

Hellenbrand[®]

IRON CURTAIN[®]
SYSTEM 2.0

ProMate-6 / Iron Curtain[®] 2.0 Demand Aeration Manual



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

Consumer's Manual

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Manufactured by:
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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.

INSTALLATION DATA

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

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

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)

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Dealer Name _____ **Phone** _____

Address _____ **Email** _____

GENERAL SPECIFICATIONS

OPERATING PRESSURES

Minimum/Maximum Minimum 25 psi
Maximum 80 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
Ozone 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.

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 25 psi at a predetermined continuous flow rate is required to backwash the filter properly, with a maximum of 80 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: All filter system drain lines must be a **minimum of 3/4"** or equal to the size of the drain line connection at the control valve **or larger**. Avoid overhead drain lines when possible. If used, overhead drain lines are not to exceed a height of five feet above the control valve and should be no more than fifty feet in length.

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.**

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, see page 26-27 for wiring and programming. 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

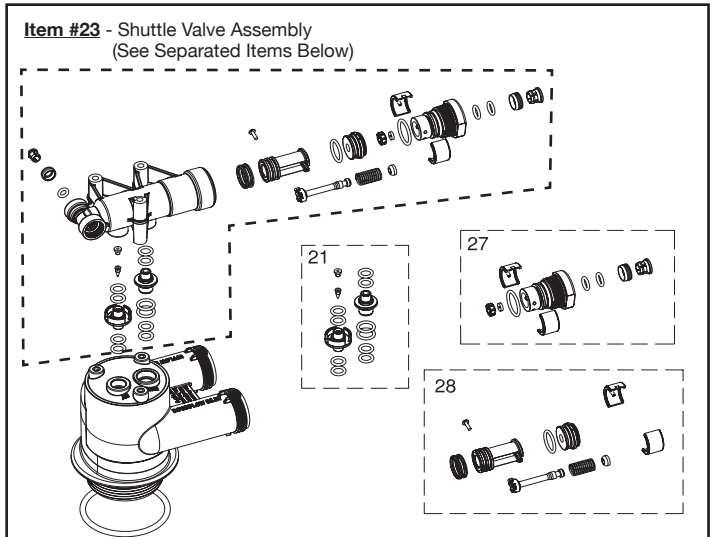
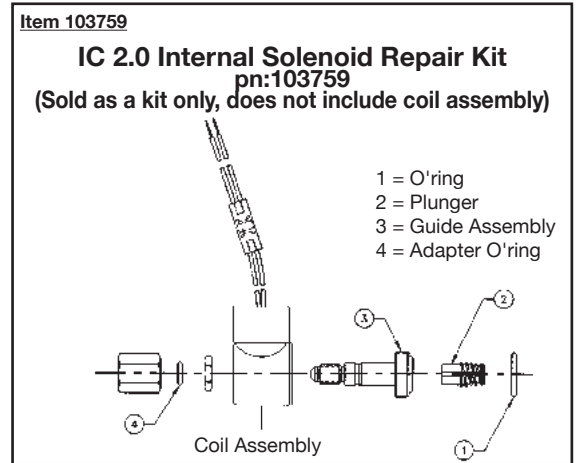
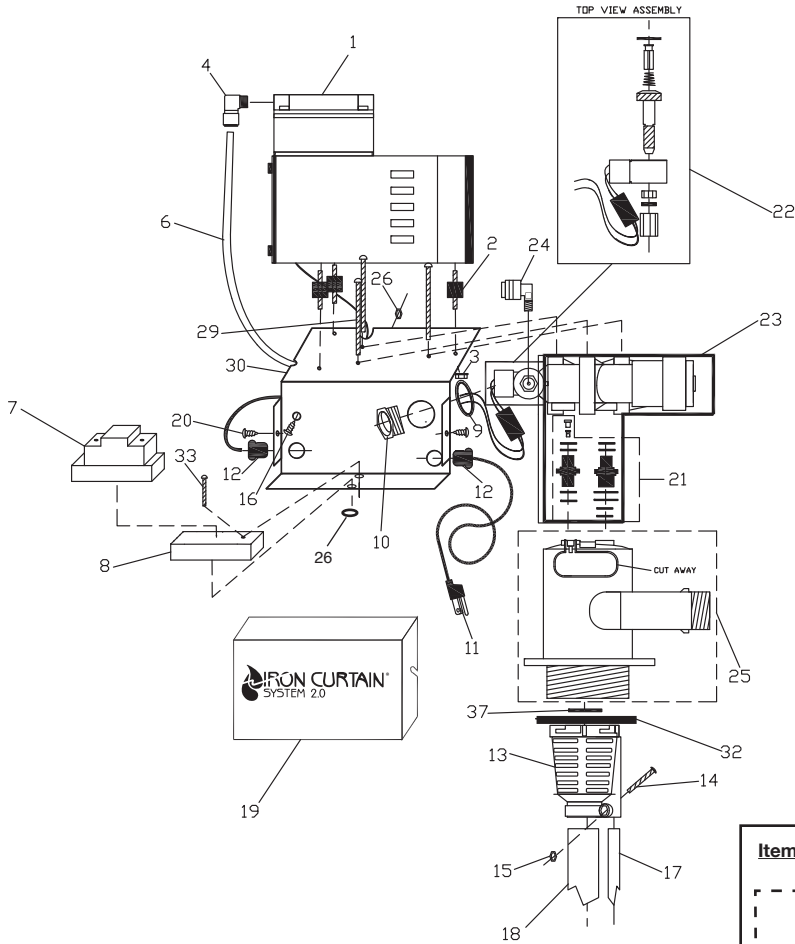
0.3 - 3.0 ppm Iron - Every 500 Gallons
3.0 - 6.0 ppm Iron - Every 500 Gallons
6.0 - 10.0 ppm Iron - Every 250 Gallons
10+ ppm Iron - Consult Factory

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

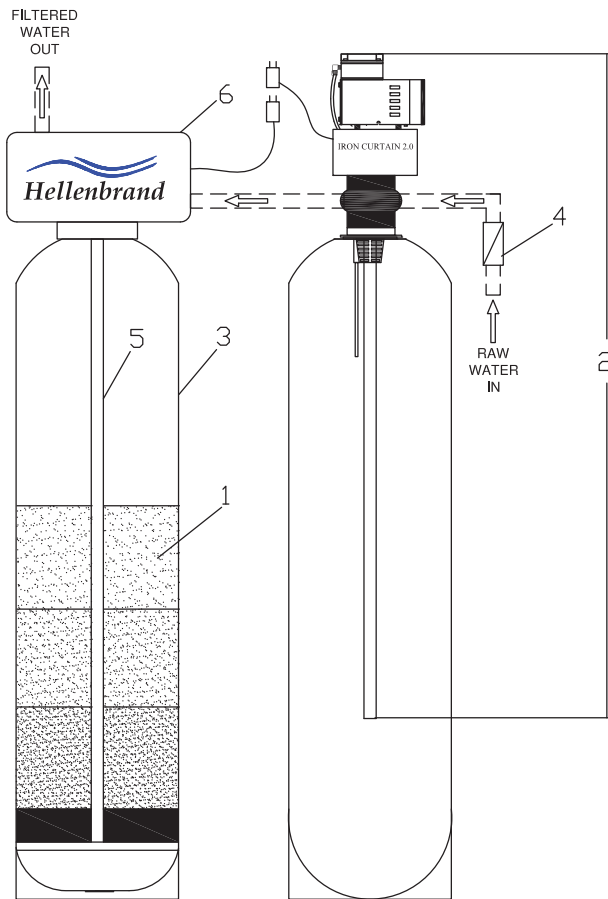
IC-2.0 Assembly



Item No.	Part No.	Description	Qty.
1	110269	Hellenbrand Pump	1
2	101631	IC Pump Feet	3
3	102137	IC Pump Feet Nut	3
4	110470	Elbow, IC Pump 1/4" NPT x 1/4" Tubing	1
6	102666	1/4" Polypropylene Tubing (9" required)	1
7	108010	Relay	1
8	108011	Relay Base	1
9	102433	Conduit Seal	1
10	101318	Electrical Bushing, 1/2"	1
11	103073	Power Cord, 8 ft.	1
12	103108	Strain Relief, Elec. Cords	2
13	101547	Upper Distributor Basket	1
14	102479	Screw, Upper Distributor Basket 6-32 x 3/4" 8-18SS	1
15	102133	Nut, Upper Distributor Basket 6-32 316SS	1
16	102477	Grounding Screw	1
17	102247	Bleed off Tube	1
18	102663	Pick Up Tube	1
19	103469	Cover	1
20	102477	Screw, Cover	2
21	101152	Adapter Assembly Kit w/Duckbill Check Valve Installed	1
22	103914	Solenoid Operator Assembly	1
22-RK	103759	IC 2.0 Internal Solenoid Repair Kit	1
23	102847	Shuttle Assembly	1
24	100479	1/4" Vent Port Adapter	1
25	101766	Aeration Head	1

26	107995	Relay Base Nut	2
27	101390	End Cap Assembly	1
28	102259	Piston Assembly	1
29	102476	Back Plate Bolt	3
30	108030	Back Plate	1
	102792	1" Brass Inlet Check Valve (Not Shown, See pg 7)	
	104174	Vertical Adapter Inlet Check Valve	
31	104136	Complete Aeration Assembly	1
32	102192	O'Ring-Tank Adapter	1
33	107994	Relay Base Screw	1
36	102894	Solenoid Spanner Wrench (Not Shown)	1
37	102165	O'Ring Pick-Up Tube	1

Iron Curtain® System – IC-10 / IC-12



ITEM NO.	QTY. REQ'D.	PART NO.	DESCRIPTION
1	1	101065	IC-10 Rebed Mix
		101069	IC-10A Rebed Mix
		101068	IC-10+ Rebed Mix
		101070	IC-12 Rebed Mix
		101072	IC-12A Rebed Mix
		101071	IC-12+ Rebed Mix
2	1	107585	Aeration Assembly
3	1	104554	1054 Vortech IC Filter Tank
		104561	1252Vortech IC Filter Tank
3A	1	104552	10x54 IC-10 Aeration Tank
		104559	12x52 IC-12 Aeration Tank
4	1	102792	1" Check Valve (See pg 7)
		104174	Check Valve
5	1	102241, 101173	Distributor Tube for IC-10
		102238, 101173	Distributor Tube for IC-12

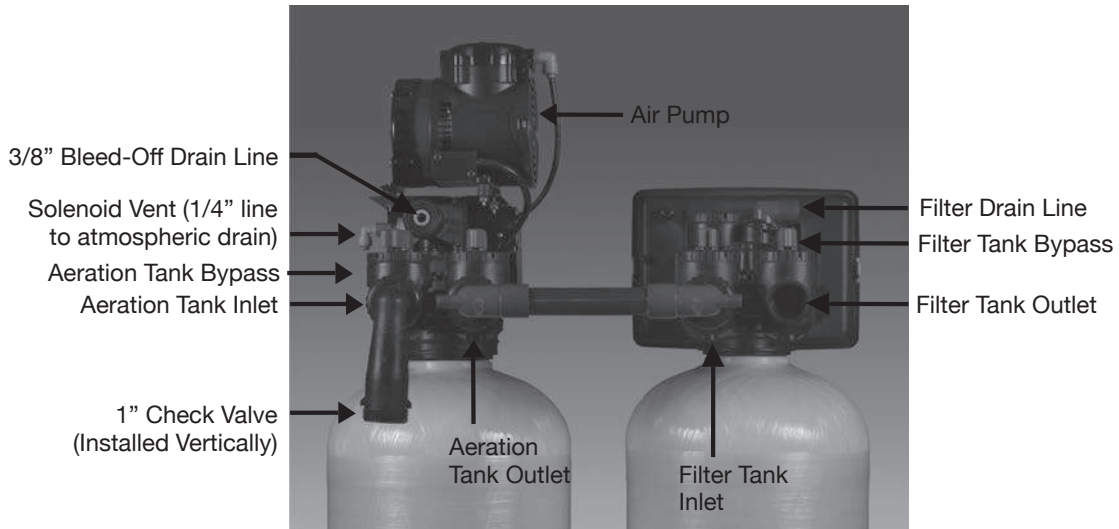
Control Valve Options for Filter Valves

6	1	104301	ProMate6-IC-10
		104302	ProMate6-IC-12

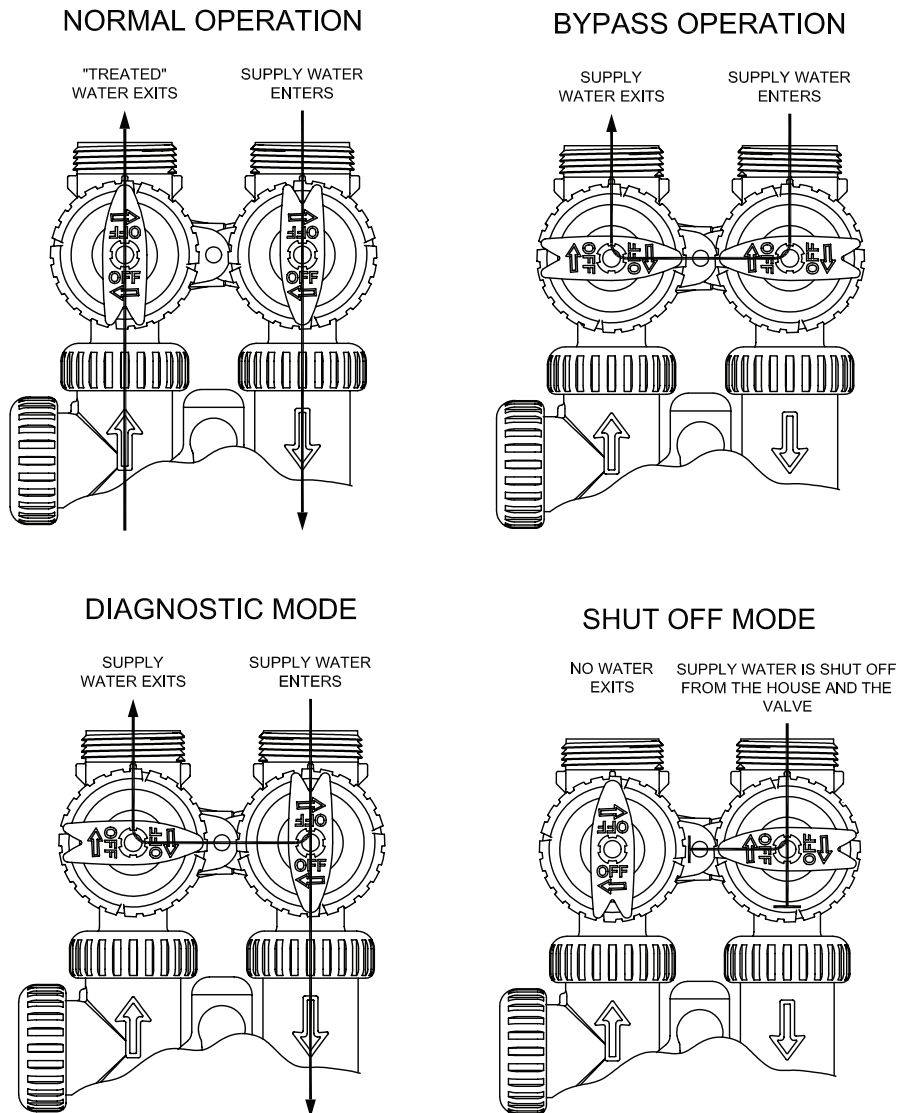
Not Shown.....101235 Bypass

FIGURE 8

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. See complaint #1, Page 19	1. Plugged Inlet	1a. Contact your local Hellenbrand Dealer for onsite service
		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
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

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

Complaint	Problem	Cause	Solution
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

FILTER WARRANTY

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

Hellenbrand, Inc., 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.