



# TOXIN SHIELD™



*Installation & Service Manual*

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# Unpacking & Inspection

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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

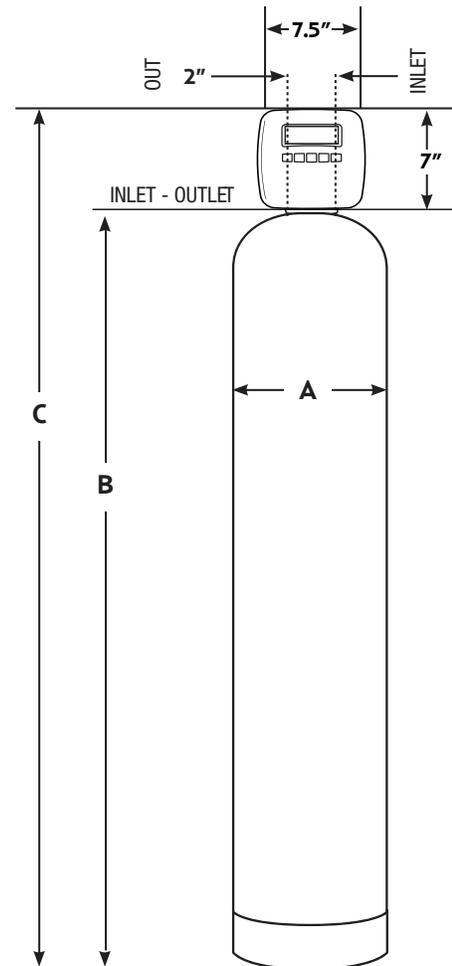
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- » Before you begin installation, read the entire manual.
- » **CHECK LOCAL PLUMBING AND ELECTRICAL CODES. THE INSTALLATION MUST CONFORM TO STATED CODES.**
- » Use only lead-free solder and flux for all sweat-solder connections, as required by state 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, protect the filter if installing it 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	Max Service Flow Rate	Min Backwash Flow Rate	Max Pressure	Tank Size
TS+ 1000	< 7 gpm	20 gpm	5 gpm	120 psi	10" x 54"
TS+ 2000	< 12 gpm	20 gpm	10 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

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## WHERE TO INSTALL THE FILTER

- » Place the filter as close to the incoming water line as possible. On municipal applications, this would be as close to the water meter as possible. If you desire to bypass outdoor faucets, install or plumb as necessary (this will also conserve water and filter capacity).
- » 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

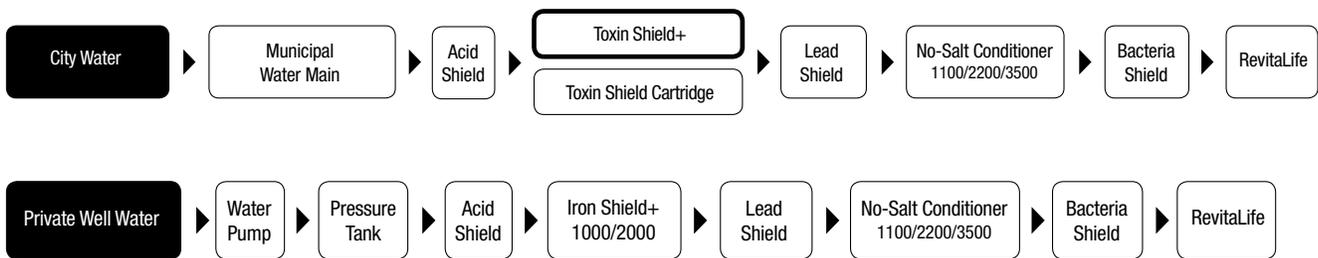
- » A minimum pipe size of  $\frac{3}{4}$ " should be used to connect to the filter valve. Pipe size of 1" or larger can be connected to the valve.
- » Use copper, brass, CPVC or Pex plastic pipe fittings. **Always follow local plumbing codes.**
- » A bypass valve is already installed on the filter. The bypass valve allows you turn off water to the filter for maintenance, while still allowing water to flow into the house.
- » A 1" bypass valve and a 1" drain are provided. The drain must have an air gap. **The end of the drain must be secured in place.**
- » If a solid drain line is needed to comply with local plumbing codes, you can purchase locally the parts needed to connect to drain.

# 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 house 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

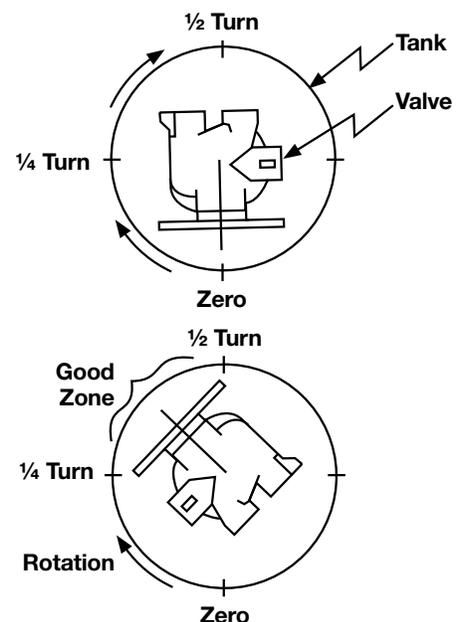


## INSTALLING VALVE HEAD ON TANK

**DO NOT exceed 25 ft lbs of torque when installing this product. Exceeding this limit may damage the threads and cause failure.**

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 to the right).



**Note: Do NOT use the drain connector to tighten the valve on the tank. This can break the drain connection or crack the valve.**

# Setting the Controller

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

When the unit is in the “Service” position (the unit is providing treated water) the display will alternate showing the current time of day and the days between regeneration. The regeneration cycle is preset to occur at 12:30 AM every seventh day. The timing and frequency of regeneration can be modified as required.

Normal duration for the regeneration cycle is approximately 16 minutes.

- 1) Backwash = 15 minutes. Water flow is reversed inside the unit to lift the filter media, rinsing contaminants and sediment from the filter bed.
- 2) Fast Rinse = 1 minute. This packs the bed, readying the system to begin filtering water again.
- 3) The system then returns to the “Service” position.

Untreated water is available during the regeneration cycle. 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.

Follow the regeneration schedule instructions. Do not set the regeneration frequency longer than 7 days, as this risks fouling the filter media and can make the unit inoperable over a period of time.

# 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.
- b. Press UP or DOWN button until the display shows the current hour. Scroll past 12 to toggle to PM.
- c. Press NEXT button.
- d. Press UP or DOWN button until the display shows the current minutes.
- e. 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.
- b. 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 H<sub>2</sub>S 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 Toxin Shield+.*

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

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

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- 1) Open two faucets inside the home.
- 2) Turn the bypass valve into 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) Let homeowner know the system will be regenerating for the next 16 minutes. During this time they will have water to the home, but it will be untreated until regeneration is complete.

# 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 Filtering	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	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
Air in Pipes - Air from Faucets	System trying to backwash at same time as another system	Set systems so backwash cycles do not overlap

# Limited Warranty

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EasyWater, Inc., Fishers, IN warrants this EasyWater Toxin 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](mailto: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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