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Flexx Oxi-Gen Aeration Iron and Sulfur Filter

081-FX-XXX



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Unpacking and Inspection

Be sure to check the entire unit for any shipping damage or lost parts. Also note damage to the shipping cartons. Contact US Water Systems at 1-800-608-8792 to report any shipping damage within **24 hours of delivery**. Claims made after 24 hours may not be honored. Small parts, needed to install the unit, will be in a parts bag. To avoid loss of the small parts, keep them in the parts bag until you are ready to use them.

Safety Guide

For your safety, the information in this manual must be followed to minimize the risk of electric shock, property damage or personal injury.

- Check and comply with provincial / state and local codes. These codes must be followed.
- Use care when handling the system. Do not turn upside down, drop, drag or set on sharp protrusions.
- The water system works on 12 volt-60 Hz electrical power only. Be sure to use only the included transformer.
- Transformer must be plugged into an indoor 120 volt, grounded outlet only.
- **WARNING:** This system is not intended for treating water that is micro biologically unsafe or of unknown quality without adequate disinfection before or after the system. Contact US Water Systems for disinfection treatment equipment.

Before Starting Installation

Proper Installation

This system must be properly installed and located in accordance with the Installation Instructions before it is used or the warranty will be void.

- **Do not** Install or store where it will be exposed to temperatures below freezing or exposed to any type of weather. Water freezing in the system will break it. Do not attempt to treat water over 100°F.
- **Do not** install in direct sunlight. Excessive sun or heat may cause distortion or other damage to non-metallic parts.
- Properly ground to conform with all governing codes and ordinances.
- Use only *lead-free solder and flux* for all sweat-solder connections as required by state and federal codes.
- Maximum allowable inlet water pressure is 100 psi. If daytime pressure is over 80 psi, night time pressure may exceed the maximum. Use a pressure reducing valve (PRV) to reduce the pressure.
- **Warning:** Discard all unused parts and packaging material after installation. Small parts remaining after the installation could be a choke hazard.

Tools, Pipe, Fittings, and Other Materials

- Channel Locks
- Screwdriver
- Teflon Tape
- Razor Knife
- Two adjustable wrenches
- Additional tools may be required if modification to home plumbing is required.
- To maintain full valve flow, be sure the plumbing size matches the size of the valve. The outlet pipe should be the same size or larger than the water supply pipe.
- Use copper, brass, or PEX pipe and fittings. Some codes may also allow PVC Plastic pipe.
- **ALWAYS** install the included bypass valve or install a 3 shut-off valve hard piped bypass. Bypass valves allow the water to be turned off to the system but can still provide water to the house for water use during repairs or service.
- 5/8" OD, 1/2" ID drain line is needed for the valve drain.

About The System

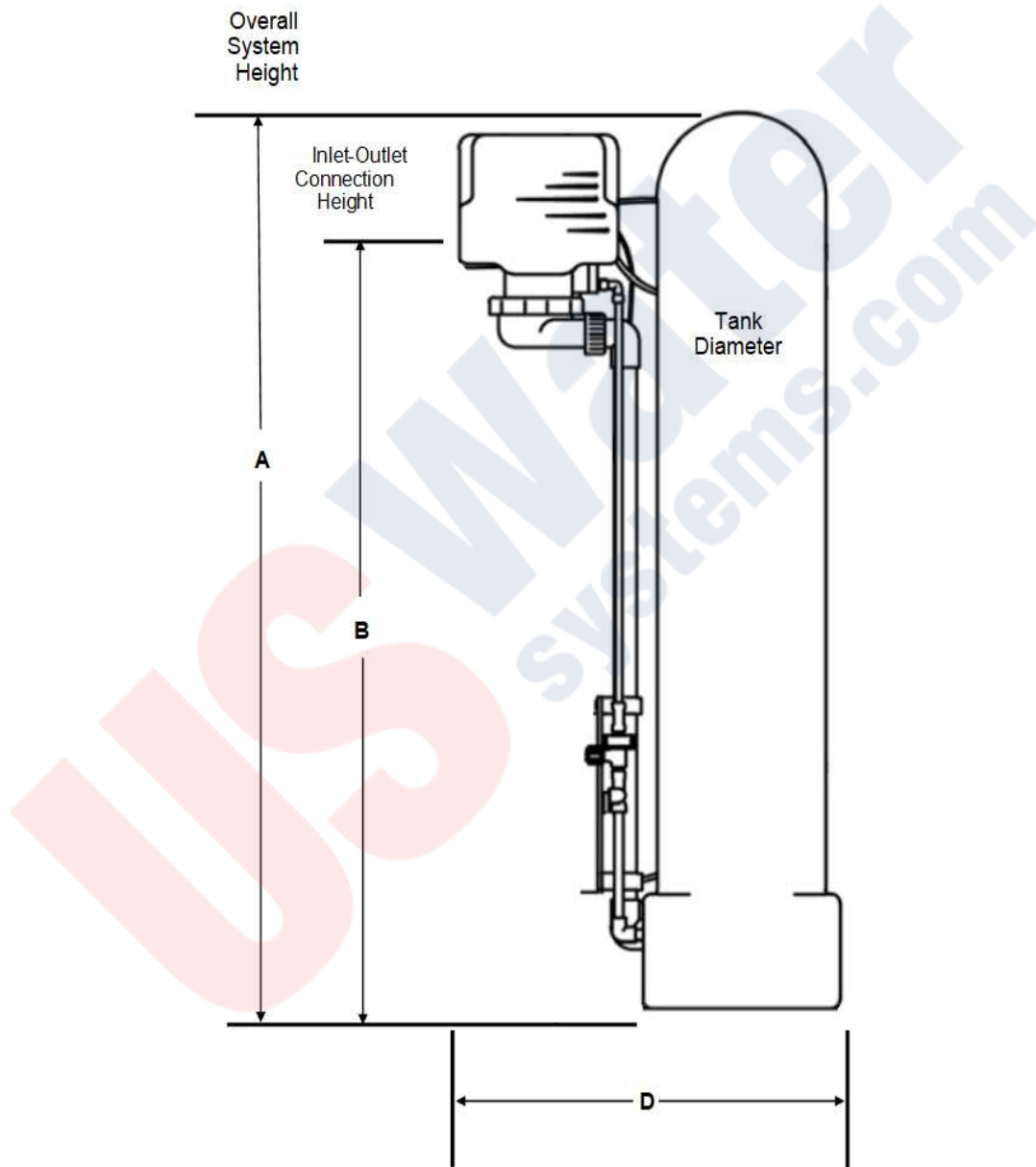
The Flexx Oxi-gen uses the air we breath to naturally reduce the effects of Iron, Manganese, and Sulfur Gas. By introducing oxygen to the water, contaminants chemically change to a physical particle that can be mechanically filtered out of this water. This natural process, called oxidation, is usually accomplished in other systems by using chemicals such as H₂O₂ or potassium permanganate. Since the Flexx Oxi-gen does not use chemicals to treat the water, maintenance and chemical byproducts associated with these types of systems are eliminated. The energy required to operate this system is provided by using extra power that is available in your well pump to inject free air into the water. There are several normal side effects that may or may not occur when water is treated in this manner:

- **Cloudy or milky appearance to the treated water** - This side effect is usually more pronounced when the iron, manganese, or sulfur gas levels are low. Since the Flexx Oxi-gen uses oxygen for the treatment of these contaminants, it can be expected to have some amount left over in the treated water. The higher the contamination levels are, the less oxygen there will be. It is the oxygen that gives the cloudy or milky appearance. Once the faucet is opened and the water is drawn, pressure is released and allows the oxygen to escape. This usually will take from a few seconds to a minute depending on the amount of oxygen and the pressure. This noticeable side effect tells you the system is working properly and also will enhance the palatability of the water. It's oxygen that gives water its fresh, crisp taste.
- **Sputtering or slight coughing from the hot water side faucets** - This is a normal phenomenon that usually occurs first thing in the morning. As the highly oxygenated Flexx Oxi-gen water is exposed to heat in the hot water tank, a small amount of oxygen will separate. The longer the water is allowed to sit in the hot water tank, the more this will be noticed.

Usually, this will only occur if the hot water is allowed to sit idle for eight (8) hours or more. Consequently, when hot water is drawn after an extended period of no water use, a slight sputtering or coughing may be experienced for a few seconds. If this causes the hot water to splash out of the sink, the problem is reduced by simply turning on the cold water first and blending in the hot for several seconds. If there is a large amount of free air noticed on the cold water side, there is a possible malfunction of the system and US Water Systems should be contacted to service the unit.

System Dimensions

Model	Tank Size	A	B	C	D
FX-150	10" x 54"	61"	52"	10"	21"
FX-250	13" x 54"	61"	52"	13"	24"



Specifications

Please review operating pressures, temperatures and water chemistry limitations to ensure compatibility.

Model Number	FX-150	FX-250
Tank Size	10" x 54"	13" x 54"
Capacity (cu/ft)	1.5	2.5
Gravel Under-bedding	15 lbs.	25 lbs.
Backwash Flow Control (GPM)	5.0	7.0
Service Flow Rates	7 GPM	15 GPM
Peak Flow Rates	10 GPM	20 GPM
Pressure Drop @ Service Flow	5-7 PSI	
Pressure Drop @ Peak Flow	15-20 PSI	
Water Pressure	20 PSI Min / 100 PSI Max	
Water Temperature	39°F Min / 100°F Max	
Plumbing Connections	3/4" or 1" MPT	
Electrical Requirements	100-240V, 50/60 Hz, 0.3 A / Output 12V, 500mA	
Iron	≤ 10 ppm	
Hydrogen Sulfide	≤ 12 ppm	
Manganese	≤ 0.7 ppm	
pH	6.5 - 7.8	

NOTE: System is not meant for iron bacteria treatment.

How the Water System Works

- Air is injected into the top of the tank, converting ferrous iron to ferric iron and oxidizing sulfur after untreated water has passed through the control valve, preventing the control valve from fouling with iron and/or sulfur. The sludge that forms in most Air Injection systems is simply gone and the iron and sulfur is eradicated with ease.
- Legacy View App and meter control give you total and advanced control over system regeneration, efficiency, and ease of operation. All it takes is 30 seconds to program the Flexx Oxi-gen.
- Simple 9 volt battery back-up keeps electronic motor active and will return the control valve to service position in case of power failure during regeneration.
- Includes meter to provide water usage history.
- Air draw cycle can be initiated without a backwash cycle, saving 1000's of gallons of water annually.
- The control valve slowly releases compressed air charge prior to backwash cycle, eliminating the explosive blast that can dislodge the drain line.
- Fully adjustable cycle times.
- Built-in bypass valve

NSF Approved Components - The US Water Systems Flexx Oxi-gen Aeration Iron and Sulfur Filter is a fully automatic backwashing filtration system. It uses all NSF and FDA approved components, including the Catalytic Carbon filter media, which is tested and certified by the WQA to NSF/ANSI 61.

Legacy View App

- Communicates with your smartphone via Bluetooth
- Simply set the time of day, time of regeneration, and backwash frequency
- Uses a 9 volt battery so that, if power goes out during regeneration, it automatically returns to service so as not to continually waste water to the drain.
- Monitors remaining battery life
- Fully programmable cycles
- Can be "precision tuned"

Where to Install the System

- Place the system as close as possible to the pressure tank (well system) or water meter (city water).
- Place the system as close as possible to a floor drain or other acceptable drain point (laundry tub, sump, standpipe, etc)
- Connect the unit to the water system **BEFORE** the water heater (10' or more). **DO NOT RUN HOT WATER THROUGH THE SYSTEM.** Temperature of water passing through the system must be less than 100°F.
- Do not install the system in a place where it could freeze. **Damage caused by freezing is not covered by the warranty.**
- Put the system in a place where water damage is least likely to occur if a leak develops. **The manufacturer will not repair or pay for water damage.**
- A 120 volt electric outlet is needed within 6 ft of the system. The transformer has an attached 6 foot power cable. **Be sure the electrical outlet and transformer are in an inside location so they are protected from wet weather.**
- If installing in an outside location, you must take the steps necessary to ensure the system, installation plumbing, wiring, etc are protected from the elements and contamination sources.
- **Keep the system out of direct sunlight.** The sun's heat may soften and distort plastic parts.

Preparation

System Tank Preparation

Water Pressure: A minimum of 20 pounds of water pressure is required for the control valve to operate effectively.

Electrical Facilities: An uninterrupted alternating current (AC) supply is required. *Note: Other voltages are available. Please make sure your voltage supply is compatible with your unit before installation.*

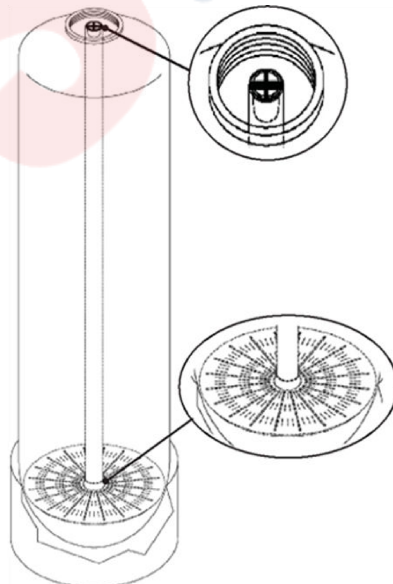
Existing Plumbing: Condition of existing plumbing should be free from lime and iron buildup. Piping that is built up heavily with lime and/or iron should be replaced.

Location of Tank and Drain: The media tank should be located close to a drain to prevent air breaks and back flow.

Caution: Water pressure is not to exceed 80 psi, water temperature is not to exceed 110°F (43°C), and the unit cannot be subjected to freezing conditions.

Media Installation

1. Remove the tank from the carton. Remove the plastic cap on the tank.
2. Verify the riser tube is secured in the bottom of the tank. The tube should not pull out of the tank.



3. Install the clear, plastic cap that is provided in the install kit onto the distributor tube.

4. Use the blue funnel provided to pour the gravel and carbon into the tank. Pour it evenly around the hole to ensure it is well distributed in the tank and pour slow enough to keep from plugging the hole. A helper may be needed to hold the funnel during the filling process. The gravel is poured in first and the carbon second. Install all the gravel and carbon that was sent. US Water Systems does NOT send extra media. **NOTE:** It is recommended that a dust mask and safety goggles be worn to prevent possible injury.



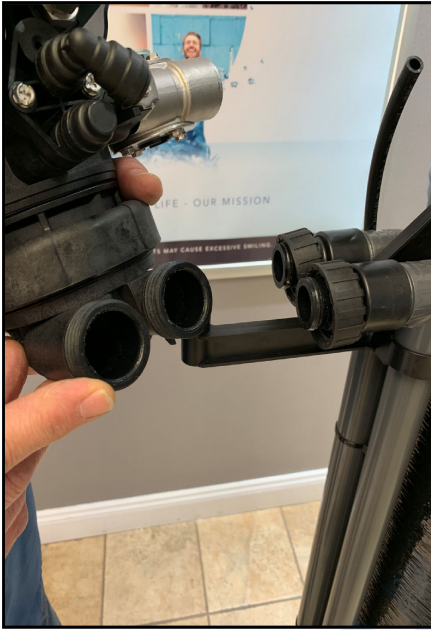
5. When the media is installed, move the tank side to side to settle the media. Remove the funnel and clear cap from the distributor tube. Now install the Ferric iron collection spheres. Install all the spheres in the tank. Fill the tank with water and allow it to soak for at least an hour before startup. Re-install the threaded plastic cap on the tank.



6. Lubricate the distributor O-rings on the valve connectors.



7. Install the valve on the tank and tighten the connector nuts hand tight. There shouldn't be a need to use tools on these connectors. Hand tight should be sufficient.



8. Install the valve fastening bolt in the bottom of the valve through the support arm bracket. Push the plastic air tube in the fitting on the side of the valve.



Installation Instructions

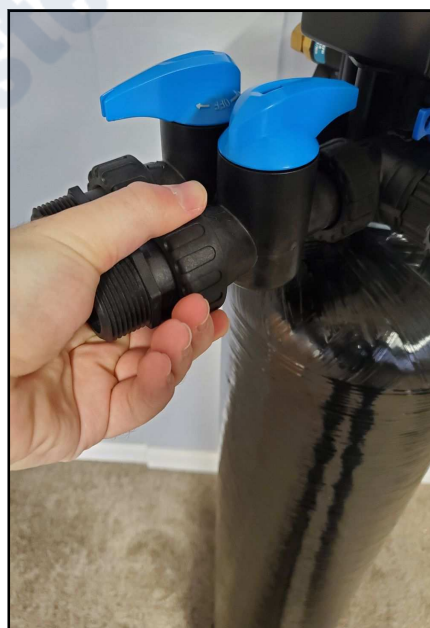
1. If your hot water tank is electric, turn off the power to it to avoid damage to the element in the tank.
2. If you have a private well, turn the power off to the pump and then shut off the main water shut off valve. If you have municipal water, simply shut off the main valve. Go to a faucet or spigot (preferably on the lowest floor of the house) and turn on the cold water until all pressure is relieved and the flow of water stops.
3. Locate the media tank close to a drain where the system will be installed. The surface should be clean and level.

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

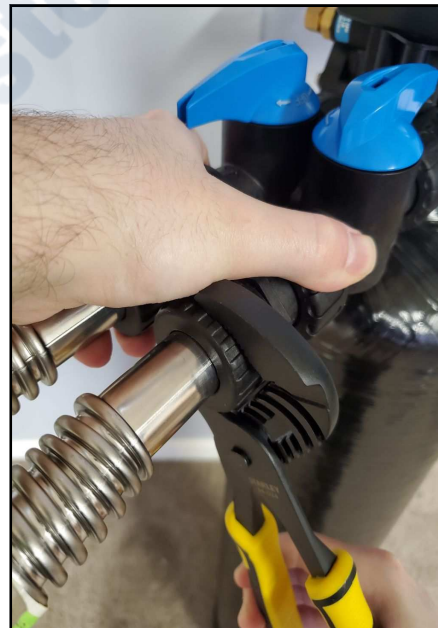
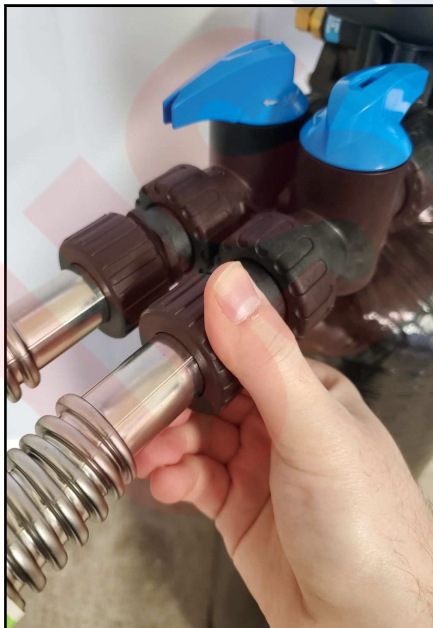
The system is equipped with male pipe threaded ports on the control valve bypass. The bypass is marked with arrows to show proper flow direction. The arrow pointing toward the valve indicates the inlet. The arrow pointing away from the valve is the outlet.



4. Insert the provided plumbing fittings into the bypass. 3/4" and 1" male pipe thread fittings are supplied so ensure you pick the correct one for your plumbing. Tighten the retaining nuts hand tight, ensuring that the fittings are not cross threaded.



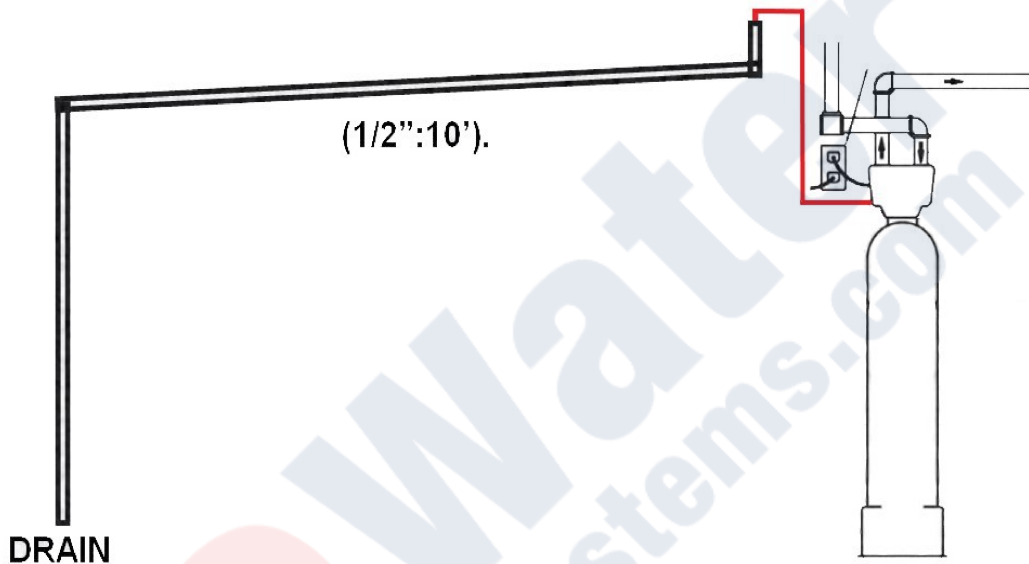
5. Be sure to use Teflon tape or other pipe sealant on the plumbing fitting threads and install them in the bypass accordingly. Use an adjustable wrench to ensure they are tight.



NOTE: All piping should be secured to prevent stress on the bypass valve and connectors.

NOTE: Connections above are made using a stainless steel flex connector with a rubber gasket and do not require Teflon tape.

6. Connect the drain hose to the valve and secure it with a hose clamp. Run the drain hose to the nearest laundry tub, floor drain or approved air gap fitting. The drain can be ran overhead or down along the floor. Drain tubing should be a minimum of 1/2" ID. When running the drain overhead, it is important that the tubing has no dips or kinks. If the drain is ran overhead and must run linearly to the available drain, it is recommended that a hard pipe is used of larger diameter than the drain line. This linear pipe should have a physical "drop" toward the drain (1/2" : 10'). The goal is to have a gravity drain without much back pressure when traveling long distances.



NOTE: A direct connection into a waste drain is not recommended. A physical air gap of at least 1.5" should be used to avoid bacteria and wastewater traveling back through the drain line into the system.



NOTE: Be sure to secure the drain line. The system will drain with force and it should be secured to prevent a leak. Hose clamps should be used to secure the drain line at the connection points.

7. Turn both bypass handles perpendicular to the bypass to place the unit in the bypass position. Slowly turn on the main water supply. At the nearest cold treated faucet or spigot, 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. If a faucet is used, make sure the screen is removed first.



8. Make sure there are no leaks in the plumbing system before proceeding. Close the water tap when the water runs clean. Check for leaks again.
9. Proceed to programming then to the start up instructions.
NOTE: The unit is not ready for service until you complete the start-up instructions. Be sure to program the unit first.

Programming Using Onboard Buttons

Plug the transformer into the port marked "P" on the valve. The LED screen will be flashing between the time of day and the number of days between backwash cycles.



NOTE: The unit will recharge with air every night. The days between a full backwash cycle are what the flashing number represents.

1. To enter the Main Menu, press the **Menu/Enter** button. (Time of Day will flash)
2. To set the **Time of Day**, press the **Set/Change** button. (First digit will flash)
 - To change digit value, press the Set/Change button.
 - To accept the digit value, press the Menu/Enter button.
 - Next digit will flash to begin setting.
 - Once the last digit display is accepted, all digits will flash.
3. To set **A.M. or P.M.**, press the **Menu/Enter** button.
 - To change digit value, press the Set/Change button.
 - To accept the digit value, press the Menu/Enter button.
 - Once A.M. or P.M. is accepted, the next menu item will flash.
4. Days Between Backwash
 - Press Menu/Enter button. This display is used to set the maximum amount of time (in days) the unit can be in service without a backwash. This option setting is identified by the letter "A" in the left digit. Backwash will begin at the set Backwash time. A "00" setting will cancel this feature. The max value for this setting is 29.
 - To adjust this value, press the Set/Change button.
 - To accept the digit value, press the Menu/Enter button.

5. To set the number of days between Air Draw Cycles (d), press the **Set/Change** button.
 - Repeat instructions from step (2)
 - Maximum value is 9.
 - If value set to 0, air draw is turned off but an air cycle will still be completed when backwash cycle occurs. If the number of days between air draw cycles is set to a higher number of days than the number of days between backwash cycles, it will have no effect. In order to turn off all cycles, both the days between backwash and days between air draw cycles must be set to 0
 - Default setting is 1 day.
6. To Exit Main Menu, press the **Menu/Enter** button.

NOTE: If no buttons are pressed for 60 seconds, the Main Menu will be exited automatically.

Master Programming Using Onboard Buttons

To enter Master Programming Mode, press and hold both buttons for 5 seconds.

NOTE: All Master Programming functions have been preset at the factory. Unless a change is desired, it is NOT necessary to enter Master Programming Mode.

1. Regeneration Time (r) - Example (r12A)
 - The time of day at which regeneration may take place is designated by the letter "r". Default regeneration time setting is 12A
 - The first display digit indicates A.M. or P.M. To change the value, press the Set/Change button. Press Menu/Enter to accept the value and move to the next digit.
 - The second and third display digits indicate the hour at which the regeneration will occur. Change the digits with the Set/Change button and accept with the Menu/Enter button.
 - After the entire display flashes, press the Menu/Enter button to move to the next menu item.
2. Backwash Cycle Step Times* (Steps 2, 3, 4, 5)
 - The next 4 displays set the duration of time in minutes for each backwash cycle step.
 - The step number which is currently modifiable is indicated on the far left of the display screen. The number of minutes allotted for the selected backwash step is displayed on the far right.
 - Change the digit value using the Set/Change and Menu/Enter buttons as described above.

NOTE on Air Draw Cycle (4): The longer the unit is set to remain in the Air Draw cycle (4), the more air is drawn into the system. A default setting of 20 minutes draws air down to the level of a normal media bed height. If the system needs more air, increase the time setting for step (4) or decrease the number of days between air draw cycles (in Main Menu).

3. Bluetooth Enabled
 - BE - 1 (ON) / BE-0 (OFF)
 - Toggle the setting with the Set/Change button.
4. Bluetooth Password - BBPP is displayed for one second then password is displayed.
 - Change the digit values using the Set/Change and Menu/Enter buttons as described above.
5. To exit the Master Programming Mode, press the Menu/Enter button until time of day returns

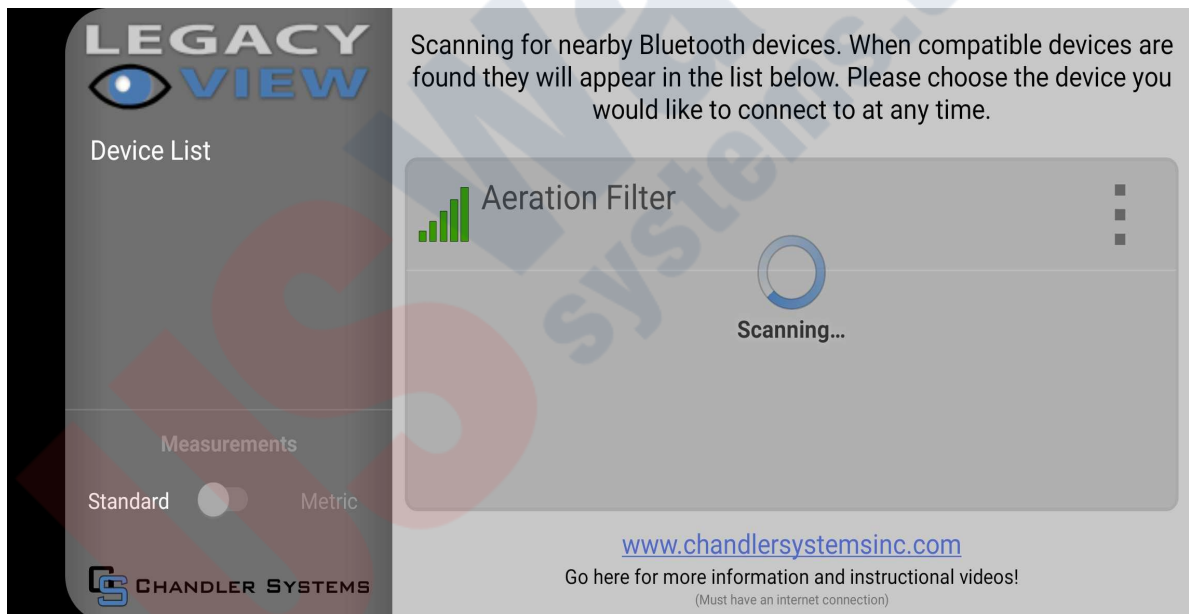
NOTE: If no buttons are pressed for 60 seconds, the Master Programming Mode will be exited automatically.

Programming Using Legacy View App

The Legacy View app allows the user to control every aspect of the water system from the convenience of a smart phone. The Legacy View app will allow the user to monitor usage history, change cycle times, start a regeneration and advance through a regeneration.

To use the Legacy View app:

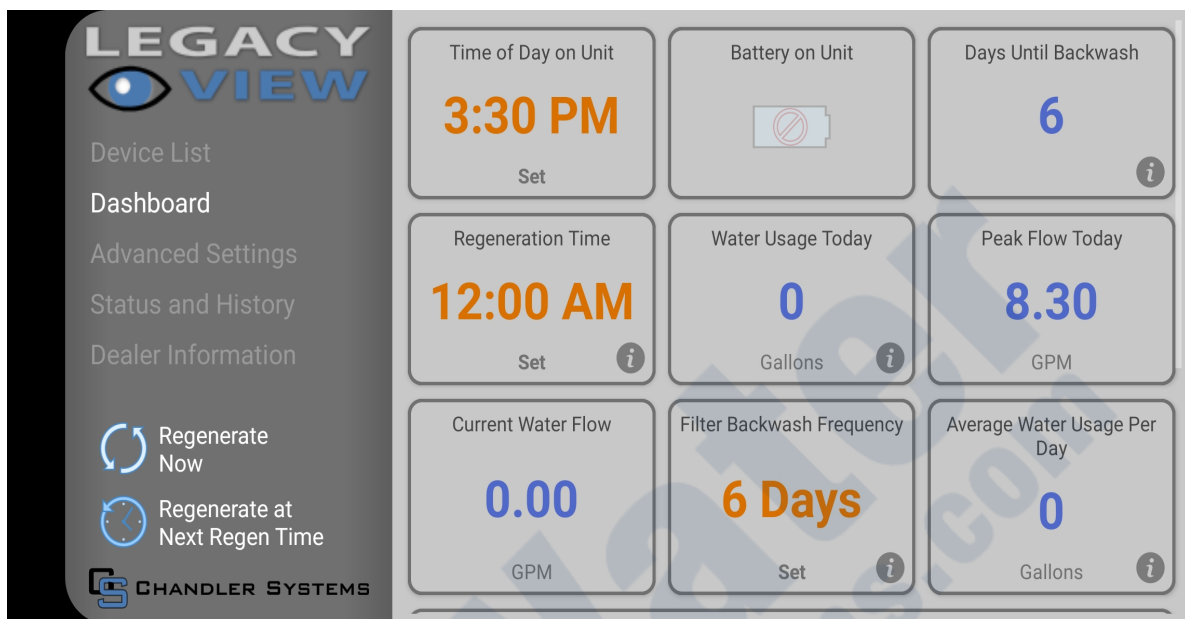
1. Go to the App store on the phone to be used and search for "Legacy View"
2. Download the free Legacy View app.
3. Open the app to begin programming.
4. Once the app is open, it will begin scanning for control valves in the Bluetooth vicinity.



5. Once the app connects to the control valve or valves, they will appear on the screen. Each valve can be renamed by tapping on the three vertical dots on the valve listed on the screen. Choose "Label Device" and a lettered keyboard will appear. The user can name the valve using the keyboard then save it by pushing "OK".
6. Choose the valve to be programmed by tapping on the name. A "Dashboard" will show up for the control valve.

NOTE: There may be firmware updates available for the valve. If the valve needs updates, it will ask you to approve the upload. The valve will not connect until the update has been completed. In some cases, there may be more than one update to perform before the valve will connect.

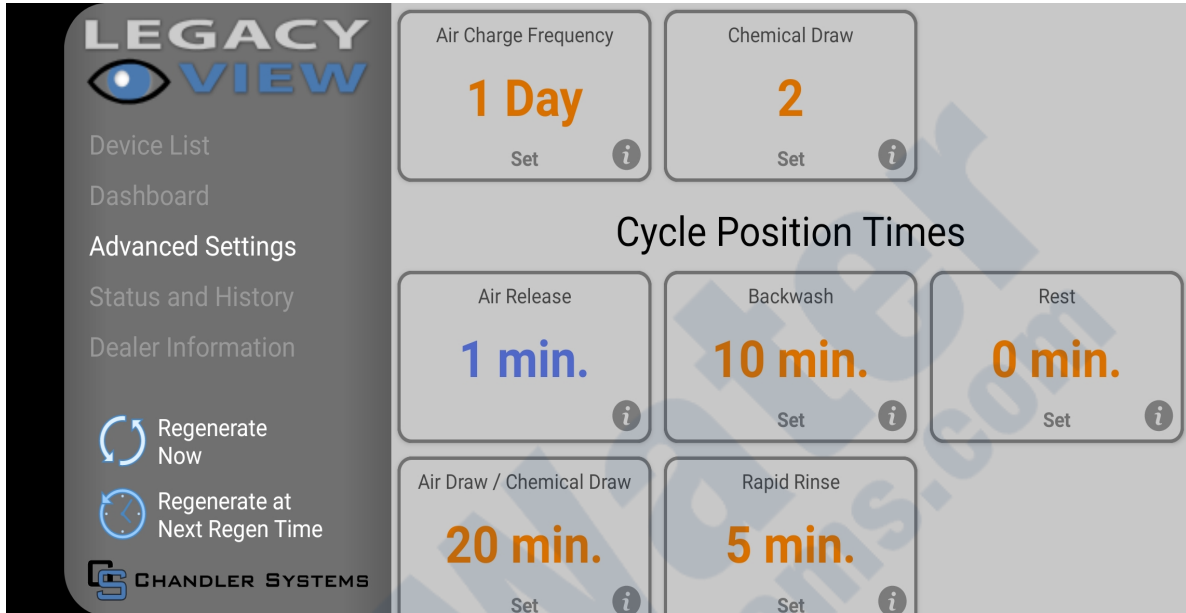
Dashboard



Parameters that can be changed are indicated with orange font. To change a parameter, tap on the orange font then use the keyboard that appears to change the value.

1. **Time of Day:** Tap on the "Time of Day" box. A box will appear that allows you to set the unit to the time that matches the device being used to program the unit. Press "OK" and the time will change to the current time of the device.
2. **Filter Backwash Frequency:** Tap on the "Filter Backwash Frequency" box and input the desired days between backwash. 3 days is the default setting. This will work in 90% of the cases. 5 days would be the maximum recommended frequency. In some cases, it may be necessary to backwash every night (1 Day).
3. **Regeneration Time:** Tap on the "Regeneration Time" box. Input the desired regeneration time for normal operation. This is typically two hours after everyone in the house is asleep or after the business is closed for the day. If there is other backwashing equipment, make sure this time is offset so both units are not backwashing at the same time.

Advanced Settings

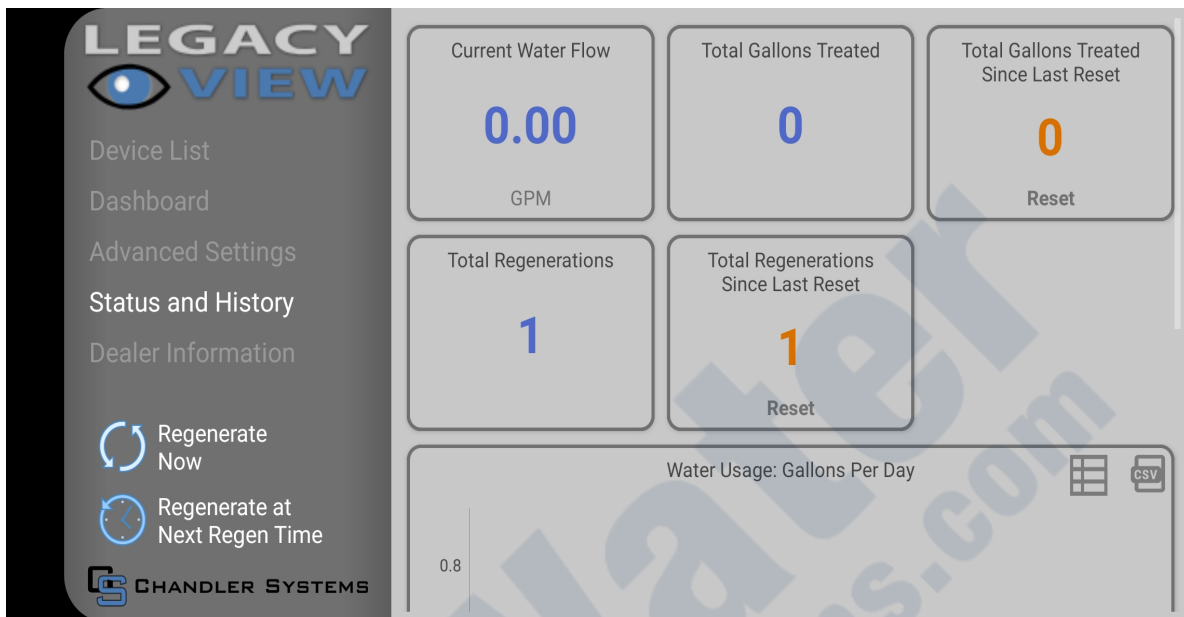


Parameters that can be changed are indicated with orange font. To change a parameter, tap on the orange font then use the keyboard that appears to change the value.

NOTE: These are factory set and should not be changed without guidance.

1. **Air Charge Frequency:** This should be set to 1 day. The maximum for this should be 3 days but only in a very low water usage setting.
2. **Backwash Cycle:** This should be set to 20 mins and should not be changed.
3. **Rest:** This should be set to 1 min. (Picture is not accurate)
4. **Air Draw:** This should be set to 20 min and should not be changed.
5. **Rapid Rinse:** This should be set to 5 min and should not be changed.

Status and History



The Status and History screen shows current conditions of the system as well as flow rate and usage history. There are two parameters that can be reset.

1. **Total Regenerations:** This parameter shows how many times the system has regenerated since it was put in service or since the last time the value was reset.
2. **Total Water Treated:** This parameter shows the total amount of water that has been treated since the system was put in service or since the last time the value was reset.

Regenerating Using the Legacy View App

There are two options for regenerating the system. Tap on the desired option and press "OK".

1. **Regenerate Now:** Regenerate Now will queue an immediate regeneration and will start instantly.
2. **Regenerate at Next Regen Time:** Regenerate at Next Regen Time will queue the system to regenerate at the specified regeneration time chosen in the programming.

System Start-Up

1. With the bypass handles in the bypass position, initiate an immediate regeneration. Advance through the first 4 cycles to cycle 5. This is the backwash cycle. Each cycle can be advanced by touching the "Go To Next Regen Step" button and selecting "OK" to advance to the next cycle.
2. Once the valve has stopped moving and is in the backwash position, slowly open the bypass handles about 1/8th turn. Water should slowly enter the tank.
NOTE: If there is a loud knocking sound, simply turn the bypass handle back a bit as the system is filling too quickly.
3. During the backwash cycle, slowly open the bypass valve until there is water coming out of the drain hose. Then open the bypass valve fully.
4. Allow the system to backwash and push all the air out through the drain.
5. The valve will automatically move to the "Rest" cycle when the backwash cycle is complete. Skip this cycle by pressing and holding the "Set/Change" button on the control valve or by pressing "Go to Next Regen Step" on the Legacy View App.
6. This will move the valve to the "Air Draw" cycle. Skip this cycle by pressing and holding the "Set/Change" button on the control valve or by pressing "Go to Next Regen Step" on the Legacy View App.
7. The valve will then advance to the "Rapid Rinse" cycle. Allow the system to rinse for the entire cycle.
8. Once the system has returned to the Service position after the rinse cycle, the system is installed and ready for use.

System Features

Battery Back-Up (Uses a standard 9-volt alkaline battery.)

- During power failures, the battery will maintain the time of day as long as the battery has power. The display is turned off to conserve battery power during this time. To confirm that the battery is working, press either button and the display will turn on for five (5) seconds.
- If power failure occurs while the system is regenerating, the control valve will motor to a shut off position to prevent constant flow to drain. Depending upon the system pressure and other factors, it is possible to observe a reduced flow to drain during this step. After power is restored, the control valve will return and finish the cycle where it left off prior to the power interruption.
- When used without battery back-up, during a power failure, the unit stops at its current point in the regeneration position and then restarts at that point when the power is restored. The time will be offset by the increment of time the unit was without power so it is necessary to reset the time of day on the unit. No other system will be affected.

WARNING: DO NOT INSTALL THE BATTERY BACKUP UNTIL THE SYSTEM HAS BEEN PROGRAMMED AND START UP IS COMPLETE!

1. Remove the two screws on the back of the valve.



2. Pull out the 9V battery connector, remove the battery cover, and attach the battery to the connector.



3. Push the battery back in the holder on the valve and replace the cover and screws.



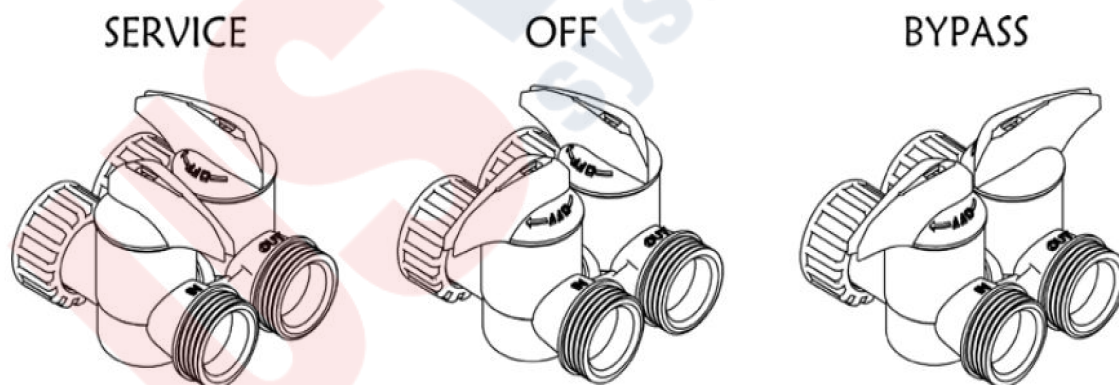
Automatic Bypass During Regeneration

The regeneration cycle can last 30 to 180 minutes, after which treated water service will be restored. During regeneration, untreated water is automatically bypassed for use in the household. This is why 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 Bypass

In the case of emergency, you can isolate your water system from the water supply using the bypass valve located at the back of the control. In normal operation, the bypass is open with the handles in line with the inlet and outlet pipes.

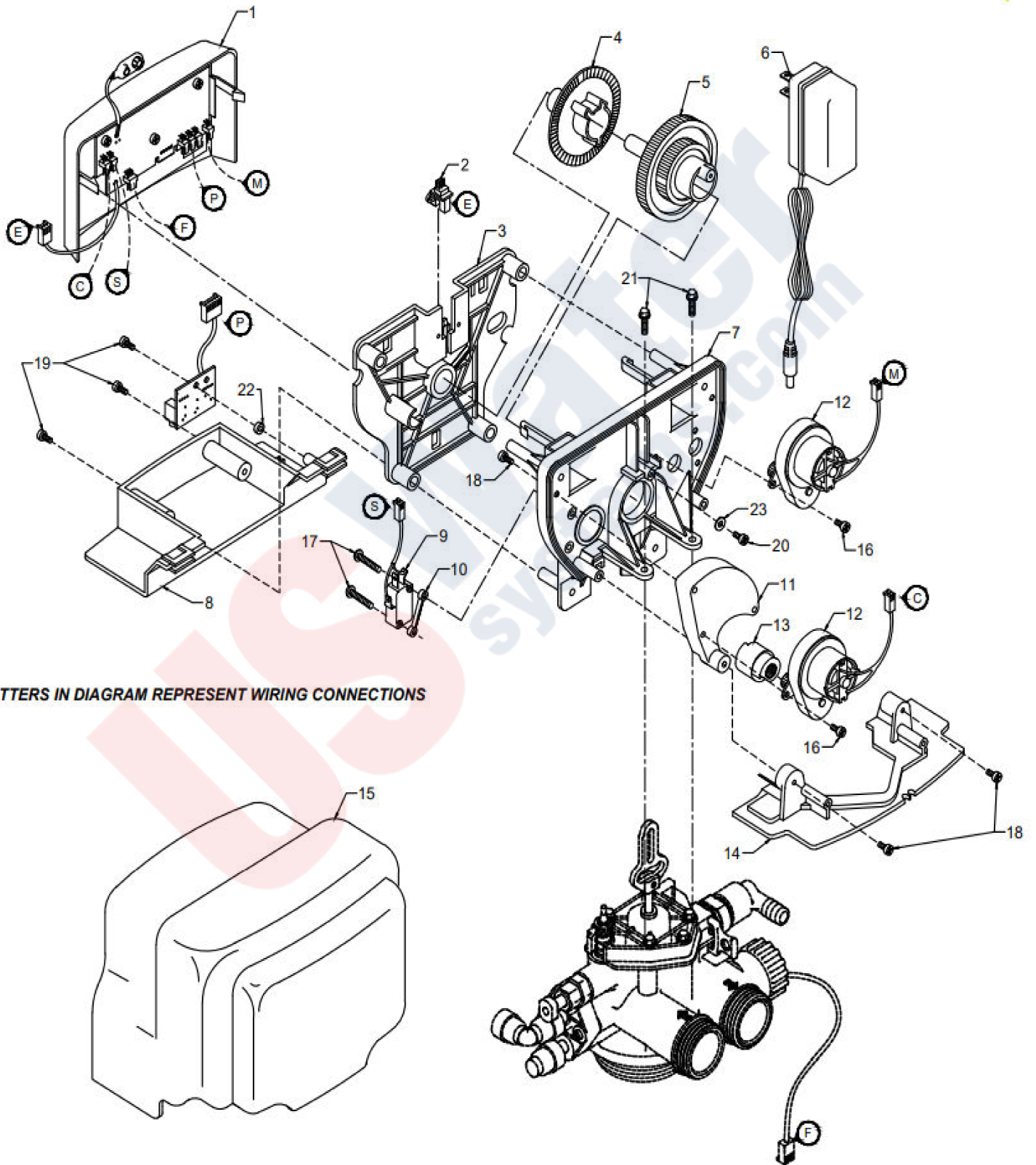
To isolate the system, simply rotate the handles clockwise (as indicated by the word OFF and arrow pointer on the handles) until they stop. Water can be used at related fixtures and appliances as the water supply is bypassing the system, The water used, however, will be untreated. To resume treated water service, open the bypass valve by rotating the handles counter clockwise.



About The System

You may notice new sounds as your water system operates. The regeneration cycle lasts up to 120 minutes. During this time, you may hear water running intermittently to the drain.

Power Head Exploded View

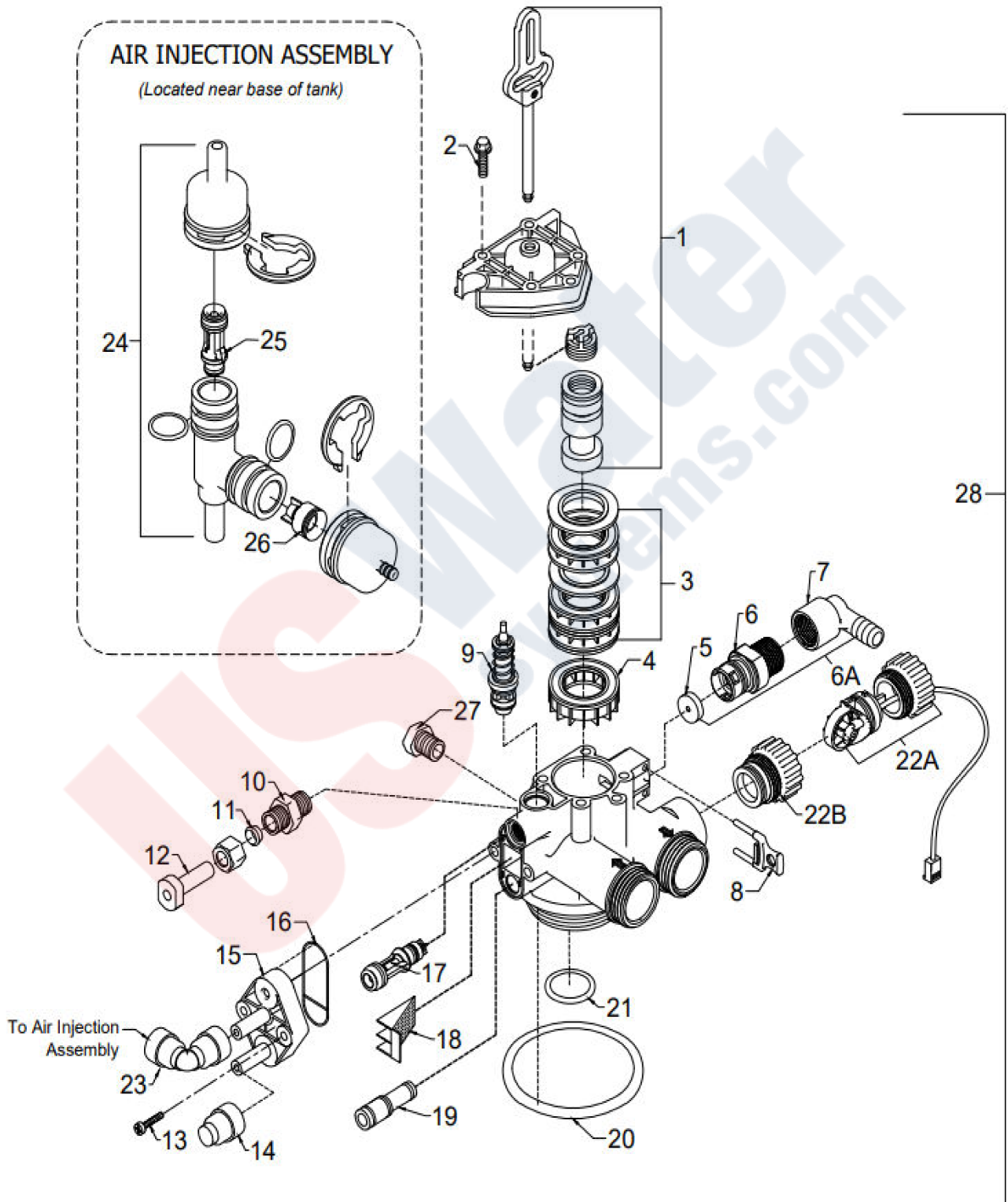


LETTERS IN DIAGRAM REPRESENT WIRING CONNECTIONS

Power Head Parts List

REF	DESCRIPTION	PART NO.	QTY
0	Powerhead Assy.	20015X100	1
1	Circuit Board Assy.	22015X102	1
2	Encoder	20001X124	1
3	Front Plate	20001X004	1
4	Encoder Wheel	20001X007	1
5	Main Gear	21001X120	1
6	Power Supply	20001X125	1
7	Back Plate	20001X005	1
8	Lower Front Base For Cover	20111X002	1
9	Microswitch	20251X113	1
10	Switch Spacer	20111X004	1
11	Brine Motor Mount	20111X006	1
12	Legacy View Motor Assy.	20016X006	2
13	Brine Cam	20111X005	1
14	Lower Back Base For Cover	20111X003	1
15	Valve Cover	20111X000	1
16	6-32 X 5/16" Phillips, Pan Head	SC2	4
17	4 X 3/4" Phillips, Oval Head	SC3	2
18	6 X 1/2" Slotted, Hex Head Black	SC9	3
19	6 X 1/2" Phillips, Pan Head	SC10	3
20	6 X 1/2" Slotted, Hex Head	20001X003	1
21	10-24 X 3/4" Screw SST	20001X001	2
22	Circuit Board Washer	20111X014	1
23	6 X 1/2 Fenderwasher SST	20001X002	1

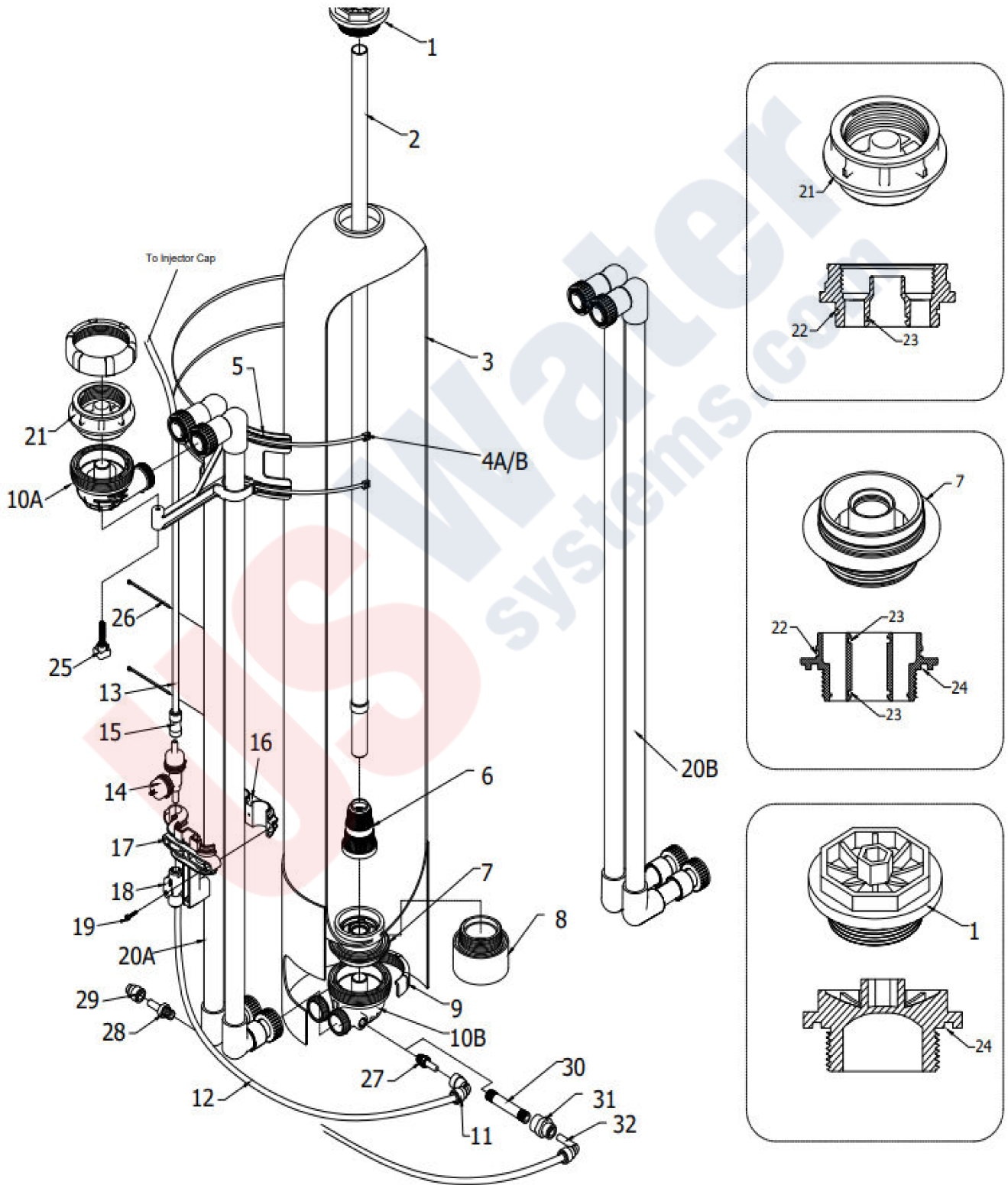
Valve Body Exploded View



Valve Body Parts List

REF	Description	Part No.	QTY
1	Piston Assembly Final Rinse	085-FX-SFP	1
2	10-24 X 3/4" Screw SST	311-1024-34	5
3	Seal and Spacer Kit	085-MX-SS	1
4	End Spacer	N/S	1
5	Flow Control Button 5.0 GPM	085-DLFC-50	1
	Flow Control Button 7.0 GPM	085-DLFC-70	1
6	DLFC Housing	085-DLFC-ASSY	1
7	Drain Line Hose Barb 90° Elbow	085-MX-DLF	1
8	Drain Retainer	085-DLFC-RTN	1
9	Brine Valve	085-BRVLV	1
10	BLFC Assy SST	085-BLFC-ASSY	1
11	BLFC Ferrule 3/8"	085-DL-FER	1
12	Plug 3/8"	085-FX-PLUG	1
13	10-24 X 3/4" Screw SST	311-1024-34B	2
14	3/8" Push Lock Plug	900-W0620006B	1
15	Injector Cap	085-FXO-IC	1
16	Injector Seal	085-INJ-SEAL	1
17	Injector Assy #1 White	085-INJ-WH	1
18	Injector Screen	085-INJ-SC	1
19	Injector Plug & O-Ring Assy	085-INJ-PL	1
20	Tank / Valve O-Ring	085-FXO-CV-ORING	1
21	Dist O-Ring	085-DIST-ORING	1
22a	Meter Assembly	085-METER-ASSY	1
22b	Meter Plug w/ O-Ring	085-METER-PLG	1
23	3/8" Push Lock 90° Elbow	900-Q0620626BV	1
24	Air Injector Check Assy	085-FXO-AIA	1
25	Injector, White	085-INJ-WH	1
26	Check Valve	085-FX-CKVLV	1
27	1/4" NPT Cap	085-CAP-025	1

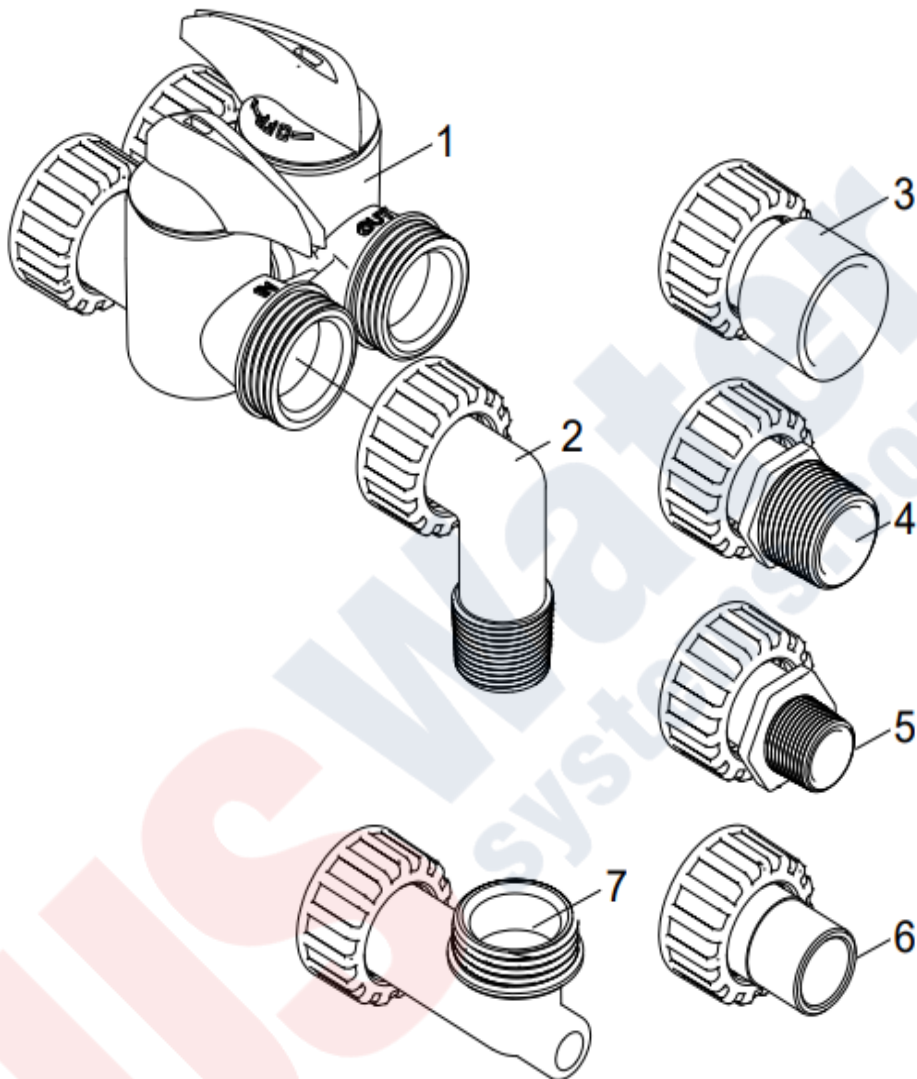
Tank Assembly Exploded View



Tank Assembly Parts List

REF	Description	Part No.	QTY
1	Tank Cap	085-FX-TKCAP	1
2	Tank Distributor Tube (per foot)	085-DIST	4.5
3a	10" Black Tank	085-TK-1054	1
3b	13" Black Tank	085-TK-1354	1
4a	10" Zip Tie	N/A	2
4b	13" Zip Tie	N/A	2
5	Tank Bracket	085-TK-BRK	1
6	Basket	085-DIST-BSKT	1
7	Tank Adapter	085-TK-ADPTR	1
8	13" Tank Extension (Requires one of 085-FXO-CV-ORING also)	085-TK-13EX	1
9	Sidekick Nut	085-FX-NUT	2
10a	Upflow Body	085-FX-UP	1
10b	Upflow Body Drilled	085-FX-UPD	1
11	90° Push Lock Elbow	900-Q0620626B	1
12	3/8" Brine Tubing, Blk (per ft)	901-TUB-38-BK	2
13	3/8" Brine Tubing, Blk (per ft)	901-TUB-38-BK	1
14	Air Injection Assembly	085-FXO-AIA	1
15	Straight Coupler Push Lock	900-R0620626BV	3
16	Bracket Retainer	085-FX-BRKRT	1
17	Sidekick Air Injection Bracket	085-FX-AIBRK	1
18	3/8" Push Lock Ball Valve	085-FX-38BV	1
19	Self Tapping Screw	311-FX-ST	3
20a	10" Sidekick Main Feed Assembly (44" Pipe, Left and Right)	085-FX-MFPA-10B	1
20b	13" Sidekick Main Feed Assembly (44" Pipe, Left and Right)	085-FX-MFPA-13	1
21	Valve Adapter	085-FX-VLVADPT	1
22	O-Ring	085-FX-ORING	2
23	O-Ring, Dist Tube	085-DIST-ORING	2
24	O-Ring, Tank	085-TK-ORING	1
25	Knob	085-FXO-FB	1
26	Black Zip Tie for 3/8" Tubing	N/A	1
27	3/8" NPT to 3/8" Push Lock Adapter Stem	900-S0660616B	3
28	1/4" NPT to 3/8" Push Lock Adapter Stem	195-S0660416B	1
29	3/8" Push Lock Plug	085-FX-PLUG	1
Not Shown	Gravel, 10 X 54 Tank - 15 lbs	600-UB-1418	15
	Gravel, 13 X 54 Tank - 25 lbs	600-UB-1418	25
	Aeration Balls	085-FXO-ABP	1
	Funnel	601-FUNNEL	1

Bypass Exploded View / Parts List



REF	Description	Part No.
1	D15 Bypass	085-PBP
2	1" NPT Elbow Set	085-PBP-ELL-100
3	1" Female Straight Slip Set	085-PBP-SJ-100
4	1" NPT Straight Set	085-PBP-100
5	3/4" NPT Straight Set	085-PBP-075
6	3/4" Female Straight Slip Set	085-PBP-SJ-075
7a	Elbow, Vertical Adapter (Blank)	085-PBPA-BL
7b	Elbow, Vertical Adapter (1/4" NPT Tapped)	085-PBPA-025

Troubleshooting

Symptom	Probable Cause	Correction
Fails to Regenerate Automatically	Power supply plugged into intermittent or dead power source	Connect to constant power source
	Improper control valve programming	Reset program settings
	Defective power supply	Replace power supply
	Defective Drive motor	Replace motor
Regeneration at Wrong Time	Time of day improperly set, due to power failure	Reset time of day programming and install 9-volt battery
	Regeneration time set improperly	Reset regeneration time programming
Poor Water Quality	Check items listed in #1 and #2	
	Bypass valve open	Close bypass valve
	Channeling	Check for too slow or high service flow. Check for media fouling
	Lack of aeration in water	Program valve to draw air more frequently
		Increase number of minutes in air draw cycle
Clean injection assembly and screen		
Loss of Water Pressure	Fouled media	Clean media. Pretreat to prevent
	Improper backwash setting	Backwash more frequently
Continuous Flow to Drain	Foreign material in control	Call dealer. Clean valve and replace pistons and seals
	Internal control leak	Same as above
	Valve jammed in backwash or rapid rinse position	Same as above
	Motor stopped or jammed	Check for jammed piston. Replace piston and seals. Replace motor if motor is unresponsive

Warranty

US Water Systems warrants that your new water conditioner is built of quality material and workmanship. When properly installed and maintained, it will give years of trouble free service.

Seven Year Valve and Electronics Guarantee - US Water Systems will replace any part on the valve or electronics which fails within seven (7) years from date of manufacture, as indicated by the serial number, provided the failure is due to a defect in material or workmanship. The only exception shall be when proof of purchase or installation is provided and then the warranty period shall be from the date thereof.

10 Year Warranty on Mineral Tanks and Brine Tanks - US Water Systems will provide a replacement mineral tank or brine tank within ten (10) years of the original purchase to any original equipment purchaser in possession of the Flexx Oxi-Gen System that fails provided that it is at all times operated in accordance with specifications and not subject to freezing.

General Provisions - US Water Systems assumes no responsibility for consequential damage, labor or expense incurred as a result of a defect or for failure to meet the terms of these guarantees because of circumstances beyond our control. Installation workmanship failure is not covered under warranty. Damage caused by environmental conditions such as, lightning strikes, humidity or heat will not be covered under warranty.

These warranties are in lieu of all other warranties expressed or implied, and we do not authorize any person to assume for us any other obligation on the sale of this water conditioner. No responsibility is assumed for delays or failure to meet these warranties caused by strike, government regulations or other circumstances beyond the control of US WATER SYSTEMS, INC.

To obtain warranty service, call or write: US WATER SYSTEMS, INC. 1209 Country Club Road Indianapolis, IN 46234 (317) 271-8600. ANY IMPLIED WARRANTIES OF FITNESS OR MERCHANTABILITY ARE LIMITED TO THE TERMS OF THIS EXPRESSED WARRANTY AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THOSE HEREIN. US WATER SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some states do not allow the exclusion or limitations of incidental or consequential damages so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

THIS WARRANTY MAY BE TRANSFERRED TO A SUBSEQUENT OWNER WITH WRITTEN APPROVAL OF US WATER AND PAYMENT OF STANDARD TRANSFER FEE.

Flexx Oxi-Gen is a product of US Water Systems.