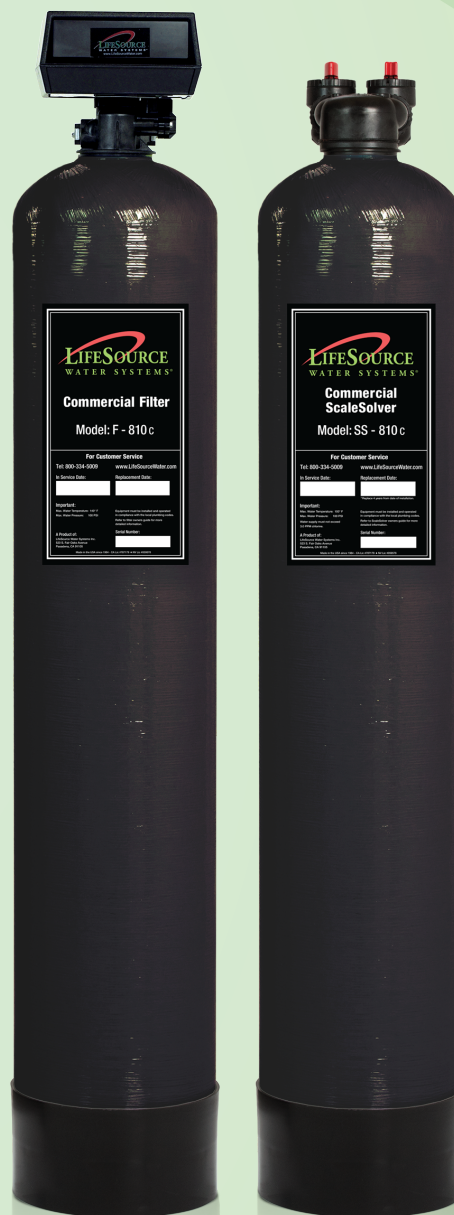




Installation and Operations Guide

Model:
810 Commercial Water System



LifeSource Water Systems, Inc.
523 S. Fair Oaks Ave. ♦ Pasadena, CA 91105
LifeSourceWater.com ♦ Customer Service: (626) 792-9996

CA Lic. #787179 - NV Lic. #059578

Equipment Specifications

810 Commercial Water System Overview

Water Filter Specifications

The 810 Commercial Water Filter is a no maintenance, whole facility water filtration system. This system includes a fully automatic valve head that runs a self-rinsing cycle every 14-days.

- **Inlet Connection** 1"
- **Outlet Connection** 1"
- **Max. Dimensions** 52" x 8"
- **Max. Flow Rate** 10 gpm
- **Max. Temperature** 140° F

**In areas where outside temperatures are less than 32° F for an extended period of time, insulation is required*

- **Max. Pressure** Min. 40 psi, Max. 100 psi
- **Dry Weight** 39 lbs.
- **In-Service Weight** 115 lbs.

Power Requirement:

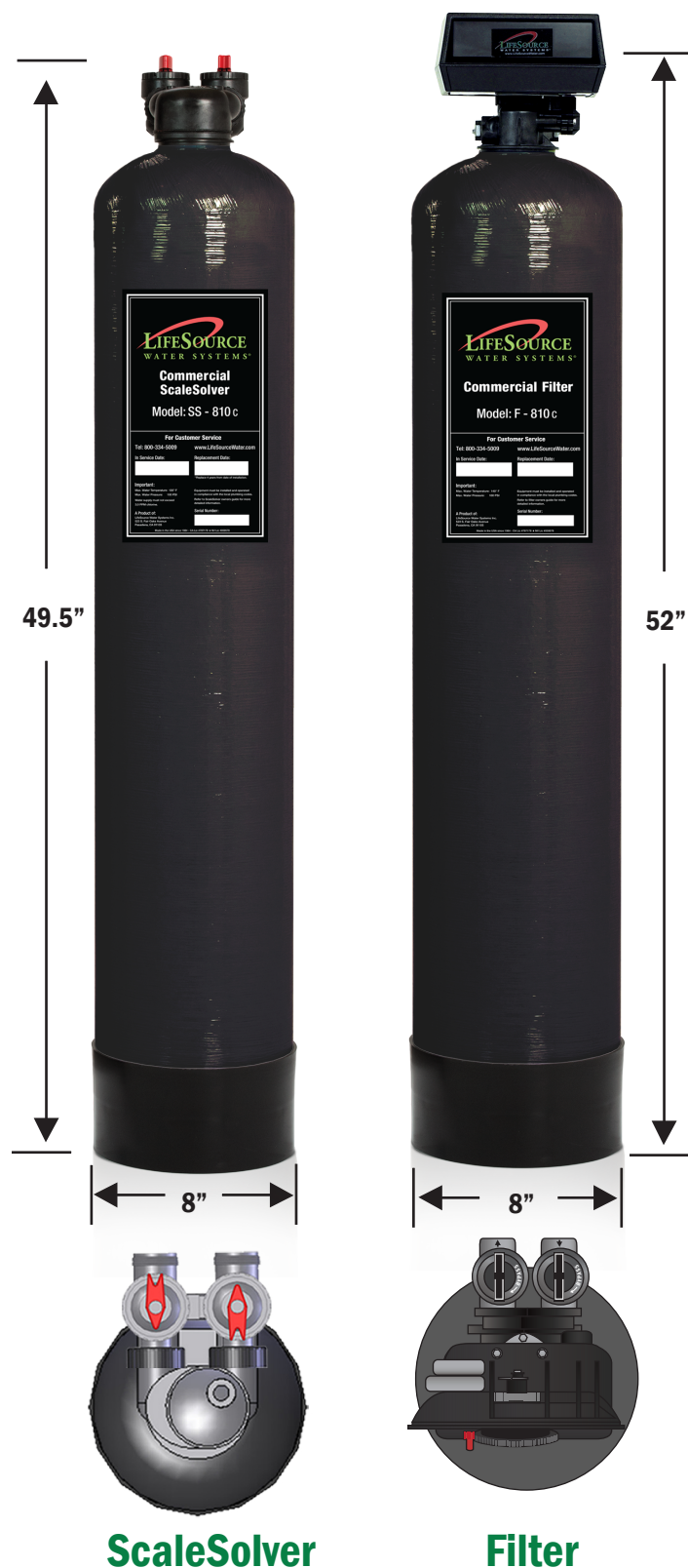
1 standard 110v electrical outlet within 5' of system or a 24v transformer plugged into a more distant electrical outlet.

ScaleSolver Specifications

The 810 Commercial ScaleSolver is self-contained and ready to use. A simple inlet and outlet connection is all that is required for installation. No backwash is necessary.

- **Inlet Connection** 1" PVC Union with Socket
- **Outlet Connection** 1" PVC Socket
- **Max. Dimensions** 49.5" x 8"
- **Max. Flow Rate** 20 gpm
- **Max. Temperature** 100° F (37.8° C)
- **Max. Pressure** 100 PSI
- **Dry Weight** 17 lbs.
- **In-Service Weight** 90 lbs.

* Chlorine must not be above 3.0 PPM.



Pre Installation Instructions

Cautions And Requirements For Installing 810 Commercial Water System



CAUTIONS & REQUIREMENTS *Read Before Installing System*

- ◆ **All installations are to be done in accordance with any local codes.**
- ◆ **LifeSource Water Systems are attached to the main water line** going into the building. The pipe connection is made after the pressure regulator, if present, and after the sprinkler supply line. Attaching irrigation or sprinkler lines to the LifeSource Water System is not recommended. Make sure facility water is on the main line. (Some kitchen cold water lines have been plumbed separately if previously plumbed for soft water.)
- ◆ **CHECK WATER PRESSURE:** The system is rated for 100psi. Water pressure measuring 80psi during the day may surge to over 100psi at night when self-cleaning occurs. If daytime water pressure on main line is above 80 psi, a pressure regulator [See Figure 1] is required.
- ◆ **Both tanks come with a 1" connected bypass.** Arrows on top of the bypass valve indicate the incoming and outgoing water flow.
- ◆ **All systems have a rinse drain line with a restrictive washer determining the g.p.m. (gallon per minute) flow rate.** The 1620 Series systems require either a ½" O.D. (outside diameter) flexible tubing clamp in place or ½" PVC pipe.
- ◆ **REMOVE OR CHANGE ANY EXISTING FILTERS** on the refrigerator water line, beneath the sink and on any other water lines in the building. Any such filters, if retained, should be routinely changed per manufacturers' recommendations.
- ◆ **A suitable outlet to drain the rinse water must be made available for filter.** That outlet can either be a ground location that has a sufficient percolation, a driveway or a drain.
- ◆ **DO NOT CONNECT THE FILTER RINSE LINE TO AN AIR CONDITIONER DRAIN LINE.**
- ◆ An air gap must be used in connecting to a drain line to prevent possible back siphoning into the tank (**see Air Gap Illustration Figure 4**).
- ◆ **Filters delivered without the valve head installed:** PRE-FILL the tank with water after the tank has been placed at the installation site. This will allow the water to assimilate into the carbon and any air to escape prior to operation. ***If the system was delivered with the valve head pre-installed on the tank, DO NOT ATTEMPT TO REMOVE THE VALVE HEAD.**
- ◆ **The ScaleSolver unit operates in the UPFLOW mode which is opposite of a conventional softener.** Both the inlet and outlets are clearly marked on tank.
- ◆ **This system requires a full bypass** to allow for a service flow to be routed around the system as needed for servicing. [See Figures 2 & 3]
- ◆ Copper and other metals must not be above EPA standards for municipal water.



Figure 1 - Water Pressure Gauge

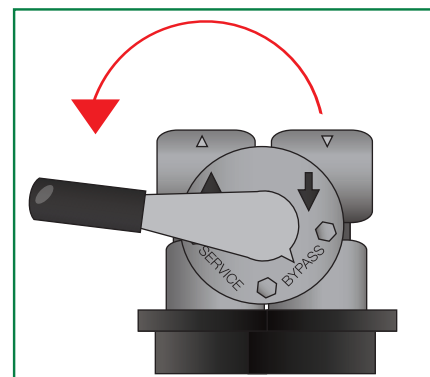


Figure 2 - Filter Valve IN Bypass Position

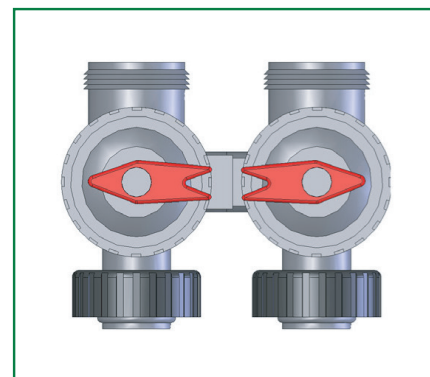


Figure 3 - ScaleSolver Valve IN Bypass Position

Installation Instructions

810 Commercial System Installation and Setup Water Filter

System Location Requirements

- ◆ **Place this system vertically on a smooth, level surface.** This system operates in an UP-Flow, fluidized bed mode. Level surface is required. The system may be placed in any position during shipping and installation but must be operated in the vertical position.
- ◆ **The system should be placed within 5 feet of a 110-volt electrical outlet.** A 24-volt transformer can be used if no outlet is available within five feet. Be sure to secure the transformer to the electrical outlet with the screw provided.
- ◆ **The ScaleSolver must be the final stage in the treatment chain.** DO NOT install the water filter post ScaleSolver.
- ◆ **Do not let the system freeze.** Damage to the tank may result.

Installation Instructions

All installations are required to be completed in accordance with all local building and plumbing codes.

NOTE: If a re-circulating pump is present on your hot water heater, unplug the pump PRIOR to shutting off the water supply to avoid a burnout of the pump motor.

1. Place the tanks where they are to be installed. Pay close attention to the direction of the arrows on each valve head.
2. First begin with the ScaleSolver by opening up the inlet valve first and then the outlet valve.

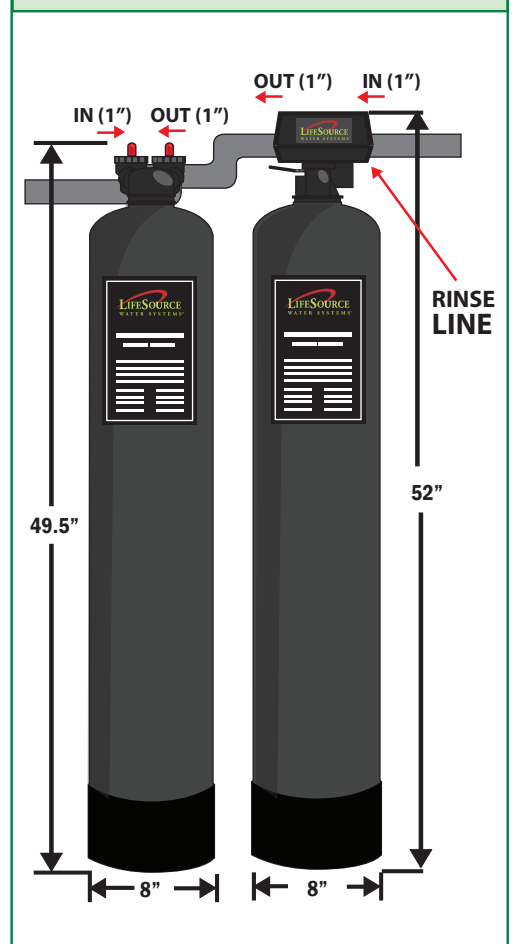
NOTE: The ScaleSolver unit operates in the UPFLOW mode which is opposite of a conventional softener. Both the inlet and outlets are clearly marked on tank.

3. As the ScaleSolver fills with water, allow cold water to run through a faucet or hose bib to release air from tank.
4. Water flowing from faucets may be white, allow water to run until clear. This takes approximately 10-15 minutes.
5. Shut off faucets and place ScaleSolver on bypass before setting up the filtration unit.

NOTE: If installing a sediment filter, plumb in the sediment filter pre the water filter. Arrows indicate in and out. Care should be taken to cool the plastic casing when soldering nearby pipe connections. The building ground wire, if necessary, should be looped around the system to maintain proper grounding.

6. Filtration unit valve heads are shipped separately. To properly set up the filter, fill tank with water, remove the blue tape on the center riser pipe and screw on the valve head securely.
7. Before turning on the main water line, set the built-in bypass lever to the BYPASS position. **[FIG 2]**

Figure 4: 810 Commercial System



Installation Instructions

810 Commercial System Installation and Setup Water Filter

Installation Instructions Continued...

8. Connecting The Rinse Line

The rinse line can be directed to a ground location that has sufficient percolation, a driveway or a drain. In areas where freezing occurs, the rinse line cannot be directed or located outdoors. **DO NOT CONNECT THE RINSE LINE TO AN AIR CONDITIONER DRAIN LINE.**

An air gap must be used when attaching a rinse line to a drain line. An air gap will prevent backflow contamination, in the event of a clogged sewer line, if rinse line is connected to a sewer line. Devices that create an air gap can be purchased at most plumbing supply stores.

[See Figure 4]

This system requires either a ½" O.D. (outside diameter) flexible tubing clamp in place or ½" PVC pipe.

Connect the rinse line on the filtration tank, using care not to over-tighten. If using PVC pipe, 1/8" holes can be drilled about 4" apart along the pipe lying on the ground to better distribute the water in a garden area. **DO NOT** cap the end of the pipe or connect the end of the pipe to a drip line.

NOTE: If using the 24-volt transformer, run wire and make connections - but do not plug in.

9. Turn on the main water supply and check all connections for leaks.

NOTE: After installing the filtration tank, it is extremely important that this unit be backwashed thoroughly to remove the dust and carbon fines on the new carbon. If the tank has been pre-filled with water, extreme care must be taken in the initial filling. Filling the tank with water too quickly can cause the carbon to be forced up into the valve head and may jam or ruin the piston which controls the backwash.

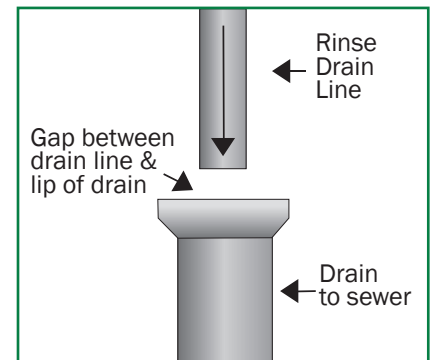
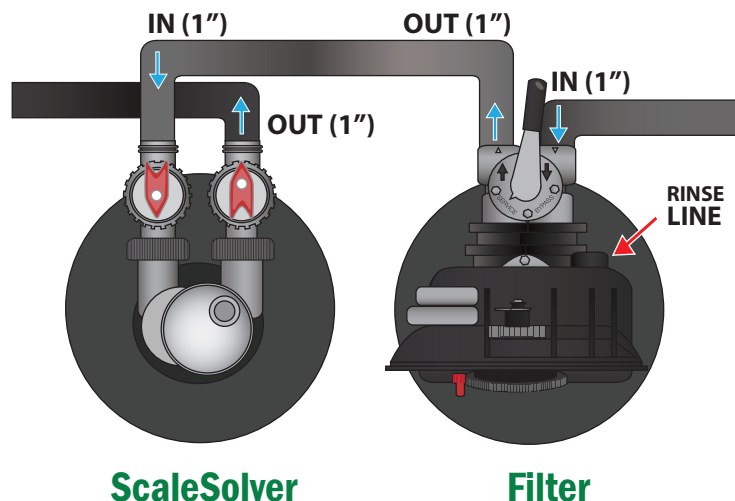


Figure 4 - Air Gap Illustration

TOP VIEW OF SCALESOLVER AND FILTER



Manual Rinse

Manual Rinse Instructions Of Newly Installed Filter

First Rinse Of Newly Installed System

After installing a new filter, it is extremely important that the system be thoroughly rinsed manually to remove the dust and carbon fines on the new carbon.

NOTE: If the tank has been pre-filled with water, extreme care must be taken in the initial filling. Filling the tank with water too quickly can cause carbon to be forced up into the valve head and may ruin the piston that controls the self-rinsing cycle.

1. Lift off the valve cover and turn the control knob on your left (as you face the tank) **CLOCKWISE**, from the **SERVICE** position (notch in 9 o'clock position) to the **BACKWASH** position (notch in roughly the 12 o'clock position).
2. Using the built-in bypass lever as the control for the flow of water, **GRADUALLY** rotate the lever half-way to the **SERVICE** position to allow the water to **SLOWLY** fill the tank. The water flows down the riser pipe, allowing the tank to fill from the bottom. A moderate amount of air will escape out of the backwash line as the water fills the extensive pore network of the carbon.
3. Allow the rinse water to run for two to three minutes. Then **SLOWLY** rotate the bypass lever to the **SERVICE** position. The water will continue the self-cleaning cycle. Leave the bypass lever in the **SERVICE** position.

MANUAL RINSE CYCLE INSTRUCTIONS

4. Rotate the control knob at the top of the tank **SLOWLY** clockwise to **RAPID RINSE** (between 4 and 5 o'clock). Stop and leave it on **RAPID RINSE** for 2 to 3 minutes. Water will be running out the rinse line during this time. [See Figure 5]
5. Then turn the control knob **SLOWLY** clockwise to **BACKWASH** (approximately 12 o'clock). While turning the control knob, the water will stop running out the rinse line. Once in the **BACKWASH** position, the water will once again begin flowing out the rinse line. Stop and let it run for two or three minutes at **BACKWASH**. [See Figure 6]

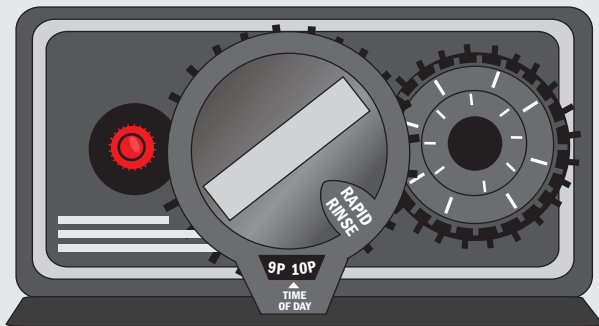


Figure 5 - Control knob in **RAPID RINSE** position.

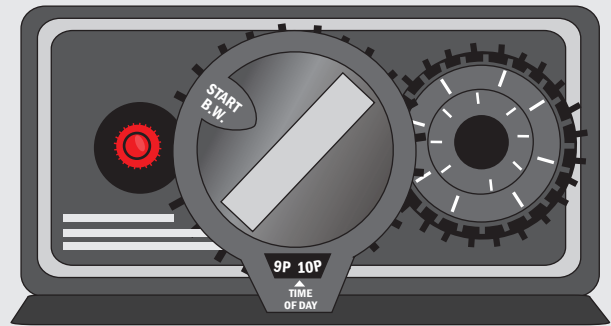


Figure 6 - Control knob in **BACKWASH** position.

6. Repeat instructions 4 & 5 to manually rinse the filter. **This process can take up to 20 minutes** and will need to be ran 4 to 5 times or until the water from the rinse line runs clear.

7. **At the beginning of the Manual Rinse Cycle, the water flowing from the rinse line will come out almost black.** This is normal. The high grade carbon filter is being thoroughly rinsed. Each time you manually run a complete rinse cycle, the new filter is being cleaned and prepped. The water from the systems rinse line will turn from black to gray and then begin to get more clear with each rinse cycle you complete. [See Figure 7]

NOTES: If the water is still gray or if it has tiny black particles in it, repeat the Manual Rinse Cycle until the water is totally clear.



Figure 7 - Rinse line to drain.

Setting Timer

How To Set Or Reset System Self-Cleaning Timer

Manual Rinse Cycle Instructions Continued...

8. After the **Manual Rinse Cycle** has been completed, rotate the valve control lever to the **SERVICE** position. Make sure the control lever is in the full **SERVICE** position. [See Figure 8]

NOTE: This system is equipped with a timer to automatically rinse and clean the system on a regular basis, so manually rinsing the system will not be necessary in the future.

9. Check the control knob on the right (which is the day wheel indicating how many days until the next self-cleaning cycle). The white arrow should be pointing at the 7-day setting. To increase frequency of the self-cleaning, pull this wheel toward you and rotate to the desired day-setting.

10. Set the time of day by pushing the red button (which frees the outer red wheel). Rotate this wheel until the current time of day appears, then release the button to set. Self-cleaning is now programmed to occur every 14 days at 2 a.m. Plug in the timer.

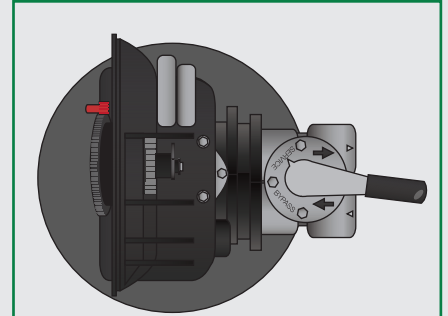


Figure 8 - System in SERVICE position.

Self-Rinse Timer Details

The 810 Commercial Filter is pre-programmed to self-rinse once every 14-days for 30 minutes between 2 a.m. and 3 a.m. Water pulled into the building at this time will not be filtered by the system.

Reset Self-Rinse Timer

If you would like self-rinsing to occur at a time other than 2 a.m., you must adjust the **TIME OF DAY**. For example, if you would like self-cleaning to occur between 12 a.m. and 3 a.m. (which is two hours earlier than programmed), you must set the **TIME OF DAY** two hours later than it actually is. If you want self-cleaning to occur between 9 a.m. and 12 a.m. (which is seven hours later), you must set the **TIME OF DAY** seven hours earlier than it actually is.

To reset the weekly automatic self-rinsing timer follow the following instructions [See Figure 9]:

- ◆ Remove the cover at the top
- ◆ Depress and hold down the red button (A)
- ◆ Place your finger on top of the large gear (B) and rotate it until the correct "present time of day" shows in the lower window (C)
- ◆ Release the red button
- ◆ Replace the cover

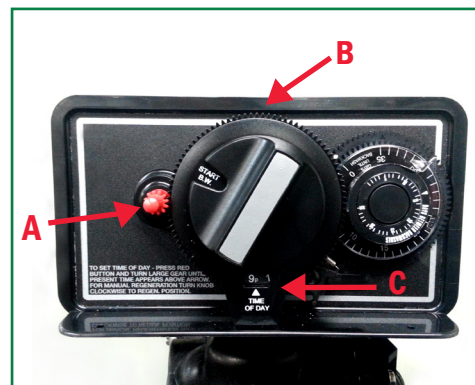


Figure 9 - Resetting self-rinse timer.

NOTE: After a power outage you should confirm that the timer is set at the correct time of day. To determine if the timer has electrical power, lightly place your fingers on the gray clock located on the back of the timer face. If the clock is warm, it is receiving electrical power.

For detailed video instructions, please go to www.LifeSourceWater.com and click on the Customer Care button in the upper right corner of the page.

Post Install Instructions

Important Instructions For Immediately After Installation And Trouble Shooting Guide

Immediately After Installation

- ♦ **Flush lines of old water** by running water from each faucet. Remember that the hot water heater will be filled with old water.
- ♦ **Clean Dislodged Sediment:** Aerators on faucets, faucet heads, toilets, etc. may have to be cleaned of scale and sediment that dislodges from old pipes.

NOTE: On old pipes that have accumulated sediment ONLY - Run water for a couple of minutes during the first 15 days, after it has been sitting in the pipes overnight or if water has sat in the pipes for a prolonged period.

Traditional Water Heaters & Boilers

1. Set the temperature at the medium setting to achieve 140 degrees. Older water heaters may have to be turned to high to achieve this temperature due to scale buildup in the unit.
2. **One month after your LifeSource system installation**, drain the hot water heater until the drained water runs clear. In addition your hot water heater should be drained once a year per manufacturer's instructions. Older water heaters may descale with LifeSource water and should be drained one month or so (as scale dislodges).
3. Recirculating pumps should be unplugged if the main water line is shut off in order to avoid burning out the motor. They should also be unplugged when draining the hot water heater.
4. Hot water heaters can easily be drained by attaching a hose to the faucet at the bottom of the unit. Open the faucet and allow the water to run until it is fairly cool.

Tankless Water Heater

Consult your manufacturer instruction manual for draining tankless water heaters.

Trouble Shooting System

Water Doesn't Taste Right

- ♦ Check Bypass: See if the bypass on BOTH TANKS are in the service position.
[See Figure 10 & 11]
- ♦ Check Electrical: Make sure power plug on the **WATER FILTER** is plugged into electrical 110v outlet and clock is running. If the clock is not running, it may need a new motor or transformer (if using a 24-volt head). Always start with the transformer.

Rinse Line Runs Continuously: If water continually flows out the rinse line, one will get a cross-mixture of tap water and filtered water, as the piston hasn't fully returned to service position. This is usually caused by tiny pebbles lodging in the piston or in the seals and spacers if the piston assembly. Manually turn the dial several times through the self-cleaning cycles. Often this will dislodge the offending obstruction.

Air Is Visible In Water After System Is Installed: If the water appears cloudy when you fill a glass of water, this usually indicated that air has gotten into the water lines during installation. Open all faucets in the building and run water for a couple of minutes to flush out the air.

System Rinse Line Runs Continuously: If water continually flows out the rinse line on the **WATER FILTER**, one will get a cross-mixture of tap water and filtered water, as the piston hasn't fully returned to service position. This is usually caused by tiny pebbles lodging in the piston or in the seals and spacers of the piston assembly. Manually turn the dial on the **WATER FILTER** several times through the self-cleaning cycles. Often this will dislodge the offending obstruction.

Figure 10: Water Filter Valve In SERVICE Position

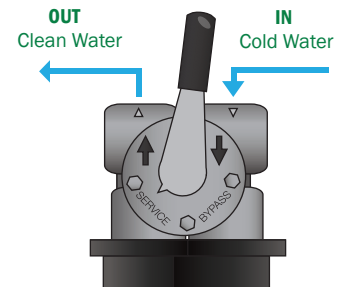
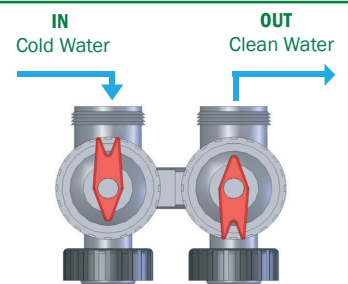


Figure 11: ScaleSolver Valve In SERVICE Position



Good Practice

Suggested Tips To Help Maximize System Benefits

Glass Shower Doors

To prevent lime scale buildup, buff shower doors with Rain-X or Liquid Furniture Wax. Waxes and Rain-X seal the pores in glass and promote water sheeting off glass, preventing soap scum buildup. Simply buff on and off every two months for crystal clear shower doors.

Washing Machines

Clean water from your LifeSource System cleans better. For best results reduce soap usage by about 75%. Do not use single dose detergent packs or pods. Packs or pods will overwhelm your washing machine and clothes with excess soap. Excess soap will remain in clothes after rinse cycle.

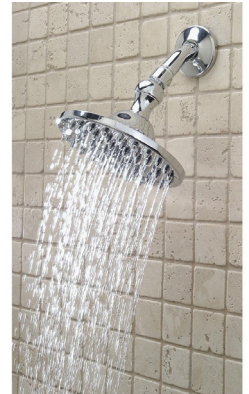
Automatic Dishwashers

To reduce water spots on glassware & dishes, reduce soap usage about 75%. Do not use single-use dishwasher detergents, (Pods, Packs or Tabs). These will overwhelm your dishwasher with excess soap. Excess soap will cause excess water spots and glazing. We recommend Cascade Complete. One teaspoon of Cascade Complete detergent and 1 teaspoon of Sour Salt*, (Citric Acid) or Glass Magic, as a rinsing agent, will produce excellent results.

Lime or Soap Scum Buildup

If you currently have lime buildup in your dishwasher, we suggest pouring a tablespoon of sour salt (Citric Acid) into the bottom of your dishwasher. Run one empty cycle with no soap or dishes to remove excess detergent and mineral deposits. Hot water must be at least 130 degrees.

* Citric Acid – Also known as 'sour salt.' Citric acid is a natural acidic ingredient found in all citrus fruits and is used primarily in sausage making or canning to keep fruits from discoloring. Sour Salt is the most effective, natural and inexpensive cleaning agent for mineral deposits available.



Warranty Details

Summary Of Conditions, Testing And Regulatory Approvals For The 810c Water Filter and ScaleSolver

LifeSource Water Filter Limited Product Warranty

We warrant to the original owner that the water treatment system purchased is free from defect in material and workmanship under normal use, service and conditions.

LIMITED 5 YEAR WARRANTY

To the original owner, at the original installation site, the LifeSource Water Systems tank and internal components are warranted not to leak, burst or fail in any way, for a period of five years from the installation date, subject to the following conditions:

1. Installation is made according to manufacturer's recommendations and meet current and local building and plumbing codes. LifeSource recommends installation by a licensed plumber.
2. Water pressure does not exceed 100 PSI and incoming cold water temperature is not higher than 120 degrees F.
3. That failure has not resulted from misuse, alteration, freezing, accident, fire or neglect.

The automatic timer valve used by LifeSource Water Systems has a three year warranty on parts if installed as required by the manufacturer. There will be no service charge for the first 90 days if installed by the factory.

WATER PRESSURE EXCEEDING 100 PSI CAN DESTROY THE INNER WORKINGS OF THE TANK AND VALVE HEAD AND NULLIFY ALL WARRANTIES. WORKING PRESSURE REGULATORS ARE RECOMMENDED WHERE WATER PRESSURE EXCEEDS 75 PSI DURING THE DAY (PRESSURE CAN SURGE DURING THE NIGHT.)

Function warranty cannot be honored if granular activated carbon media has been coated with excessive iron, silt, mud or other foreign substances. Recommended regular self cleaning should be automatically set at once per seven to thirty day period.

Note #1: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

Note #2: See Installation Instructions for user responsibility, general operation and maintenance requirements, service to the system and parts and service availability.



NSF/ANSI-42
Tested & Certified
See WQA Performance Data
Sheet For Claims



Factory/Corporate Office

523 S. Fair Oaks Ave. Pasadena, CA 91105
800-334-5009 www.LifeSourceWater.com

Warranty Details

Summary Of Conditions, Testing And Regulatory Approvals For The 810c Water Filter and ScaleSolver

Warranty Details

LifeSource Water Systems, Inc. warrants the ScaleSolver system as follows:

- ◆ The ScaleSolver system (including the tank, media and valve head) is warranted for performance for a period of **three years** from the date of the original installation.
- ◆ The ScaleSolver warranty is **four years** when installed in conjunction with a LifeSource Water System in the proper configuration.

Limitations

Our obligation under this warranty, with respect to the tank or valve, is limited to furnishing a replacement for, or at our option, repairing any part or parts to our satisfaction that prove defective within the warranty period stated above. Such replacement parts will be delivered to the owner F.O.B. nearest factory, at no cost, excluding freight and local labor charges, if any.

Our obligation under this warranty, with respect to the ScaleSolver media, will be limited to furnishing a replacement for the media within three years from date of original installation. Such replacement media will be delivered to the owner F.O.B. nearest factory, at no cost, excluding freight and local labor charges, if any. Damage to the media due to chlorine, other oxidizers or fouling or any other operation outside of the limits shown under Specifications, is not covered by this warranty.

LifeSource Water Systems, Inc. shall not be liable for freight, handling or labor charges, or consequential damages.

A complete warranty can be found at the following web address:

www.LifeSourceWater.com/ScaleSolver_Warranty.php

Conditions

- ◆ The ScaleSolver must be installed and serviced by an authorized LifeSource Water Systems, Inc. dealer or other entity approved by LifeSource Water.
- ◆ Any component failure must not result from abuse, fire, freezing or other acts of nature, violence, or improper installation.
- ◆ Equipment must be installed and operated in compliance with the local plumbing codes, EPA regulated and LifeSource approved well water.
- ◆ Equipment is limited to use at water pressures not to exceed 100 PSI.
- ◆ Water supply must not exceed 3.0 PPM chlorine. For water supply exceeding 3.0 PPM chlorine, pretreatment is required. A LifeSource water filter is recommended.
- ◆ Water must not contain copper and other metals in excess of EPA guidelines for municipal water.
- ◆ Defective parts are subject to inspection by either LifeSource Water Systems, Inc. or any authorized representative before final commitment of warranty adjustment is made.
- ◆ LifeSource Water, Systems Inc. reserves the right to make changes or substitutions in parts or equipment with material of equal quality or value.

Testing and Regulatory Approvals

The ScaleSolver system is tested and certified to NSA/ANSI Standard 61. PowerTAC tested at Arizona State University using the German DVGW-W512 test protocol. *German Technical and Scientific Association for Gas and Water.