INSTRUCTIONS FOR INSTALLATION AND MAINTENANCE

AUTOMATIC BACKWASH FILTERS FOR IRON, MANGANESE, & HYDROGEN SULFIDE REDUCTION

AIO AND OZONE ASSIST

Model #'s:
BW-IRON-1MPT-08
BW-IRON-OZO-1MPT-08

Dear Customer,
It is our pleasure to bring to you the most advanced filtration technology available. We hope that it exceeds your expectations and meets all of your filtration needs.

Contact:
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A Company of the Atlas Filtri Group.
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Installation & Operations Manual
Installation Information

To be filled out completely by the installer

Installed By:_____

Company Name & Phone #:_____

Installation Date:_____

Serial #:_____

Model #:_____

Water Pressure Tested @ PSI:_____

City Water or Private Well Water:_____

Installed in-line with other water treatment equipment (Yes or No):_____

Tested incoming Total Iron (PPM):_____

Tested incoming Total Manganese (PPM):_____

Tested incoming Total Hydrogen Sulfide (PPM):_____

Tested incoming Total Iron Bacteria (PPM):_____

Tested incoming pH:_____

If raw water is chlorinated, test free chlorine PPM level:_____

Main Water Line Size and Type:_____

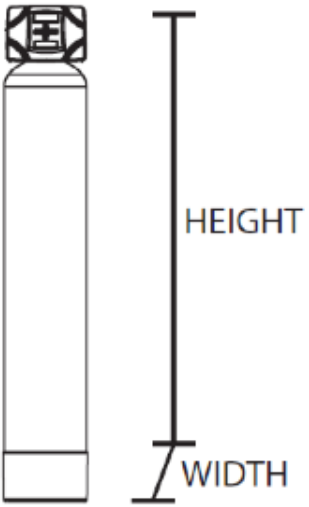
Total Number of People Living in the Home:_____

NOTICE **These filter systems and filter media listed in this manual do NOT remove or kill bacteria. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before and after the system**

Features & Benefits

- Designed with blended media, specific for Iron, Manganese, and Hydrogen Sulfide reduction. Built with AIO or AIO with Ozone Assist.
- Chemical Free. No chemicals used in these filters for regeneration.
- Low maintenance and cost effective filter systems to be used as a stand-alone filter in the home, or to be used as post-filtration to other water treatment devices. *Note: It is very important to have a full water chemistry report done on the specific water this filter system is treating. Properly treat other contaminants in the water prior to this filter system. This filter should be used as a polishing filter after all other water treatment equipment. Check with Atlas Filtri North America prior to installing this filter system to ensure you have proper pre-filtration equipment installed. (Filter systems must be maintained properly with media bed replacements on a regular maintenance schedule based off of chemistry and gallon usage).
- Advanced Electronic control valve. Metered digital display, with advanced real-time diagnostic screens.
- Optional EOG II Ozone assist device, used during regeneration (on Model # BF-IRON-OZO-1MPT-08).
- Fully Automatic Backwash Control Valve, with Bypass Valve included with 1” MPT plumbing adapter kits and inlet spring close check valve.
- Simple installation with inlet, outlet, and drain line connections. (System does require a drain line, not provided by manufacture).
- Life expectancy/Total gallon capacity is calculated and based on the filter size, and raw water chemistry.
- 10-Year warranty on mineral tank construction. (Against manufacture defects only)
- 5-Year warranty on control valve parts. (Against manufacture defects only)
- Note: These filter systems and filter media listed in this manual do NOT remove or kill bacteria. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before and after the system

Specifications & Model Numbers



Model Number	Bypass Size	Cubic Feet	Footprint	Service/Peak Flow Rates
BW-IRON-1MPT-08	1" MPT	2.0	12.5" W X 60" H	4 GPM/8 GPM
BW-IRON-OZO-1MPT-08	1" MPT	2.0	12.5" W X 60" H	4 GPM/8 GPM

- Flow rates listed above on Service Flows are conservative & are based off Media Manufactures specifications.
- Peak Flow Rate listed are calculated & based off of a peak flow scenario inside a typical home. Peak flow rates should only be run for very short periods of time and not sustained as the common flows in the home. The rejection percentage of contaminants will be reduced at higher/peak flow rates.
- **Note: These filter systems will out flow the flow rates shown in the table- if the demand from the home is flowing at a higher flow rate than listed in the above table. Flow rates being ran through a home at higher flow rates than the above table can drastically reduce the rejection percentage of the targeted contaminants in the water. It is very important to properly size the filter system for the specific home application and potential sustained flow rates.**
- **Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before and after the system.**

Filter Media Life

- The Blended Filter Media in this filter system must be replaced over time.
- It is important to maintain the filter system and keep record of the dates that the filter media has been replaced.
- Average life expectancy of the filter media will range between 2 years to 7 years on average, all depending on the following.
  - Life of the media is all based off of the size of the filter system, the amount of incoming Iron, Manganese, Hydrogen Sulfide, and Turbidity in the raw water supply, and the total gallons of water usage through the filter system throughout the home.
- Life expectancy of the filter media is based on the following variables:
  - The size of your filter system (cubic feet)
  - The amount of Iron, Manganese, Hydrogen Sulfide (in PPM), and Turbidity that is in the raw water supply.
  - Regular/annual maintenance
- It is very important to maintain the filter system and replace the media on a set service schedule, and properly maintain the control valve parts and EOG II device.
- To help you better understand daily water usages, you can refer to the below example of average estimated water usage per person, per day.
  - The national average of total domestic water used per person- per day- will range between 50 to 100 gallons per person- per day.
  - That is an average of 18,250 to 36,500 gallons of water usage, per person- per year.

  EXAMPLE:
  - 3 people in your home. 300 total gallons of water usage per day (3 people X 100 gallons per person- per day = 300 gallons per day).
  - That is 109,500 total gallons per year (300x365=109,500)
  - Never overrun the service life of the filter media. It is recommended to buffer 25% more on usage to make sure the media is being replaced on time, along with testing and monitoring raw water Iron, Manganese, and Hydrogen Sulfide levels annually.
  - **Note: The diagnostics in the electronics will keep track of daily water usage and also a totalizer. A service alarm can be set on the electronics to display "service needed" based on time or gallons used.**

Filter Media Replacement Records

- Date of Original Installation:_____

- Date of Replacement: _____
- Name of Service Company: _____

- Date of Replacement: _____
- Name of Service Company: _____

- Date of Replacement: _____
- Name of Service Company: _____

- Date of Replacement: _____
- Name of Service Company: _____

- Date of Replacement: _____
- Name of Service Company: _____

- Date of Replacement: _____
- Name of Service Company: _____

- Date of Replacement: _____
- Name of Service Company: _____

Installation Notes

- This Filter system consists of 1 total filter media tank, with electronic digital control valve and bypass valve with 1" brass spring loaded check valve installed on inlet of bypass valve. (No chemical or regenerate tank used).
- Install this system in accordance with all local and state plumbing codes.
- Check your water pressure! If on a city water supply or a well system that produces High PSI pressures of 80 PSI or over, install a new PRV valve. High pressure will ruin your filter system and VOID the warranty. 90 PSI is the MAX pressure rating.
- Install a rigid or semi-rigid (non-collapsible, such as PEX or PVC) 5/8" or ¾" drain line off of this filter system. Make sure to properly air-gap the drain line into a P-trap or a floor drain and secure. Never direct connect drain line. Always use a legal air-gap device.
- Follow Inlet and Outlet arrows on control valve head and bypass valve to make sure you do not install the system backwards. The 1" spring loaded check valve is installed on the inlet.
- Do not locate or install this filter systems where they can freeze, or in outdoor elements where they will see rain, wind, moisture, or direct UV sunlight. Failure to protect this filter system from these elements will damage the system and VOID the warranty.
- Only install on a cold water feed line. Never install this filter system with a hot water feed line. Never run hot water through this filter system. Hot water will ruin the filter system and VOID the warranty.
- Install this filter system on the homes incoming water line into the home, after other pre-filtration water treatment systems, such as a Pre-filter, etc..
- If installing this filter system on a private well water supply, have the water chemistry tested from a certified lab, to ensure that this is the proper system to be installed, and also add other water treatment devices suitable to treat the particular waters chemistry. Always protect this filter system from sand, silt, sediment, and turbidity that can be found in some private well water supplies.
- Install a vacuum breaker on the inlet piping to this filter system if the installation is prone to seeing vacuum or negative pressure or reverse flow. Vacuum, negative pressure and reverse flow will damage the filter system and VOID the warranty. Refer to all local and state plumbing codes.
- Protect this filter system from hot water back-feed from the water heater. Make sure to install a working expansion tank on the inlet line of the water heater (traditional tank style water heater and not on an on-demand water heater). Expansion tank must be located between the outlet of this filter and the inlet of the water heater.

Conditions for Operation & Parameters

Raw Water:

- Ph: Should not be less than 7.0, nor greater than 8.0
- Total Free Chlorine Residual: Under .5 PPM residual constant
- Total Iron: Under 8 PPM
- Manganese: Under .50 PPM
- Hydrogen Sulfide H2s Gas: Under 1 PPM
- Turbidity: Less Than 1 Ntu
- DO NOT USER WITH WATER THAT IS MICROBIOLOGICALLY UNSAFE OR OF UNKNOWN WATER QUALITY WITHOUT ADEQUATE DISINFECTION BEFORE OR AFTER THE SYSTEM

Plumbing & Mechanical:

- NOTE: A Pre-Filter must be installed in the plumbing prior to this filter system to protect the system from sand & sediment & turbidity.
- Well pump & well must be capable of delivering 10 gpm constant.
- 120 Volt power needed for filter system.
- Cold water feed only.

Flow Rates:

- Backwash Flow Rate: 7.5 GPM
- Service Flow Rate: 4.0 To 8.0 GPM depending on raw water quality.

General Installation & Guide

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.

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.

DO NOT use pipe dope or other sealants on control valve threads. Teflon tape must be used on the plumbing threads of the 1" connection and on the threads for the drain line connection only - that are having plumbing fittings threaded on to them. Teflon tape is not necessary on the nut connections or cap because o-ring seals are used. The nuts and caps are designed to be tightened by hand or with the special plastic service wrench, #V3193-XXX. If necessary, pliers can be used to unscrew the nut or cap. DO NOT use a pipe wrench. DO NOT place screwdriver in slots on caps and/or tap with a hammer.

1. The distance between the drain and the Backwash Systems should be as short as possible. Drain tube/pipe should be a minimum of 5/8" size & run no longer than 2 feet vertical & 20 feet horizontal.

2. All plumbing should be done in accordance with local plumbing codes.

3. Do not install any Water Filter with less than 15 feet of piping between its outlet and the inlet of a water heater.

4. Do not locate unit where filter or its connections (including the drain lines) will ever be subjected to room temperatures under 34°F or over 100°F. Do not install in direct UV sunlight. Protect from freezing, and weather elements.

5. Inlet/outlet plumbing: connect to a supply line and install an inlet shut-off valve.

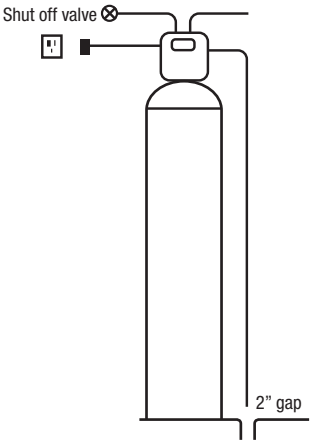
6. Drain line: Be sure that the drain can handle the backwash rate of the system and install a flexible plastic tube to the Drain Line Assembly.

Site Requirements:

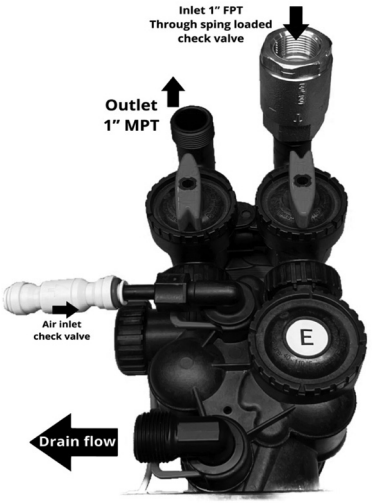
- **Water Pressure: 40 - 90psi**
- Water Temperature: 40 - 100°F
- The tanks should be on a firm, level surface
- Electrical: Use a 115/120V, 60Hz uninterrupted outlet
- Current draw is 0.25 amperes
- A 15 foot power cord is furnished
- The plug-in transformer is for dry locations only
- Batteries are not used

IMPORTANT: Never insert a drain line directly into a drain, sewer line, or trap. Always allow an air gap between the drain line and the wastewater to prevent the possibility of sewage being back-siphoned into the conditioner.

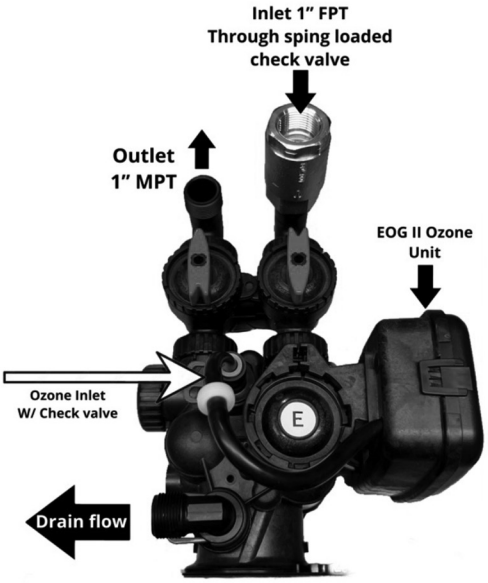
Basic Installation



Top View of Control Valves



Top View of Filter # BW-IRON-1MPT-08

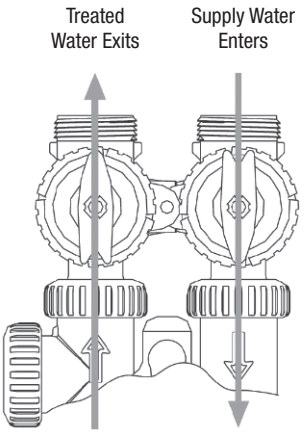


Top View of Filter # BW-IRON-OZO-1MPT-08

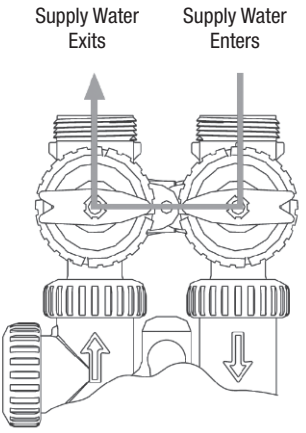
Bypass Valve

To shut-off water to the system, please position arrow handles as shown in the bypass operation diagram below. If your valve doesn't look like the diagram below, contact your service technician for instructions on how to shut-off water.

NORMAL OPERATION



BYPASS OPERATION

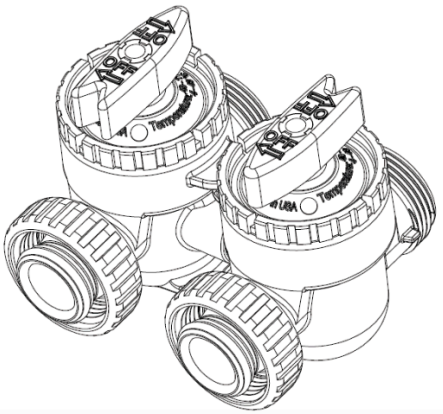


The bypass valve is used to isolate the control valve from the plumbing system in order to perform valve repairs or maintenance.

1. **Normal Operation Position:** The RED inlet and outlet handles point in the direction of flow indicated by the engraved arrows on the control valve.

2. **Bypass Position:** The RED inlet and outlet handles point to the center of the bypass. Untreated water is supplied to the plumbing system.

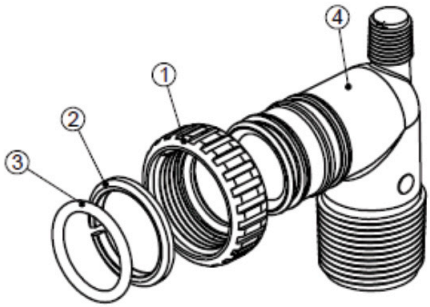
BP-C-V3006 Bypass Valve



Installation Fitting Assemblies

Description: **Fitting 1” PVC Male NPT Elbow Assembly**

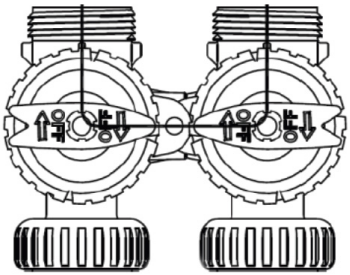
Drawing No.	Order No.	Description	Quantity
1	CV-P-V3151	Nut 1” Quick Connect	2
2	CV-P-V3150	Split Ring	2
3	CF-P-V3105	O-Ring 215	2
4	CV-P-V3149	Fitting 1 PVC Male NPT Elbow	2



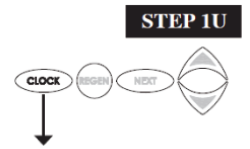
Start Up

1. After installation is complete and the main water line in the home is still turned off, rotate the BYPASS knobs to the OFF positions. See below.

Bypassed Position (closed)

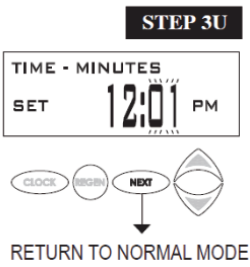


2. Plug system into power and Set the Time of day. (See below)



STEP 1U - Press CLOCK.

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



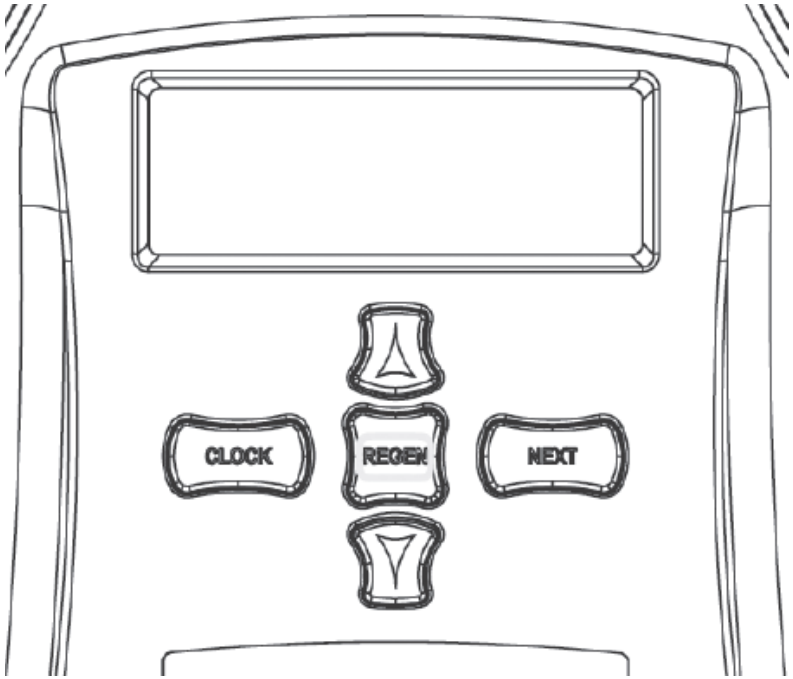
STEP 3U - Current Time (minutes): Set the minutes of the day using ▼ or ▲ buttons. Press NEXT to exit Set Clock. Press REGEN to return to previous step.

Note: The Regeneration time has been set to 12:00AM at the factory, along with a calendar day override setting of 14 days. The system is a metered demand system and will regenerate based off usage, but also has a calendar day override as a backup.

3. Now that installation is complete, the time-of-day set, and the system still in the bypass closed position, follow the next steps to start-up the filter system.

4. Turn main water line supply back on in the home and open some cold water faucets to flush water lines from any debris from installation and also to expel the air out of the water lines. Once air has been relieved from all faucets in the home, proceed to next step.

5. Press and Hold the Regen button for 5 seconds until you hear the control valve motor start, then release your finger from the button. See below.



6. When the motor stops running, the display will read BACKWASH and start counting down from 10 minutes. See below.

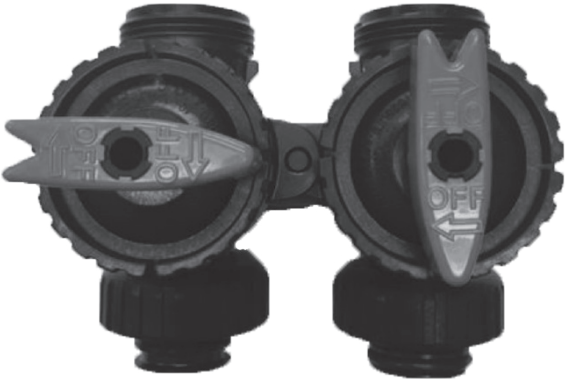
7. Slightly and slowly open the Inlet bypass knob ½ of the way open (pointing to roughly the 8 o'clock position) until you can hear water starting to flow into the filter tank. You will also start to hear air expelling out of the filter system and running to drain. Leave the outlet bypass knob in the closed position.

CAUTION: If water flow is introduced too rapidly into the filter system it could cause the filter media to lift too quickly and clog off the upper basket on the control valve, causing no water top backwash out of the tank. It is very important to only open the inlet bypass knob halfway open to slowly fill the tank. Do not fully open the inlet bypass knob. See below.

8. After opening the inlet bypass knob ½ way open, unplug the power to the filter system. The display will now be blank on the filter system.

9. When water starts flowing freely to drain from the filter system without the presence of air in the drain line, let the system flow to drain like this for 15 minutes.

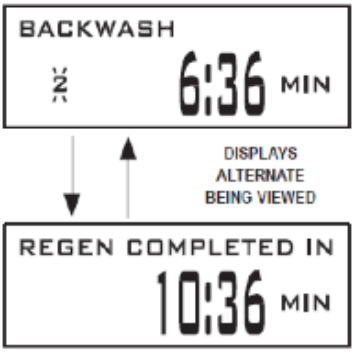
10. After initial 15 minutes of water flowing to drain, slowly open the inlet bypass knob to the fully open position (6 o'clock position). Leave the outlet bypass knob in the closed position. See below.



11. With the inlet bypass knob in the fully open position, allow water to flow to drain for another 10 minutes.

12. After 10 minutes of flowing water to drain, plug the Arsenic filter system back into power. The display will still be reading BACKWASH. See below.

Note: During Regeneration, the display screen will alternate between the cycle and how much time is left before the regeneration is complete. See below.



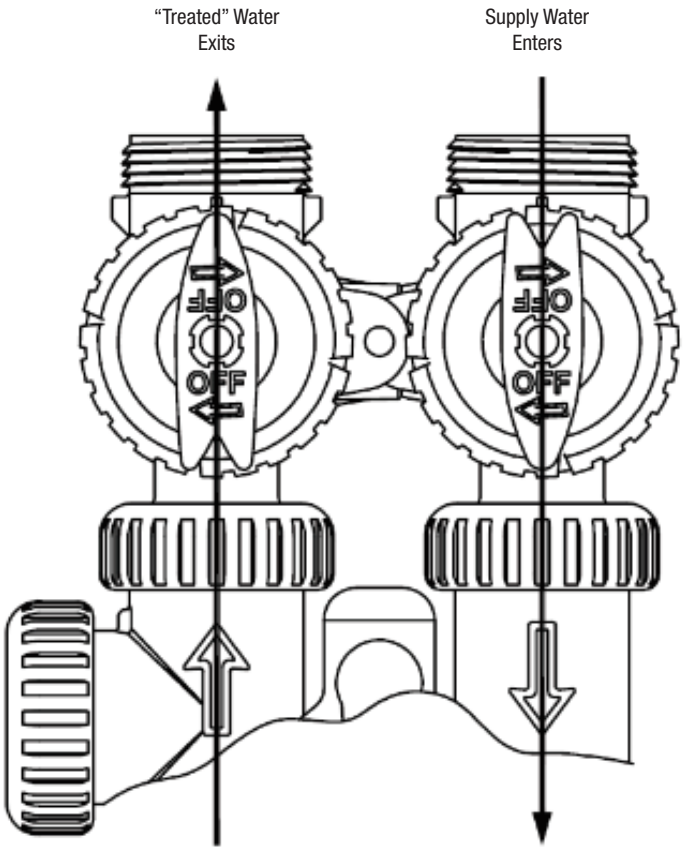
Note: During regeneration, visually observe the water flowing to drain. Towards the end of the regeneration, the water flowing to drain should be clean and clear, without the presence of dark color in the drain water.

13. Allow the system to finish its regeneration on its own. The control valve will continue to count down BACKWASH minutes and then automatically cycle to the next position which is DRAW. After DRAW, the control valve will cycle to the next position which is RINSE. After RINSE the control valve will cycle the home/service position. The time of day will be displayed when the system is done regenerating and back in the home/service position. See below.

Note: If the drain water is not clean and clear towards the end of the regeneration cycle, you will need to repeat steps 11 through 13 by starting another regeneration by pressing and holding the Regen button.

Start Up is now complete. Rotate the outlet bypass knob to the fully open position of Normal Operation (pointing to the 12 o'clock position). See below.

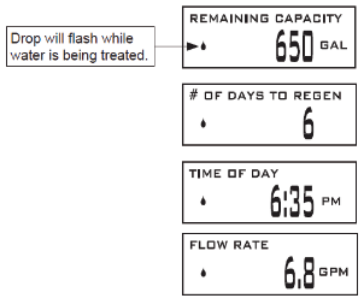
NORMAL OPERATION



With the filter system now in operation, fully open all cold-water faucets in the home to flush lines. Note: It is normal to experience some air in line lines. Run cold water faucets until all air is cleared out of the lines and no discolored water is present. After cold water lines are cleared, open the hot water lines and flush completely the same way. Note: A traditional tank style water heater will be full of unfiltered water. It can take several days to fully mix out all of the unfiltered water with new filtered water.

General Operation

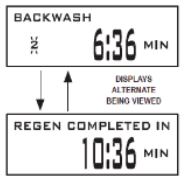
When the system is operating, one of several displays may be shown. Pressing NEXT will alternate between the displays. One of the displays is always the current time of day. # OF DAYS TO REGEN is the number of days left before the system goes through a regeneration cycle. REMAINING CAPACITY is the gallons that will be treated before the system goes through a regeneration cycle. Pressing ▼ while in the Capacity Remaining or Days Remaining displays will decrease the capacity remaining in 10 gallon increments or the Days Remaining in 1 day increments, and will also increase the volume use d impacting the recorded values in Diagnostics Steps. FLOW RATE shows the current treated water flow rate through the system.



If the system has called for a regeneration that will occur at the preset time of regeneration, REGEN TODAY will alternate with the header on the display. If a water meter is installed, the water drop flashes on the display when water is being treated (i.e. water is flowing through the system).

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 a household is asleep. If there is a demand for water when the system is regenerating, untreated water will be used.



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.

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 a 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 canceled.

Bypass Valve Operation

Figure 1

NORMAL OPERATION

"Treated" Water Exits

Supply Water Enters

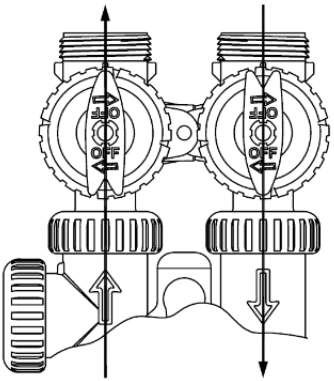


Figure 2

BYPASS OPERATION

Supply Water Exits

Supply Water Enters

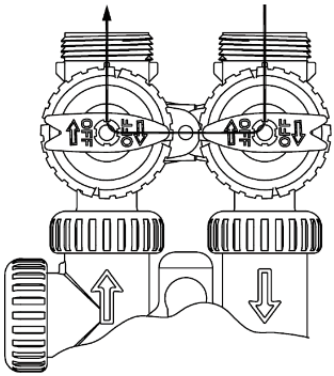


Figure 3

DIAGNOSTIC MODE

Supply Water Exits

Supply Water Enters

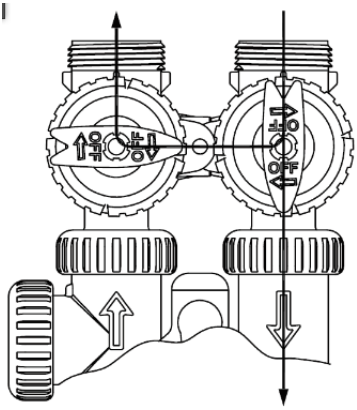
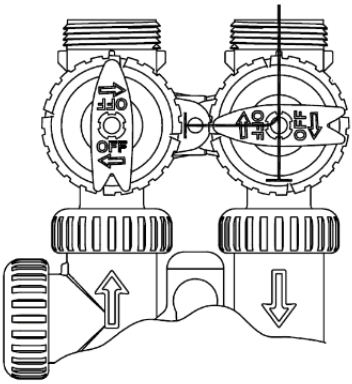


Figure 4

SHUT OFF MODE

No Water Exits

Supply Water is Shut Off from the House and the Valve



Troubleshooting

Problem	Possible Cause	Solution
1. No Display on PC Board	a. No power at electric outlet	a. Repair outlet or use working outlet
	b. Control valve Power Adapter not plugged into outlet or power cord end not connected to PC board connection	b. Plug Power Adapter into outlet or connect power cord end to PC Board connection
	c. Improper power supply	c. Verity proper voltage is being delivered to PC Board
	d. Defective Power Adapter	d. Replace Power Adapter
	e. Defective PC Board	e. Replace PC Board
2. PC Board does not display correct time of day	a. Power Adapter plugged into electric outlet controlled by light switch	a. Use uninterrupted outlet
	b. Tripped breaker switch and/or tripped GFI	b. Reset breaker switch and/or GFI switch
	c. Power outage	c. Reset time of day. If PC Board has battery back up present, the battery may be depleted. See Front Cover and Drive Assembly drawing for instructions
	d. Defective PC Board	d. Replace PC Board
3. Display does not indicate that water is flowing. Refer to user instructions for how the display indicates water is flowing	a. Bypass valve in bypass position	a. Turn bypass handles to place bypass in service position
	b. Meter is not connected to meter connection on PC Board	b. Connect meter to three pin connection labeled METER on PC Board
	c. Restricted/stalled meter turbine	c. Remove meter and check for rotation or foreign material
	d. Meter wire not installed securely into three pin connector	d. Verify meter cable wires are installed securely into three pin connector labeled METER
	e. Defective meter	e. Replace meter
	f. Defective PC Board	f. Replace PC Board
4. Control valve regenerates at wrong time of day	a. Power outage	a. Reset time of day. If PC Board has battery back up present, the batter may be depleted. See Front Cover and Drive Assembly drawing for instructions
	b. Time of day not set correctly.	b. Reset to correct time of day
	c. Time of regeneration set incorrectly	c. Reset regeneration time
	d. Control valve set at “on 0” (immediate regeneration	d. Check programming setting and reset to NORMAL (for a delayed regen time)
	e. Control valve set at “NORMAL + 0” (delayed and/or immediate)	e. Check programming setting and reset to NORMAL (for a delayed regen time)
5. Time of day flashes on and off	a. Power outage	a. Reset time of day. If PC Board has battery back up present, the batter may be depleted. See Front Cover and Drive Assembly drawing for instructions

Troubleshooting continued

6. Control valve does not regenerate automatically when the REGEN button is depressed and held.	a. Broken drive gear or drive cap assembly	a. Replace drive gear or drive cap assembly
	b. Broken piston rod	b. Replace piston rod
	c. Defective PC Board	c. Defective PC Board
7. Control valve does not regenerate automatically but does when the REGEN button is depressed and held.	a. Bypass valve in bypass position	a. Turn bypass handles to place bypass in service position
	b. Meter is not connected to meter connection on PC Board	b. Connect meter to three pin connection labeled METER on PC Board
	c. Restricted/stalled meter turbine	c. Remove meter and check for rotation or foreign material
	d. Incorrect programming	d. Check for programming error
	e. Meter wire not installed securely into three pin connector	e. Verify meter cable wires are installed securely into three pin connector labeled METER
	f. Defective meter	f. Replace meter
	g. Defective PC Board	g. Replace PC Board
8. Water running to drain	a. Power outage during regeneration	a. Upon power being restored control will finish the remaining regeneration time. Reset time of day.
	b. Damaged seal/stack assembly	b. Replace seal/stack assembly
	c. Piston assembly failure	c. Replace piston assembly
	d. Drive cap assembly not tightened in properly	d. Re-tighten the drive cap assembly
9. E1, Err -1001, Err-101 = Control unable to sense motor movement	a. Motor not inserted full to engage pinion, motor wires broken or disconnected	a. Disconnect power, make sure motor is fully engaged, check for broken wires, make sure two pin connector on motor is connected to the two pin connection on the PC Board labeled MOTOR. Press NEXT and REGEN buttons for 3 seconds to resynchronize software with piston position or disconnect power supply from PC Board for 5 seconds and then reconnect.
	b. PC Board not properly snapped into drive bracket	b. Properly snap PC Board into drive bracket and then Press NEXT and REGEN buttons for 3 seconds to resynchronize software with piston position or disconnect power supply from PC Board for 5 seconds and then reconnect.
	c. Missing reduction gears	c. Replace missing gears

Troubleshooting continued

10. E2, Err-1002, Err-102 = Control valve motor ran too short and was unable to find the next cycle position and stalled	a. Foreign material is lodged in control valve	a. Open up control valve and pull out piston assembly and seal/stack assembly for inspection. Press NEXT and REGEN buttons for 3 seconds to resynchronize software with piston position or disconnect power supply from PC Board for 5 seconds and then reconnect.
	b. Mechanical binding	b. Check piston and seal/stack assembly, check reduction gears, check drive bracket and main drive gear interface. Press NEXT and REGEN buttons for 3 seconds to resynchronize software with piston position or disconnect power supply from PC Board for 5 seconds and then reconnect.
	c. Main drive gear too tight	c. Loosen main drive gear. Press NEXT and REGEN buttons for 3 seconds to resynchronize software with piston position or disconnect power supply from PC Board for 5 seconds and then reconnect.
	d. Improper voltage being delivered to PC Board	d. Verify that proper voltage is being supplied. Press NEXT and REGEN buttons for 3 seconds to resynchronize software with piston position or disconnect power supply from PC Board for 5 seconds and then reconnect.
11. E3, Err-1003, Err-103 = Control valve motor ran too long and was unable to find the next cycle position	a. Motor failure during a regeneration	a. Check motor connections then Press NEXT and REGEN buttons for 3 seconds to resynchronize software with piston position or disconnect power supply from PC Board for 5 seconds and then reconnect.
	b. Foreign matter built up on piston and stack assemblies creating friction and drag enough to time out motor	b. Replace piston and stack assemblies. Press NEXT and REGEN buttons for 3 seconds to resynchronize software with piston position or disconnect power supply from PC Board for 5 seconds and then reconnect.
	c. Drive bracket not snapped in properly and out enough that reduction gears and drive gear do not interface	c. Snap drive bracket in properly then Press NEXT and REGEN buttons for 3 seconds to resynchronize software with piston position or disconnect power supply from PC Board for 5 seconds and then reconnect.
12. Err-1004, Err-104 = Control valve motor ran too long and timed out trying to reach home position	a. Drive bracket not snapped in properly and out enough that reduction gears and drive gear do not interface	a. Snap drive bracket in properly then Press NEXT and REGEN buttons for 3 seconds to resynchronize software with piston position or disconnect power supply from PC Board for 5 seconds and then reconnect.

Replacement Filter Tank

Filter Model #	Replacement Tank Model #	Cubic Feet
BW-IRON-1MPT-08	RT-BW-IRON-1MPT-02	2.0
BW-IRON-OZO-1MPT-08	RT-BW-IRON-1MPT-08	2.0

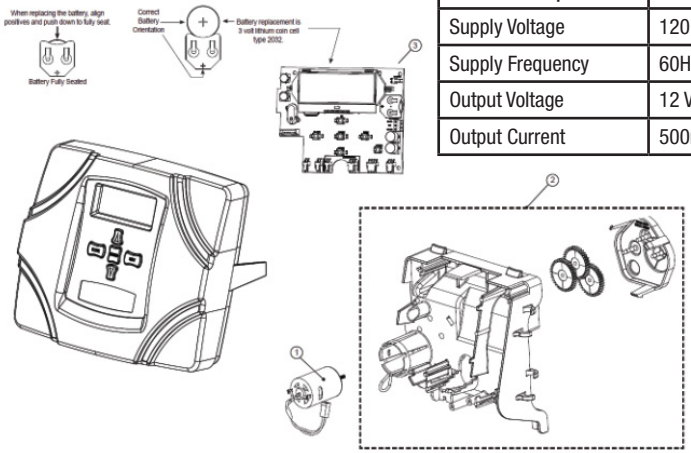
- All replacement filter tanks come fully assembled and ready for installation.
- All replacement tanks come with a new distributor tube and screen assembly.
- All replacement tanks come with new filter media installed in the tank.
- Order the correct replacement tank for the model # of filter system installed.

Powerhead Control Valve Parts for 1” Model #’s

Model # BW-IRON-1MPT-08

Model # BW-IRON-OZO-1MPT-08

Drawing No.	Order No.	Description	Quantity
1	CV-P-V3107-01	Motor	1
2	CV-P-V3106-02	Drive Bracket Assy	1
3	CV-P-V3757PR-03	Vision PC Board	1
NOT SHOWN	CV-P-V3186	WS1 AC Adapter 120V-12V	1



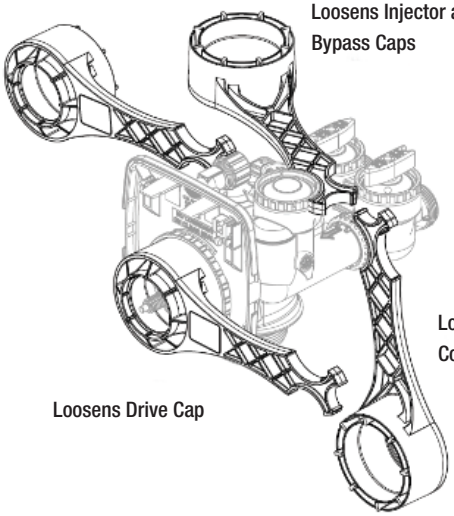
AC Adapter	U.S.
Supply Voltage	120 VAC
Supply Frequency	60Hz
Output Voltage	12 VAC
Output Current	500mA

Control Valve Service Wrench

Service Wrench - CV-P-V3193-02

Not provided with system. Separate purchase required. Bypass and depressurize system before using wrench.

Loosens Drain Nut in Polytube Applications



Loosens Injector and Bypass Caps

Although no tools are necessary to assemble or disassemble the valve, the Service Wrench (Shown in various positions on the valve), is available to aid in assembly or disassembly.

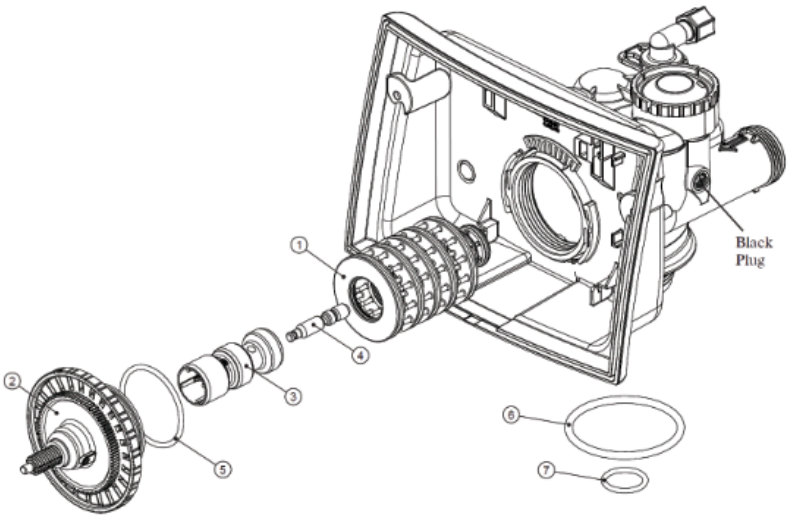
Loosens Quick Connect Nuts

Loosens Drive Cap

Internal Valve Parts for 1” Model #’s

Model # BW-IRON-1MPT-08
Model # BW-IRON-0ZO-1MPT-08

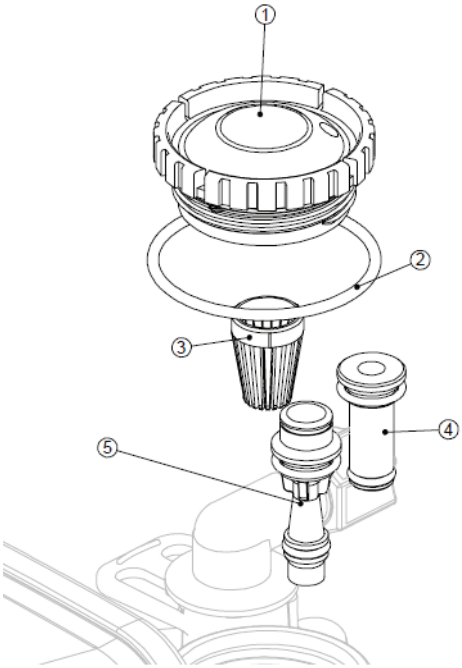
Drawing No.	Order No.	Description	Quantity
1	CV-P-V3005	Spacer Stack Assembly	1
2	CV-P-V3004	Drive Cap Assembly	1
3	CV-P-V3011	Piston Downflow Assembly	1
4	CV-P-V3174	Regenerant Piston	1
5	CV-P-V3135	O-ring 228	1
6	CV-P-V3180	O-ring 337	1
7	CV-P-V3105	O-ring 215 (Distributor Tube)	1



Injector Cap, Injector Screen, Injector, Plug & O-Ring

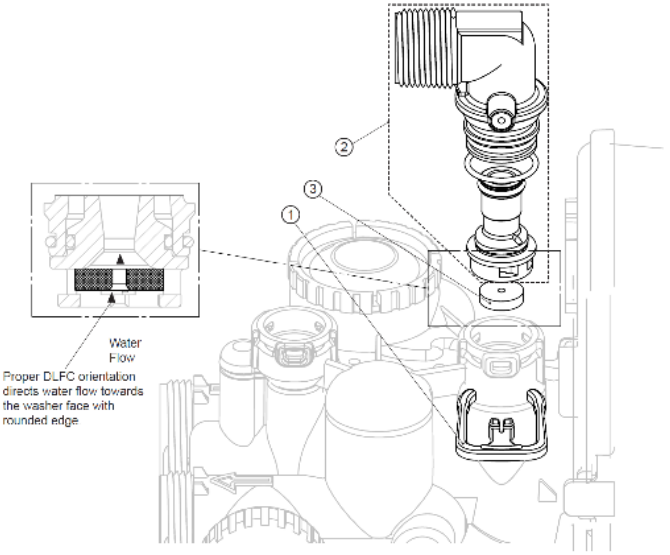
Drawing No.	Order No.	Description	Quantity
1	CV-P-V3176	Injector Cap	1
2	CV-P-V3152	O-ring 135	1
3	CV-P-V3177-01	Injector Screen Cage	1
4	CV-P-V3010-1Z	Injector Asy Z Plug	1
5	CV-P-V3010-1E	Injector Asy E White	1
	CV-P-V3010-1F	Injector Asy F Blue	
	CV-P-V3010-1G	Injector Asy G Yellow	
Not Shown	CV-P-V3170	O-ring 011	*
Not Shown	CV-P-V3171	O-ring 013	*

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



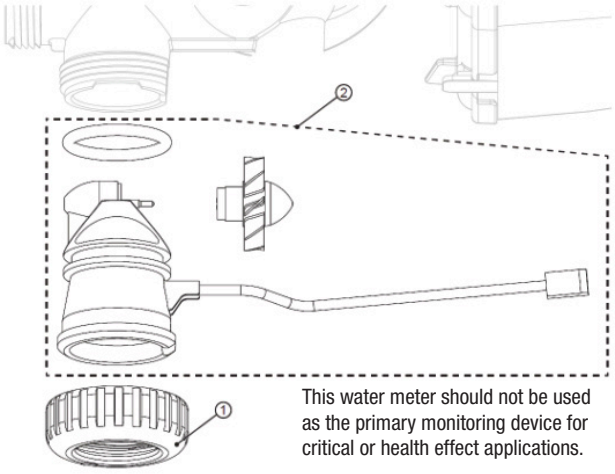
Injector # CV-P-V3010-1F

Drawing No.	Order No.	Description	Quantity
1	CV-P-H4615	Elbow Locking Clip	1
2	CV-P-V3331	Drain Elbow & Retainer Assembly	1



Water Meter

Drawing No.	Order No.	Description	Quantity
1	CV-P-V3151	Nut 1" Quick Connect	1
2	CV-P-V3003	Meter Assembly	1



This water meter should not be used as the primary monitoring device for critical or health effect applications.

Air Blocker for Clack 1” Control Valves

Clack Corporation has its newest distributor family addition, the Air Blocker, available now. The Air Blocker traps water in its chamber to block the head of air from re-entering the control valve body. This will help reduce the iron oxidation that occurs, in the control valve, on air over media systems. The Air Blocker will extend the valves’ service life and cleaning intervals, over systems without an air blocker. It is designed with the twist-lock feature that has an o-ring seal and will only work on Clack 1” control valves with 1.050 riser pilot. Patent Pending.

Air Blocker device has been installed on this filter system.

Optional OZONE Assist (Model # BF-IRON-OZO-1MPT-08)

Ozone & Filtration Innovation

THE OZOTECH ENHANCED OXIDATION GENERATOR

The Ozotech Enhanced Oxidation Generator (EOG), when combined with the Clack Corporation automatic water filter control valve will provide active ozone during the backwash process and leaves a head of ozone in the filter. This patented process aides in the oxidization, cleaning and the filtering of iron, manganese, sulphate and various other heavy metals from your water. Utilizing the Ozotech EOG can also aid in anti-microbial protection against nuisance bacteria and reduce unwanted odors.

The Ozotech EOG is the "Next New Technology" in water treatment and has a place in any water company's water treatment toolbox. There is no better system on the market.

Easy to Install and Built to Last

With just a few steps, the compact Ozotech EOG mounts directly onto the Clack® control valve. The system includes the patented stainless steel Ozotech CD cell and features an allweather enclosure.

Improves Quality of Water

Ozone is proven to destroy microorganisms and remove minerals such as iron and magnesium instantly and effectively without harmful residue. The system will also assist in eliminating unwanted odors such as rotten egg, stale, or musty smells.

Low Maintenance

With no chemicals or pumps to maintain, the Ozotech EOG requires very little maintenance. The system is also energy efficient drawing only milliamps per day. A cleaning kit and instructional video are available upon request.

No Harmful Chemicals

Ozone has been proven to kill bacteria faster than chlorine, eliminating the need for traditional chemicals such as hydrogen peroxide or chlorine typically used to disinfect water. The Ozotech EOG is safe for the environment including septic systems.

The Ozotech EOG mounts directly onto the approved Clack® ozone resistant control valve. Contact Ozotech for approved Clack distributors. (*Clack valve not included)

Ozotech EOG SKU: 31506
Protected by US Patent #9586839

- Engineered for fit, finish & long-lasting service
- Simple three-step installation
- Improves the taste of your water
- Reduces odors caused by water-borne, nuisance bacteria
- Stops air-borne bacteria from entering your water supply

How Ozotech EOG Works

The Ozotech Enhanced Oxidation Generator (EOG) is a water treatment system designed to oxidize, clean, and filter water while providing anti-microbial protection against nuisance bacteria and related odors. As a fully integrated part of this water treatment filter the Ozotech EOG system produces cleaner, better tasting water without using or replacing chemicals.

The water entering the Ozotech EOG system passes through an ozone layer where impurities are oxidized, deodorized and enlarged so the filter can remove them and hold them until a backwash cycle is initiated. During the backwash cycle the impurities are sent to drain and the ozone layer is replaced, ready to process another batch of crystal clean water.

Ozotech EOG Frequently Asked Questions

What would be the ideal situation to try the Ozotech EOG?
Slight rotten egg odors or metallic tastes that stem from iron, manganese, IRB's or mild H2S.

Is it a unique solution for a unique issue, or is it enhancing an existing solution?
The Ozotech EOG generator is an enhancement of the AIO type systems controlling bacteria build-up in the dome area of the tank and reducing odors related to that build-up.

Who is the target market for the Ozotech EOG?
The Ozotech EOG, when added to a Clack AIO system, will increase the oxidation process and re-oxidize medias such as Katalox Lite, Greensand Plus or Titanium oxide. It also controls the build-up of iron-related bacteria and aerobic bacteria thus controlling associated tastes and smells.

The typical water analysis would be:

Iron	<5ppm
Manganese	<1 ppm
pH	>6.5
IRB'S	
Pink Algae	
Biofilm	

Check Valves

1” Brass Spring Loaded Check Valve is installed on inlet of bypass valve.

3/8” Quick Connect Air Draw Check Valve.
Installed on filter model # BW-IRON-1MPT-08

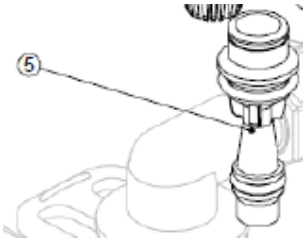
Insert Check Valve, installed in 90 degree fitting for OZONE intake.
Installed on filter model # BW-IRON-OZO-1MPT-08

Inline Ozone Diaphragm Check Valve.
Installed on filter model # BW-IRON-OZO-1MPT-08

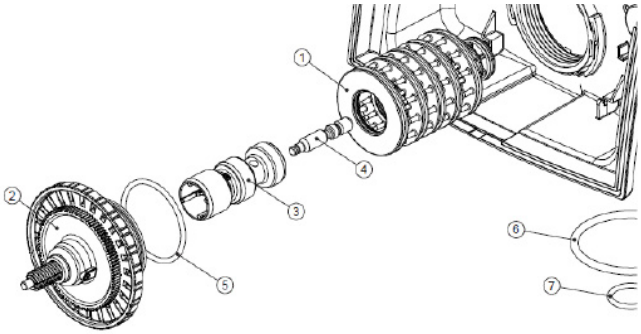
Service Parts and Annual Maintenance

Model # BF-IRON-1MPT-08

3/8” Quick Connect Air Draw Check Valve



Valve Injector # V3010-1F



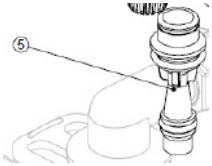
- Replace 3/8” Quick Connect Air Draw Check Valve Annually.
- Replace Valve Injector # V3010-1F annually, and clean injector screen.
- Clean internal parts of control valve annually. Replace seal stack and pistons if they show any wear or build up (#’s 1, 3, 4, on above internal parts diagram).

Service Parts and Annual Maintenance

Model # BF-IRON-OZO-1MPT-08

Insert Check Valve & 90 Fitting

Inline Ozone Diaphragm Check Valve

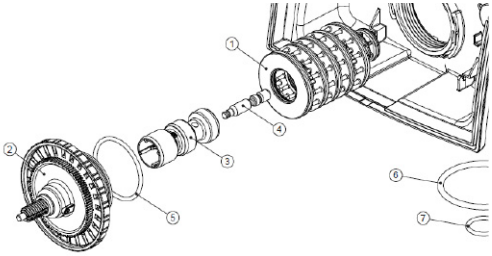


Valve Injector # V3010-1F

Air Filter

EOG II Ozone Corona Cell

Ozone Cell Cleaning Kit



- Replace Insert Check Valve and 90 Degree Fitting Annually.
- Replace Inline Ozone Diaphragm Check Valve Annually.
- Replace (Blue) Air Filter Annually.
- Replace Valve Injector # V3010-1F annually, and clean injector screen.
- Clean the EOG II Corona Cell with Ozone Cleaning Kit Annually.
- Clean internal parts of control valve annually. Replace seal stack and pistons if they show any wear or build up (#'s 1, 3, 4, on above internal parts diagram).

Product Limited Warranty

Congratulations on purchasing one of the finest water filtering products on the market today. To the original purchaser: Your new water filtering system carriers a comprehensive Product Warranty.

Warranty applies to Manufacturing defects only, to the original owner at original installation site

10-year Warranty Items:

- Mineral tank carries a 10-year warranty against manufacture defects only.

* Service, Labor and Freight Charges Not Included*

5-Year Warranty Items:

- All Digital and Mechanical parts carry a 5-Year warranty, against manufacture defects only.

* Service, Labor and Freight Charges Not Included*

Atlas Filtri North America will repair or replace defective part at their own option, provided that the part is returned to Atlas Filtri North America, freight prepaid. All service must be performed by an authorized technician. *Service, Labor & Freight Charges are Not Included by Atlas Filtri North America or Manufacture*

Warranty Exclusions:

- Defective warranty part or parts will be repaired or replaced at the option of Atlas Filtri North America, F.O.B. Atlas Filtri North America. 1068 North Farms Rd. Bldg #3. Wallingford, CT. 06492.
- All systems must be installed correctly by a licensed installer and meet all state and local plumbing codes.
- All service work must be performed by an Authorized Technician.
- This Warranty does NOT apply to and is VOID on all systems that have been neglected, installed incorrectly, wrongfully applied, or if they have had hot water introduced through them from back-feed or incorrect installation, or have had any sand, silt, turbidity, organic loading or high Iron fouling, direct UV sunlight, rain, weather elements, freezing, fire, flood, power surges, brown outs, earthquakes, or any other natural disaster. This warranty does not apply and is VOID if systems have had vacuum, negative pressure, or reverse flow. Protect systems from vacuum, negative pressure, and reverse flow.
- This Warranty does not apply on systems installed on waters of unknown quality. Do not install systems on waters that are microbiologically unsafe or of unknown water quality.

This Warranty gives you specific legal rights. You may also have other additional legal rights which may vary from state to state by statutory provisions. Atlas Filtri North America will not be liable for any freight, labor charges, loss or damages caused by defective part.

Atlas Filtri North America
1068 North Farms Rd. Bldg. #3
Wallingford, CT. 06492
Phone: (203)-284-0080
atlasfiltri.com

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