

# PRODUCT AND INSTALLATION MANUAL

## Whole Home Water Filtration Systems

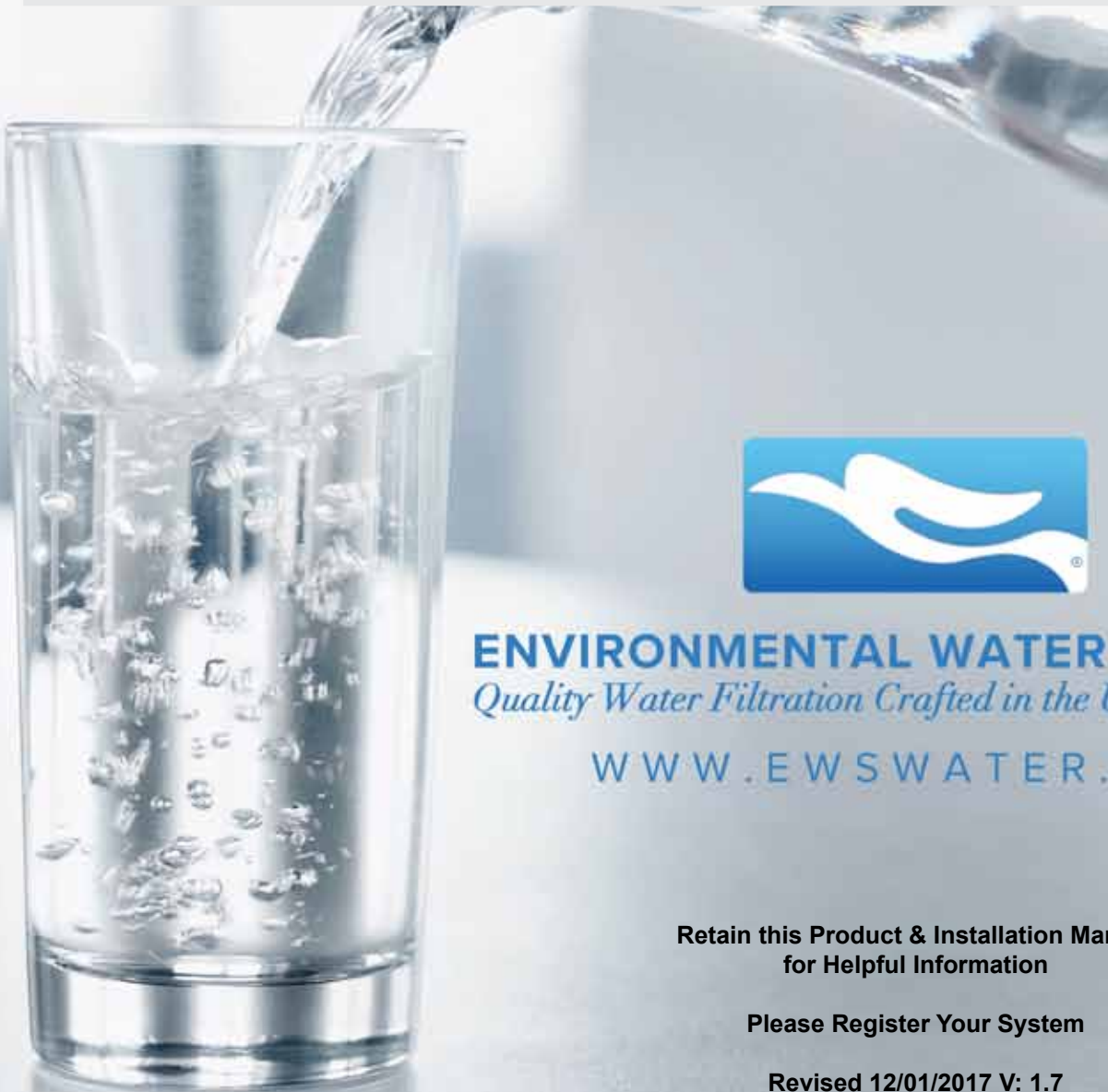
MODEL NUMBERS:

Whole Home Water Filtration & Conditioning Systems:

EWS-SPECTRUM, EWS-CC-1465, EWS-CC-1865, EWS-1035

Whole Home Water Filtration Systems:

CWL-SPECTRUM, CWL-CC-1465, CWL-CC-1865, CWL-1035



**ENVIRONMENTAL WATER SYSTEMS®**  
*Quality Water Filtration Crafted in the USA Since 1987.*

[WWW.EWSWATER.COM](http://WWW.EWSWATER.COM)

**Retain this Product & Installation Manual  
for Helpful Information**

**Please Register Your System**

**Revised 12/01/2017 V: 1.7**



## SIMPLE STEPS FOR A CORRECT INSTALLATION AND A HAPPY CUSTOMER

1.

Set up system and install it on the main water supply coming into the home

Page 7-9

2.

Use corrugated flexible stainless or some other flexible piping to make the plumbing connections

Page 10

3.

Install a proper drain line with an air gap

Page 11

4.

Plug in the transformer into the back of the valve and into a standard outlet and set the time of day

Page 12-13

5.

Open inlet on the bypass slowly to fill the tank and begin the start up procedure (see complete start up procedure)

Page 13-14

6.

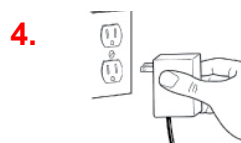
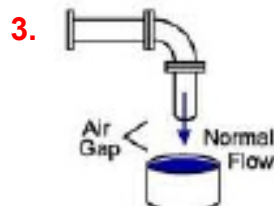
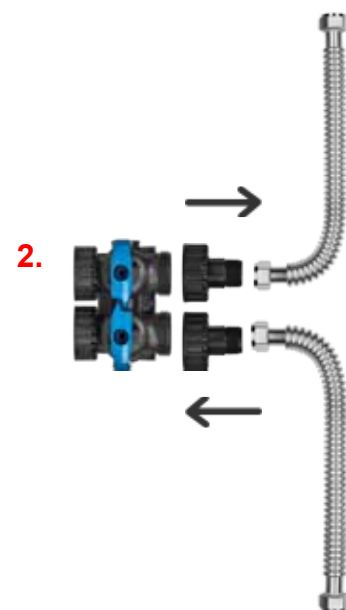
Allow system to start itself up and self clean the filtration media

Page 15

7.

Open outlet on the bypass and put system in service position and flush water throughout the house, run tubs, flush toilets, replace ice and drain water heater if needed.

Page 16



Create Happy Customers  
Avoid Problems and Callbacks



please see the great information available in this service manual

**For Illustration Purposes Only:**

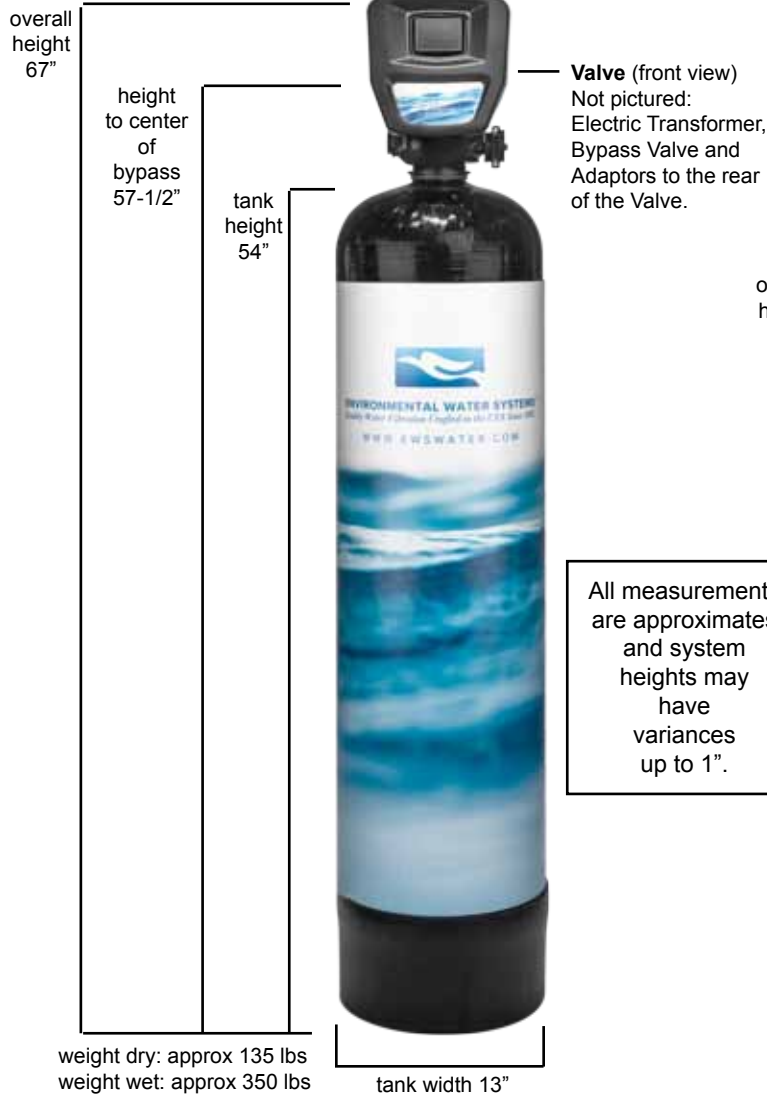
Tank, valve and all contents (as pictured below) for these systems are delivered fully assembled\*.  
Electric transformer, bypass and supplied adaptors - some assembly required.

Pictured:  
EWS-SPECTRUM  
CWL-SPECTRUM

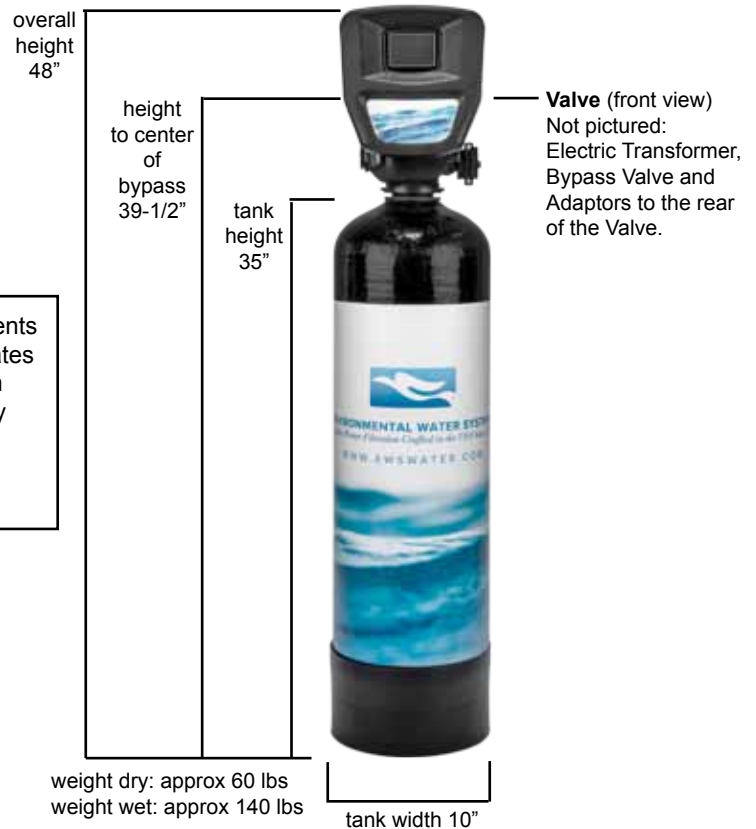
Pictured:  
EWS-1035  
CWL-1035

Specialty systems for condos or townhomes  
based on limited space and water usage

depth: minimum 22" needed for proper installation



depth: minimum 21" needed for proper installation



**\*Not Supplied:**

Due to variations in installations, length and sizing needed for pipe connections to and from the system (see flexible requirement) and drain line are not supplied

**Flexible Connections Required:**

Stainless steel corrugated water connectors, PEX or PVC Sch 40 have a flexible capability that may assist with issues where the rough and finish measurements are slightly off or where pressure surges/spikes or back pressure occur. This flexible connection may prevent tank and valve issues where rigid or hard pipe create problems over time. This is a requirement of the tank manufacturer and is stated on the label affixed to every tank. Perform all plumbing according to state or local codes.



**Drain Line Air Gap Required and Spring Check Highly Recommended:**

Please see information for proper drain line installation in the Product and Installation Guide

For Illustration Purposes Only:  
Corrugated flexible stainless not supplied

**Complete setup, install and startup of these systems can be found in this Product and Installation Guide**

CAUTION: If installing other equipment in addition to this System - Contact customer service for proper order of installation

**For Illustration Purposes Only:**

**On-Site Assembly Required**

Due to shipping weight for all larger systems,  
tank, all tank contents and valve must be assembled on site.  
Please review the simple steps for proper assembly.



Pictured:  
EWS-CC-1465  
CWL-CC-1465

Pictured:  
EWS-CC-1865  
CWL-CC-1865

depth: minimum 24" needed for proper installation



**Valve (front view)**  
Not pictured:  
Electric Transformer,  
Bypass Valve and  
Adaptors to the rear  
of the Valve.

All measurements  
are approximates  
and system  
heights may  
have  
variances  
up to 1".

depth: minimum 28" needed for proper installation



**Valve (front view)**  
Not pictured:  
Electric Transformer,  
Bypass Valve and  
Adaptors to the rear  
of the Valve.

**\*Not Supplied:**

Due to variations in installations, length and sizing needed for pipe connections to and from the system (see flexible requirement) and drain line are not supplied

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Stainless steel corrugated water connectors, PEX or PVC Sch 40 have a flexible capability that may assist with issues where the rough and finish measurements are slightly off or where pressure surges/spikes or back pressure occur. This flexible connection may prevent tank and valve issues where rigid or hard pipe create problems over time. This is a requirement of the tank manufacturer and is stated on the label affixed to every tank. Perform all plumbing according to state or local codes.



**Drain Line Air Gap Required and Spring Check Highly Recommended:**

Please see information for proper drain line installation in the Product and Installation Guide

For Illustration Purposes Only:  
Corrugated flexible stainless not supplied

**Complete setup, install and startup of these systems can be found in this Product and Installation Guide**

**CAUTION:** If installing other equipment in addition to this System - Contact customer service for proper order of installation

## CHECK TO SEE IF YOU HAVE ALL THE BOXES BEFORE ASSEMBLY - BELOW IS THE BOX COUNT FOR EACH SYSTEM

Model #'s EWS-CC-1465 and CWL-CC-1465 should have 6 boxes.

- 1 Box - Tall with 14" x 65" Tank with a Capped 1-1/2" Riser Tube (or ICN (2) Riser Manifold - EWS Series only) inside and Tank Wrap
  - 1 Box (master carton) contains Valve, Transformer, Valve Screen, Bypass Valve, Adaptors, and Service Manual
  - 1 Box contains 50 lbs. underbed (pea gravel material specific to this system for filtration and flow rate) with Black Funnel
  - 3 Boxes containing 1 cubic foot each (35 lbs. each box) of EWS' proprietary Chloramine Reduction Media (CRM)
- 6 Total

Model #'s EWS-CC-1865 and CWL-CC-1865 should have 8 boxes.

- 1 Box - Tall with 18" x 65" Tank with a Capped 1-1/2" Riser Tube (or ICN (3) Riser Manifold - EWS Series only) inside and Tank Wrap
  - 1 Box (master carton) contains Valve, Transformer, Valve Screen, Bypass Valve, Adaptors, and Service Manual
  - 1 Box contains 50 lbs. underbed (pea gravel material specific to this system for filtration and flow rate) with Black Funnel
  - 5 Boxes containing 1 cubic foot each (35 lbs. each box) of EWS' proprietary Chloramine Reduction Media (CRM)
- 8 Total

## simple steps for proper assembly - no tools required

1. Tank - remove from the tall box.

Caution: Riser (or ICN Riser Manifold - EWS Series only) is already in the Tank. Do not remove and be careful not to damage.

Note: You will need to center the riser as you fill the tank with filtration media in Step 5.

2. Tank will be heavy once filled so move it to the installation and main water line connection location beforehand.
3. Keep Riser Capped to cover opening of the clean Riser to prevent filling down the tube. Heavy-duty tape can also be used.
4. Place or adjust Capped Riser Tube in the center of the Tank.

Caution: Riser rests at the bottom and center of Tank. Do not press down. Follow loading instructions - step # 5, A-B.

### 5. Load the Tank in the following order:

- A:** 1<sup>st</sup> - find the Box which contains 50 lbs. of underbed (grey pea gravel) with the Black Funnel and load all materials until box is empty.

Caution: Slowly fill and make small adjustments as needed to make sure Riser Tube is straight up and down and centered in Tank.

- B:** Next - find the next 3 (1465 systems) or 5 (1865 systems) boxes with pre-measured filtration media. This material is black and granular and the boxes weigh 35 lbs. each. Empty all the contents of each box into the Tank.

Caution: Slowly fill and make small adjustments as needed to make sure Riser Tube is straight up and down and centered in Tank.

Caution: Media is dusty. Do not inhale. Work in area with good ventilation and/or take preventative measures.

Note: Top 1/3 of the Tank should be empty. This is called freeboard for the proper backwashing of the system

### 6. Once the Tank is loaded, remove the Cap (or tape) from the top of the Riser Tube.

### 7. Installation of the Valve onto the Tank:

From master carton remove Valve, Transformer, Valve Screen, Bypass Valve, and Adaptors.

- A:** Connect Valve Screen to the bottom of the Valve before connecting Valve to the Tank
- B:** Make sure the top of the Tank and Tank threads are clean of any debris or materials from Steps 1 through 6.
- C:** Center Riser Tube where it fits up and into the center & bottom of the Valve. The Valve Screen at the bottom of the Valve will help center and guide the Riser Tube into the proper position. Back off the installation if resistance occurs and retry until Riser fits up and slips into position without any issues.

Warning: Do not force Riser into the bottom of the Valve. Riser should be straight and centered and should fit snugly into that position. A Riser that is forced to fit, bent or off-center may prevent a proper fit into the valve, crush the lower screen or fail under pressure. The result would be the media material contained in the Tank would enter the plumbing system.

- D:** Install the Valve onto the Tank by turning clockwise. Be careful not to cross-thread Valve onto Tank.

### 8. Please place Tank Wrap around Tank. Tighten across the Tank using the velcro strips.

**CONTINUE TO THE INSTALLATION & FOLLOW THE PROPER SETUP, INSTALLATION AND STARTUP PROCEDURES**



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 For additional installation information and videos, troubleshooting and questions & answers - please visit <a href="http://www.ewswater.com">www.ewswater.com</a> or email the EWS crew @ <a href="mailto:customerservice@ewswater.com">customerservice@ewswater.com</a> or call us @ 702.256.8182 during normal business hours, Monday through Friday from 8am to 4:30pm pacific standard time	

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COMPLIANCES, CALIFORNIA COMPLIANCES, PRODUCT GUIDELINES, FACTORY PREPARATION,  
PRODUCT PERFORMANCE AND GENERAL TERMS AND STANDARD CONDITIONS OF SALE ARE  
AVAILABLE UPON REQUEST OR PUBLISHED ON [WWW.EWSWATER.COM](http://WWW.EWSWATER.COM)



**CAUTION:** Read and follow the information in this manual to minimize the risk of electric shock or personal injury.

**IMPORTANT!** If you are unsure about the installation of your system, contact EWS customer service or consult a professional plumber.

**IMPORTANT!** This system must be installed in compliance with applicable state and local codes, law, and regulations.

## Instructions Before Using

Before beginning installation, read all instructions completely. Then obtain all the materials and tools needed for installation. Handle all components of the system with care. Do not drop, drag or turn components upside down.

**WARNING:** Failure to setup, install and startup the system correctly in any manner voids the warranty.

**CONNECTIONS:** Perform installation according to state and local plumbing codes.

**REQUIRED:** Use of flexible stainless steel connections is required (as code applicable) to connect unit to water supply. Allows flexibility for tank expansion under pressure (see installation section in this manual).

**WARNING:** Use of teflon tape is the only sealant to be used on threaded drain and adaptor connections. Do not use pipe dope or pipe joint compound.

**EXISTING PLUMBING:** Condition of existing plumbing should be free of lime &/or iron buildup. Pipe(s) and/or water heaters should be replaced if any heavy buildup exists. Pre-existing conditions will effect the performance of this system.

**ELECTRICAL:** All Systems in this guide (USA versions) use 12 volt transformer for electrical power. Always use the supplied power cord and transformer. Plug power cord into a standard 110/115/120 volt, grounded and unswitched outlet. If outside, follow code for protected outlet and GFI. Be sure electric outlet and transformer do not come in contact with water.

**CAUTION:** Plumber installed jumper between inlet and outlet connections may be required to maintain the plumbing system ground. Properly ground system to conform with all codes and ordinances.

### INSTALLATION LOCATION:

- Install system in a protected area.
- Always connect the system to the main water supply pipe feeding the entire home before the water heater(s).
- Do not install in direct sunlight. Heat from sun may cause damage. Protect from sun, rain, wind, etc.
- See "Where to Install the System" on page 8 of this manual for complete information.

### WATER TEMPERATURE:

**WARNING:** Any water over 110°F, thermal expansion of any water heater or where any hot or heated water comes back or flows through the system over 110°F at any time voids the warranty. Do not expose system to freezing temperatures which causes equipment damage and voids the warranty.

**PRESSURE:** Minimum inlet water pressure is 20 psi. Maximum inlet water pressure is 75 psi. Use (PRV) pressure reducing valve if necessary to prevent high pressure and problem pressure surges above 75 psi.

**WARNING:** Pressure exceeding, surging or spiking above 75 psi or any negative pressure voids the warranty.



### CAUTION:

- Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection. Well water needs to be properly and completely tested before the specification of any filtration and treatment system(s).
- Test water periodically to verify that the system is performing satisfactorily.

## location and setup

**UNPACKING AND INSPECTION** - Check the system components for damage or missing parts.

### WHERE TO INSTALL THE SYSTEM

- Place system on the main water supply in order to supply filtered water to the entire home.
- Place the system where you want to install the unit. Whether inside or outside, make sure the unit is level and on a firm base.
- A standard grounded and unswitched 110/115/120v electrical outlet is needed to plug in the transformer. If outlet is over 9 feet away use 18 gauge extension cord to connect up to 100 feet away. Do not exceed 100 feet. Do not cut or splice original equipment.
- Do not install the system where it would block access to the water heater, or access to the main water shutoff, water meter, or electrical panels. Always connect the system prior to the water heater(s).
- Install the system in a place where damage is least likely to occur if any unforeseeable issue arises. System should be in an accessible location and be visible in order to visually monitor system and routinely check clock operation and valve controls.

**CAUTION:** Do not install on a soft water loop or bypass of other water lines where the filtered water will not be available for household use. All Whole Home Filtration Systems are designed to filter all the water to the entire home.

**CAUTION:** Installing other equipment in addition to this System? Softeners (if applicable) always go after the filtration system. Any questions? Please contact EWS for proper order of installation.

**NOTE:** Can be connected for outside faucets for plants, lawn, pools, spas, and other features. It is not necessary under normal circumstances for any outside application. All Iron Systems will not harm these other features, however there will be more water usage through the system and may not create any additional benefits for those features due to external environmental issues and porous or natural surfaces or materials.

### DRAIN LOCATION

- Place the system as close as possible to a vented sewer drain with a "P" trap or some other drain location.
- *Highly Recommended:* Install a non-restrictive spring check valve in drain line within the first 2' of the drain port to prevent possible back flow. (see below when a non-restrictive spring check valve is required)

**REQUIRED:** Air gap with proper ventilation is a requirement. Similar to any washing machine, this system must have a minimum of a 1" air gap on the drain to prevent back flow of drain water or gases into the system

**REQUIRED:** Expand drain line to 1" ID and install a non-restrictive spring check valve in drain line within the first 2' of the drain port if drain line exceeds 20' in total length, or drain line flows over 5' above the height of the drain port, or if drain line is being routed outside.

**CAUTION:** Never install drain line smaller than 3/4" in diameter. Never restrict drain line or drain water flow.

- Consider the reuse of drain water as an alternative to simply going down the drain. Unlike salt or resin systems or softeners which have a brine discharge, all Whole Home Water Filtration Systems drain only filtered water in order to self-clean the filter. Water can go back to a pool for make up water or water a yard, trees and plants. You can use this filtered drain water in many ways.

Follow above requirements for proper drain line setup, air gap and the need for a non-restrictive spring check valve. Allow water to completely drain through line and do not allow drain water to sit in line. Do not restrict drain water flow. Do not cross-connect or tie into to other water lines.

### OUTSIDE INSTALLATION

- Install the system where it will not be exposed to direct sunlight or subject to temperatures outside of the limits stated in "Instructions Before Using" on Page 7 in this manual. The system is weather resistant but not weather-proof and it is a requirement to protect the system from outside elements and weather exposure.
- Follow all instructions found on Page 7 in this manual and all information, requirements, cautions and hints stated on this page.
- **Helpful Hint to Protect your System:** If an outside installation is preferable or needed, simply purchase an inexpensive plastic shed at a big box store that can be easily assembled on site and house the system. If applicable, insulation can be applied to reduce heat or cold. If applicable, holes can be made to run pipes, drain line and/or electrical. Any other method you choose is fine as long as the system is protected in a similar manner. Sorry, but nice plants, trees and shrubs are not a protection method.
- Burying the System: If you choose to bury the system for aesthetic reasons, please see the requirements to prevent system damage.

**REQUIRED:** Place system into a heavy-duty, corrugated, solid wall culvert pipe with a minimum diameter size 2" larger than the diameter of the system that is being installed to prevent ground movement which can cause tank to be crushed.

**REQUIRED:** Protect top portion and valve of the system that has been placed into the culvert pipe by following all information in this section.

**Helpful Hint:** A shorter shed, solid covering or a big artificial rock can be used to protect the system from the elements, pets or the kids kicking a soccer ball into it.



## INSTALLATION

1. Turn off gas or electric supply to the water heater(s).
2. Turn off the main water supply.
3. Open a hot and cold faucet to drain house water pipes.

**NOTE:** Keep those hot and cold faucets open until these instructions tell you to close. Keep bypass closed.

4. Move the assembled system into installation position and check that Valve is securely fastened to the Tank.

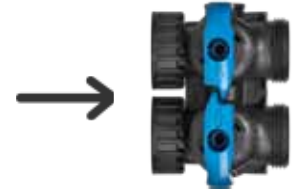
**CAUTION:** Factory assembly of Valve to Tank connection is performed according to specifications. However in transportation, delivery and movement to the installation position this connection may have loosened. It is important to make sure this connection is tight and if necessary hand-tighten only in a clockwise direction to ensure this connection.

**NOTE:** System has a self-leveling base which can compensate for any slight floor pitch. Refer to "Instructions Before Using" on page 7 and "Where To Install The System" on page 8.

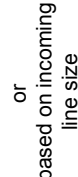
## 5. VALVE PARTS AND FINAL ASSEMBLY:

- a. Locate the Bypass Valve:  
**Connect Bypass to the Valve.**

**NOTE:** Make sure blue levers are facing up and bypass is in the closed position



- b. Locate the 1" or 1-1/2" MNPT Adaptors:  
Select the proper sized Adaptor for your incoming and outgoing water lines  
**Connect the Adaptors to the Bypass.**



**WARNING:**  
Always keep inlet and outlet of bypass closed until instructed to open

**NOTE:** The most common incoming main water line sizes are from 3/4" up to 1-1/4" where the 1" adaptor is a correct application. With an incoming line size of 1-1/2" (1-1/4" based on flow rate needs), select and use the larger 1-1/2" adaptor.

**WARNING:** All connections: Do not use pipe joint compound or pipe dope. Use Teflon tape only on all external pipe threads.

**WARNING:** All connections: Hand tighten only. Do not overtighten. Make sure o-ring and white retainer ring are in place.

**CAUTION:** All connections: Check that all surfaces are clean of any debris before inserting Bypass into the Valve and the Adaptors into the Bypass.

- c. Locate the Electric Transformer:  
**Connect Transformer to the Valve**

**NOTE:** Input into the Valve is just like those used in computer laptops and many electronic devices.

The cord is represented in white for illustration purposes only



input into valve

Locate the input jack on the lower right side or the drain side of the valve. A flashlight will help to find the input. Insert firmly and do not plug the other end into an outlet until instructed to do so towards the end of installation.



### NOTE:

There should be no extra parts or boxes. Other than the adaptors you did not use, please make sure there are no extra parts or boxes lying around. Once filled with water correcting something can be a problem.

**ok we are ready to make the plumbing connections**

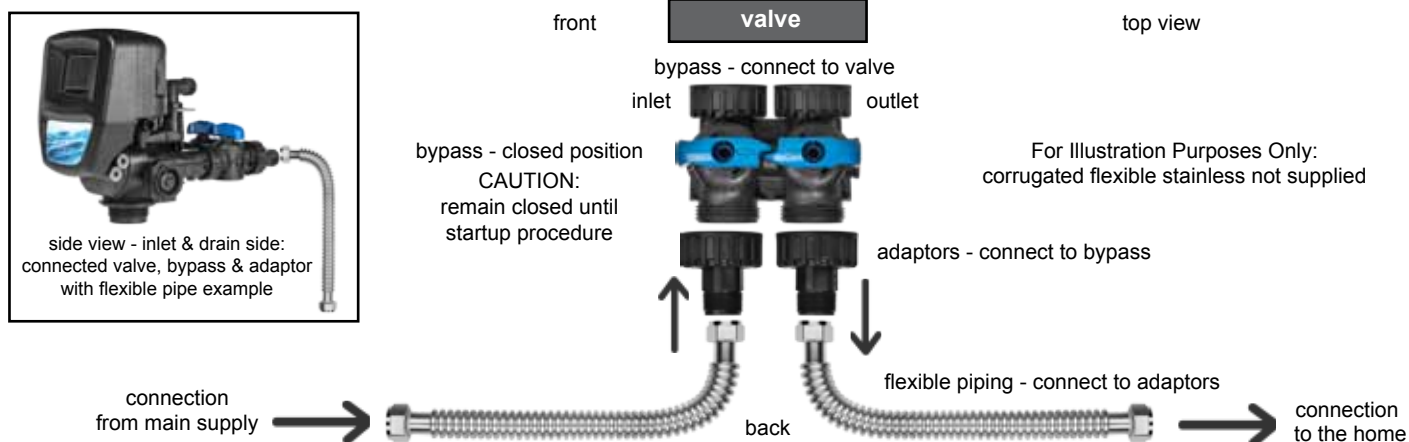
## 6. Locate water line or pipe to be cut and make sure of direction of water flow.

**CAUTION:** Do not cross-connect or plumb backwards. Make sure of the direction of water flow from cut pipe to be connected.

## 7. Plumb Inlet and Outlet Connections to and from the system.

**REQUIRED:** Use stainless steel corrugated flexible water connectors, PEX or PVC Sch 40 unless restricted by local plumbing code.

**WARNING:** Be sure the incoming water supply is connected to the inlet port of the valve.  
Note: the valve and bypass are marked with arrows indicating the proper flow direction.



Stainless steel corrugated flexible water connectors, PEX or PVC Sch 40 have a flexible capability that will assist with the installation where the rough plumbing and finish measurements are slightly off.

**WARNING:** Do not force valve and bypass to meet the plumbing. This will cause stress between tank neck and valve connections which will result in leak issues under pressure.

**WARNING:** Do not use pipe joint compound or pipe dope. Use Teflon tape only on all external pipe threads.

**CAUTION:** Allow for a gentle curve when using flexible connections to avoid a rigid connection. Support inlet and outlet plumbing in some manner (use pipe hangers) to keep the weight off of the valve fittings.

**CAUTION:** An operating and maintained pressure reducing valve (PRV) may be required on the main water line and prior to the system to regulate pressure. If applicable, a check valve on the main supply before the system or a check valve on the outlet side of the the system (water heater will require expansion tank) to prevent backflow and excessive head pressure may be required. Location of system on the lowest or highest floor or where home is located at the bottom or top of a hill may create head pressure or pressure variances.

**WARNING:** Any pressure on the system exceeding, surging or spiking above 75 psi and any negative pressure due to vacuum break voids the warranty.



**WARNING:** If making a soldered copper installation, do all sweat soldering before connecting pipes to the bypass valve, adaptors or drain line. Torch heat will damage plastic parts.  
EWS and tank manufacturer require use of stainless steel corrugated flexible water connectors.

**WARNING:** When turning threaded pipe fittings onto plastic fittings, use care not to cross-thread, strip threads and/or over-tighten.

**WARNING:** Use Teflon tape only on all external pipe threads. Do not use pipe joint compound or pipe dope.

**CAUTION:** Support inlet and outlet plumbing in some manner (use pipe hangers) to keep the weight off of the valve fittings.

A word about the proper installation of a drain line. It appears simple, however if simple mistakes are made it can create many problems associated with this or any system. Please read the instructions below to avoid any issues.

8. Plumb rigid tubing only (PVC recommended if code applicable) directly to the 1" MNPT drain fitting.

**NOTE:** Make sure o-ring and grey clip are in place to secure drain fitting.  
Drain adaptor can swivel.

**WARNING:** Do not use vinyl tubing or any hose type material and clamps for the drain line.

**HINT:** Install a union on the drain line in order make any service or need to disconnect easier in the future.



9. Connect and route the drain line to a vented sewer drain with a "P" trap or some other drain location. Installation with an air gap is required.

**HIGHLY RECOMMENDED:** Install a non-restrictive spring check valve in drain line within the first 2' of the drain port to prevent possible back flow. (see below when a non-restrictive spring check valve is required)

**REQUIRED:** Air gap with proper ventilation is a requirement.  
Similar to any washing machine, this system must have a minimum of a 1" air gap on the drain to prevent back flow of drain water or gases into the system

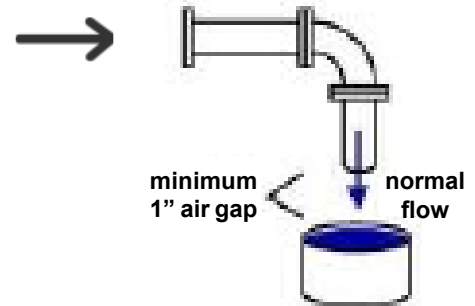
**REQUIRED:** If drain line exceeds 20' in total length, or drain line flows up over 5' above the height of the drain port, or if drain line is being routed outside, expand drain line to 1" ID and install a non-restrictive spring check valve in drain line within the first 2' of the drain port

**CAUTION:** Never install drain line smaller than 3/4" in diameter.  
Never restrict drain line or drain water flow.

**NOTE:** Secure (clamp, tie or wire) installed drain line near drain point to prevent movement and avoid any possible water damage.

**NOTE:** If using a sink, floor drain or any other drain point, an air gap is required and the drain point needs to be capable of draining water away 7 gpm (bath tub) or up to 20 gpm (see drain fitting flow rates for all systems on page 18) for up to 20 minutes every 10 days to avoid water damage.

**CAUTION:** Ventilation, Attics and Crawl Spaces: Air gap and proper air flow and ventilation is necessary to prevent any back up or cross contamination into system. Be aware attics and crawl spaces can restrict air flow. Do not enclose or cover up drain point. It would be best if you can see the water flowing from the drain line into the drain point. (see illustration above)



## INFORMATION FOR AN OUTSIDE DRAIN LINE:

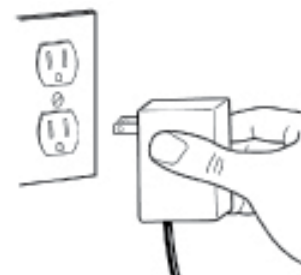
Do not freeze. Do not block or bury water flow. Do not directly connect to irrigation (bubblers, drip line and/or sprinklers). Create a PVC drain line(s) with holes (distribution header). Drain line and surroundings must be pitched or sloped to allow for proper water flow and drainage where drain water never sits in the line or any landscape or rain water is allowed to create standing water at the drain line. Allow enough space (lawn, planter, water storage) to flow and absorb 7 gpm (bath tub) or up to 20 gpm (see drain fitting flow rates or all systems on page 18) for up to 20 minutes every 10 days to avoid water damage.

**REQUIRED FOR AN OUTSIDE INSTALLATION:** A non-restrictive spring check valve in drain line within the first 2' of the drain port to prevent possible back flow.

Backwash is needed for proper filtration and filter life up to 10 years  
Drain water is usable for watering and other uses and does not have to be wasted.

## INSTALL ELECTRICAL CONNECTION

10. Connect electrical power by plugging the transformer into a standard grounded and unswitched 110/115/120v electrical outlet.  
If outlet is over 9 feet away use 18 gauge extension cord to connect up to 100 feet away. Do not exceed 100 feet. Do not cut or splice original equipment.



If you haven't already done so from Page 9, 5c. Plug outlet from transformer into the input on the valve. The input is in a protected area to avoid any damage from water. See input location on the valve on Page 9

**NOTE: POWER CONSUMPTION** Power consumption is that of a radio alarm clock or a doorbell.

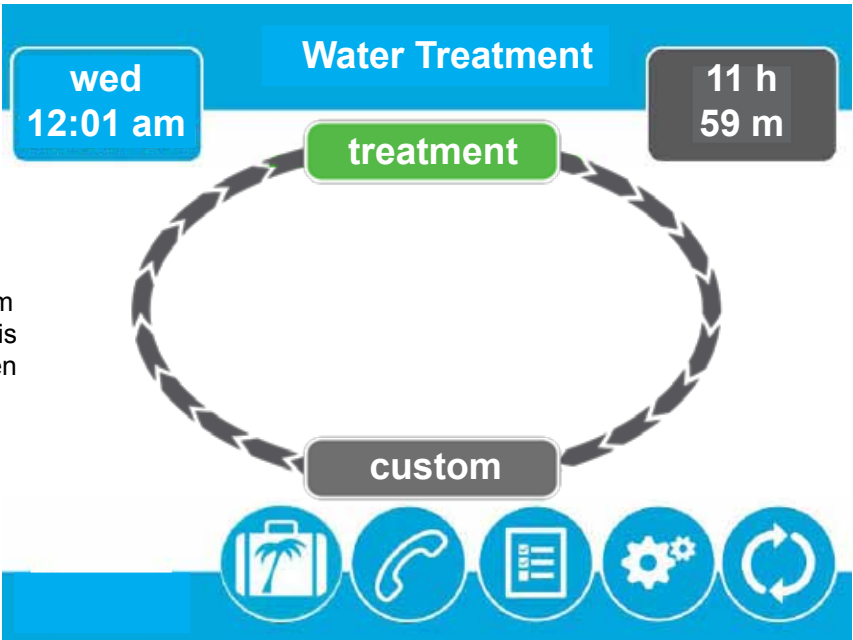
**CAUTION:** If the home's plumbing system is copper (or any metal) then it may be necessary to install a jumper. Install a jumper between the incoming and outgoing pipes before and after the flexible stainless connections to maintain the continuity of the systems' ground. Properly ground system to conform with all codes and ordinances.

## touch screen home page and what you see when the system is on

When system is plugged in the screen will light up and both the upper right and left boxes will be blinking.

- NOTE:** Do not worry this is normal and they will stop blinking once the time is set (left) and the system is run through the start up (right).
- NOTE:** Similar to any smart phone you must be directly in front of the screen to see. Taller units may require a step ladder to see the screen properly.
- Press and hold the screen briefly so the screen reads your touch properly. Just like a new smart phone, it may take a moment to adjust to the screen.

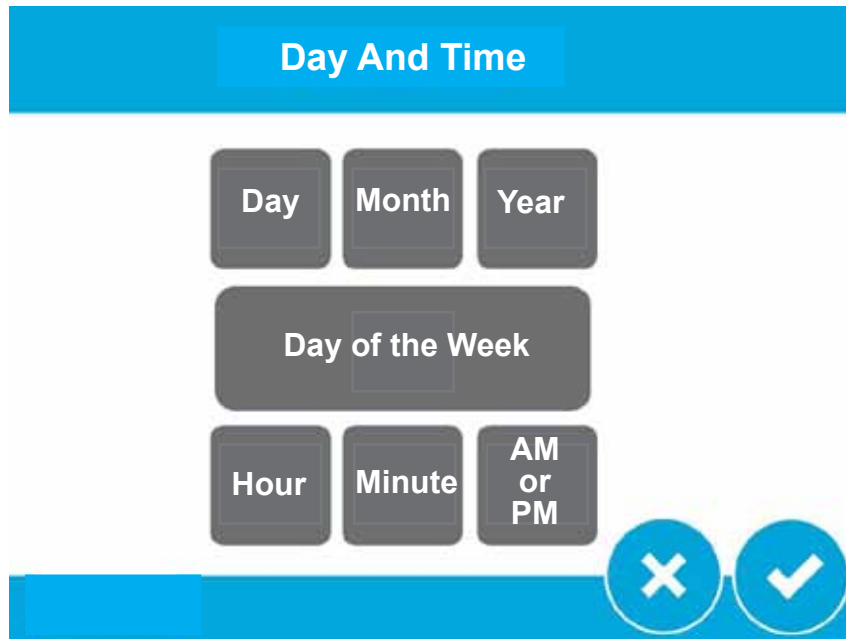
Home Page  
once the system is plugged in this is the 1st screen you will see



- NOTE:**
- Day & Time are the only changes needed.
  - System does not need any additional programming.
  - Please follow the instructions and allow system to run through the pre-programmed start-up and flush.

ok, lets, set the clock

11. Touch the box in the upper left hand corner where a day & time are blinking.  
The Day And Time screen will appear






**NOTE:**

Day & Time are the only changes needed.

System does not need any additional programming.

Please follow the instructions and allow system to run through the pre-programmed start-up and flush.

- |  |  |
|--|--|
| Touch the Day button.  | Using the down  or up  arrows adjust to the correct day |
| Touch the Month button   | Using the arrows adjust to the correct month   |
| Touch the Year button  | Using the arrows adjust to the correct year  |
| Note: Day of the Week will adjust automatically  |  |
| Touch the Hour button  | Using the arrows adjust to the correct hour  |
| Touch the Minute button  | Using the arrows adjust to the correct minute  |
| Touch the AM or PM button  | Using the arrows adjust to the correct am or pm setting  |
| Press the Check Mark in the lower right corner  | and return to the home screen  |

### CLEAR THE PLUMBING LINES AND CONNECTIONS

12. **1** - Keep the inlet and outlet closed to and from the system  
**2** - Turn on main water supply  
**3** - Go to a tub (best) or the nearest faucet, remove aerator and run water through the plumbing system and through your plumbing connections before opening the inlet to the system or beginning the start up procedure  
**4** - Now that lines have been cleared, shut off water to the tub or faucet and follow start up procedures

**CAUTION:**

Debris may be present in the lines from closing and opening the main supply or from plumbing connections made prior the system. We want to prevent any debris from entering the valve and causing damage to the piston, spacers and seals. \*\*

\*\*Debris in the valve can cause a leak to the drain (similar to a leak in a faucet or shower valve where the water does not shut off completely) which can require additional service or the purchase of new parts.

**now it's time to fill the tank and flush the system**



## start up procedure - fill the tank and flush the system

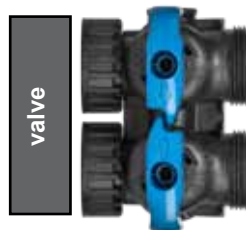
14

### FILL THE TANK - SLOWLY

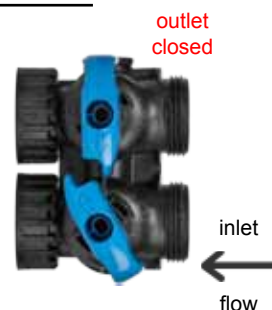
13. Main water supply is open, plumbing lines have been flushed and tub or faucet is closed (Step #12)

Open the inlet slightly on the bypass as shown

**CAUTION:** Open slowly to prevent rapid flow and high initial pressure into the system

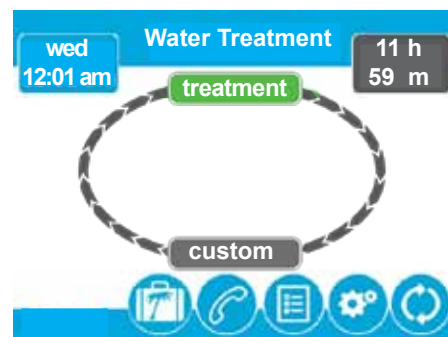


open  
inlet  
slightly



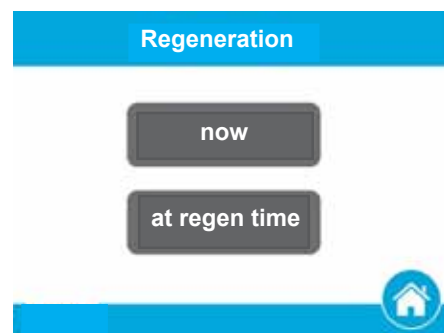
### START UP TO FLUSH THE SYSTEM

14. Press the Cycle button in the lower right corner.



Screen will change

Press the now button

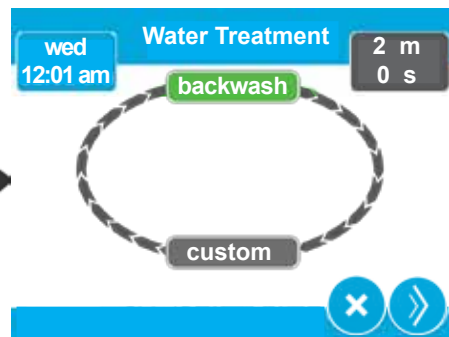


Screen will read backwash in green box

backwash

Time of the cycle (2 minutes) will read in the top right box.

2 m  
0 s



15. When the display in the top right box reads 1 minute

1 m  
0 s

**OPEN THE INLET ON THE BYPASS SLOWLY**  
**inlet open position**

**NOTE:** This cycle allows air to be purged from system while initially filling the tank

Little or no water will be seen coming out of the drain.

**NOTE:** The remainder of the cycles will flush the system.



open inlet only  
during system start up

outlet  
closed

inlet  
open

**system is now flushing on its' own and you are almost done**

Keep the inlet to the bypass open and make sure the outlet is still closed

These are the system start up and self-cleaning cycles and the duration:

<b>backwash</b>	Backwash	2 minutes	purges air in system and begins filling the tank
<b>pause</b>	Pause	10 minutes	fills the tank and saturates the filtration media
<b>rapid rinse</b>	Rapid Rinse	6 minutes	water should begin to flow from drain and prepares the filtration media
<b>pause</b>	Pause	2 minutes	allows valve to adjust to opposite backwash flow
<b>backwash</b>	Backwash	4 minutes	lifts filtration media and flushes dust & fines, grey water should flow from drain
<b>pause</b>	Pause	2 minutes	allows the filtration media to settle prior to another backwash
<b>backwash</b>	Backwash	3 minutes	lifts filtration media and flushes fines, grey water should flow from drain
<b>pause</b>	Pause	2 minutes	allows the filtration media to settle prior to another backwash
<b>backwash</b>	Backwash	2 minutes	lifts filtration media and flushes fines, grey water should flow from drain
<b>pause</b>	Pause	2 minutes	allows the filtration media to settle prior to last cycle
<b>rapid rinse</b>	Rapid Rinse	6 minutes	check this last cycle that drain water is running clear, see #16

## WATER CONSERVATION NOTE:

Once system has gone through this proper start up, the setting can be adjusted for a water conservation setting which can reduce the total water usage from 23 minutes (for a proper start-up) down to 13 minutes. The setting is dependant on local water conditions and usage.

Call or email EWS customer service or visit [www.ewswater.com](http://www.ewswater.com) and view the touch screen water conservation video.

16. Observe the drain water during the last 6 minute Rapid Rinse cycle.

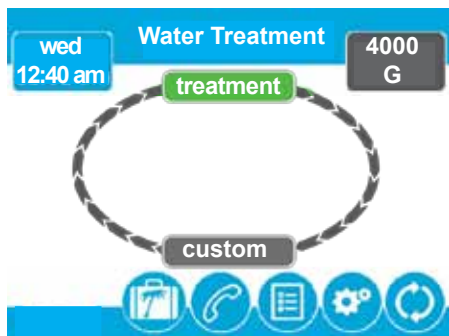
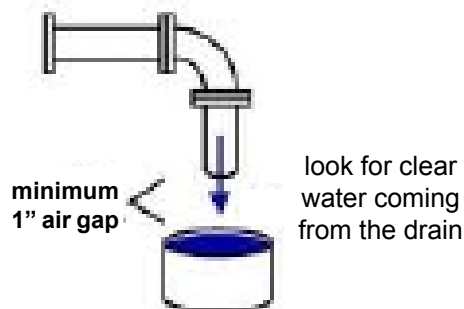
**If the water is running clear:** Go to Page 16, Step #17

**If the water remains grey:** Go back to Page 14, Step #14

**CAUTION:** If the drain water remains grey,



Press the Cycle button and repeat the flushing sequence until the water from the drain line runs clear.



System will now go back to the Home Page and is ready for service

NOTE: Upper right box will read 4000 G.

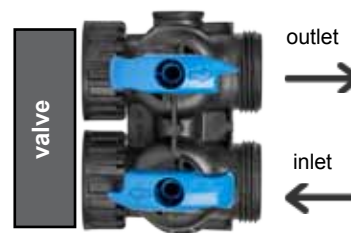
The valve is metered and the system will self clean when 4,000 gallons are used or on the 10th day at midnight, which ever comes first.

**time to put the system in service and check your work**

## 17. OPEN OUTLET ON THE BYPASS

### TO PUT THE SYSTEM IN FINAL SERVICE POSITION

open inlet & outlet  
system is in service position



## 18. System is ready for use.

Turn on gas or electric supply to the water heater(s).

**To ready home for filtered water, please flush all the water throughout the home.**

- open as many hot and cold faucets through out the home as possible,
- remove the aerators or any restriction at the end of the faucets,
- run tubs,
- flush toilets,
- dispose of any ice previously made
- run water throughout home for 5 minutes.



Create Happy Customers

## 19. Final Checklist

- check all connections,
- pressure not to exceed 75 psi,
- make sure system was not installed backwards
- using the proper flexible piping
- make sure drain is correctly installed and drain water was running clear.



Avoid Problems and Callbacks

### NOTE: CLOUDY WATER

If water appears cloudy, allow to run for several more minutes until all air is expelled or until clear.

### NOTE: PRE-EXISTING CONDITIONS, OLDER HOMES, HEAVY SEDIMENT

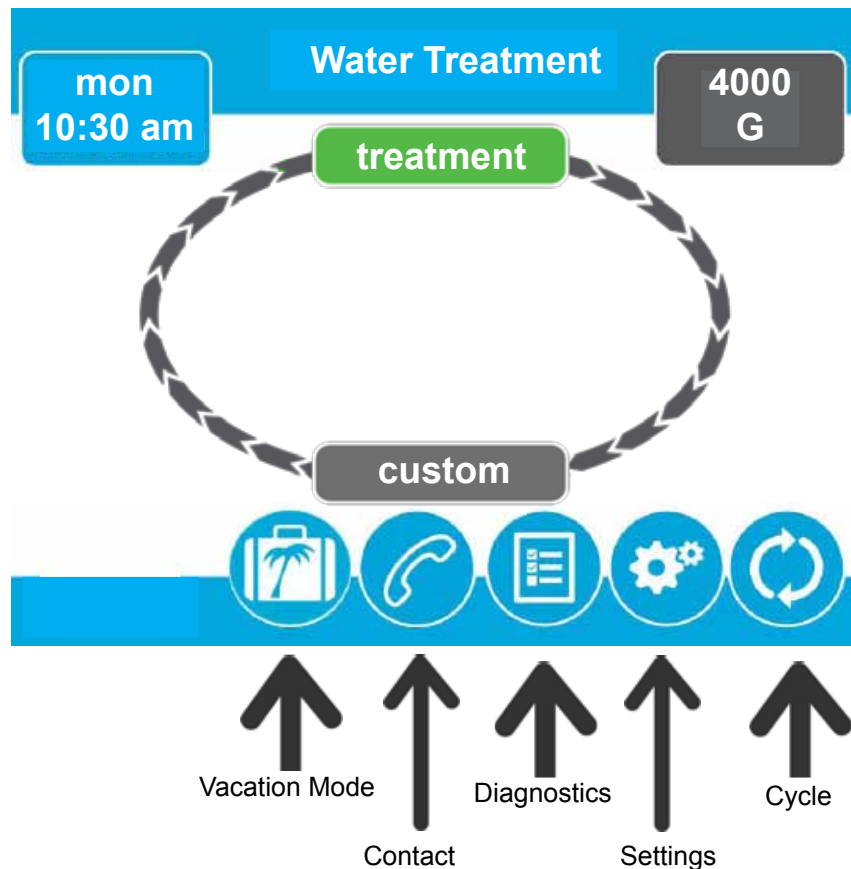
If home is a year or more old, it is highly recommended that all water heaters or tankless on-demand heaters be flushed and that all dishwashers, washers and any other water appliances be cleaned of any existing residue.

Please review Page 7 "Instructions Before Using" for existing plumbing and pre-existing conditions that will effect the performance of this system.

### WARNING:



Failure to follow these procedures can result in debris in the system, the system's valve, the home, and/or filtration media being expelled. Expelled media will cause immediate short and long term issues with the system's valve, and will enter pipes and the fixtures or appliances within the home.



**Vacation Mode:**

Press the button and Vacation Mode will be in the upper right box. The system will not backwash until the button is pressed again and the upper right box returns to the normal setting.

**Note:**

Press the button upon your return. The upper right screen will return to 4000 G and backwash when you use 4,000 gallons of water or on the 10th day whichever comes first.

**Recommended:**

Upon return from vacation, press Recycle button to begin a backwash to refresh the filter for you.

**Contact:** Press the button and a new screen appears with EWS customer service contact information.

**Diagnostics:** Press the button and new screen appears with your current flow rate, a peak flow rate the system has encountered and the amount of gallons that have passed through the system.  
Note: Flow rate may determine if a leak is occurring in your home.

**Settings:** Press the button and a new screen appears indicating the default backwash of every 10 days, the time of that backwash is 12:00 am/midnight. The last line is water hardness that is non-applicable to this filter system. You can adjust the number of days between backwashes and what time you want that backwash to occur as long as there is no conflict with any other system(s).

**Cycle:** Press the button and a new screen appears that allows you to manually backwash your system.

There are many features that can be accessed to save water, determine water flow, longevity of the filter and change times. Please contact EWS Customer Service for more information.



**Home:** Press and return to the Home screen



**Advance:** Press and advance to the next cycle



**X :** Press and go back to the previous screen



**Check:** Press and Ok the setting or change and moves to the next screen

**Adaptor 1":** Most Common  
Direct threaded attachment to the bypass for 3/4" up to 1-1/4" main water lines



**Adaptor 1-1/2":**  
Direct threaded attachment to the bypass for 1-1/4" up to 1-1/2" lines requiring greater flow rates



**Bypass:**  
Direct threaded attachment to the back of the valve. No tools or plumber installed bypass needed. Shown in closed position



Valve - Outlet Side

Valve - Inlet Side



**Drain Adaptor (DLFC)**



**Drain Flow Rates:**  
Spectrum (most common) - 7gpm  
1035 - 4gpm,  
1465 - 9gpm,  
1865 - 20gpm



**Drain (grey) Clip:**  
Secures drain adaptor to valve drain port

Note: drain line to properly air gapped location is not supplied by EWS

**Front View;  
Touch Screen Valve**

2.5" valve base: all 1035 and Spectrum systems  
4" valve base: all 1465 and 1865 systems



**Riser Distribution ORing  
Valve Tank ORing  
Upper Valve Screen**



**Electric:**

12 volt plug & play transformer with 9' cord  
Note: Valve consumes the power equal to a doorbell

Below represents a fully assembled system from a front view.

Sizes will vary based on model

**Grey Adaptor Nut and ORing:  
(EWS-SPECTRUM ONLY)**



Grey 4" to 2-1/2" Adaptor Nut and Brown ORing (EWS Series Only) to accommodate ICN Riser maintenance up to every 10 years



**Tank:**

13" x 54"  
(pictured, most common used in all Spectrum systems) Food & beverage grade, non-corrosive, one-piece, blow-molded polyethylene interior with structured fiberglass outer laminate.

2.5" opening:  
all 1035 and CWL-Spectrum systems

4" opening:  
all EWS-Spectrum, and all 1465 and 1865 systems

Note - Freeboard:  
Top 1/3 of tank is empty for proper backwash and lift of filtration media for the automatic self cleaning of the system

**Filtration:**

EWS proprietary, high grade, 1200 iodine rated, granular activated carbon (GAC). No binders, fillers or metal resins

1035 systems: 1.0 cu.ft.  
Spectrum systems: 2.5 cu.ft.



Additionally processed for advanced filtration due to chloramine (chlorine & ammonia)

1465 systems: 3.0 cu.ft.  
1865 systems: 5.0 cu.ft.



**self leveling base**

**Underbed:**

Specific pea gravel materials for proper water and backwash flow and distribution

20 lbs. for all 1035 systems  
30 lbs. for all Spectrum systems  
50 lbs. for all 1465 and 1865 systems



**Tank Wrap:**

eco-cover for tank with contact information and information important for the proper application of the system.



**Riser:  
(CWL SERIES ONLY)**  
Food & beverage rated pvc water distribution riser with lower screen

**ICN Riser & Manifold:  
(EWS SERIES ONLY)**

Food & beverage rated pvc water distribution riser with lower screen and ICN Manifold for Conditioning.

EWS-1035 1 ICN,  
EWS-Spectrum & EWS-CC-1465 2 ICN's  
EWS-CC-1865 3 ICN's

Not Shown: optional stainless steel cover & plastic dome for 1354 sized tanks only.

CAUTION: If installing other equipment in addition to this System - Contact customer service for proper order of installation



## Notification:

This warranty is referenced by EWS, Inc. in all literature, addressed in General Terms and Standard Conditions of Sale, and is published in its entirety in all EWS, Inc. product manuals, websites, and in all service guides supplied with all product.

## Limited Warranty:

EWS, Inc., a Nevada corporation, hereby warrants all products to the original consumer purchaser to be free from defects in material and workmanship as stated in the following paragraphs:

- All residential point of use: countertop filtration, in-line filtration, undercounter drinking water filtration, shower filtration, residential reverse osmosis, and canister and filter cartridge point of entry pre-sediment and/or filtration units or systems for one year from date of purchase.
- All residential point of entry: pH decreasing and softener (resin and ion-exchange) systems, Environmental (EWS) Water Systems, Iron Removal units, CWL whole-home (filtration media) systems, pH increasing reagent (sacrificial media) units for 10 years on the tank and riser, 10 years on the ICN conditioner(s) (if applicable) and 5 years on the valve body and electronics from date of purchase.
- All commercial systems: Dependent on specification and application, please consult with EWS, Inc. upon specification.
- All filtration medias, resins, cartridges, uv lamps, and/or membranes are not covered by any warranty. Filter media, resin, cartridge, uv lamp, and/or membrane replacement or maintenance schedule will vary and must be replaced, as necessary, as determined by usage and local water conditions.
- Any wear and tear parts or any parts damaged in shipping, installation or application are not covered under warranty.

Product performance may vary based on local water conditions, proper product specification and application, proper plumbing application, setup, installation, startup, maintenance and/or usage. To ensure proper operation, follow all setup, installation, start-up and maintenance procedures as detailed in all service guides.

Not intended for use where water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after unit(s). The contaminants or other substances removed or reduced by these and any other water filtration or treatment devices are not necessarily in your water. To confirm the presence of any primary and secondary contaminants, have your water supply completely analyzed by an independent and approved facility or if applicable, contact your local water utility for information.

**Aesthetic, non-health related, or constituents without set federal standards may be part of water testing but are insufficient to determine proper application of any water filtration or treatment device.**

EWS, Inc. will replace, free of charge, during the warranty period, any part which proves defective in material and/or workmanship under proper product and plumbing specification and application, normal and proper installation, use, service and proper care as published in detail in all service guides included with product. Wear and tear parts such as pistons, spacers & seals are not covered under warranty. Labor charges are excluded from any warranty service or repair and are not the responsibility of EWS, Inc. Shipping charges may apply to delivered replacement parts or materials. Charges may also apply for the cost of any replacement media, resin, cartridges, uv lamp and/or membrane from any warranty service or repair. Information can be obtained at any time through a local dealer, distributor, representative or direct from EWS, Inc. and/or on-line at: [www.ewswater.com](http://www.ewswater.com). Replacement parts can be obtained from your local dealer, distributor, online or contractor.

This warranty is the exclusive warranty granted by EWS, Inc. and is in lieu of all other warranties of merchantability and fitness for a particular purpose and is further limited to defective parts replacement only. Labor charges and/or damage incurred in setup, installation, and startup, or repair, or replacement, as well as, incidental and consequential damages connected therewith, are excluded, and are not the responsibility of, and will not be paid by EWS, Inc.

This warranty is void for any damages due to improper product and/or plumbing specification and/or application, misuse, abuse, neglect, accident, acts of nature, action of any military or civil authorities, improper handling and transportation, or improper setup, installation, and/or startup, or any violation of instructions furnished by EWS, Inc., or any replacement parts other than genuine parts or replacements supplied by EWS, Inc.

This warranty is not a warranty of merchantability, fitness, taste, aesthetics, and/or performance that may be subject to improper product and/or plumbing specification and/or application, misuse, abuse, neglect, accident, acts of nature, action of any military or civil authorities, improper handling and transportation, or improper setup, installation, and/or startup, or any violation of instructions furnished by EWS, Inc.

**This warranty is not a warranty of merchantability, fitness, taste, aesthetics, and/or performance that may be personal and of subjective opinion and that does not relate to the performance of any system.**

## Warranty Information and the Purchaser's Responsibility

Keep a record of the purchase receipt and/or installation receipt. Purchaser is required fill out warranty registration form(s) on applicable product(s) and register all product by either online @ [www.ewswater.com](http://www.ewswater.com), telephone, postal delivery, fax, e-mail (either [register@ewswater.com](mailto:register@ewswater.com) or information provided to [customerservice@ewswater.com](mailto:customerservice@ewswater.com)). **Failure to do so voids the warranty unless restricted by state regulations.**

Privacy: EWS, Inc. does not sell, show or make available any information on any consumer in our database. This database is to ensure, if needed, proper warranty service, and good customer service for years to come. Please see our privacy policy published in our website at [www.ewswater.com](http://www.ewswater.com).

## Know Your Water:

• If on a municipal system, large or small, it is your right as a consumer to have access to the most recent test results and to expect adherence to federal guidelines, as well as any state or local requirements. Any problems should be reported to the appropriate agencies. Please acquire those municipal test results to become an informed consumer.

• If on an individual well, have your water completely and independently tested. Local code may require a simple test for coliform bacteria to approve a well, however you may be unaware of potential problems for you and/or your home. A local water salesman is looking to close a sale and is going to test for hardness minerals and a few simple and obvious issues, which may or may not be contamination problems. Their solution is almost always the same and yet may provide no resolution to any true problems. Obtain our "Guide for the Private Well Owner" on our website; [www.ewswater.com](http://www.ewswater.com). Review our section on well water testing and applications in our complete catalog with your local distributor, dealer, or our representative or visit our website.

## • WARNING:

Some restrictions apply to the use of softeners. Contact your local municipal water district or Gov't Agency. Brine discharge is already restricted on, or may be a problem for, septic applications and waste water treatment facilities. Since some states have already restricted softeners to metered valves to prevent excessive brine discharge, EWS, Inc. only provides metered valving in its line of softeners.

Restrictions or an outright ban may also apply to hot-side only, salt-exchange tanks or services. Local water dealers and other organizations do not inform consumers of these issues and believe these rules are unenforceable. The consumer is ultimately responsible.

Softeners may also provide warranty issues with pools and spas, certain other products and finishes. Softened water should not be used for drinking, cooking, pets or plants and is usually bypassed or "looped away" from the cold side of the kitchen sink. Reverse osmosis, which also has its drawbacks and issues with other products and materials, may be used to remove the salt from the water that the softener put in at the kitchen sink, yet may be misapplied for the actual local water conditions.

Any problems of water quality, or the fitness of any EWS, Inc. product that is associated with any mechanical, construction, application, installation, and/or environmental issue(s) (ie: flow rates, line pressure, piping materials, broken supply lines, changing water conditions; well or municipal water quality, et. al.), known or unknown, of the home or facility will not be considered by EWS, Inc. until such issue(s) have been resolved.

Responsibility for the proper product and/or plumbing specification, application and/or installation of any device manufactured by EWS, Inc. lies with the consumer, their builder contractor, plumbing sub-contractor and any other installer of choice. Items do not specify and/or install themselves. EWS, Inc. has provided many sources to acquire information on the proper application of systems and their installation prior to any purchase. EWS, Inc. manufactures a complete product line of point of use water filtration systems and point of entry filtration, softening and/or conditioning systems and/or appliances.

EWS, Inc. and the distributors of EWS, Inc. will stand behind the warranties of materials and workmanship. However, EWS, Inc. and the distributors of EWS, Inc. and the Environmental Water Systems Product Line do not bear any responsibility for improper applications of product and/or improper installation. It is for this reason that EWS, Inc. provides complete information on all product for your understanding, specification, application and selection, and proper plumbing application and installation.

To obtain warranty service support, contact your local dealer or contractor from whom you obtained the product or contact EWS, Inc., Customer Service, via phone, fax, or email.

The EWS, Inc./Environmental Water System Product available through:

Authorized Kitchen & Bath Showrooms, Appliance Showrooms, Building & Plumbing Wholesale Supply Locations and their building, plumbing, HVAC and service contractors, and Authorized Online Distributors.

**EWS is a Proud Contributor and Sponsor of Organizations Dedicated to Improving Health, Well-Being and the Environment**

- Heart • Lung & Respiratory • Allergy & Asthma • Dermatology & Skin • Digestive: Crohn's & Colitis •
- Oceans • Inland Water Ways • Wetlands • Forestry • Soil • Air •



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[WWW.EWSWATER.COM](http://WWW.EWSWATER.COM)

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