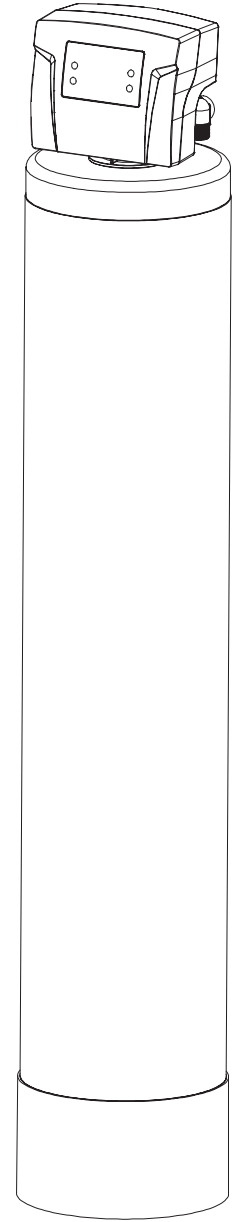


OWNER'S MANUAL



LWC Water Conditioner

- 1. Page 13 of this manual contains important maintenance procedures for the continued proper operation of your unit. These must be performed regularly for your warranty to remain valid.**
2. Read all instructions carefully before operation.
3. Avoid pinched o-rings during installation by applying NSF certified lubricant to all seals (provided with install kit).
4. This system is not intended for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

Leaf Home Water Solutions
1595 Georgetown Road
Hudson, OH 44236

Phone Number
1-888-701-5497

Website
www.LeafHomeWaterSolutions.com

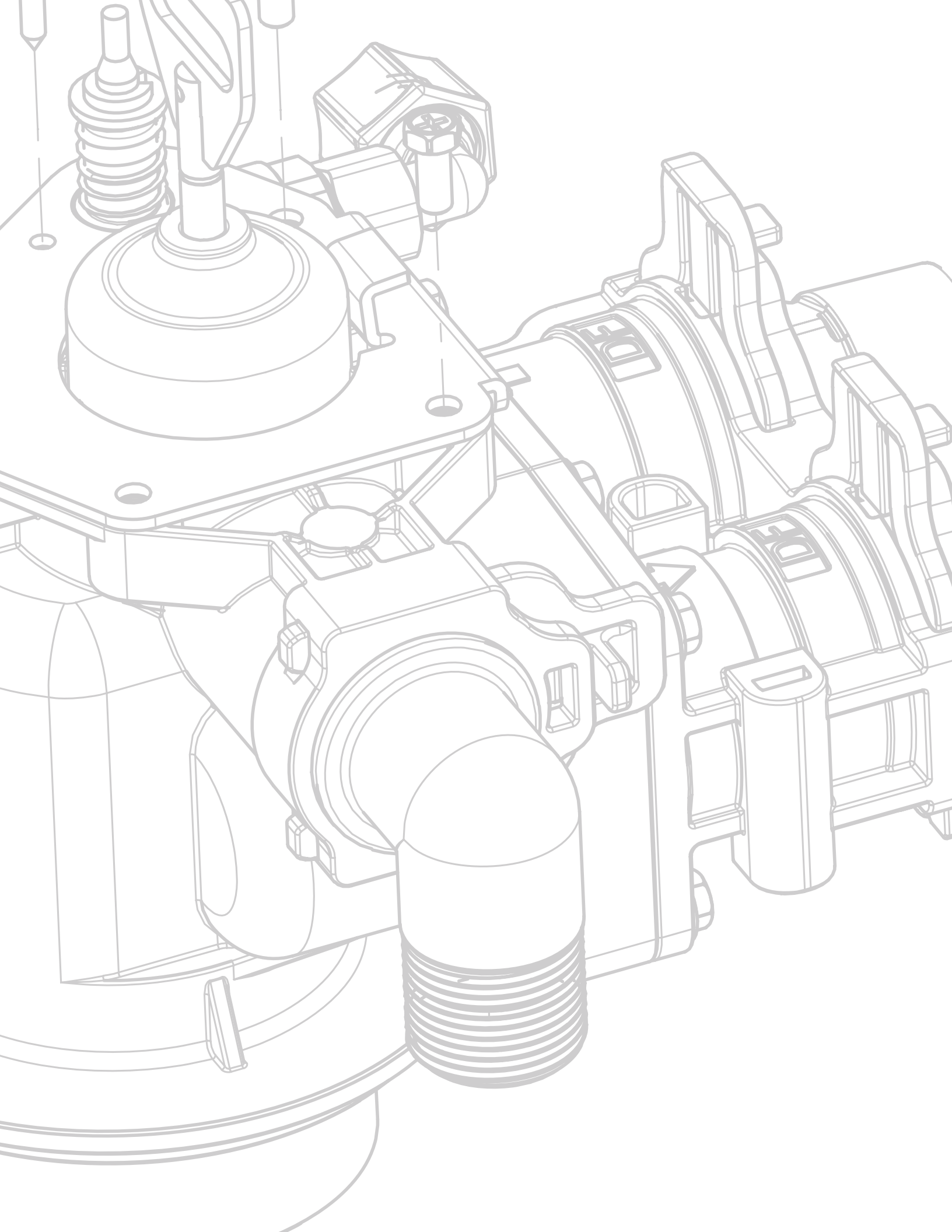


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READ THIS PAGE FIRST

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.
- ▶ 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) NSF 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.
- ▶ 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 the feed water condition.
- ▶ 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.

SPECIFICATION

Upflow Conditioner Models

Model	Flow Rate		Regeneration Water Usage (Gallons)	Mineral Tank Size	Scale Reduction Media (Liters)	Ship Weight (Lbs)
	Service USGPM	Backwash USGPM				
LWC1.0	10.0	2.0	20	9 x 48	4.0	57
LWC1.5	12.0	2.4	24	10 x 54	4.5	62
LWC2.0	15.0	3.5	35	12 x 52	6.5	65

! 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 conditioner 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 conditioner.

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.

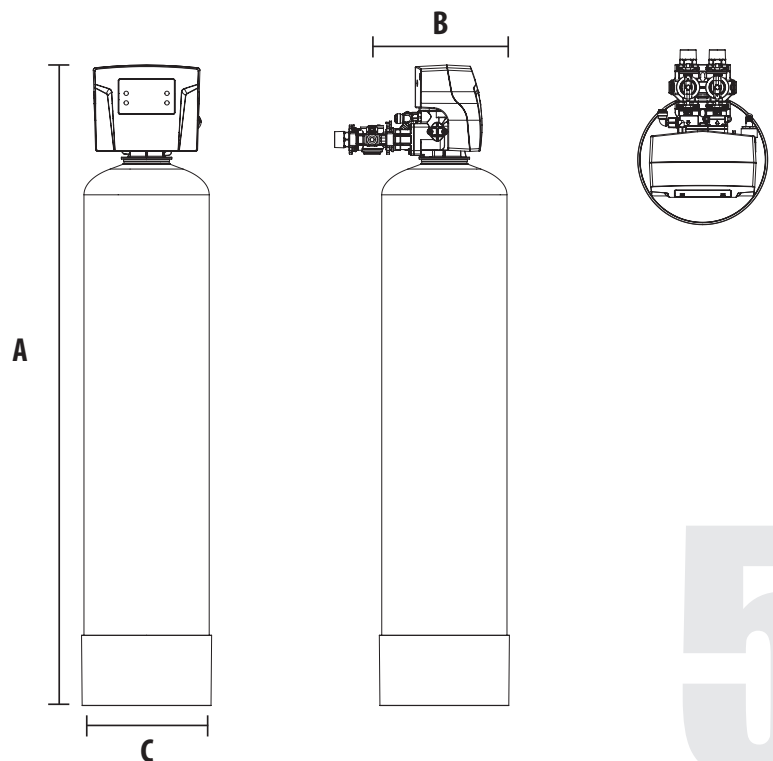
For satisfactory operation, the pumping rate of the well system must equal or exceed indicated backwash flow rate.

All units come with plastic bypass.

Feedwater Parameters	
Recommended Operating Temp	(°C) 5 to 90
pH range	6.5 to 9.5
Hardness (Carbonate)	Max. ppm 1400
Salinity	Max. ppm 35000
Iron	Max. ppm 0.5*
Manganese	Max. ppm 0.05
Free Chlorine	Max. ppm 3
Copper	Free
Oil	Free
Hydrogen Sulfide	Free

SYSTEM DIMENSIONS

Model	A (Inches)	B (Inches)	C (Inches)
1.0	55.5	15.5	9
1.5	61.5	16	10
2.0	69	16.5	12



UNPACKING / INSPECTION OF WATER CONDITIONER 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 unit, 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?

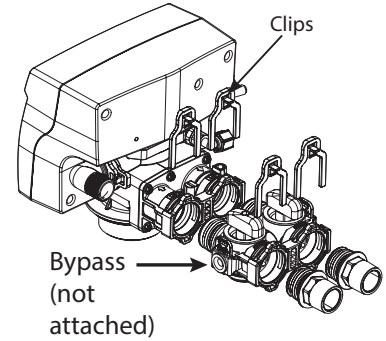
For Models LWC1.0, LWC1.5, and LWC2.0 you can expect the following:

1. Control Valve
2. Tank
3. Parts Box
4. Owners Manual
5. Drain Hose & Clamp

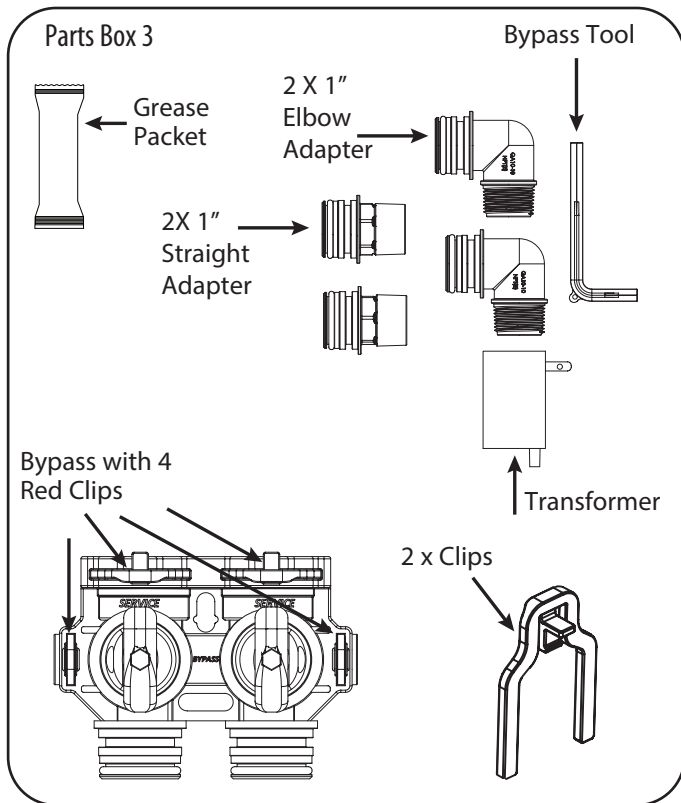
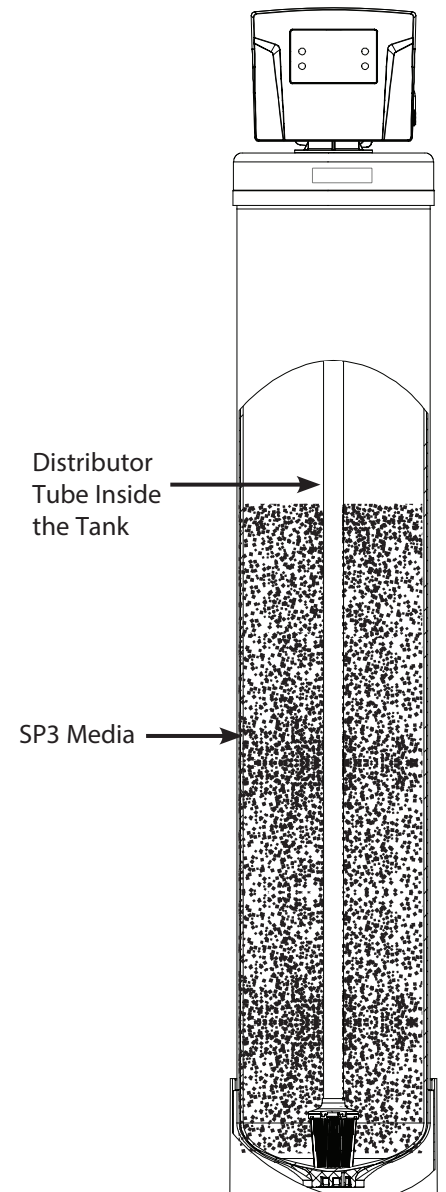
1. Control Valve



There are 7 Red clips. Please check to make sure you have all of them.

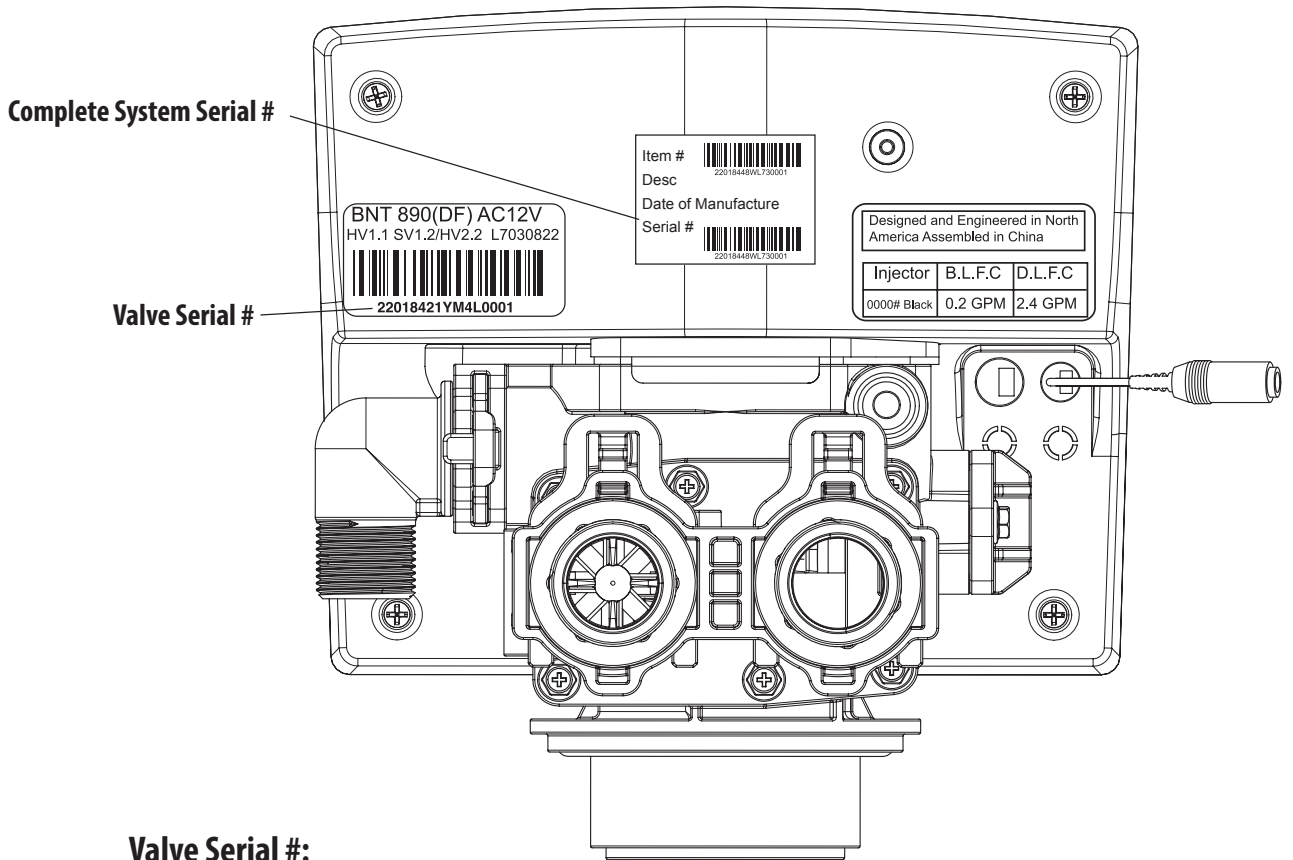


2. Tank



CHECK VALVE TYPE AND VALVE SERIAL

Check to make sure the valve type is what you ordered. The serial # label on the left will show (UF) for upflow valve. The right sticker shows the serial # of the control valve. The middle sticker is the dataplate which provides the serial # and date of manufacture of the system. Both serial # labels are important for troubleshooting.



Valve Serial #:

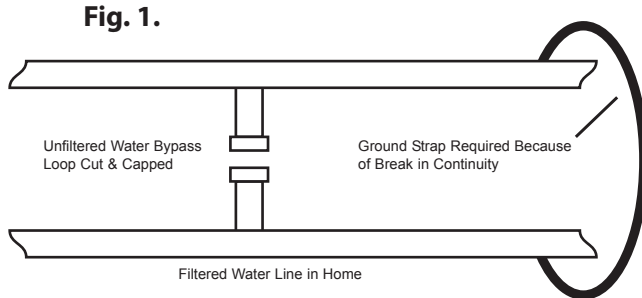
Date Code

<u>22018343</u>	<u>M</u>	<u>1</u>	<u>K</u>	<u>0001</u>
PART NUMBER	YEAR (2016)	MONTH (JAN)	DAY of MONTH (20)	BATCH NUMBER
	H = 2011	1 = JAN	1	
	I = 2012	2 = FEB	2	
	J = 2013	3 = MAR	3	
	K = 2014	4 = APR	4	
	L = 2015	5 = MAY	5	
	M = 2016	6 = JUN	6	
	N = 2017	7 = JUL	7	
	O = 2018	8 = AUG	8	
	P = 2019	9 = SEP	9	
	Q = 2020	A = OCT	A = 10	
		B = NOV	B = 11	
		C = DEC	C = 12	
			D = 13	
			E = 14	
			F = 15	
			G = 16	
			H = 17	
			I = 18	
			J = 19	
			K = 20	
			L = 21	
			M = 22	
			N = 23	
			O = 24	
			P = 25	
			Q = 26	
			R = 27	
			S = 28	
			T = 29	
			U = 30	
			V = 31	

BEFORE INSTALLATION

Make sure you have a copy of the most recent water test results. **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.



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

Do not turn the water conditioner upside down.

To Ensure 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 (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: The installation should only be completed by an LHWS certified installer to ensure this product is installed in accordance with local plumbing codes.

- ▶ Additional tools may be required if modification to home plumbing is required.
- ▶ Plastic inlet and outlet fittings are included with the water conditioner. To maintain full valve flow, 3/4" or 1" pipes to and from the water conditioner fittings are recommended. You should maintain the same, or larger, pipe size as the water supply pipe, up to the water 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, and 3 valve plumbing bypass. Bypass valves let you turn off water to the water conditioner for repairs if needed, but still have water in the house pipes.

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 water conditioner is initially placed in service, the tank may have been laid on its side during transit. If this occurs, backwash the water 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

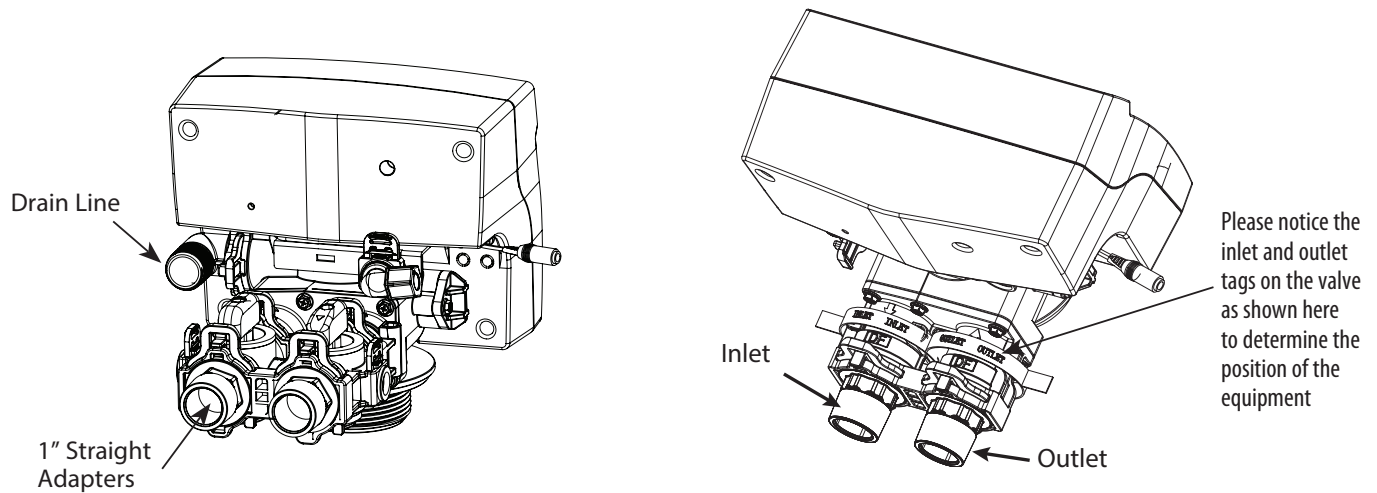
Planning Your Installation

Select the location of your water conditioner 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. Locate as close as possible to the water supply source.
3. Locate as close as possible to a floor or laundry tub drain.
4. Locate in correct relationship to other water treatment equipment. If closer than 10 feet, please install check valve in accordance with local plumbing codes.
5. Water conditioner should be located in the supply line before the water heater. Temperatures above 110°F (43°C) will cause damage to the water conditioner.
6. Do not install a water conditioner in a location where freezing temperatures occur. Freezing may cause permanent damage to this type of equipment and will void the factory warranty.
7. Allow sufficient space around the unit for easy servicing.
8. Keep the water conditioner out of direct sunlight. The 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 properly to the control valve. Connect the straight, elbow, or flex 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 o-rings to the fittings.
4. Connect water 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.

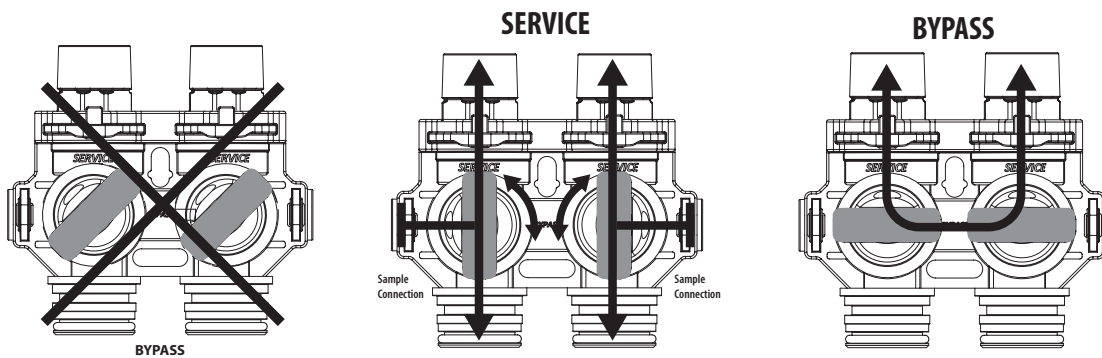
*Automatic Water Bypass

The regeneration cycle lasts approximately 15 minutes 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.

*Manual Water Bypass

In case of an emergency, you can isolate your water conditioner from the water supply using the 3 valve plumbing bypass or 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 water 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 water 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 untreated water could bypass through the valve.**



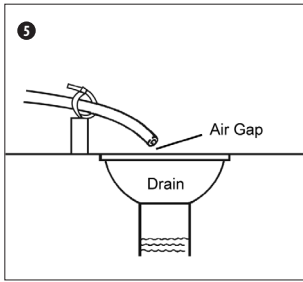
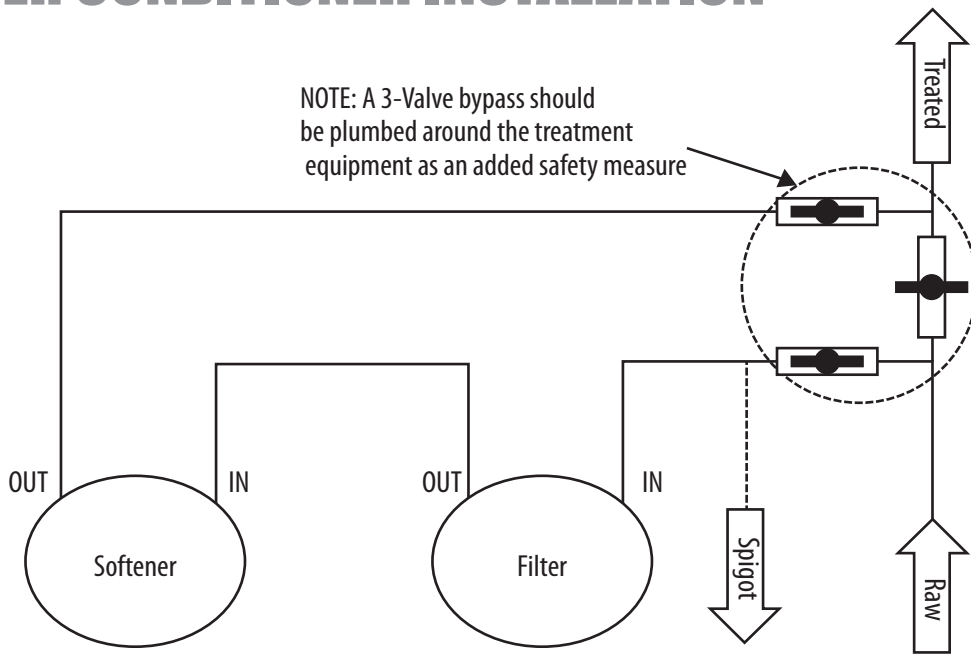
7. Make sure there are no leaks in the plumbing system before proceeding.

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 8

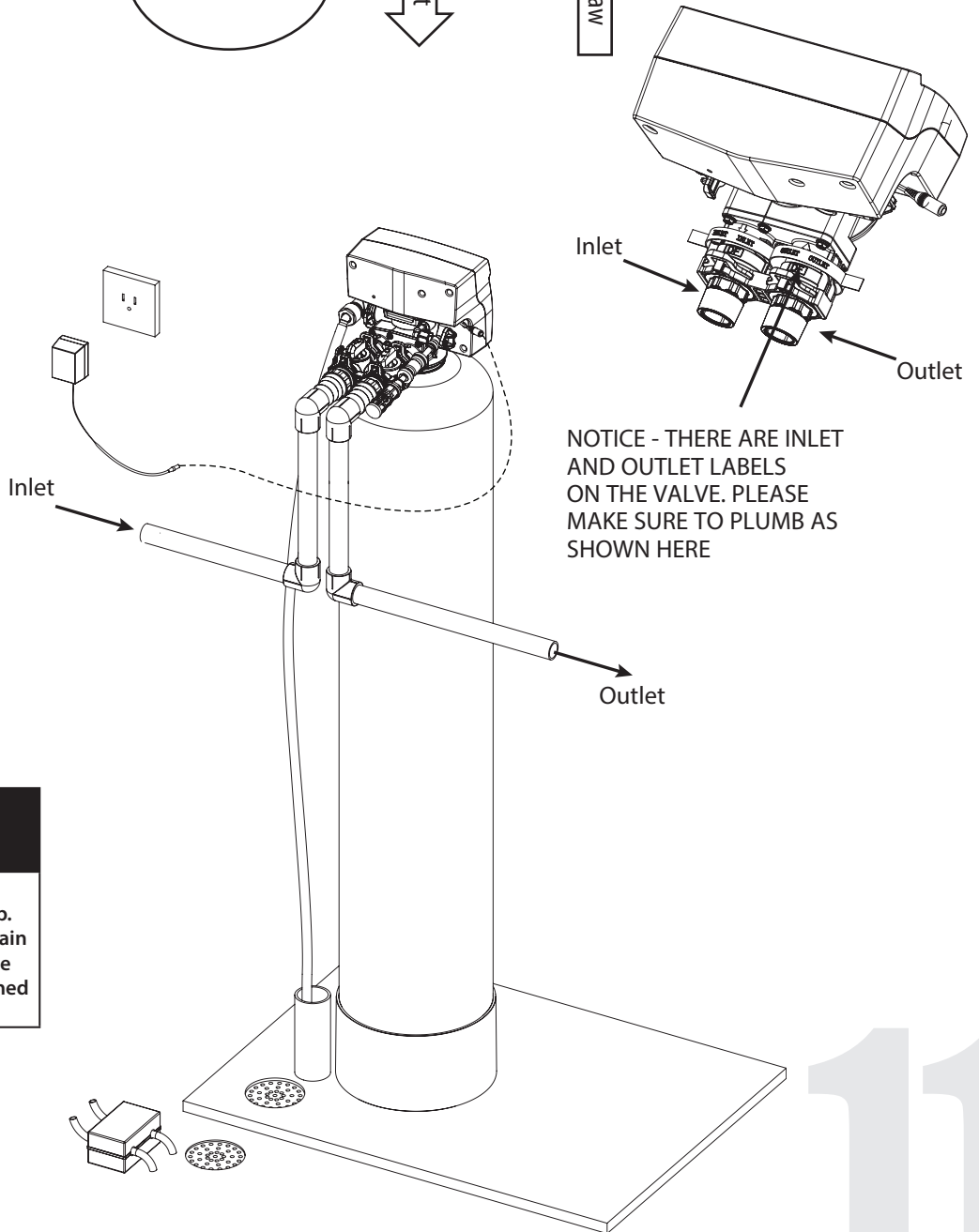
WATER CONDITIONER INSTALLATION

NOTE: A 3-Valve bypass should be plumbed around the treatment equipment as an added safety measure



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

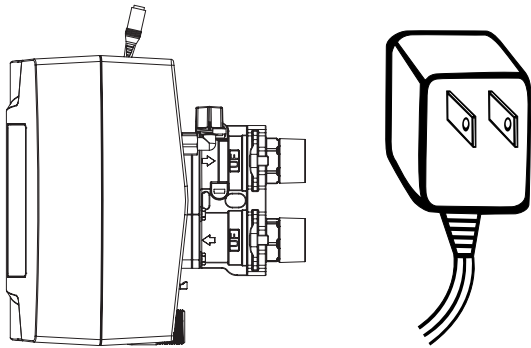
CAUTION!
Never insert drain line directly into a drain, sewer line, or trap. Always allow an air gap between the drain line and the wastewater to prevent the possibility of sewage being back-siphoned into the conditioner.



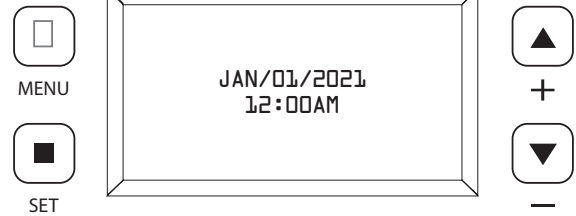
STARTUP INSTRUCTIONS

1. Connect the Transformer to the Valve





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



Screen Display Button Configuration:



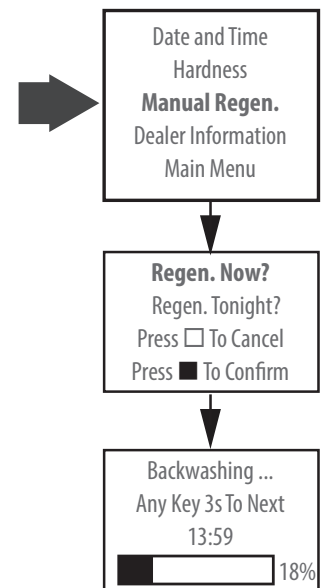
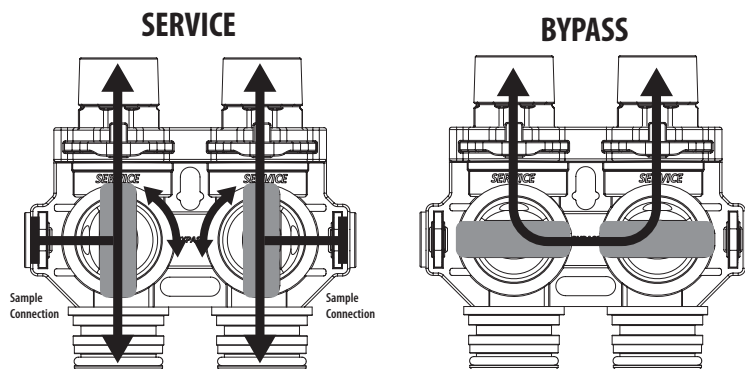
Key Pad Settings:

-  This function is to enter the basic set up information required at the time of installation.
-  This function is to accept the values if changed and advance to the next page in the menu.
-   These buttons are used to increase or decrease the value of the settings while in the programming mode.

2. Manually Regenerate the Valve

Manually Regenerate the Valve and move it to backwash position.

Press Menu Key  and Scroll down  using Up and Down Arrow buttons to "Manual Regen". Press "SET"  Select "Regen Now"



3. After manual regeneration has started, your water conditioner will advance to the rinse cycle. Once in rinse unplug control valve from power supply.
4. 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 to drain for 3-4 minutes.)
5. Once all air is purged from the system, you can slowly open the outlet valve fully.
6. Now plug your control valve back in, after it has finished the rinse cycle the unit will return to the service position. Your plumbing system should now be receiving treated water.
7. The Valve is already programmed from the factory. Please set up date and time of day as shown on next page.

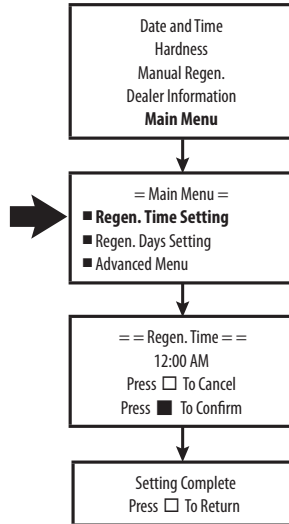
Set Up Current Time of Day and Regeneration Time:

Press Menu Key and Select "Date and Time" using "Set" button and set For setting the regeneration time,

Press Menu Key and Select Main Menu till you hear a beep and select Regen time.

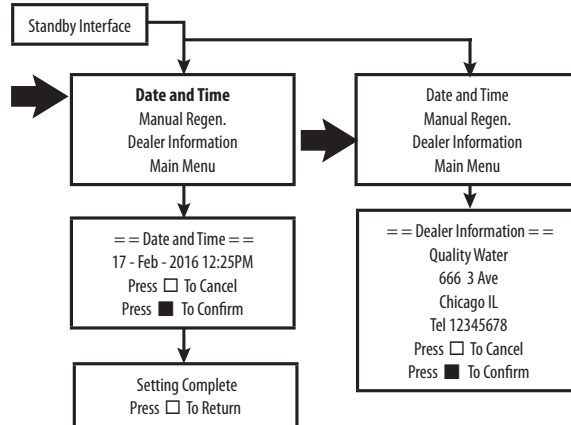
Setting the Regeneration Time

Press **Menu** key. Press **—** to advance to Advanced Menu
 Press **SET** or until you hear a beep
 Press **+** or **—** to choose menu option. Press **SET** to enter
 Press **+** or **—** to change option. Press **SET** to accept



Setting Time of Day and Dealer Information

Press **Menu** key
 Press **SET** or until you hear a beep
 Press **+** or **—** to choose menu option. Press **SET** to enter
 Press **+** or **—** to change value. Press **SET** to accept



MAINTENANCE INSTRUCTIONS

Care of Your Equipment

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).

Replacing Media Bed

The media bed in a descaler system is slowly dissolved and has to be replaced. The frequency of replacement varies, depending on water quality - consult Leaf Home Water Solutions to determine the expected life of your media bed.

CAUTION!

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

WARNING!

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

MAINTENANCE INFORMATION

Please have the information below filled out and available when calling in:

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

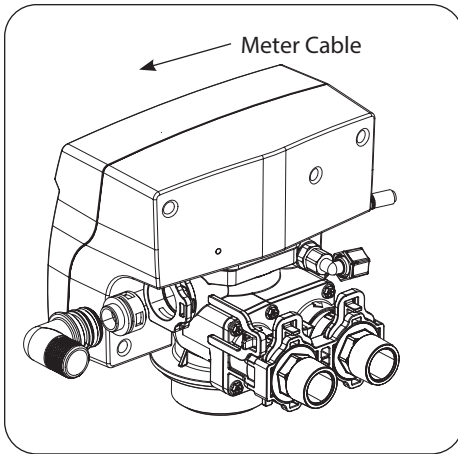
Additional notes:

SERVICING CONTROL VALVE

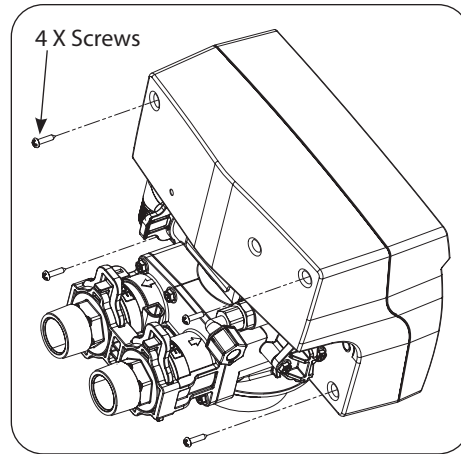
Before Servicing

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

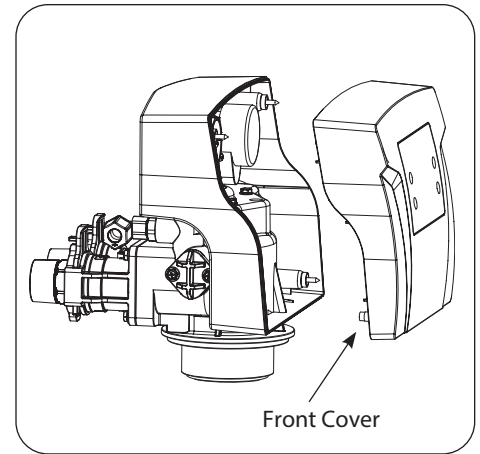
TIMER REPLACEMENT



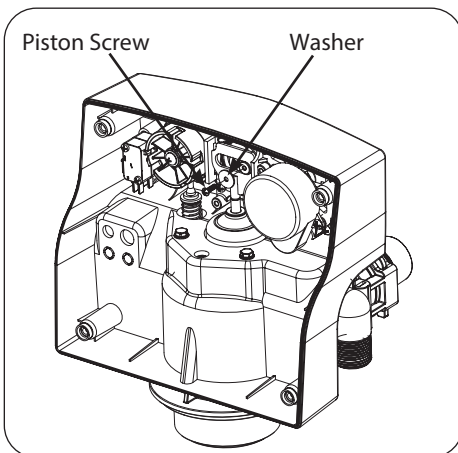
1. Disconnect the meter cable from the meter. (If flow meter is attached)



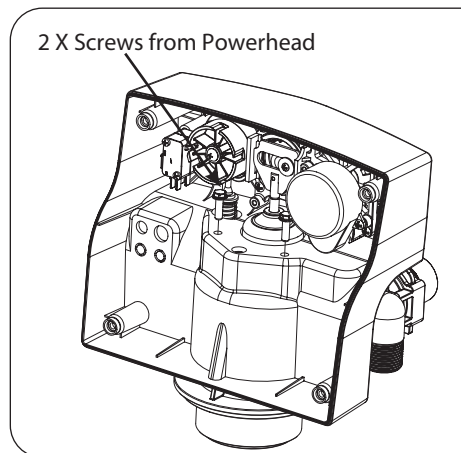
2. Remove four screws from the back of the valve cover



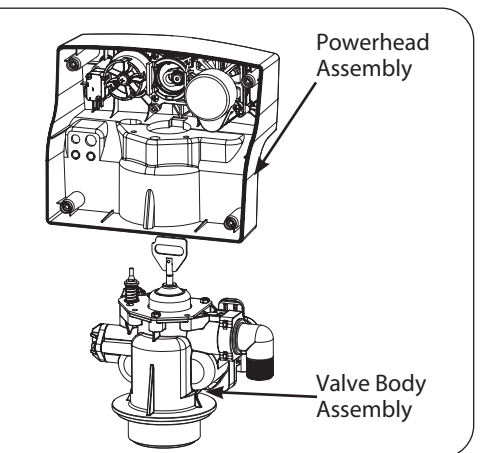
3. Remove the front cover of the valve.



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

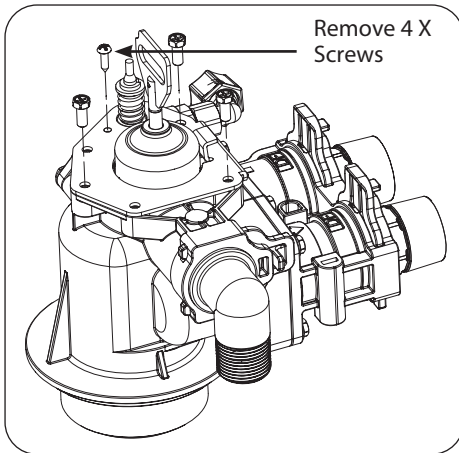


5. Remove the two screws from the powerhead as shown.

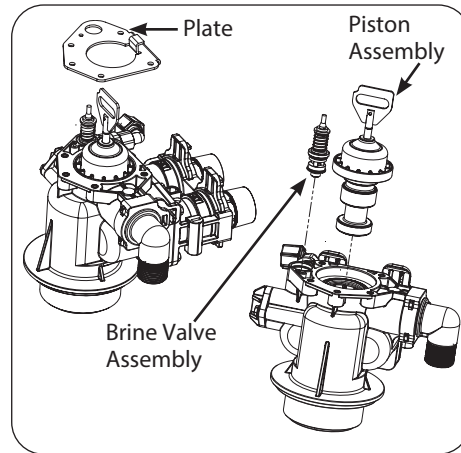


6. Lift the powerhead from the valve body assembly.
7. Replace the powerhead by reverse following the steps in this section.

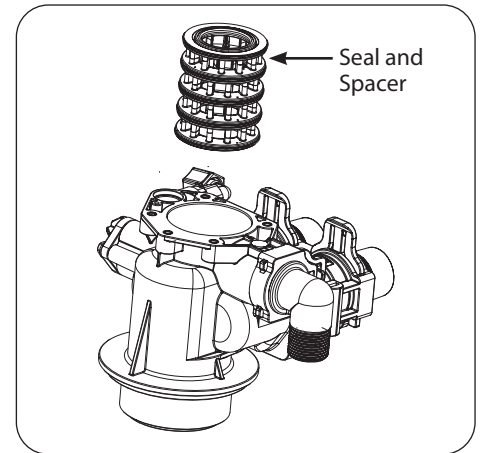
PISTON ASSEMBLY REPLACEMENT



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

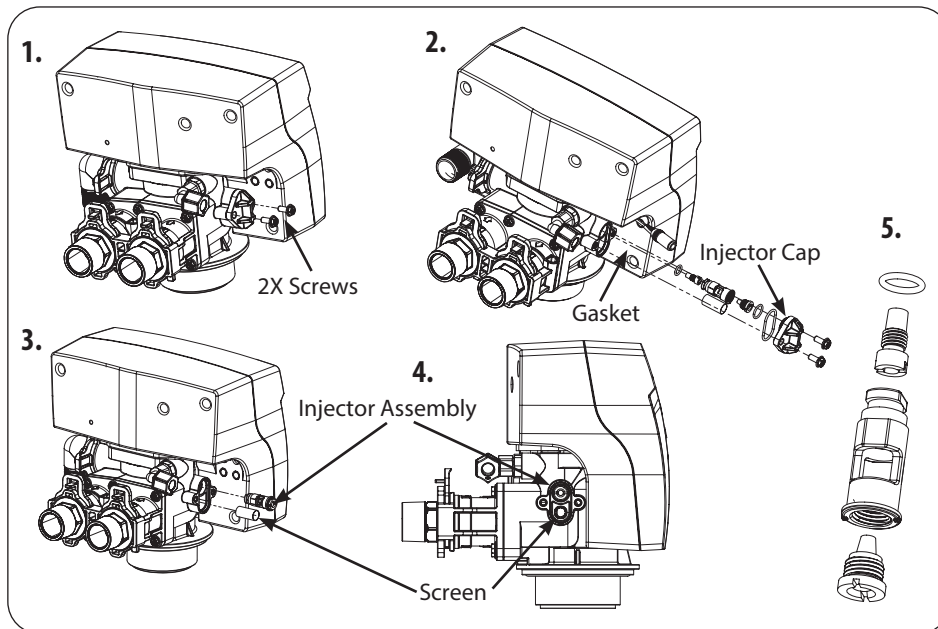


3. Remove the plate from the valve body and pull the Piston Assembly from the valve. The brine valve assembly can also be removed in this stage.
4. Remove the seal spacer assembly, grease it with silicone lubricant and put back in.



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

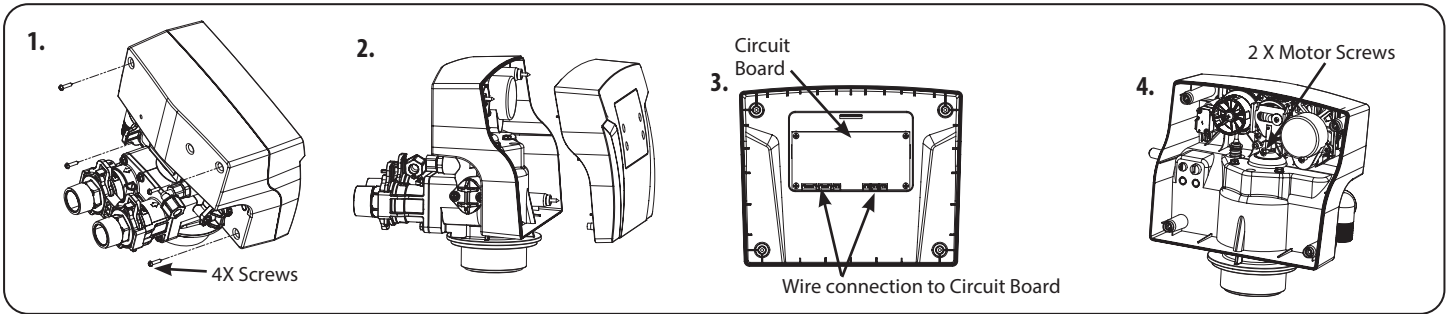
CLEAN INJECTOR ASSEMBLY



1. Remove the two screws from the injector cap
2. Pull the injector cap and gasket
3. Pull the injector assembly and Screen
4. Replace/Clean screen and injector assembly and put it back in the valve in appropriate location as shown
5. Put back the injector cap. Lubricate the injector assembly o-rings and injector cap gasket. Care should be taken to put all o-rings and gaskets in place and Lubricate them so that they don't pinch

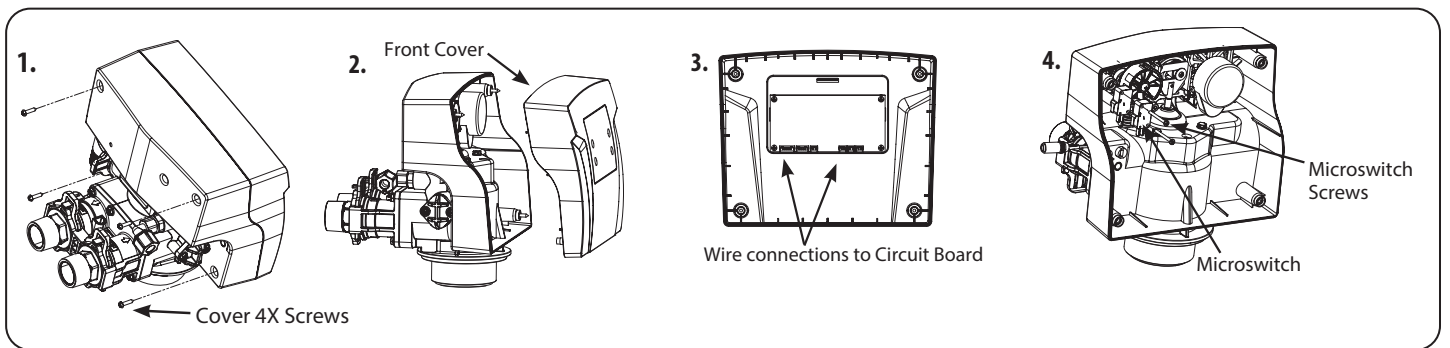
REPLACE MOTOR

1. Remove screws from the back of the valve and pull the cover
2. Remove all connections from the circuit board
3. Remove the two screws from the motor. Remove the motor and watch for the pin under the motor.
4. Replace the motor, connections and cover

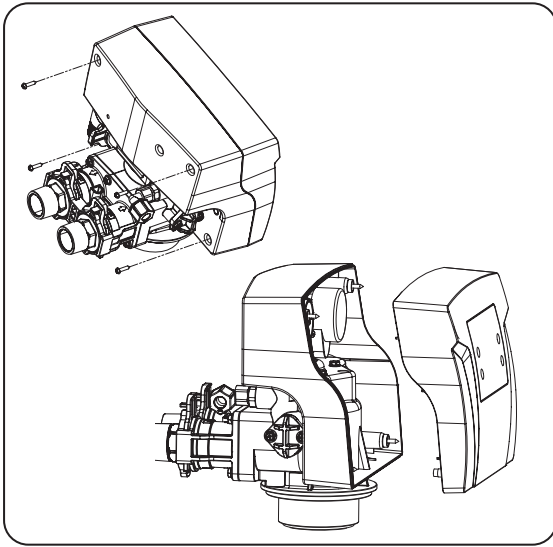


REPLACE MICROSWITCHES

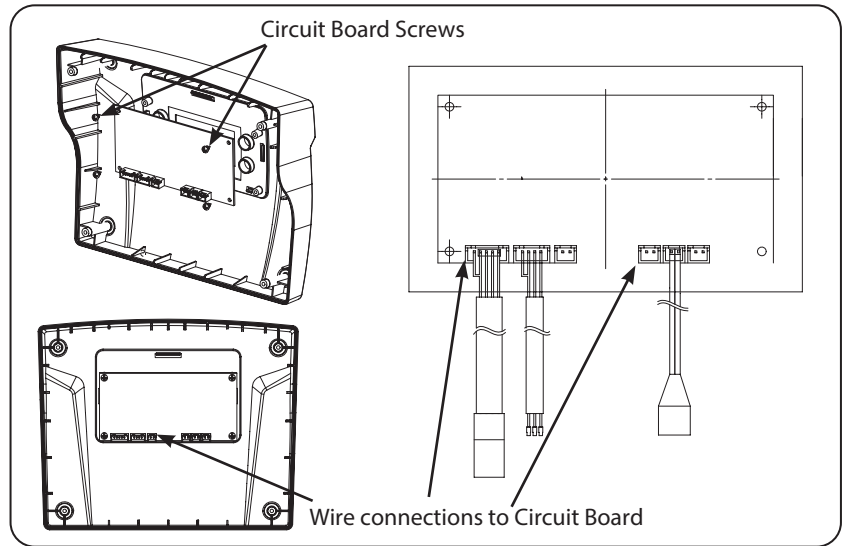
1. Remove screws from the back of the valve and pull the cover
2. Remove all connections from the circuit board
3. Remove the two screws from the microswitch
4. Replace the microswitch, connections and cover



CIRCUIT BOARD REPLACEMENT

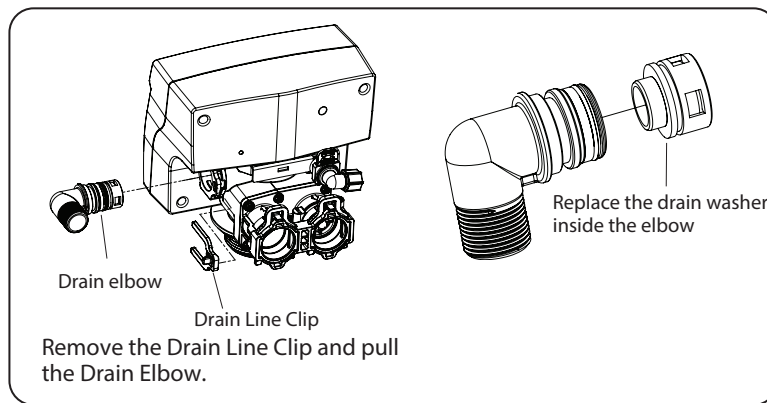


1. Remove the screws from the back of the valve and pull the front cover



2. Remove all connections from the circuit board
3. Remove the four screws from the circuit board and pull it out

DRAIN WASHER REPLACEMENT



Remove the Drain Line Clip and pull the Drain Elbow.

AFTER SERVICING

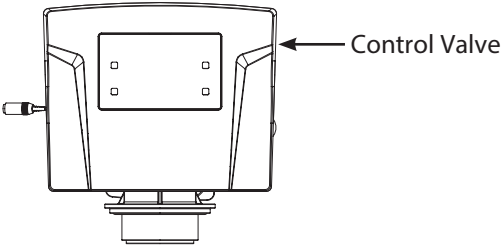
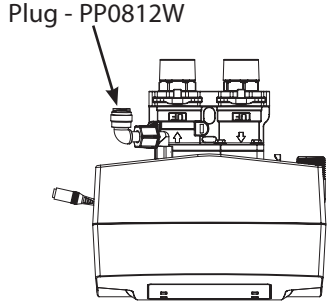
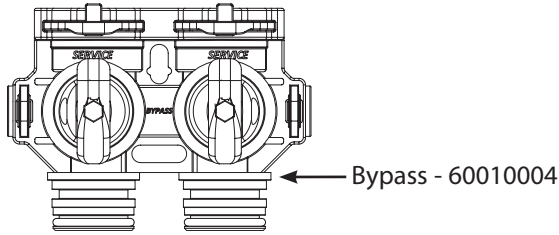
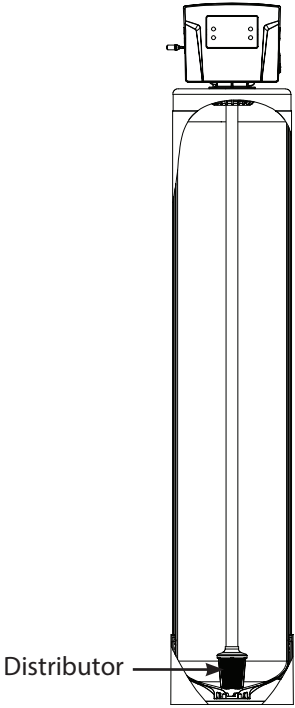
1. Reconnect drain line.
2. Return bypass or inlet valve to normal in service position. Water pressure will automatically build in the filter.

NOTE

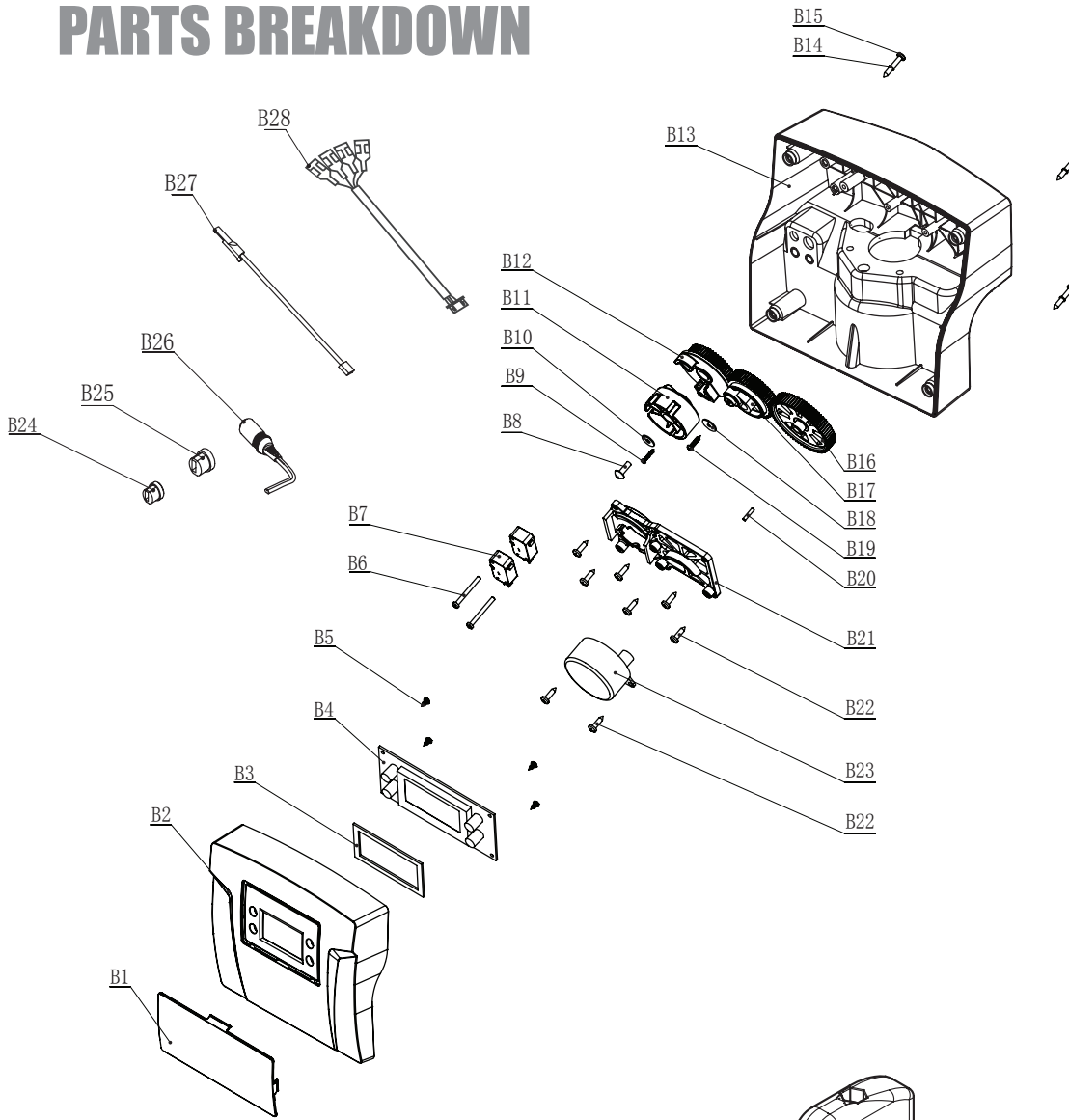
Be sure to shut off any bypass line.

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

PARTS BREAKDOWN



PARTS BREAKDOWN

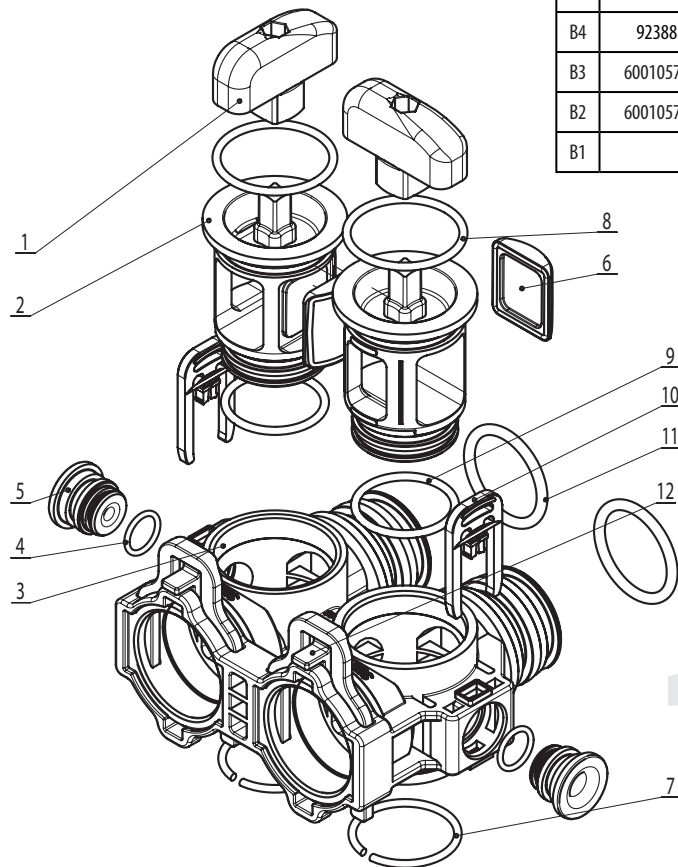


UF and DF Power Head Parts List

No.	Part #	Description	Qty
B28	60010329	Micro Switch Cable	1
B27	60010115	Meter Cable	1
B26	60010124	Power Cable	1
B25	60010330	Meter Cable Clip	1
B24	60010331	Power Cable Clip	1
B23	92393	Motor 12VAC 3W	1
B22	60010574	Screw on Mounting Plate	8
B21	60010573	Mounting Plate	1
B20	60010660	Motor Pin	1
B19	60010099	Screw on Main Gear	1
B18	60010100	Washer on Main Gear	1
B17	92391	Main Gear	1
B16	92389	Drive Gear	1
B15	60010581	Screw on Back Cover	4
B14	60010332	Washers on Screw	4
B13	60010582	Back Cover(Black)	1
B12	92392	Brine Gear	1
B11	60010577 -UF 60010576 - DF	Locating wheel(UF)	1
B10	60010661	Washer on Locating Wheel	1
B9	60010333	Screw 2.2×13	1
B8	60010575	Screw on Locating Wheel	1
B7	60010580	Micro Switch	2
B6	60010579	Screws on Micro Switch	2
B5	60010572	Screws on PCB	4
B4	92388	PCB	1
B3	60010571	PCB Absorb Shock Foam	1
B2	60010570	Front Cover (Black)	1
B1		Controller Touch Panel	1

Bypass Parts List

No.	Part #	Part Description	Qty
1		Shaft Knob	2
2		BNT Bypass Shaft	2
3		BNT Bypass Body	1
4		Plug O-Ring 12.42×1.78	2
5	60010209	Bypass Plug	1
6		BNT Bypass Knob Seal	8
7		Steel Retainer Ring	1
8		O-Ring 35.5×2.65	1
9		O-Ring 30×2.65	1
10	60010069	Plug Clip	1
11		O-Ring 30×3.55	1
12	92387	BNT Valve Clip	1

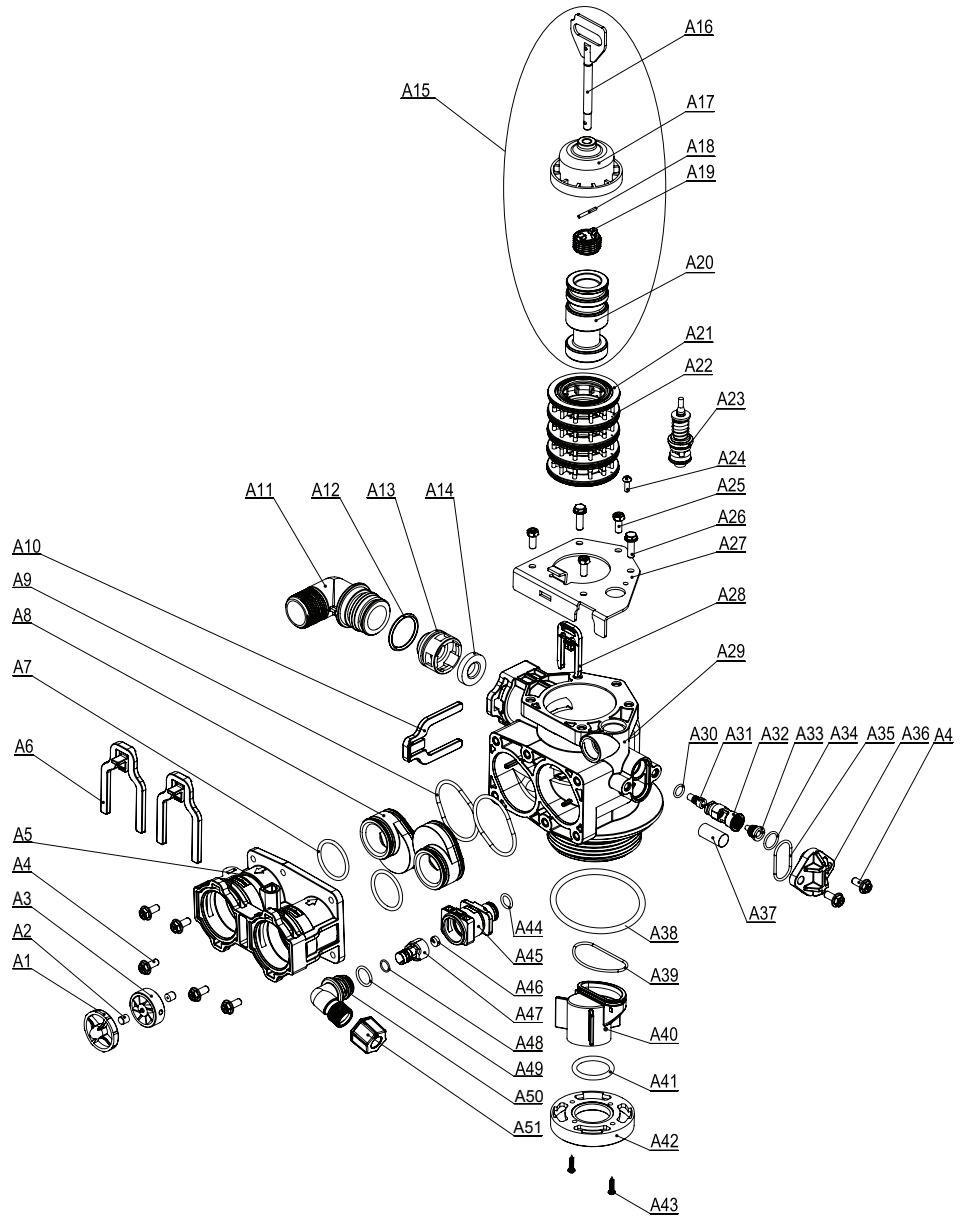


PARTS BREAKDOWN

Parts list of control valve body:

No.	Part #	Description	Qty
A51	60010184	Brine Line Elbow Nut	1
A50	60010172	Brine Line Elbow	1
A49	60010044	O-ring of Brine Line Elbow	1
A48	60010188	O-ring of BLFC Holder	1
A47	60010173	BLFC Holder	2
A46	60010128	BLFC(0.2GPM)(Optional)	1
A45	60010340	Brine Line Connector	1
A44	60010265	O-ring on Brine Line Connector	1
A43	60010099	Screw on Valve Bottom Connector	2
A42	60010599	Valve Bottom Connector	1
A41	60010080	Distributor O-ring	1
A40	60010598	Central Pipe Adaptor	1
A39	60010597	O-ring of Central Pipe Adaptor	1
A38	60010077	Tank Mouth O-ring	1
A37	60010715	Screen Valve	1
A36	60010595	Injector Cover	1
A35	60010341	O-ring of Injector Cover	1
A34	60010186	Big O-ring of Injector Holder	1
A33		Injector Nozzle(Optional)	1
A32	60010174	Injector Holder	1
A31		Injector Throat(Optional)	1
A30	60010187	Small O-ring of Injector Holder	1
A29		Valve Body	1
A28	60010069	Secure Clip Brine Line	1
A27	60010343	End Plug Retainer	1
A26	60010076	Valve Body Connect Screws	2
A25	60010075	End Plug Retainer Screws	3
A24	60010574	Screw 3.5x13	1
A23	60032	Brine Valve Injector Stem Assembly	1
A22		Spacer Valve	8
A21		Seal Valve	5
A20	92383 - DF	Down Flow Piston Valve	1
A19	PISTON ASSY	92384 - UP PISTON ASSY	1
A18	92384 - UP	92385 - FILTER PISTON ASSY	1
A17	PISTON ASSY	End Plug Valve	1
A16	92385 - FILTER	Piston Rod Valve	1
A15	PISTON ASSY	Piston Assembly Valve(DF)	1
A14		DLFC(2.4GPM)(Optional)	1
A13	60095694	DLFC Holder	1
A12	60010211	O-ring on Drain Elbow	1
A11	60010253	Drain Elbow 3/4" NPT	1
	60010254	Drain Elbow 1" NPT	1
A10	60010227	Secure Clip of Drain Line	1
A9	60010585	Big O-ring of Adaptor Coupling	2
A8		Adaptor Coupling	2
A7		Small O-ring of Adaptor Coupling	2
A6	92387	Adaptor Secure Clip	2
A5	60010589	Valve Connector	1
A4	60010596	Screws of Valve Connector	8
A3	60010238	Impeller Assembly	1
A2		Bush	2
A1	60010587	Impeller Holder	1

Seal and Spacer Kit 92382



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

Part #	Part Description	Part #	Part Description
60010110	BLFC BUTTON #2 0.3GPM A32	60010613	INJECTOR SET #3 YELLOW THROAT
60010082*	BLFC BUTTON #2 0.7GPM A32	60010614	NOZZLE #3 YELLOW THROAT
60010128	BLFC BUTTON 0.2GPM	60010685	INJECTOR SET #4 GREEN THROAT
		60010686	NOZZLE #4 GREEN THROAT
		12052	1.4 GPM DLFC WASHER
		12053	2.0 GPM DLFC WASHER
		60010140	#4S 5.0GPM
		60010142	#7S 7.0 GPM
		60010143	#1 8.0 GPM
		60010144	#2 11.0 GPM
		60010145	#3 14.0 GPM
		60010146	#4 17.0 GPM
		60010147	#5 21.0 GPM
		60010148	#6 24.0 GPM

* Default

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PARTS BREAKDOWN

INJECTOR PART # for CONTROL VALVE

No.	Part #	Part Description	Qty
1	60010601	INJECTOR THROAT(BLACK 0000#)	1
2	60010602	INJECTOR NOZZLE(BLACK 0000#)	1
3	60010603	INJECTOR THROAT(GREY 000#)	1
4	60010604	INJECTOR NOZZLE(GREY 000#)	1
5	60010605	INJECTOR THROAT(PURPLE 00#)	1
6	60010606	INJECTOR NOZZLE (PURPLE 00#)	1
7	60010607	INJECTOR THROAT(RED 0#)	1
8	60010608	INJECTOR NOZZLE(RED 0#)	1
9	60010609	INJECTOR THROAT (WHITE 1#)	1
10	60010610	INJECTOR NOZZLE (WHITE 1#)	1
11	60010611	INJECTOR THROAT(BLUE 2#)	1
12	60010612	INJECTOR NOZZLE(BLUE 2#)	1
13	60010613	INJECTOR THROAT(YELLOW 3#)	1
14	60010614	INJECTOR NOZZLE(YELLOW 3#)	1

DLFC PART # for CONTROL VALVE

No.	Part #	Part Description	Qty
1	60095720	BNT95DLFC-0(4.0 GPM)	1
2	60010143	BNT95DLFC-1(7.0GPM)	1
3	60010144	BNT95DLFC-2(11.0GPM)	1
4	60010145	BNT95DLFC-3(14.0GPM)	1
5	60010146	BNT95DLFC-4(17.0GPM)	1
6	60010147	BNT95DLFC-5(21.0GPM)	1
7	60095692	BNT95DLFC-6(24.0GPM)	1
8	60095721	BNT95DLFC-1S(2.4GPM)	1
9	60095722	BNT95DLFC-2S(3.5GPM)	1
10	60095723	BNT95DLFC-3S(4.5GPM)	1
11	60010140	BNT95DLFC-4S(5.0GPM)	1
12	60095724	BNT95DLFC-5S(6.0GPM)	1
13	60095725	BNT95DLFC-6S(6.0GPM)	1
14	60010142	BNT95DLFC-7S(7.0GPM)	1

BLFC PART # for CONTROL VALVE

No.	Part #	Part Description	Qty
1	60010128	BNT95BLFC (0.2 GPM)	1
2	12053	BNT95BLFC-1(2.0 GPM)	1
3	60010162	BNT95 BLFC-7(1.35 GPM)	1

TROUBLE SHOOTING GUIDE

Problem	Possible Solutions
<p>1. CONDITIONER DELIVERS UNTREATED WATER</p> <ul style="list-style-type: none"> A. Bypass valve is open B. Hot water tank scale C. Leak at distributor tube D. Internal valve leak E. Flow meter jammed F. Flow meter cable disconnected or not plugged into meter cap G. Improper programming 	<ul style="list-style-type: none"> A. Close bypass valve B. Make sure distributor tube is not cracked. Check o-ring and tube pilot C. Make sure distributor tube is not cracked. Check o-ring and tube pilot D. Replace seals and spacers and/or piston E. Remove obstruction from flow meter F. Check meter cable connection to timer and meter cap G. Reprogram the control to the proper regeneration type, inlet water hardness, capacity or flow meter size.
<p>2. CONDITIONER FAILS TO REGENERATE</p> <ul style="list-style-type: none"> A. Electrical service to unit has been interrupted B. Timer is not operating properly C. Defective valve drive motor D. Improper programming 	<ul style="list-style-type: none"> A. Assure permanent electrical service (check fuse, plug, chain or switch) B. Replace timer C. Replace drive motor D. Check programming and reset as needed
<p>3. LOSS OF WATER PRESSURE</p> <ul style="list-style-type: none"> A. Iron build-up in line to water conditioner B. Inlet of control plugged due to foreign material broken loose from pipes by recent work done on plumbing system. 	<ul style="list-style-type: none"> A. Clean line to water conditioner B. Remove piston and clean control
<p>4. LOSS OF MEDIA THROUGH DRAIN LINE</p> <ul style="list-style-type: none"> A. Air in water system B. Drain line flow control is too large 	<ul style="list-style-type: none"> A. Assure that well system has proper air eliminator control. Check for dry well condition. B. Ensure drain line flow control is sized
<p>5. IRON IN CONDITIONED WATER</p> <ul style="list-style-type: none"> A. Iron content exceeds recommended parameters 	<ul style="list-style-type: none"> A. Add iron removal filter system
<p>6. CONTROL CYCLES CONTINUOUSLY</p> <ul style="list-style-type: none"> A. Timer not operating properly B. Faulty microswitches and/or harness C. Faulty cycle cam operation 	<ul style="list-style-type: none"> A. Replace timer B. Replace faulty microswitch or harness C. Replace cycle cam or reinstall

TROUBLE SHOOTING GUIDE

Problem	Possible Solutions
7. DRAIN FLOWS CONTINUOUSLY A. Foreign material in control B. Internal control leak C. Control valve jammed in brine or backwash position D. Timer motor stopped or jammed teeth E. Timer not operating properly	A. Remove piston assembly and inspect bore. Remove foreign material and check control in various regeneration positions B. Replace seals and/or piston assembly C. Replace piston and seals and spacers D. Replace timer motor and check all gears for missing teeth E. Replace timer
8. (Error Code) (Error E1) - Electrical Trouble Shooting: Issue1: When the controller is plugged, the buzzer beeps and the screen displays "System Error E1" Cause: The wire of micro switch is not plugged or loose.	Check the micro switch and connect the wire well.
9. (Error Code) (Error E2) - Electrical Trouble Shooting: Issue2: The buzzer beeps and the screen displays "System Error E2" Cause: The motor can not find its right position, micro switch or motor malfunction, automatic circuit protection action.	Check the current of micro switch and motor.

MASTER PROGRAMMING GUIDE

Below is how the settings are set at factory:

MODELS	PRESS '+' AND '-' FOR 8 SECONDS						REGEN. MODE	RINSE DURATION	PRESS MENU KEY AND SCROLL TO 'MAIN MENU'. THEN PRESS 'SET' TILL IT BEEPS		VALVE SETTINGS				
	LANGUAGE	REGION	VALVE	METER RATIO	SALT VS EFFICIENCY	AUTO CALCULATION			REGEN TIME SETTING	REGEN DAY SETTING	Injector	Injector Color	BLFC Washer	DLFC Washer	DLFC Washer Code
LWC1.0	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	12:00AM	7 DAYS	#0000	Black	0	2.0	#2
LWC1.5	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	12:00AM	7 DAYS	#0000	Black	0	2.4	1S
LWC2.0	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	12:00AM	7 DAYS	#0000	Black	0	3.2	2S

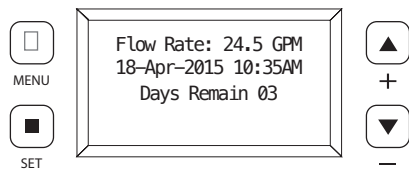
MASTER PROGRAMMING GUIDE

Key Pad Configuration:

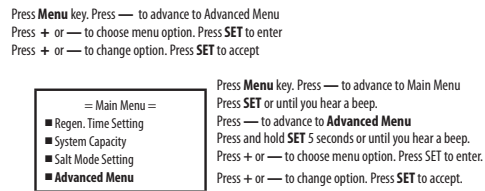
MENU This function is to enter the basic set up information required at the time of installation.

SET This function is to accept the values if changed and advance to the next page in the menu

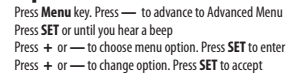
+ / - These buttons are used to increase or decrease the value of the settings while in the programming mode



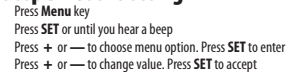
Step B - Advanced Menu



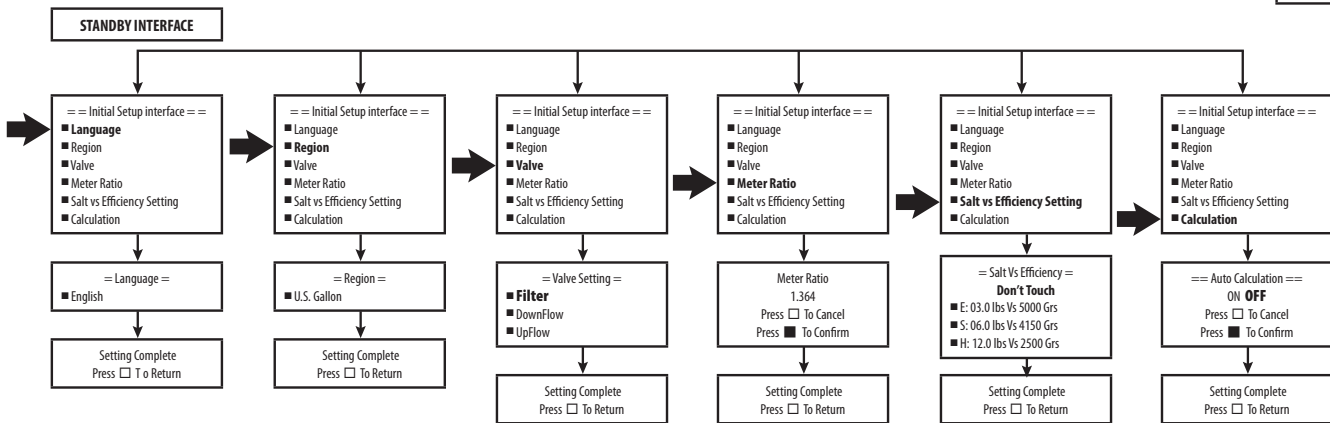
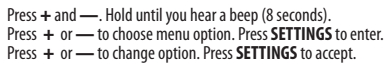
Step C - Main Menu



Step D - User Setting



Step A - Region Setting



DIAGNOSTIC SCREEN

PRESS "MENU" KEY AND SCROLL TO "MAIN MENU". THEN PRESS "SET" TILL IT BEEPS. SCROLL TO ADVANCED MENU

Press "MENU" key . Press - to advance to Main Menu

Press "SET" or until you hear a beep.

Press - to advance to Advanced Menu

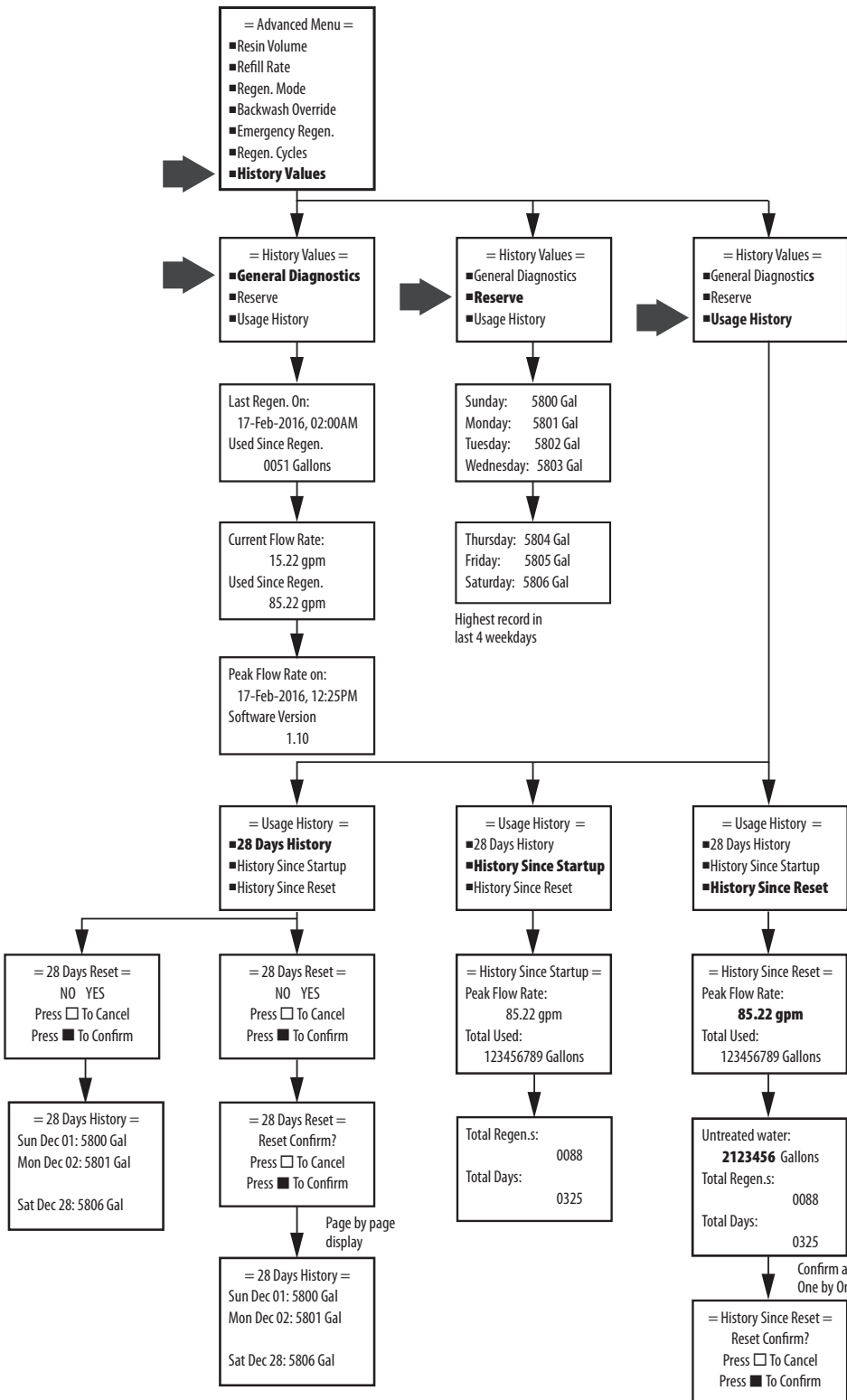
Press and hold "SET" 5 seconds or until you hear a beep.

Press - to advance to History Values

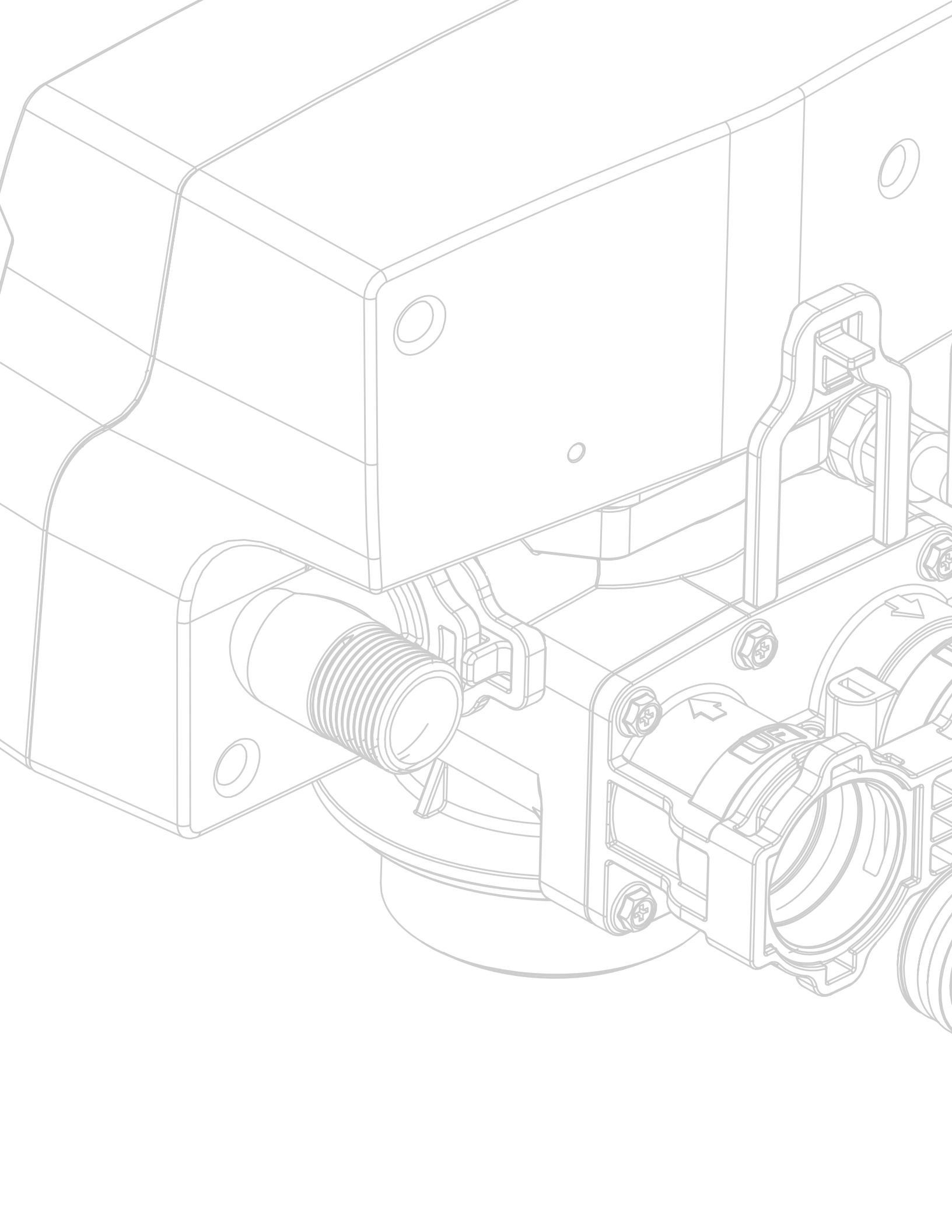
Press "SET" or until you hear a beep.

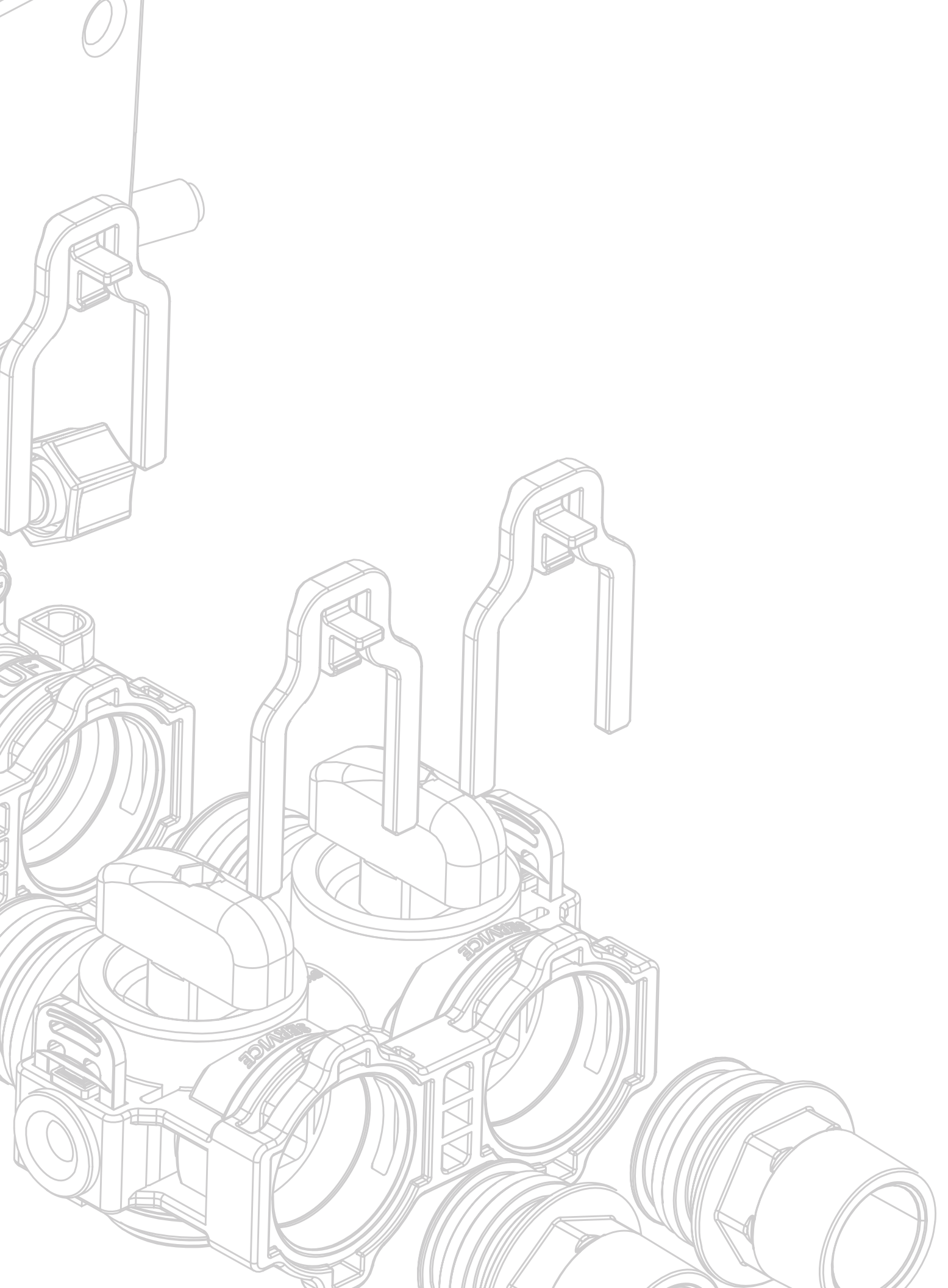
Press "+" or "-" to choose menu option. Press "SET" to enter.

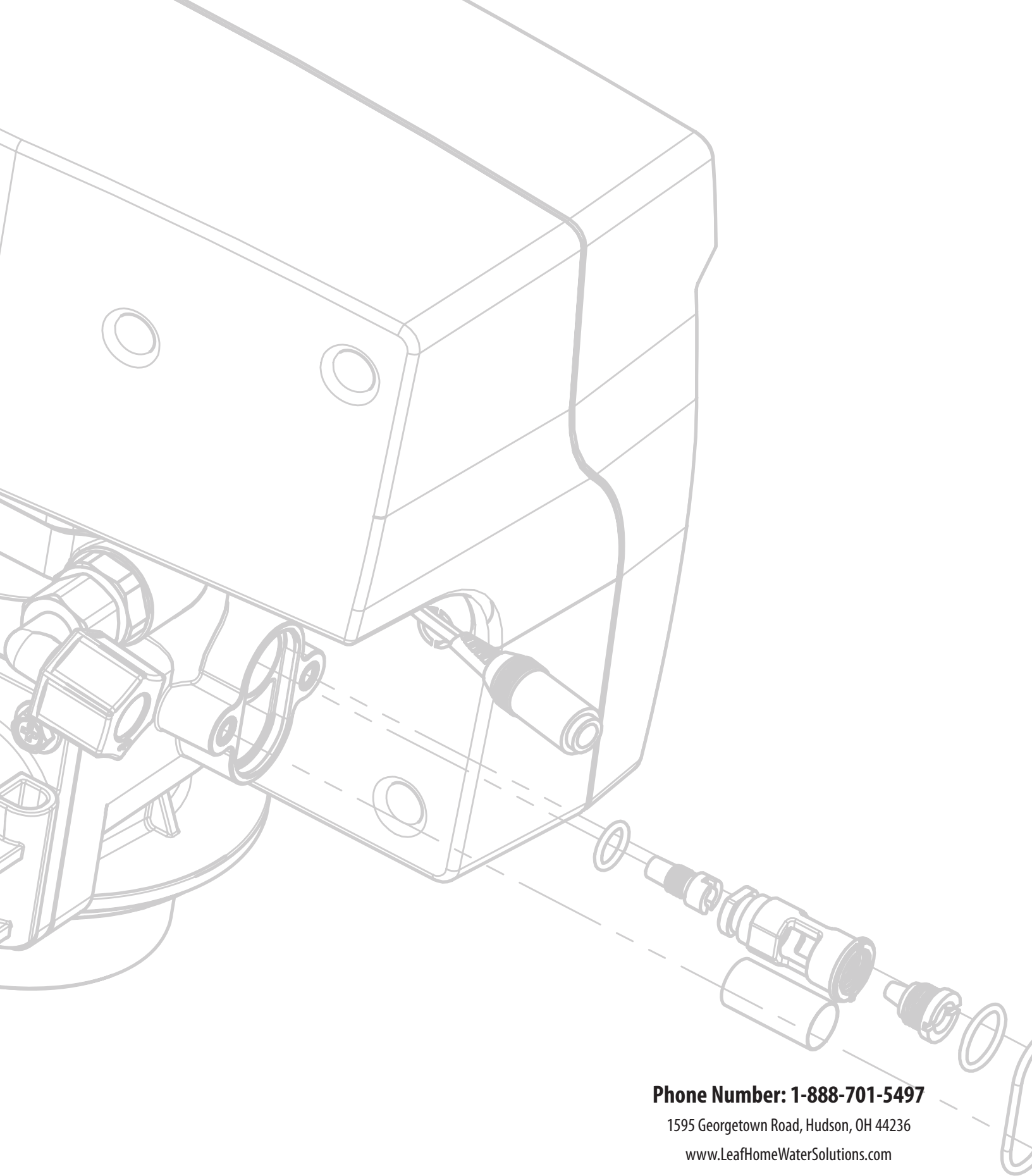
Press "+" or "-" to change option. Press "SET" to accept.



PARAMETER	DESCRIPTION
LAST REGEN ON	Date of last system regeneration.
USED SINCE REGEN	Volume used since last regeneration.
CURRENT FLOW RATE	The current system flow rate.
PEAK FLOW RATE	The peak or highest flow rate since last regeneration.
SOFTWARE VERSION	The software version programmed on the PCB.
RESERVE	The calculated reserve for each day based on the highest days usage over the past 4 weeks.
28 DAYS HISTORY	The volume used for each of the last 28 days.
USAGE HISTORY	The usage since system start up and from the last reset.
TOTAL USED	The total volume used.
TOTAL REGENS	The total quantity of regenerations.
TOTAL DAYS	The total days in operation.







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