



## Owner's Filter Manual

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p/n 800621 Rev. C  
Updated 7/3/19  
©2015-2019

*Manufactured by:*

**PROFICIENT H2O**

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This owner's manual is designed to assist owners and installers with the operation, maintenance and installation of your new water filter. It is our sincere hope that this manual is clear, concise and helpful. Detailed instructions on general operating conditions, pre-installation and installation instructions, start-up, and meter programming are included. We have included a troubleshooting guide, service instructions and parts diagrams to assist future needs.

**In the event that you need professional assistance for servicing your water filter, please contact the dealer who installed this system.**

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Contractor Name \_\_\_\_\_ Phone \_\_\_\_\_  
Address \_\_\_\_\_ Email \_\_\_\_\_  
\_\_\_\_\_

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# JOB SPECIFICATION SHEET

MODEL NO. \_\_\_\_\_

**\*WATER TEST AT TIME OF INSTALLATION**

<input type="checkbox"/> Iron (ppm)	<input type="checkbox"/> Hydrogen Sulfide	<input type="checkbox"/> Manganese
<input type="checkbox"/> pH	<input type="checkbox"/> Chlorine	<input type="checkbox"/> Other _____
<input type="checkbox"/> TDS	<input type="checkbox"/> Tannins	<input type="checkbox"/> Other _____

**\*SIZING INFORMATION**

All Water is Filtered Except:

Rear Hose Bib     Front Hose Bib     Kitchen Cold     Toilets     All Cold  
 Other \_\_\_\_\_

\*INSTALLATION DATE \_\_\_\_\_

\*SERIAL NUMBER \_\_\_\_\_

NOTES \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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## GENERAL SPECIFICATIONS

**OPERATING PRESSURES**

Minimum/Maximum ..... 30 psi-120 psi

**OPERATING TEMPERATURES**

Minimum/Maximum ..... 40° - 110° F

**METER**

Accuracy .....	±5%
Flow Rate Range .....	0.25 - 27 GPM
Gallon Range .....	20 - 50,000

**DIMENSIONS**

Drain Line.....	3/4" or 1" NPT
Regenerant Line.....	3/8" Poly Tube

**ELECTRICAL CURRENT DRAW AND VOLTAGE** ..... 0.5A 110v

Compatible with the following regenerants or chemicals: Sodium chloride, potassium permanganate, sodium bisulfite, sodium hydroxide, hydrochloric acid, chlorine and chloramines.

## PRE-INSTALLATION CHECK LIST

**(All electrical & plumbing should be done in accordance to all local codes)**

**Water Pressure:** A minimum of 30 pounds of water pressure (psi) is required for regeneration. Maximum pressure 120 psi.

**Water Quality:** On rural water supplies there is often a problem with sand or sediment in the water. (This problem occasionally occurs in public water supplies.) Sand and sediment may plug the filter, restricting the flow through the media bed. Note: Well and/or pump problems affecting the operation of the filter and repairs are not covered under the warranty.

**Electrical:** A continuous 110 volt/60 cycle current supply is required. Make certain the current supply is uninterrupted and cannot be turned off with another switch. All electrical connections must be connected per local codes. **Surge protection is recommended with all electrical controls.**

**Existing Plumbing:** Condition of existing plumbing must be free from lime and iron build-up. Piping that is built-up heavily

with lime and/or iron must be replaced. If piping is blocked with iron, additional equipment may be needed ahead of the filter to correct the problem.

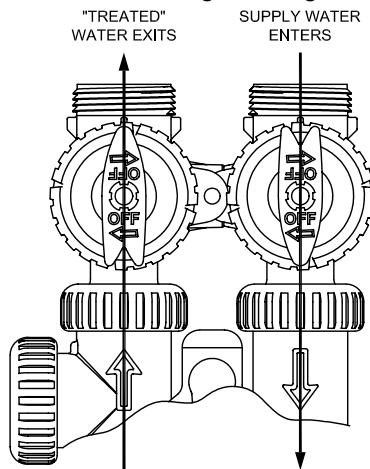
**Drain Line:** The filter should be located close to a drain. Avoid overhead drain lines if possible to prevent back pressure. Overhead drains are not to exceed 8 feet above the floor and no more than 20 feet in length. The pipe size for the drain line should be a minimum of 3/4". Backwash flow rates in excess of 10 gpm or length in excess of 20' require 1" drain line.

**Bypass Valves:** Always provide for the installation of a bypass valve.

**Caution:** Water temperature is not to exceed 110°F; the filter cannot be subject to freezing conditions, or to a vacuum due to loss of pressure (such as a water main break).

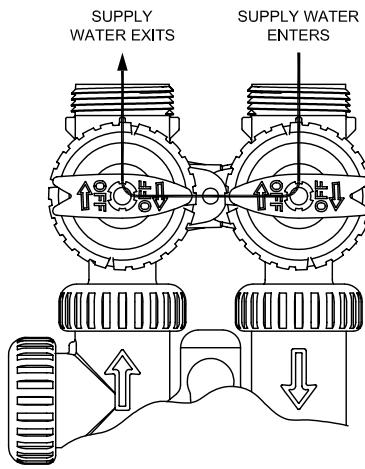
### BYPASS VALVE OPERATION

#### NORMAL OPERATION Softening - Filtering



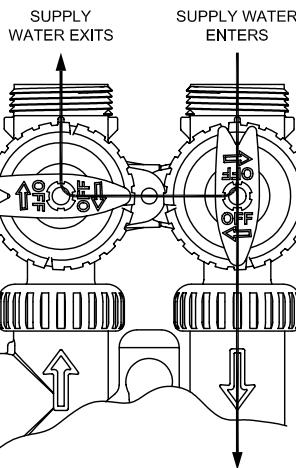
**Figure 1**

#### BYPASS OPERATION



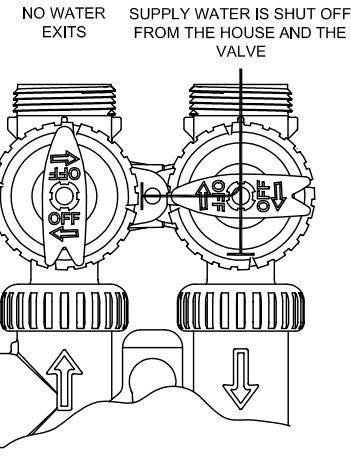
**Figure 2**

#### DIAGNOSTIC MODE



**Figure 3**

#### SHUT OFF MODE



**Figure 4**

# INSTALLATION INSTRUCTIONS

(All electrical & plumbing should be done in accordance to all local codes)

Your new Iron Lazer allows for simple installation and start up. Installation diagrams are provided to assist you. Use of these diagrams and the following procedures will ensure that the system is properly installed.

## Follow all state and local plumbing and electrical codes!

- Do not use vaseline, oils, other hydrocarbon lubricants or spray silicone anywhere. A silicon lubricant may be used on black o-rings but is not necessary. **Avoid any type of lubricants, including silicone, on red or clear lip seals.**
  - Only teflon tape may be used on threads. Teflon tape is not necessary on the nut connection or caps because of radial o-ring seals.
  - **The pipe size for the drain line should be a minimum of 3/4". Backwash flow rates in excess of 10 gpm or length in excess of 20' require 1" drain line.**
1. Place the filter where you want to install it, making sure it is on a clean, level and firm base.
  2. Do all necessary plumbing (Install check valve on inlet to filter, inlet to inlet, outlet to outlet and drain line to drain). The control valve, fittings and/or bypass are designed to accommodate minor plumbing misalignments but are not designed to support the weight of a system or the plumbing.
  3. When assembling the installation fitting package (inlet and outlet), connect the fitting to the plumbing system first and then attach the nut, split ring and o-ring. Heat from soldering or solvent cements may damage the nut, split ring or o-ring. Solder joints should be cool and solvent cements should be set before installing the nut, split ring and o-ring. Avoid getting primer and solvent cement on any part of the

- o-rings, split rings, bypass valve or control valve.
- 4. **A jumper ground wire should be installed between the inlet and outlet pipe whenever the metallic continuity of a water distribution piping system is interrupted. Install grounding strap on metal pipes.**
- 5. The drain connection may be made using either 5/8" poly-tube with nut & insert (see page 21, figure 17) or a 3/4" female adapter. If soldering, joints near the drain must be done prior to connecting the drain line flow control fitting. Leave at least 6" between the drain line control fitting and solder joints when soldering pipes that are connected on the drain line control fitting. Failure to do this could cause interior damage to the drain line flow control fitting.
- 6. When installing a filter system it is common to provide filtered water to some fixtures such as the kitchen cold faucet. This is typically done as a matter of personal preference. In rare occasions it has been noted that the customer may experience some air in the filtered water line on the morning after regeneration. It has proven to be beneficial to plumb the line for filtered-only water fixture in a downward direction before the inlet to the softener (12 inches recommended), then make a reverse turn and go upward toward the fixture. Understanding that air always rises to the highest point in a water system, and it cannot naturally flow downward. Connect inlet of filter to water system supply lines.

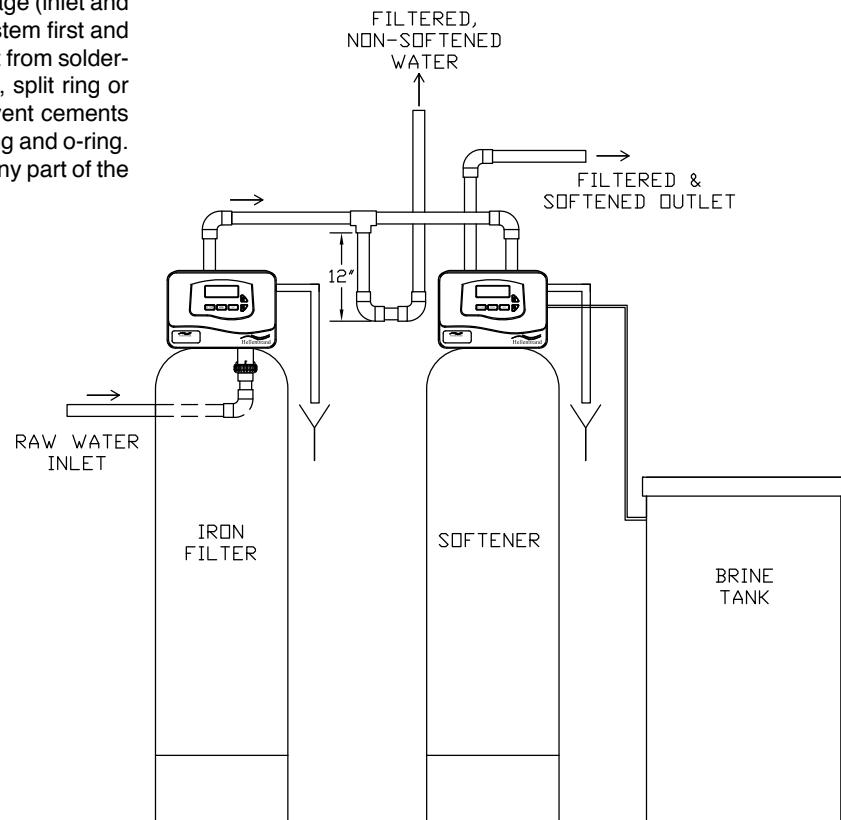
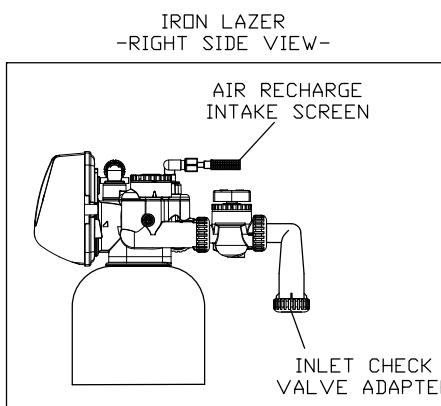


Figure 5

When installing an Iron Lazer system it is common to provide filtered only water to some fixtures such as the kitchen cold faucet. This is typically done as a matter of personal preference. On rare occasions, the customer may experience some air in the filtered water line the morning after regeneration. It has proven beneficial to plumb the line for the filtered only water fixture in a downward direction from the inlet of the softener (12 inches recommended), then make a reverse turn and go upward toward the fixture. Any accumulated air always rises to the highest point in a water system and cannot naturally flow downward.

## Iron Lazer Start Up Instructions

1. Complete all plumbing connections; inlet, outlet and drain line.
2. Place bypass valve in bypass position (see page 4). Turn on main water supply and open a cold filtered faucet to flush piping of any air and/or foreign material. Run until water is clear.
3. Open inlet valve slowly until it is in fully open position. Let water run to drain until clear. Plug unit into 120V outlet and remove cover and plug transformer connection into 4-prong connection on circuit board labeled power. Valve will return to service position.
4. Initiate backwash by holding "REGEN" button down until piston movement is heard. Backwash until water at drain is clear.
5. Let regeneration proceed automatically to fast rinse and air recharge.
6. Push "Set Clock" and use UP and DN arrows to set correct time of day.

## Operating Conditions

**pH** — The pH level of the influent water must be 7.0 or higher for iron oxidation reaction to proceed per the engineering specifications.\*

**Iron** — This system is rated for a maximum of 3.0 ppm of ferrous (clear water) and/or ferric (red water) iron.\*

**Iron Bacteria** — If iron bacteria are present; more frequent service may result, life of the Iron Lazer system may be limited and the system may be unable to properly remove iron. **By properly controlling the iron bacteria with chlorine or other approved methods for bacterial reduction, the Iron Lazer System will function properly. In some instances, continuous chlorination of the water supply may be needed.**

**Hydrogen Sulfide** — Sometimes referred to as "rotten egg" odor. This system is rated for a maximum of 1.0 ppm hydrogen sulfide. Hydrogen sulfide levels vary depending on barometric pressure.\*

**Manganese** — Limit 1.0 ppm; amounts present over 1.0 ppm may gradually prevent iron removal. Note: For optimum manganese reduction, pH should be greater than 8.5.\*

**Organic Matter (Tannins)** — The presence of organic matter such as tannins will prevent the oxidation process of converting the dissolved element, such as iron or manganese, to a nonsoluble precipitate or solid substance. In other words, organics can tie

up the iron preventing filtration. **The presence of organics such as tannins above 0.5 ppm voids any claims for this system to perform as stated above. In some applications, tannin levels below 0.5 ppm or the presence of other organics may hinder the operation of this system.\***

**Chlorine** — The presence of chlorine in the raw water supply ahead of this system should be limited to a maximum of 1.0 ppm free chlorine residual and 0.5 ppm free chlorine or less when fed continuously.

**Total Dissolved Solids (TDS)** — While TDS does not directly affect iron removal, it is a good indicator of potential interference. Most waters have TDS less than 500 and generally present no problems to iron reduction. If any ion becomes excessive, it may cause failure of iron removal.

**A TDS more than 500 ppm voids any claims for this system to perform as stated above.\***

**\*For application parameters outside the specified operation conditions or additional information regarding the listed items, contact your dealer.**

## Specifications

Iron Lazer Models	Filter Tank Size	Media Cu. Ft	Inlet/ Outlet	Max. Service Flow GPM	(1) Backwash Rate GPM
Iron Lazer-10	10"x54"	1.5	1"	4.0	5.3
Iron Lazer-12	12"x52"	2.0	1"	6.0	7.5

(1) Water temps above 60° F will require a higher backwash rate. Consult factory.

# BACKWASH FREQUENCY

## Iron Applications

- 0.3 - 1.0 ppm Iron - Every 3rd Day
- 1.0 - 2.0 ppm Iron - Every Other Day
- 2.0 - 3.0 ppm Iron - Every Day

## Hydrogen Sulfide Applications

- 0.1 - 0.33 ppm Hydrogen Sulfide - Every 3rd Day
- 0.33 - 0.66 ppm Hydrogen Sulfide - Every Other Day
- 0.66 - 1.0 ppm Hydrogen Sulfide - Every Day

## PROGRAMMING

### General Information

The control valve is the "brain" of your water filter. It consists of the valve body and powerhead with solid state microprocessor.

The display panel (see Figure 7) consists of the LCD display and five push buttons which are used in displaying and programming the water filter settings.

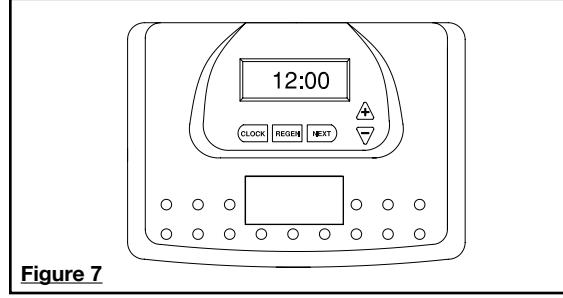


Figure 7

## USER DISPLAYS/SETTINGS

### General Operation

When the system is operating, one of three displays may be shown. Pressing NEXT will alternate between the displays. One of the displays is the current time of day. The second display is one of the following: days to a regen or gallons remaining. Days To A Regen is the number of days left before the system goes through a regeneration cycle. Capacity remaining is the number of gallons that will be treated before the system goes through a regeneration cycle. The third display is current flow in gal/min. The user can scroll between the displays as desired by pushing NEXT or display will scroll automatically.

When water is being treated (i.e. water is flowing through the system) the word "GPM" flashes on left side of display when other than flow rate is displayed.

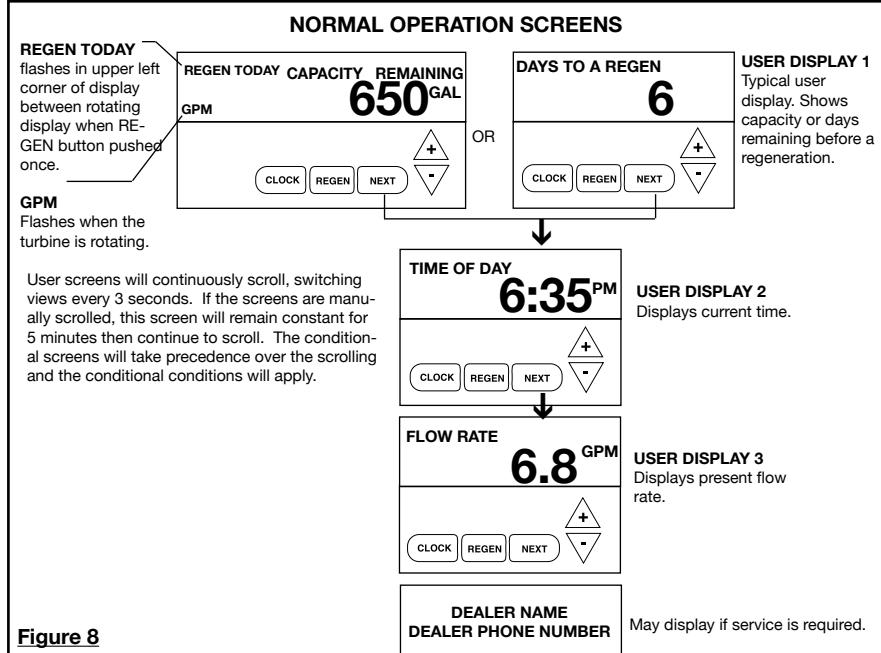


Figure 8

## Regeneration Mode

Typically a system is set to regenerate at a time of low water usage. An example of a time with low water usage is when the household is asleep. If there is a demand for water when the system is regenerating, untreated water will be supplied.

When the system begins to regenerate, the display will change to include information about the step of the regeneration process and the time remaining for that step to be completed. The system runs through the steps automatically and will reset itself to provide treated water when the regeneration has been completed.

Regeneration Step #2  
(shows time remaining in "Backwash" is 8:22)



Figure 11

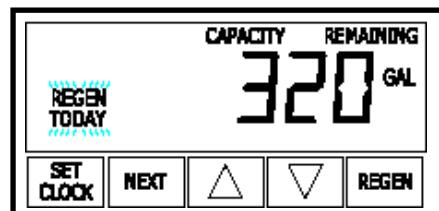


Figure 12

## Manual Regeneration

Sometimes there is a need to regenerate the system, sooner than when the system calls for it, usually referred to as manual regeneration. There may be a period of heavy water usage because of guests or heavy laundry day.

**To initiate a manual regeneration at the preset delayed regeneration time, press and release "REGEN". The words "REGEN TODAY" will flash on the display to indicate that the system will regenerate at the preset delayed regeneration time. If you pressed the "REGEN" button in error, pressing the button again will cancel the request.**

**To initiate a manual regeneration immediately, press and hold the "REGEN" button for three seconds. The system will begin to regenerate immediately. The request cannot be cancelled. You must cycle all the way through the cycles to make it stop. PLEASE NOTE: This will reset the meter.**

## FILTERING REGENERATION CYCLES

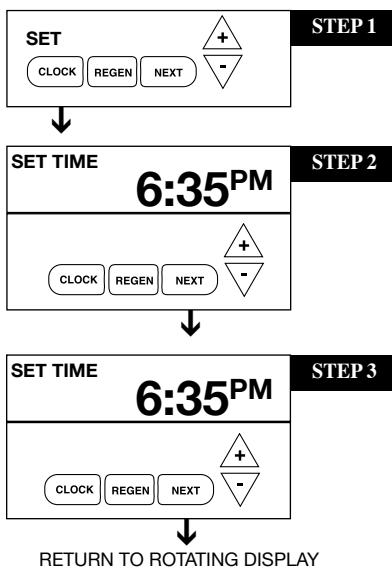
No Regeneration Chemical Used	Factory Settings
1st Cycle: Backwash	12 minutes
2nd Cycle: Rinse	6 minutes
3rd Cycle: Air Recharge	5 minutes - 10" 8 minutes - 12" 13 minutes - 13"

## WATER FILTER DISINFECTION

The materials of construction of your water filter will not support bacterial growth nor will these materials contaminate a water supply. However, the normal conditions existing during shipping, storage, and installation indicate the advisability of disinfecting a filter after installation, before the equipment is used to treat potable water. In addition, during normal use a filter may become fouled with organic matter or in some cases, with bacteria from the water supply.

Every water filter should be disinfected after installation, some will require periodic disinfection during their normal life. **Disinfection:** Disinfection methods kill most of harmful bacteria found in water which may cause illness. Disinfection methods may vary depending on what media is contained in the filter. Contact your dealer for specific instructions.

## SET TIME OF DAY



$\triangle$  = ▲ Up Arrow     $\nabla$  = ▼ Down Arrow

**Step 1** - Press SET CLOCK.

**Step 2** - Current Time (**hour**): Set the hour of the day using ▲ or ▼ buttons. AM/PM toggles after 12. Press NEXT to go to step 3.

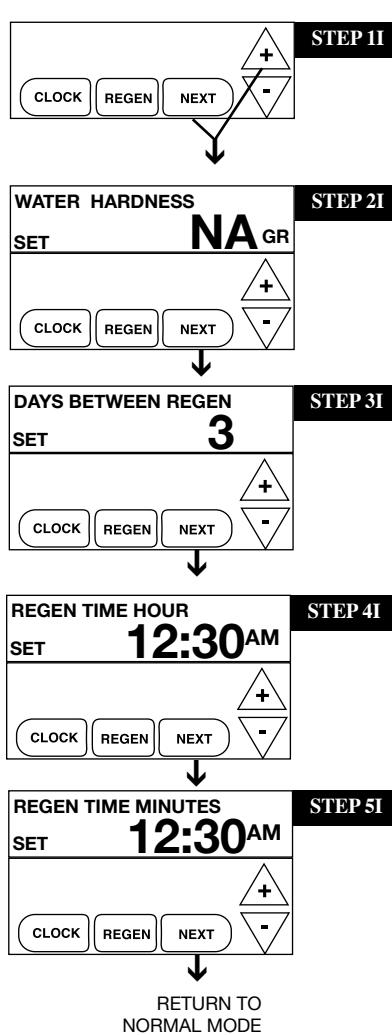
**Step 3** - Current Time (**minutes**): Set the minutes of day using ▲ or ▼ buttons. Press NEXT to exit Set Clock. Press REGEN to return to previous step.

**Power Loss** - Lithium battery on circuit board provides up to 2 years of time clock backup during power outages. If the power is out when battery is depleted, only time of day needs to be reset, all other values are stored in non-volatile memory. When time of day is flashing, replace lithium coin type 2032 battery.

Battery back-up feature will be activated after 24 hours of power.

Do not forget to reset for daylight savings time.

## INSTALLER PROGRAMMING



$\triangle$  = ▲ Up Arrow     $\nabla$  = ▼ Down Arrow

**Step 1I** - Press NEXT and ▲ simultaneously for 3 seconds.

This display may not appear on standard filtering mode.

**Step 2I - Hardness:** Not Applicable (nA) Press NEXT to go to Step 3.

**Step 3I - Day Override:** This sets the number of days between regenerations. If value set to "oFF" regeneration initiation is based solely on gallons used. If value is set as a number (allowable range from 1 to 28) a regeneration initiation will be called for on that day even if sufficient number of gallons were not used to call for a regeneration. Set Day Override using ▲ or ▼ buttons: **Factory setting is 3 days.**

- number of days between regeneration (1 to 28); or
- "oFF"

Press NEXT to go to step 4. Press REGEN to return to previous step.

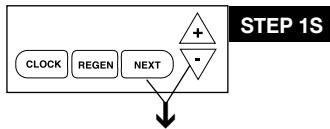
**Step 4I - Regeneration Time (hour):** Set the hour of day for regeneration using ▲ or ▼ buttons. AM/PM toggles after 12. **The factory setting time is 12:00 a.m.** This display will show REGEN IMMEDIATE ON ZERO GAL if system is set for immediate regeneration. Press NEXT to go to step 5I. Press REGEN to return to previous step.

**Note:** When installing this unit as part of a multi unit parallel system the regen time of day must be adjusted to prevent multiple units from regenerating at the same time.

**Step 5I - Regeneration Time (minutes):** Set the minutes of day for regeneration using ▲ or ▼ buttons. This display will not be shown if system is set for immediate regeneration. Press NEXT to exit Installer Displays/Settings. Press REGEN to return to previous step.

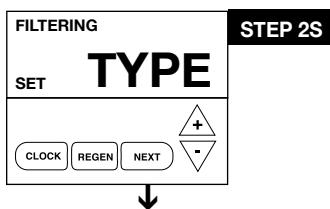
## FILTER SETUP

 = ▲ Up Arrow     = ▼ Down Arrow



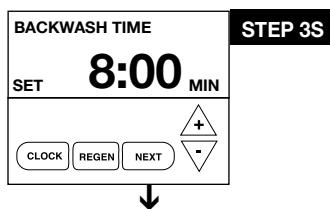
STEP 1S

**STEP 1S** – Press NEXT and ▼ simultaneously for 3 seconds. If screen in Step 2S does not appear in 5 seconds the lock on the valve is activated.



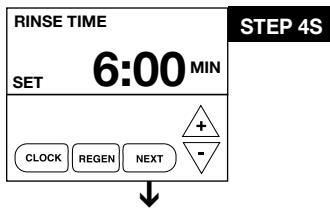
STEP 2S

**STEP 2S – Select between softening or filtering.** A flashing "SOFTENING" or "FILTERING" will appear. Choose FILTERING using ▼ or ▲ button. **Factory setting is Filtering.** Press NEXT to go to Step 3S. Press REGEN to exit Filter System Setup.



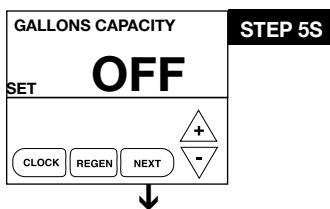
STEP 3S

**STEP 3S – Select the time for the first cycle** (which in this example is BACKWASH) using the ▼ or ▲ button. Press NEXT to go to Step 4S. Press REGEN to return to previous step.



STEP 4S

**STEP 4 S – Select the time for the second cycle** (which in this example is RINSE) using ▼ or ▲ button. Press NEXT to go to Step 5S. Press REGEN to return to the previous step.

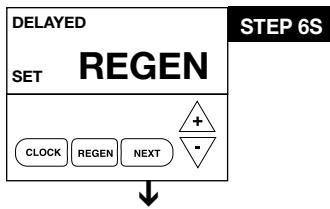


STEP 5S

**STEP 5 S – Set Gallons Capacity** using ▼ or ▲ button. If value is set to:

- “oFF” regeneration will be based solely on the day override set (see Installer Display/Settings Step 3, page 6 or
- as a number of gallons (allowable range 20 to 250,000) regeneration will be based on the value specified.

Increment increase is 20 for the range 20 to 2000, 100 for the range of 2000 to 10,000 and 500 for the range of 10,000 to 50,000 and 2000 for range of 50,000 to 250,000. Press NEXT to go to Step 6S. Press REGEN to return to previous step.

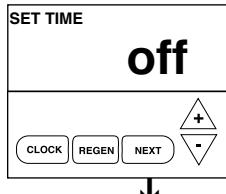


STEP 6S

**STEP 6 S – Set Regeneration Time Options** using the ▼ or ▲ button. If value is set to:

- “DELAYED” means regeneration will occur at the preset time;
- “IMMEDIATE” means regeneration will occur immediately when the gallons capacity reaches 0 (zero); or
- “DELAYED + IMMEDIATE” means regeneration will occur at one of the following:
  - the preset time when the gallons capacity falls below the reserve or the specified number of days between regenerations is reached, whichever comes first; or
  - immediately after 10 minutes of no water usage when the gallon capacity reaches 0 (zero).

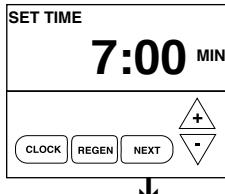
**Factory Setting is Delayed.** Press NEXT to go to Step 7S. Press REGEN to return to previous step.



### STEP 7S

**STEP 7 S – Set Relay to energize by time or gallons or OFF by using ▼ or ▲ buttons. A relay can be used to operate a chemical feed pump or solenoid. The choices are:**

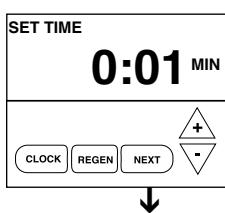
- **Relay Set on Time** - Relay activates after set number of minutes after start of regeneration. Start of regeneration is defined by first backwash cycle, dn brine or up brine, whichever is first. Relay deactivates after set time.
- **Relay Set on Gallons** - Relay activates every set number of gallons while in service and deactivates after set time
- **Relay Set on Regen Gallons** - Relay activates every set number of gallons through meter in service and during regeneration.
- **Off** - If off is selected, Steps 8S or 9S will not be shown. **Factory setting = OFF**. Press NEXT to go to step 8 or 9S for relay settings, or 11S if OFF selected.



### STEP 8S

**STEP 8 S – If off was selected in previous step, this screen does not appear.**

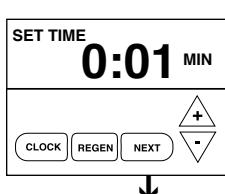
**If Time chosen to Energize Relay**, use up and down arrows to set # of minutes AFTER START OF REGEN to close relay. Press NEXT.



### STEP 9S

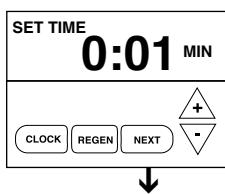
**STEP 9 S – If Time or off was selected in previous steps, this screen does not appear.**

**If Gallons Chosen to Energize Relay**, use up and down arrows to set # of gallons per relay closure. Range = 1-50 gallons. Press NEXT.



### STEP 10S

**STEP 10 S – If Regen Gallons chosen to energize relay.** Relay activates every set number of gallons through meter in service and during regeneration. Use up and down arrows to set the number of gallons per relay closure. Range = 1 - 50 gallons. Press NEXT.

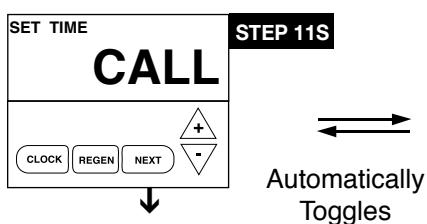


### STEP 11S

**STEP 11 S – Set duration between scheduled service calls.**

Use UP & DOWN arrows to select in 1/4 year increments from 1/4 to 9.75 years or OFF.

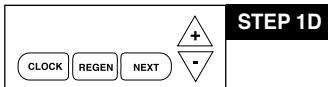
**Factory Setting = OFF.**



# DIAGNOSTICS

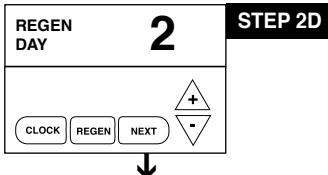
 = ▲ Up Arrow     = ▼ Down Arrow

**Reset Diagnostic Values:** Hold    NEXT/DOWN buttons for 3 seconds, then hold   UP/DOWN buttons for 3 seconds.



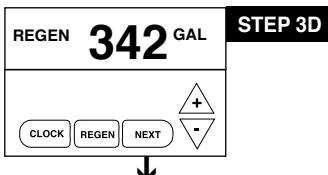
**STEP 1D**

**STEP 1D – Press ▼ or ▲ simultaneously for three seconds.** If screen in step 2D does not appear in 5 seconds the lock on the valve is activated.



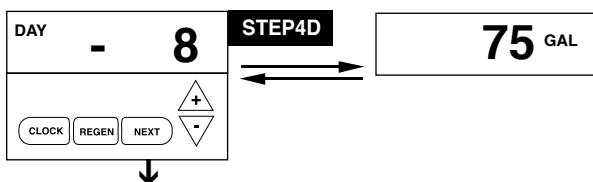
**STEP 2D**

**STEP 2D – Days, since last regeneration:** This display shows the days since the last regeneration occurred. Press the NEXT button to go to Step 3D. Press REGEN to exit Diagnostics.



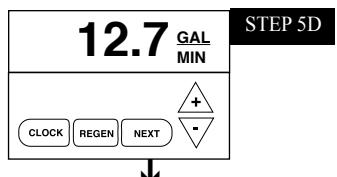
**STEP 3D**

**STEP 3D – Volume, since last regeneration:** This display shows gallons of water that has been treated since the last regeneration. This display will equal zero if a water meter is not installed. Press the NEXT button to go to Step 4D. Press REGEN to return to previous step.



**STEP 4D**

**STEP 4D – Volume of water used, 63-day usage history:** This display shows day 1 (for yesterday) and flashes the volume of water treated yesterday. Pressing the ▲ button will show day 2 (which would be the day before yesterday) and flashes the volume of water treated on that day. Continue to press the ▲ button to show the volume of water treated for the last 63 days. If a regeneration occurred on the day the word "REGEN" will also be displayed. This display will show dashes if a water meter is not installed. Press the NEXT button at any time to go to Step 5D. Press REGEN to return to the previous step.



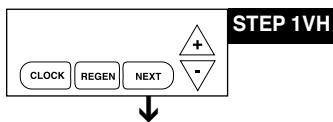
**STEP 5D**

**STEP 5D – Flow rate, maximum last seven days:** The maximum flow rate in gallons per minute that occurred in the last seven days will be displayed. This display will equal zero if a water meter is not installed. Press the NEXT button to exit Diagnostics. Press REGEN to return to the previous step.

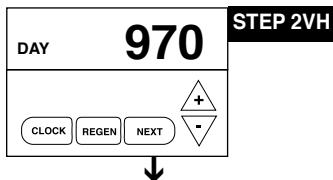
RETURN TO NORMAL MODE

# VALVE HISTORY

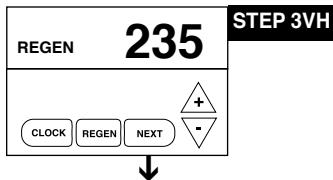
(Can Not Be Reset)



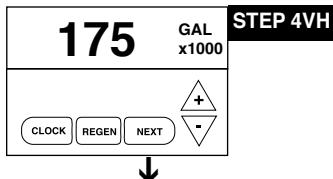
**STEP 1VH** – Press ▼ and ▲ simultaneously for three seconds and release, then press ▼ and ▲ simultaneously and release. If screen in step 2VH does not appear in 5 seconds the lock on the valve is activated.



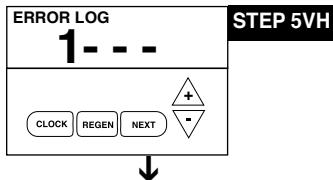
**STEP 2VH – Days, total since start-up:** This display shows the total days since startup. Press the NEXT button to go to Step 3VH. Press REGEN to return to previous step.



**STEP 3VH – Regenerations, total number since start-up:** This display shows the total number of regenerations that have occurred since startup. Press the NEXT button to go to Step 4VH. Press REGEN to return to previous step.



**STEP 4 VH – Volume, total used since start-up:** This display shows the total gallons treated since startup. This display will equal zero if a water meter is not installed. Press NEXT button to exit Valve History. Press REGEN to return to previous step.



**STEP 5VH – Error Log history:** up to 10 errors. Press ▼ and ▲ buttons to view each recorded error. If no errors have occurred " - - - " is displayed. Press NEXT button to exit Valve History.

RETURN TO NORMAL MODE

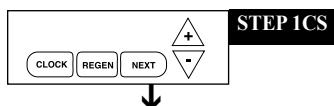
# CYCLE SEQUENCE

Cycle Sequence instructions allows the operator to set the order of the cycle. The Softener System Setup allows the operator to set how long the cycles will last. The operator may choose up to 9 cycles in any order.

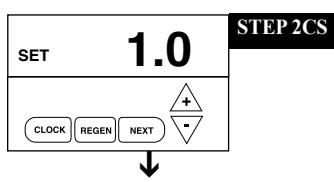
END must be used as the last cycle option. The SOFTENING cycle should only be used in brine prefill applications to allow salt to dissolve.

The following is an example of how to set a valve so that when regeneration is initiated, BACKWASH occurs first, dn BRINE occurs second, RINSE occurs third, and FILL occurs fourth.

Cycle Options		
BACKWASH	DN BRINE	FILL
RINSE	FILTERING	END

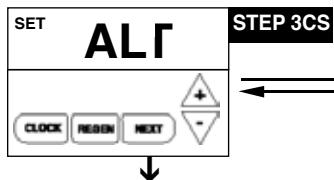
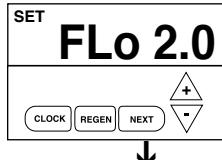


**STEP 1 CS** – Press NEXT and ▼ simultaneously until display changes, then release. Again press NEXT and ▼ simultaneously and release. If screen in step 2CS does not appear in 5 seconds the lock on the valve may be activated.



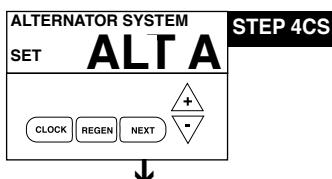
**STEP 2 CS – Meter Size.** Use the ▲ or ▼ to select 1 for 1" Iron Lazer valve. Press NEXT to go to Step 3CS. Press REGEN to exit cycle sequence. Options include 1.25", 1.5", 2.0L" and 2.0"

If 2.0L or 2.0 selected in Step 2CS, select flow meter size by using ▲ and ▼ arrows to select 2" meter, Flo2.0 for 1.5" meter, select Flo1.5



**STEP 3CS** – Use the ▲ or ▼ to select one of the following:

- **Twin Alternating System** – Select Alt A or Alt B, See instructions in Step 4CS; or
- **No Hard Water Bypass During Regeneration** – See instructions in Step 5CS.
- **Separate Source Enabled** - Allows control to have a separate water source during the regeneration cycle. See instructions in Step 6CS.
- **OFF; Factory Setting is OFF** - Press NEXT to go to Step 7CS.



**STEP 4CS – Twin Alternating System** – Allows automatic alternation between two units to provide filtered water 24 hours a day.

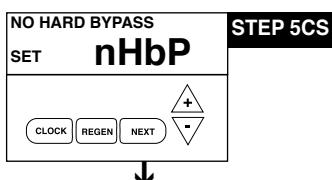
Use ▲ or ▼ buttons to select ALT A or ALT b

Select ALT A for the control valve that has the two-pin connector labeled MAV DRIVE connected to the alternator valve.

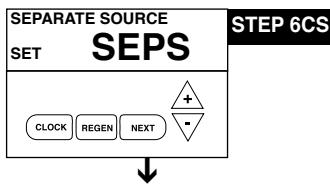
Select ALT b for the control valve that will be connected via three-prong connector labeled INTERCONNECT. Must use 3-wire interconnect cable. Press NEXT to go to Step 5CS.

For Alternating System, change programming:

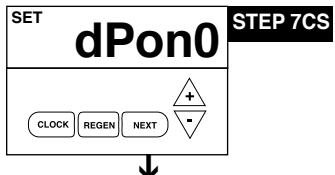
- Set filter, with volume capacity in GALLONS and select Regeneration Time Option "on 0" and select DAYS BETWEEN REGEN as desired.
- For complete programming, see Twin Alternating MAV manual.



**STEP 5CS – No Hard Water Bypass Enabled** - Selection requires that a connection to a Motorized Alternator Valve (MAV) is made to the two pin-connector labeled ALTERNATOR MAV DRIVE located on the printed circuit board. The MAV will be driven closed before the first regeneration cycle that is not FILL or SOFTENING or FILTERING, and be driven open after the last regeneration cycle that is not FILL. NOTE: If the control valve enters into an error state during regeneration mode, the no hard water bypass valve will remain in its current state until the error is corrected and reset. Press NEXT to go to Step 9CS.



**STEP 6CS – Configuring the Control Valve for Separate Source Operation** - Select Separate Source Enabled for control operation. For separate source operation, the three wire connector is not used. Selection requires that a connection to a MAV is made to the two pin connector labeled ALTERNATOR MAV DRIVE located on the printed circuit board. The C port of the MAV must be connected to the valve inlet and the A port connected to the separate source used during regeneration. The B port must be connected to the feed water supply. When set to Separate Source Enabled the MAV will be driven closed before the first regeneration cycle, and be driven to open after the last regeneration cycle. NOTE: If the control valve enters into an error state during regeneration mode, the MAV will remain in its current state until the error is corrected and reset. Press NEXT to go to Step 7CS.



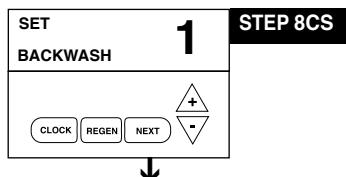
**STEP 7CS – Select differential pressure switch to trigger REGEN.** Selection only matters if a connection is made to the two pin connector labeled DP SWITCH located on the printed circuit board. Use ▲ or ▼ arrows to select. Following is an example of the options:

dPon0 - If the dP switch is closed for an accumulative time of 2 minutes, a regeneration will occur immediately. Factory Setting is dPon0.

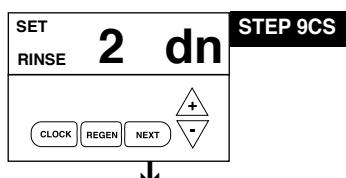
dPdEL - If the dP switch is closed for an accumulative time of 2 minutes, a regeneration will occur at the scheduled regeneration time.

HoLd - If the dP switch is closed, a regeneration will be prevented from occurring.

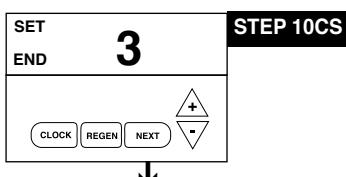
**Factory setting is dPoff.** Press NEXT to go to Step 8CS. Press REGEN to return to previous step.



**STEP 8CS – First Regeneration Cycle.** Press ▼ or ▲ buttons to select, in this example it is backwash. Press NEXT to go to Step 9CS. Press REGEN to return to previous step.



**STEP 9CS – Second Regeneration Cycle.** Press ▼ or ▲ buttons to select, in this example it is rinse. Press NEXT to go to Step 10CS. Press REGEN to return to previous step.



**STEP 10CS – Third Regeneration Cycle.** Press ▼ or ▲ buttons to select, in this example it is End. Press NEXT to go to an "END" cycle must be programmed. Press REGEN to return to previous step.

# TROUBLE SHOOTING

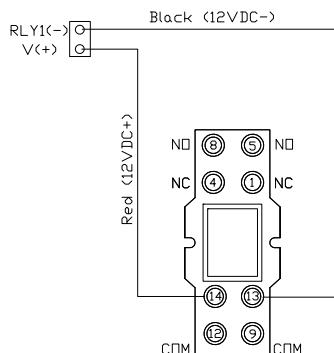
PROBLEM	CAUSE	CORRECTION
<p>After resolving the cause of any error code or any service valve, press NEXT &amp; REGEN simultaneously for 5 seconds or disconnect power supply for 5 seconds at PC board and reconnect to resynchronize software with piston position.</p>		
<b>VALVE ERROR CODES</b>		
<b>Error Code 101</b> - Unable to recognize start of regeneration	A1. Control not reading piston position	<p>A1. Resynchronize software with piston position by pressing start of regeneration NEXT and REGEN buttons simultaneously for 5 seconds, until screen changes. Initiate regeneration to verify function by pressing and holding REGEN button until regeneration initiates, step through regeneration modes by pushing REGEN button each time motor stops.</p> <p>A2. Verify motor connection to PC board; motor wires intact and motor fully inserted to engage pinion.</p> <p>A3. Verify correct assembly; PC board snapped onto drive bracket and wires are in backplate guides and drive bracket snapped onto backplate. Verify three drive gears are in place on drive bracket.</p>
<b>Error Code 102</b> - Unexpected stall	<p>B1. Mechanical Binding</p> <p>B2. Buildup on piston</p> <p>B3. Improper voltage being delivered to board</p>	<p>B1a. Check for any foreign material in stack assembly impeding piston movement and remove; verify seals intact and in place, if not, replace stack assembly and piston.</p> <p>B1b. Check for incorrect assembly, drive bracket not snapped into place, motor pushed inside of barrel of drive bracket (black gear on motor end should be flush with end of shaft).</p> <p>B1c. Drive gears unable to rotate freely - replace gear(s) if not rotating freely.</p> <p>B2. Clean with soft cloth and vinegar, or replace piston</p> <p>B3. Motor unable to move piston, check voltage is present on 12V DC motor at start of regeneration modes. Transformer should provide 12 volts when plugged into outlet and not attached to board - if not replace transformer</p>
<b>Error Code 103</b> - Motor ran too long, timed out trying to reach next position	C1. High drive forces on piston	<p>C1. Loosen drive cap gear 1/4 turn</p> <p>C2. Address high drive forces</p> <p>C3. Motor failure during regeneration-replace motor</p>
<b>Error Code 104</b> - Motor ran too long, timed out trying to reach home position	D1. Piston unable to reach home position	<p>D1. Incorrect assembly; check drive bracket is correctly seated and snapped into place on backplate, wires outside of guides on backplate can impede drive bracket from correct position.</p> <p>D2. Check PC board is seated on posts and snapped into place on drive bracket</p> <p>D3. Drive gear labels dirty or missing, missing or broken gear, replace as needed</p>
<p><b>MAV ERROR CODES</b></p> <p>After resolving any MAV error or servicing MAV, resynchronize software with piston positioning by pressing NEXT and REGEN buttons simultaneously for 5 seconds or disconnecting power from PC board for 5 seconds and reconnecting.</p>		
<p><b>ALTERNATING MAV DRIVE - ERROR CODES 106 &amp; 107</b></p>		
<b>Error Code 106</b> - Alternating MAV ran too long		<p>A1. Control valve is programmed for alternating or as NHWB without having MAV connected to board. Reprogram valve to proper setting or connect MAV to alternating MAV drive on PC board</p> <p>A2. MAV motor not fully engaged with gears</p> <p>B1. Open MAV and check for foreign material on stack assembly, remove if present, verify seals intact and in place. If not, replace stack assembly</p> <p>B2. Drive gear should spin freely-replace if necessary</p>
<b>Error Code 107</b> - Alternating MAV stalled	B. Mechanical Binding	
<p><b>AUXILIARY MAV DRIVE - ERROR CODES 116 &amp; 117</b></p>		
<b>Error Code 116</b> - Auxiliary MAV ran to long		<p>A1. Control valve is programmed for auxiliary MAV without having MAV connected to board. Reprogram valve to proper setting or connect MAV to two-pin connection labeled auxiliary drive on PC board</p> <p>A2. MAV motor not fully engaged with gears</p> <p>B1. Open MAV and check for foreign material on stack assembly, remove if present, verify seals intact and in place. If not, replace stack assembly</p> <p>B2. Drive gear and reducing gears should spin freely, replace if necessary</p>
<b>Error Code 117</b> - Auxiliary MAV stalled		
	B2. Mechanical Binding	

# TROUBLE SHOOTING

PROBLEM	CAUSE	CORRECTION
1. Control valve stalled in regeneration	<ul style="list-style-type: none"> <li>A. Motor not operating</li> <li>B. No electric power at outlet</li> <li>C. Defective transformer</li>   <li>D. Defective PC board</li> <li>E. Broken drive gear or drive cap assembly</li> <li>F. Broken piston retainer</li> <li>G. Broken main or regenerant piston</li> </ul>	<ul style="list-style-type: none"> <li>A. Replace Motor</li> <li>B. Repair outlet or use working outlet</li> <li>C. Should provide 12 volts when plugged into outlet, if not, replace transformer</li>   <li>D. Replace PC board</li> <li>E. Replace drive gear or drive cap assembly</li> <li>F. Replace drive cap assembly</li> <li>G. Replace main or regenerant piston</li> </ul>
2. Blank or incomplete LED display	<ul style="list-style-type: none"> <li>A. Transformer unplugged</li> <li>B. No electric power at outlet</li> <li>C. Defective transformer</li>   <li>D. Short in meter</li>   <li>E. Check battery, should be greater than 3 volts</li> <li>F. Defective PC board</li> </ul>	<ul style="list-style-type: none"> <li>A. Connect to power</li> <li>B. Repair outlet or use working outlet</li> <li>C. Should provide 12 volts when plugged into outlet, if not, replace transformer</li>   <li>D. Unplug meter from PC board, if LED lights appropriately, replace meter assembly.</li> <li>E. Replace battery if less than 3 volts</li> <li>F. Replace PC board</li> </ul>
3. Control does not display correct	<ul style="list-style-type: none"> <li>A. Power outage &gt; 2 years time of day</li> <li>B. Power outage &lt; 2 years, time of day flashing, battery depleted</li> </ul>	<ul style="list-style-type: none"> <li>A. Reset time of day, replace lithium coin type battery on circuit board</li> <li>B. Reset time of day, replace lithium coin type battery on circuit board</li> </ul>
4. No "filtering" display when water is flowing	<ul style="list-style-type: none"> <li>A. Bypass valve in bypass position</li> <li>B. Meter connection disconnected</li> <li>C. Restricted/stalled meter turbine</li>   <li>D. Defective meter</li> <li>E. Defective PC board</li> </ul>	<ul style="list-style-type: none"> <li>A. Put bypass valve in service position</li> <li>B. Connect meter to PC board</li> <li>C. Remove meter and check for rotation, clean foreign material</li> <li>D. Replace meter</li> <li>E. Replace PC board</li> </ul>
5. Control valve regenerates at wrong time of day	<ul style="list-style-type: none"> <li>A. Power outages</li> <li>B. Time of day not set correctly</li> <li>C. Time of regeneration incorrect</li> <li>D. Control valve set at "on 0" (immediate regeneration)</li> <li>E. Control valve set at NORMAL + on 0</li> </ul>	<ul style="list-style-type: none"> <li>A. Reset control valve to correct time of day</li> <li>B. Reset to correct time of day</li> <li>C. Reset regeneration time</li> <li>D. Check control valve set-up procedure regeneration time option</li> <li>E. Check control valve set-up procedure regeneration time option</li> </ul>

# RELAY TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTION
18. Relay does not energize		
A. Relay driver programmed on "Time"	<ul style="list-style-type: none"> <li>A. Programmed incorrectly</li> <li>B. Defective relay, See figure below</li> <li>C. Defective PC Board</li> <li>D. Faulty wire connections between PC board and relay</li> </ul>	<ul style="list-style-type: none"> <li>A. Reprogram, see page 11</li> <li>B. Replace Relay</li> <li>C. Replace PC Board</li> <li>D. Check and repair wire connections</li> </ul>
B. Relay driver programmed on "Gallons"	<ul style="list-style-type: none"> <li>A. Programmed incorrectly</li> <li>B. Faulty meter connection</li> <li>C. Defective relay, See figure below</li> <li>D. Defective PC Board</li> <li>E. Faulty wire connections between PC board and relay</li> </ul>	<ul style="list-style-type: none"> <li>A. Reprogram, see page 11</li> <li>B. Repair or replace meter assembly</li> <li>C. Replace Relay</li> <li>D. Replace PC Board</li> <li>E. Check and repair wire connections</li> </ul>
19. Relay energized during regeneration	<ul style="list-style-type: none"> <li>A. Relay programmed as "on REGEN gallons"</li> </ul>	<ul style="list-style-type: none"> <li>A. Reprogram, see page 11</li> </ul>

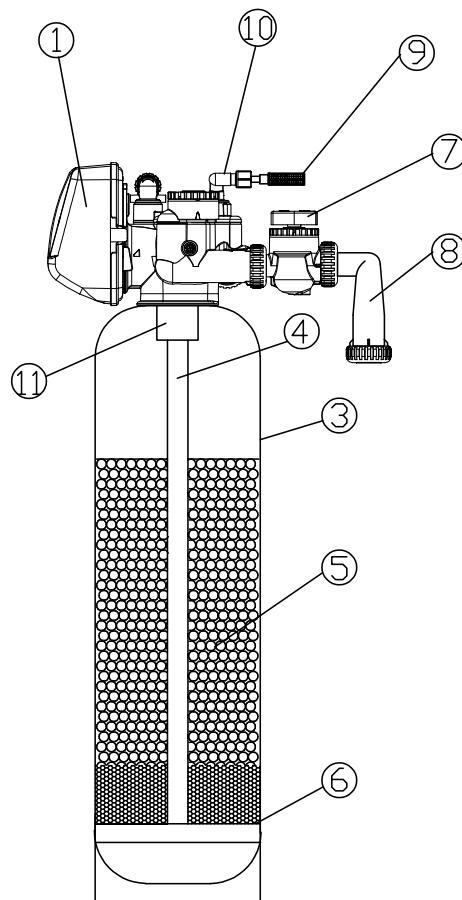


### Relay operation while in error modes

1. Relays should turn off immediately whenever a Valve Error occurs.
2. Relays should remain on and continue to operate as programmed if a MAV Error (106/107 or 116/117) occurs and the valve has already entered regen.
3. Relays should remain off, and not operate as programmed, if a MAV Error (106/107 or 116/117) occurs and the valve has not entered regen.

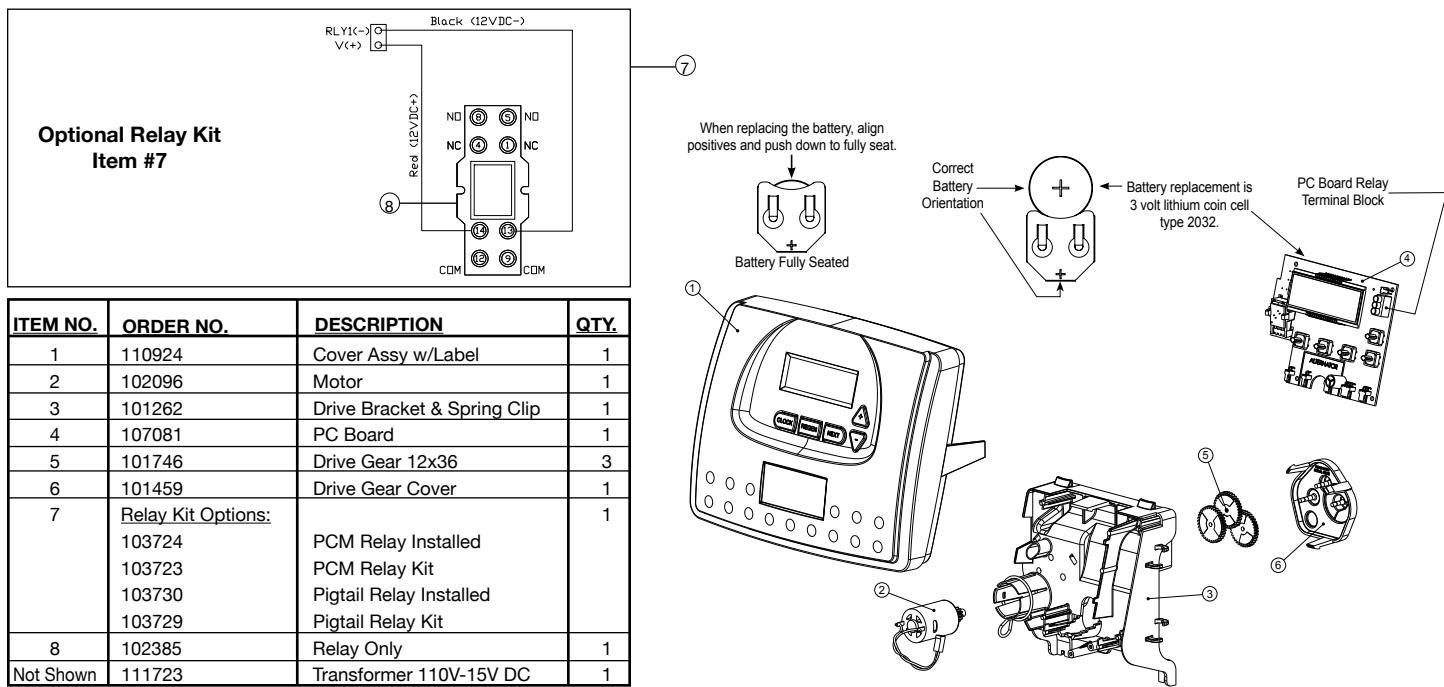
## IRON LAZER

<b>Item</b>	<b>Description</b>	<b>Qty</b>	<b>Part #</b>
1	Metered Control	1	104295, specify flow control
3&4	Mineral Tank Assembly		
	Iron Lazer 1054 Filter Tank	1	110563
	Iron Lazer 1252 Filter Tank	1	110564
5	Filter Media	1	109285 Iron Lazer-10 Rebed 109286 Iron Lazer-12 Rebed
6	Plate Distributor - (Part of Vortech Tank)		
7	Bypass Valve	1	101325
8	Inline Check Valve Kit	1	104174 (includes 90° vertical adapter & inline check valve)
9	Air Recharge Intake Screen	1	109038
10	Internal Check Valve Elbow Assy	1	110822
11	Blocker, Air WS1 CV 1.050	1	112460



Compatible with the following regenerants or chemicals: Sodium chloride, potassium permanganate, sodium bisulfite, sodium hydroxide, hydrochloric acid, chlorine and chloramines. For specific regeneration systems, contact factory.

## FRONT COVER AND DRIVE ASSEMBLY



After completing any valve maintenance involving the drive assembly or the drive cap assembly and pistons, press and hold NEXT and REGEN buttons for 3 seconds or unplug power source jack from the printed circuit board (black wire) and plug back in. This resets the electronics and establishes the service piston position. The display should flash all wording, then flash the software version (ex: 214) and then reset the valve to the service position.

Figure 14

## DRIVE CAP ASSEMBLY, DOWNFLOW PISTON, REGENERANT PISTON AND SPACER STACK ASSEMBLY

ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102548	Spacer Stack Assy	1
2	101613	Drive Cap Assy.	1
3	102167	O-Ring 228 -Drive Cap Assy.	1
4a	102292	Piston Downflow Assy.	1**
4b	102297	Piston Upflow Assy.	1
5	102296	Regenerant Piston	1
6	102192	O-ring 337-tank	1
7	102165	O-ring - Distributor Tube	1
8	101189	Back Plate	1
9	102892	Service Wrench - Not Shown	1

\*102292 is labeled with DN and 102297 is labeled with UP.

Note: The regenerant piston is not used in backwash only applications.

\*\*Standard Option.

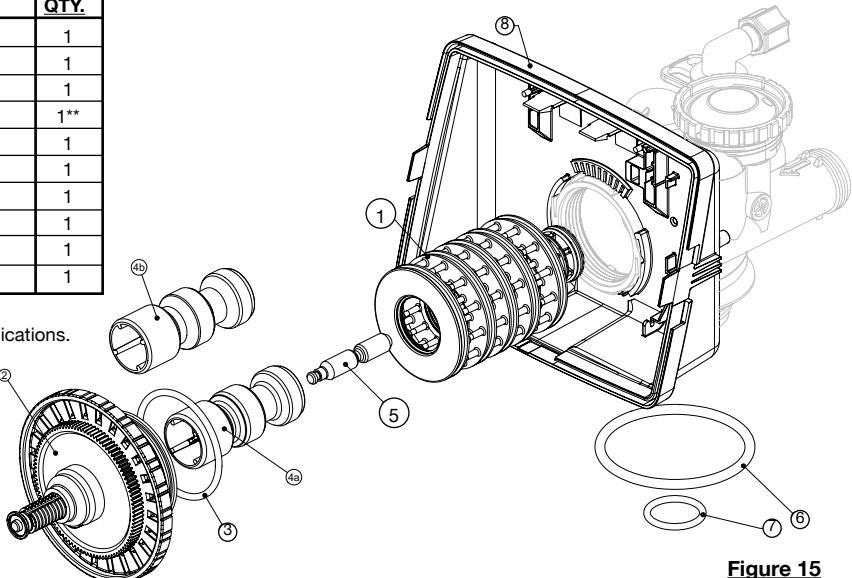


Figure 15

Do not use vaseline, oils, other hydrocarbon lubricants or spray silicone anywhere. A silicone lubricant may be used on black o-rings but is not necessary. **Avoid any type of lubricants, including silicone, on red or clear lip seals.**

After completing any valve maintenance involving the drive assembly or the drive cap assembly and pistons, press and hold NEXT and REGEN buttons for 3 seconds or unplug power source jack from the printed circuit board (black wire) and plug back in. This resets the electronics and establishes the service piston position. The display should flash all wording, then flash the software version (ex: 214) and then reset the valve to the service position.

# INJECTOR CAP, INJECTOR SCREEN, INJECTOR, PLUG AND O-RING

ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	101375	Injector Cap	1
2	102159	O-ring 135	1
3	102457	Injector Screen	1
4	102319	Injector Assy. Z Plug-Filter	1
5	101825 101826 101827 101828 101829 101830 101831 101832 101833 101834 <b>101835</b>	Injector Assy. A Black Injector Assy. B Brown Injector Assy. C Violet Injector Assy. D Red Injector Assy. E White Injector Assy. F Blue Injector Assy. G Yellow Injector Assy. H Green Injector Assy. I Orange Injector Assy. J Light Blue <b>Injector Assy K Light Green</b>	1
Not Shown	106767	O-ring 011	*
Not Shown	106768	O-ring 013	*

\* The injector plug and the injector each contain one 011 (lower) and 013 (upper) o-ring.

Note: For upflow position, injector is located in the up hole and injector plug in the down hole. For a filter that only backwashes injector plugs are located in both holes.

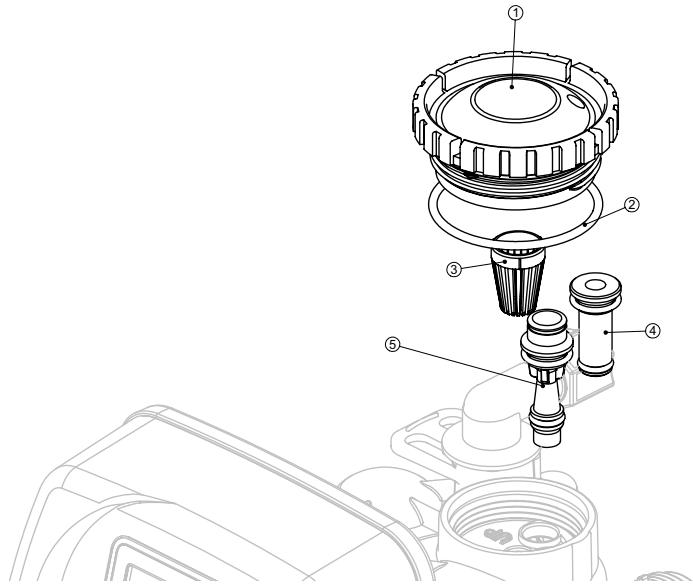
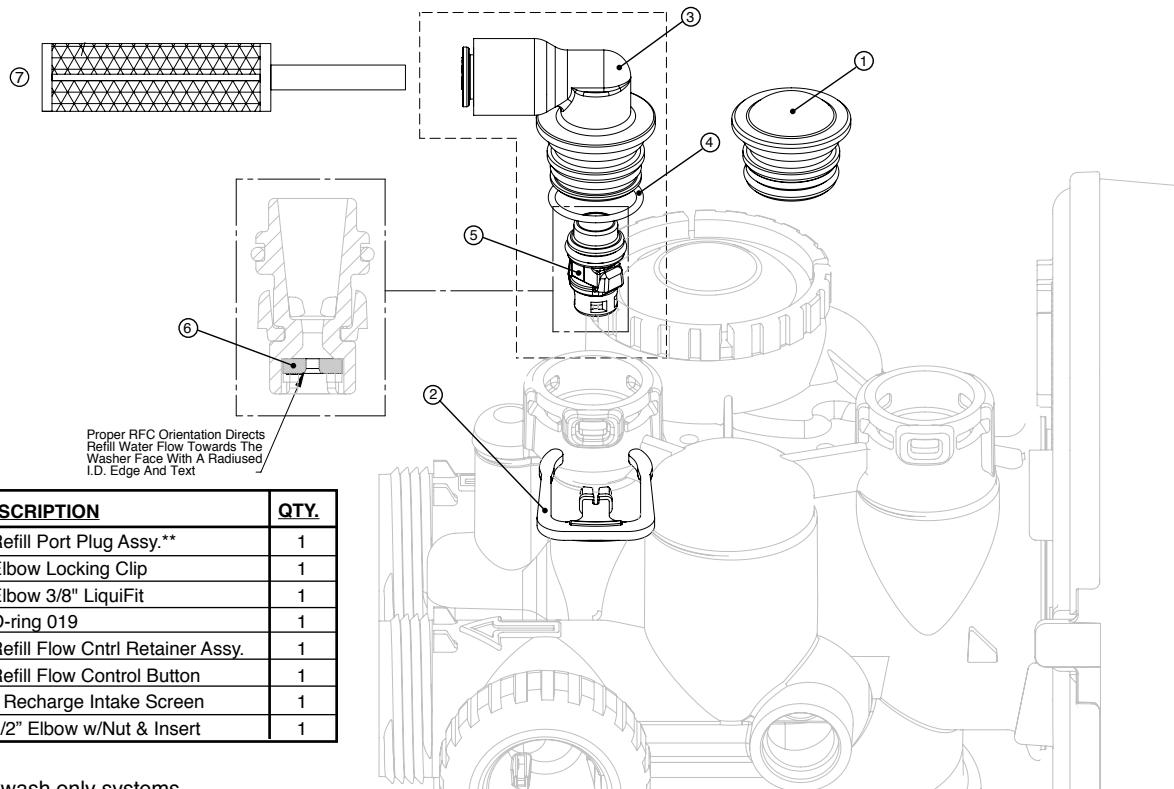


Figure 15

The nuts and caps are designed to be unscrewed or tightened by hand or with the special plastic wrench. If necessary a pliers can be used to unscrew the nut or cap. Do not use a pipe wrench to tighten or loosen nuts or caps. Do not place screwdriver in slots on caps and/or tap with a hammer.

Do not use pipe dope or other sealants on threads. Teflon tape must be used on threads of the 1" NPT connection and on the threads for the drain line connection. Teflon tape is not necessary on the nut connection nor caps because of o-rings seals.

## REFILL AND REFILL PORT PLUG



ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102322	Refill Port Plug Assy.**	1
2	101414	Elbow Locking Clip	1
3	111389	Elbow 3/8" LiquiFit	1
4	102153	O-ring 019	1
5	102418*	Refill Flow Cntrl Retainer Assy.	1
6	102421	Refill Flow Control Button	1
7	109038	Air Recharge Intake Screen	1
Not Shown	101617	1/2" Elbow w/Nut & Insert	1

\*Assembly includes item #6.

\*\*This part is required for backwash only systems.

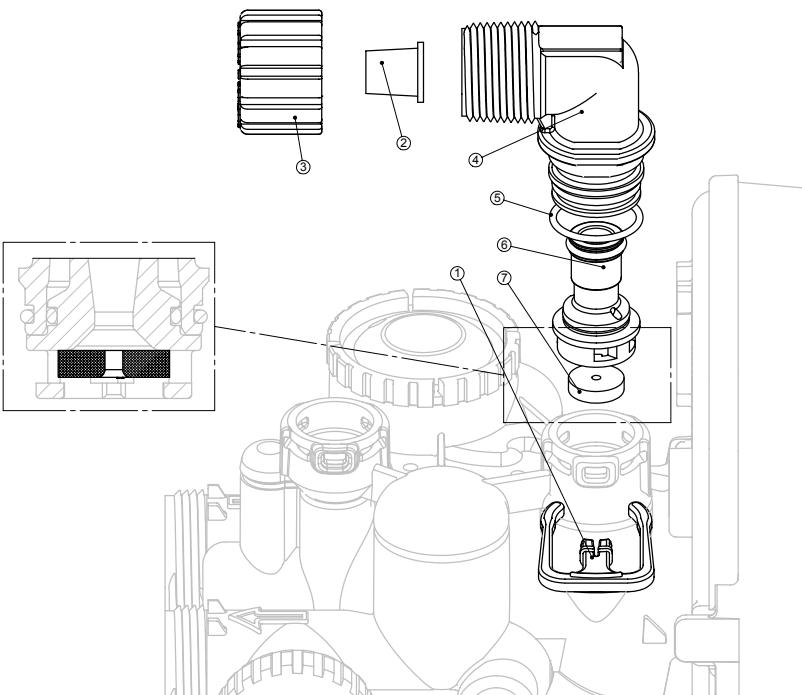
Figure 16

## DRAIN LINE - 3/4"

ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	101414	Elbow Locking Clip	1
2	101871	Polytube Insert, 5/8"	Optional
3	102131	Nut, 3/4" Drain Elbow	Optional
4-5	101619	Drain Elbow 3/4" Male Asy-No Vent	1
5	102153	O-Ring 019	1
6	102406	DLFC Retainer Assy.	1
7	101591 101595 101598 101561	DLFC 5.3 gpm for 3/4" DLFC 7.5 gpm for 3/4" DLFC 9.0 gpm for 3/4" DLFC 10.0 gpm for 3/4"	1
One DLFC must be used if 3/4 fitting is used			

Systems are shipped without 3/4" nut for drain elbow (polytube installation) and 5/8" polytube insert (polytube installation only).

**Option:** 101618 – 3/4" Drain Elbow with Silencer Vent.



**Figure 17**

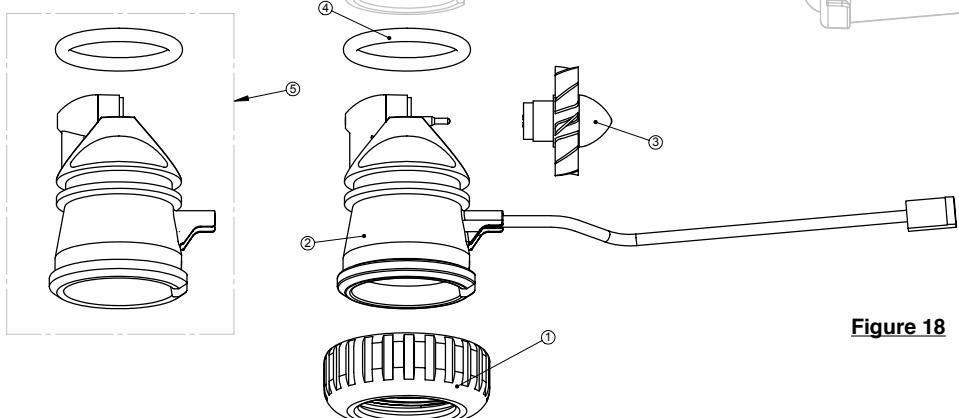
## WATER METER AND METER PLUG

ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102141	Nut 1" QC	1
2-4	102051*	Meter Assy.	1
3	102687	Turbine Assy.	1
4	102165	O-ring 215	1
5	102321	Meter Plug Assy.**	1

\*Order number 102051 includes 102687 and 102165, which are item numbers 3 & 4.

\*\*Only used if metering is not to be done (time clock units)

The nuts and caps are designed to be unscrewed or tightened by hand or with the special plastic wrench. If necessary a pliers can be used to unscrew the nut or cap. Do not use a pipe wrench to tighten or loosen nuts or caps. Do not place screwdriver in slots on caps and/or tap with a hammer.



**Figure 18**

## BYPASS VALVE

### Bypass Valve

ITEM NO.	ORDER NO.	DESCRIPTION	QTY
1	102141	Nut 1" Quick Connect	2
2	102437	Split Ring	2
3	102165	O'Ring 215	2
4	102450	Bypass 1" Rotor	2
5	110997	Bypass Cap	2
6	110998	Bypass Handle	2
7	109479	Bypass Rotor Seal Retainer	2
8	102159	O-Ring 135	2
9	102161	O-Ring 112	2
10	102160	O-Ring 214	2

### (Not Shown) Bypass Vertical Adapter Assembly

ORDER NO.	DESCRIPTION	QTY
102141	Nut 1" Quick Connect	2
102437	Split Ring	2
102165	O'Ring 215	2
106858	Bypass Vertical Adapter	2

The nuts and caps are designed to be unscrewed or tightened by hand or with the special plastic wrench. If necessary a pliers can be used to unscrew the nut or cap. Do not use a pipe wrench to tighten or loosen nuts or caps. Do not place screwdriver in slots on caps and/or tap with a hammer.

Do not use pipe dope or other sealants on threads. Teflon tape must be used on threads of the 1" NPT connection and on the threads for the drain line connection. Teflon tape is not necessary on the nut connection nor caps because of o-ring seals.

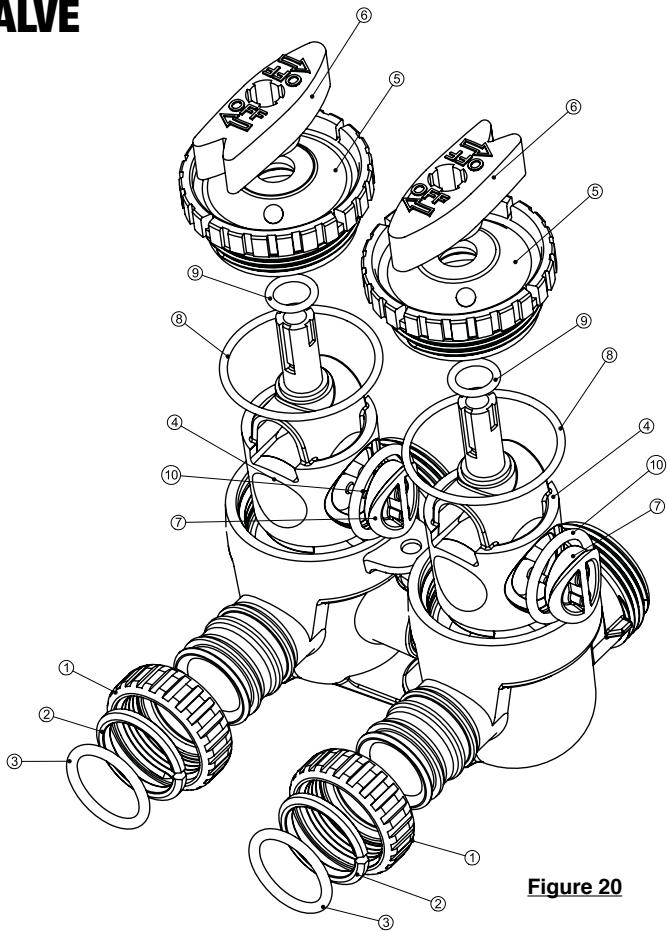


Figure 20

## RECOMMENDED ANNUAL MAINTENANCE

### Annually

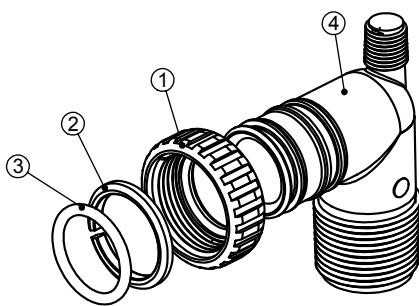
- Test raw water, assure filter settings are appropriate for the application. Note and record any changes.
- Verify injector is clean and functioning.
- View head of air and determine need for cleaning inlet diffuser by running at service flow and then note difference when bypass open. If significantly different, disconnect valve from tank and clean inlet diffuser. If IRB slime or iron build-up is present, bacterial control may be required.
- Check back wash flow is proper and water supply is maintained for the duration of the backwash cycle.
- Check, clean or replace air draw check valve (at brine elbow).
- Confirm draw time setting draws air to top of bed.
- Check filter valve settings.
- Check diagnostic information to review any errors, address errors if present.
- Note and record any changes.
- Anticipated life of stack & piston is 5-7 years for standard ferric and ferrous iron applications. The presence of iron bacteria may require more frequent service.
- It is recommended to change the battery (CR2032), stock code 110038, on the control valve circuit board if it is more than two years old. This maintains time of day in the event of power loss.

## INSTALLATION FITTING ASSEMBLIES

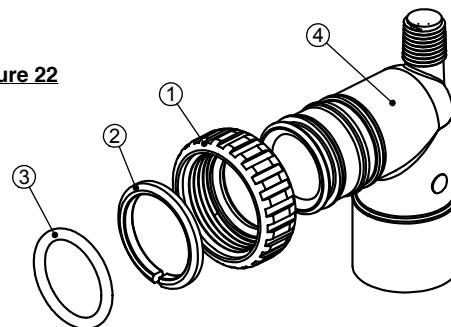
ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102141	Nut 1" Quick Connect	2
2	102437	Split Ring	2
3	102165	O-Ring 215	2
4	106761	Fitting 1" PVC Male NPT Elbow	2
1-4	101639	Ftg 1" PVC Male NPT Assy (Set of 2)	1

ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102141	Nut 1" Quick Connect	2
2	102437	Split Ring	2
3	102165	O-Ring 215	2
4	106762	Fitting 3/4" & 1" PVC Solv. 90	2
1-4	101640	Ftg 3/4" & 1" PVC Solv 90 (Set of 2)	1

**Figure 21**



**Figure 22**

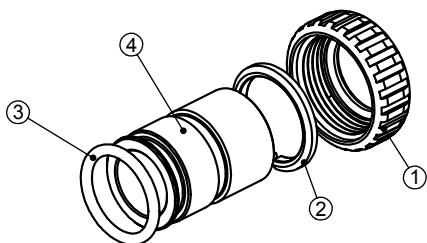


The nuts and caps are designed to be unscrewed or tightened by hand or with the special plastic wrench. If necessary a pliers can be used to unscrew the nut or cap. Do not use a pipe wrench to tighten or loosen nuts or caps. Do not place screwdriver in slots on caps and/or tap with a hammer.

Do not use pipe dope or other sealants on threads. Teflon tape must be used on threads of the 1" NPT connection and on the threads for the drain line connection. Teflon tape is not necessary on the nut connection nor caps because of o-rings seals.

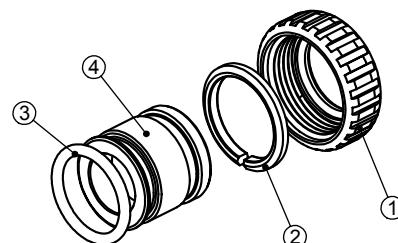
ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102141	Nut 1" Quick Connect	2
2	102437	Split Ring	2
3	102165	O-Ring 215	2
4	106763	Fitting 1" Brass Sweat	2
1-4	101641	Ftg 1" Brass Sweat Assy (Set of 2)	1

**Figure 23**



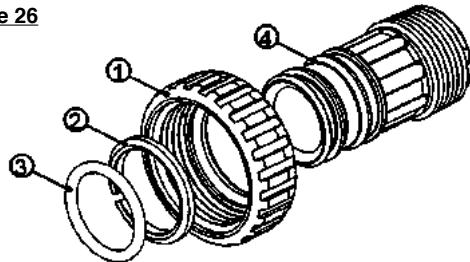
ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102141	Nut 1" Quick Connect	2
2	102437	Split Ring	2
3	102165	O-Ring 215	2
4	106764	Fitting 3/4" Brass Sweat	2
1-4	101642	Ftg 3/4" Brass Sweat Assy (Set of 2)	1

**Figure 24**



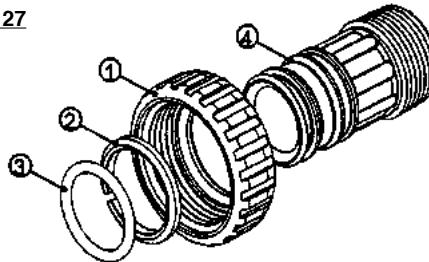
ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102141	Nut 1" Quick Connect	2
2	102437	Split Ring	2
3	102165	O-Ring 215	2
4	106765	Fitting 1" Plastic Male NPT	2
1-4	101643	Fitting 1" Male NPT Assy (Set of 2)	1

**Figure 26**



ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102141	Nut 1" Quick Connect	2
2	102437	Split Ring	2
3	102165	O-Ring 215	2
4	106766	Fitting 1-1/4" Plastic Male NPT	2
1-4	101644	Fitting 1-1/4" Male NPT (Set of 2)	1

**Figure 27**



## INSTALLATION FITTING ASSEMBLIES CONTINUED

Order No: 110135

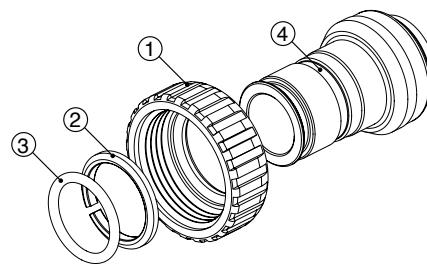
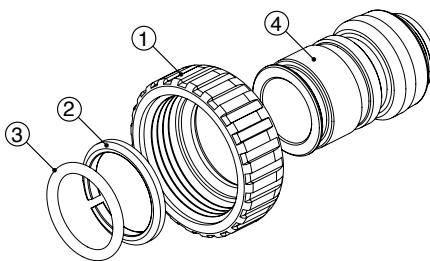
Description: IC 2.0 Fitting 3/4" Brass SharkBite Assembly

ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102141	Nut 1" Quick Connect	2
2	102437	Split Ring	2
3	102165	O-Ring 215	2
4	106769	Fitting 3/4" Brass Sharkbite	2
1-4	110135	Fitting 3/4" Brass Sharkbite Asy.(Set of 2)	1

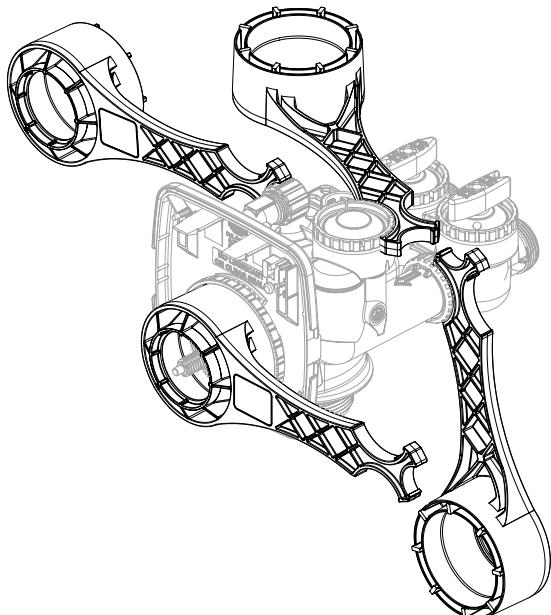
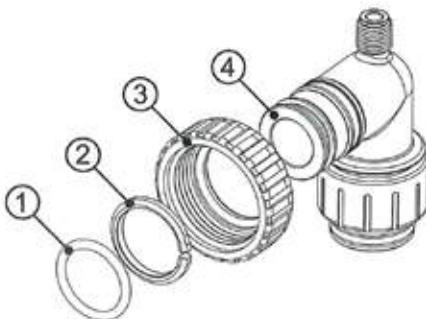
Order No: 110136

Description: IC 2.0 Fitting 1" Brass SharkBite Assembly

ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102141	Nut 1" Quick Connect	2
2	102437	Split Ring	2
3	102165	O-Ring 215	2
4	106770	Fitting 1" Brass Sharkbite	2
1-4	110136	Fitting 1" Brass Sharkbite Asy. (Set of 2)	1



ITEM NO.	ORDER NO.	DESCRIPTION	QTY.
1	102141	Nut 1" Quick Connect	2
2	102437	Split Ring	2
3	102165	O-Ring 215	2
4	V3790	Fitting 3/4" John Guest	2
1-4	108478	Fitting 3/4" JG QC Assy (Set of 2)	1



## WRENCH

Although no tools are necessary to assemble or disassemble the valve, the wrench (shown in various positions on the valve) may be purchased to aid in assembly or disassembly.

Wrench part number is 102892.

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## **NOTES:**



## FILTER WARRANTY

### INCLUDES – Iron Lazer and Iron Lazer Plus Filter Systems

Proficient H<sub>2</sub>O, warrants to the original consumer purchaser that the system and the parts listed below will be free from defects in material and/or workmanship from the date of the original installation for the following time periods:

- For a Period of FIVE YEARS: The filter control valve electrical parts including the motor and board, control valve body, excluding internal parts.
- For a Period of FIVE YEARS: The Iron Lazer Plus Aeration Macromatic Timer.
- For a Period of FIVE YEARS: The Iron Lazer Plus aeration control body, excluding its internal parts, solenoid and air pump assemblies.
- For a Period of TEN YEARS: The fiberglass aeration or mineral tanks, 6" Diameter - 13" Diameter.
- For a Period of FIVE YEARS: The fiberglass aeration or mineral tanks, 14" Diameter - Up.
- For a Period of ONE YEAR: The Ozone Generator.
- For a Period of ONE YEAR: The entire filter system ("System").

Any parts used for replacement are warranted for the remainder of the original warranty period for the applicable part.

THIS WARRANTY IS EFFECTIVE TO THE ORIGINAL CONSUMER PURCHASER ONLY, AND ONLY FOR AS LONG AS THE SYSTEM REMAINS AT THE ORIGINAL INSTALLATION SITE. COVERAGE TERMINATES IF YOU SELL OR OTHERWISE TRANSFER THE SYSTEM OR IF THE SYSTEM IS MOVED FROM THE ORIGINAL INSTALLATION SITE.

No sales representative, distributor, agent, dealer, reseller, authorized seller or any other person or entity is authorized to make any other warranty, or modify or expand the warranty provided herein on behalf of Proficient H<sub>2</sub>O. Upon expiration of the applicable warranty period, Proficient H<sub>2</sub>O shall have no further liability related to the System/parts to which the warranty period applies, except with respect to valid warranty claims asserted during the appropriate warranty period.

If the System or any part described above becomes defective within the specified warranty period, you should notify your local authorized seller of Proficient H<sub>2</sub>O products, and arrange a time during normal business hours for the inspection of the System at the original installation site. You may also contact Proficient H<sub>2</sub>O and we will provide you with the contact information for your local authorized seller of Proficient H<sub>2</sub>O products. Proficient H<sub>2</sub>O, at its option, will repair or replace the System or any part found defective within the terms of this warranty. You are responsible for freight from our factory and any service fees charged by the local authorized seller of Proficient H<sub>2</sub>O products for installation, repair, removal, replacement, service, etc., of any System or parts. This warranty does not include any labor charges. This paragraph sets forth the exclusive remedy for any valid warranty claims against Proficient H<sub>2</sub>O.

THIS WARRANTY DOES NOT COVER defects caused by sand, sediment or bacteria fouling, accident, fire, flood, Act of God, misuse, misapplication, neglect, alteration, installation or operation contrary to Proficient H<sub>2</sub>O's printed instructions, or installation, repair or service by anyone other than Proficient H<sub>2</sub>O or an authorized seller of Proficient H<sub>2</sub>O products.

IN ADDITION, THIS WARRANTY DOES NOT COVER UNPROTECTED OUTDOOR INSTALLATIONS. This System, including all of the electrical components, must be protected against windblown dust, falling and windblown rain, freezing temperatures and the formation of ice, with an appropriate enclosure consisting of a floor, roof, walls, ventilation and heat.

As a manufacturer, we do not know the characteristics of your water supply or the purpose for which you are purchasing this system. You should be aware that the quality of water supplies may vary seasonally or over a period of time, and that your water usage rate may vary as well. Water characteristics may change considerably if this System is moved to a new location. For these reasons, Proficient H<sub>2</sub>O assumes no liability for the determination of the proper equipment necessary to meet your needs; and Proficient H<sub>2</sub>O does not authorize others to assume such obligations for Proficient H<sub>2</sub>O.

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