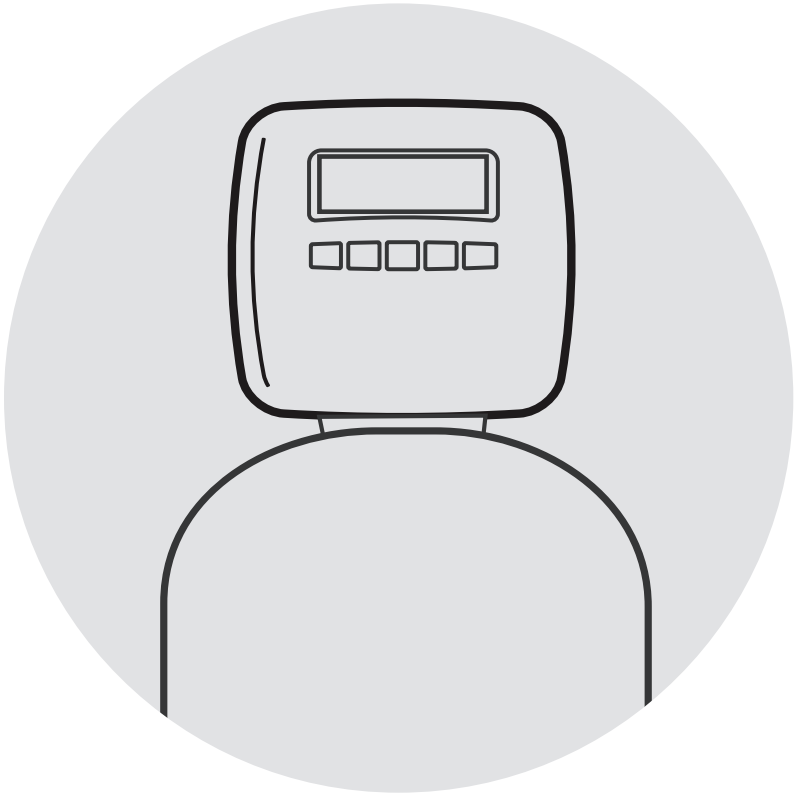


**EASYWATER®**



**IRON SHIELD® GX7**



# Installation & Operations

# Table of Contents

---

<b>1. Unpacking &amp; Inspection .....</b>	<b>2</b>
<b>2. How It Works .....</b>	<b>3</b>
<b>3. Specifications .....</b>	<b>4</b>
3.1 Filtration Specifications .....	4
3.2 System Dimensions .....	5
3.3 EasyWater Control Valve – Electrical Specifications .....	5
<b>4. Installation .....</b>	<b>6</b>
4.1 Pre-Installation .....	6
4.2 Before You Begin Installation .....	6
4.3 Installing Control Valve on Tank .....	7
4.4 Plumbing Connections .....	8
4.5 Drain .....	9
4.6 Drain Options .....	9
<b>5. System Startup .....</b>	<b>10</b>
<b>6. Bypass Configuration .....</b>	<b>12</b>
<b>7. Sequence of Installation .....</b>	<b>14</b>
<b>8. System Programming .....</b>	<b>15</b>
8.1 Programming Regeneration Time & Frequency .....	15
8.2 Programming Settings - GX7 1000-3000 Models .....	16

<b>9. Maintenance .....</b>	<b>17</b>
9.1 Recommended Maintenance .....	17
9.2 Cleaning the Injector & Internal Screen.....	17
9.3 Peroxide Wash.....	19
9.4 Optional Service Wrench.....	21
9.5 Control Valve Exploded View.....	22
9.6 Stack Assembly/Piston Service .....	23
<b>10. Troubleshooting .....</b>	<b>26</b>
<b>11. Limited Warranty .....</b>	<b>28</b>

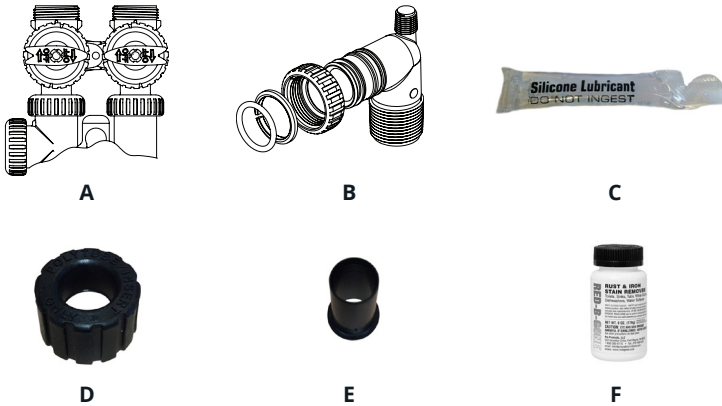
# 1. Unpacking & Inspection

---

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.

- ▶ 1 x IronShield Control Valve
- ▶ 1 x IronShield GX7 Media Tank
- ▶ 1 x Owners Packet containing the following:
  - Owners Manual
  - Red-Handled Bypass Assembly (Fig 1-A)
  - Elbow Assembly (2 x Elbow Assemblies, 1" MPT) (Fig 1-B)
  - Silicone Lubricant (Fig 1-C)
  - Drain Nut (Fig 1-D)
  - Polytube Insert (Fig 1-E)
  - Red-B-Gone Rust Remover (Fig 1-F)

Fig 1



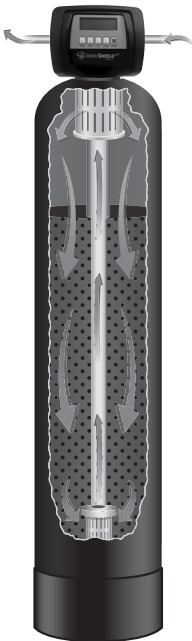
## 2. How It Works

---

*Congratulations on the purchase of your new EasyWater IronShield GX7. As with every EasyWater product, we are confident that you will be completely satisfied with your purchase. EasyWater is dedicated to providing the healthiest and most eco-friendly products to our customers.*

Since 1986, EasyWater has designed and manufactured industry leading equipment for Industrial, Commercial and Residential applications. EasyWater provides a complete line of high quality water treatment systems to solve our customers water quality problems. Our innovative design and advanced filtration methods continually set the tone for the water quality industry.

Your EasyWater IronShield GX7 uses advanced filtration media and oxygen to effectively remove iron, hydrogen sulfide, manganese and tannins\* from the water. This is a natural process that is healthier for you and better for the environment than using salt or chemicals.



- 1) In Service:** Untreated water enters the filter. Iron and other contaminants are trapped in the natural filtration media, while dissolved oxygen is added to the water.
- 2) Backwash:** Upward flow of water lifts the filter bed, removing trapped contaminants and increasing the life of the media.
- 3) Regeneration:** Our unique air injection system draws air into the system which naturally regenerates and recharges the filtration media preparing it for the next filtration cycle.

# 3. Specifications

## 3.1 Filtration Specifications

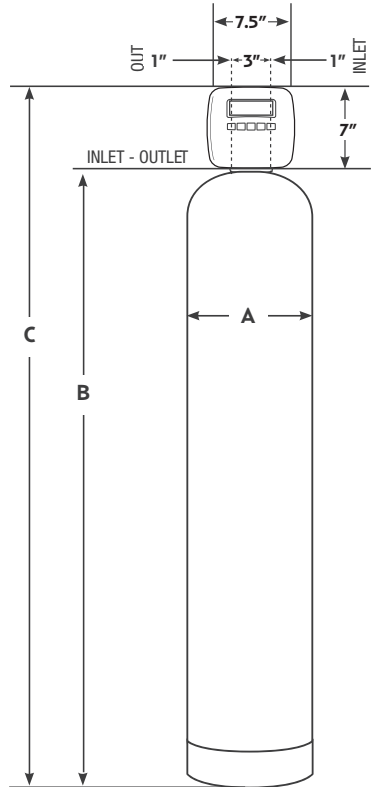
Model	Optimal Flow Rate	Min Backwash Flow Rate	Max Pressure	Max Combined Iron, Manganese, H2S and Tannins	Drain Size	Tank Size
GX7-1000	< 6 gpm	5 gpm	120 psi	20 ppm*	5/8"	10" x 54"
GX7-2000	< 11 gpm	9 gpm	120 psi	20 ppm*	3/4"	13" x 54"
GX7-3000	< 17 gpm	13 gpm	120 psi	20 ppm*	1"	16" x 65"

*\*Combined Iron, H2S, Manganese and Tannins not to exceed 20 ppm, or contact your EasyWater Consultant for treatment options; pH must be a minimum of 7.0 for iron or manganese removal.*

*Pre-treatment is required if bacterial iron or sulfur-reducing bacteria is present. Contact your EasyWater Consultant or Authorized Dealer for pretreatment options. This is not a disinfection system. Do not use with water that is micro-biologically unsafe or of unknown quality without adequate disinfection before and after the system. IronShield is not designed to remove colloidal or other low micron particles such as colloidal iron or sub-micron manganese, or tannins. Additional treatment may be required. Larger sizes available and custom system configurations available. Constructed of NSF and/or FDA approved materials.*

### 3.2 System Dimensions

	All 10" Diameter Filters	All 13" Diameter Filters	All 16" Diameter Filters
<b>A</b>	10"	13"	16"
<b>B</b>	57"	57"	65"
<b>C</b>	64.5"	64.5"	72.5"
<b>Depth</b>	16"	16"	16"



### 3.3 EasyWater Control Valve – Electrical Specifications

- ▶ Supply Voltage: 100VAC to 120VAC
- ▶ Supply Frequency: 50/60 Hz
- ▶ Output Voltage: 15VDC
- ▶ Output Current: 500 mA

# 4. Installation

---

## 4.1 Pre-Installation

- 1) Install according to applicable codes in your area. For installation questions or assistance call your EasyWater consultant or Authorized Dealer.
- 2) Remove all contents from packaging. Identify all components are present (See Pg 2, Fig 1). Not included are fittings and piping for plumbing to 1" Male NPT inlet/outlet connections and drain line.
- 3) Identify the water line that will feed into the system (Note: system must be fed cold water). Close the home's main shutoff valve and open a faucet at the lowest elevation to drain water from plumbing.
- 4) Determine the best location for the filter based on space, power and drain availability, access for maintenance, and piping and fittings.

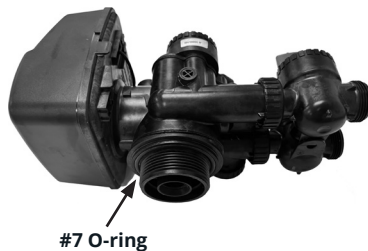
## 4.2 Before You Begin Installation

- 1) Shut the home's main water supply off valve.
- 2) After positioning tank in desired location, remove the shipping cap that is threaded into the tank's top opening and dispose of the cap.



**CAUTION:** Gently remove the shipping cap to avoid lifting the riser tube.

- 3) Use silicone lubricant to lubricate the bottom large #7 o-ring on the Control Valve.





- 4) Ensuring the male end of the down-tube that comes up from the center of the media tank slides into the bottom female opening directly in the center of the Control Valve, screw the valve onto the tank and hand tighten snug.

Note: If the down-tube has risen during shipping and is protruding 1" or less above the highest lip of the media tank (Fig 1), the down tube may need to be trimmed or adjusted so that the top of the down-tube is flush, or as close to flush as possible, with the top lip of the media tank.



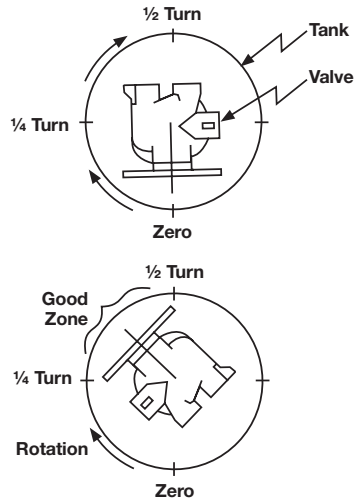
If necessary, the down-tube may be trimmed using a variety of tools such as a pipe/tube cutter, hacksaw, oscillating tool, sawzall etc.

### 4.3 Installing Control Valve 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.**

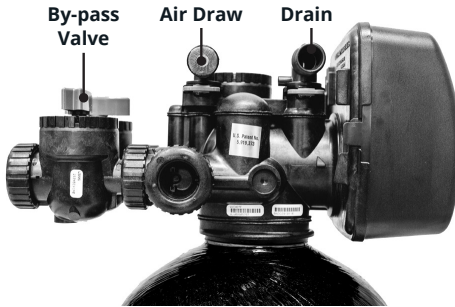
Unless special equipment is available to mechanically torque the valve to the tank, please follow the steps below:

- 1) Hand spin the valve onto the tank, ensuring the threads are not cross-threaded. Note: 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 the valve clockwise from zero to between 1/4 turn and 1/2 turn (see diagram).



## 4.4 Plumbing Connections

- 1) Connect the Red-Handled Bypass directly to the Control Valve.



- 2) Note the inlet/outlet of the system as indicated by the raised black arrows on the Control Valve. **Water will not flow through the IronShield if plumbed backwards.**
- 3) Assemble and connect the Elbow Assemblies to both the inlet and outlet of the Red-Handled Bypass. The Elbow Assemblies terminate as 1" NPT connections.



- 4) Locate & turn off the home's cold water supply line. Cut the cold water supply line after the shut-off valve in a convenient location as close to the IronShield as possible and connect the upstream side to the IronShield's inlet elbow (1" NPT connection). Connect the IronShield's outlet elbow (1" NPT) back to the downstream side of the break in the cold water supply line. **Water will not flow through the IronShield if plumbed backwards.**



## 4.5 Drain

- 1) Plumb the system's drain from the drain fitting to a secure and sufficient drain such as stand pipe, sump pit, washing machine drain, floor drain, utility sink, etc. If multiple backwashing systems are to be installed, be sure that each drain line is independently ran to an open air drain.  
**If multiple products are installed, do not connect the drain lines together.**
- 2) Secure the drain line well so that the pressure from backwash will not dislodge the drain line. If the drain line is not secured, water will leak out of the equipment during regeneration at high pressure. EasyWater is not responsible for any damage associated with such leaks.
- 3) Use a non-collapsible drain line that meets the minimum drain line size requirements such as non-collapsible polytubing, PVC, PEX or copper. Garden hose or other collapsible tubing/hosing is not sufficient and may damage filtration media.

## 4.6 Drain Options

### Minimum Drain Line Size:

- ▶ 1000 Sized Systems require a minimum drain line size of 5/8"
- ▶ 2000 Sized Systems require a minimum drain line size of 3/4"
- ▶ 3000 Sized Systems require a minimum drain line size of 1".
- ▶ Larger drain line size may be required for long distances of drain line or special circumstances.

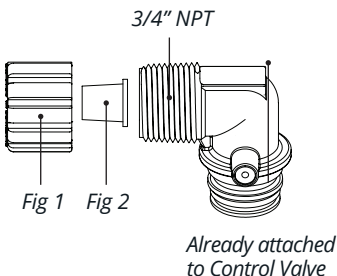
Please consult your EasyWater Consultant or Authorized Dealer if the drain line size is in question. Drain Nut (Fig 1) & Polytube Insert (Fig 2) are only used if plumbing drain line with non-collapsible 5/8" polytube. These items are not used when hard plumbing in PVC, PEX or Copper.

### 3/4" Drain Elbow Assembly

(Part: 022-226-075)

### 1" Drain Assembly

(Part: 022-184-200)



## 5. System Startup

---

- 1) Turn the Inlet side on the Red-Handled Bypass to the Diagnostic Mode (leave the outlet closed for now) (See 'Diagnostic Mode' pg 13, Fig 3). Slowly open the home's main shutoff valve (only partially at this time) and allow the filter to fill. Check for leaks. Address any leaks. If no leaks are present, open the home's main shutoff valve.
- 2) Let media soak before proceeding to the next step. Allow the media to soak for at least 60 minutes. The longer the media soaks the less likely occurrence of media fines to home. **If the media is not thoroughly soaked media fines will be introduced into the home's plumbing system. This will result in needing to flush out of the home's plumbing system including the plugging of faucet aerators, fixtures, toilets, etc.**
- 3) Plug the Control Valve into an electrical/power outlet (requires approximately 1/2 amp at 110VAC).
- 4) The Control Valve is pre-programmed and only requires the current time of day to be set. To set the time of day:
  - Press "CLOCK" to set the time of day.
  - Set the hour using the "DOWN" and "UP" arrows.
  - Advance to the minutes by pressing the "CLOCK" button.
  - Use the "DOWN" and "UP" arrows to set the minutes. Press the "CLOCK" button to save.
- 5) After the media soaks for the minimum required length of time, check for leaks by pressing and holding the REGEN button for 3 seconds to initiate the systems first time regeneration. A full regeneration is not needed at this stage.
  - Once the regeneration has been initiated, the REGEN button on the Control Valve can be used to manually advance the Control Valve through each step of the regeneration sequence. Each of the **3 stages** of regeneration begin with a new countdown on the clock. You must wait until each new countdown clock begins within each stage of the regeneration before advancing the Control Valve to the next stage using the REGEN button.

- 6) Check for leaks during each of the regeneration stages. Address any leaks.
- 7) After verifying that there are no leaks, initiate a second regeneration. Allow filter to complete the full regeneration sequence. Verify water runs clear to drain.
- 8) Once the regeneration is complete, the water will now be treated.
- 9) Open the outlet on the Red Handled Bypass (See 'Normal Operation' pg 12, Fig 1).
- 10) Open the nearest cold faucet in the home and let the water run until any air trapped in the plumbing lines is purged and the water runs clear. The initial water will likely be gray in color. This is normal and will clear up as the water is run. **Failing to follow this step may result in media entering the home's plumbing system, toilets, showers, etc.**

# 6. Bypass Configuration

- 1) Normal Operation Position: The inlet and outlet handles point in the direction of flow indicated by the engraved arrows on the Control Valve. Water flows through the Control Valve during normal operation and this position also allows the Control Valve to isolate the media bed during the regeneration cycle. (See 'Normal Operation' Fig 1)
- 2) Bypass Position: The inlet and outlet handles point to the center of the bypass, the Control Valve is isolated from the water pressure contained in the plumbing system. Untreated water is supplied to the plumbing system. (See 'Bypass Operation' Fig 2)
- 3) Diagnostic Position: The inlet handle points in the direction of flow and the outlet handle points to the center of bypass valve. System water pressure is allowed to the Control Valve and the plumbing system while not allowing water to exit from the Control Valve to the plumbing. (See 'Diagnostic Mode' pg 13, Fig 3)
- 4) Shut Off Position: The inlet handle points to the center of the bypass valve and the outlet handle points in the direction of flow. The water is shut off to the plumbing system. If water is available on the outlet side of the filter it is an indication of water bypass around the system (i.e. a plumbing connection somewhere in the building bypasses the system). (See 'Shut Off Mode' pg 13, Fig 4)

Figure 1

## NORMAL OPERATION

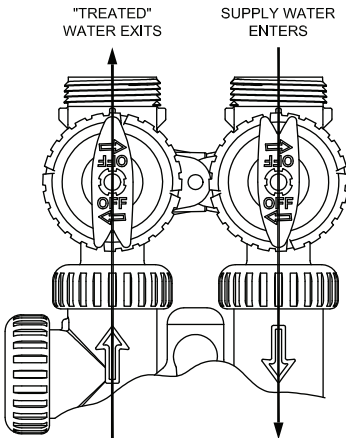


Figure 2

## BYPASS OPERATION

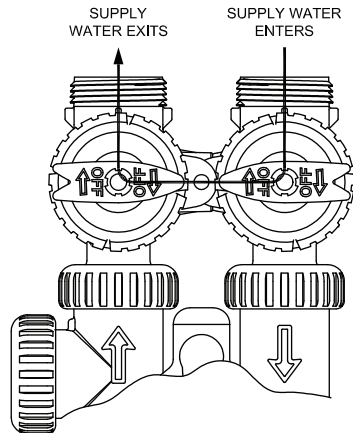


Figure 3

### DIAGNOSTIC MODE

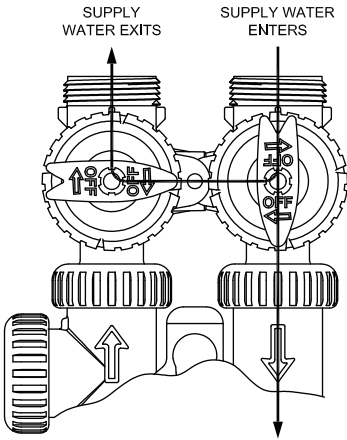
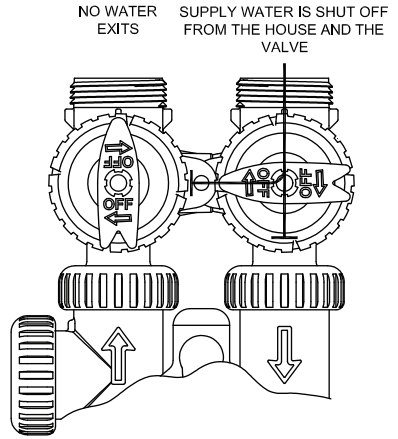


Figure 4

### SHUT OFF MODE



**IMPORTANT:** In the event of a system leak, place system into bypass.  
(See 'Bypass Operation' pg 12, Fig 2)

# 7. Sequence of Installation

---



*If a lawn or garden irrigation system or open loop heating/cooling system is to be treated, a separate IronShield GX7 may be necessary.*

*Give as much room as possible between the systems to allow for each treatment phase to take effect before entering the next phase.*

*Contact your EasyWater Consultant or Authorized Dealer for more information on these types of installations.*



# 8. System Programming

---

## 8.1 Programming Regeneration Time & Frequency

- 1) To access the Regeneration settings below, press and hold the 'NEXT' and 'UP' buttons simultaneously for 3 seconds.
- 2) Use the 'UP' and 'DOWN' buttons to change the settings as needed.
- 3) Press and release the 'NEXT' button to save the setting and advance to the next setting.

<b>All GX7 Models</b>	
<b>Day Override:</b>	<b>5</b>
<b>Regeneration Time:</b>	<b>12:00 am</b>
<b>Light Normally:</b>	<b>ON</b>

**Note:** Higher levels of iron, H<sub>2</sub>S, or manganese and/or homes in which a lot of water is used, the regeneration frequency may need more frequent regeneration.

If other backwashing equipment is being used, ensure that the regeneration times do not overlap. Allow at least 1 hour intervals between the end of one system's completed regeneration and the beginning of the next system's regeneration.

## 8.2 Programming Settings - GX7 1000-3000 Models

**Note:** Equipment arrives pre-programmed and only requires Time of Day to be set before operation (See Pg 10, Section 5.4 to set time of day).

- 1) To access the basic Programming settings below, press and hold the 'NEXT' and 'DOWN' buttons simultaneously for 3 seconds.
- 2) Use the 'UP' and 'DOWN' buttons to change the settings as needed.
- 3) Press and release the 'NEXT' button to save the setting and advance to the next setting.

<b>IronShield 1000 GX7</b>	<b>IronShield 2000 GX7</b>	<b>IronShield 3000 GX7</b>
<p><b>TYPE: Air Cycle Filter</b></p> <p>Air Release Time: 4.0 min            Backwash Time: 14 min            Air Charge Time: 40 min            Rinse Time: OFF            Gallons Capacity: 1000 Gal            Delayed: Regen            Relay 1 OFF            Relay 2 OFF            Service Alarm: OFF</p>	<p><b>TYPE: Air Cycle Filter</b></p> <p>Air Release Time: 4.0 min            Backwash Time: 14 min            Air Charge Time: 60 min            Rinse Time: OFF            Gallons Capacity: 2000 Gal            Delayed: Regen            Relay 1 OFF            Relay 2 OFF            Service Alarm: OFF</p>	<p><b>TYPE: Air Cycle Filter</b></p> <p>Air Release Time: 4.0 min            Backwash Time: 14 min            Air Charge Time: 60 min            Rinse Time: OFF            Gallons Capacity: 3000 Gal            Delayed: Regen            Relay 1 OFF            Relay 2 OFF            Service Alarm: OFF</p>

# 9. Maintenance

**IMPORTANT:** Always disconnect the power before servicing equipment.

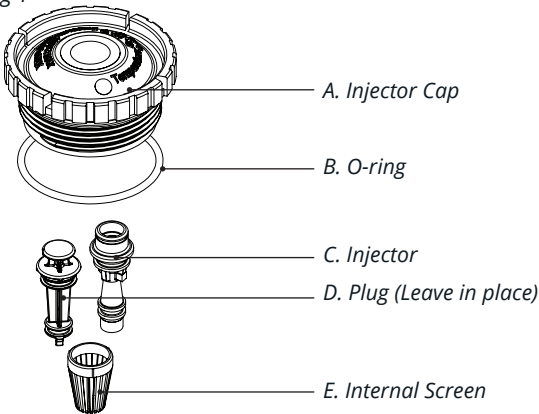
## 9.1 Recommended Maintenance

	0-2 ppm	2-4 ppm	5+ ppm
Peroxide Wash	Every 12 Months	Every 6 Months	Every 3 Months
Clean Screen	Every 12 Months	Every 6 Months	Every 6 Months

*\*May vary due to water usage. Clean the system's internal injector and screen each time prior to performing the peroxide wash.*

## 9.2 Cleaning the Injector & Internal Screen

Fig 1



- 1) Place the system into bypass. (See 'Bypass Operation' pg 12, Fig 2)
- 2) Initiate a manual regeneration by pressing and holding down the "REGEN" button for 3 seconds. This will allow the water and air pressure to be released down the drain.

- 3) Allow the first stage of the regeneration cycle to run, allowing water to drain, for approximately 1 minute.
- 4) After the first stage of the regeneration cycle has run for approximately 1 minute, use the REGEN button on the Control Valve to manually advance the Control Valve through each step of the regeneration sequence.
  - Each of the 3 stages of regeneration begin with a new countdown on the clock. You must wait until each new countdown clock begins within each stage of the regeneration, before advancing the Control Valve to the next stage. If the REGEN button is pressed prior to the new countdown timer beginning, the valve will not advance to the next stage.
- 5) Locate, unscrew (counter clockwise) and remove the Injector Cap (See Pg 17, Fig 1-A), Internal Screen and Injector.
  - The Injector Cap (See Pg 17, Fig 1-A) is located on the top side of the Control Valve and is a 2 1/2" round black plastic cap. The Injector Cap ships with a 'white' sticker of a letter from the alphabet on top of the Injector Cap. \*Note the Injector Cap has a large black o-ring (See Pg 17, Fig 1-B) just underneath the upper lip of the Cap. If this o-ring is lost or damaged during this process, the Control Valve will leak once reinstalled.
  - The Internal Screen (See Pg 17, Fig 1-E) is located on the underside of the Injector Cap, directly in the center and is removed simply by pulling it loose. This internal screen is not threaded or glued and simply sits inside of the Cap.
  - The Injector (See Pg 17, Fig 1-C) is 'blue' in color (Some models color may differ) and located directly underneath the Injector Cap.
  - Remove the Injector using either the edge of the Injector Cap to pry up the Injector or carefully use a pair of needle-nose pliers to gently pull the Injector up and out of the Control Valve Body.
  - The Injector is not glued or threaded into the Control Valve Body, it is seated with an o-ring and pulls directly up and out.
  - **NOTE:** There is also a Plug (See Pg 17, Fig 1-D) located underneath the Injector Cap that must remain seated inside of the Control Valve Body in the port titled 'UP'. Do not remove this plug. If accidentally removed, place it firmly back into the port titled 'UP' until it bottoms out.

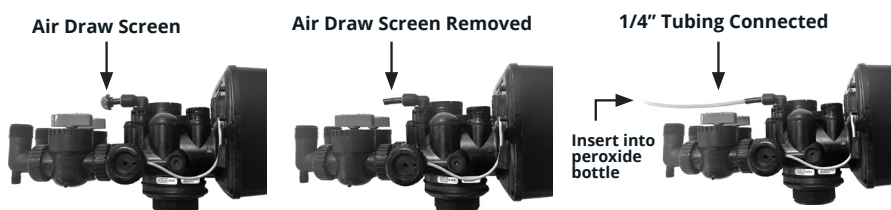
- 6) Clean the Internal Screen and Injector
  - Soak the Internal Screen and Injector in Iron Out or a peroxide solution before cleaning with a wire brush or old toothbrush. The Internal Screen has slits that are angled and each needs to be clean and free of debris. **The Internal Screen and Injector may be stained in color. If this is the case, this staining itself does not impact system performance.**
  - **IMPORTANT:** Using a small paperclip, straighten one side of the paperclip and insert it directly down the center hole of the Injector, all the way through and out the other side. Do this even if you believe the Injector is clear and clean. Failing to do so will result in poor system performance and you may be unable to draw peroxide into the valve during the Peroxide Wash maintenance.
- 7) Once cleaned, reinstall the Internal Screen and Injector by pressing them firmly in place. The Injector will seat down into the Valve Body and should be firmly pressed down into the Valve Body until it bottoms out.
- 8) Reinstall the Injector Cap. Hand tighten, do not use a wrench. Lubrication of the Injector Cap o-ring (2) with silicone is recommended.
- 9) Return the handles on the Red-Handled Bypass to the Normal Operation position (both red-handles should be parallel to the Control Valves inlet and outlet (See 'Normal Operation' pg 12, Fig 1).
- 10) Check for, and address, any leaks. If none are present, initiate a manual backwash and advance the Control Valve through each stage of the regeneration cycle manually using the REGEN button. A full regeneration cycle is not needed at this time.
  - Each of the **3 stages** of regeneration begin with a new countdown on the clock. You must wait until each new countdown clock begins within each stage of the regeneration before advancing the Control Valve to the next stage. If the REGEN button is pressed prior to the new countdown timer beginning, the valve will not advance to the next stage.

## 9.3 Peroxide Wash

### Materials Needed:

- ▶ (3) 32 oz. bottles of hydrogen peroxide (2% min concentration) from the local drugstore.
- ▶ Approximately 2' of ¼" OD flexible tubing from the local hardware store.

- 1) System must be in Normal Operation and not in Bypass Operation (See 'Normal Operation' pg 12, Fig 1).
- 2) Remove the air draw screen (See image below) from the air draw port and insert your 2 foot piece of 1/4" tubing directly into the air draw port on the valve. The 1/4" tubing will slide directly into the small stub that is exposed after removing the 'air draw screen'.



- 3) Initiate a manual regeneration by pressing and holding down the REGEN button for 3 seconds and manually advance the Control Valve to the second stage/air draw stage.
  - Press and hold the REGEN button until the first cycle begins. The piston inside of the control valve start to move making an audible sound. Once this occurs release the 'REGEN' button.
  - A countdown clock will appear on the screen. Once the countdown clock begins, allow 30-60 seconds of time to run off of the clock before pressing the 'REGEN' button once more.
  - A second countdown clock will begin on the screen. The 1000 Models have a 40 minute countdown timer, while the 2000 and 3000 models have a 60 minute countdown timer. This is the stage in which the peroxide can be drawn into the tank.
  - Allow 1 minute to run off of this countdown clock before placing the open end of the 1/4" tubing from 'Step 1' into the first bottle of peroxide.
  - Ensure that the peroxide is being drawn up the tube

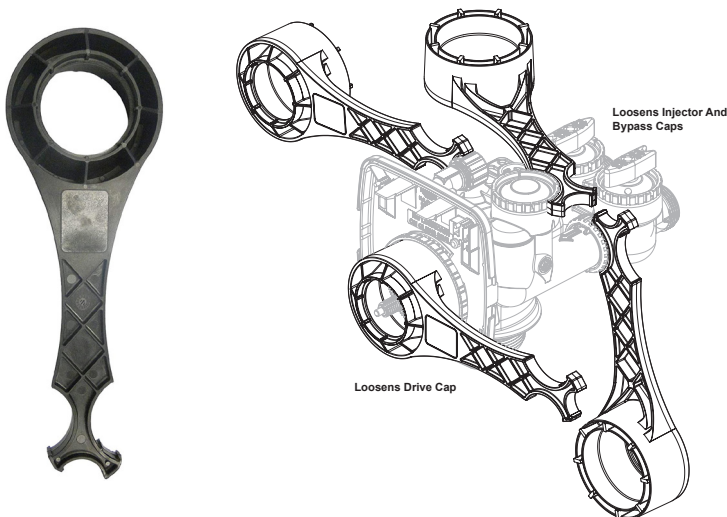
**Note:** If peroxide does not begin to draw up into the tubing within 4 minutes, it's possible that the internal screen or injector requires maintenance or the system's Red-Handled Bypass is in Bypass Operation. See 'Cleaning Injector & Screen' for more information.

- 4) Once the first bottle is empty, place the tube into the second bottle of hydrogen peroxide, then any remaining bottles of peroxide, so that all bottles of hydrogen peroxide solution are drawn into the tank during the cycle.
- 5) After all the hydrogen peroxide solution has been drawn into the tank, immediately press the 'REGEN' button once more and a third countdown clock will begin. Once this final countdown clock begins, press the 'REGEN' button once more.
- 6) Allow the hydrogen peroxide solution to react in the tank for a minimum of 20 minutes before advancing to the next step.
- 7) After the peroxide solution has soaked in the tank for at least 20 minutes, initiate another manual backwash by holding the REGEN button down until the piston inside starts to move. The backwash cycle will automatically start.
- 8) The entire cleaning process takes about 2 hours, after which the maintenance is complete.

## 9.4 Optional Service Wrench

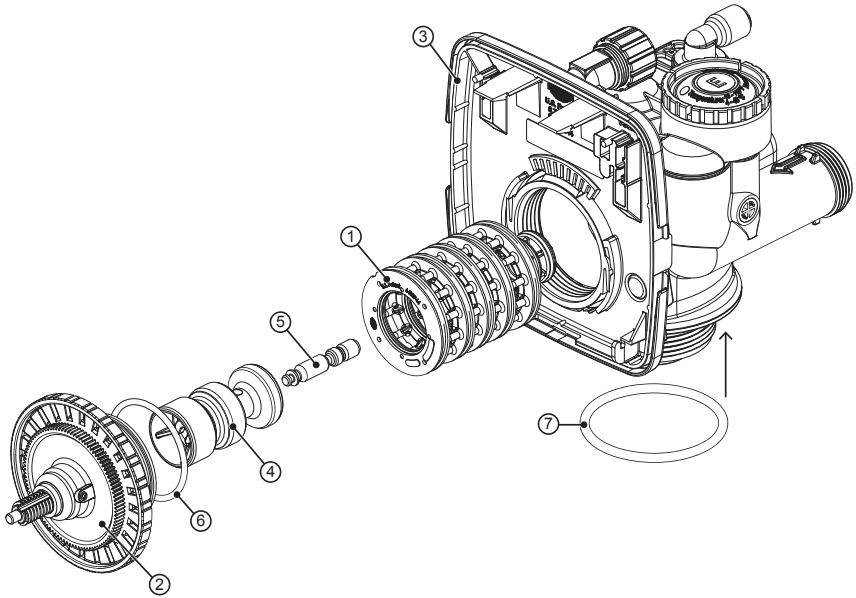
[Part: 080-043-001]

Although no tools are required to service the EasyWater IronShield GX7 Control Valve, the tool shown below may be purchased to aid in assembly, disassembly and service.



## 9.5 Control Valve Exploded View

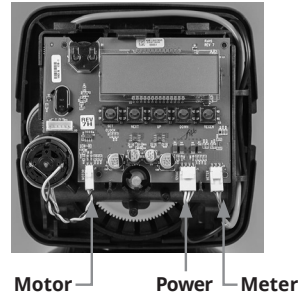
Drawing No.	Part No.	Description	Quantity
1	RPL-A-1109	Stack Assembly	1
2	A-1108	Drive Cap Assembly	1
3	RPL-005-002	Back Plate	1
4	A-1110	Piston	1
5	A-1111	Regenerant Piston	1
6	A-1125	O-ring 228	1
7	080-092-001	O-ring 337	1





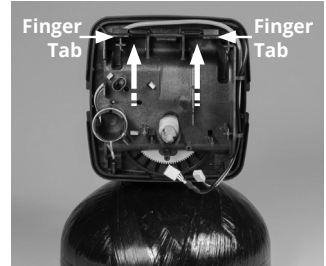
## 9.6 Stack Assembly/Piston Service

- ▶ Coin Cell Lithium Battery (3 volt type 2032)
- ▶ Drive bracket modular design allows easy access to components
- ▶ Coin Cell Lithium Battery back-up with 8-hour power carry over



### 1) Removing the Drive Bracket

- Disconnect the power/unplug.
- Place the system into bypass or turn main water supply off.
- Remove the Valve Cover to access the Drive Bracket.
- Lift up on the two tabs as indicated.
- Pull top of drive bracket forward, using finger tabs.
- The PC board can be removed separately from the drive bracket but is not recommended.



### 2) Removing the Drive Cap Assembly

- Unscrew drive cap assembly with service wrench or flathead screwdriver (**If no service wrench, use flathead screwdriver and follow instructions on Pg 26, 2-b**)



Service Wrench

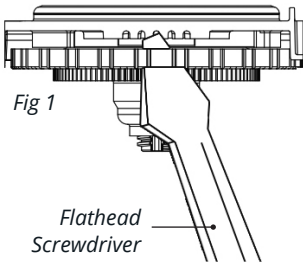


Unscrew drive cap assembly counter-clockwise



Drive cap assembly removed

b. Flathead Screwdriver Instructions Only:



Have a towel handy for this step. Water may leak out momentarily. The Drive Cap Assembly is threaded into the control Valve Body and seals with an O-ring. To remove the Drive Cap Assembly use the Valve Wrench (Purchased Separately) or insert a ¼" to ½" flathead screwdriver into one of the slots around the top 2" of the Drive Cap Assembly so it engages the

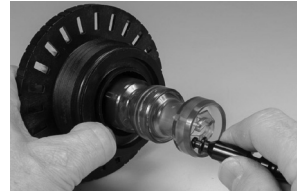
notches molded into the Drive Back Plate (See Pg 22, Section 9.5) around the top 2" of the piston cavity (See Fig 1 above). The notches are visible through the holes. Lever the screwdriver so the Drive Cap Assembly turns counter clockwise. Once loosened unscrew the Drive Cap Assembly by hand and pull straight out.

### 3) Instructions

- a. The Main Piston is attached to the Drive Cap Assembly and will slide out as the Drive Cap Assembly is removed.
- b. Detach the Main Piston from the Drive Cap Assembly (see figures below on Page 25, steps 4-5).
- c. Remove the Stack Assembly. The Stack Assembly can be removed without tools by using thumb and forefinger. Do not disassemble the stack assembly. The Stack Assembly may be chemically cleaned using peroxide, Iron-Out or diluted vinegar, or wiped with a soft cloth.
- d. Insert the new/cleaned Stack Assembly back into the Valve Body by hand. Do not force the Stack Assembly in. The control Valve Body bore interior can be lubricated with silicone to allow for easy insertion of the entire Stack Assembly
- e. Reattach or attach the new Main Piston to the Drive Cap Assembly
- f. Slide the Main Piston inside of the Stack Assembly and thread the Drive Cap Assembly back onto the Valve Body.

#### 4) Regenerant Piston Removal

- a. Regenerant Piston is easily removed from the snap lock horseshoe connection.



#### 5) Main piston

- a. Main piston is attached to piston rod with a snap-off connection.
- b. Rotate white gear to expose piston. Failure will snap drive cap.
- c. Put a slight side pressure on middle of the piston to be able to roll off piston.



#### 6) Spacer Stack Assembly Removal

- a. Spacer stack assembly is removed by simply pulling stack out



# 10. Troubleshooting

Problem / Codes	Possible Cause	Solution
101 – Unable to recognize start of regeneration	a. Control valve has just been serviced	a. Press and hold 'NEXT' and 'REGEN' buttons for 3-5 seconds.
102 – Unexpected stall	b. Foreign matter is lodged in control valve	b. Check piston and spacer stack assembly for foreign matter
103 – Motor ran to long, timed out trying to reach next cycle position	c. High drive forces on piston	c. Replace piston(s) and spacer stack assembly
104 – Motor ran to long, timed out trying to reach home position	d. Control valve piston not in home position	d. Press and hold 'NEXT' and 'REGEN' buttons for 3-5 seconds.
	e. Motor not inserted fully to engage pinion, motor wires broken or disconnected, motor failure	e. Check motor and wiring. Replace motor if necessary
	f. Drive gear label dirty or damaged, missing or broken gear	f. Replace or clean drive gear
	g. Drive bracket incorrectly aligned to back plate	g. Reseat drive bracket properly
	h. PC board is damaged or defective	h. Replace PC board
H2S/Rotten egg odor remains/ returns	Too low of regeneration frequency	Increase regeneration frequency (Day Override), See Section '8.1 Programming Regeneration Time & Frequency'
Water is cloudy when poured into a glass but clears after a few seconds leaving no residue in the bottom of the glass	Higher levels of dissolved oxygen naturally in unfiltered water	Lower 'Air Charge Time' from 40 minutes to 30 minutes, See Section '8.2 Programming Settings - GX7 1000-3000 Models' (*If iron or H2S return after lowering the 'Air Charge Time' reset the 'Air Charge Time' to original manufacturer setting)
Air hammering following system regeneration	Inadequate flow rate required for filter backwash	See Minimum Backwash Flow Rate requirements listed for your model, Section '3.1 Filtration Specs' (Note minimum Backwash Flow Rate is required throughout the entire regeneration cycle)
Iron or odor returns after months of operation	Clogged Injector	Perform recommended maintenance. See Section '9. Maintenance'

Problem / Codes	Possible Cause	Solution
<p>Media fines coming through and into faucet aerator(s), shower head(s), Tub(s) etc.</p>	<p>Inadequate Media Soak / Startup</p>	<p>Flushing Media out of plumbing Lines:</p> <ol style="list-style-type: none"> <li>1. Shut the home's main cold water line off.</li> <li>2. Remove any aerator(s) or shower head(s) from all faucet(s) and shower(s) where media has clogged or is visibly coming through and into the home.</li> <li>3. While the home's main cold water line is off and with the aerators/ shower head(s) removed; <ul style="list-style-type: none"> <li>- Turn the cold water on full stream, at each of these faucet(s)/ tub(s)/shower(s) locations.</li> </ul> </li> <li>4. The water will run for a moment and start to die down quickly. <ul style="list-style-type: none"> <li>- Leave the cold water running at each of these faucet(s)/tub(s)/ shower(s) before proceeding to the next step.</li> </ul> </li> <li>5. Turn the home's main cold water line back on. The open faucets will spit a mixture of air and water while the air in the lines is cleared out. This action will help "broom" the media through, and eventually out of, the plumbing lines.</li> <li>6. Repeat the above steps until all of the locations run clear and continue to run clear.</li> <li>7. Once the water runs clear and the media is no longer coming through, reinstall the faucet aerator(s) and shower head(s).</li> </ol>

# 11. Limited Warranty

---

EasyWater, Inc., Fishers, IN warrants this EasyWater IronShield GX7 (referred to as Filter) as stated herein:

From the date of shipment from EasyWater, Inc., 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 Consultant or Authorized Dealer. If you are unable to contact your EasyWater Consultant or Authorized Dealer, contact EasyWater, Inc. at (888) 766-7258 or via email at [contact@easywater.com](mailto:contact@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.  
9910 N by NE Blvd, Ste 200, Fishers, IN 46037 (888) 766-7258

*EasyWater is not responsible for damages incurred during product installation or while performing maintenance, recommended or otherwise.*



**EASYWATER®**



*The Easy Solution for Water Problems™*

(888) 766-7258 | [easywater.com](http://easywater.com)