



EverGreen Air Scour Filter Manual



INSTALLATION, OPERATING AND START-UP MANUAL

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Air Scour (ASC) Filter Check List and Flushing Instructions

1. ASC Filters should not be used on water that has possible Iron Bacteria or SRB without Ozone Option.
2. Filter media should be wetted and soak for 4 hours before start-up.
3. All sequestering agents including polyphosphates and meta-phosphates should be added after the filter System.
4. For pH <7.0, it is recommended that the iron filter be followed by a water softener even if the water is <3 grains per gallon. In hard water, a water softener should always follow an iron filter and the softener system should include a resin cleaner device.
5. The unit must be backwashed at its specified flow rate at minimum 30psi to achieve bed expansion for effective removal of precipitates and suspended solids.
6. The start-up backwash and rinse prior to new service installation is critical for clearing media of color and fines. We recommend 5 bed volumes of backwash followed by 5 bed volumes of fast rinse. This timing is explained in Schedule B.
7. The backwash frequency shall be every 12 to 24 hours for **continuous operating systems**. If the unit is operated intermittently, backwash per recommendations in Schedule A.

Schedule A.

1 to 3 ppm Fe (Iron)

Maximum flow rate: 7.0 US GPM/Ft²

Media backwash frequency: Every Three Days

4 to 6 ppm Fe (Iron)

Maximum flow rate: 5 US GPM/Ft²

Media backwash frequency: Every Two Days

7 to 9 ppm Fe (Iron)

Maximum flow rate: 3.0 US GPM/Ft²

Media backwash frequency: Daily

Schedule B.

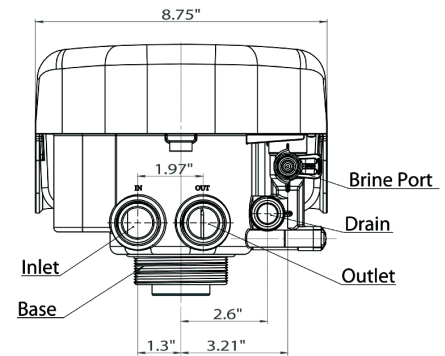
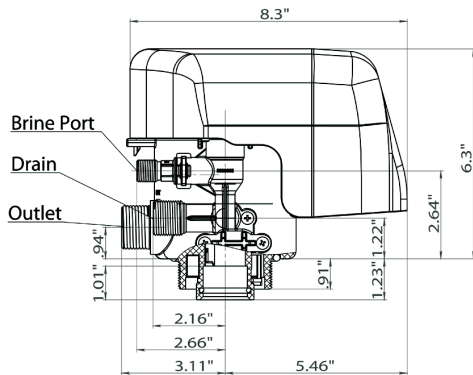
One cubic foot: Backwash is 8 minutes and fast rinse is 6 minutes.

One and one-half cubic feet: Backwash is 10 minutes and fast rinse is 8 minutes.

Two cubic feet: Backwash is 12 minutes and fast rinse is 10 minutes.

Any size in the presence of iron: Backwash 15 minutes and fast rinse 12 minutes

Water Filtration for the Next Generation



EverGreen Air Scour System Specifications

Model*	Resin - Cubic Feet	Overall Height Inches	Diameter Inches	Flow Rate Gallons Per Minute ₁	Peak Flow Rate Intermittent	Gallons Per Regeneration < 3 PPM ₂	Gallons Per Regeneration > 3 PPM ₂
FSB-1054-ASC	1	60.9	10	3.5	5.3	750	500
FSB-1252-ASC	1.5	59.0	12	5.5	8.3	1,000	600
FLB-1354-ASC	2	61.4	13	6.0	9.0	1,250	800
FLN-1465-ASC	3	72.2	14	7.0	10.5	1,500	1,000

* Available in Catalytic Collection, Birm/Greensand Plus, Cat Carbon/Cat Carbon OZ, Clino Zeolite 1 - Continuous Flow Rate at 7 gpm/square foot; Intermittent Peak is 50% greater than continuous
 2 - System Through-put is Based on Total Iron \geq 5 ppm

Electrical / Operational Specifications

Control Valve		Working Conditions	
Transformer Input	120VAC - 60Hz	Water Pressure	20 - 120 PSI
Transformer Output	12VDC - 2A	Water Temperature	35°F - 125°F
Valve Wattage	24W	Iron Level ₄	1 to 5 PPM Ferrous

4 - For Ferric Iron and Ferrous Iron Over 5 PPM, Contact PWT Technical Support

Control Valve Parameters

Inlet	Outlet	Drain ₅	Air Line	Base	Riser Tube	Hard Water Bybass
1"	1"	1/2" Barb	3/8"	2.5" - 8NPSM	1-1/4" (32MM)	Yes - During Regeneration

5 - Drain Connection Also 3/4" MNPT

Additional Specifications

Valve Material	Tank Material	Meter Accuracy	Clock
Noryl® Plastics	FRP	\pm 5%	12 Hour - with Battery Back-up

Primary Applications

Recommended for commercial and residential softening or demineralization water treatment systems.

- Softening System
- Iron Removal System
- Ion Exchange Equipment
- Boiler Softening Water Treatment
- RO Pre-treatment

Product Characteristics


- **Mechanical Components**

The control uses internal ceramic discs which are corrosion and abrasion resistant to form a hermetic seal. Rotation of the upper disc aligns to the corresponding lower disc ports for Service, Stage A1-A3, Air Scour, and Stage B modes.

- **365 Day Usage Memory**


Manual / Delayed Regeneration

-
-

Pressing  at any time results in an immediate manual regeneration.



Pressing and holding  for 3 seconds, when system is locked, results in a delayed regeneration at the preselected time.

- **Extended Power Outage Indicator**

If outage exceeds 3 days, the time of day indicator “” will flash 12:12. The current time of day needs to be re-set. All other set parameters remain stored in memory. The valve will resume to operate from the point of the power outage.

- **Three Regeneration Sequences**

- **Lockout Function**

Keypad will lock after 5 minutes without use. To access the parameter changes press and hold  and  simultaneously for 3 seconds to unlock.

- **LCD Display Screen**

- **Advanced Valve and External Device Connections**

Interlock and Alternate Interlock

Remote Handling


Solenoid Valve

- **7 Regeneration Mode Options with Adjustable Cycle Times**

- **Maximum Day Regeneration Interval**

When the valve reaches the maximum programmed service days, without reaching the set service capacity, it will trigger a regeneration at the pre-programmed time of day. Regeneration(s) reset both the maximum day regeneration value and the service capacity value.

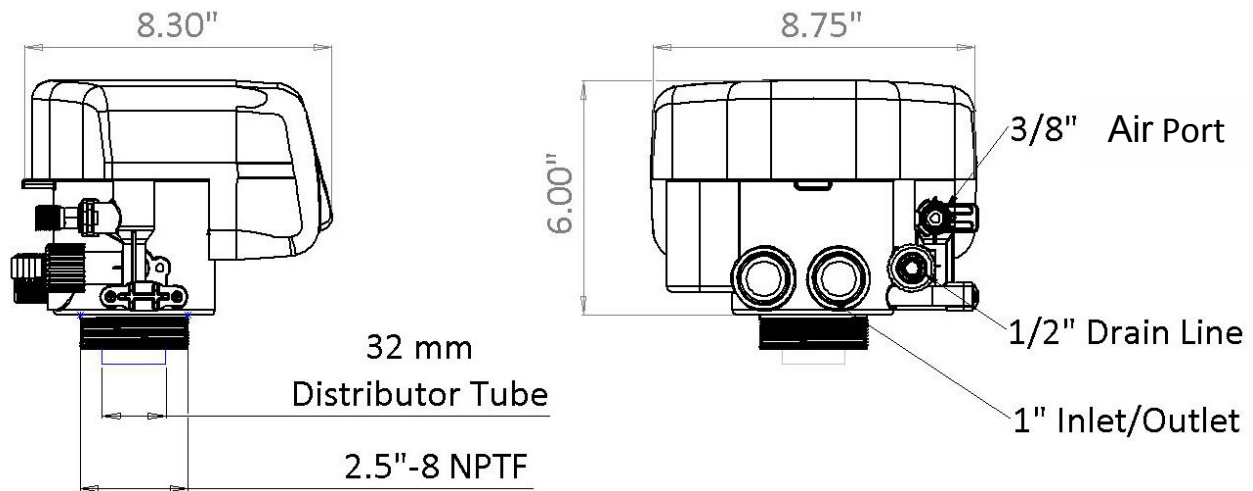
- **One Button to Change the Current Time**

Pressing and holding the  button for 3 seconds, when system is locked, allows the current time of day to be adjusted.

- **Service Alarm**

When the service alarm feature counts-down and reaches set point, (Selectable 30 day min to 900 day max in 30 day increments) the alarm will activate at 8pm. The alarm will sound for 2 minutes and then shut off automatically. To silence alarm within the 2 minute period, press any button. A service call message will then appear on the screen as a signal for the homeowner to contact a water treatment professional for routine service. To eliminate this message from the screen, unlock the valve programming by pressing the UP and DOWN arrows simultaneously until the padlock in the upper left corner of the screen disappears (approximately 3 seconds). Next, enter the programming menu by pressing the MENU/CONFIRM button once and then pressing the BACK/REGENERATION button once. The system will then go back to normal status and the operational days will re-start new count-down. Note: The system will operate normally when it is displaying the service alarm message.

Product Dimensions and Specifications



Model	Length(max)	Width(max)	Height (max)	Regeneration Mode
PWT - ASC	8.3"	8.75"	7.5"	Air Scour
The valve dimensions are for reference only.				

Connect Port Dimensions							
Product Model	Inlet Port	Outlet Port	Drain Port	Air Port	Base	Riser Pipe	Hard Water Bypass
EverGreen -ASC	1" NPT	1" NPT	3/4" NPT	3/8"	2.5" 8NPSM	32 mm	Yes
Main Technical Parameters							
Water Capacity	See Performance Data Sheet						
Power Input	100-240VAC 50/60Hz						
Power Output	12VDC @ 2A						
ASC Regeneration Cycles	Service → Backwash → Stage A1 → Air Scour → Stage A2 → Air Scour → Stage A3 → Stage B						
Regeneration Mode	A-01 Meter Delay: Regeneration happens when the capacity reaches zero and the preset time of regeneration is reached.						

Pre-Installation Check List

Before installation, read through this manual thoroughly. Then obtain all materials and tools needed for installation.

This system will operate at maximum efficiency when the following conditions are considered.

Required PWT ASC Operation Conditions:		
Working Conditions	Working pressure	20psi - 120psi
	Water temperature	35 °F - 125 °F
Working Environment	Environment temperature	35 °F - 125 °F
	Relative humidity	≤95%
	Power source	100 - 240VAC 50/60Hz
Inlet Water Quality	Turbidity	2FTU
	Ozone	0.0 mg/l
	Chlorine	0.0 mg/l
	Iron ²⁺ / Iron ³⁺	5.0 mg/l / 0.30 mg/l

- All plumbing and electrical work should be performed by an accredited professional to ensure all federal, state, local and municipal regulations are met.
- Do not use the system with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
- Do not use the air tube, injector body, or other connectors on the PWT-ASC valve as a handle to carry the system.
- Ensure there is no ozone or other oxidizers injected prior to this system.
- When there is moderate to high turbidity, a filter should be installed before the water softening system on the inlet side.
- If the water pressure exceeds 120psi, a pressure reducing valve must be installed before the water inlet. If the water pressure exceeds 80 psi, installing a pressure reducing valve before the water inlet is highly recommended. If the water pressure is under 20 psi, a booster pump must be installed before the water inlet.

EverGreen equipment, like all modern electronic devices, can be damaged by electrical surges or brown outs. Every effort has been taken to harden the circuits, by design, to protect against such events. These precautions, or even additional surge protection, are not 100% effective. Therefore, equipment damage caused by abnormal electrical events is not covered by warranty.

*****Failure to use this product within the described conditions may void the warranty*****

Installation

● Installation Notice

- Before installation, read through this manual thoroughly and obtain all materials and tools needed for installation.
- All plumbing and electrical work should be performed by an accredited professional to ensure all federal, state, local and municipal guidelines are met.

● Unit Location

- The filter or softener should be located close to a floor drain away from direct sunlight and any heat sources.
- Protect equipment from direct sunlight and precipitation exposure.
- Install equipment in a location safe from unauthorized access or vandalism.
- Ensure that the unit is installed with enough space for operation and maintenance.
- The installation surface should be clean and level.
- Install the unit in an environment which minimizes consumer risk of loss in the event of malfunction.
- Hankscraft offers many different products for many different applications, for both indoor and outdoor environments. If you are not 100% sure the equipment purchased is suitable for the installation application or environment, please check with a Hankscraft representative, or your local equipment provider, to ensure the proper equipment is selected. Equipment installed in inappropriate applications or environments are not covered by warranty.

● Plumbing and Mechanical Setup

Note:

- 1) If the water outlet or water tank is installed higher than control valve, or parallel interlock system with multi-outlets, a liquid level controller must be installed in the brine tank. If not, the water outlet or source tank will flow backwards into brine tank during backwashes.
- 2) If making a soldered copper installation, all sweat soldering should be done before connecting pipes to the valve. Torch heat will damage plastic parts.
- 3) When turning threaded pipe fittings onto plastic fitting, take precaution not to cross thread or over tighten.

➤ Control Valve Installation

- * As Figure 1-1 shows; insert a 32mm riser pipe with bottom basket into the center of the mineral tank. If pipe is higher than the top of the pressure tank, mark it, remove from tank, and cut. Take care to keep foreign material out of pressure tank.

Note: The length of riser pipe should be below tank flange. The distance from the top of the tank to the top of the pipe should be between **3/16" and 1/4"**. The edges of the pipe should not be sharp to avoid damage to the seal inside the RevV4 valve.

- * If mineral tank was not purchased as part of a complete system from Hankscraft Runxin be sure to plug the riser pipe prior to filling with media. Media quantity is relative to desired capacity and tank size. (Refer to Product Sizing table on page 7)
- * Install Valve Base O-ring around the neck of the valve.
- * Lubricate the center hub O-ring of the RevV4 valve.
- * Install the top basket with a twist and lock action to center hub of the RevV4 valve.
- * Place RevV4 valve onto tank with the distributor pipe inserted down the middle of The top basket. Rotate clockwise to secure onto the tank. **Do not overtighten!**

Overtightening may cause the valve to crack and void the warranty.

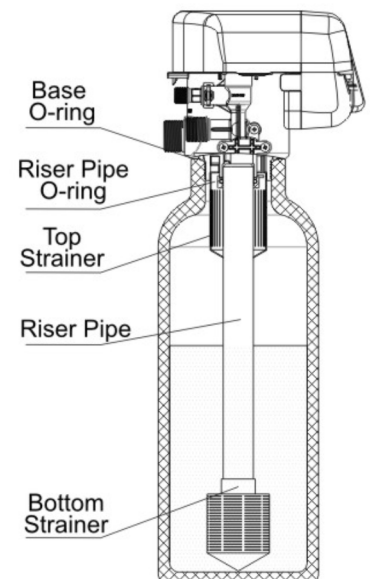


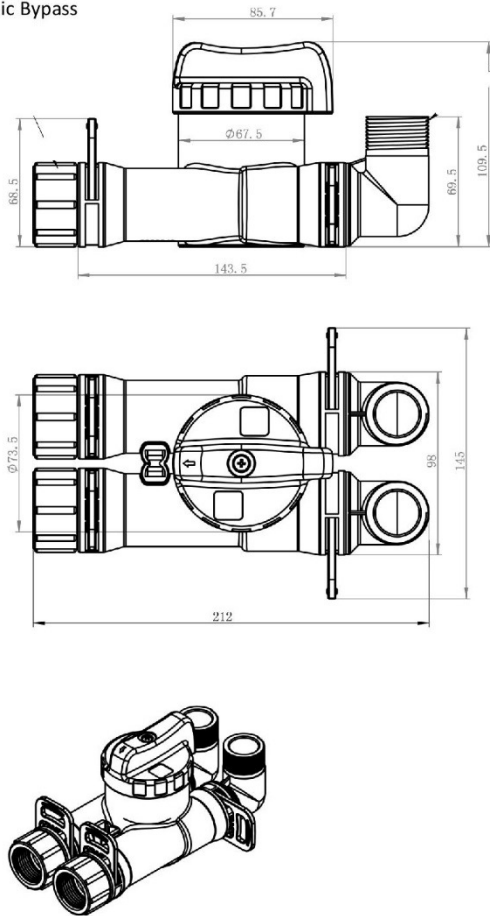
Figure 1-1

Installation- Continued

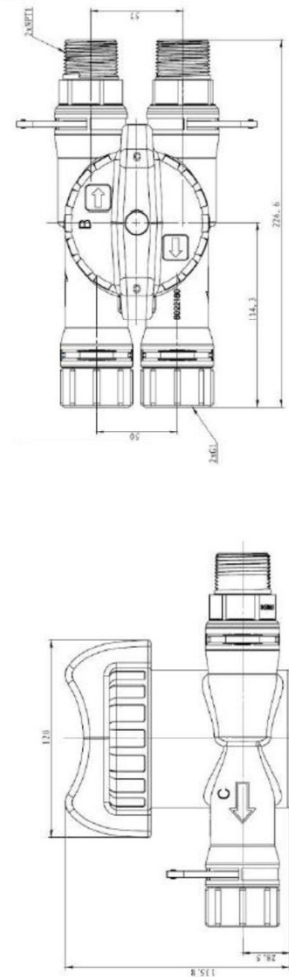
- System Installation continued on page 22

Ceramic Bypasses

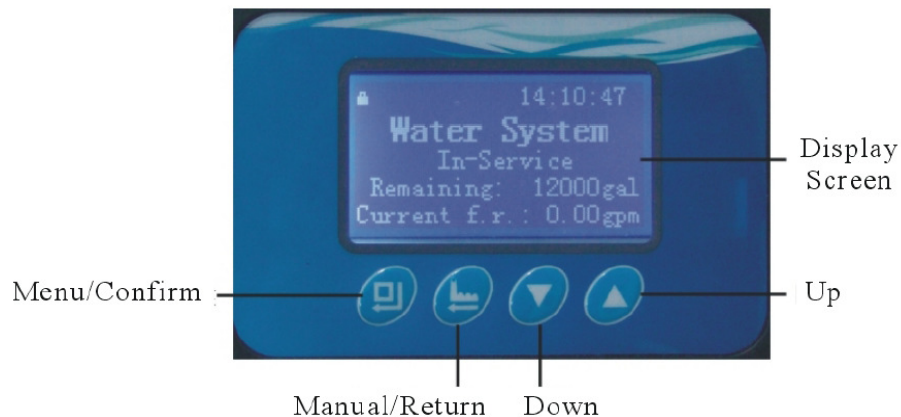
Hanksraft Part Number 41207
Large Ceramic Bypass



Hanksraft Part Number 41205
Small Ceramic Bypass



Programming: Display and Instructions



● Programming Instructions

Manual / Delayed Regeneration

Pressing at any time results in an immediate manual regeneration.

Pressing and holding for 3 seconds, when system is locked, results in a delayed regeneration at the preselected time.

One Button to Change the Current Time

Pressing and holding the button for 3 seconds, when system is locked, allows the current time of day to be adjusted.

Unlocking the Keypad

icon indicates the buttons are locked within 5 minutes of idle use. To unlock press and hold and for 3 seconds until the icon is off.

Enter Key

Press button to enter the basic programming mode, modify highlighted options, and return to the main menu.

Manual Regen/Esc. Key

Press at any phase during manual regeneration to advance to the next phase or press during programming to exit to the home screen without modifying the current highlighted option.

Up and Down Arrows

or buttons are used to scroll through the various basic programming options as well as adjust values.

● Programming Modes

➤ Basic Programming – Allows you to adjust the time values for each phase. To enter basic programming, follow the directions below.

- * When the icon is on, press and hold both and for 3 seconds to unlock the keypad; then press to enter the main menu; press or to highlight each option. Press to enter that option. Press or to adjust the value. Press to accept changes. (Press to exit back to service status)

➤ Advanced Programming – Allows you to set the Regen Cycle and Regen Mode that will work best for your customer; as well as adjust or set each phase time. To enter advanced programming, follow the directions below.

- * Plug the PWT-ASC in and immediately press in sequence to enter into the advanced setting. Press select the menu item to be changed (Press to return to the previous menu). or to

Note: If valve locks while programming, unplug power supply and repeat step above.

- * Press to enter the main menu; press or to highlight each option. Press to enter highlighted option. Press or to adjust the value. Press to accept changes. (Press to advance to service status)

The following pages will outline programming for each regeneration mode.

EverGreen ASC Filter Set-up Sheet

All Air Scour Systems

Control Valve - PWT ASC

***DO NOT CHANGE CYCLE SETTINGS - THEY ARE FACTORY SET AND CHANGES WILL AFFECT THE OPERATION OF THE SYSTEM. MAKING CHANGES MAY VOID THE SYSTEM WARRANTY.**

Programming: ASC

Screen View	Setting	Additional Information
Review Company Info	NA	
Set Valve Model	72605	
Set Language	English	
Set Company Info	NA	
Set Hour Mode	12 HR	
Set Time of Day	Actual Time	
Set Date	Current Date	
Set Program Type	Interlock	
Clear Data	Close	
*Set Regen Mode: A-01-A-07 *	A-01	Meter Delayed
Set Capacity	Gallons	FSB-ASC-1054 = 500, FSB-ASC-1252 = 600, FLB-ASC-1354 = 800, FLN-ASC-1465=1,000
Phase 1A	MINUTES	*DO NOT CHANGE
Air Scour 1	MINUTES	*DO NOT CHANGE
Phase 2A	MINUTES	*DO NOT CHANGE
Air Scour 2	MINUTES	*DO NOT CHANGE
Phase 3A	MINUTES	*DO NOT CHANGE
Phase B	MINUTES	*DO NOT CHANGE
Max Days for Regeneration	3 Days	
Signal Output Mode b-01 (02)	b-01	
Set Service Alarm	disabled	
Review Regen Times	NA	
Review Software Ver.	Ver. 5.0	

Warranty

● Limited Warranty

As described herein, Hankscraft Runxin, LLC (“Hankscraft”), warrants its products are free from defects in material and workmanship only, when properly installed, operated, and maintained. This warranty is subject to the exceptions herein.

Hankscraft warrants to the original owner that the items listed below, excluding but not limited to wear parts like O-rings, gaskets and seals, will be free from defects in materials and workmanship for the period of time specified below from the original purchase date.

- Control valves and all internal valve parts and the salt storage tank – FIVE (5) YEARS
- Mineral tank – TEN (10) YEARS
- Any other component – ONE(1) YEAR
- Ceramic disc for rotary valve (applicable to RevV series valves only) – LIFETIME
- RO and UF Filter Systems- ONE (1) YEAR

Media/resin is not warranted due to water supply quality differences

Any parts used for replacement are warranted for the remainder of the original warranty period applicable to the part from the date of manufacture so long as the parts are installed by a Hankscraft factory trained and authorized installer.

Hankscraft’s obligation by this Limited Warranty, at its option, is to repair or replace any warranted product only. Labor for repair or replacement is not included as part of this warranty. Prior to returning the product to Hankscraft, a valid return materials authorization number must be obtained from Hankscraft. Any product returned to Hankscraft without a valid return authorization number will be rejected. Any product found to be defective will, at the sole discretion of Hankscraft, be repaired or replaced. Hankscraft is not responsible for shipping cost to the repair facility. This section lists the sole remedies for any valid warranty claim.

This warranty does not apply to defects reported to Hankscraft outside of the warranty period.

This warranty does not apply to defects caused by installing, operating, servicing, modifying, repairing or maintaining (or lack of maintaining) the product outside of Hankscraft’s recommendations. Filters, membrane elements and flow restrictors that become fouled or plugged due to excessive turbidity, dissolved solids, or microorganisms are not covered by this warranty. This warranty does not apply to defects caused by damage during shipment, neglect, misuse, modification, accident, noncompliance with local codes and ordinances, hot water, frozen water, sediment, corrosive liquids, gases, chemicals, bacteria, animals, sand, salt, flood, wind, fire, outdoor installations where the product is not reasonably covered, pneumatic use, natural disasters, war, terrorism or acts of God. No other person is authorized to make any other warranty on behalf of Hankscraft either during or after the applicable warranty period.

Hankscraft assumes no liability for determining the proper products and equipment or installation necessary to meet the requirements of the user of the product, and Hankscraft does not authorize others to assume such liability on its behalf.

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