

## Installation Instructions for Air Injection Systems with Fleck 5600 and 5600SXT

Covers air injection silver, gold, and platinum filter systems.

### THANK YOU

Thank you for purchasing a new **Air Injection System from Oceanic Water Systems**. We appreciate the opportunity you have given us to provide you with better water. We are committed to providing the best customer experience possible and have provided these installation instructions to make things as simple as possible. If you have read through these entire instructions and FAQ section and still have questions feel free to contact us for further help. Our office hours are Monday-Friday 10:00 AM - 4:00 PM PST, and you can call us at 661-575-0033. You can also use the contact us link above to connect you to one of our technical experts.

### BEFORE YOU BEGIN

- **BASIC PLUMBING SKILLS ARE REQUIRED FOR INSTALLATION. IF YOU ARE UNSURE OF YOUR ABILITIES TO INSTALL THE SYSTEM USING THESE INSTRUCTIONS PLEASE HIRE A QUALIFIED PLUMBER.**
- **READ THROUGH YOUR PARTS LIST AND VERIFY ALL COMPONENTS ARE ACCOUNTED FOR AND IN GOOD CONDITION BEFORE SCHEDULING A PLUMBER.**
- **PLEASE READ THROUGH THE ENTIRE INSTRUCTION MANUAL CAREFULLY. IF HIRING A PLUMBER ENSURE THEY HAVE A COPY BEFORE THEY START.**
- **MOST COMMON QUESTIONS ARE ANSWERED IN THE INSTRUCTIONS OR FAQ SECTION. IF YOU HAVE READ BOTH OF THOSE AND STILL HAVE QUESTIONS YOU MAY CONTACT US FOR FURTHER HELP.**
- **PLUMBING RELATED QUESTIONS NEED TO BE DIRECTED TO A LOCALLY QUALIFIED PLUMBER. WE ARE NOT PLUMBERS AND ANY PLUMBING QUESTIONS WE RECEIVE WILL NOT BE ANSWERED.**

### SYSTEM REQUIREMENTS

Your chosen installation location and water supply must meet ALL of the following requirements:

- 20-90 PSI (1.38-6.20BAR)
- 34-110°F (1.1-43.3°C)
- System must be protected from freezing
- Firm level surface AFTER the pressure tank
- 3-prong, 120V outlet within 5 ft. (1.5 m) of the control head with constant power. GFCI outlet is recommended. Use of an extension cord is NOT recommended.
- A 1.5 inch standpipe, sump pit, or outside drain. **Please note:** The drain line is pressurized and can be ran vertically if necessary.

## 1. VERIFY SYSTEM INVENTORY

Use the following table to help verify the parts that are included with your system and verify that they are all accounted for. Inspect all parts for damage and report any damage immediately. **Damage claims must be made within 30 days of delivery to be eligible for replacement.**

### Polyglass Tank

A tall slender tank 44–65 inches in height with an opening on the top. Larger tanks may have a gray threaded adapter to reduce tank opening to match control head. **Please Note:** If you have the Vortech tank upgrade, the Vortech tank replaces the standard tank, so a system with the Vortech tank upgrade will still have only one polyglass tank.

Note for loaded systems: Tanks that are shipped loaded may arrive on their side or even upside down. The tanks are closed and the media will return to the bottom once placed in the correct position. Any mixing of tank contents will correct itself after being placed in service.



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### Riser/Distributor Tube

A tall pipe that runs from the bottom of the tank to the control valve. If your tank is loaded (empty tanks only weigh 20-30 pounds) DO NOT pull the riser tube out of the tank. One end has a basket (basket design varies) and it usually ships inside the tank. Please Note: On systems with the Vortech tank there is no basket as the pipe is connected to the bottom tank plate and is not removable. (Tank cutaway shown)



## Control Head

Screws on top of the tank and controls the water flow and backwashing cycles. Digital SXT has LCD panel. The mechanical has control knobs.

Please note: Some SXT systems may have labels referring to the older SE model number. This is an internal designation and does NOT indicate that you received an SE controller. This image will show the differences for easy reference.



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## Bypass Valve

Depending on your order your system will have either a single piece stainless steel bypass or a two part plastic bypass with yoke connection. This is what connects to your control head and provides standard fitting connections to hook up to your plumbing.

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## Drain Fitting

Fitting(s) that connect the control head to the drain line. **Please Note: Drain line is not included.** Depending on the system ordered there are multiple options, and the pictures shown are common examples but actual fitting may vary.



## Before you start plumbing

### 1. PRE-INSTALLATION PREPARATION

**Money-saving tip:** If hiring a plumber to do the installation you can save some money by preparing the tank ahead of time. This cuts down on the time the plumber has to spend and doing so is simple enough that most people can accomplish it in less than an hour.

#### 1. Verify riser tube position



Tank & Riser

**NOTE REGARDING LOADED TANKS:** Systems that arrive loaded will have the riser tube in place and attempting to remove it will require the tank to be emptied and refilled. **DO NOT try to remove the riser tube from a loaded tank.**

The riser tube sits in an indentation centered in the bottom of the tank. With the riser tube properly positioned, ensure that it is within 1/3 inch (8 mm) above or below the lip of the tank. If it is not contact us for help correcting the problem.

**If your system came loaded** – Start Here

#### 1. ATTACH THE CONTROL HEAD

##### 1. Lubricate the O-rings **DO NOT use Vaseline**



Tank O-ring

Pilot O-ring

The tank O-ring—seals the control valve to the tank, and the pilot O-ring—seals around the riser tube. Verify they are present and free from nicks or kinks. Use a silicone lubricant or vegetable oil to both O-rings. **DO NOT use petroleum based lubricants!** Please note that the pilot O-ring is up inside the control head and you will usually have to reach up inside to feel it. It is very secure inside the head and almost impossible for it to come out. It is also a good idea to verify that the riser tube fits snugly into the pilot hole and that the O-ring seals around it.

## 1. Inspect and install dispersal basket



**Dispersal Basket**

Air Injection Systems will have a top dispersal basket— used to facilitate the oxidation process. The larger end will be towards the bottom of the tank, with the cone pointing up. Push it down the riser tube until the top is about 1 inch (25 mm) below the bottom of the tank threads.

### 1. Screw on control head **hand tight only**

**DO NOT apply anything (pipe dope, plumbers paste, Teflon tape, etc.) to the threads on the control head or the resin tank!**

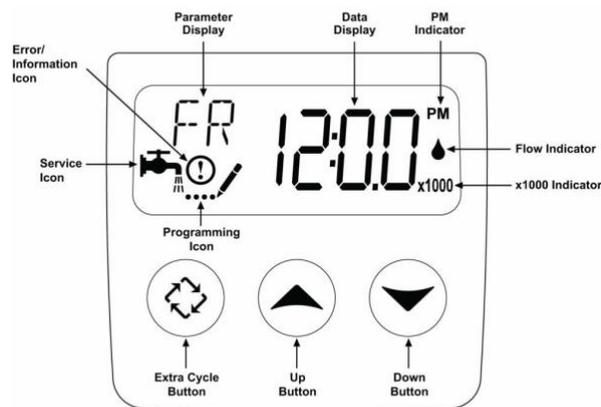
Ensure the riser tube slips inside the pilot opening in the bottom of the head. Screw the head down onto the resin tank until solid contact is made between the tank and O-ring, then tighten about another 1/4–1/3 of a turn and STOP. **Do not over tighten the control head as this can cause damage.** Once properly tightened down check to ensure the tank and control head meet evenly all the way around.

### 1. SETUP CONTROL HEAD

#### 1. Plug control head in

Plug the control head into a qualifying outlet as stated in the requirements section. **Please Note:** The control head can be plugged in and operated without water, this will not damage the control head. Once plugged in, verify the system is receiving power and ensure the outlet is not on a switch that might get turned off. On digital valves the display should light up and start flashing a time, on mechanical valves you may hear a quiet hum of the motor or you may have to wait to see if the time dial keeps track of time. **Please note:** The **service icon** (the icon that looks like a faucet) indicates that the system is IN SERVICE, that is the system is running and working. It DOES NOT indicate the system needs serviced.

## 1. DIGITAL CONTROLLER - Initial valve setup



**SXT Controls**

For initial programming enter master programming by setting the clock to 12:01 pm. To set the time of day press and hold the up OR down arrow until the service icon is replaced with the programming icon. Use the up and down arrows to set the time of day (PM is indicated in the upper right corner of the screen). Hold the arrow button to advance quickly through the time. Once the time is set, press the extra cycle button to save the setting. Once the parameter display is gone, press and hold the up AND down arrow buttons together for 5-10 seconds until the programming icon appears and [DF] is shown in the parameter code. Once each setting has been entered, use the extra cycle button to advance to the next setting. **Please Note:** Most of these settings will be left alone.

Depending on your system some settings may not be shown, and some settings may be different than shown here. **Do not change any settings unless specifically instructed to do so by these instructions or one of our techs.**

Ensure the time is set to 12:01pm, hold BOTH up and down arrows until programming icon appears			
		<b>Required</b>	This setting is required and should be changed if it does not match
		<b>Variable</b>	This setting will vary depending on the system and application. Use these instructions to set appropriate
<b>PLEASE NOTE:</b>		Any setting on your system that is not specifically highlighted below will be left at default. This is a list of all possible settings that will NOT be shown on your system and are included for informational purposes only.	
Code	Parameter	Options	Description
DF	Display Format	GAL	Volume is displayed in gallons and time in a 12-hour AM/PM format – These instructions are based on the GAL setting
		Ltr	Volume is displayed in liters and time in 24-hour format
VT	Valve Type	dF1b -OR- AIO	Downflow single backwash - used on air injection systems that require the air draw. Some systems show an AIO option, but if that is not available use the dF1b setting
		Fltr	Filter - used for basic backwashing systems that do not need the air draw
		dF2b	Downflow double backwash - similar to the dF1b but with 2 backwashes. Not commonly used.
		UFbd	Upflow brine first - not commonly used.
		UFtr	Upflow filter - not commonly used.
		Othr	Other - not commonly used
CT	Control Type	FI	Metered (Flow) Immediate - counts down from the programmed gallon capacity and begins a backwash immediately after reaching 0. Only used on dual tank water softeners.
		Fd	Metered (Flow) Delayed - counts down from the programmed gallon capacity and when 0 is reached queues a backwash cycle for the set regeneration time. Only used on water softeners.
		Tc	Time Clock - will begin a backwash cycle at the set regeneration time after the set number of days has passed. Common setting on all backwashing systems except water softeners to ensure consistent cleaning of the media.

		dAY	Day of the Week - will begin a backwash cycle on the set day(s) at the set regeneration time. More consistent Time Clock setting is recommended in most situations.
NT	Number of Tanks	1	For systems with only 1 media tank (all systems except dual tank softeners).
		2	For systems with 2 media tanks (dual tank softeners only).
UT	Indicates current tank in service	U1	Tank 1 is in service
		U2	Tank 2 is in service (dual tank softeners only).
C	Capacity	1-999.9 (x1000)	System capacity, in grains. Metered softeners only.
H	Hardness	1-199	Hardness of the water, in grains. Metered softeners only.
RS	Reserve Selection	SF	Percentage safety factor - this uses a percentage of the capacity for a reserve. Softener systems only.
		rc	Fixed reserve capacity - uses a set volume for a reserve. Softener systems only.
SF	Safety Factor	0-50%	Only applies to softeners with RS set to SF
RC	Reserve Capacity	1-(half of calculated capacity)	Fixed reserve capacity, softeners only. It is commonly set to the average number of gallons used in a day. If you are unsure of your actual usage, a good rule of thumb is to set it to the number of people in the house times 75. Example, if there are 4 people in the house, you would set it to 300 gallons (4x75).
DO	Day Override	3	This setting will start the backwash cycle after the set number of days. Typically set to 3 or less to ensure the media gets lifted and cleaned off regularly. This ensures effective filtration and long media life. If you have very dirty water or use large volumes of water you will want to set this to 1 or 2. <b>For Filox media:</b> Filox media used in Platinum systems requires backwashing at minimum every 2 days, with every night recommended for best results.
RT	Regen Time	12:00	This sets the time that the backwash cycle will start. This process can take up to 2 hours depending on system size and configuration, so schedule it when water will not be used. It is common to set to run when everyone is asleep or out of the house, and ensure it does not conflict with any other systems you may have.
BW	Backwash	10	This sets the length of the backwash portion of the cycle. During this cycle water flows through the system in reverse to lift the media and rinse off accumulated contaminants, with a strong flow of water going out the drain line. Reducing this cycle can lead to reduced media life and premature system failure. For very dirty water longer times may be needed.
BD -OR- AD	Brine Draw -OR- Air Draw	60	This sets the length of the brine draw portion of the cycle. Air injection systems may show AD, but BD functions the same way. During this cycle a slow flow of water will go down the drain as the air pocket is created in the tank.

RR	Rapid Rinse	1	The rapid rinse cycle runs water through the tank in the normal direction to get rid of excess air and settle the media for normal operation. During this cycle there will be a steady flow of water down the drain.
BF	Brine Fill	0	This sets the length of the brine fill portion of the cycle. On air injection systems this will be set to OFF.
D1-D7	Day of the Week Setting	OFF	Set to On or OFF for each day of the week. Only applies to systems with Control Type dAY, not typically used.
CD	Current Day	1-7	Used to set the current day. Only applies to systems with Control Type dAY, not typically used.
FM	Flow Meter Type (metered systems only)	P0.7	3/4" Paddle Wheel Meter
		Gen	Generic or Other Meter
		P2.0	2" Paddle Wheel Meter
		t1.5	1.5" Turbine Meter
		P1.5	1.5" Paddle Wheel Meter
		t1.2	1.2" Turbine Meter
		t1.0	1" Turbine Meter
		P1.0	1" Paddle Wheel Meter
		t0.7	3/4" Turbine Meter
K	Meter Pulse Setting	0.1-999.9	Pulses per gallon. Only applies to systems with FM set to Gen, not typically used.

Pressing the extra cycle button after the final setting will save your changes. If no buttons are pressed for 60 seconds while in programming mode the changes will be cancelled.

**If you accidentally change a setting that does not have a recommended or variable value: Please do a hard reset as outlined in the resets section to return all values to default. You can then go back through the programming to set it up according to the chart above.**

Once you have finished programming use the arrows to set the current time of day. Once the time is set the display should then show the service icon, with the data display flashing between the current time of day and days remaining until the next backwash. Once it reaches 0 the system will queue a backwash for the set time. A flashing service icon indicates that a backwash is queued. A manual backwash can be queued by pressing the extra cycle button. An immediate backwash can be initiated by holding the extra cycle button for about 5 seconds. **The service icon indicates that the system is "In Service" and functioning correctly, it does NOT mean that the system needs service.**

After initial setup the master programming should not need to be used again unless a system reset is performed. Even in the event of a power outage all settings are retained. If your water use or water quality changes you can use the user programming to make common changes to the programming as lined out below.

Ensure the time is NOT set to 12:01pm, hold BOTH up and down arrows until programming icon appears			
Please refer to the master programming chart for proper values each setting.			
Code	Parameter	Options	Description
DO	Day Override	3	This setting will start the backwash cycle after the set number of days.
RT	Regen Time	2:00	This sets the time that the backwash cycle will start.
CD	Current Day	1-7	Sets the current day (day of week systems only)
Pressing the extra cycle button after the final setting will save your changes. If no buttons are pressed for 60 seconds while in programming mode the changes will be cancelled.			
SXT User Programming Chart			

### 1. DIGITAL Controller - Resets

If your controller is showing odd behavior such as erratic display, no display, or showing an error code, the first step is to try and reset it. Start with the soft reset, and if that does not solve the problem move on to the master reset. If the problem persists contact one of our technicians.

Reset	Directions	Effect
Soft Reset	Hold Extra Cycle and Down buttons for 25 seconds	This will reset all parameters to the system default values, but leaves the days since the last backwash intact. This is a good place to start if you feel you may have changed a default setting. After resetting proceed through the master programming section.
Hard Reset	Hold Extra Cycle button while plugging the unit in	This will reset all parameters in the system. This is typically reserved for erratic behavior that a soft reset does not resolve. After resetting proceed through the master programming section.

### SXT Controller Resets

## Plumbing the system in

### 1. PLUMBING GUIDELINES

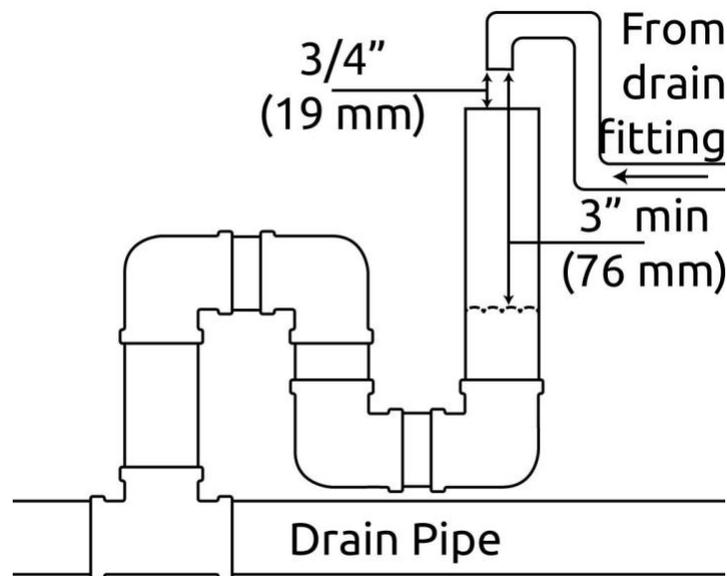
**Before you continue** Many homeowners install their own water systems with basic plumbing skills; if you are not comfortable with projects like this, please hire a professional plumber. Make sure to check local plumbing codes and follow any codes that apply. These instructions offer basic plumbing tips and can not cover every situation. They are intended as a supplement and should not replace local plumbing codes or actual plumbing experience.

## 1. Drain Line Connection

**Please note:** Drain water comes out under line pressure, so it can be run vertically to connect to an overhead drain pipe.



Drain Fitting



Example Drain w/ Air Gap

**Never make a direct connection into a waste water drain.** A physical air gap of at least 3 inches (76 mm) between the end of the drain line and the wastewater level in the drain pipe should be used to avoid contamination of the line. An additional gap of 3/4 inch (19 mm) between the drain pipe and drain line is recommended to prevent any problems in the case of a pipe overflow. Using a simple P-trap as shown—is ideal as well, but a stand pipe with a diameter of at least 1.5 inches (38 mm) is adequate. As the water coming out is under pressure, make sure to **secure the drain line** so that it does not move and create a mess.

**Do not tie multiple systems into a single drain line.**

If hooking up multiple systems, each system needs a separate, independent drain line to ensure proper operation and prevent damage. Systems can all be run to the same standpipe/sump/outside drain, but the drain line from each system needs to be separate.

**Do not use additional fittings on the drain line.**

Avoid installing any additional fittings (check valves, ball/gate valves, etc.) as this can prevent proper backwash and cause premature system failure.

**1. Inlet/Outlet Connections**



**Couplers with Check Valve**



**OR**

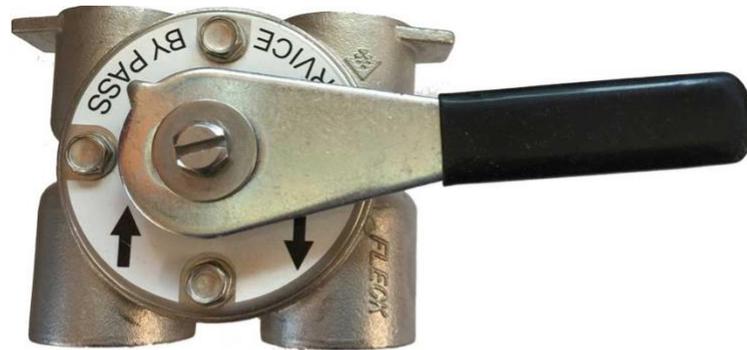


**Connection Fitting**

**Do not overtighten the screws.** The bypass valve will have some up and down movement, this is normal. The clips simply hold the connection fittings together and the screws only need tightened enough to keep the clips in place. Further tightening will not stop leaks and tightening too much can damage the system, which will not be covered under warranty.

**Verify flow direction.** Untreated water will enter the system on the side marked with an arrow pointing toward the front of the control head (on both the bypass valve and the control head itself). The inlet side will have a check valve and water will flow through it into the tank, the side shown — — will be facing you. (some models will have an arrow on the check valve itself, and the arrow should point toward the head). Treated water will exit the system on the side marked with an arrow pointing away from the front of the control head (on both the bypass valve and the control head itself).

**Correct inlet/outlet connections are vital.** Improper flow direction will prevent proper operation and can damage your system and your plumbing. **The direction of flow can not be changed.** Turning the bypass upside down will not change the direction of the water flow.



**OR**



**Bypass Position**

**It is recommended to keep the bypass in the service position when making plumbing connections and turn it to bypass when first turning the water back on.** shows the bypass position. In bypass position the handles will be turned 90-degrees and be perpendicular to the inlet and outlet fittings.

**When soldering do not solder directly to the included connection or close to the control control head.** First solder a short (min 3-inch [7.6-cm]) piece of copper pipe onto the adapters, away from the valve, before connecting the adapter to the bypass or yoke fitting.

**For threaded connections, do NOT tighten the adapters into fittings while they are connected to the control head.** Disconnect the bypass or yoke fitting, and connect the adapter using a high quality thread sealant (pipe joint compound or Teflon/PTFE tape), and replace.

**When installed the bypass valve can move up and down, this is normal.**

#### **1. PLACE SYSTEM IN SERVICE**

Once all plumbing is done and plumbing connections have been checked for leaks you can place the system in service.

#### **1. Open bypass valve slowly**

If you have more than one system, ensure the other systems are bypassed to prevent any possible problems. Open a faucet that is near the system, a laundry sink or outside faucet (if it will be treated by the system) is ideal, this will allow the air to bleed out of the system. **Slowly** open up the bypass valve just to the point of allowing water to enter the system at a trickle, and leave it like that until the tank is full of water. If you pre-filled the system it should only take a minute or two. Once the tank is full, slowly open the bypass valve the rest of the way. Allow water to run out of the faucet for 15-20 minutes to ensure all the air is worked out of the tank and off of the , then close the faucet.

## 1. Check for leaks

Check the system for any leaks, paying attention to the seal between the tank and control head as well as the connections between the bypass valve and control head. Open a nearby faucet and check to ensure there is no leaks that show up when water is running.

## 1. Flush the system

Open a nearby faucet. The water may be discolored at first, this is normal. Let water run out of the faucet for at least 10 minutes, or until any discoloration clears up. Depending on the system this may be almost immediate, or it may take a couple of hours. Once the water is cleared up a manual backwash should be run.

## 1. Initiate manual backwash

It is a good idea to allow the system to run through a manual cycle. On mechanical valves, turn the main knob until it clicks into the first position. On digital systems, hold the extra cycle button for 5-10 second until the backwash starts.

## 1. Verify proper operation

Watch the system as it steps through each cycle, make sure it moves to each position, that water is not leaking from any other fittings, and that water is flowing down the drain line.

**Be sure to return any other systems to the service position.**

# Frequently Asked Questions

## INVENTORY AND SETUP

### What is the proper order to arrange multiple systems?

If you are installing more than one tank system the typical order for installation is:

**sediment filter > pH filter > iron filter > carbon filter > water softener > arsenic filter**

Whole house cartridge systems are typically installed after any tank systems, the Scale Sentry system after the cartridge system(s), and any UV systems will be last.

### Do I need a prefilter?

In most cases a prefilter is not necessary. Since the system cleans itself most particulate in the water will be trapped and rinsed off by the backwash cycle, eliminating the need for a sediment prefilter.

### My polyglass tank arrived and sits crooked, what do I do?

The black boot on the bottom of the tank may get knocked out of alignment during shipment. If your tank is a bit tilted, simply pick the tank up 2–3 inches (5–8 cm) off the floor and drop it gently but firmly down, favoring the side that needs to be adjusted to make the tank stand straight.

### After installing the bypass it still moves up and down, is that normal?

Yes. The bypass seals with O-ring and even when tightened down some movement will occur, without leaking. The system requires this movement to allow for pressure changes in the system. **Do not overtighten the bypass valve.** As long as the screws are snug enough to keep the bypass from coming apart further tightening will just cause damage.

## DRAIN LINE

### Can I run my drain line to a sewer/septic?

Yes. These systems can be ran to your sewer or septic line and is typically the recommended place to run the drain. Most concerns are related to the amount of water going down the drain, and a properly designed septic/sewer system will not have a problem handling it.

### Can my drain line be ran vertically?

Yes. Water from the drain comes out under pressure and can be ran vertically if needed.

## DIGITAL DISPLAY

### Why does my display flashing between the time of day and a number?

This is normal, with the number displayed indicating the number of days until the next backwash.

### What does the faucet icon mean?

That is the service icon, meaning the system is in service. It does NOT mean the system needs service. If it is flashing then a backwash is queued for the next set time.

### What does the water drop icon mean?

That is the flow icon. Only used on metered softeners, it indicates water is flowing through the system.

### What does the circled exclamation icon mean?

That indicates an error. Match the number on your display with the number on the error chart below for troubleshooting tips.

Error Code	Error Type	Cause	Solution
0	Cam Sense Error	Piston took more than 6 minutes to advance	Unplug the system, disconnect the piston from the motor/gear, and verify that the piston moves freely inside the valve; if it does not replacement of the seal and spacers and possibly the piston is required. After reconnecting the piston, inspect the control head for any broken, worn, or disconnected parts, and replace or reconnect any that are found. Perform a hard reset. After verifying programming run the system through a backwash and watch the motor to ensure that it is moving the piston, if it is not the motor needs to be replaced. If error still occurs contact us for support.
1	Cycle Step Error	Unexpected cycle input	Unplug the system and check to ensure all electrical connections and cam switches are secure. Plug the unit back in and check the master programming and ensure valve type and system type are correct for your system. Initiate a manual regeneration and verify it progresses through the steps correctly. If error reoccurs, contact us for support.
2	Regen Failure	More than 99 days since last backwash (7 on day of the week setups)	Perform a manual backwash to reset the error. Check your settings to ensure the system is setup to backwash automatically. Check the meter to ensure it is not stuck and that the gallons remaining is counting down.

3	Memory Error	Circuit board memory failure	Perform a hard reset and go through the master programming to update the settings. If error occurs again contact us for support
UD	Upper Drive Sync	Piston is syncing	Common when changing programming or if system loses power. System will automatically recover from this state.

**SXT Error Codes**