



CONSUMER'S MANUAL

ProMate-6 / Iron Curtain Demand Aeration



U.S. Patent No. 7,156,995 B2, 7,491,321 & 7,638,063

Franklin Water Treatment, LLC
hellenbrand.com

Congratulations on your purchase of one of the finest water treatment systems available today – the Iron Curtain® System. This patented, non-chemical filter system, will remove iron, manganese and/or hydrogen sulfide from your water supply when properly applied.

This owner’s manual is designed to assist owners and installers with the operation, maintenance, and installation of your new iron removal system. It is our sincere hope that this manual is clear, concise, and helpful to both owner and installer. We have included detailed instructions of general operating conditions, pre-installation, installation, start-up, and timer settings.

Questions? Should you have any questions regarding the installation, operation or servicing of this system, please contact the dealer you purchased this system from. Your dealer will be familiar with your particular situation, your water conditions, etc. and should be able to address your concerns promptly and efficiently.

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Dealer Name _____ **Phone** _____

Address _____ **Email** _____

INSTALLATION DATA

Date of Installation _____ Installed By _____
Filter Model Number _____ Aeration Model Number _____
Address of Installation _____

Raw Water Test: Iron _____ Manganese _____ pH _____ Hydrogen Sulfide _____
TDS _____ Iron Bacteria _____ yes _____ no Tannins _____
Hardness _____ Alkalinity _____ Bromide _____

Note: If continuous Chlorine or Ozone is added to the influent water before the filter system the influent water should be tested for the presence of Bromide. If detected, bromide must be removed prior to the addition of ozone or chlorine.

Automatic Filter Regeneration: Every _____ Days

Frequency of Air Recharge: Every _____ Gallons

Continuous Water Supply Flow Rate @ 30 PSI (While the pump is running) _____ Gallons Per Minute (gpm)

GENERAL SPECIFICATIONS

OPERATING PRESSURES

Minimum/Maximum Minimum 30 psi
Maximum 70 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
Check Valve 3/8" Poly Tube

ELECTRICAL CURRENT DRAW AND VOLTAGE 2.0A/120V

¹Operating outside of the optimum pressure range may affect system function. Contact your Hellenbrand support team for information.

FILTER SYSTEM DISINFECTION

The construction materials of your Filter System 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 system after installation, before the system is used to treat potable water. In addition, during normal use a system may become fouled with organic matter or in some cases, with bacteria from the water supply.

Therefore, every Filter System should be disinfected after installation, some will require periodic disinfection during their normal life. You have two choices for disinfection as follows:

A. SODIUM HYPOCHLORITE (household bleach, non-scented, EPA registered sanitizing agent) 5.25% SODIUM HYPOCHLORITE solutions are available under such trade names such as Clorox, Lin co, Bo Peep, White Sail and Eagle Brand Bleach. Any chemical introduced into a potable water supply must be NSF/ANSI/CAN 60 listed. If stronger solutions are used, such as those sold for commercial laundries, adjust the dosage accordingly. 1. Dosage: 2 ounces per cubic foot of filter media. 2. Add the required amount of hypochlorite to the inlet of the filter system. Press REGEN and allow the Filter System to go through a normal regeneration. Remember some filter medias should NOT be regenerated in the first 24 hours, program accordingly.

IRON CURTAIN® 2.0

Iron Filtration System

Aeration/precipitation/multi-media filtration for:

1. Iron Reduction/Removal
2. Manganese Reduction/Removal
3. Hydrogen Sulfide Reduction/Removal

Principle of Operation

The Iron Curtain® System uses a **three step process of oxidation, precipitation, and mechanical filtration for the reduction/removal of iron, manganese, and hydrogen sulfide.** The process of how the Iron Curtain® System does each one of these separate procedures is the key to the successful results this product has obtained in the market place. **There are two main components that make up the Iron Curtain® System.** They are:

1. Iron Curtain® 2.0 Aeration Assembly
2. Iron Curtain® Multi-Media Depth Filter

1 The first step in any oxidizing process is to bring the raw water into intimate contact with a strong oxidant. This will begin to convert the dissolved element such as iron or manganese to a physical particle or nonsoluble precipitate. A strong, inexpensive, environmentally-safe oxidant is oxygen, which makes up about 21% of ambient air. To do this, the Iron Curtain® System sprays water through a regulated head of air in the aeration tank.

2 The second step in this three step process is to provide adequate reaction or contact time for the precipitation reaction to go to completion. This allows time for the iron and/or manganese particles to become large enough to filter out. The aeration tank with the Iron Curtain® System allows for several minutes of contact time at the rated service flows, compared to only seconds on other systems.

It should be noted that this reaction time will also be affected by temperature; the warmer the water the faster the reaction. A low pH can slow the oxidation reaction of the iron. This reaction time may also be affected by the presence of organic material (such as tannins). If tannins are present, field tests have shown that they will not be removed and will also hinder the ability of this system to effectively remove iron, manganese, and/or hydrogen sulfide. Installation of this system on water supplies with more than 0.5 ppm of tannins will void warranty.

3 The third and final step is filtration for the removal of the precipitates from the water. A WQA Water Filtration Study Guide states:

"The ideal filter bed would be one with large grains at the top to prevent the formation of a surface cake and to provide large pores for coarse particles and small grains at the bottom to entrap smaller particles. This allows the entire depth of the bed to be used as a filter. This also allows for longer filter runs and faster flow rates. Unfortunately, such an ideal bed, when consisting of a single media is not possible, the way to solve this problem is to use layers of media."

The advantages of a multi-media bed are:

1. Longer runs between backwash times.
2. Caking of the bed and breakthrough turbidity are virtually eliminated.
3. Much higher service flow rates per square foot.
4. Higher degree of clarity because of the heavier, finer filter media in the bottom.

The standard Iron Curtain® System uses four layers of filter media. The top layer is made up of large, lighter weight particles. The second layer contains a slightly heavier media. The third layer contains a much heavier media, smaller in size than the one above. The fourth layer is a special support bed to retain filter media so it does not pass through the distribution system, and allows an even distributed flow of backwash water.

Operation of Aeration System

The Iron Curtain® System introduces air into the aeration tank and bleeds off the old head of air automatically. A relay controls the air recharge cycle and how frequently it occurs. The relay turns on the air pump, opening the drain port and the top air recharge port of the aeration tank. The air pump runs for a pre-set amount of time, replenishing the head of air and discharging excess water and/or air to drain.

Advantages Over Other Systems

1. The original system was tested and validated by WQA.
2. Uses no chemicals or salt.
3. Eliminates the need for air injectors, venturis, or micronizers that can plug with iron.
4. No floats or air volume controls are used to regulate air volume in aeration tank which "foul" from iron.
5. Two-tank system consisting of a pressurized aeration tank and multi-media depth filter.
6. 110V aeration pump to recharge aeration tank.
7. "Piggy-back" plug allows control valve to be plugged into same outlet.
8. Can be used on shared wells, municipal water supplies, or with buried pressure tanks without additional equipment.
9. Higher service flow rates.
10. Better filtration results.
11. U.S. Patents #B1 5,096,596 and 7,156,995.
12. Variable settings on air recharge that is independent of backwash frequency.
13. Can reduce both dissolved and particulate iron.

Operating Conditions

The original Iron Curtain® System has been validated by the WQA under their S-200 Filter Standard for the reduction/removal of iron, manganese, and/or hydrogen sulfide. The concentration limits listed below reflect the maximum individual limit that each contaminant was tested for separately without any interference of other contaminants in the influent water.

In reality, these contaminants may be present in combination which may limit the filter's ability to remove these contaminants in higher concentrations. In some cases, individual sellers of this equipment have had success removing higher concentrations of contaminants—iron, for example—above the limitations we have listed. If you are considering the installation of this system for the reduction/removal of iron, manganese and/or hydrogen sulfide levels that are above operating conditions listed below, we recommend that you consult your dealer for proper application. Installation of this system under these circumstances may void part(s) and/or all of the system warranty.

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 10 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 Curtain® 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 Curtain® System will function properly. One option to control iron bacteria within the Iron Curtain® is chlorine injection during the regeneration cycle. 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 10 ppm hydrogen sulfide. Hydrogen sulfide levels vary depending on barometric pressure.*

Manganese — Limit 2.0 ppm; amounts present over 2.0 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 residual and 0.5 ppm 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 750 ppm voids any claims for this system to perform as stated above.***

Pre-Installation Check List

Water Pressure: A minimum of 30 psi at a predetermined continuous flow rate is required to backwash the filter properly, with a maximum of 70 psi to be used.*

Actual Influent Flow Rate: (Water available from well pump, service inlet, etc.) The actual flow rate must exceed the backwash rate for the model of filter selected at a minimum of 30 psi for the entire

length of the backwash cycle. See actual backwash rates in the Specifications section on page 6.

Electrical Requirements for Filter Control: A continuous 110 volts is required to cycle the controls and aeration pump. Make certain the electrical supply is always on and cannot be turned off with another switch.

Existing Plumbing: The condition of the existing plumbing should be free from lime and iron build-up. Piping that is heavily built-up with lime and/or iron should be replaced.

Equipment Location: See Figure 1, on page 7.

Location of Aeration and Filter Tank: See Figure 1 on page 7. These two tanks should be installed after the pressure tank and as close to each other as practical. If you want to filter outside hosebibs, be sure the filter system is properly sized to handle the flow rates required for extended periods of time, in addition to the normal household demand.

Drain Lines: The pipe size for the drain line should be a **minimum of 3/4"**. Backwash flow rates in excess of 7 gpm or length in excess of 20' require 1" drain line. Drain line must terminate with air gaps that conform to ASME A112.1.2 or ASME A112.1.3 to a code compliant receptor. Multiplex systems that operate independent of each other require individual drain lines. Under Wisconsin code drain line material must be approved water distribution piping per Wisconsin code 384.30-8.

Check Valve: On applications where there is a non-filtered demand for water such as joint wells (where the filter system is only installed in one of two or more homes), outside hosebibs, farms with outbuildings, yard hydrants, etc. a spring loaded check valve is provided and must be installed ahead of the aeration tank. See Figure 1, on page 7. Install the check valve in a vertical upflow position with a minimum 6" water column above the check valve. This prevents air from escaping past the check valve. If the check valve is installed in a horizontal position, and there is a simultaneous demand for both non-filtered and filtered water, the air head in the aeration tank may escape backwards past the check valve into the non-filtered water line.

By-Pass Valves: Always provide for a bypass on the filter system. It is recommended that a bypass be placed on both the aeration tank and the filter tank.

Filtered Water: Normally, filtered water is furnished to all household lines; however, outside faucets are typically left on raw water. If filtered water is provided to outside faucets, the filter system must be sized accordingly.

CAUTION: Iron Curtain System controls and/or air compressors are NOT designed to be installed outdoors with direct exposure to the elements. Hellenbrand recommends filter systems to be installed indoors or under a protective shelter protected from the elements. Installing these systems in a high humidity and or a corrosive environment will cause premature failure of the compressor which is NOT covered under warranty. The water pressure is not to exceed 80 p.s.i.; water temperature is not to exceed 110° F; filter system cannot be subject to freezing conditions; filter system cannot be subject to a negative pressure or vacuum. On installations where there is the possibility of a negative pressure or vacuum, a vacuum breaker or check valve must be installed at the inlet of the conditioner. For example, if the water service is interrupted due to a water pipe break, well pump being serviced, etc., a back siphon could occur causing a vacuum or negative pressure on the filtration equipment.

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

INSTALLATION INSTRUCTIONS

Your new Iron Curtain® model IC-2.0 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.

1. **Follow all state and local plumbing and electrical codes!**
2. The inlet check valve must be installed in the upflow position on the raw water supply feeding the aeration tank. (See figure 1, page 8 for proper check valve installation procedures)
3. When installing an Iron Curtain 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 the 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. (Figure 1, page 8)
4. The raw water supply from the outlet of the check valve must be connected to the down-flow inlet connection on the aeration tank. **Refer to the stickers marked inlet/**

outlet for proper connections. A factory by-pass valve is available and should be installed on the aeration tank assembly. (See page 11 for details). Leave the aeration tank on by-pass at this time.

5. The outlet from the aeration tank is then connected to the inlet of the filter tank. A factory by-pass valve is available and should be installed on the filter tank assembly. (See page 8 for details).
6. Connect the outlet of the filter system to the water system lines you are filtering.
7. The IC-2.0 aeration head assembly has a 3/8" drain connection that must be run to a drain. This can tee into the drain line of the filter or to a drain independent of the filter drain. Drain line emits surges of excess air from aeration tank and must be secured. Tubing has been supplied.
8. There is a 1/4" tube size vent port off of the solenoid valve which is vented to the atmosphere. This will normally expel very little moisture unless an internal seal fails within the valve body. **This vent should be run to a drain to prevent any water damage to the surrounding area, should the solenoid fail. This must drain downward to an open atmospheric drain separate from the filter drain.**
9. Recommend 1" diameter pipe between aeration tank and filter tank.

START-UP INSTRUCTIONS

DO NOT BACKWASH IN FIRST 24 HOURS

READ COMPLETELY PRIOR TO STARTING SYSTEM

Filter control is shipped from factory in downflow rinse position.

Complete all plumbing connections; inlet, outlet and drain line, connect 3/8" line to back of control with air compressor & run to drain. (OK to connect to filter drain line) Secure with cable ties.

1. Verify both tanks are in bypass.
2. Flush cold water piping to nearest faucet until air gone and water clear.
3. Open inlet valve slowly on aeration tank to fully open position.
4. Once aeration tank inlet is fully open and tank is filling, plug aeration control into 120V outlet and water/air will start to run to drain from 3/8" tube.
5. **DO NOT PLUG IN FILTER CONTROL.**
6. With air compressor running, open outlet of aeration tank.

7. Slowly open inlet fully to filter tank, Let filter run to drain for 10 minutes or until water clear. Filter is in rinse position.
8. **CLOSE INLET TO FILTER; WAIT UNTIL WATER STOPS RUNNING TO DRAIN.**
9. Plug filter control into 120V outlet or piggy back plug on aeration control for ProMate and H-Series controls. Remove filter cover and plug power wire to 4-prong, connect at bottom of circuit board, labeled 12VAC PWR (This is usually second position from right). Replace filter cover.
10. Open inlet and outlet to filter.
11. Push SET CLOCK button and use up & down arrows to set time of day.

Failure to follow proper start-up may result in equipment malfunction not covered by warranty.

Aeration Control Center

Your new IC-2.0 Aeration Control is factory pre-set to cycle the air compressor every 500 gallons or approximately once every 24 hours and during filter regeneration. If chem feed option is used, only one means of initiating air recharge will be available. The air pump will begin to run and will automatically shut off and not affect the functioning of the Iron Curtain®.

Iron Curtain® Filter Control

Your Iron Curtain® Filter is factory preset to backwash every third day. Adjust as necessary but never backwash less often than every three days. See filter control owners manual for details.

Regeneration Frequency

Your Iron Curtain® Filter System contains a special filter media mixture which allows it to filter iron longer than standard filters between backwash regenerations. However, it is our recommendation to leave factory settings as is, unless you wish to backwash more frequently. You will have to backwash more frequently if you have higher amounts of iron, iron bacteria, hydrogen sulfide, and/or manganese present in your water supply. You will also have to regenerate more frequently if you notice iron bleed through before the end of the normal service run.

For manual air recharge, push REGEN button until display changes, this will occur in filtering mode.

Backwash Frequency

Iron Applications

0.3 - 3.0 ppm Iron - Every 3rd Day
3.0 - 6.0 ppm Iron - Every Other Day
6.0 - 10.0 ppm Iron - Every Day
10+ ppm Iron - Consult Factory

Air Recharge Frequency

Recommended duration of pump run time is 10 minutes, and is factory set to that duration. (Settings Based on Average Pressure (50psi) and <500 Gallons Daily Use).

Iron Applications

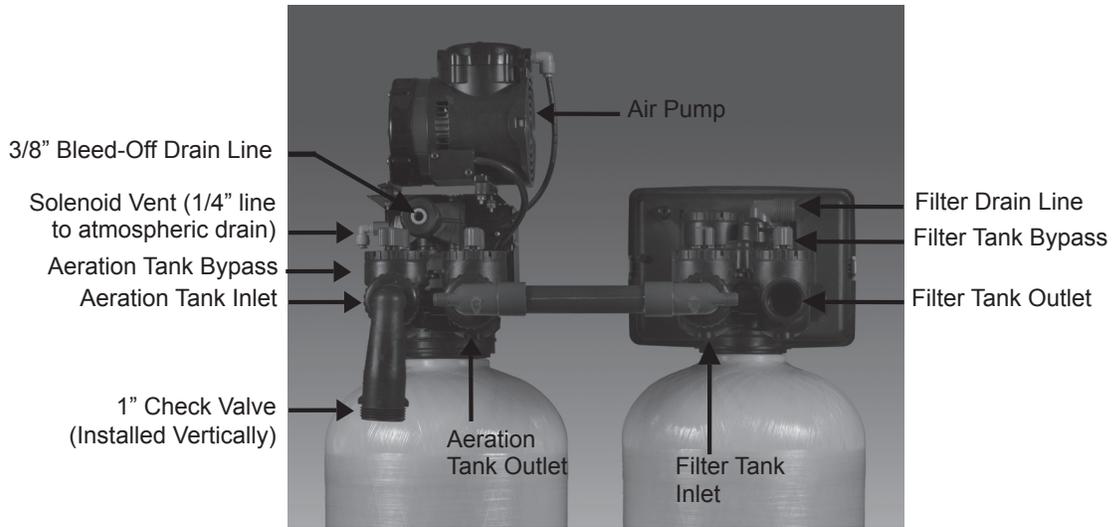
0.3 - 3.0 ppm Iron - Every 500 Gallons
3.0 - 6.0 ppm Iron - Every 500 Gallons
6.0 - 10.0 ppm Iron - Every 250 Gallons
10+ ppm Iron - Consult Factory

Hydrogen Sulfide Applications

Hydrogen Sulfide (H₂S) consumes 7 times the amount of oxygen to oxidize than iron does. Therefore, for Hydrogen Sulfide Applications, we use the following guideline;

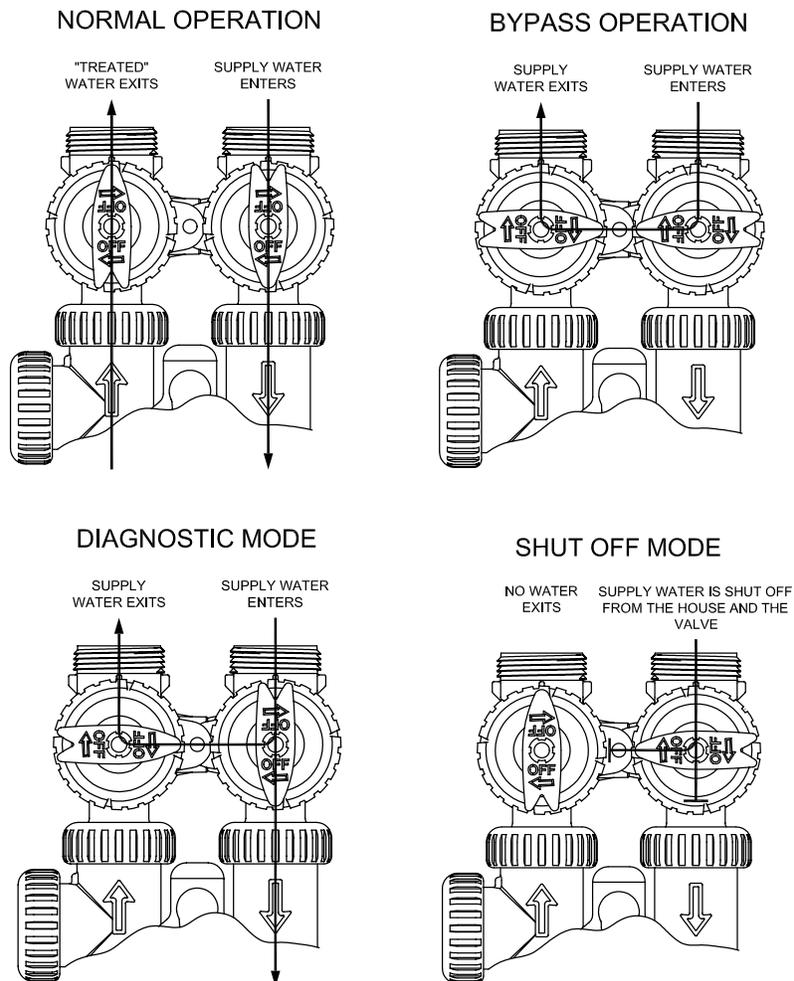
0 - 4 ppm H₂S - Every 250 Gallons
4 - 8 ppm H₂S - Every 200 Gallons
8 - 10 ppm H₂S - Every 100 Gallons

ProMate® Filter Valve Option



BYPASS VALVE OPERATION

Complete Bypass, Part #101325



Troubleshooting

Complaint	Problem	Cause	Solution
1. Iron or manganese* bleed-through or staining	A. Inadequate backwash of filter	1. Media bed fouled	1a. Contact your local Hellenbrand Dealer for onsite service
	B. Fails to regenerate	1. Interrupted electrical service	1a. Assure continuous electrical supply (check plug, breaker, fuses, etc.)
	C. Water contaminant levels are greater than limits established by the manufacturer	1. It is not uncommon for local water conditions to change	1a. Contact your local Hellenbrand Dealer
Sulphur odor bleed-through	D. Inadequate aeration	1. Loss of air through inlet check valve	1a. Contact your local Hellenbrand Dealer for onsite service
		2. Loss of air through air leak	2a. Contact your local Hellenbrand Dealer for onsite service
		3. Faulty aeration pump	3a. Contact your local Hellenbrand Dealer for onsite service
	E. Exceeding recommended filter system flow rate	1. Service flow rate demand is higher than filter system design flow rate	1a. Contact your local Hellenbrand Dealer for onsite service
	F. Regeneration during service flow demand	1. Time of day set incorrectly	1a. Reset timer
	G. Raw water bleeding through filter	1. Internal control valve leak	1a. Contact your local Hellenbrand Dealer for onsite service
	2. Water leaking from vent port adapter	A. Seals failed internally	1. Pressure has exceeded rating on system Refer to complaint #10
B. Shuttle valve stuck in the open position.			
3. Water is effervescent	A. This can be expected when water is aerated under pressure	1. Water supply has been naturally aerated under well system pressure. As water is released to the atmosphere, air molecules separate from the water.	1a. This natural phenomenon will typically dissipate to the atmosphere in a matter of seconds. If preferred, water can be drawn and stored in an open container prior to use (i.e. fill a pitcher and store in the refrigerator for cool fresh drinking water)
4. Loss of pressure	A. Lack of proper cleaning of system	1. Plugged Inlet 2. Fouled Media Bed can also cause loss of pressure.	1a. Contact your local Hellenbrand Dealer for onsite service
5. Air spurting at outside or non-filtered water fixtures	A. Inlet check valve not sealing		1a. Contact your local Hellenbrand Dealer for onsite service
6. Air spurting from filtered water fixtures*	A. Reduced pressure in distribution system		1a. Contact your local Hellenbrand Dealer for onsite service
*For further details - see air spitting document on our website under Water News.			
7. Loss of media through drain line of filter control	A. Air passing through filter during backwash	1. Excess air accumulated in aeration tank from aeration pump	1a. Contact your local Hellenbrand Dealer for onsite service
		2. Excess air accumulated in filter system from water supply or well pump	1a. Contact your local Hellenbrand Dealer for onsite service

Complaint	Problem	Cause	Solution
8. Excessive noise during regeneration	A. Howling or whistling noise during regeneration cycle	1. Drain line is vibrating against other pipes, conduits, pipe hangers, heat ducts, floor joists, etc.	1a. Insulate drain line, specifically at points of contact with other materials
9. Water running to drain continuously from filter control	A. Control valve is stuck in regeneration cycle. See specific control manual	1. Electrical service to control(s) has been interrupted	1a. Assure continuous electrical service is available (check plug, breaker, fuse, etc.) 1b. Contact your local Hellenbrand Dealer for onsite service
10. Water running to drain continuously from 3/8" bleed off tube on aeration tank.	A. Shuttle valve stuck in the open position.	1. Shuttle valve failed	1a. Plug in aeration pump. (See start-up instructions - page 5.) 1b. Contact your local Hellenbrand Dealer for onsite service
11. Blue green staining	A. Corrosive water condition in copper distribution piping system	1. Low pH condition of the raw water supply. On type "A" filters, the pH correction media may be depleted	1a. Contact your local Hellenbrand Dealer for onsite service

*Manganese can be slow to oxidize when the pH is less than 8.5

FILTER WARRANTY

Includes – Iron Curtain® 2.0, Iron Curtain® Jr. and Storm Filter Systems

Hellenbrand, 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 IC-2.0 Aeration Macromatic Timer.

For a Period of FIVE YEARS: The IC-2.0 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 unit 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 Hellenbrand. Upon expiration of the applicable warranty period, Hellenbrand 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 Hellenbrand products, and arrange a time during normal business hours for the inspection of the System at the original installation site. You may also contact Hellenbrand and we will provide you with the contact information for your local authorized seller of Hellenbrand products. Hellenbrand, 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 Hellenbrand 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 Hellenbrand.

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 Hellenbrand's printed instructions, or installation, repair or service by anyone other than Hellenbrand or an authorized seller of Hellenbrand 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, Hellenbrand assumes no liability for the determination of the proper equipment necessary to meet your needs; and Hellenbrand does not authorize others to assume such obligations for Hellenbrand.

TO THE EXTENT PERMITTED BY APPLICABLE LAW, REMEDIES FOR DEFECTS OR FAILURES ARE LIMITED TO THE REMEDIES PROVIDED IN THIS WARRANTY. THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. ANY IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, NON-INFRINGEMENT, OR ANY WARRANTIES ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING, OR FROM USAGES OF TRADE, ARE LIMITED IN DURATION TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE.

UNDER NO CIRCUMSTANCES SHALL HELLENBRAND BE LIABLE TO THE ORIGINAL CONSUMER PURCHASER OR TO ANY OTHER PERSON FOR ANY INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OR FOR ANY OTHER LOSS, DAMAGE, OR EXPENSE OF ANY KIND, INCLUDING LOSS OF PROFITS, WHETHER ARISING OUT OF BREACH OF WARRANTY, BREACH OF CONTRACT, IN TORT OR OTHERWISE, AND REGARDLESS OF WHETHER HELLENBRAND WAS AWARE OF THE POSSIBILITY OF SUCH LOSS. THESE LIMITATIONS WILL APPLY REGARDLESS OF ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Similarly, some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Hellenbrand products are not for sale or distribution into the State of California effective 8/31/18.