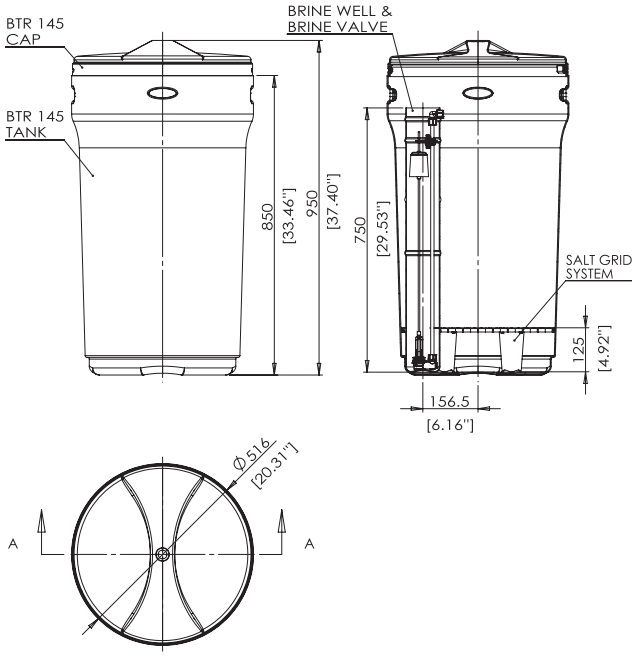
Model	Liquid Volume		Tank Dimensions (inches)	Salt Capacity	
	US Gal	Liters	L x W x H	Lbs	Kg
Brine Tanks					
BTR-100	29.5	111.5	18.1 x 34.7	270.0	122.2
BTR-145	42.3	159.7	20.3 x 37.4	385.0	174.2
BTR-200	53.0	200.3	23.0 x 40.5	700.0	316.7

* All brine tanks come with salt grid, safety float and brine well

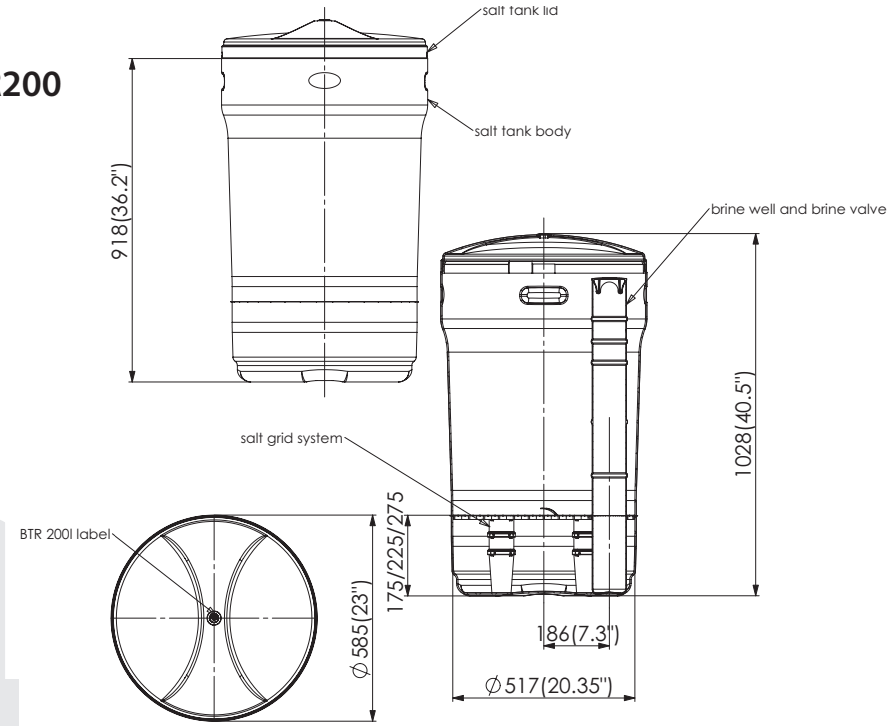
BTR100



BTR145



BTR200



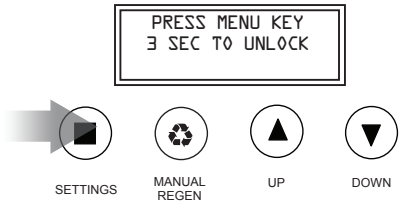
LEVEL 2 PROGRAMMING (OPTIONAL SETTINGS):

NOTE

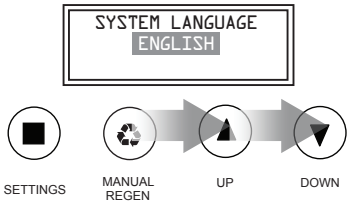
Under normal use there is no need to change the settings under level 2 programming. You can, however, change the default settings if required.

CAUTION: DO NOT CHANGE LEVEL 2 SETTINGS WITHOUT CONSULTING A CANATURE WATERGROUP TECHNICIAN (1-877-288-9888). Wrongly changing the settings can result in malfunction of the unit.

When the Level 2 Master Programming Mode is entered, all available option setting displays may be viewed and set as needed. Depending on current option settings, some parameters cannot be viewed or set.



The display will read Press **SETTINGS ■ for 3 sec to unlock".** After 3 seconds, the display will beep confirming unlock



Press and hold ▲ ▼ ***together*** for three seconds to enter Level Two Master Programming

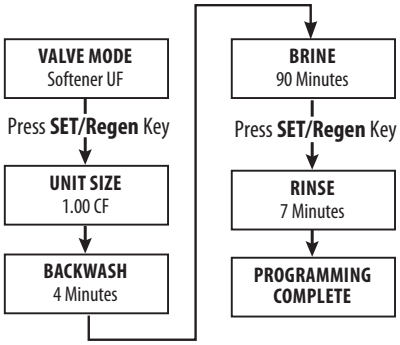
To change any setting under level 2 programming:

- Press the **MANUAL REGEN** ♻ key button and the value flashes
- Press the **UP** ▲ or **DOWN** ▼ keys to change the value
- Press the **MANUAL REGEN** ♻ again to accept value
- Press the **DOWN** ▼ key to advance to the next value

MASTER PROGRAMMING

Press **Up** and **Down** Button for 5 seconds

Press **MANUAL REGEN** Button and and change value using **Up** and **Down** Buttons

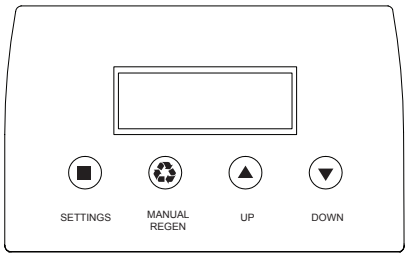


Key Pad Setting

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

MANUAL REGEN This function is to initiate an immediate or delayed manual regeneration.

DOWN / UP Increase or decrease the value of the settings while in the programming mode.



Main Valve Settings	
Meter Ratio	METER RATIO AFTER MAR 20,2018 - 5.68 METER RATIO BEFORE MAR 20,2018 - 8.00
Service Delay	3.0
Backwash Delay	7.0
Brine Delay	4.0
Rinse Delay	5.0
Refill Delay	4.0

SOFTENER UF (UP FLOW)

This mode is for the operation of an up flow regenerating softener. The amount of salt used each regeneration is proportional to the capacity remaining in the system. A preset amount of brine (Default is 70%) is prepared after a normal regeneration. Just before a regeneration is scheduled, fresh water is added to the brine tank to "top off" the already prepared 70% of brine. The total amount of brine used to regenerate the system is proportional to the capacity remaining.

I.e. If the system has 10% capacity remaining, then only 90% of the salt dosage is needed to restore ca-pacity to 100%. 70% of the brine is already prepared (and fully saturated) so 20% is added so that the total of 90% is prepared.
When a standard regeneration is started, the valve will move first to the refill position to add water to the brine tank. The amount of water added is equal to the calculated refill time for the salt dosage X Brine Tank Refill%. The valve then will return to service for the amount of Brine Make Time. When this is com-plete the valve will move to the Brine position.

The regeneration sequence is 1. BRINE MAKE (REFILL), 2. BRINE, 3. BACKWASH, 4 RINSE, 5. RE-FILL.

LANGUAGE

Current available language is English.

UNITS

Current unit of measure is gallons. Metric units may become available at a later date.

EFFICIENCY & CAPACITY SETTINGS

There are 3 settings to choose in Settings. High Efficiency, Standard Capacity, and Iron & Manganese. The values for these settings are set in the Factory Options and are used to calculate the system capacity and refill time.

REFILL

This value should match the BLFC flow washer. It is used to calculate the refill time.

BRINE MAKE TIME

This value is the time allowed for the salt to dissolve in the water to create the brine solution. The value is the amount of time ahead of the scheduled regeneration time that the water will be added to "top off" the brine already prepared in the brine tank.

BRINE PRE-FILL%

This is the percentage of the water that will be added to the brine tank after a regener-ation. The default is 70%. The remaining amount of water will be added just prior to the regeneration and will be proportional to the amount of capacity left in the system.

DAILY RESERVE

This value is used to calculate the reserve capacity. Reserve Capacity = No. People x DAILY RESERVE.

DAY OVERIDE

This setting can be used to add number of days to over ride the meter. As an example if the setting is 5, the system will regenerate after 5 days even if there is still gallons capacity remaining. OFF will cancel this feature.

RINSE OVERIDE

This setting can be used to skip the RINSE cycle. As an example if the setting is 10, the system will skip 10 rinse. OFF will cancel this feature.

BW OVERIDE

This setting can be used to skip the back wash cycle. As an example if the setting is 10, the system will skip 10 back wash cycles. The setting will only work if the WATER TYPE is set to CITY for clean water applications.

FORCED REGEN

When set to ON, the system will start a forced regeneration when the remaining capacity reaches 3%. The regeneration consists of 8 minutes of Brine and 12 minutes of Rinse.
The 20 minutes regeneration will restore up to 33% of the system capacity. At the next regeneration time (2:00 AM), the system will automat-ically perform a standard regenera-tion to restore ca-pacity to 100%.

VACATION MODE

When set to ON, the system will perform a 10 minute back wash and 10 minute rinse if there is no water flow detected after 7 days. The regeneration will occur at the scheduled REGEN TIME.

MASTER PROGRAMMING

85HE UPFLOW SOFTENER -Programming									
MASTER SETTINGS	**PRESS & HOLD**	♻ ▲ ▼							
UNIT SIZE	**HE-75C**	**HE-100C**	**HE-75**	**HE-100**	**HE-125**	**HE-150**	**HE-200**	**HE-250**	**HE-300**
VALVE TYPE	UPFLOW	UPFLOW	UPFLOW	UPFLOW	UPFLOW	UPFLOW	UPFLOW	UPFLOW	UPFLOW
SOFTWARE VER.	Default	Default	Default	Default	Default	Default	Default	Default	Default
METER RATIO AFTER MAR 20,2018	5.68	5.68	5.68	5.68	5.68	5.68	5.68	5.68	5.68
METER RATIO BEFORE MAR 20,2018	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Service Delay	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Backwash Delay	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Brine Delay	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Rinse Delay	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Refill Delay	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
FACTORY SETTINGS	**PRESS & HOLD**	■ ♻							
LANGUAGE = ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH
UNITS = GALLONS	GALLONS	GALLONS	GALLONS	GALLONS	GALLONS	GALLONS	GALLONS	GALLONS	GALLONS
HIGH EFFICIENCY = 3 LBS	3 LBS	3 LBS	3 LBS	3 LBS	3 LBS	3 LBS	3 LBS	3 LBS	3 LBS
HIGH EFFICIENCY = 5000 GRAINS	5000 Grains	5000 Grains	5000 Grains	5000 Grains	5000 Grains	5000 Grains	5000 Grains	5000 Grains	5000 Grains
STD CAPACITY = 6 LBS	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS
STD CAPACITY = 4100 GRAINS	4100 GRAINS	4100 GRAINS	4100 GRAINS	4100 GRAINS	4100 GRAINS	4100 GRAINS	4100 GRAINS	4100 GRAINS	4100 GRAINS
IRON & MN = 12 LBS	12 LBS	12 LBS	12 LBS	12 LBS	12 LBS	12 LBS	12 LBS	12 LBS	12 LBS
HIGH CAPACITY = 2500 GRAINS	2500 GRAINS	2500 GRAINS	2500 GRAINS	2500 GRAINS	2500 GRAINS	2500 GRAINS	2500 GRAINS	2500 GRAINS	2500 GRAINS
REFILL = 0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM
BRINE MAKE TIME = 30 MIN	30 MIN	30 MIN	30 MIN	30 MIN	30 MIN	30 MIN	30 MIN	30 MIN	30 MIN
BRINE PREFILL %	70%	70%	70%	70%	70%	70%	70%	70%	70%
DAILY RESERVE	75 GAL	75 GAL	75 GAL	75 GAL	75 GAL	75 GAL	75 GAL	75 GAL	75 GAL
BW OVERIDE	10	10	10	10	10	10	10	10	10
FORCED REGEN	ON	ON	ON	ON	ON	ON	ON	ON	ON
VACATION MODE	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SETTINGS	**PRESS & HOLD**	■							
TIME OF DAY	SET	SET	SET	SET	SET	SET	SET	SET	SET
YEAR	SET	SET	SET	SET	SET	SET	SET	SET	SET
MONTH	SET	SET	SET	SET	SET	SET	SET	SET	SET
DAY	SET	SET	SET	SET	SET	SET	SET	SET	SET
SET HARDNESS	25	25	25	25	25	25	25	25	25
SET PEOPLE	4	4	4	4	4	4	4	4	4
SALT SETTING	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD
WATER TYPE	WELL / OTHER	WELL / OTHER	WELL / OTHER	WELL / OTHER	WELL / OTHER	WELL / OTHER	WELL / OTHER	WELL / OTHER	WELL / OTHER
REGEN TIME	2:00 AM	2:00 AM	2:00 AM	2:00 AM	2:00 AM	2:00 AM	2:00 AM	2:00 AM	2:00 AM
ADVANCED SETTINGS	**PRESS & HOLD**	▲ ▼							
VALVE MODE	SOFTENER UF	SOFTENER UF	SOFTENER UF	SOFTENER UF	SOFTENER UF	SOFTENER UF	SOFTENER UF	SOFTENER UF	SOFTENER UF
UNIT SIZE	0.75 ft^3	1.0 ft^3	0.75 ft^3	1.0 ft^3	1.25 ft3	1.5 ft^3	2.0 ft^3	2.5 ft^4	3.0 ft^4
SALT SETTING	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD
BACKWASH	4	4	4	4	4	4	4	4	4
BRINE	53	53	53	53	53	53	53	53	53
RINSE	4	4	4	4	4	4	4	4	4
LOCK VALVE	LOCK	LOCK	LOCK	LOCK	LOCK	LOCK	LOCK	LOCK	LOCK
VALVE SETUP									
Injector	#0000 BLACK	#0000 BLACK	#0000 BLACK	#0000 BLACK	#0000 BLACK	#0000 BLACK	#00 PURPLE	#00 PURPLE	#1 WHITE
BLFC Washer	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM	0.2 GPM
DLFC Washer	#2 2.0 GPM	#3 2.4 GPM	#1 1.5 GPM	#2 2.0 GPM	#3 2.4 GPM	#3 2.4 GPM	#5 3.5 GPM	#5 3.5 GPM	#A 5.0 GPM
TANK SIZE	9X35	10X35	8X44	9X48	10x47	10X54	12X52	13x54	14X65
UPPER CONE	YES	YES	YES	YES	YES	YES	YES	YES	YES

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:

_____

_____

_____

_____

_____

_____

Toll Free: 1-877-288-9888

Regina, SK • Cambridge, ON • Carmel, IN • Pottstown, PA • Phoenix, AZ

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