



WATERTRUST PRO SERIES™

WHOLE HOUSE IRON REDUCTION SYSTEMS
1.0, 1.5 INSTALLATION AND OWNERS MANUAL

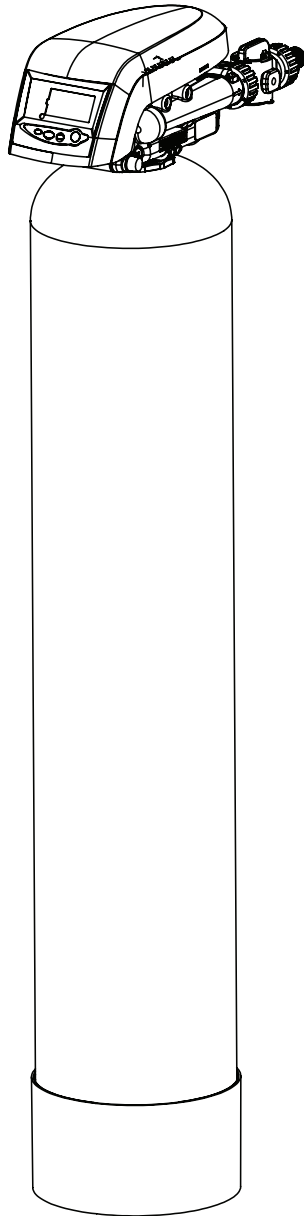


Table of Contents

Application Limitations	3
Operation Specifications	3
Pre-Installation Instructions	4
Maintenance Requirements	4
Installation Instructions	4-6
Valve Layout.....	6
Control Layout	7
Display, Icons, and Cursors.....	7
Button Functions	7
Programming Overview	8
Control Operation	8
Level I Programming	8
Filter Quick Programming.....	9
Level II Programming	10
Programming the Lockout Feature	11
Level III Cycle Programming- C Values.....	11
Exploded Views and Parts Lists.....	12-16
Troubleshooting.....	17-19
Maintenance Schedule	20
Warranty Information	24

Application Limitations

pH: The influent water must be between 6.8 and 9.0.

Iron: Maximum influent iron concentration is 5.0ppm.

Iron Bacteria: If iron bacteria are present, frequent service may occur and the life of the system may be limited. By properly controlling the iron bacteria with chlorine or other approved methods for bacterial reduction, the system will function properly.

Manganese: Maximum influent manganese concentration is 2.0 ppm; amounts over 2.0 ppm may gradually prevent iron removal. For optimum manganese reduction, the pH should be between 8.0 and 9.0. If both iron and manganese are present, the pH should be between 8.0 - 8.5.

Organic Matter (Tannins): The presence of organics above 2.0 ppm may hinder the operation of the system.

Chlorine: The presence of chlorine in the raw water supply should be limited to a maximum of 1.0 ppm.

Operational Specifications

Model	Media Amount (Cu. Ft)	Service Flow Rate (Gal/Min)	Psi Drop at Service Flow Rate (Gal/Min)	Drain Flow Rate (Gal/Min)
Pentair Iron Reduction System 1.0	1.0	5.0	3	5.0
Pentair Iron Reduction System 1.5	1.5	5.0	3	5.0

The order number for the replacement media is 14816

Power Requirements

The computer board receives power from an external wall-mount transformer, supplied with each system.

Voltage: The voltage supplied to the computer board is 12V AC.

Frequency: The line frequency is 60 Hz.

Water Pressure

A minimum of 20 pounds of water pressure is required for proper operation of the system. The stated operating pressure range is 20 psi - 80 psi (138 kPa - 551 kPa).

Bypass Valve

The bypass valve enables the customer to bypass the system in situations of emergency leaks in the equipment, service calls and/or outdoor water use.

Temperature Operating Ranges

Operating Temperature Range: 40° F - 100° F (4.4° C - 38° C)

Storage Range: The computer board can be stored at temperatures from -20°C (-4°F) to 70°C (158°F).

Humidity: The computer board operates properly with relative humidity from 10% to 95%, non-condensing.

Environmental Requirements

Location: The water filter and control cannot be exposed to outdoor elements, such as direct sunlight or atmospheric precipitation. The system may be installed in a covered, open-air structure such as a carport, residential or commercial building. Weather covers are also available through the Customer Service (PN. 1267811).

Pre-Installation Instructions

- Do not install this system where water is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
- This system must be installed in an area that is not affected by extreme heat, cold or the elements. The selected installation area must be adequate for easy service of all parts.
- This system must be installed in accordance with all applicable state and local laws and regulations.
- This system is designed to treat cold water only and can be installed on any cold water supply.

Maintenance Requirements

- Clean the backwash flow control.
- Verify that the flow meter is functioning correctly. Clean the impeller, if necessary.
- Verify the programming of the control. Reprogram, if necessary.
- Verify the minimum and maximum water pressure. Install a pressure reducer, if necessary.
- Replace the filter media every three to five years. Systems used for treatment of high iron will require replacement of the filter media more often. Call your local dealer to replace the filter media.
- After 2-3 years change the flappers if needed.
- Every year replace the flapper spring (PN 1235339).
- We suggest to follow the maintenance schedule table displayed on page 20 of this manual.

Installation Instructions

1. Safety Precautions

- To prevent accident or injury, do not hoist the unit over your shoulder. Use a hand truck to transport the unit.

NOTE: Do not lay the unit on its side during transportation and/or installation.

- Wear safety glasses and work gloves during installation and service.

2. Test the Raw Water

- Test the raw water supply to ensure it meets the "Application Limitation" on page 3.

3. Check Water Pressure

- Use a pressure gauge to confirm that the water pressure does not exceed 80 psi. If the water pressure does exceed this limit, install a pressure regulator on the inlet pipe of the unit. The minimum pressure for a filter is 20 psi. 60 psi is the optimum operating pressure.

4. Check the Well Pump Flow Rate

- Proper backwash is required to maintain the life of the filter media. If installed on a well, check to make sure the well pump can provide a drain flow rate of 5 gallons per minute.

5. Locate a Site for the Unit

- There are three primary requirements needed for a site: the main water source, a drain (the drain may be a floor drain, a sewer trap, utility sink, vent stack, dry well, etc., depending on local plumbing codes) and an electrical connection. Locate the system as close to these items as practical. Avoid drain lines over 25 feet long. In most applications, bypass any outside faucets.
- Place the unit in the desired location. The location must have a level, smooth surface.
- If the system is located outdoors, protect the unit from direct sunlight. (Direct sunlight can damage the fiberglass and other system components.) If necessary, build a box or shed.

NOTE: The system can only be installed outdoors in climates that do not reach freezing levels.

6. Turn Off the Water and Drain the Plumbing

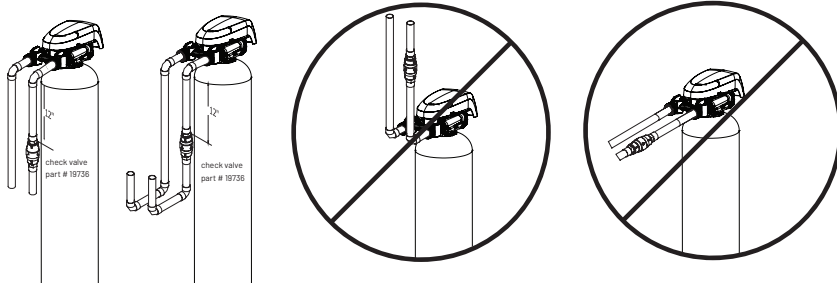
- Turn off the water at the meter or the pressure tank.
- Drain all the pipes. Do not sweat the pipes with water in them; steam will damage plastic parts in the valve.
- To drain the plumbing system, open all the faucets in the house and flush the toilets. This procedure will allow air to enter the plumbing system. The water will drain out of the lowest faucet or outlet.

7. Bypass the Outside Faucets

- When possible, it is best to bypass the outside faucets. However, in some cases the outside faucets can not be accessed. In this situation the bypass valve should be used whenever watering outside for extended periods of time. If the installation is outside or in a garage a faucet can be installed on the inlet water side to provide an option for untreated water.

8. Install the Check Valve

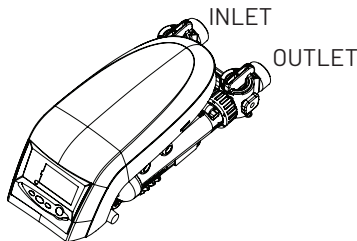
- Install the check valve (supplied) on the raw water supply feeding the tank. The check valve must be installed in vertical, upflow position with a minimum 12" water column above the check valve. Please see figures below.



- Connect the treated water pipe to the Outlet pipe connection of the bypass valve. When looking at the front of the unit, the outlet is the pipe connection on the right side of the valve.

9. Connect the Plumbing to the Bypass Valve

- Do not point the soldering torch directly at the system. The thermoplastic material is most durable within normal operating temperatures, but will melt in a torch flame.
- To prevent hot water from backing up into the conditioner, avoid short connections of pipe between the conditioner and the hot water heater. If you can't avoid a short connection, move the equipment to another location. As a last resort, install a check valve. If the check valve causes "water hammer", install a water hammer suppressor.
- Connect the raw water pipe to the inlet pipe connection of the bypass valve. When looking at the front of the unit, the inlet is the pipe connection on the left side of the valve.



10. Turn On the Water and Test for Leaks and Flush the Plumbing

- Before turning the water back on, place the system in the bypass position, then close all of the faucets except one cold water tap from a bath tub.
- Turn the water on slowly and allow the water to flow out the bath tub for several minutes to remove any dirt, solder, glue, etc. from the plumbing system.
- Once the water runs clear, turn the bypass valve handles to the service position and allow the water to fill the system. It is common for the first few gallons of water to show some color (orange to brown) for a few minutes. Once the water runs clear shut off the bath tub.
- The system will now pressurize, allowing you, to check for any leaks.

11. Flush the Remaining Debris From the System

- To flush the remaining untreated water from the plumbing, turn on all the faucets in the house and flush the toilets (approximately two to three minutes per faucet.)
- Run hot water in the bathtub to remove any remaining untreated water.

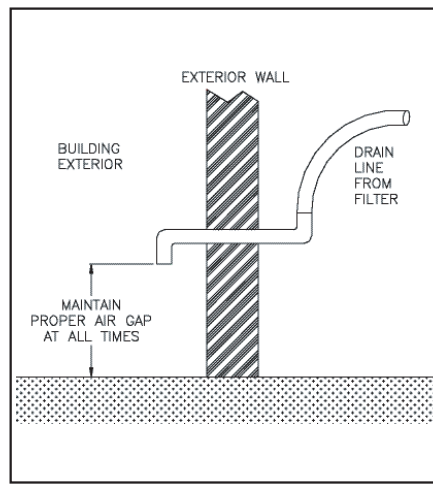
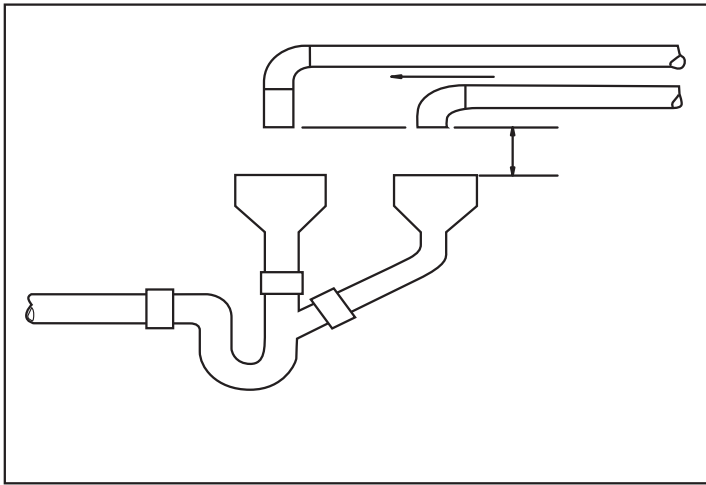
12. Install the Drain Line and Air Gap

- Using the supplied drain line fitting use Teflon tape on the threads and attach to the top of the valve. Run 1/2 inch ID flexible drain line tubing (not supplied) to an appropriate drain. Most local codes require an air gap. See pictures on the next page. The Air-Gap is not provided with the product.

NOTE: Drain line may be plumbed with rigid pipe or PEX, if required by local code. The drain connection on the valve will accommodate any standard 3/4 inch NPT fitting.

NOTE: The regeneration cycle is a simple backwash to refresh the filter bed, followed by an intake of air to establish an air head in the tank. Since no regeneration chemicals are added, the discharge water may be drained to the outside and used for irrigation in climates where freezing is not a concern. Please note that iron in the drain water may cause staining, so avoid situations where the water may

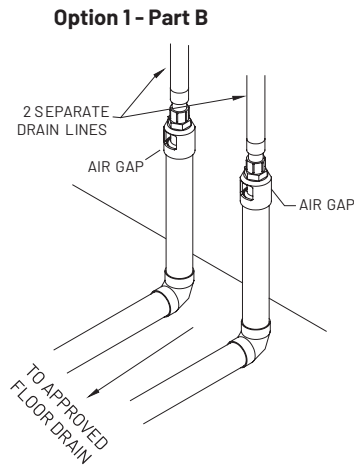
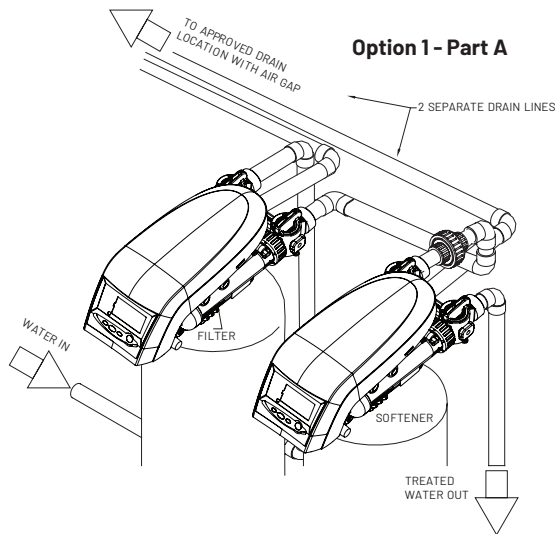
splash onto walls, vehicles, patios, etc.



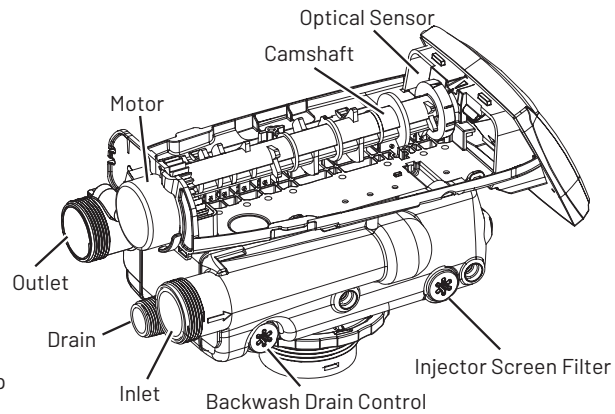
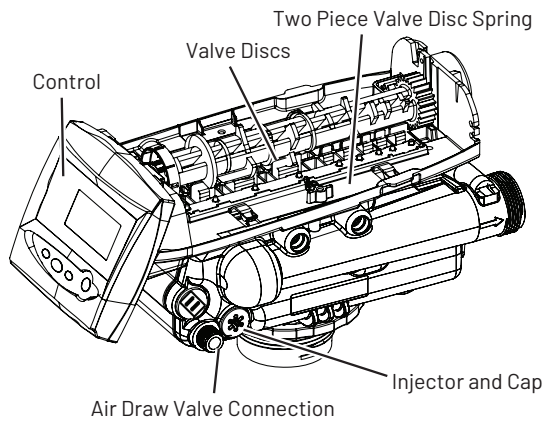
Option for non-freezing climate only

Special attention for situations where a Filter and a Softener are installed together:

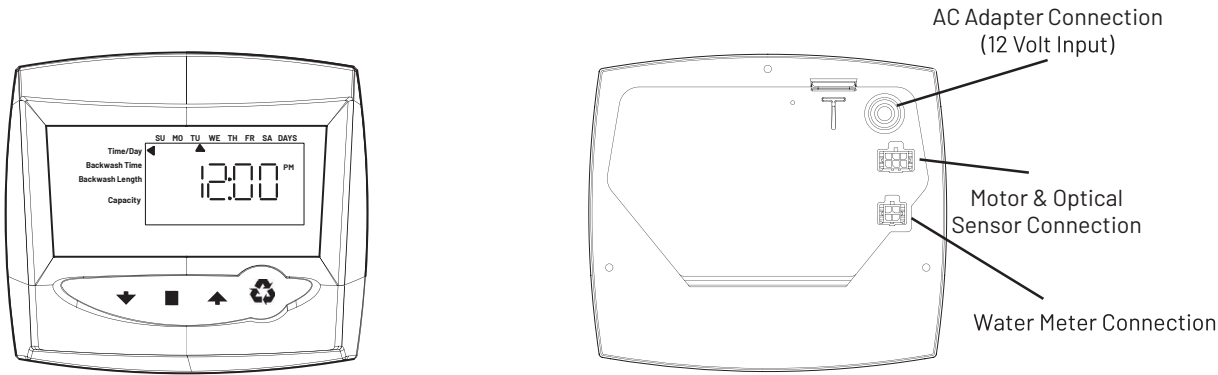
Install the drain lines from both systems (see Part A). Then terminate the lines separately using an air gap device as shown in Part B. (do not combine drain lines).



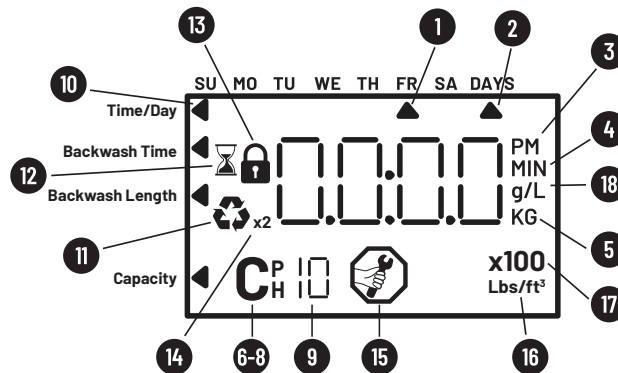
Valve Layout



Control Layout



Displays, Icons, and Cursors



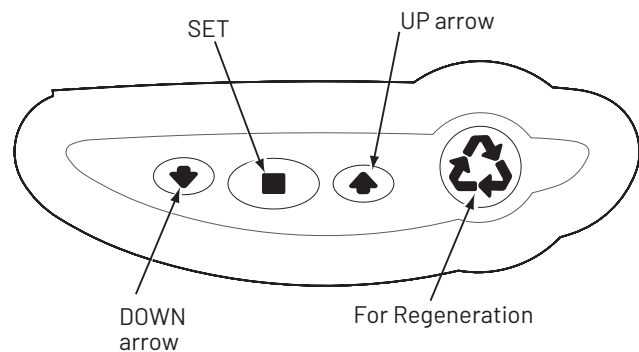
NOTE: In normal operation and during programming, only a few of the icons will actually be displayed.

1. Used to select and indicate the actual Day of the Week setting.
2. This cursor is displayed when programming the Days Override.
3. PM indicator displayed when setting Time of Day and Time of Regeneration.
NOTE: There is no AM indicator.
4. Indicates displayed value in minute increments.
5. Indicated kilograins or kilograms when estimated capacity is displayed.
6. Used to display "P", "H", and "C" parameter.
7. Indicates access into "H" level IV History viewing.
8. Indicates access into "P" level II programming.
9. Used to display cycle position during regeneration. Also indicates access into "C" Level III cycle programming.
10. This cursor is displayed during Level I programming: Time of Day, Regen Time, Day, Salt, etc.
11. When flashing, this indicates regeneration is to occur at next Time of Regen. Appears as a solid icon during regeneration.
12. When hourglass is flashing, this indicates that the control is moving to a regeneration cycle. Appears as a solid icon during a canceled regeneration and the control is cycling directly back to the home position.
13. Indicates the selected program setting has been locked out. Lock settings are changed in Level II programming.
14. Indicates double regeneration.

15. Maintenance display turns on if the months in service exceed the value programmed in P11 "Service Interval"

16. When Lbs/ft³ is displayed, the valve for regenerant amount entered is in pounds per cubic foot.
17. X100 multiplier for large values.
18. When "g/L" is displayed, the valve is in grams per liter.

Button Functions



DOWN and UP Arrows: Used to scroll through settings or change setting value.

SET: Used to enter a setting into memory or activate a setting to be changed.

REGEN: Used to command the control to regenerate and enable or disable lockout setting.

Programming Overview

The control includes multiple program levels that allow the Water Treatment Professional to customize the system for many water conditions. Additionally, historical data can be viewed allowing quick and easy troubleshooting. In most cases, Level I programming is all that is required to set up the water conditioning system for proper operation. A brief description of each program level is listed below.

- **Level I:** Used to program control for normal applications.
- **Level II:** (P-Values) Allows the installer to customize programming for non-standard applications.
- **Level III:** (C-Values) Allows the installer to adjust the length of select cycles for non-standard applications.
- **Level IV:** History (H-Values) Allows access to historical information for troubleshooting the system.

NOTE: If a button is not pushed for thirty seconds, the control returns to normal operation mode.

Control Operation

Power Loss Memory Retention

The control features battery-free Time of Day and Day of Week retention during loss of power. A super capacitor is designed to hold the information in memory for 8 to 24 hours depending on the installation. If the super capacitor is exhausted, the control will display four dashes (- - : - -) immediately upon power up. The Time of Day and Day of Week must be reset. All other programmed parameters are stored in the static memory and are retained during power outages.






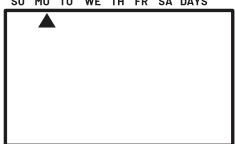




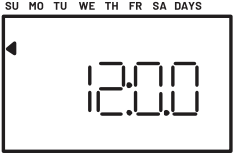




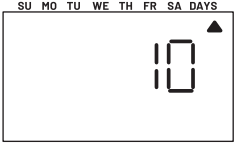




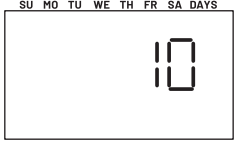









Level I Programming

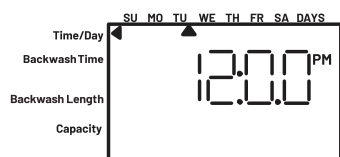
The control can be quickly programmed by following the sequential procedure on the following page. Level I program parameters are those that can be accessed by pressing the UP or DOWN buttons.

- **Time of Day:** Includes PM indicator. Can be set to display as a 24-hour clock. See Level II Programming.
- **Day of Week:** Set to actual day of the week.
- **Time of Regeneration:** Fully adjustable. Default is 2:00 AM.
- **Day Override:** Range 0.5 to 99 days. Leave at 0 to disable.

NOTE: When the control is set up for a twelve-hour clock a PM indicator will illuminate when the displayed time is in the PM hours. There is no AM indicator.

Filter Quick Programming

Screen	Buttons to	Description	Range
	<p>press </p> <p>then  or </p> <p>press </p>	<p>1. Time of Day (12 hr.) Set to time of day NOTE: Setting includes PM indicator</p>	
	<p>press </p> <p>then  or </p> <p>press </p>	<p>2. Day of Week Set to actual day of the week</p>	
	<p>press </p> <p>then  or </p> <p>press </p>	<p>3. Time of Regeneration Set to desired time of Backwash</p>	
	<p>press </p> <p>then  or </p> <p>press </p>	<p>4. Days Override Do not set at 0 if you backwash on volume Set the desired days between backwash Suggested value 3 or 4 days</p>	Days: 1 to 30
	<p>press </p> <p>then  or </p> <p>press </p>	<p>5. Backwash Duration Set to desired duration of backwash in minutes 0 to 99 suggested value 14</p>	
	<p>press </p> <p>then  or </p> <p>press </p>	<p>6. Capacity To backwash your filter on volume intervals set the filter capacity in gallons</p>	



Service Display

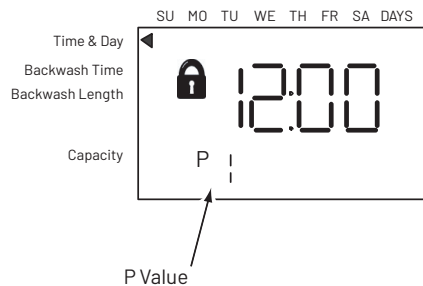
Displays actual day of the week and time of day.

NOTE: Upon completing the Level I Programming, the Regen icon will begin flashing, indicating that a delayed regeneration will occur at the next programmed time of regeneration. If a delayed regeneration is not desired, press the REGEN button to disable the delayed regeneration and the system will regenerate by water usage.

Level II Programming

Level II program parameters can be adjusted and used to fine-tune the conditioner's operation. The parameters are accessible by pressing and holding the UP and DOWN buttons until the control displays a "P" value.

NOTE: The controls must be in a home position to change settings. See Table below for Level II parameters. Typically the Level II parameters will not need to be adjusted, as the default settings accommodate most applications. Contact your Water Treatment Professional before attempting any programming.



The 742/762 features a special programming level that allows the installing dealer to make changes to the control for more demanding applications. The home owner/end user should never have to access this level.

To enter Level II programming press and hold UP and DOWN for 5 seconds. A "P" value will be displayed indicating Level II.

Level II menus include:

- P1 = Time of day
- P2 = Day of week
- P3 = Time of regeneration
- P4 = Number of days between regeneration (99 day calendar override)
- P5 = Not used (742 only)
- P6 = Amount of regenerant used per regeneration or filter backwash time (salt setting)
- P7 = System capacity
- P8 = Hardness
- P9 = Units of measure
- P10 = Clock mode
- P11 = Service interval
- P12 = Remote regeneration switch delay
- P13 = Refill sensor control (conditioner only)
 - 0 = Off
 - 1 = Salt detector only 2 = Chlorine generation
- P14 = Refill rate (conditioner only)
- P15 = Draw rate (conditioner only)
- P16 = Reserve type
- P17 = Initial average or fixed reserve
- P18 = Flow sensor select
- P19 = K-factor or pulse equivalent
- Pr = Refill First option
- Pd = Remote switch operation (742 only)

See the Logix Professional dealers manual for further details on setting Level II parameters.

Accessing History Values

The 742/762 features a review level that displays the operation history of the system. This is a great troubleshooting tool for the control valve.

To access history values, press and hold SET and DOWN for five seconds to view the "H" levels.

History Values

	Description	Range	Notes
H0	Initial setting value	Cubic feet or liters	Resin volume
H1	Days since last regeneration	0 - 255	
H2	Current flow rate	Depends on turbine used	762 only
H3	Water used today in gallons/m ³ since Time of Regeneration	0 - 131,070 gallons or 0 - 61,310.70 m ³	762 only
H4	Water used since last regeneration in gallons/m ³	0 - 131,070 gallons or 0 - 61,310.70 m ³	762 only
H5	Total water used since reset in 100s	0 - 999,900 gallons or 0 - 9,999 m ³	762 only
H6	Total water used since reset in 1,000,000	4,294 x 106 gallons or 4,264 x 104 m ³	762 only
H7	Average usage for Sunday in gallons or m ³	0 - 131,070 gallons or 0 - 61,310.70 m ³	762 only
H8	Average usage for Monday in gallons or m ³	0 - 131,070 gallons or 0 - 61,310.70 m ³	762 only
H9	Average usage for Tuesday in gallons or m ³	0 - 131,070 gallons or 0 - 61,310.70 m ³	762 only
H10	Average usage for Wednesday in gallons or m ³	0 - 131,070 gallons or 0 - 61,310.70 m ³	762 only
H11	Average usage for Thursday in gallons or m ³	0 - 131,070 gallons or 0 - 61,310.70 m ³	762 only
H12	Average usage for Friday in gallons or m ³	0 - 131,070 gallons or 0 - 61,310.70 m ³	762 only
H13	Average usage for Saturday in gallons or m ³	0 - 131,070 gallons or 0 - 61,310.70 m ³	762 only
H14	Average service cycle	0 - 255 days	762 only
H15	Peak flow rate	0 - 200 gpm or 1,000 Lpm	762 only
H16	Day and time of peak flow rate	Time and day that peak flow occurred	762 only
H17	Months since service	0 - 2,184 months	
Hr	Number of regenerations since last serviced	0 - 65,536	

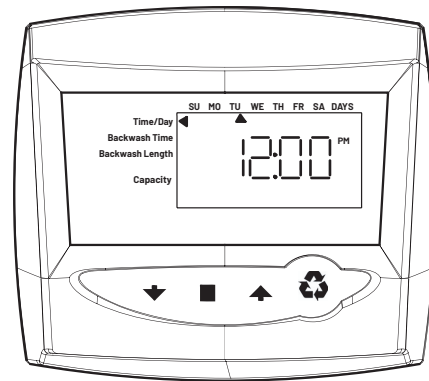
Programming The Lockout Feature

All parameters can be locked out when the control is in Level II programming. Simply press the REGEN button during Level II programming and a Lock icon will appear indicating that the setting cannot be adjusted. To disable the Lock Out Feature, press the REGEN button when in Level II. The lock icon will not be displayed.

Level III Cycle Programming - C Values

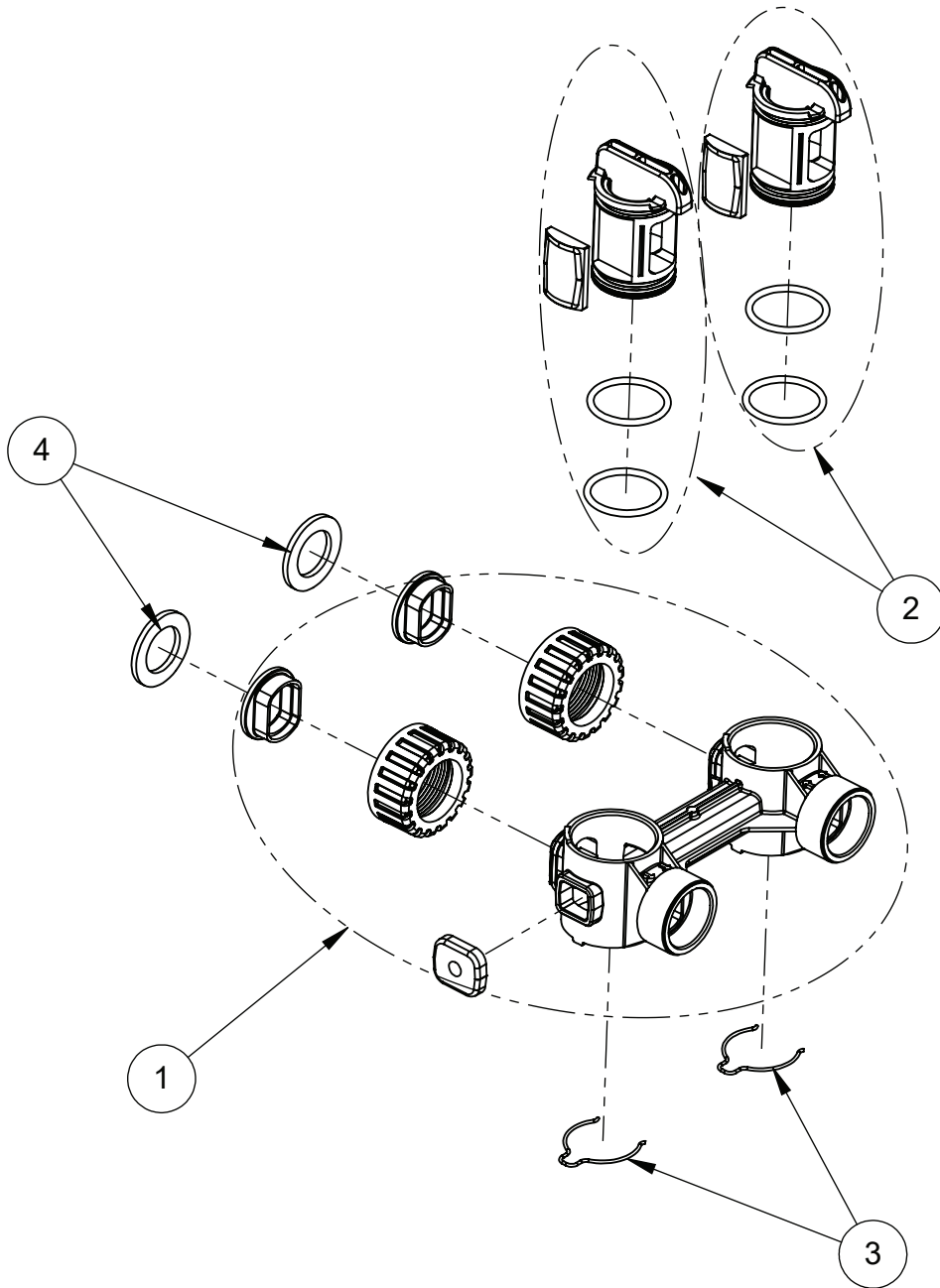
Several Level III program parameters can be adjusted to fine-tune a conditioner's operation for non-standard applications. Typically these parameters will not need to be adjusted, as the default settings accommodate most applications. Contact your Water Treatment Professional before attempting any programming. The parameters are accessible by pressing and holding the UP and SET buttons until the display shows a "C" value.

NOTE: The control must be in the treated water position to change settings.



C#	Description	Range	Minimum Increments	Default Setting	Notes
C1	Backwash	0-200	1 Min	14	Flow rate dictated by size of drain line flow controller
C2	Air Draw	0-200	1 Min	40	Draws air through the brine port, only a qualified technician should change the default setting of 40 minutes
C3	Air Rinse	0-200	1 Min	0	Must be always set to zero, do not change this parameter
C4	Repressurization	0-200	1 Min	3	Allows system to equalize water pressure across valve discs
C5	Fast Rinse	0-200	1 Min	1	Rinse residuals and compact the media
C6	2nd Backwash	0-200	1 Min	0	Set to zero
C7	2nd Fast Rinse	0-200	1 Min	0	Set to zero
C8	Regenerant Refill	Not Adjustable	1 Min	0	Set to zero

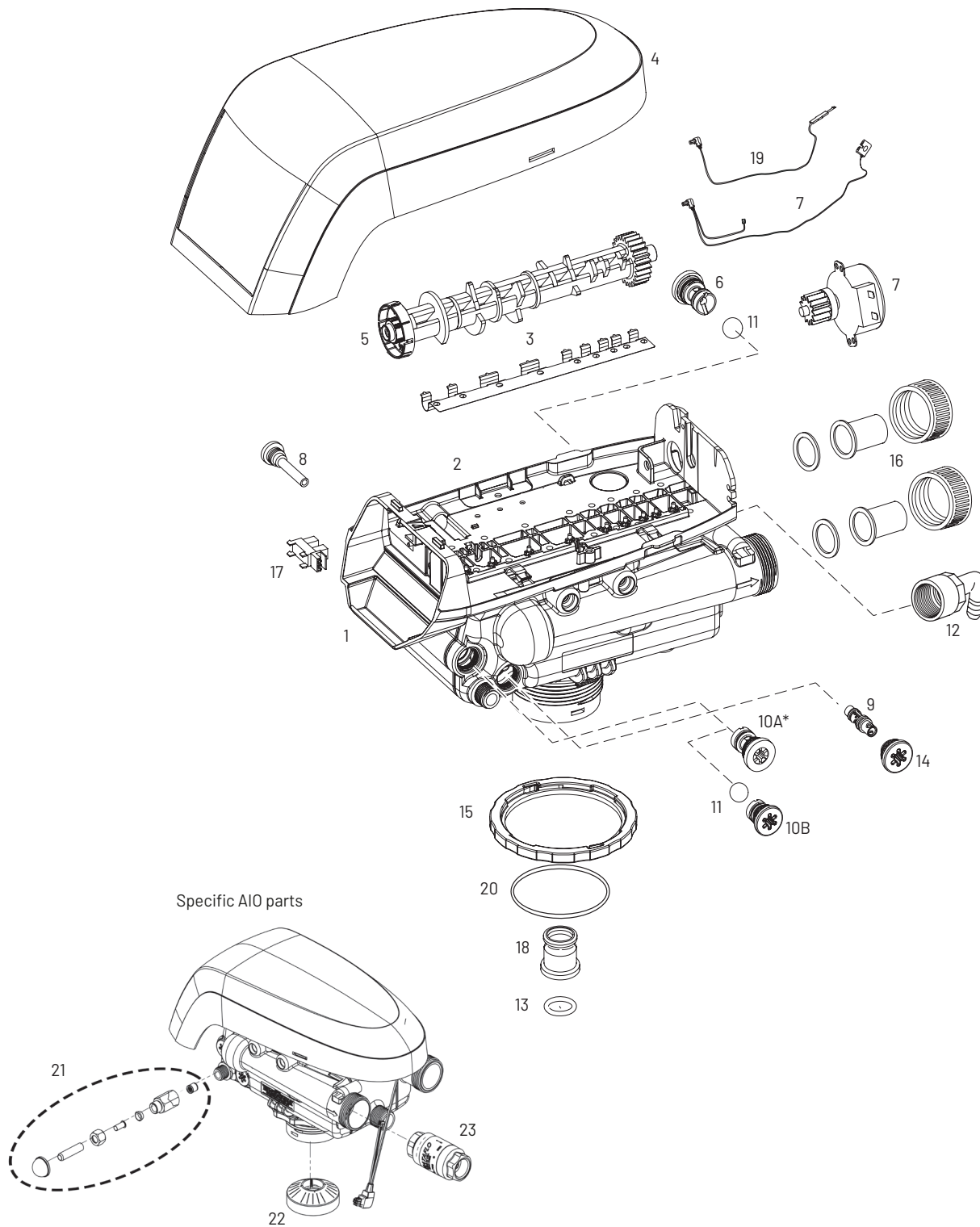
Bypass Valve Exploded View And Parts List



BYPASS VALVE ASSEMBLY PART NUMBER 1040930

BYPASS PARTS SHOWN IN THE ABOVE DRAWING ARE NOT SOLD STAND-ALONE

Control Exploded View



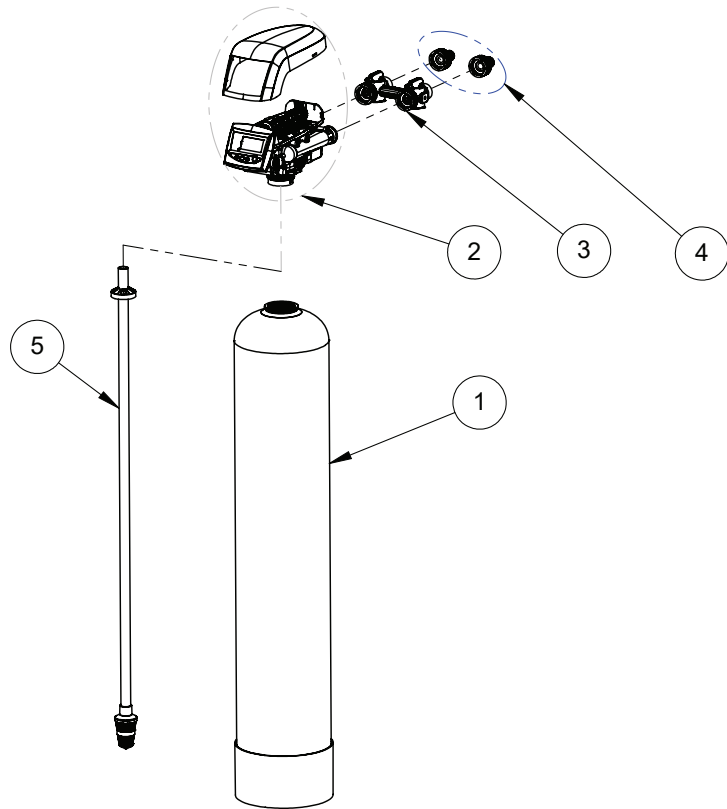
⚠ WARNING: Do not use the flow control ball with #10A.

Control Parts List

ITEM	PART NUMBER	DESCRIPTION	QTY
WHOLESALES SYSTEMS SERVICE PARTS			
*	1041174	Flappers Service Kit	1
3	1235339	Valve Disc Spring, One Piece	1
WHOLESALES SYSTEMS REPAIR PARTS			
1	1244651	Valve Assembly W/O Flow Controls	1
2	1235338	Top Plate, 268/700 Series Valves	1
3	1235339	Valve Disc Spring, One Piece	1
4	1236246	Cover, Valve, 255/Performa 700/860 Series Controller	1
5	1235352	Camshaft Standard	1
	4000806	AIO Camshaft	1
6	1000212	Flow Control For 1.0 & 1.5 Softeners & Tannin	1
	1000213	Flow Control For 2.0 Softeners & Tannin	1
	1030355	Flow Control, Ext, 5 GPM	1
	1030356	Flow Control, Ext, 6 GPM	1
	1030357	Flow Control, Ext, 7 GPM	1
7	3019221	Motor/Optical Cable Assembly	1
8	1000226	Screen Cap Assembly With O-ring	1
9	1035734	Injector For 1.0 & 1.5 Cu Softeners	1
	1035735	Injector For 2.0 Cu Softeners	1
	1035736	Injector AIO Filters	1
10A	1000222	Brine Flow Control For Softeners & Tannin Filter	1
10B	1030502	Ball, Refill Flow Control For Softeners & Tannin Filters	1
11	1030334	Refill Plug For Carbon & Acid Filters	1
12	1002449	Drain Fitting Elbow	1
13	1010428	O-ring	1
14	1000269	Injector Cap With O-ring	1
15	1035622	Tank Ring	1
16	1001769	Autotrol 3/4" Connection Kit	1
	1001603	Autotrol 1" Connection Kit	1
*	1041174	Flappers Kit	1
*	38191	Valve Bypass	1
17	1235373	Optical Sensor	1
19	1235446	Turbine Cable	1
20	1010154	Tank O-ring	1
21	38192	Air Draw Assembly Kit, AIO	1
22	19737	Riser Pipe Kit Deflector W/Spacer	1
23	41861	Check Valve Air Draw	1
*	1033444	Internal Turbine Meter	1
*	1233187	Motor Lock Pin	1
*	44149	Autotrol 268 Valve Transformer US	1
*	1242168	762 Controller NA	1
*	1242162	742 Controller NA	1

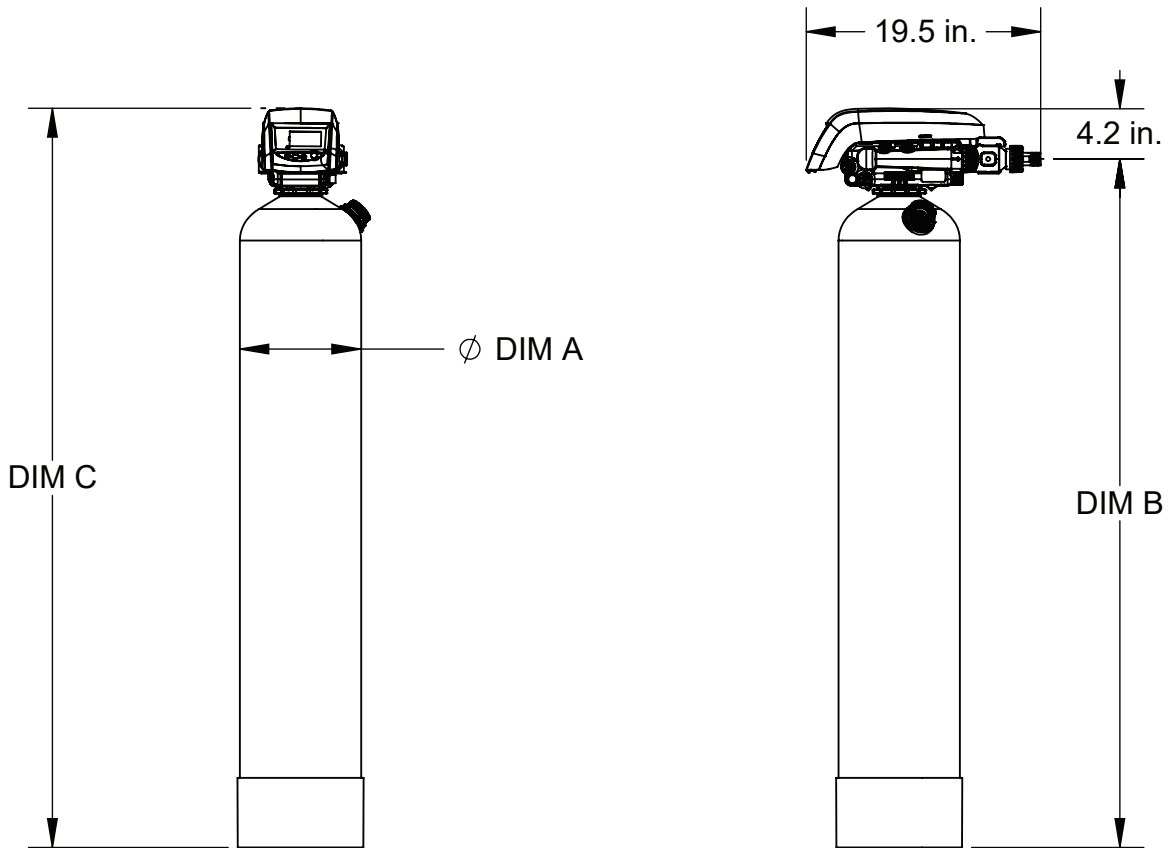
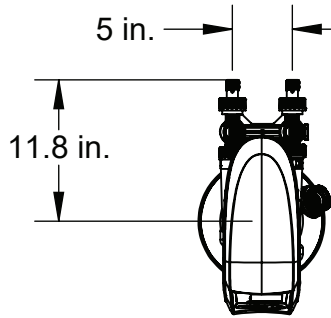
* not shown in the drawing

System Exploded View And Parts List



Item	Part Number	Description	QTY.
1	38256	10" x 44" Tank Black W/Base, 1.0	1
	38257	10" x 54" Tank Black W/Base, 1.5	1
2	4000626	268 Valve, AIO, W/Cover	1
3	1040930	Bypass Assembly	1
4	1001769	3/4" Male Npt Fitting Connectors	1
	1001603	1" Male Npt Fitting Connectors	1
5	38933	Distributor Assembly, 1.0	1
	38932	Distributor Assembly, 1.5	1
not shown	39516	10" x 44" Tank Sleeve, 1.0	1
	39517	10" x 54" Tank Sleeve, 1.5	1

Tank Size	Dim A	Dim B	Dim C
10" x 44"	10.2 in.	47.4 in.	51.6 in.
10" x 54"	10.2 in.	57.4 in.	61.6 in.



Troubleshooting

Symptom	Cause	Solution
1. Untreated water to service	<ol style="list-style-type: none"> 1. Open bypass valve. 2. Loss of filter media. 3. The valve is in regeneration. 4. Excessive water use. 5. The unit fails to regenerate. 6. Capacity of filter media is exhausted. 7. Leak on flapper bypass. 8. Leak at the riser tube. 9. The valve body and timer are out of synchronization. 10. Media exhausted or consumed. 	<ol style="list-style-type: none"> 1. Close the bypass valve. 2. Refer to SYMPTOM #4 3. Wait for the regeneration to complete. 4. Check the frequency of regenerations. 5. Refer to SYMPTOM #2. 6. Replace the filter bed. 7. Check and replace flappers if necessary. 8. Verify that the riser tube is seated correctly and is not cracked. 9. Synchronize the valve body and timer. 10. Add or replace media
2. The unit fails to regenerate	<ol style="list-style-type: none"> 1. Faulty electrical supply. 2. The control is not set properly. 3. The drive motor is defective. 4. The flow meter is defective. 5. The computer board is defective. 6. The optical sensor is defective. 	<ol style="list-style-type: none"> 1. Check the electrical items (fuse, transformer). 2. Verify the correct regeneration schedule and reset the control. 3. Replace the drive motor. 4. Replace the flow meter. 5. Replace the computer board. 6. Replace the optical sensor.
3. Loss of filter media through the drain line	<ol style="list-style-type: none"> 1. Excessive backwash/fast rinse flow. 2. The lower and/or upper distributor is damaged. 3. A leak between the riser tube and upper distributor. 	<ol style="list-style-type: none"> 1. Verify that the backwash flow control is installed and sized correctly. 2. Replace the distributor(s). 3. Verify that the riser tube is seated correctly and is not cracked.

If the troubleshooting guide did not resolve the unit's symptoms, please contact your local Dealer for service.

Troubleshooting Continued

<p>4. Loss of water pressure</p>	<ol style="list-style-type: none"> 1. Mineral or iron build up in the filter tank. 2. Plugged lower and/or upper distributor. 3. Crushed lower and/or upper distributor. 4. Plugged riser pipe. 	<ol style="list-style-type: none"> 1. Clean the filter bed and control valve. Increase the regeneration frequency. 2. Remove the debris from the distributor(s). 3. Replace the distributor(s). 4. Remove and clean the riser pipe.
<p>5. Constant water flow to the drain</p>	<ol style="list-style-type: none"> 1. Drive motor failure. 2. Computer board failure. 3 Drain flapper damaged/wearied. 	<ol style="list-style-type: none"> 1. Replace the drive motor. 2. Replace the computer board. 3. replace flappers (code 1041174)
<p>6. Air leak to the outlet/ inlet of the system</p>	<ol style="list-style-type: none"> 1. Bypass flapper not sealing 2. Inlet Check valve not working 3. Inlet Check valve not installed in the proper 4. O-ring around riser pipe damaged 	<ol style="list-style-type: none"> 1. The flapper spring could be damaged/wearied. Replace the two flapper springs (code 1235339) in order to make sure there is enough force on the flappers. If leak continues replace the flappers (code 1041174) 2. Replace the check valve 3. Make sure the inlet check valve is installed as indicated in page 5 of this manual (vertically and with a minimum 12" water column above the check valve) 4. Replace the O-ring. (code 1010428)

If the troubleshooting guide did not resolve the unit's symptoms, please contact your local Dealer for service.

Troubleshooting Continued

700 Series Controller Troubleshooting

Problem	Cause	Correction
ERR 1 is displayed	Controller power has been connected and the control is not sure of the state of the operation.	Press the UP arrow and the control should reset.
ERR 2 is displayed	Controller power does not match 50 or 60 Hz.	Disconnect and reconnect the power. If problem persists, obtain the appropriate controller or AC adapter for either 50 or 60 Hz power.
ERR 3 is displayed	Controller does not know the position of the camshaft. Camshaft should be rotating to find Home position.	Wait for two minutes for the controller to return to Home position. The hourglass should be flashing on the display indicating the motor is running.
	Camshaft is not turning during ERR 3 display.	Check that motor is connected. Verify that motor wire harness is connected to motor and controller module. Verify that optical sensor is connected and in place. Verify that motor gear has engaged cam gear. If everything is connected, try replacing in this order: –Wire harness, Motor and Optical Sensor Assembly –Controller
	If camshaft is turning for more than five minutes to find Home position:	Verify that optical sensor is in place and connected to wire. Verify that camshaft is connected appropriately. Verify that no dirt or rubbish is clogging any of the cam slots. If motor continues to rotate indefinitely, replace the following components in this order: –Wire harness, Motor and Optical Sensor Assembly –Controller
Four dashes displayed: --:--	Power failure occurred.	Press SET to reset the time display.

Maintenance Schedule

AIO iron systems requires annual maintenance from a qualified installer/technician. The following table indicates what needs to be inspected and replaced as part of the maintenance schedule. If the maintenance schedule is not followed system warranty will void.

Items	1 year	2 year	3 year	4 year	5 year
Injector & filter	Clean	Clean	Clean	Clean	Clean/replace if necessary
DLFC**	Clean	Clean	Clean	Clean	Clean/replace if necessary
1265 Bypass (if present, contains O-rings**)	-	-	-	-	Clean/replace if necessary
Flappers ***	Check	Replace	Check	Replace	Check
Flappers Spring***	Replace	Replace	Replace	Replace	Replace
O-rings**	Check for watertightness/ clean or replace in case of leakage	Check for watertightness/ clean or replace in case of leakage	Check for watertightness/ clean or replace in case of leakage	Check for watertightness/ clean or replace in case of leakage	Check for watertightness/ clean or replace in case of leakage
Motor, motor cable and optical sensor harness	Check	Check	Check	Check	Replace
Optical Sensor	Check	Check	Check	Check	Replace
Electronic/Settings*	Check	Check	Check	Check	Check/replace if necessary
Transformer*	Check	Check	Check	Check	Check/replace if necessary
Turbine (if present, internal or external model)***	Check/clean	Check/clean	Check/clean	Check/clean	Replace
Turbine cable (if turbine is present)	Check	Check	Check	Check	Replace
Valve Watertightness	Check	Check	Check	Check	Check
Valve to piping watertightness	Check	Check	Check	Check	Check

*Electronical parts – durability strongly affected by power source quality and stability

** Elastomer durability is strongly affected by raw water concentration in chlorine and its derivate

*** Wear part.

For Pentair product warranties visit: } **pentair.com**



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