



ACID SHIELD™



Installation & Service Manual

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Unpacking & Inspection

Be sure to inspect the entire shipment immediately upon receipt for any shipping damage or parts loss. Also note any damage to the shipping carton. **Contact the transportation company for all damages and loss claims. EasyWater is not responsible for damages in transit.**

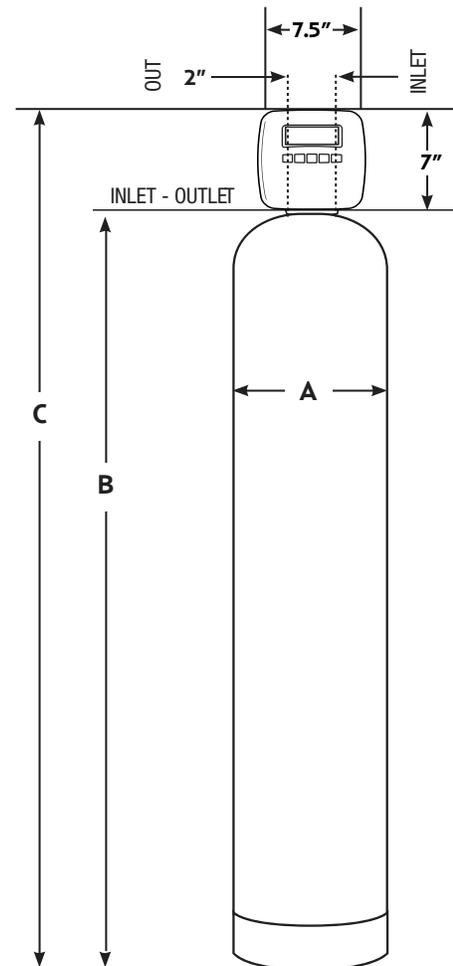
Basic Guidelines

- » Before you begin installation, read the entire manual.
- » **CHECK LOCAL PLUMBING AND ELECTRICAL CODES. THE INSTALLATION MUST CONFORM TO STATED CODES.**
- » Use only lead-free solder and flux for all sweat-solder connections, as required by state and federal codes.
- » Use care when handling the filter. Do not drop or set on sharp objects.
- » Do not locate the system where freezing temperatures occur. Do not attempt to treat water that is over 120°F. **FREEZE DAMAGE OR HOT WATER DAMAGE VOIDS THE WARRANTY.**
- » If installing outdoors, protect from direct sunlight. Excessive sun and heat may cause distortion or other damage to non-metallic parts.
- » While the electronic components are enclosed, protect the filter if installing outdoors where water damage can occur.
- » Unplug the filter from electrical power before servicing the filter or removing the outer valve cover. Complete maintenance or repairs and replace covers before plugging into the power outlet again.
- » The filter works on 120V – 60 Hz electrical power only. **MAKE SURE THE FILTER IS PLUGGED INTO AN OUTLET WITH CONTINUOUS POWER.**

Specifications

Model	Optimal Flow Rate	Min Backwash Flow Rate	Maximum Pressure	Tank Size
AS 1000	< 8 gpm	5 gpm	120 psi	10" x 54"
AS 2000	< 12 gpm	12 gpm	120 psi	13" x 54"

	All 10" Diameter Filters	All 13" Diameter Filters	All 16" Diameter Filters
A	11"	14"	16"
B	57"	57"	65"
C	64.5"	64.5"	72.5"
Depth	16"	16"	16"



Before Starting Installation

WHERE TO INSTALL THE FILTER

- » Place the filter as close to the incoming water line as possible. On well water applications, this would be as close as possible **after the pressure tank**. If you desire to bypass outdoor faucets in order to conserve water and filter capacity, install or plumb as necessary.
- » Connect the filter to the main water line before (ahead of) the water heater. Do not run hot water through the filter. Temperature of water passing through the filter must be less than 120°F.
- » Place the filter as close as possible to a floor drain, or other acceptable drain point.
- » Place the filter in an area where water damage is least likely to occur if a leak develops. **The manufacturer will not repair or pay for water damage.**
- » Do not install the filter in an area where it could freeze. **Freeze damage is not covered by the warranty.**
- » A 120 volt electric outlet is required to plug in the filter controller. The filter comes with a 24 volt transformer with a 10 foot power cord. **This connection must meet local electrical codes.**
- » Keep the filter out of direct sunlight, as excessive sun and heat can distort any not-metallic parts.

TOOLS, PIPE, FITTINGS & OTHER MATERIALS NEEDED

- » A minimum pipe size of ¾" should be used to connect to the filter valve.
- » Use copper, brass, CPVC or PEX plastic pipe fittings. **Always follow local plumbing codes.**
- » A bypass valve is already installed on the filter. The bypass valve allows you turn off water to the filter for maintenance, while still allowing water to flow into the house.
- » **AS 1000:** A 1" bypass valve is included. A sturdy drain hose of 1/2" inside diameter minimum (to be provided by installer), is needed for the valve drain. A smaller hose will not allow the filter to operate properly. If drain distance is greater than 10 feet, increase to 3/4" diameter drain hose. The drain must have an air gap. **The end of the hose must be secured in place.**
- » **AS 2000:** A 1" bypass valve and a 1" drain line are provided. The end of the drain must have an air gap and must be secured in place.
- » If a rigid valve drain is needed to comply with local plumbing codes, you can purchase locally the parts needed to connect to drain.

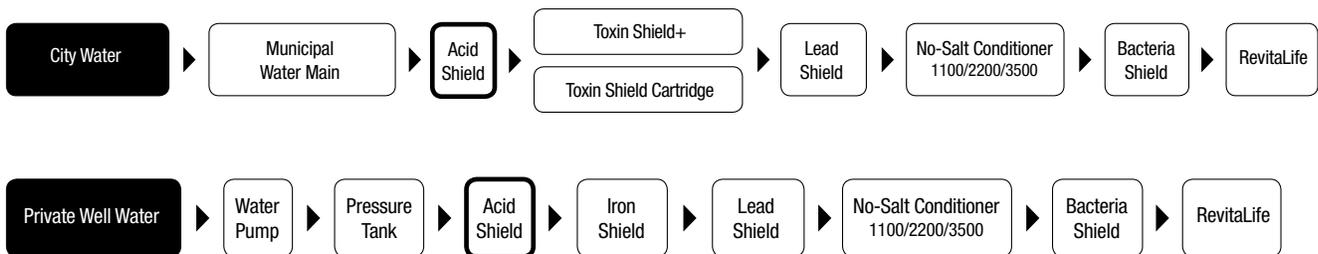
Continue reading on next page »

Before Starting Installation (Cont'd)

PLAN HOW YOU WILL INSTALL THE FILTER

- » You must first decide how to run “IN” and “OUT” pipes to the filter. Look at the main water pipe at the point where you will connect the filter. Is the pipe soldered copper, glued plastic or threaded brass/galvanized? What is the pipe size?
- » Determine the direction of the water flow in the home, then turn off incoming water supply valve. Plumb the incoming water line into the bypass valve side marked “IN”. Plumb the line leaving the filter into the bypass valve side marked “OUT”.

PRODUCT INSTALLATION SEQUENCE



If a lawn or garden irrigation system or open loop heating/cooling system is to be treated, a separate Acid Shield will be necessary. Contact EasyWater Tech Support for more information on these installations.

Before Starting Installation (Cont'd)

INSTALLING VALVE HEAD ON TANK

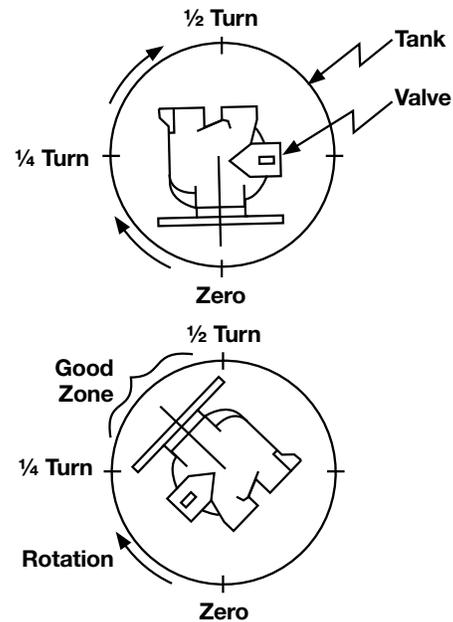
DO NOT exceed 25 ft lbs of torque when installing this product. Exceeding this limit may damage the threads and cause failure. **DO NOT** use the drain connector to tighten the valve on the tank. This can break the drain connection or crack the valve.

Unless special equipment is available to mechanically torque the valve to the tank, please follow the steps below:

- 1) Hand spin the valve onto the tank, ensuring the threads are not cross-threaded.

Note: All Fleck® valves are right-hand threads, or clockwise, to install.

- 2) Rotate the valve freely without using force until it comes to a stop (this position is considered zero).
- 3) Rotate valve clockwise from zero to between ¼ turn and ½ turn (see diagram).



Setting the Controller

The EasyWater Acid Shield uses an electronic controller to manage the valve head, and the regeneration and backwash processes.

When the unit is in the “Service” position (the unit is providing treated water), the display will alternate between showing the current time of day and the days between regeneration. The regeneration cycle is preset to occur at 12:00 AM every second or seventh day. The timing and frequency of regeneration can be modified as required.

Normal duration for the regeneration cycle is approximately 20 minutes for both the Acid Shield 1000 and 2000.

- 1) Backwash Cycle = 20 minutes. [Water flow is reversed inside the unit to lift the filter media, rinsing the accumulated contaminants from the filter bed.]
- 2) The system then returns to the “Service” position.

Untreated water is available during the regeneration cycle unless the system is equipped with a “No Hard Water Bypass” feature. It is important that no other water treatment filter regenerates at the same time. Regeneration of multiple filters should be staggered in two hour increments.

With higher than normal water usage or high levels of iron, manganese, H₂S or tannins, the system may need to regenerate more frequently than the preset two day cycle. The system can be programmed for daily regeneration if necessary. Do not set the regeneration frequency longer than two days, as this risks fouling the filter media and can eventually make the unit inoperable.

Setting the Controller (Cont'd)



SETTING THE CURRENT TIME OF DAY

This method is also used to reset correct time of day in the event of a power outage lasting over 48 hours.

- a. Press CLOCK button.
- a. Press UP or DOWN button until the display shows the current hour. Scroll past 12 to toggle to PM.
- a. Press NEXT button.
- a. Press UP or DOWN button until the display shows the current minutes.
- a. Press the NEXT button to exit and resume normal operation.

SCHEDULING AN EXTRA REGENERATION TONIGHT

This will give your filter full capacity should you expect much higher than normal water usage tomorrow.

- a. Press the REGEN button.
- a. The words "Regen Today" will flash on the display to indicate that the system will regenerate tonight at the normal set time (typically 12:30am).

SCHEDULING A REGENERATION IMMEDIATELY

Water conditions fluctuate, as does water usage. If you begin getting iron or manganese staining or H₂S odor in your home, typically due to higher than normal water usage, you may choose to regenerate filter immediately.

NOTE: If you use water during the 61-81 minute regeneration period the water will be untreated by the EasyWater Acid Shield.

- a. Press and hold the REGEN button for three seconds. Open two faucets inside the home.

System Start-Up *(After installation is complete)*

- 1) Open two faucets inside the home.
- 2) Turn the bypass valve to the service position.
- 3) Fill the filter with water by turning on the water service valve SLOWLY.
- 4) Close the two open faucets inside the home.
- 5) Check installation for leaks.
- 6) Backwash the unit **until water runs clear**.
- 7) Press and Hold the REGEN button for 5 seconds to initiate an immediate regeneration..
- 8) The system will be regenerating for the next 61 - 81 minutes. During this time you will have water to the home, but it will be untreated until regeneration is complete.

NOTE: All water supplies contain oxygen and with this chemical-free oxygen injection system you may see additional bubbles in your water. These dissipate quickly.

Replenishing the Filter Media

- 1) Close the homes main water service valve.
- 2) Open nearest treated faucet to relieve water pressure and drain plumbing line.
- 3) Place Acid Shield system into the Bypass position.
- 4) Carefully unscrew and remove mineral tank cap exposing the dome hole. Be ready with a container to catch the small amount of water that escapes from the unit.
- 5) Siphon out the volume of water needed to allow room for the media to be added.
- 6) Using a large funnel, pour replacement media into the tank through the exposed dome hole. Fill media so that there is approximately 18 – 24” of distance between the top of the media inside of the tank and the bottom of the dome hole through which media was added.
- 7) Replace the mineral tank cap and follow the “System Start-Up” directions on Page 9.

Troubleshooting

Problem	Possible Cause	Solution
System Does Not Backwash	No power	Ensure unit is plugged in and receiving power Ensure system is not on a switch that gets turned off
	Power failure	Reset time of day and check settings
	Defective motor	Replace motor
System is Not Adequately Raising pH	Drain line is kinked	Ensure drain line is as straight as possible without any kinks
	Drain fitting or drain line blocked	Check drain fitting, drain line and clear any obstructions
	System is not backwashing frequently enough	Increase backwash frequency
	Distributor (riser) tube is leaking	Ensure tube is not cracked or broken Ensure O-ring where tube connects to head is in good condition and replace if necessary
	Media is fouled or depleted	Replace media
Water Continuously Runs to Drain	Motor stopped or jammed	Check motor and replace if necessary
	Debris in head	Remove piston, check for any debris and clean if necessary
	Internal leak in control	Inspect piston, seals, spacers and replace if necessary

Limited Warranty

EasyWater, Inc., Fishers, IN warrants this EasyWater Acid Shield (referred to as Filter) as stated herein:

From the date of installation, within the warranty period described below, we will repair or replace any part which we find defective because of faulty materials or workmanship. You pay only freight to our factory and local labor charges.

- Five years on valve body
- Five years on electronic control
- Ten years on media tank, excluding filter media

Damage to any part of Filter because of misuse, misapplication, neglect, alteration, accident, installation or operation contrary to printed instructions, or damage caused by an act of terrorism or any unusual force of nature such as, but not limited to, freezing, flood, hurricane, tornado or earthquake is not covered by this warranty. In all cases, regular parts and service charges will apply.

We assume no warranty liability in connection with this Filter other than specified herein. This warranty is in lieu of all other warranties, express or implied, including warranties of fitness for a particular purpose. We do not authorize any person or representative to assume for us any other obligations on the sale of this Filter.

Should a defect or malfunction occur, contact your EasyWater Authorized Partner Dealer. If you are unable to contact your EasyWater Authorized Partner Dealer, contact EasyWater, Inc., at (888) 766-7258 or via email at info@easywater.com. We will repair or replace the part at no cost if our repair department determines it to be defective under the terms of the warranty.

Feed water quality must meet the requirements for this system on an ongoing basis in order for this warranty to be valid.

This warranty is valid for the original purchaser only and gives you specific legal rights. You may have other rights which vary from state to state.

EasyWater, Inc.
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