

OWNER'S MANUAL & INSTALLATION GUIDE



SoftPlus™ Premium Series High Efficiency Water Softeners

APPLICABLE MODELS: SP-5810SXT Series

PLEASE READ THIS MANUAL CAREFULLY BEFORE ATTEMPTING INSTALLATION. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY AFFECT THE PERFORMANCE OF YOUR SYSTEM, VOID YOUR WARRANTY, AND RESULT IN PROPERTY DAMAGE.

Congratulations on the purchase of your SoftPlus™ Premium Series high-efficiency water softener.

You have purchased one of the finest water softeners on the market today. This manual is designed to provide owners, installers, and service technicians with detailed information about the installation, start-up, and operation of your new water treatment system.

The brain of your SoftPlus™ system is the Fleck 5810SXT control valve. It is manufactured by one of the world's premier water treatment companies. The Fleck 5810 control valve is well respected for its reliability, serviceability, simple operation, and value. The integrated Fleck SXT digital valve controller offers unsurpassed simplicity of operation, yet complete control over all important valve operations. The Pentair Fleck 5810SXT Downflow/Upflow Service Manual is also included with your system. It includes additional information regarding the operation of your valve, replacement parts lists, and more.

Your SoftPlus™ water treatment system is designed to offer low maintenance operation. The control valve will perform regular backwash functions automatically, however, you will need to periodically add salt to your brine tank as it is consumed by the system. For your convenience, your system has been pre-programmed for you at our factory. Should you need to change any of the settings, simply follow the instructions provided in this manual.

IMPORTANT SAFETY SYMBOLS



Hazards or unsafe practices that may result in personal injury and/or severe property damage.



Hazards or unsafe practices that may cause operational problems with your water treatment system.

Table of Contents:

GENERAL WARNINGS	4
OPERATING CONDITIONS	5
INSTALLATION	7
Step 1 – Pre-Installation Inspection	7
Step 2 – Selecting an Installation Location	8
Step 3 – Prepare Treatment Tank	10
Step 4 – Turn off the Water & Electric Water Heaters	12
Step 5 – Prepare and Install Inlet and Outlet Plumbing Connection	13
Step 6 – Drain Line Installation	15
Step 7 – Brine Tank Connections	16
Step 8 – Connect the Brine Tank Overflow to Drain	18
Step 9 – Control Valve Set-up	19
Step 10 – Initial Start-up and Leak Testing	20
REGENERATION	23
SALT	25
CHANGING TIME OF DAY	26
USER PROGRAMMING MODE	27
MASTER PROGRAMMING MODE	29
RESETS	31
OPERATION DURING A POWER FAILURE	31
DIAGNOSTIC DATA	32
MAINTENANCE & TROUBLESHOOTING	32
WARRANTY INFORMATION	35

GENERAL WARNINGS



Do not allow children or pets to play on or around the water filter.

Do not install or store this filter system where it will be exposed to freezing temperatures.

Do not tamper with controls.

Do not repair, replace, or attempt to service any part of the system unless specifically instructed to in this manual and you have the understanding, tools, and skills necessary to carry out the procedure.

Packing materials can be dangerous to children. Keep all packing material (plastic bags, polystyrene, boxes, etc.) well out of the reach of children.

Individual components of this water treatment system, and the installed system, are heavy. Precautions should be taken to prevent personal injury or strain. Do not move heavy components without assistance if you are not physically capable of safely carrying out the procedure.

If the water treatment system is to be left unattended for an extended period of time (vacation, etc.), we strongly recommend that you turn off the water supply to the system, or the whole house, while you are away.

All state, provincial, and local government codes governing installation of water softeners should be observed.

If your water pipes are metal (galvanized or copper), they may be used to ground electrical systems, appliances, or your phone line. If this is the case, be sure to install regulation ground clamps to the metal pipe on each side of the control valve and connect a jumper wire between the 2 clamps (#4 gauge solid copper wire recommended). Consult a certified electrician or plumber if you are unsure.

OPERATING CONDITIONS

The following chart provides guidance on the conditions required for successful operation of your SoftPlus™ system.



USE OF THIS EQUIPMENT OUTSIDE OF THESE OPERATING CONDITIONS MAY ADVERSELY AFFECT THE PERFORMANCE OF YOUR SYSTEM, RESULT IN SYSTEM DAMAGE INCLUDING WATER LEAKS AND CORRESPONDING PROPERTY DAMAGE, AND MAY VOID YOUR WARRANTY.

Minimum Water Pressure	20 PSI
Maximum Water Pressure	90 PSI*
Recommended Water Pressure	40-70 PSI
Water Temperature	36F to 100F (2 to 38C)
Air Temperature	32F to 125F (0 to 52C)**
pH Range	5.0*** to 9.0
Maximum Recommended Hardness	75 grains per gallon (770 mg/l)
Maximum Recommended Iron	< 3 ppm (mg/l)
Maximum Recommended Manganese	< 1 ppm (mg/l)

* While the SoftPlus™ system is built to withstand pressures exceeding 90 PSI, if your water pressure is greater than 70 PSI, we recommend that you have a certified plumber install a pressure reducing valve ahead of the SoftPlus™ system.

** The system cannot be subjected to freezing conditions or severe damage to the system and your property could occur.

*** pH correction is strongly recommended where pH levels are less than 6.5 to prevent damage to your control valve and plumbing system, and to prevent leaching of metals from copper and brass plumbing components and solder in your home. Contact your dealer for recommendations.

SoftPlus™ 5810SXT Series Water Softener, Specifications Flow Rates & Backwash Requirements:

Model	8-44	9-48	10-54	12-52	13-54	14-65
Capacity at Salt Dose of 15 pounds / Cubic Foot:	24,750 grains	33,000 grains	49,500 grains	66,000 grains	82,500 grains	99,000 Grains
Capacity at Salt Dose of 9 pounds / Cubic Foot:	20,250 grains	27,000 grains	40,500 grains	54,000 grains	67,500 grains	81,000 Grains
Capacity at Salt Dose of 6 Pounds / Cubic Foot (Recommended):	16,500 grains	22,000 grains	33,000 grains	44,000 grains	55,000 grains	66,000 grains
Lbs of Salt Per Regeneration @ dose of 6 lbs/CF:	4.5	6	9	12	15	18
Resin Volume (Cubic Feet):	0.75	1	1.5	2	2.5	3
Optimal Service Flow Rate* (GPM)	3.5	4.4	5.5	7.9	9.2	10.7
Maximum Service Flow* Rate (GPM)	5.2	6.6	8.2	11.8	13.8	16.0
Backwash Flow Rate at 40F Water Temp (GPM)	1.7	2.5	3.0	4.0	5.0	5.5
Backwash Flow Rate at 70F Water Temp (GPM)	2.0	2.7	3.5	4.5	5.5	6.0

* For the best performance of your system, the optimal service flow rate should not be exceeded on a continuous basis. Satisfactory to good performance can generally be achieved up to the recommended maximum service flow rate as long as this level of flow rate is not sustained continuously.



CONFIRM THAT YOUR WATER CONDITIONS, SERVICE FLOW RATE NEEDS, AND AVAILABLE BACKWASH FLOW RATES MEET THE ABOVE SPECIFICATIONS FOR THE MODEL YOU ARE INSTALLING BEFORE COMMENCING THE INSTALLATION PROCESS. IF IN DOUBT, CALL YOUR DEALER FOR ADVICE. INSTALLED UNITS CANNOT BE RETURNED.

INSTALLATION

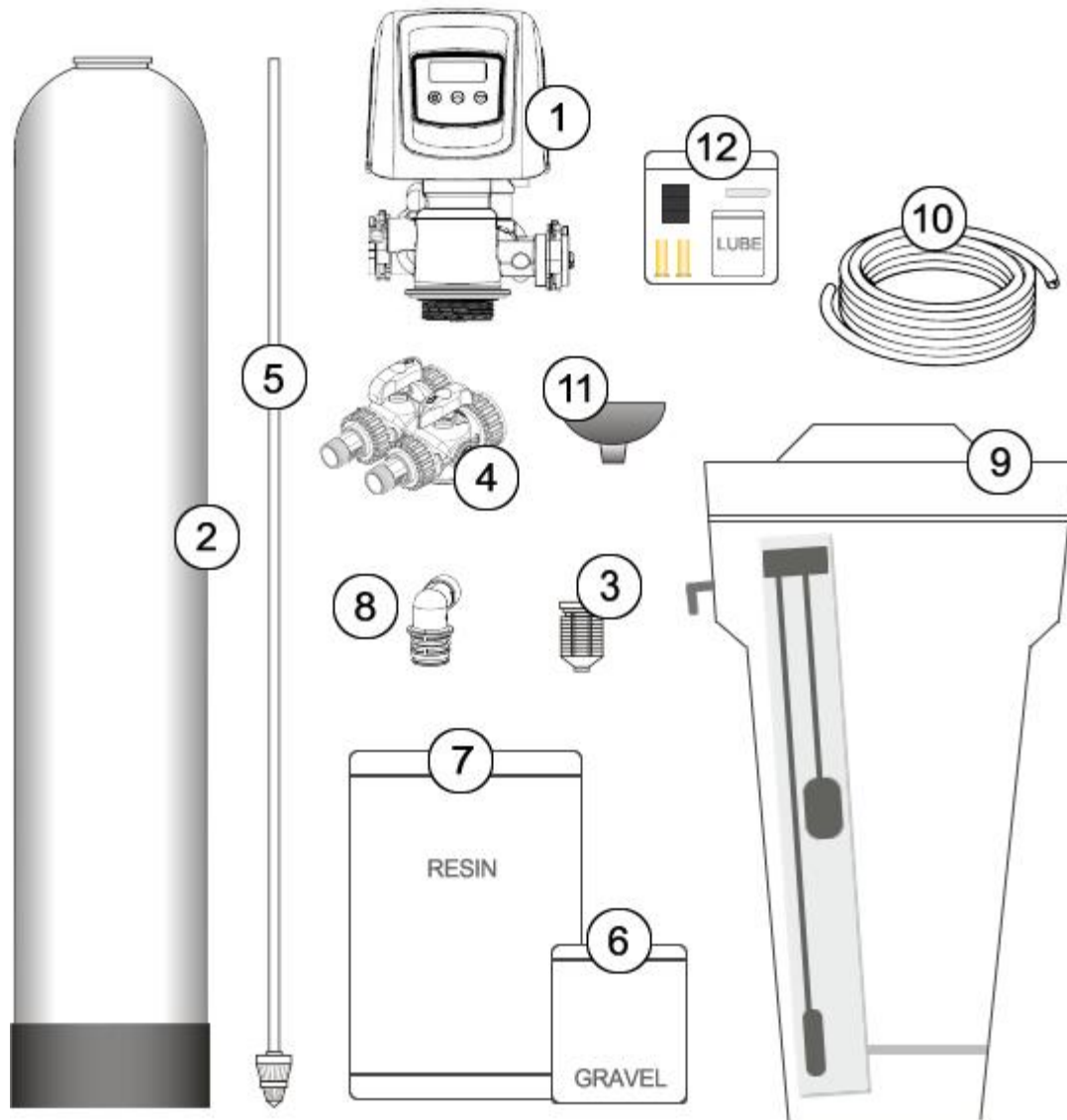


WE RECOMMEND THAT YOU READ THIS ENTIRE MANUAL BEFORE STARTING THE ACTUAL INSTALLATION. WHILE WE STRONGLY RECOMMEND THAT A LICENSED PLUMBER PERFORM ALL INSTALLATION WORK, A MECHANICALLY-INCLINED HOMEOWNER WITH SUITABLE PLUMBING KNOWLEDGE CAN INSTALL THIS SYSTEM. IN ALL CASES, IT IS CRITICAL THAT THE INSTALLATION BE DONE IN ACCORDANCE WITH THESE INSTRUCTIONS AND ALL APPLICABLE PLUMBING AND ELECTRICAL CODES. BE SURE TO OBTAIN ALL REQUIRED PERMITS. IF THESE INSTRUCTIONS AND THE APPLICABLE CODES ARE IN CONFLICT, THE RELEVANT PLUMBING/ELECTRICAL CODE SHALL BE FOLLOWED. EQUIPMENT FAILURE, PERSONAL INJURY, OR PROPERTY DAMAGE CAN RESULT IF THIS EQUIPMENT IS NOT INSTALLED PROPERLY.

Step 1. – Pre-Installation Inspection

Inspect all of the components that you received with your unit. You should have received the following:

1. Fleck 5810 SXT Control Valve
2. Media Tank
3. Upper Screen
4. Bypass Assembly w/ Bypass Valve and 1" NPT Connector Yokes (2)
5. Riser tube and Lower Distributor
6. Bag or Box of Gravel
7. Bag(s) or Box(es) of Cation Exchange Resin
8. Drain Line Flow Control - DLFC (attached to #1)
9. Brine Tank with Brine Well, Brine Valve assembly, Salt Grid, and Overflow Elbow
10. Brine Tubing (10 feet)
11. Funnel
12. Small Parts Bag (contains food grade silicone O-ring lubricant, and parts for the brine tubing connections)



Step 2. – Selecting an Installation Location

While exterior installation in warm climate areas is possible, we strongly recommend interior installation only. The system cannot be allowed to freeze or severe system damage could occur. The system should not be exposed to rain and it should not be installed in direct sunlight, as long-term exposure to UV light could damage components of the system. Furthermore, direct sunlight could raise the internal water temperature in the treatment tank and reduce backwash effectiveness.

In most cases, the system should be located AFTER your water pump and pressure tank, AFTER the branch line to exterior irrigation, and BEFORE your hot water heater.



IF YOU HAVE OTHER WATER TREATMENT EQUIPMENT, YOU SHOULD DISCUSS THE ORDER OF YOUR TREATMENT EQUIPMENT WITH YOUR DEALER PRIOR TO INSTALLATION.

Select a location for installation of your water filter that is within close proximity to the main incoming water line of the home. The location should have a firm, level surface with enough space for the unit itself including the brine tank and sufficient space surrounding the unit to facilitate maintenance. We recommend that the brine tank be located immediately beside your treatment tank and control valve (it can be beside or in front). Frequent access to the brine tank is necessary to add salt so it should be located in a readily accessible location. Although not ideal, if it is necessary, the brine tank can be located up to about 10 feet away from the treatment tank and control valve (max. tubing length).



WHILE WATER LEAKS ARE VERY RARE AND UNEXPECTED, YOUR WATER FILTER SYSTEM SHOULD BE LOCATED NEXT TO A FLOOR DRAIN OR PROTECTED BY A WATER LEAK DETECTION SYSTEM WITH AUTOMATIC SHUT-OFF VALVE TO PREVENT WATER DAMAGE TO YOUR PROPERTY IN THE UNLIKELY EVENT OF A WATER LEAK. RECOMMENDED WATER LEAK DETECTION SYSTEMS ARE AVAILABLE AT WWW.A-LEAK-DETECTOR.COM.

You will also require a suitable drain to discharge waste water from the backwash cycle. A drain standpipe for a washing machine, floor drain, or sump pump are excellent drain options. We recommend that the drain line be connected to a minimum 1½" drain standpipe or floor drain located ideally below the top of the head of your water filter. If possible, the drain should be no farther than 20 feet from the system.



NOTE: NEVER CONNECT THE DRAIN LINE DIRECTLY INTO A DRAIN PIPE. ALLOW AN AIR GAP BETWEEN THE DRAIN TUBING AND WASTE LINE TO PREVENT THE POSSIBILITY OF BACK-SIPHONING. WE DO NOT RECOMMEND USE OF A CHECK VALVE AS IT MAY BECOME CLOGGED WITH CONTAMINANTS EJECTED FROM THE SYSTEM DURING BACKWASH.

You will also need access to a standard, non-switched, grounded 120 volt (60 Hz) electrical outlet. An extension cord may be used to reach a suitable electrical outlet. If this option is used, ensure that the extension cord is UL/CSA certified and of an appropriate wire gauge for the application.

Step 3. – Prepare Treatment Tank

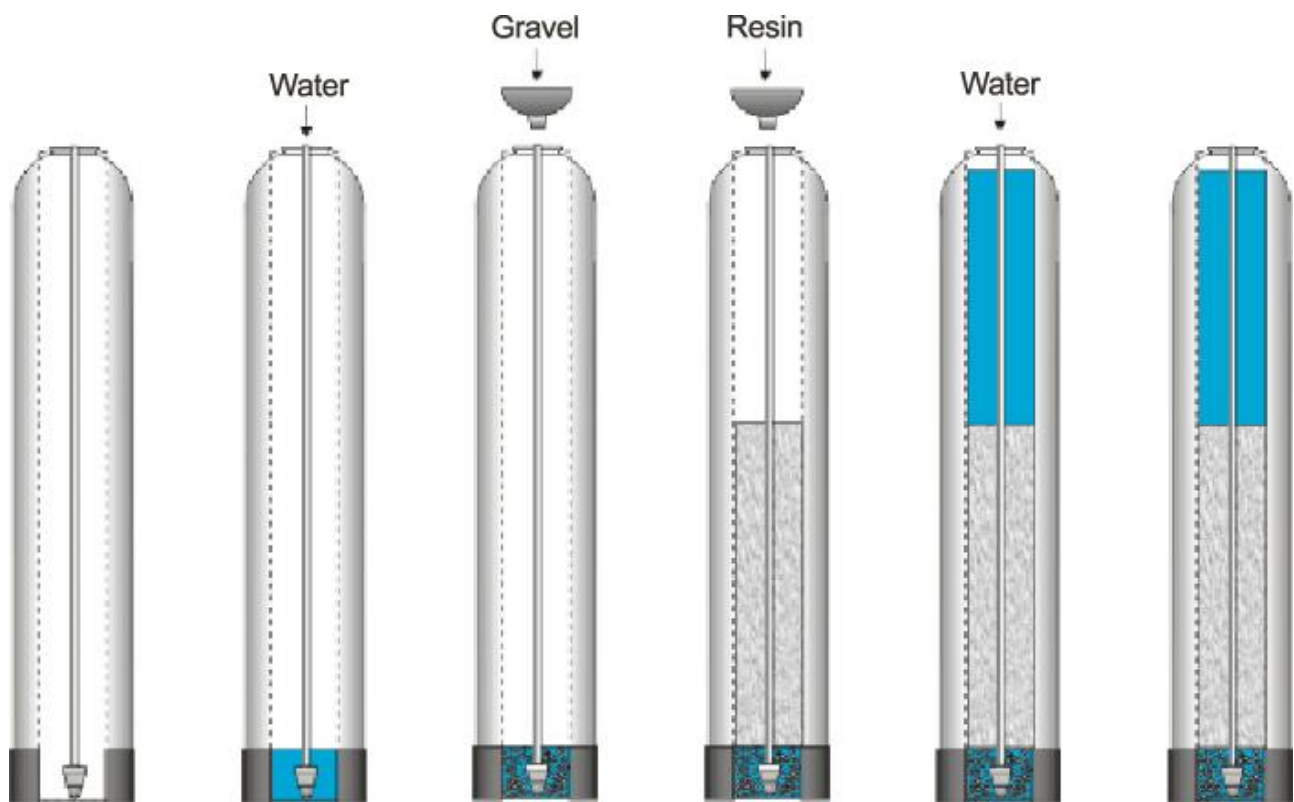
Two types of media are supplied with your system: gravel which forms the base layer (underbedding) in your treatment tank, and a cation exchange resin which removes certain contaminants and softens the water.

Place the tank in the location where it will sit when the installation is complete. Note that the black base of your tank is not permanently attached to the rest of the tank. If your tank appears to be crooked, the base has likely been knocked out of alignment during shipping. This can be corrected by picking the tank up and tapping it on a hard surface while holding it perpendicular to the floor. A few light taps will generally straighten it out.

Temporarily remove the distributor and riser tube assembly from the treatment tank. Hand tighten the Fleck 5810SXT control valve on the tank and mark where the front of the tank will be. Turn the tank so that the front of the tank is where you want it when it is full – once it is full of media and water, it becomes very heavy and difficult to move!

Remove the control valve and re-insert the distributor and riser tube assembly into the tank. The distributor, which looks like a cone-shaped plastic screen, is pre-connected to the end of the long plastic riser tube which extends from the bottom of the tank to the top of the tank where the control valve is attached. At the bottom of the tank, there is a recess in the center of the tank to accept the distributor to keep it properly aligned. The riser tube has been pre-cut to the correct height for you. When the distributor is correctly positioned, the top of the riser tube will be approximately 1/8 to 1/4 of an inch below the top of the tank. If the tube is flush or protruding above the top of the tank, the distributor tube is not nested correctly in the recess at the bottom of the tank.

Add enough water to the tank to cover the lower distributor with a minimum of 6 inches of water. This will prevent damage to the lower distributor as gravel is loaded. Place the funnel into the tank so that the riser tube is in the middle. Place tape over the open end of the riser tube. This will prevent gravel or media from accidentally going down the tube during the following steps.



For the following steps, we recommend that you wear a dust mask. Take the bag/box of gravel and, using a small scoop, add the gravel to the tank through the funnel to completely cover the lower distributor. Use all of the gravel. Be sure to provide some downward pressure on the riser tube while adding the gravel to ensure that the distributor does not shift out of its recess or rise up. Ensure that you create an even layer of gravel across the bottom of the tank. A rigid piece of thin wall tubing (conduit, copper pipe, etc.), approximately 1" longer than the tank height works well as a leveling tool if you need it. Ensure that the riser tube remains centered in the opening at the top of the tank.

Once this is complete, add the cation exchange resin media in the same manner. Use all of the resin provided. Depending on the capacity of the system, there will only be enough resin to fill the tank to about 1/2 to 3/4 full. This is normal. The media tank should never be filled to the top of the tank as the remaining space, known as the "freeboard," is necessary for the media to have room to expand during the backwash cycle.

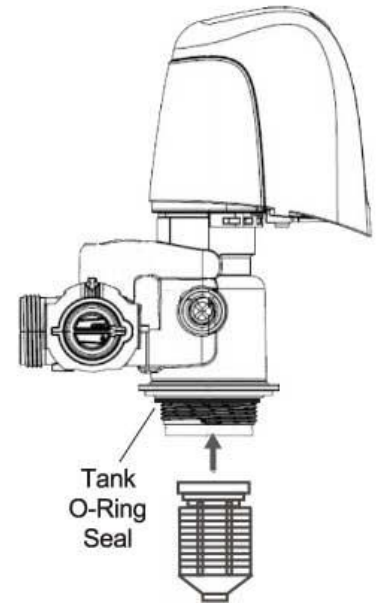
Once you have finished adding the media to the tank, remove the tape from the distributor tube. Be careful not to pull upwards on the riser tube while doing this as it is important that the distributor remain in its recess at the bottom of the tank.

Fill the media tank with water up to within a couple of inches of the top of the tank.

Attach the upper screen to the underside of the control valve.
Be sure to twist clockwise and lock it into place.

Apply a small amount of lubricant to the top inch of the outside of the riser tube and to the tank o-ring seal.

Note: Only use food-grade silicone lubricant. A small bag of lubricant is provided in the small parts bag. Do NOT use petroleum jelly.



The control valve can now be secured to the top of the tank. Before attaching the valve, check to make sure that there is no debris such as gravel or resin in the tank threads. Screw the control valve onto the tank – make sure that the riser tube inserts into the center hole in the upper screen and the control valve as you screw down the valve. The control valve should be hand-tightened (clockwise). Do NOT use the control valve's timer assembly for leverage and do not use tools. A firm grasp with both hands at the base of the valve will work. Do NOT use pipe cement (“pipe dope”) or Teflon® tape on the threads.

Step 4. – Turn off the Water & Electric Water Heaters



FAILURE TO FOLLOW THIS PROCEDURE COULD RESULT IN SERIOUS, PERMANENT DAMAGE TO THE HEATING ELEMENTS IN YOUR WATER HEATER.

If you have a conventional electric water heater or an on-demand (tankless) electric water heater, we highly recommend that you turn off the power to the heater while installing any water treatment equipment. Turn off power to your water heater now.

Turn off the household main water shutoff valve. Open several plumbing fixtures inside the home as well as the outside faucets to drain as much water out of the plumbing system as possible.

Following completion of the entire installation, restore the water flow by turning on the household main water valve and allow all air to be purged from the plumbing system before turning the power back on to your water heater.

Step 5. – Prepare and Install Inlet and Outlet Plumbing Connections



WARNING

TEFLON® TAPE IS THE ONLY SEALANT TO BE USED ON THE 1" NPT CONNECTOR YOKES AND DRAIN FITTINGS.



WARNING

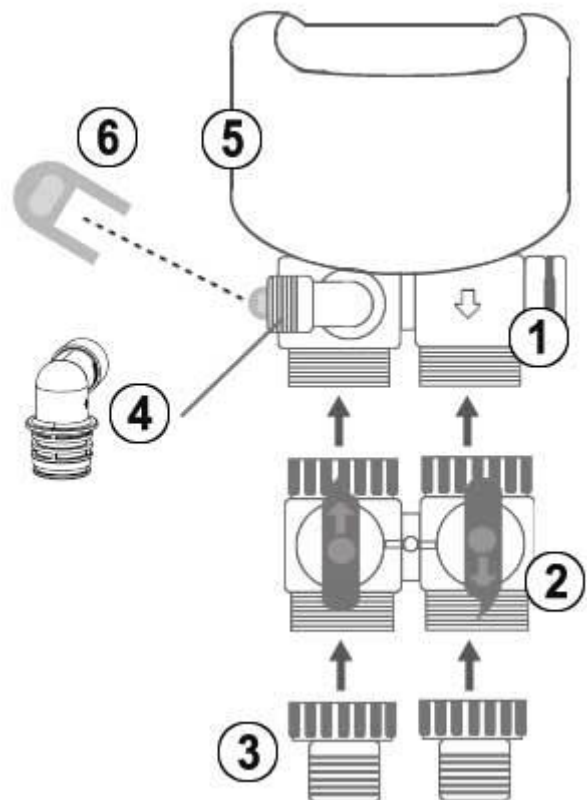
IF YOU WISH TO USE COPPER PIPING FOR YOUR INSTALLATION AND WILL BE SOLDERING THE JOINTS, DO NOT APPLY HEAT NEAR YOUR CONTROL VALVE, BYPASS ASSEMBLY, 1" NPT CONNECTOR YOKES, OR THE DRAIN FITTINGS; OTHERWISE SERIOUS DAMAGE TO THESE PARTS COULD OCCUR. ALWAYS SOLDER JOINTS WITH THESE COMPONENTS DETACHED. IF YOU ARE USING COPPER ADAPTERS TO CONNECT TO THE 1" NPT CONNECTOR YOKES, IT IS RECOMMENDED THAT YOU SOLDER A 6" PIECE OF COPPER PIPE INTO EACH OF THE CONNECTION ADAPTERS AWAY FROM THE VALVE, THEN LET THEM COOL OFF BEFORE THREADING THEM ONTO THE 1" NPT CONNECTORS.

Key Control Valve Components:

1. Control Valve Body
2. Bypass Valve
3. 1" NPT (Male) Connector Yokes
4. Drain Line Flow Control (DLFC)
5. Valve Cover
6. DLFC Retention Clip

The system's control valve is connected to your incoming and outgoing water lines by way of a bypass assembly with 1"NPT threaded fittings. This assembly is composed of the bypass valve and two 1"NPT connector yokes.

Locate the inlet and outlet ports on the back of the outlet are marked with arrows indicating the correct direction of water flow. Looking at the back of the control valve, the inlet is on the left and the outlet is on the right. Check the corresponding markings on the bypass to ensure the correct direction of water



flow and attach the bypass valve to the control valve. The in and out arrows on the bypass should be pointing the same direction as the in and out arrows on the outside of the control valve.



BE VERY CAREFUL TO MAKE SURE YOU PLUMB THE SYSTEM IN THE RIGHT DIRECTION.

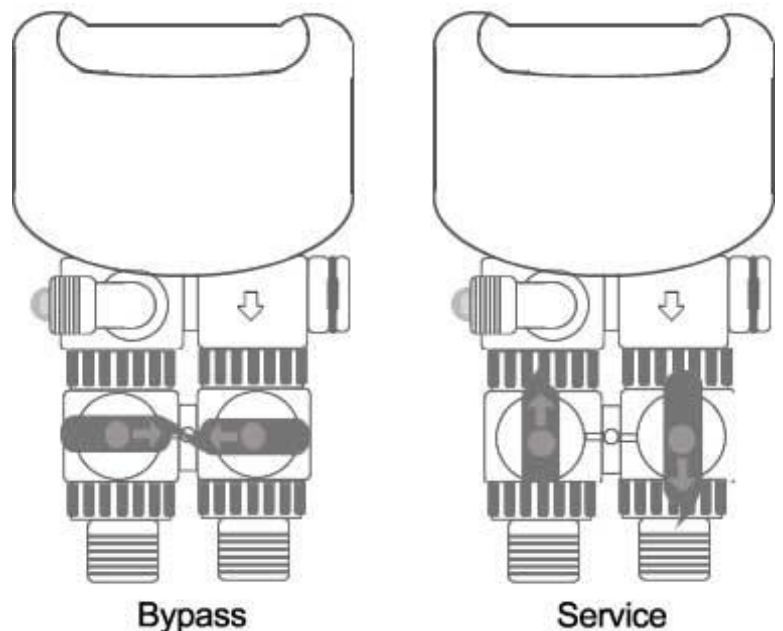
The bypass assembly is secured to the control valve using threaded fittings. Thread sealant tape should not be used on these threads. The seal is made by way of o-rings. To attach the bypass to the control valve, simply thread the 2 nuts on the bypass onto the valve until the nuts bottom out on the valve body. Do not overtighten - it is normal for some “play” to exist when the bypass assembly is properly seated. This allows for minor misalignment of the piping connections and relieves stress on the valve. The 1” NPT connector yokes are connected to the bypass in the same manner (they are normally shipped to you pre-connected to the bypass, but you can separate them to make the plumbing to your main water lines easier if you want).

You will need to purchase the appropriate NPT threaded fittings to connect the connector yokes to the material and size of your main inlet and outlet water lines.

Plumb your main incoming and outgoing water lines using suitable pipe, fittings, elbows, etc. as necessary to create a tidy, secure installation up to the back of the bypass valve (including the correct connection adapters to mate with the threaded fittings on the bypass assembly’s connection yokes.) Be sure to follow all local plumbing codes.



WE HIGHLY RECOMMEND THAT YOU REMOVE THE BYPASS ASSEMBLY FROM THE CONTROL VALVE BEFORE MAKING THESE FINAL CONNECTIONS AS YOU MAY INADVERTENTLY APPLY TOO MUCH PRESSURE ON THE VALVE WHILE SECURING THE ADAPTERS, CAUSING DAMAGE TO THE VALVE BODY.



Place the bypass in the “bypass” position as pictured above.

Step 6. – Drain Line Installation



NOTE: NEVER CONNECT THE DRAIN LINE DIRECTLY INTO A DRAIN. ALLOW AN AIR-GAP OF A MINIMUM OF 1 INCH (CHECK LOCAL CODES) BETWEEN THE DRAIN LINE AND WASTE LINE TO PREVENT THE POSSIBILITY OF BACK-SIPHONING. ALWAYS FOLLOW LOCAL CODES. THE DRAIN LINE SHOULD NOT BE EXPOSED TO FREEZING TEMPERATURES.

During the regeneration cycle, your SoftPlus™ system will send water and contaminants out the drain port. This port needs to be connected to a suitable household drain, ideally within 20 feet of your media tank. A nearby floor drain, sump pump, or a standpipe for a washing machine is an excellent option. We recommend that the drain line be connected to a minimum 1½” drain standpipe or floor drain located ideally below the top of the head of your water filter.

Locate the drain port on the back of your control valve. The drain line flow control assembly (DLFC) is pre-attached to the control valve - it has black plastic housing with 3/4 inch female NPT threads.

You will need to purchase suitable pipe or tubing for the drain line. The minimum drain line diameter is 1/2 inch although 3/4” is preferred. Polyethylene tubing, PEX, PVC, CPVC, and copper pipe are all acceptable material choices for the drain line. If you are using flexible tubing, be sure that there are no “kinks” or “crimps” in the tubing after installation that may cause a flow restriction. If used, overhead drain lines are not to exceed a height of 5 feet above the control valve and should be not more than 50 feet in length. Should an overhead drain line be utilized, it is recommended that the drain line diameter be not less than 3/4”, and that it not be fastened flush to the bottom of a floor joist to minimize noise transfer to the upstairs of the building during regeneration.

Using an appropriate fitting, connect the drain line flow control to your drain line tubing/pipe. The DLFC can be removed from the control valve to facilitate easier plumbing if desired. To remove the drain line flow control, pull on the retaining clip to remove it and then grasp the drain line flow control and pull upward. You may wish to dry-fit

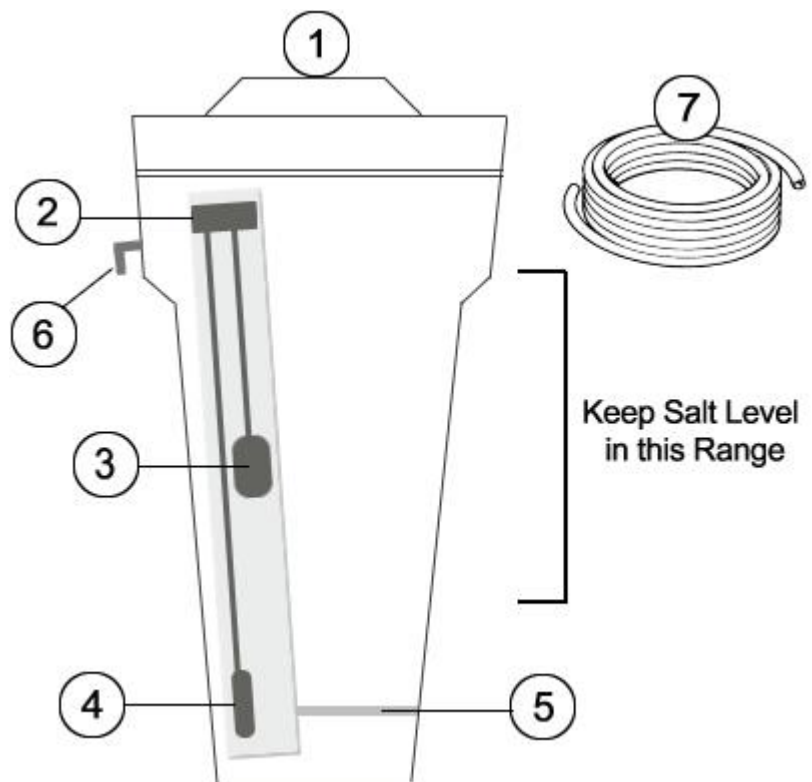
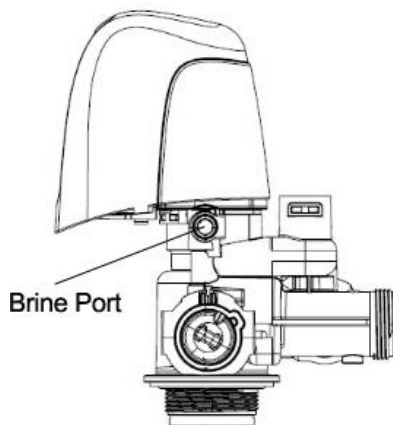
the fitting first to make sure you line up the drain line properly with the drain port on the control valve if you are using rigid pipe.

Re-insert the DLFC into the control valve and securely lock into place with the retaining clip when done.

Ensure that the drain line is thoroughly secured along its route to the drain. The drain line will be under pressure when the backwash cycle is working. If not adequately secured, the drain line could vibrate during backwash causing excessive noise. If this is experienced, use additional fixtures to better secure the drain line.

Step 7 – Brine Tank Connections

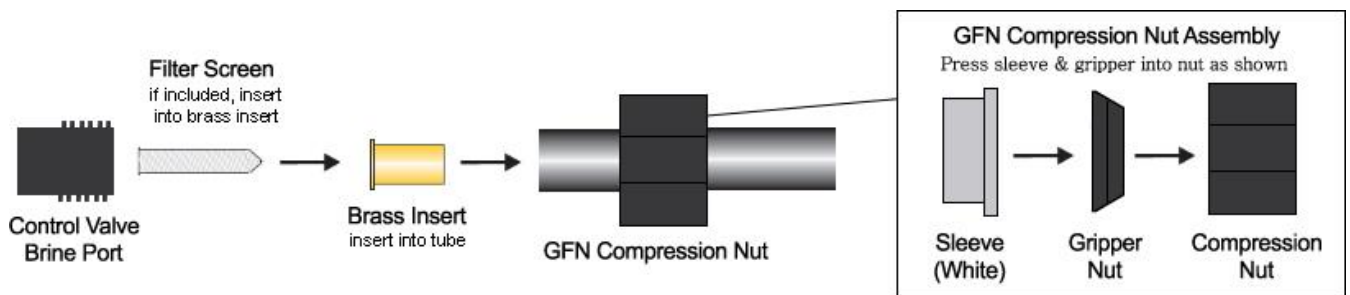
1. Brine Tank Lid
2. Brine Valve
3. Safety Float
4. Air Check Valve
5. Salt Grid
6. Brine Overflow Elbow
7. Brine Tubing



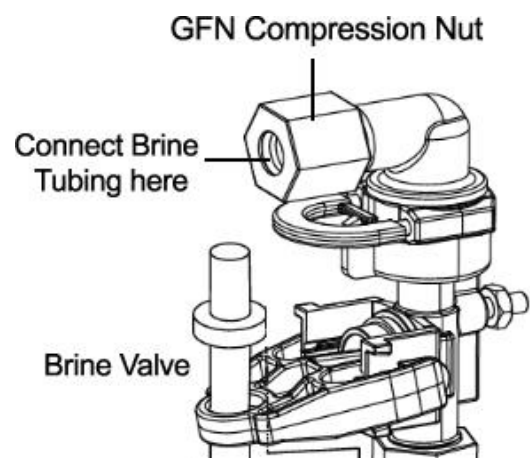
To connect the brine tubing from the control valve to the brine tank, you will require the black brine tubing and numerous parts from the small parts bag. We recommend that the brine tank be located as close as possible to the treatment tank and control valve, however, it can be up to 10 feet away if necessary.

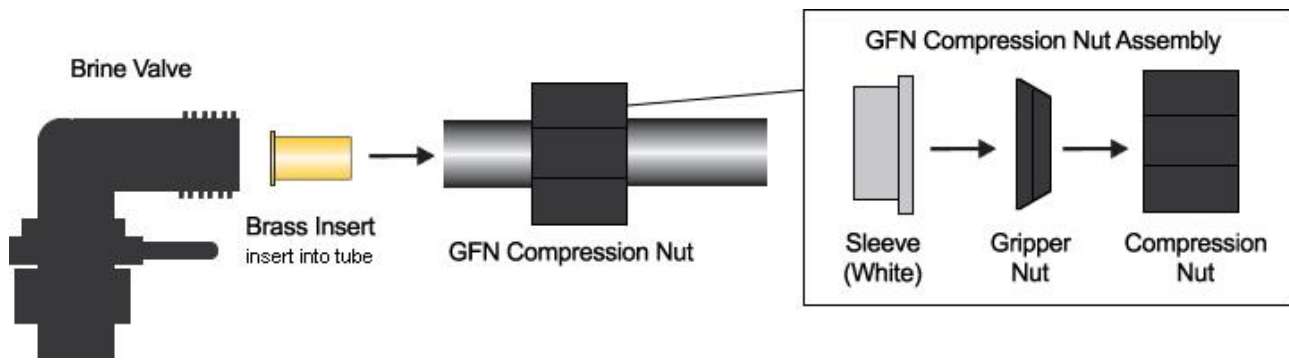
Locate the brine port on the right side of your Fleck 5810 control valve (when facing the front of the control valve).

1. Make sure that the end of the brine tubing is cut square and that the tubing coating is smooth, unmarred, and undamaged.
2. Slide the GFN compression nut onto the end of the brine tubing with the open end facing the end of the tubing.
3. Insert the brass tubing insert into the end of the brine tubing.
4. Insert the filter screen into the brass insert.
5. Center the tubing on the brass brine port on the control valve and thread the GFN compression nut onto the brine port (clockwise). Securely tightly. Excessive forced is not required and should not be used.



Remove the lid off the top of the brine tank. Look inside your brine tank and you will see a vertical white tube called the brine well. Remove the cap from the top of the brine well. Inside the brine well, you will find the brine valve with air check and safety float. The other end of the brine tubing connects to the top of the brine valve in the same manner as the connection to the brine port on the control valve except there is no filter screen. There is a small hole drilled in the brine tank and brine well that you insert the brine tube through to connect it to the brine valve. Feed a small length of brine line through this hole and connect it to the brine valve assembly using a brass insert and the existing plastic GFN compression nut that is attached to the brine valve.





If you have an excessive length of brine line, you should trim it to a more appropriate length first. The brine tubing should be as short and straight as possible. Make sure that the end of the brine tubing is cut square and that the tubing coating is smooth, unmarred, and undamaged. Tighten the black compression nut finger tight, then confirm that there are no kinks or crimps in the brine line.

Step 8 – Connect the Brine Tank Overflow to Drain

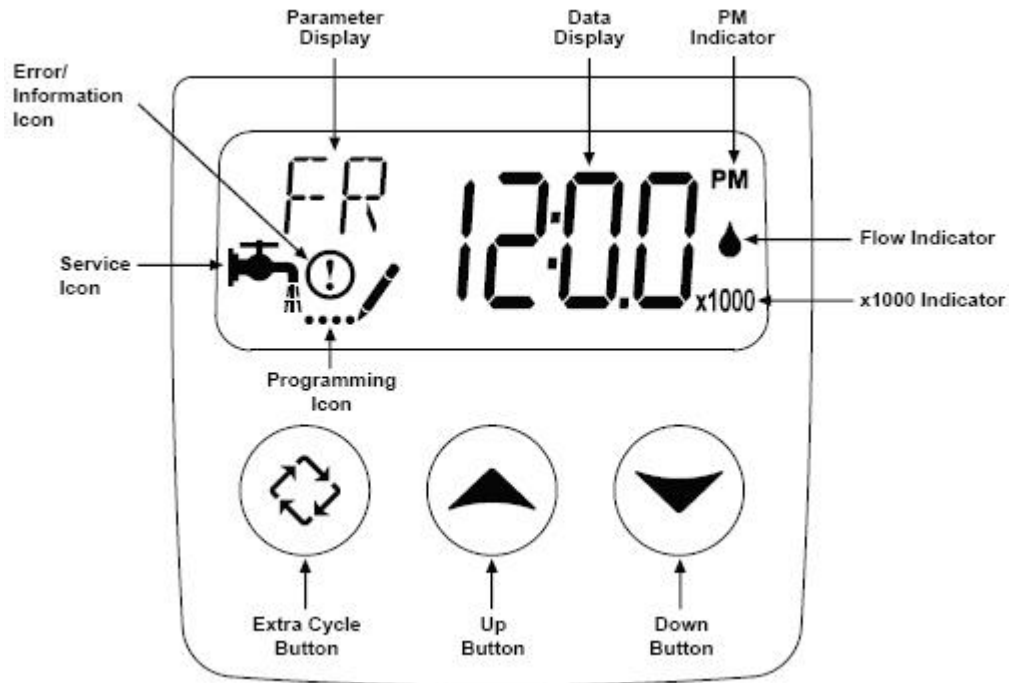
Locate the plastic overflow elbow on the side of your brine tank. This is a safety overflow that will allow water to be safely carried to a drain in the event that the system attempts to overfill the brine tank AND the brine tank safety float fails. It should be connected to a suitable drain if an overflow would not immediately and safely run down a floor drain on its own.

You may use the same material as was used to plumb your drain line connection from the control valve or other suitable material. 1/2 inch I.D. vinyl tubing is a popular option, but you need to ensure that this material cannot become kinked or crimped.

This drain line will not be under pressure, so it must be directed to a drain that is physically lower than it is. DO NOT connect this drain line into the pressurized drain line coming from the control valve. It must be run separately to the drain. Be sure to leave a 1" air gap at the drain to prevent back-siphon. This is only a safety overflow drain and will not be in use under normal operation. Depending on your installation, running the drain tubing to an open basement floor drain is often possible. Secure the drain tubing to the elbow with a suitable fitting or hose clamp.

Step 9 – Control Valve Set-up

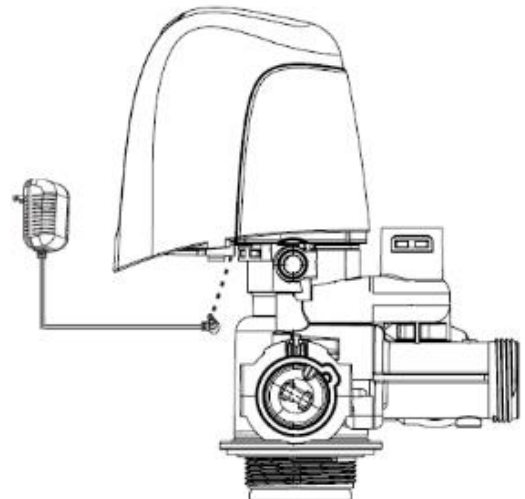
During cold weather, the control valve should be warmed to room temperature before operating. Note: All electrical connections must be done according to local codes.



Plug the control valve into a standard, grounded 120 volt (60 Hz) electrical outlet. Be certain that the outlet is uninterrupted and not controlled by a switch. An extension cord may be used to reach a suitable electrical outlet. Ensure that the extension cord is UL/CSA certified and of an appropriate wire gauge for the application. Plug the other end of the power cord into the electrical port on the control valve.

Note: The electrical port on the control valve is located on the right side of the valve (when you are facing the control panel), just behind the tab used to remove the valve cover. It is a bit tricky to find.

Once plugged in, the digital display on the control valve will illuminate. The control valve may need to reset to the home position when it is powered up. If it does, the motor will run for a few seconds.



The digital display should be alternating between the current time setting (which is probably incorrect), and the number of gallons remaining until the next regeneration cycle. You will also see the “service” icon which appears as a small faucet in the bottom left corner of the display window.

We will first set the time of day to the correct time. Press either the UP or DOWN button and hold for a few seconds. The parameter display will read “TD” (Time of Day) and the “programming” mode icon will appear (4 dots and a pencil). Use the UP and/or DOWN buttons to change the time displayed to the correct time of day. Once the display shows the correct time, press the EXTRA CYCLE button to save your changes.



Your system has been pre-programmed to regenerate based on its capacity and your water conditions, and to perform this process at 12:30am in the morning when it is unlikely that water will be required in the building. In most cases, this will occur every 5 to 7 days, but this will vary depending on your water conditions and water demand. If water is required during the regeneration process, untreated water will be permitted to flow to meet your service needs. You can alter the time of day that the regeneration process occurs if 12:30am is not ideal for you. If you have another automatic backwashing/regenerating water treatment system, make sure that they are not set to regenerate at the same time. We recommend that they backwash/regenerate at least 2 hours apart. Follow the instructions under “User Programming Mode” to change the regeneration time if desired. If you want to change the duration of the regeneration cycles, these settings must be edited in the “Master Programming Mode” – see below for details.

Before proceeding, you will need to confirm or set your feed water hardness level setting and your day override setting. In most cases, these settings will have been pre-programmed for you at the factory if we were given information about your water source and quality at your time of purchase. See “User Programming Mode” below for instructions on how to do this.

Step 10 – Initial Start-up and Leak Testing

Make sure the white salt grid is correctly positioned at the bottom of the brine tank.

Once you add salt, the brine tank will be difficult to move, so it is important that it be located in the desired location now. Do not add salt yet! Position the brine tank in its permanent location and add water to it until the water level is roughly 4 inches above the top of the salt grid. This will not be the permanent water level in your brine tank. The control valve will determine the proper amount of water to put into the brine tank. We are adding water to the tank at this time for initial testing purposes only.

Add 3 tablespoons of standard 5.25% unscented household bleach (sodium hypochlorite) to the water in the brine tank. This will be used to disinfect your system as part of the start-up process.

Ensure that the bypass is in the bypass position. Open a nearby cold water faucet. A faucet without an aerator screen is best. Slowly turn on the main water supply valve to your home and allow the water to run for a few minutes or until the system is free of foreign material and air that may have resulted from the installation. Once the water is running clear and free of air, slowly open the bypass valve on the back of your control valve to let water run through the treatment tank. Run the water for several minutes until all air is purged from the system and then close the water faucet.



CAREFULLY INSPECT YOUR PLUMBING CONNECTIONS AND CONTROL VALVE FOR LEAKS AND REPAIR ANY LEAKS FOUND BEFORE PROCEEDING.

Press the EXTRA CYCLE button and hold it down for about 5 seconds to engage a full regeneration cycle. “BW” will appear on the parameter display and the system will start the BACKWASH cycle. Allow the backwash to complete its whole cycle.

The valve piston will then re-position and the valve will begin the BRINE DRAW/SLOW RINSE cycle indicated by the parameter “BD” on the LCD display. Check the brine tubing connections at the control valve and brine valve for leaks. Tighten fittings if necessary. Inspect the water level in the brine tank and observe whether the water level is declining, indicating that the control valve is drawing brine as it should. If the system is not drawing water from the brine tank, check all connections for air leaks and check the brine tubing for kinks that may be blocking brine flow. If this does not resolve the problem, call your dealer for support. Allow the BRINE DRAW/SLOW RINSE cycle to run for at least 15 minutes (45 minutes remaining).

Once you have confirmed that you have a proper brine draw and you have waited at least 15 minutes, press the EXTRA CYCLE button to advance to the RAPID RINSE (“RR”) cycle. Allow this cycle to run for its full duration.

When the RAPID RINSE (“RR”) cycle is complete, the control valve will enter the BRINE FILL (“BF”) cycle. During this cycle, the control valve sends a very specific amount of water to the brine tank to make brine solution for the next regeneration. This volume of water plays a very important role in the salt efficiency of your system. Check to make sure that the water level in your brine tank is now slowly rising. If not, contact your dealer for assistance. When this cycle is complete, your control valve will return to normal service mode.



INSPECT ALL OF YOUR PLUMBING CONNECTIONS AND REPAIR ANY LEAKS IMMEDIATELY BEFORE PROCEEDING. IF THE DRAIN PIPE RATTLED OR VIBRATED DURING THE REGENERATION PROCESS CAUSING EXCESSIVE NOISE, USE ADDITIONAL FASTENERS TO BETTER SECURE THE DRAIN LINE.

You can now add salt to your brine tank. The salt is not included with your softener but can be purchased from most major department stores, grocery stores, home stores, and hardware stores as needed. See “Salt” below.

Open a nearby cold water tap (after the SoftPlus™ system) and let the water run for 5 to 10 minutes until the water is running clear. Repeat for other faucets in the building starting at the highest elevation and working down to the lowest point until all air is purged. The initial flow of water may be slightly discolored. This is normal and will go away quickly.

It is now safe to turn the electricity back on to your water heater.

Congratulations!

Your system is now ready to provide treated water to your home!

Keep in mind that your hot water heater may be full of untreated water so it may take a couple of days before all water used in your home is treated.

REGENERATION

Water softeners remove the minerals responsible for hard water through a process called **ion exchange**. Water softener resin attracts positively charged hard water mineral ions. These contaminants cling to the resin and are removed from the water stream. As the resin becomes saturated with contaminants over time, the water softener is designed to perform an automatic self-cleaning process called regeneration on a periodic basis. The softener uses sodium ions from common salt to eject contaminants off of the resin - the sodium ions are "exchanged" for the contaminants and the sodium ions cling to the media instead. The contaminants and excess salt brine are backwashed / rinsed down the drain.

The salt used to regenerate the media is stored in a brine tank which sits beside the system. All you have to do is add salt to the brine tank periodically (only once or twice per month for most systems).

The regeneration process is automatically engaged and controlled by your Fleck 5810SXT valve based on your water demand. Your system was pre-programmed at the factory. In most cases, your system will be programmed to regenerate every 5 to 7 days at 12:30am, but this will vary depending on your water demand and water source.

There are 4 steps to the regeneration process:

Step 1: Backwash: factory pre-set for 10 minutes (parameter display code BW)

Step 2: Brine Draw /Slow Rinse: factory pre-set for 60 minutes (parameter display code BD)

Step 3: Rapid Rinse: factory pre-set for 6 minutes (parameter display code RR)

Step 4: Brine Fill: factory pre-set for 14 to 23 minutes depending on the size of your system and salt efficiency setting (parameter display code BF)

Each time the softener regenerates, salt water (brine) is needed to recondition the resin in the water tank. The brine is pulled from the brine tank at a controlled amount. If the salt tank does not contain enough salt, the brine will be weak and the media will not be fully reconditioned, and untreated water will pass through.

See "Salt" Below.

Note, unless otherwise stated, all of our water softeners are factory pre-set to operate at high salt efficiency with capacity and all regeneration settings based on a salt dose of 6 lbs per cubic foot of resin. Additional capacity can be achieved at higher dose settings if desired.

Please consult your dealer for advice if you would like to re-configure your system at a high capacity and salt dose. Be aware that such changes will result in a less efficient water softener and higher salt consumption.

During each step of regeneration, the digital display on the control valve will indicate the cycle currently underway and the amount of time remaining in that cycle.

Unless directed by a water treatment professional familiar with this system, we do not generally recommend that you alter the duration of any cycles, however, you can adjust the duration of all cycles based on your water conditions through the “Master Programming Mode” (see below).

If your feed water conditions change, you should adjust the hardness level setting. See “User Programming Mode” below.

Manual regeneration:

If desired, you can choose to initiate a manual regeneration either immediately, or the next time the backwash time of day is reached:

To initiate a manual regeneration the next time the backwash time of day is reached:

Press the EXTRA CYCLE button once. The “service” icon will begin to flash indicating that a regeneration is scheduled next time the regeneration time of day is reached.

To cancel a queued regeneration, press the EXTRA CYCLE button.

To initiate an immediate manual regeneration:

Press the EXTRA CYCLE button and hold it down for 5 seconds until the regeneration process begins.

Skip through regeneration steps:

There may be times that it may be desirable to skip through regeneration steps without allowing them to fully complete. This would be most typical during servicing. When a cycle engages, always wait until the motor has stopped before skipping to the next cycle. You can hear the valve motor while it is repositioning the valve at the beginning of each cycle.

During the regeneration process, you can advance to the next step by pressing the EXTRA CYCLE button.

The control valve will continue to keep time and the passage of days for a minimum of 48 hours in the event of power failure.

SALT

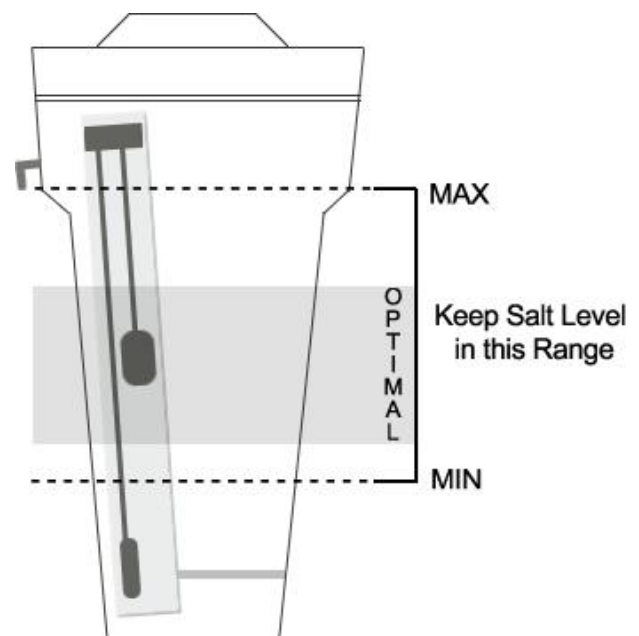
You must keep salt in the brine tank. If you run out of salt, your system will stop working properly, and permanent media damage could result if left without salt for an extended period of time. Check the salt level every 2-3 weeks.



THE BRINE TANK SHOULD BE KEPT TOPPED UP WITH SALT AT ALL TIMES. THE MINIMUM RECOMMENDED SALT LEVEL IS 1/4 AND THE MAXIMUM RECOMMENDED SALT LEVEL IS 1 INCH BELOW THE BRINE OVERFLOW ELBOW.

You should only use sodium chloride or potassium chloride pellet salt specifically designed for use in water softeners. Other types of salt (rock or snow melting salt for instance) will contain dirt and chemicals that will affect your water softener. If you choose to use potassium chloride salt, consult with your dealer as programming adjustments may be required due to the lower regeneration efficiency of potassium vs. sodium-based salt.

Keep the brine tank covered, and empty and clean the brine tank every three years.



If you have more than 0.3 ppm (mg/l) of iron, and/or more than 0.05 ppm (mg/l) of manganese in your water, we recommend that you use salt with a cleaning additive. Most

pellet shaped salts have such an additive. Alternatively, you can add a 4 oz pouch of Pro Products Rust Out (#RO24S) to your brine tank each time you add a bag of salt. This will protect your resin from iron and manganese fouling.

Salt Bridging

It is sometimes possible for the salt pellets to wedge against each other and fail to fall into the water at the bottom of the brine tank. This is called bridging and it will prevent the formation of an effective brine solution. The softener will try to regenerate but will not properly recondition the resin. A salt bridge can be broken up using a broom handle or similar rod. Carefully pound it into the salt to cause the salt bridge collapse. After loosening the salt pellets, wait 2 hours and then start a manual regeneration. A second regeneration may be needed to fully recondition the media. If bridging happens frequently, reduce the amount of salt that you add to the brine tank when you re-fill it - approximately half full is often best to prevent this problem

Sodium

All water softeners will add some sodium or potassium (depending on which type of salt is used) to the treated water. We recommend that individuals requiring a low sodium diet for health reasons such as high blood pressure or heart disease install a point-of-use drinking water filter featuring reverse osmosis technology to remove the sodium/potassium from their drinking water. These systems are relatively inexpensive and provide exceptional quality drinking water. More info can be found online here:

<http://www.homepluswater.com/reverse-osmosis-systems.php>

CHANGING THE TIME OF DAY

During regular service mode, the digital display will alternate between the current time of day and the number of gallons remaining until the next regeneration. For proper operation, it is important that the valve display the correct time of day. To change the time of day, press either the UP or DOWN button and hold for a few seconds. The "programming" icon will appear. Use the UP and/or DOWN buttons to change the time displayed to the correct time of day. Once the display shows the correct time, press the EXTRA CYCLE button to save your changes.



USER PROGRAMMING MODE

The User Programming Mode allows you to set the minimum frequency of regeneration, the time of day that regeneration will take place, your hardness level, and your reserve capacity.

To enter the User Programming Mode, press the UP and DOWN arrows at the same time and hold for 5 seconds until the “programming” mode icon appears. If the current time display is 12:01PM, you cannot enter the User Programming Mode – simply wait a minute before attempting.

DAYS OVERRIDE

The display will first show the **DAYS OVERRIDE** (parameter display code DO). This is the setting that determines the minimum frequency of backwash (measured in days). For softeners used on city water supplies, this parameter is normally set at 14 days. For softeners operated on a private well or surface water supply, this setting is usually set at 7 days.



To change the setting, use the UP and DOWN buttons. Press the EXTRA CYCLE button when done. If you do not want to change the current setting, simply press the EXTRA CYCLE button to skip to the next step.

REGENERATION TIME

The display will now show the **REGENERATION TIME** (parameter display code RT). This is the setting that determines the time of day that the automatic regeneration will start. It is strongly recommended that regeneration be set to occur at night when water will not be in use. If you have other water treatment equipment that regenerates or backwashes (such as

an iron filter), make sure that your SoftPlus™ system is not set to regenerate at the same time.



To change the setting, use the UP and DOWN buttons. Press the EXTRA CYCLE button when done. If you do not want to change the current setting, simply press the EXTRA CYCLE button to skip to the next step.

FEED WATER HARDNESS

The display will now show the **FEED WATER HARDNESS** (parameter display code H). This parameter should be set at the level of your raw (untreated) hardness from your most recent water test, in grains per gallon (GPG), adjusted for iron and manganese content.



We recommend that you determine this setting as follows:

If your hardness level is expressed in ppm or mg/l, first divide by 17.1 to convert to hardness expressed in grains per gallon (GPG).

Then, calculate your Iron Adjustment Factor as follows:

$$(\text{iron level in ppm or mg/l} + \text{manganese level in ppm or mg/l}) \times 4$$

Your recommended feed water hardness setting is equal to:

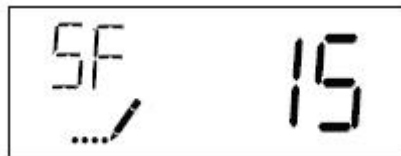
$$\text{Hardness in GPG} + \text{Iron Adjustment Factor}$$

To change the setting, use the UP and DOWN buttons. Press the EXTRA CYCLE button when done. If you do not want to change the current setting, simply press the EXTRA CYCLE button to skip to the next step.

RESERVE CAPACITY (SAFETY FACTOR)

The display will now show the **SAFETY FACTOR** (parameter display code SF).

When determining if a regeneration is required each day, the system considers if it has enough capacity to make it through the next day based on your typical daily water demand plus a “safety factor” expressed as a percentage of your typical daily demand. Reducing the safety factor increases salt efficiency but may leave you without treated water towards the end of the day on days where you use more water than normal. Increasing the safety factor reduces salt efficiency. Our factory default setting is 15% which suits most applications effectively while ensuring high overall salt efficiency.



To change the setting, use the UP and DOWN buttons. Press the EXTRA CYCLE button when done. If you do not want to change the current setting, simply press the EXTRA CYCLE button to return to service mode.

The system should now return to normal service mode. The unit will also return to normal operation after 5 seconds if no buttons are pressed.

MASTER PROGRAMMING MODE



THE MASTER PROGRAMMING MODE IS DESIGNED FOR PROFESSIONAL USE ONLY. UNLESS DIRECTED BY A WATER TREATMENT PROFESSIONAL FAMILIAR WITH THE SYSTEM, IT IS STRONGLY RECOMMENDED THAT YOU DO NOT MODIFY ANY OF THE MASTER PROGRAMMING MODE SETTINGS

To enter the Master Programming Mode, first set the time of day to 12:01PM. With the time display showing 12:01PM, enter the Master Programming Mode, by pressing the UP and DOWN arrows at the same time and holding for 5 seconds until the “programming” mode icon appears.

In this mode, you can adjust a parameter setting by using the UP and DOWN buttons. To save your changes and/or to skip to the next parameter, press the EXTRA CYCLE button. Press the EXTRA CYCLE button at the last parameter to save all settings and return to normal operation. The control will automatically disregard any programming changes and return to normal operation if it is left in Master Programming Mode for 5 minutes without any keypad input.

The following settings are the factory default settings for all 5810SXT Series SoftPlus™ systems:

Parameter	Parameter Code	Default Setting	Option Description
Display Format	DF	GAL	Gallons
Valve Type	VT	5800	Fleck 5810
Regenerant Flow	RF	dF1b	Downflow, 1 Backwash
Control Type	CT	Fd	Flow Meter, Delayed
Unit Capacity	C	See Chart on Page 5 for your Model based on salt dose of 6lb per cubic foot	
Feed Water Hardness	H	See User Programming Mode Above	
Reserve Selection	RS	SF	Percentage Safety Factor
Safety Factor	SF	15	15%
Day Override	DO	See User Programming Mode Above	
Regeneration Time	RT	12:30	12:30am
Backwash	BW	10	10 minutes
Brine Draw/Slow Rinse	BD	60	60 Minutes
Rapid Rinse	RR	6	3 minutes
Brine Fill	BF	See Below*	
Flow Meter Type	FM	t1.2	1 1/4" Turbine
Relay	RE	Off	Off
Relay	VR	Off	Off

* the brine fill cycle time is dependent upon your system size and is based on salt dose of 6 lbs per cubic foot:

Model	8-44	9-48	10-54	12-52	13-54	14-65
Brine Fill Cycle Time in minutes:	14	18	14	18	23	14

RESETS



USE OF THE RESET FUNCTIONS IS NOT RECOMMENDED EXCEPT UNDER THE GUIDANCE OF A WATER TREATMENT PROFESSIONAL FAMILIAR WITH THIS EQUIPMENT.

Soft Reset: Press and hold the EXTRA CYCLE and DOWN buttons for 25 seconds while in normal Service mode. This resets all parameters to the system default values except days since backwash in the time clock system.

Master Reset: Hold the Extra Cycle button while powering up the unit. This resets all of the parameters in the unit. Check and verify the choices selected in Master Programming Mode.

OPERATION DURING A POWER FAILURE

The 5810SXT valve/controller includes integral power backup. In the event of power failure, the control shifts into a power-saving mode. The display and motor shut down, but it continues to keep track of the time and day for a minimum of 48 hours.

The system configuration settings are stored in a non-volatile memory and are stored indefinitely with or without line power. The Time of Day flashes when there has been a power failure. Press any button to stop the Time of Day from flashing.

If power fails while the unit is in regeneration, the control will save the current valve position before it shuts down. When power is restored, the control will resume the regeneration cycle from the point where power failed. Note that if power fails during a regeneration cycle, the valve will remain in its current position until power is restored.



THE DRAIN LINE PLUMBING CONFIGURATION SHOULD INCLUDE ALL REQUIRED SAFETY COMPONENTS TO PREVENT OVERFLOWS RESULTING FROM A POWER FAILURE DURING REGENERATION.

The control will not start a new regeneration cycle without power. If the valve misses a scheduled regeneration due to a power failure, it will queue a backwash. Once power is restored, the control will initiate a regeneration cycle the next time that the Time of Day equals the programmed regeneration time. Typically, this means that the valve will regenerate one day after it was originally scheduled.

DIAGNOSTIC DATA

The SXT controller records and maintains diagnostic data to assist with servicing and troubleshooting. See page 12 of the Fleck 5810 SXT Downflow/Upflow Service Manual for details.

MAINTENANCE & TROUBLESHOOTING



THE CONTROLLER MUST BE DEPRESSURIZED BEFORE REMOVING ANY QUICK CONNECTION CLIPS OR THE VALVE ITSELF FOR SERVICING. THE CONNECTOR SHOULD BE PUSHED TOWARD THE CONTROL VALVE WHILE REMOVING CLIPS.

Service Recommendations

It is imperative that the salt level in your brine tank be kept at the correct level. See “Regeneration” and “salt” sections above for details. Every time you add salt, inspect all fittings for signs of leaks, as well as brine tubing for crimps or kinks that may impede brine flow. Empty and clean the brine tank every three years.

Your Fleck 5810 valve is built for long term operation with limited maintenance. The seals and spacers and piston assembly, injector, and injector screen require periodic servicing or replacement, generally every 2 to 5 years. See Service Bulletin #5810-2 for instructions on this procedure.

Troubleshooting

PROBLEM	CAUSE	CORRECTION
1. Valve fails to backwash	A. Electrical service to unit has been interrupted. B. Timer is defective.	A. Assure permanent electrical service (check fuse, plug, pull chain or switch). B. Replace timer.
2. Loss of water pressure.	A. Contaminant build-up in feed line. B. Contaminant build-up in unit C. Inlet of control plugged due to foreign material broken loose from pipe by recent work done on plumbing system.	A. Clean line to water filter. B. Perform manual backwash. Increase frequency of regeneration and/or backwash time. C. Remove pistons and clean control.
3. Loss of media through drain line.	A. Drain line flow control too large.	A. Check to ensure drain line flow control is sized properly for your treatment tank.
4. Water running to drain during service mode.	A. Internal valve leak. B. Jammed piston.	A. Replace seals and spacers and/or piston. B. Remove obstruction/debris and inspect seals and spacers and/or piston for damage.
5. Cloudy water and/or poor water pressure after initial installation.	A. Additional backwash required.	A. Perform 1 or more additional manual backwash cycles.
6. Continuous hard water at faucets.	A. No salt B. Bypass C. Injector / Screen Plugged D. Brine Flow Problem E. Internal Leak	A. Brine tank is empty or salt is "bridged." B. Make sure bypass valve is in service position. C. Inspect and clean injector and injector screen. D. Inspect brine tubing for kinks or blockages, check brine tube connections for air leak, & check brine line flow control for blockage. E. Check riser tube for crack, check riser tube o-ring seal on control valve, & inspect valve seals for wear.
7. Intermittent hard water at faucets.	A. No salt B. Using hot water during regeneration	A. Brine tank is empty or salt is "bridged." B. Adjust regeneration time so

	C. Change in feed water hardness D. Capacity settings E. Fouling	that hot water use does not coincide with regeneration. C. Check feed water hardness level and adjust setting if necessary. D. Capacity or safety factor settings should be reviewed with your dealer E. Resin fouling may be reducing capacity of your resin. Discuss with your dealer.
8. Excessive salt consumption.	A. Incorrect setting. B. Excess water in brine tank	A. Confirm settings with your dealer. B. See below.
9. Excess water in brine tank.	A. Drain line flow control plugged B. Plugged injector C. Incorrect setting D. Brine flow problem	A. Inspect and clean the DLFC, and ensure no blockages in drain piping. B. Inspect and clean injector and injector screen C. Confirm settings with your dealer. D. Inspect brine tubing for kinks or blockages, check brine tube connections for air leak, & check brine line flow control for blockage.
9. Softener regenerated at unexpected time of day.	A. Power failure	A. Reprogram correct time into controller.

ERROR CODES

Code	Error	Cause	Reset & recovery
0	Cam Sense Error	The valve drive took longer than 6 minutes to advance to the next regeneration position.	Unplug the unit and examine the control valve. Verify that all cam switches are connected to the circuit board and functioning properly. Verify that the motor and drive train components are in good condition and assembled properly. Check the valve and verify that the piston travels freely. Replace / reassemble the various components as necessary. Plug the unit back in and observe its behavior. The unit should cycle to the next valve position and stop. If the error re-occurs,

			unplug the unit and contact technical support.
1	Cycle Step Error	The control experienced an unexpected cycle input.	Unplug the unit and examine the control valve. Verify that all cam switches are connected to the circuit board and functioning properly. Enter Master Programming mode and verify that the valve type and system type are set correctly with regard to the unit itself. Step the unit through a manual regeneration and verify that it functions correctly. If the error re-occurs unplug the unit and contact technical support.
2	Regen Failure	The system has not regenerated for more than 99 days.	Perform a Manual Regeneration to reset the error code. Enter Master Programming mode and verify that the unit is configured properly. As appropriate for the valve configuration, check that the correct system capacity has been selected, and that the day override is set properly. Correct the settings as necessary.
3	Memory Error	Control board memory failure.	Perform a Master Reset and reconfigure the system via Master Programming mode. After reconfiguring the system, set the valve through a manual regeneration. If the error re-occurs, unplug the unit and contact technical support.

WARRANTY INFORMATION

SoftPlus™ systems are backed by a comprehensive warranty program.

The Fleck 5810SXT control valve and related bypass assembly and media tank are manufactured by Pentair LLC and are subject to Pentair LLC's Limited Warranty. See Pentair's Limited Warranty for details.

Fleck 5810SXT control valve: 5 Years*

Media tanks up to 13" in Diameter: 10 Years

Media tanks 14" and Greater in Diameter: 5 Years

*Note: Pistons and piston seals are considered wear and tear items and require regularly scheduled maintenance and replacement.

HomePlus Products Inc. will assist you in obtaining warranty coverage from Pentair LLC. To report a warranty problem with your system or request warranty assistance, please call HomePlus Products Inc. Toll free: 1-866-376-2690

Subject to the limitations noted below, all other components of the SoftPlus™ system are warranted by HomePlus Products Inc. to be free of defects in material and workmanship for a period of 1 year except as noted.**

**Note: Due to the wide variety of potential feed water conditions, there is no warranty on the cation resin or underbed gravel.

The term of these warranties begins on the date of delivery of the product to the customer and continues until the earlier of:

- the end of the warranty term noted above; or
- the date in which the product(s) is/are removed from the original location of installation; or
- the date in which the original purchaser sells or otherwise transfers ownership of the home in which the product(s) was/were originally installed.

Only products purchased from an Authorized Dealer or HomePlus Products Inc. directly are eligible for this warranty. The products must have been installed and operated in accordance with the instructions and operating conditions stated in the Owner's Manual.

Customer must register his or her warranty with HomePlus products Inc. within 90 days of original purchase for the warranty to remain valid.

This warranty applies only in Canada and the United States of America.

In the event that a part is deemed defective, the user must immediately inform HomePlus Products Inc. who will furnish a replacement part at no cost to the user. HomePlus' obligation to the customer shall be limited to the replacement of the defective part by prepaid standard freight to the original point of installation. Expedited shipping is available at the discretion and cost of the customer. When required, the return of defective parts to HomePlus is the responsibility of the customer.

This warranty does not cover any labour costs including labour costs related to troubleshooting, repair, installation, replacement, or maintenance.

This warranty does not apply to the following situations: misuse; normal wear and tear; neglect; unauthorized repair or damage caused through installation, adaptation, or modification; use in an improper manner or manner inconsistent with the manufacturer's installation, operating, and maintenance instructions; misapplication; wear or deterioration due to environmental conditions; damage occurring during transit; mishandling; improper storage; incorrect supply of water; tampering or alteration; fire, freezing; act of God; or any cause beyond the control of HomePlus Products Inc.

The original warranty period does not change in the event of part replacement by HomePlus Products Inc.

This warranty is issued exclusively to the original consumer purchaser of record so long as the product remains installed in the original location of installation, and is not transferable.

The provisions of the foregoing warranties are in lieu of any other warranty, whether expressed or implied, written or oral (including any warranty of merchantability or fitness for a particular purpose). HomePlus Product Inc.'s liability arising out of the manufacture, sale, or supplying of the products or their use or disposition, whether based upon warranty, contract, tort, or otherwise, shall not exceed the actual purchase price paid by the authorized dealer or consumer for the product. In no event shall HomePlus Products Inc. be liable to the distributor or any other person or entity for special, incidental, consequential or punitive damages (including, but not limited to, property damage or loss, loss of incomes, or loss of use damages) arising out of the manufacture, sale, or supplying of the products, even if HomePlus Products Inc. has been advised of the possibility of such damages or losses. These warranties are governed by the laws of the Province of British Columbia, Canada, and may change without notice.

To report a warranty problem with your system or request warranty assistance, please call HomePlus Products Inc. Toll free: 1-866-376-2690

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