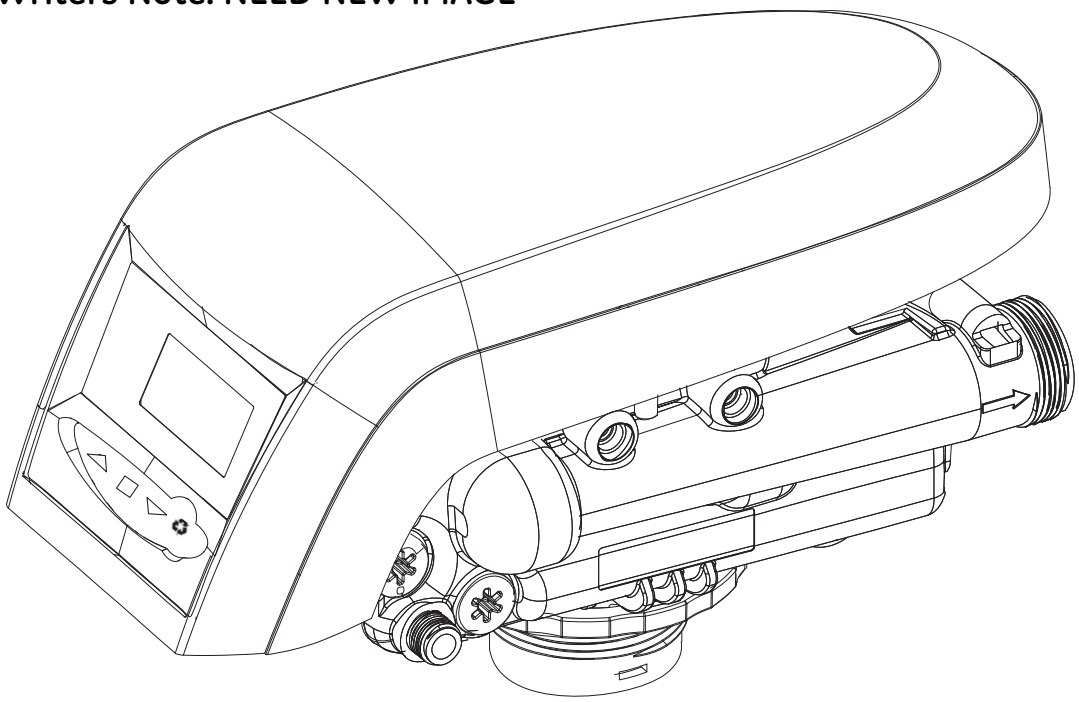
AvantaPure® Professional Series Water Treatment System by GE

Operations Manual

Models: 268 Co-Current Conditioner
263 Three-Cycle Filter

Writers Note: NEED NEW IMAGE



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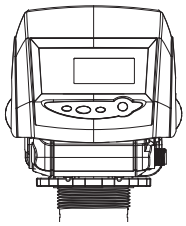
How To Use This Manual

Left Side Right Side



series controllers.

This manual is a reference and will not include every system installation situation. The person installing this equipment should have:

- Training in the AvantaPure series controllers and Autotrol brand valves
- Knowledge of water conditioning and how to determine proper control settings
- Basic plumbing skills
- The directional instructions "left" and “right" are determined by looking at the front of the unit.

Icons That Appear In This Manual

WARNING: Failure to follow this instruction can result in personal injury or damage to the equipment.

NOTE:

Introduction

Parts Included

General Warnings And Safety Information

Electrical

There are no user-serviceable parts in the AC adapter, motor, or controller. In the event of a failure, these should be replaced.

- All electrical connections must be completed according to local codes.
- Use only the power AC adapter that is supplied.
- The power outlet must be grounded.
- To disconnect power, unplug the AC adapter from its power source.

- Do not use petroleum based lubricants such as vaseline, oils, or hydrocarbon based lubricants. Use only 100% silicone lubricants.
- All plastic connections should be hand tightened. Teflon tape may be used on connections that do not use an O-ring seal. **Do not use pliers or pipe wrenches.**

The drain line must be a minimum of 1/2-inch diameter. Use 3/4-inch pipe if the backwash flow rate is greater than 7 GPM (26.5 Lpm) or the pipe length is greater than 20 feet (6 m).

- Do not support the weight of the system on the control valve fittings, plumbing, or the bypass.
- It is not recommended to use sealants on the threads. Use Teflon* tape on the threads of the 1-inch NPT elbow, the drain line connections, and other NPT threads.

**Teflon is a trademark of E.I. duPont de Nemours.*

CAUTION:

General

- Observe all warnings that appear in this manual.
- Keep the media tank in the upright position. Do not turn upside down or drop. Turning the tank upside down will cause media to enter the valve.
- Operating ambient temperature is between 34°F (1°C) and 120°F (49°C).
- Operating water temperature is between 34°F (1°F) and 100°F (38°C).
- Working water pressure range is 20 to 120 psi (1.38 to 8.27 bar). In Canada the acceptable working water pressure range is 20 to 100 psi (1.38 to 6.89 bar).
- Use only regenerant salts designed for water softening. Do not use ice melting, block, or rock salts.
- Follow state and local codes for water testing. Do not use water that is microbiologically unsafe or of unknown quality.
- When filling media tank, do not open water valve completely. Fill tank slowly to prevent media from exiting the tank.
- When installing the water connection (bypass or manifold) connect to the plumbing system first. Allow heated parts to cool and cemented parts to set before installing any plastic parts. Do not get primer or solvent on O-rings, nuts, or the valve.

WARNING: The valve and tank components of this unit have been assembled and tightened to the proper factory torque specifications. Over tightening may result in improper valve, probe and tank alignment and may damage the tank O-ring (PN 1010154).

WARNING: Excessive Weight Hazard. Use two or more people to move and install the conditioner. Failure to do so can result in injury (including back injury).

System Operation Cycle Functions

1. **Service (Downflow)**

2. **Backwash (Upflow)**

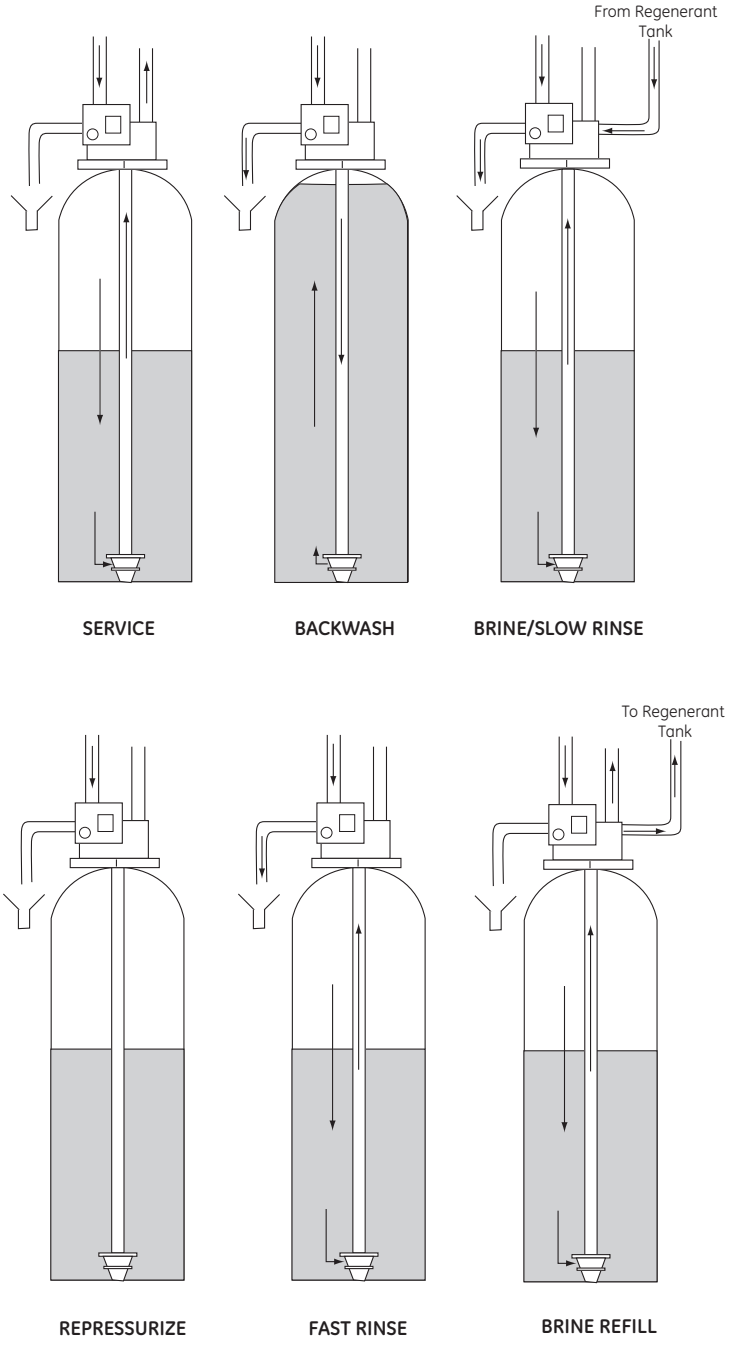
3. **Brine/Slow Rinse (Downflow)**

4. **Repressurized Cycle (Hard Water Bypass Flapper Open)**

5. **Fast Rinse (Downflow)**

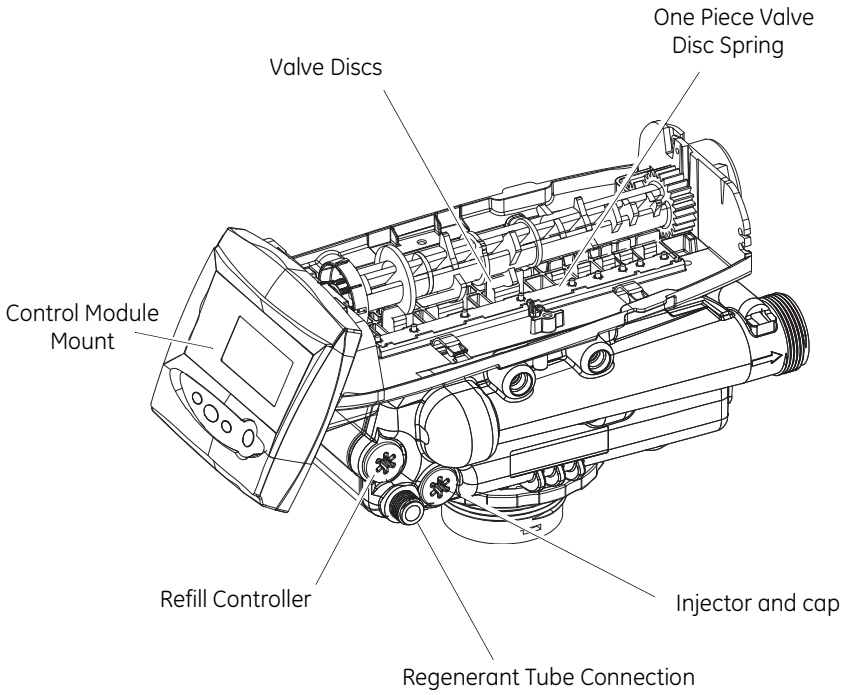
6. **Brine Refill**

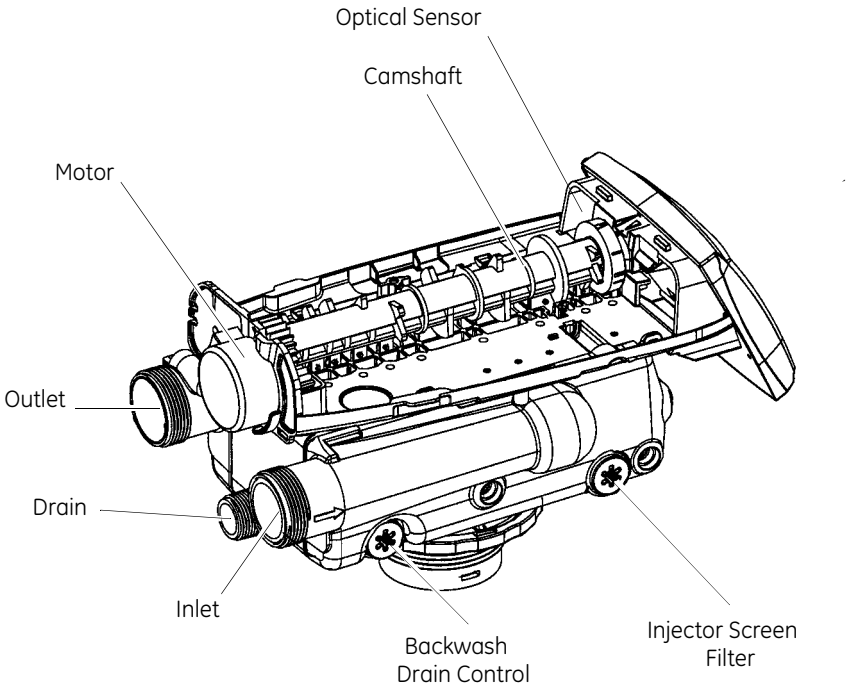
Cycle Water Flows



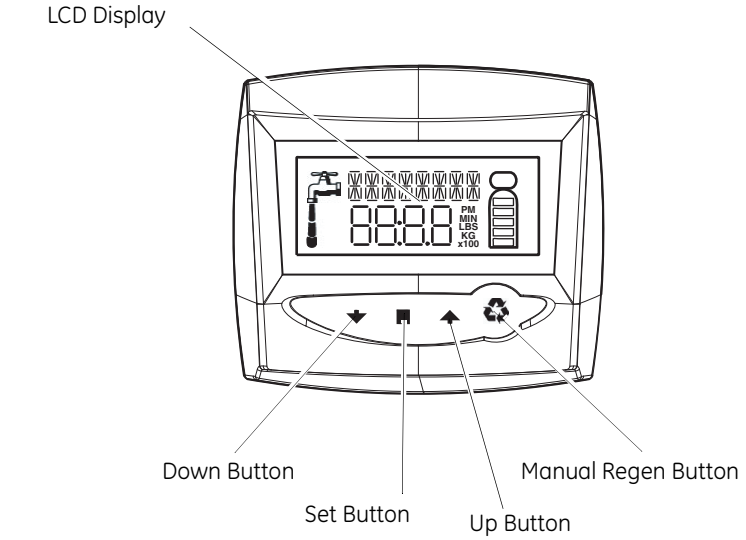
Equipment Installation

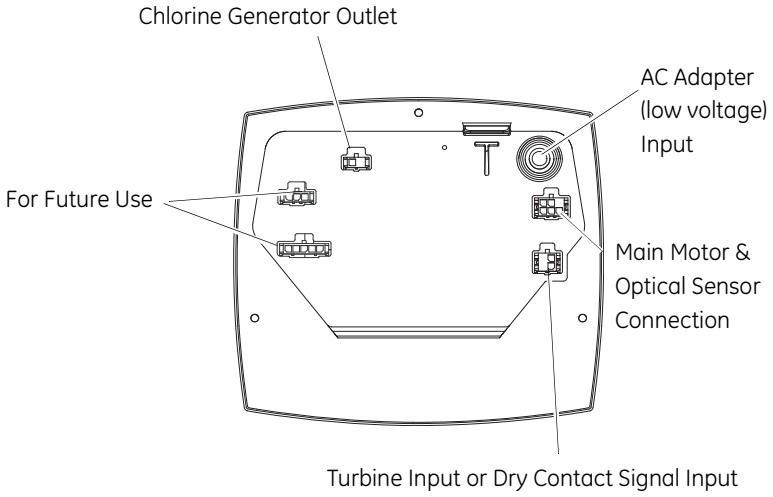
Valve Layout





AvantaPure Controller





Model Number
Recharge Style
Media Tank Size
Resin Volume
Recharge (Salt) Tank Size
Salt Storage
Drain Water Rate
Service Connection Size
Drain Connection Size
Recharge (Brine) Connection Size
Installation Space Requirements
Shipping Weight

Location of a water treatment system is important. The following conditions are required:

WRITERS NOTE: LEVELING FEET?

- Level platform or floor
- Room to access equipment for maintenance and adding regenerant (salt) to tank.
- Ambient temperatures over 34°F (1°C) and below 120°F (49°C).
- Water pressure below 120 psi (8.27 bar) and above 20 psi (1.4 bar).
- In Canada the water pressure must be below 100 psi (6.89 bar).
- Constant electrical supply to operate the controller.
- Total minimum pipe run to water heater of ten feet (three meters) to prevent backup of hot water into system.
- Local drain for discharge as close as possible.
- Water line connections with shutoff or bypass valves.
- Must meet any local and state codes for site of installation.
- Valve is designed for minor plumbing misalignments. Do not support weight of system on the plumbing.
- Be sure all soldered pipes are fully cooled before attaching plastic valve to the plumbing.

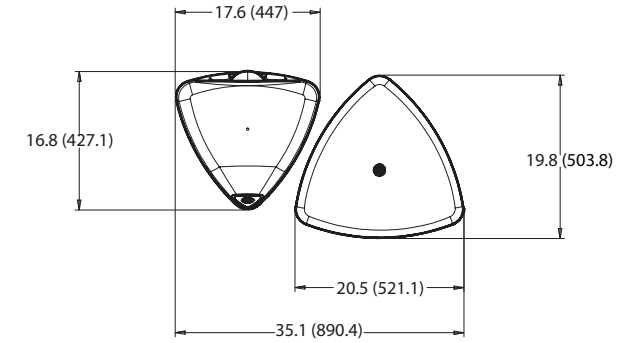
WARNING:

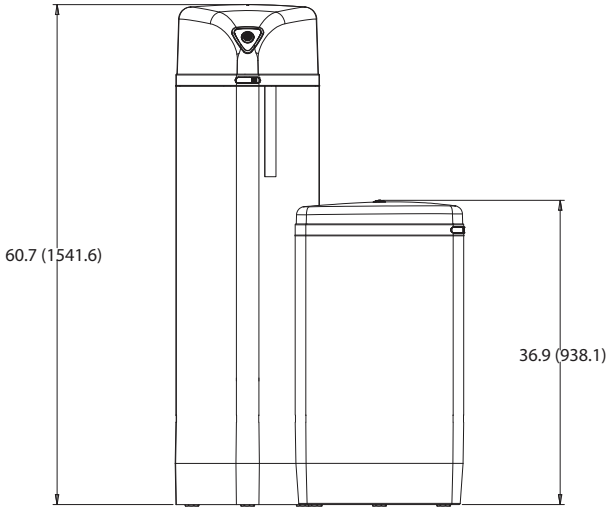
Outdoor Locations

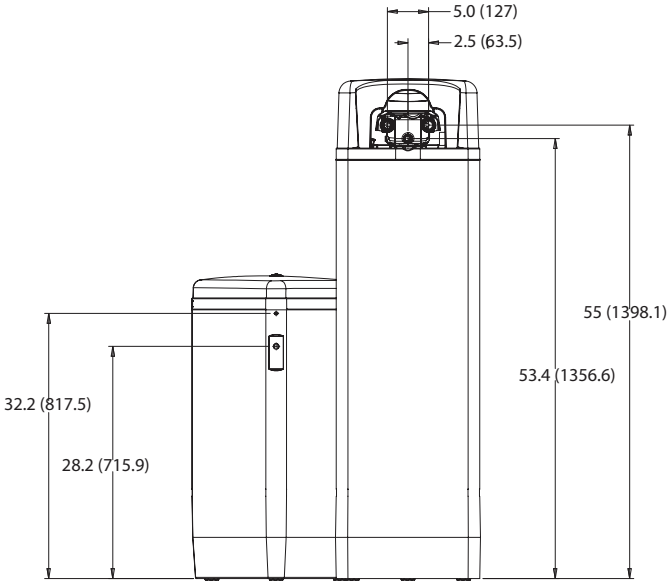
return to normal. A protective cover should assist with high temperature applications.

- Insects — The controller and valve have been designed to keep all but the smallest insects out of the critical areas. Any holes in the top plate can be covered with a metal foil ductwork tape. The top cover should be installed securely in place.

Dimensions


17.6 (447)
16.8 (427.1)
19.8 (503.8)
20.5 (521.1)
35.1 (890.4)


60.7 (1541.6)
36.9 (938.1)


5.0 (127)
2.5 (63.5)
55 (1398.1)
53.4 (1356.6)
32.2 (817.5)
28.2 (715.9)

Typical System Layout

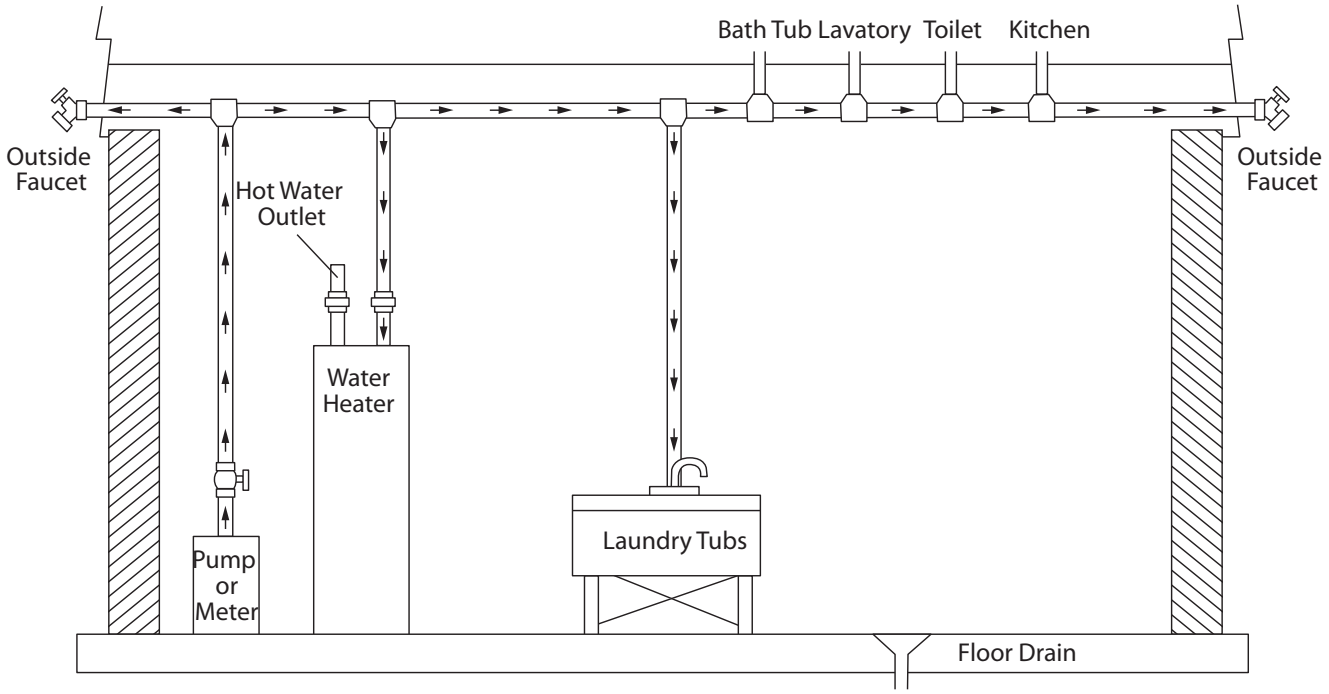
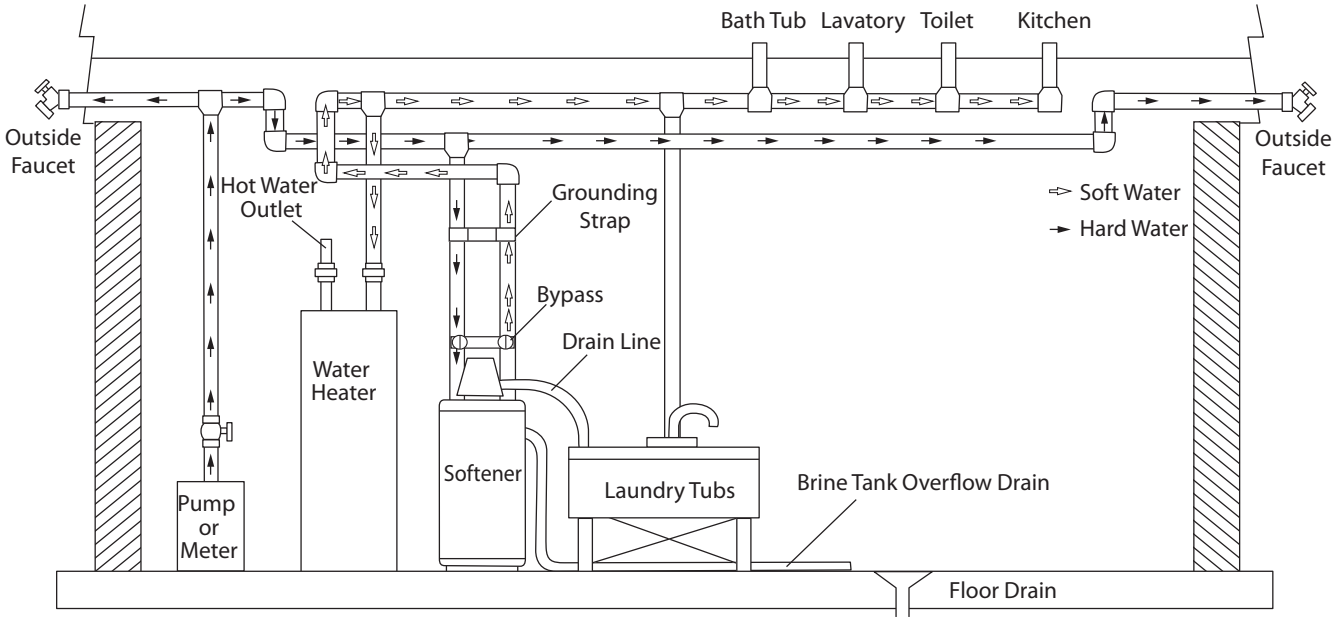


Figure 2 Softened Water Flow Diagram.

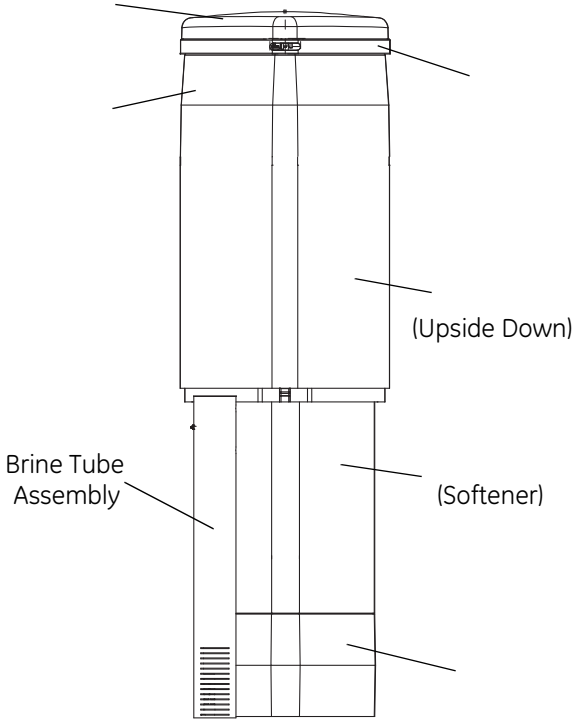


The Pro Elite system is shipped with several parts unassembled. When parts are removed from the packing, they should be inspected for damage. If any parts are damaged or missing, contact your supplier.

WARNING:

When the carton is first opened, the softener will be standing upright. The salt tank will be turned over and covering the softener (Figure).

Figure 3



To assemble the system, remove the salt tank components (cover, collar, base and brine tube assembly) from the shipping container. The media tank can now be removed. Locate the miscellaneous parts bag.

To assemble the Salt Tank:

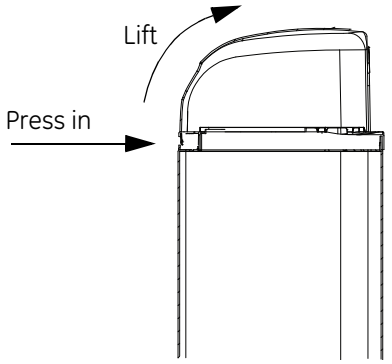
To assemble the Media Tank:

1. If the floor under the media tank is uneven, the leveling feet may be installed. Slowly lay the tank on its side. Press or tap the feet into the pockets.

WARNING: The media tank contains loose particles that will shift. If the tank is turned upside down or laid back quickly, the particles may enter the valve. If this happens, the valve may need to be disassembled and cleaned.

1. Stand the tank up and in position. Level as needed.
2. Remove cover by pressing in on the latch and lifting cover (Figure 4). When the cover is removed, the valve is visable. Remove the power adapter. It should be secured to the tank collar near the inlet/outlet connections.

Figure 4



A bypass valve system should be installed on all water conditioning systems. Bypass valves isolate the conditioner from the water system and allow unconditioned water to be used. Service or routine maintenance procedures may also require that the system is bypassed. The illustrations below show the two common bypass methods.

Figure 5
Autotrol Series 1265 bypass for use with Performa

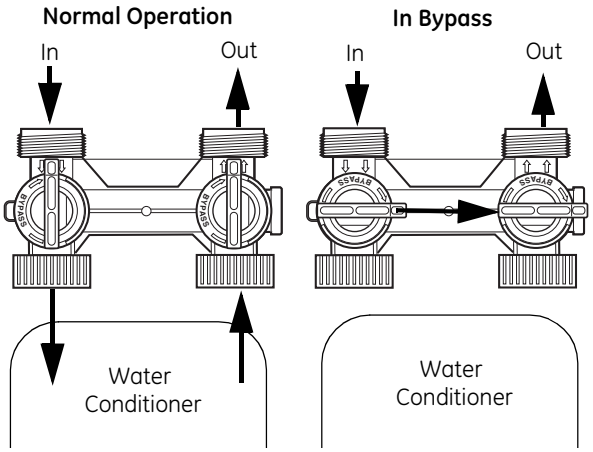


Figure 6
Typical Globe Valve Bypass System

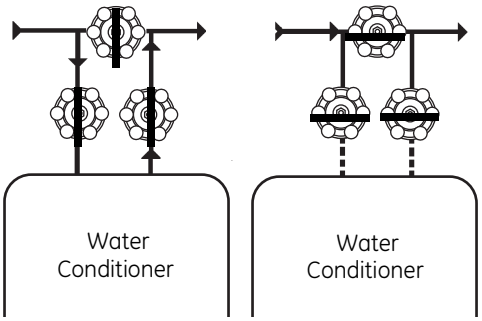
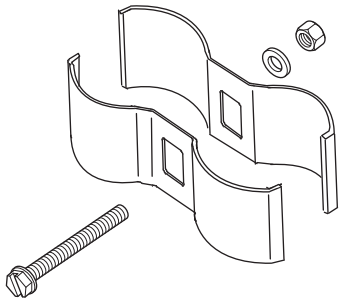


Figure 7
Grounding Strap



The inlet water must be connected to the inlet port of the valve. When replacing non-Autotrol valves, the inlet and outlet may be reversed. It is also possible for the plumbing to be installed in an opposite order.
Do not solder pipes with lead-based solder.

Do not use tools to tighten plastic fittings. Over time, stress may break the connections. When the 1265 bypass valve is used, only hand tighten the nuts.

Do not use petroleum grease on gaskets when connecting bypass plumbing. Use only 100% silicone grease products when installing any Autotrol brand valve. Non-silicone grease may cause plastic components to fail over time.

Several tube adapters are available to connect the valve to the water plumbing. See *Parts List*

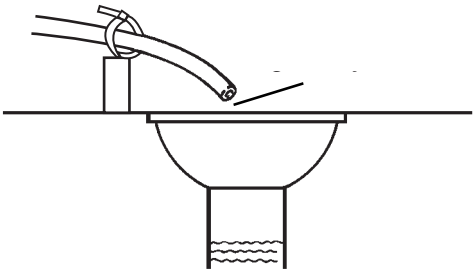
Drain Line Connection.

Regenerant Line Connection

Overflow Line Connection

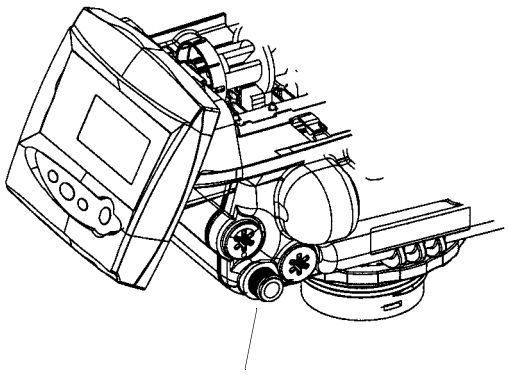
AvantPure Controller, Programming Conventions Programming Levels I, II, and III Placing the Conditioner Into Operation

Level I Programming



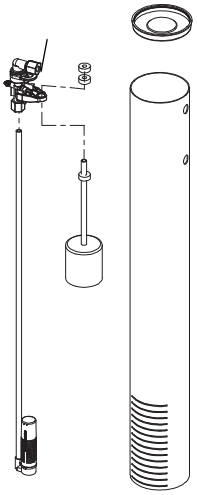
Regenerant Line Connection

(not used with 3-cycle filter system)



Parts List

**Teflon is a trademark of E.I. duPont de Nemours.*



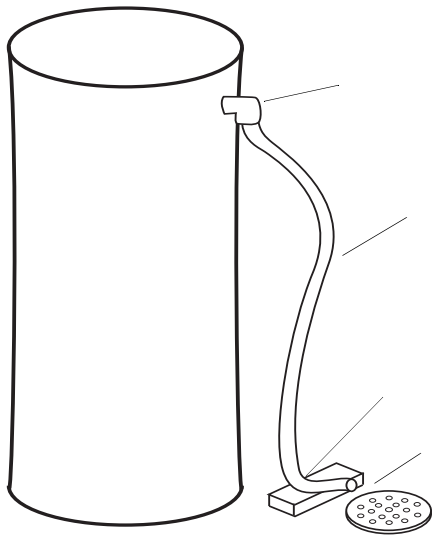
Overflow Line Connection

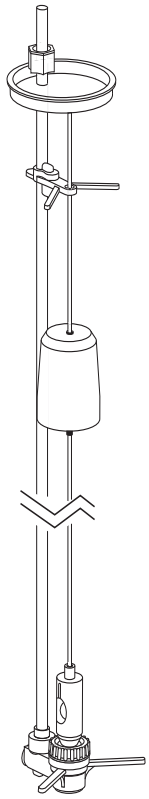
"overflow" to the drain instead of spilling on the floor. This fitting should be on the side of the cabinet or regenerant tank. Most tank manufacturers include a post for the tank overflow connector.

To connect the overflow line, locate hole on side of tank. Insert overflow fitting into tank and tighten with plastic thumb nut and gasket as shown (Figure 11). Attach length of 1/2-inch (1.3-cm) I.D. tubing (not supplied) to fitting and run to drain. Do not elevate overflow line higher than overflow fitting.

Do not tie into drain line of control unit. Overflow line must be a direct, separate line from overflow fitting to drain, sewer or tub. Allow an air gap as per drain line instructions.

Figure 11
Overflow Line Connection





CAUTION:

NOTE:

AC Adapter	Input Voltage	Application	Part Number
Standard wall-mount AC adapter	120V 60Hz	Standard indoor application	1000811
Outdoor rated AC adapter	120V 60Hz	UL listed for outdoor installations	1235448

120 VAC AC Adapters:

NOTE: The power source should be constant. Be certain the AC adapter is not on a switched outlet. Power interruptions longer than 8 hours may cause the controller to lose the time and day settings. When power is restored, the day and time settings must then be re-entered.

Controller Location

System Operation

Treated Water (Downflow)

Untreated water is conditioned as it flows through the resin bed and up the riser.

If the model selected at first start-up was 268r, this is a system that will refill the salt tank at the start of a regeneration cycle. When a regeneration cycle begins, the salt tank is filled and brine is allowed to develop before Cycle 1 starts.

Backwash (Upflow) – Cycle C1

Regenerant Draw (Downflow) – Cycle C2[1]

Slow Rinse (Downflow) – Cycle C3<Superscript>1

Repressurization – Cycle C4

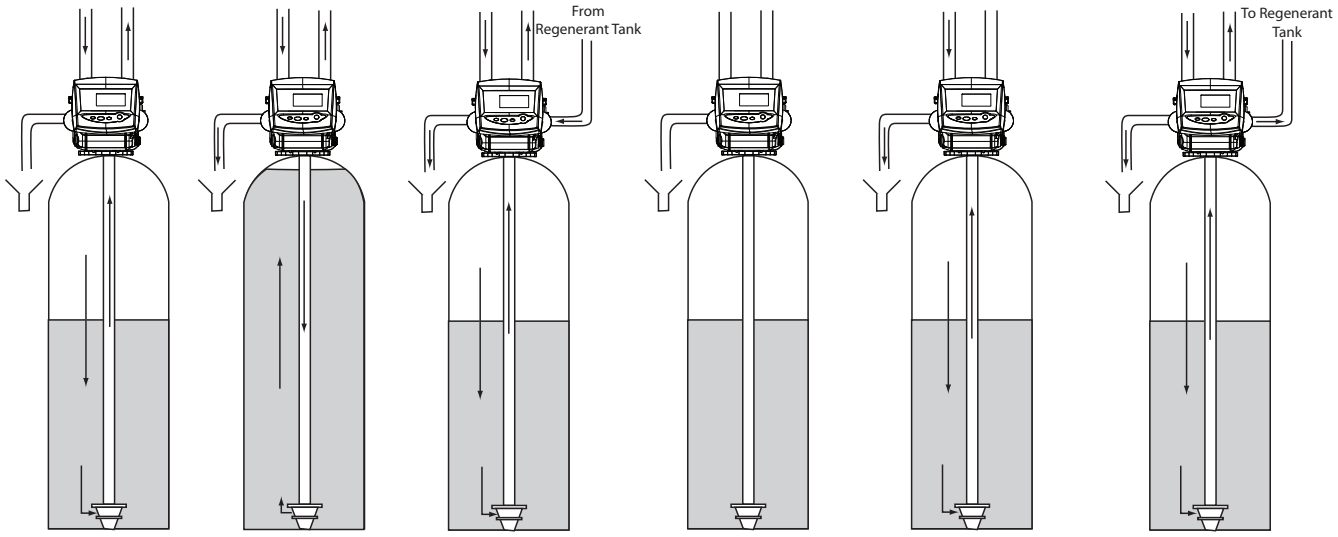
Fast Rinse (Downflow) - Cycle C5

2nd Backwash (Upflow) – Cycle C6

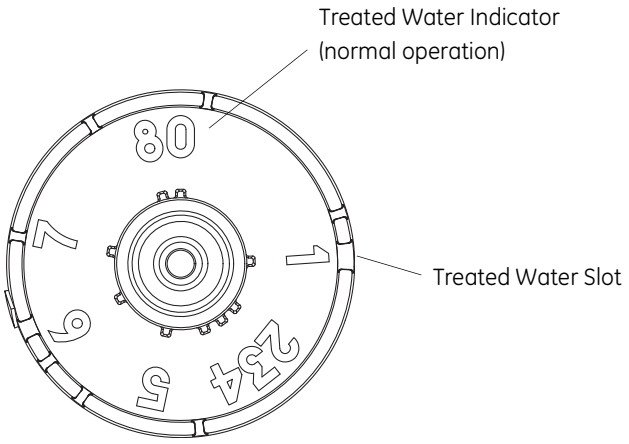
2nd Rinse (Downflow) - Cycle C7

Regenerant Refill – Cycle C8

Cycle Water Flows



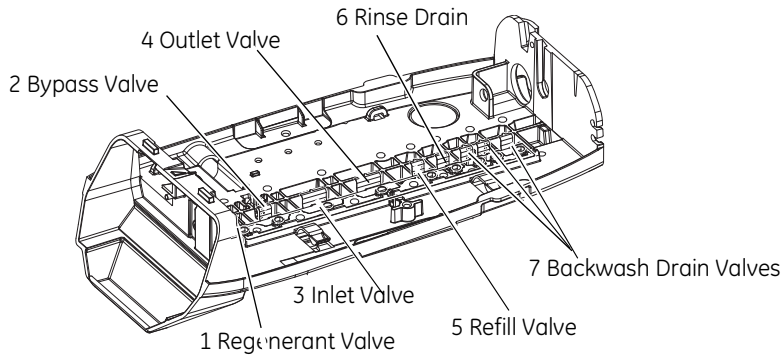
Service | **Backwash** | **Regenerant Draw/ Slow Rinse** | **Repressurize** | **Fast Rinse** | **Refill**



= Treated Water - normal operation mode
1 = Backwash Cycle
2 = Regenerant Draw Cycle (not used in filter mode)
3 = Slow Rinse Cycle (not used in filter mode)
4 = System Pause
5 = Fast Rinse Cycle 1
6 = Backwash Cycle 2 (not used in filter mode)
7 = Fast Rinse Cycle 2 (not used in filter mode)
8 = Regenerant Refill (not used in filter mode)

If electrical power is not available, the camshaft can be rotated counterclockwise by hand if the motor is removed.

Figure 14 - Performa Valve



The materials of construction of the modern water conditioner will not support bacterial growth, nor will these materials contaminate a water supply. During normal use, a conditioner may become fouled with organic matter, or in some cases with bacteria from the water supply. This may result in an off-taste or odor in the water.

Some conditioners may need to be disinfected after installation and some conditioners will require periodic disinfection during their normal life.

Depending upon the conditions of use, the style of conditioner, the type of ion exchanger, and the disinfectant available, a choice can be made among the following methods.

Sodium or Calcium Hypochlorite

Application

These materials are satisfactory for use with polystyrene resins, synthetic gel zeolite, greensand and bentonites.

5.25% Sodium Hypochlorite

These solutions are available under trade names such as Clorox*. If stronger solutions are used, such as those sold for commercial laundries, adjust the dosage accordingly.

1. Dosage
   A. Polystyrene resin; 1.2 fluid ounce (35.5 mL) per cubic foot.
   B. Non-resinous exchangers; 0.8 fluid ounce (23.7 mL) per cubic foot.
2. Brine tank conditioners
   A. Backwash the conditioner and add the required amount of hypochlorite solution to the well of the regenerant tank. The regenerant tank should have water in it to permit the solution to be carried into the conditioner.
   B. Proceed with the normal regeneration.

**Clorox is a trademark of the Clorox Company.*

Calcium Hypochlorite

Calcium hypochlorite, 70% available chlorine, is available in several forms including tablets and granules. These solid materials may be used directly without dissolving before use.

1. Dosage
    A. Two grains (approximately 0.1 ounce [3 mL]) per cubic foot.
2. Regenerant tank conditioners
    A. Backwash the conditioner and add the required amount of hypochlorite to the well of the regenerant tank. The regenerant tank should have water in it to permit the chlorine solution to be carried into the conditioner.
    B. Proceed with the normal regeneration.

AvantaPure Controller

Power Loss Memory Retention

Motor

Controller Memory

NOTE: Water flow to the valve can be turned on or bypassed when the controller is powered up for the first time.

Variable Reserve Function

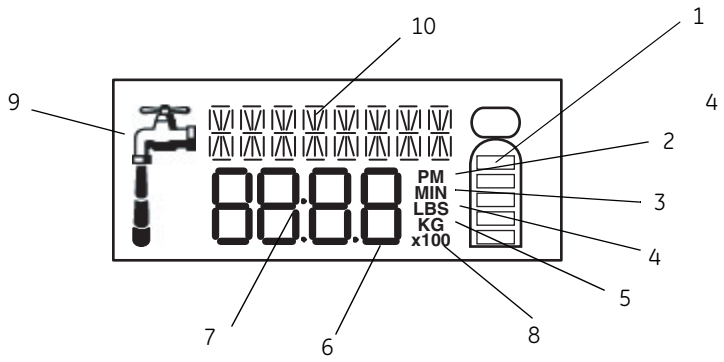
end-user's water usage schedule.

A variable reserve saves salt and water by only regenerating when absolutely necessary, and ensures enough soft water for typical high-water usage days.

Each day of regeneration the controller reviews the last four weeks of water usage for the same day of the week to determine if the remaining capacity is adequate for the next day of the week. If not, it will initiate an automatic regeneration.

Display Icons

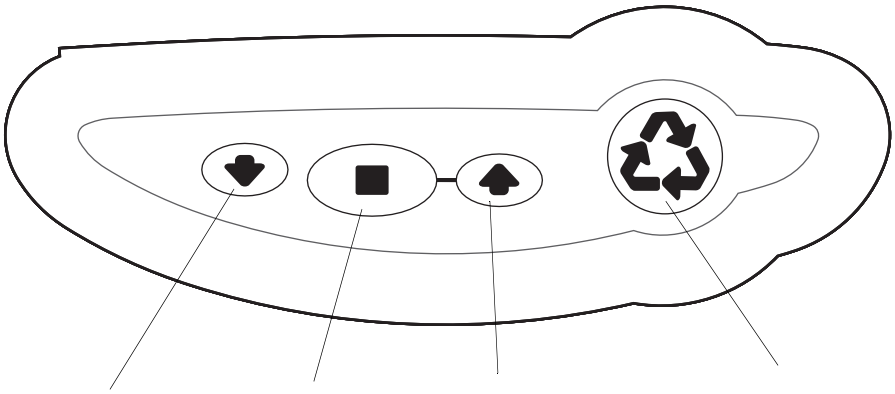
Figure 15



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

1. Displays amount of conditioning capacity remaining.
2. "PM" indicates that the time displayed is between 12:00 noon and 12:00 midnight (there is no AM indicator). PM indicator is not used if clock mode is set to 24-hour.
3. When "MIN" is displayed, the value entered is in minute increments.
4. When "LBS" is displayed, the value entered is in pounds.
5. When "Kg" is displayed, the value entered is in kilograms or kilograins.
6. Four digits used to display the time or program value. Also used for error codes.
7. Colon flashes as part of the time display. Indicates normal operation.
8. X100 multiplier for large values.
9. Shows when water is flowing through the valve.
10. Banner display.

Keypad — Buttons



Programming Conventions

UP for up arrow
DOWN for down arrow
SET for set
REGEN for regeneration

P/R for press and release
HOLD for press and hold
X sec for a number of seconds to press the button and hold it down

Things You Might Need to Know

Level II Programming

Level II Programming

Programming Overview

NOTE:

NOTE:

Level I Programming

Time of Day
Day of Week
Time of Regeneration

- **Setting Time of Day**

NOTE:

- **Setting Day of Week**

- **Setting Regeneration Time**

268 Conditioner Operation Type	263 Filter Operation Type
INJECTOR SELECTION*	REGEN SA
BACKWASH 1	CAPACITY GAL
SLOW RINSE	SELECT LANGUAGE
FAST RINSE 1	CLOCK MODE
BACKWASH 2	UNITS OF MEASURE
FAST RINSE 2	BACKWASH
OPERATION TYPE 268*	FAST RINSE
SERVICE INTERVAL	OPERATION TYPE 263*
CHLORINE GENERATOR	SERVICE INTERVAL
	CHLORINE GENERATOR

*View only.

Level II parameters will, in almost all cases, be preset to meet your configuration needs. The predefined system number will preprogram all of the Level II parameters to the selected default values.

Calendar Override allows the programmer to set the maximum days between regenerations. A setting of 0 (zero) means the calendar override is disabled. To change the calendar override, press the SET button while the words “CALENDAR OVERRIDE" appear on the banner display. The blinking digit can be changed to the desired numbers of days. To lock in the parameter, press the SET button.

Setting days between regeneration to zero will cause the system to not regenerate. This setting is used for selecting regeneration on specific days or to use with a remote regeneration input. See below.

NOTE: Regeneration on specific day is used to provide regeneration when water demands are not steady. Example: If the weekdays have low usage and the weekend is high, then regeneration every three days will not meet the requirements.

The calendar override days between regeneration must be set to zero to enable regeneration on specific days.

The 263 filter controller can be programmed to regenerate on an elapsed time period (calendar override) or by the day of the week. If you would like to regenerate on specific days select a 0 (zero) for the calendar override setting, the 263 filter will prompt you to select the days of the week in which you would like the unit to regenerate/backwash. For example, the unit could be programmed to regenerate every Monday, Wednesday and Friday.

Viewing the Salt Amount (268 softener only)

Is selected by the system model number (see Table 1). The table listed below is for reference only. Your AvantaPure Water Treatment Professional enters the model numbers based on the specific application requirements.

Table 1 AvantaPure 268 Co-Current Valve Capacity/Salt Dosage Reference

This table is for reference only. Your AvantaPure Water Treatment Professional selects the model numbers based on your specific application requirements.

	Tank Diameter Resin Cu. Ft.	Total Salt Dosage lbs	Total Capacity Kilograins	Injector Type
	9" 1.00 Ft^3	3	15,000	H
12	9" 1.00 Ft^3	9	28,000	H
13	9" 1.00 Ft^3	15	35,000	H
14	10" 1.00 Ft^3	3	15,000	J
15	10" 1.00 Ft^3	9	28,000	J
16	10" 1.00 Ft^3	15	35,000	J
17	10 X 54 1.50 Ft^3	4.5	22,000	J
18	10 X 54 1.50 Ft^3	13.5	42,000	J
19	10 X 54 1.50 Ft^3	22.5	52,000	J
20	12 X 48 2.00 Ft^3	6	30,000	K
21	12 X 48 2.00 Ft^3	18	56,000	K
22	12 X 48 2.00 Ft^3	30	70,000	K
23	13 X 54 2.50 Ft^3	7.5	37,000	L
24	13 X 54 2.50 Ft^3	22.5	70,000	L
25	13 X 54 2.50 Ft^3	37.5	87,000	L
26	14 X 65 3.00 Ft^3	9	45,000	L
27	14 X 65 3.00 Ft^3	27	86,000	L
28	14 X 65 3.00 Ft^3	45	105,000	L
93 — 3-Cycle Filter —				
98 —For Special Applications — Contact the System Manufacturer				

The default capacity setting is accurately calculated when the model number is entered by the factory. The capacity can be changed to operate "custom systems". Contact your AvantaPure Water Treatment Professional before adjusting the capacity setting. Default capacities are shown in Table 1.

Filter capacity is set in gallons or cubic meters. It is programmable from 100 to 14000 gallons or 1 to 140 cubic meters of capacity. Press the SET button and the digits will begin flashing. Change the capacity by using the up and down arrows to adjust the setting. To accept the setting, press the SET button.

NOTE: (Conditioners only) A different model number must be selected to change the default capacity and salt dosage.

Hardness is set in grains per gallon (gpg) or parts per million (ppm) and should be programmed to the total hardness level of the incoming water supply. Press the SET button to make the display flash. Use the UP and DOWN buttons to adjust the hardness setting. Press the SET button when the desired setting has been reached.

Setting the Language

The controller is capable of displaying 6 different languages. They are as follows:

1 = English
2 = Spanish
3 = French
4 = Italian
5 = Flemish
6 = German

Press the SET button and select the desired language using the UP or DOWN buttons. Press the SET button to accept the selection.

- **Setting Clock Mode**

  The controller can be programmed to operate with a 12- or 24-hour clock. Program the clock mode to "12" for a 12-hour clock or "24" for a 24-hour clock. When the controller is programmed as a 12-hour clock the PM indicator will illuminate during the PM hours. There is no AM indicator.

- **Setting Units of Measure**

  The controller can be programmed to operate in U.S. or Metric units. Program the Units of Measure to 0 (zero) for U.S. units or 1 for Metric units.

- **Viewing the Injector Type**

- **Adjusting the Cycle Times**

  Conditioner Cycle Times

268 Conditioner	
Cycle	**Range**
Backwash	1-50 minutes
Fast Rinse	1-30 minutes

Refill time does not appear as this cycle time is determined by the salt setting.

*The controller calculates the Slow Rinse default time on injector type, system size and salt dosage. The cycle times can be adjusted for custom applications. Please contact your AvantaPure Water Treatment Professional before attempting to adjust the Slow Rinse time.

This parameter displays the controller type and is preset at the factory: 268 softener, 263 filter.

The service interval feature is an option that will allow the installer to program the unit to ask for maintenance after a programmed duration. The feature is programmed from 0 (zero) to 99 months. When the programmed length of time has been reached the words "CALL DEALER FOR SERVICE" will appear in the banner display to signal the end user that regular maintenance may be required. If it is set to 0 (zero) the function is disabled. If you wish to enable this function program the desired service interval duration.

The controller has the capability to produce a low level of chlorine during the brine draw stage of regeneration. It can also sense if there is any brine present during the time when brine draw is occurring. This parameter can be adjusted to the following:

0 = Chlorine Generator with Salt Check disabled
1 = Salt Check only
2 = Chlorine Generator with Salt Check enabled

A chlorine generator refill control/cable kit, P/N 3001760, must be installed for this function to work properly. After it is installed, select the desired parameter and push SET to accept the selection.

Historical information can be retrieved from the controller be pressing the SET and DOWN buttons simultaneously, with the controller in the home position. Release both buttons when the controller displays MODEL NUMBER. Press the UP or DOWN buttons to navigate to each setting. The readout will scroll across the top of the display and the value will be displayed below the readout. Upon completing the initial programming procedure the average daily usages will display the same value. These values will changes as the unit logs water usage.

	Range/Values	Valve Type	
		268	263
MODEL NUMBER[a]	See Salt/Capacity Table on page 39	X	X
DAYS SINCE REGENERATION	0 to 255 days	X	X
PEAK FLOW RATE - DAY AND TIME	Language/Clock Mode Dependant	X	
PEAK FLOW RATE GPM[a]			
TOTAL WATER USED GAL X 100[a]	**0 TO 999900 gal.[a]**		
TOTAL WATER USED GAL X 1000000[a]	**0 to 42,940,000 gal.[a]**		
MONTHS SINCE SERVICE[a]	**0 to 2184 months[a]**		

a. Bold text indicates that specific values can be reset. Press and hold the SET button for 5 seconds to reset the value.

Placing Conditioner Into Operation

Conditioner and Filter Start-Up

NOTE:

Function	Display Text (268)	Display Text (263)

WARNING:
tank into the valve or the plumbing. In the ¼ open position, you should hear air slowly escaping from the valve drain line.

NOTE: 263 Filter - advance control back to the treated water position, proceed to Step 12.

NOTE: We recommend that you do not put regenerant into the tank until after the control valve has been put into operation. With no regenerant in the tank, it is much easier to view water flow and motion in the tank.

Action	Key	Duration	Display
Display current cycle	SET	5 Sec.	Current cycle
Advance to next cycle	SET and UP	Press and release	Next cycle
Cancel regeneration	SET and UP	5 Sec.	Regeneration canceled

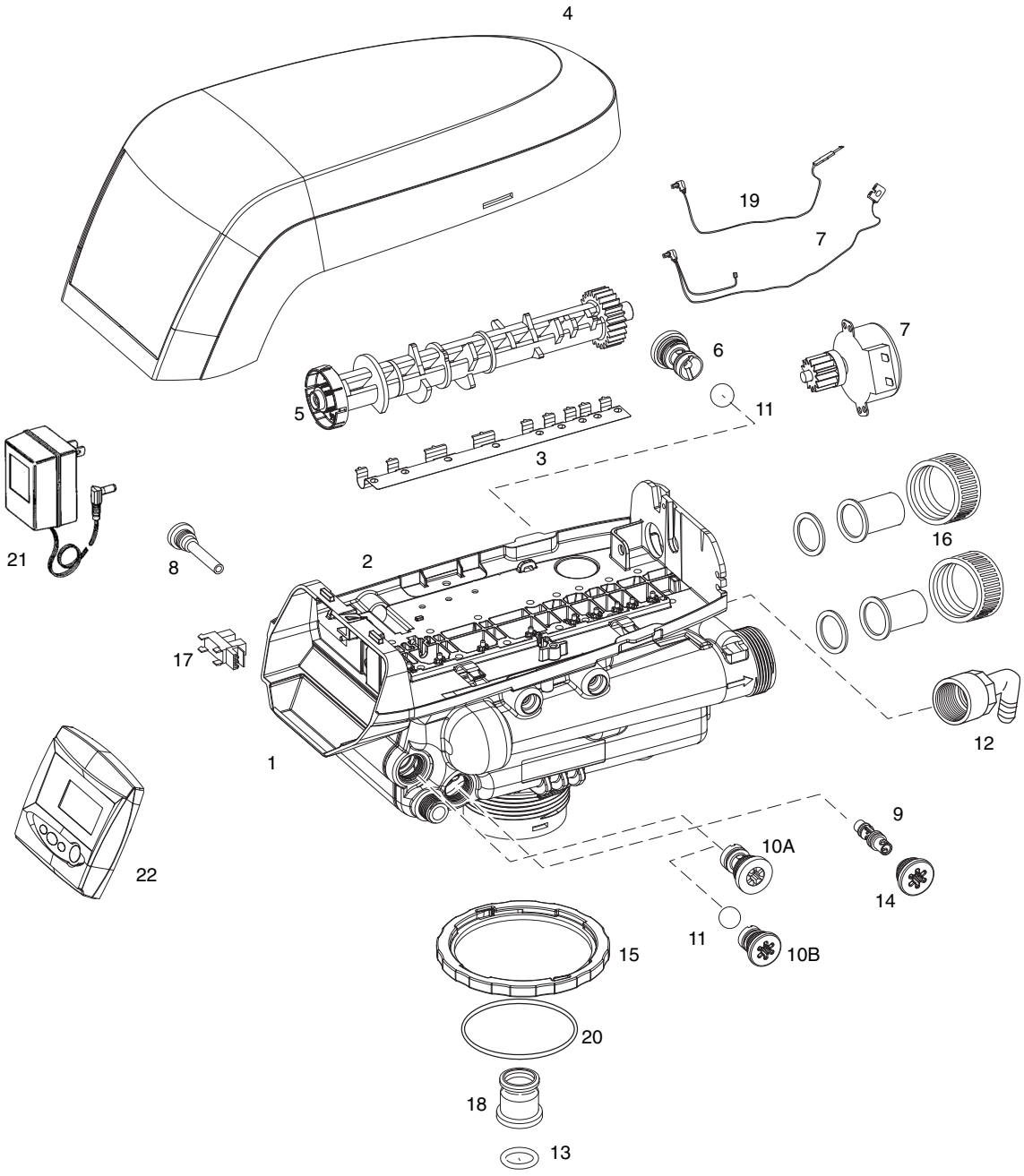
9. Engage the refill cycle to prime the line between the regenerant tank and the valve (conditioner only).
   A. Slowly open the main water supply valve again, to the fully open position. Be sure not to open too rapidly as that would push the media out of the media tank.
   B. Advance the controller to the regenerant tank Refill position. From the Backwash 1 cycle, press and hold the SET button. This will display the current cycle.

As you advance through each cycle there will be a slight delay before you can advance to the next cycle. There will be a pause after the brine draw and slow rinse cycles (system pause). This cycle allows the water/air pressure to equalize on each side of the valve discs before moving on.

   C. With the water supply completely open, when you arrive at the regenerant tank refill cycle, the controller will direct water down through the line to the regenerant tank. Let the water flow through the line until all air bubbles have been purged from the line.
   D. Do not let the water flow down the line to the tank for more than one to two minutes, or the tank may overfill.
   E. Once the air is purged from the line, press the SET button and the UP button simultaneously to advance to Treated Water position.
10. Draw water from the regenerant tank.
   A. From the treated water position initiate a manual regeneration.

      The controller will begin a manual regen, and advance the control valve to the backwash cycle. Press the SET and UP button to advance to brine draw/slow rinse cycle.
   B. With the controller in this position, check to see that the water in the regenerant tank is being drawn out of the tank. The water level in the tank should recede very slowly.
   C. Observe the water being drawn from the regenerant tank for at least three minutes. If the water level does not recede, or goes up, check all hose connections. C2 should be displayed.
11. If the water level is receding from the regenerant tank you can then advance the controller back to the treated water position by pressing SET and the UP buttons simultaneously.
12. Finally, turn on a faucet plumbed after the water conditioner. Run the faucet until the water runs clear.

AvantaPure Exploded View



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

	Part No.	Description	Qty.
	1244651	Valve Assembly w/o Flow Controls	1
2	1235338*	Top Plate, AvantaPure Series Valves	1
3	1235339	Valve Disc Spring, One Piece, Performa Valve	1
4	1242282	Cover, Valve,AvantaPure Controller	1
5	1235352*	Cam, 263-268 AvantaPure Valve, STD, Black	1
6		Drain Control Assembly:	1
	1000212	No. 10 (2.5 gpm; 9.5 Lpm)	
	1000213	No. 12 (3.5 gpm; 13.2 Lpm)	
	1000214	No. 13 (4.1 gpm; 15.5 Lpm)	
	1000215	No. 14 (4.8 gpm; 18.2 Lpm)	
7	1235361	Motor/Optical Cable Assembly	1
8	1000226	Screen/Cap Assembly w/ O-Ring	1
9		Injector (High Efficiency) Options:	
	1035733	"H" Injector (High Efficiency) - Lt Purple (9-inch tank)	
	1035734	"J" Injector (High Efficiency) - Lt Blue (10-inch tank)	
	1030413	"K" Injector (High Efficiency) - Pink (12-inch tank)	
	1035736	"L" Injector (High Efficiency) - Orange (13 & 14-inch tank)	
	1032978	Plugged Injector for 263 Filter	
	1032985	Plugged Injector Cap	
10A	1000222	Regenerant Refill Controller, No Ball	1
10B	1243510	Regenerant Refill Controller	
11	1030502	Ball, Refill Flow Control	
12	1002449	Drain Fitting Elbow (3/4-inch hose barbed)	1
13	1010428	O-Ring	1
14	1000269	Injector Cap with O-Ring	1
15	1035622	Tank Ring	1
16		Plumbing Adapter Kits:	1
	1001606	3/4-inch Copper Tube Adapter Kit	
	1001670	1-inch Copper Tube Adapter Kit	
	1001608	22-mm Copper Tube Adapter Kit	
	1001613	3/4-inch CPVC Tube Adapter Kit	
	1001614	1-inch CPVC Tube Adapter Kit	
	1001615	25-mm CPVC Tube Adapter Kit	
	1001769	3/4-inch NPT Plastic Pipe Adapter Kit	
	1001603	1-inch NPT Plastic Pipe Adapter Kit	
	1001604	3/4-inch BSPT Plastic Pipe Adapter Kit	
	1001605	1-inch BSPT Plastic Pipe Adapter Kit	
	1001611	3/4-inch BSPT Brass Pipe Adapter Kit	
	1001610	1-inch NPT Brass Pipe Adapter Kit	
	1001612	1-inch BSPT Brass Pipe Adapter Kit	
17	1235373	Module, Sensor, Photo Interrupter	1
18	1001986	13/16 inch Rubber Insert (Optional)	1
19	1235446	Turbine Cable	1
20	1010154	Tank O-Ring	1
21	1000811	AC Adapter, North American	1
22	1238362	AvantaPure controller (unprogrammed)	1
*	1033444	Turbine Assembly	
*	1239979	Cable Harness, Remote Regen 740F	
*	1239711	Switch Kit, Front Mount, 0.1 amp	
*	1239752	Switch Kit, Front Mount, 5 amp	
*	1239753	Switch Kit, Top Plate Mount, 0.1 amp	
*	1239754	Switch Kit, Top Plate Mount, 5 amp	
*	1242286	Valve Skirt	
*	1242287	Cover with Shield	
*	1033444	Internal Turbine Meter	
*	1233187	Motor Locking Pin	
*	3001760	Chlorine Generator Kit	
*	1239760	Blending Valve Kit	
*		Drain Line Flow Control	1
	1030355	Drain Line Flow Control, 5 gpm (19 Lpm)	
	1030356	Drain Line Flow Control, 6 gpm (22.5 Lpm)	
	1030357	Drain Line Flow Control, 7 gpm (26.5 Lpm)	
	1030358	Drain Line Flow Control, 8 gpm (30 Lpm)	
	1030359	Drain Line Flow Control, 9 gpm (34 Lpm)	
	1030360	Drain Line Flow Control, 10 gpm (38 Lpm)	
*	1030334	Plugged Refill Flow Control - for 263 Valve	
*	1041174	Valve Disc Kit	

*Not shown on drawing.

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P/N 3001324 Rev. H MR11

ERR 1 is displayed.	Program settings have been corrupted.	Press any key and reset model number.
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 —Optical sensor —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 —Optical sensor —Controller
Time of Day incorrect.	Power failure occurred.	Press SET to reset the time display.

1. Brine tank overflow.	a. Uncontrolled brine refill flow rate. b. Air leak in brine line to air check. c. Drain control clogged with resin or other debris.	a. Remove brine control to clean ball and seat. b. Check all connections in brine line for leaks. Refer to instructions. c. Clean drain control.
2. Flowing or dripping water at drain or brine line after regeneration.	a. Valve stem return spring weak. b. Debris is preventing valve disc from closing.	a. Replace spring. (Contact dealer.) b. Remove debris.
3. Hard water leakage after regeneration.	a. Improper regeneration. b. Leaking of external bypass valve. c. O-ring around riser pipe damaged. d. Incorrect capacity.	a. Repeat regeneration after making certain correct regenerant dosage was set. b. Replace bypass valve. (Contact dealer.) c. Replace O-ring. (Contact dealer.) d. Verify appropriate regenerant amount and system capacity. (Contact dealer.)
4. Control will not draw brine.	a. Low water pressure. b. Restricted drain line. c. Injector plugged. d. Injector defective. e. Valve disc 2 and/or 3 not closed. f. Air check valve prematurely closed.	a. Make correct setting according to instructions. b. Remove restriction. c. Clean injector and screen. d. Replace injector and cap. (Contact dealer.) e. Remove foreign matter from disc and check disc for closing by pushing in on stem. Replace if needed. (Contact dealer.) f. Put control momentarily into brine refill. Replace or repair air check if needed. (Contact dealer.)
5. Control will not regenerate automatically.	a. AC adapter or motor not connected. b. Defective motor.	a. Connect power. b. Replace motor. (Contact dealer.)
6. Control regenerates at wrong time of day.	a. Controller set incorrectly.	a. Correct time setting according to instructions.
7. Valve will not draw brine.	a. Low water pressure. b. Restricted drain line. c. Injector plugged. d. Injector defective. e. Air check valve closes prematurely on brine pickup tube.	a. Set pump to maintain 20 psi at softener. b. Change drain to remove restriction. c. Clean injector and screen. d. Replace injector. (Contact dealer.) e. Put control momentarily into brine/slow rinse. Replace or repair air check if needed. (Contact dealer.)

8. System using more or less salt than regenerant setting.	a. Foreign matter in valve causing incorrect flow rates.	a. Remove brine control and flush out foreign matter. Advance control to brine/slow rinse, to clean valve (after so doing position control to "fast rinse" to remove regenerant from tank).
9. Intermittent or irregular regenerant draw.	a. Low water pressure. b. Defective injector.	a. Set pump to maintain 20 psi at conditioner. b. Replace injector. (Contact dealer.)
10. No conditioned water after regeneration.	a. No regenerant in regenerant tank. b. Injector plugged. c. Air check valve closes prematurely.	a. Add regenerant to regenerant tank. b. Clean injector and screen. c. Put control momentarily into brine/slow rinse. Replace or repair air check if needed. (Contact dealer.)
11. Backwashes or purges at excessively low or high rate.	a. Incorrect drain controller used. b. Foreign matter affecting valve operation.	a. Replace with correct size controller. (Contact dealer.) b. Remove drain controller and clean ball and seat.
12. No water flow display when water is flowing.	a. Bypass valve in bypass. b. Meter probe disconnected or not fully connected to meter housing. c. Restricted meter turbine rotation due to foreign material in meter.	a. Shift bypass valve to not-in-bypass position. b. Fully insert probe into meter housing. c. Remove meter housing, free up turbine and flush with clean water. Turbine should spin freely. If not, replace meter. (Contact dealer.)
13. Run out of conditioned water between regenerations.	a. Improper regeneration. b. Incorrect regenerant setting. c. Incorrect hardness or capacity settings. d. Water hardness has increased. e. Restricted meter turbine rotation due to foreign material in meter.	a. Repeat regeneration, making certain that correct regenerant dosage is used. b. Set P6 to proper level. See salt setting chart. c. Set to correct values. See Programming section. d. Set hardness to new value. See Programming section. e. Remove meter housing, free up turbine and flush with clean water. Turbine should spin freely; if not, replace meter. (Contact dealer.)
14. Regenerant tank overflow.	a. Regenerant valve disc 1 being held open by foreign matter. b. Valve disc 2 not closed during regenerant draw causing brine refill. c. Air leak in regenerant line to air check. d. Improper drain control for injector. e. Drain control clogged with resin or other debris.	a. Manually operate valve stem to flush away obstruction. b. Flush out foreign matter holding disc open by manually operating valve stem. c. Check all connections in regenerant line for leaks. Refer to instructions. d. Too small of a drain control with a larger injector will reduce draw rates. e. Clean drain control.

VIEWING AND SELECTING MODEL NUMBERS

AvantaPure 268 Co-Current Conditioner
AvantaPure 263 3-Cycle Filter

Capacity/Salt Dosage (268 Co-Current Conditioner)

Model Number (263 Filter Valve)

Viewing the Model Number

Note

To Change The Model Number

Set Time of Day

Day of the Week

To Change Time of Regeneration

ERROR 3