PENTAIR

PRO ELITE PROFESSIONAL SERIES
WATER TREATMENT SYSTEM
SERVICE MANUAL

Table of Contents

جدول بيانات التشغيل و الأداء:

جدول بيانات التشغيل و الأداء لجهاز Pro Elite لتنقية المياه			
موديل	Pro Elite 268-762-100-1044	Pro Elite 268-762-150-1248	Pro Elite 268-762-200-1248
معدل التدفق التشغيلي	8.00 جالون/دقيقة	13.00 جالون/دقيقة	15.00 جالون/دقيقة
انخفاض الضغط عند معدل التدفق التشغيلي	5.5 Psi	9.5 Psi	14.4 Psi
معدل السعة (جرين/ lb ملح)	13,309 @ 3.3 lbs 26,327 @ 9.0 lbs 31,682 @ 15.0 lbs	20,023 @ 4.95 lbs 39,609 @ 13.5 lbs 47,665 @ 22.5 lbs	28,548 @ 6.6 lbs 56,472 @ 18.0 lbs 67,958 @ 30.0 lbs
معدل الكفاءة	4,033 جرين/lb @ 3.3 lbs	4,045 جرين/lb @ 4.95 lbs	4,325 جرين/lb @ 6.6 lbs
معدل التدفق الأقصى خلال عملية إعادة التنشيط	5.5 جالون/دقيقة	5.5 جالون/دقيقة	5.5 جالون/دقيقة
كمية الراتنج نوع Sybron C-249NS	1.0 قدم مكعب	1.5 قدم مكعب	2.0 قدم مكعب
حجم التنك	10” x 44”	12” x 48”	12” x 48”
معدل الغسيل العكسي	2.7 جالون/دقيقة	3.9 جالون/دقيقة	3.9 جالون/دقيقة
معدل الشطف السريع	5.5 جالون/دقيقة	5.5 جالون/دقيقة	5.5 جالون/دقيقة

*الضغط التشغيلي 20-125 psi ، الحرارة التشغيلية 1.7-38 C°
*نوع الملح المفضل استعماله : كلوريد الصوديوم – حبيبات
*جميع الموديلات المذكورة أعلاه تم اختبارها في الظروف التالية :
35 psi ± 5 psi
pH 7.5 ± 0.5
التدفق التجريبي : 50% من قيمة التدفق التشغيلي

Performance Data Sheet

Pro Elite Demand Water Softener System Performance Data Sheet			
Model	**Pro Elite 268-762-100-1044 Demand**	**Pro Elite 268-762-150-1248 Demand**	**Pro Elite 268-762-200-1248 Demand**
Rated Service Flow (gpm)	12.0	13.0	14.4
Pressure Drop at Rated Service Flow Rate (psi)	11	12	15
Rated Capacity (grains @ lb of salt)	15,122 @ 3.3 lbs 21,716 @ 9.0 lbs 27,641 @ 15.0 lbs	25,746 @ 4.95 lbs 36,972 @ 13.5 lbs 47,059 @ 22.5 lbs	36,102 @ 6.6 lbs 51,844 @ 18.0 lbs 65,988 @ 30.0 lbs
Rated Efficiency (grains/lb Salt @ lb of salt)	4,582 grains/lb @ 3.3 lbs	5,201 grains/lb @ 4.95 lbs.	5,470 grains/lb @ 6.6 lbs
Maximum FLow Rate During Regeneration (gpm)	5.5	5.5	5.5
10% Cross Linked Ion Exchange Resin (cu ft)	1.0	1.5	2.0
Tank Size	10" x 44"	12" x 48"	12" x 48"
Backwash - GPM	2.7	3.9	3.9
Rapid Rinse/Purge - GPM	5.5	5.5	5.5

Operating Pressure: 20-125 psi or 1.4-8.8 kg/cm^2, Operating Temperature: 34-100°F or 1.1-43.3°C
Acceptable Salt Type: Sodium Chloride - Pellet salt
All Systems above tested at 35 psi ±5 psi, pH of 7.5 ±0.5, Capacity Testing Flow Rate = 50% of the rated service flow rate for the various size systems.

These water softener systems have been tested by WQA and conform to NSF/ANSI 44 for specific performance claims as verified and substantiated by test data. The rated salt efficiencies above were also determined in accordance with NSF/ANSI 44 and are only valid at the salt dosage referenced above. An efficiency rated water softener is a demand initiated regeneration (DIR) softener which also complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in its operation. Efficiency rated water softeners shall have a rated salt efficiency of not less that 3350 grains of total hardness exchanged per pound of salt (based on NaCl equivalency) (477 grams of total hardness exchanged per kilogram of salt), and shall not deliver more salt than its listed rating. The rated efficiency of the water softener, the salt dosage at that efficiency, the capacity at that salt dosage and that of the efficiency is only valid at the stated salt dosage. Efficiency is measured by a laboratory test described in NSF/ANSI 44. The test represents the maximum possible efficiency the system can achieve. Operational efficiency is the actual efficiency achieved after the system has been installed. It is typically less than the efficiency due to individual application factors including water hardness, water usage, and other contaminants that reduce the water softener's capacity. These systems are not intended to be used for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Refer to the system Installation and Service Manuals for set-up and programming instructions.

Contact your local dealer for parts and service. See your owner's manual for warranty information

Tested and Certified by WQA against NSF/ANSI Std. 44 & 372 for "lead free" compliance & CSA B483.1.

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PHONE: (262) 238-4400

2/01/19

How To Use This Manual

This installation manual is designed to guide the installer through the process of installing and starting water conditioning systems featuring Pro Elite equipment.

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

- Training in the Pro Elite Demand systems.
- Knowledge of water conditioning and how to determine proper control settings.
- Adequate plumbing skills and qualifications per local and state laws, codes, and ordinances.

Icons That Appear In This Manual

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

Note: Helpful hint to simplify procedure.

Safety Information

- Observe all warnings that appear in this manual.
- Please review the entire Installation and Operation Manual before installing the water conditioning system.
- As with all plumbing projects, it is recommended that a trained professional water treatment dealer install the water conditioning system. Please follow all local plumbing codes for installing this water conditioning system.

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 is not intended to be used for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
- This water conditioning system is to be used only for potable water.
- Inspect the water conditioning system for carrier shortage or shipping damage before beginning installation.
- Use only lead-free solder and flux, as required by federal and state codes, when installing soldered copper plumbing.
- Use caution when installing soldered metal piping near the water conditioning system. Heat can adversely affect the plastic control valve and bypass valve.
- All plastic connections should be hand tightened. plumber tape may be used on connections that do not use an O-ring seal. Do not use pipe dope type sealants on the valve body. **Do not use pliers or pipe wrenches**.
- Do not use petroleum-based lubricants such as petroleum jelly, oils, or hydrocarbon-based lubricants. Use only 100% silicone lubricants.
- Use only the power transformer supplied with this water conditioning system.
- All electrical connections must be completed according to local codes.
- The power outlet must be grounded.

Install an appropriate grounding strap across the inlet and outlet piping of the water conditioning system to ensure that a proper ground is maintained.

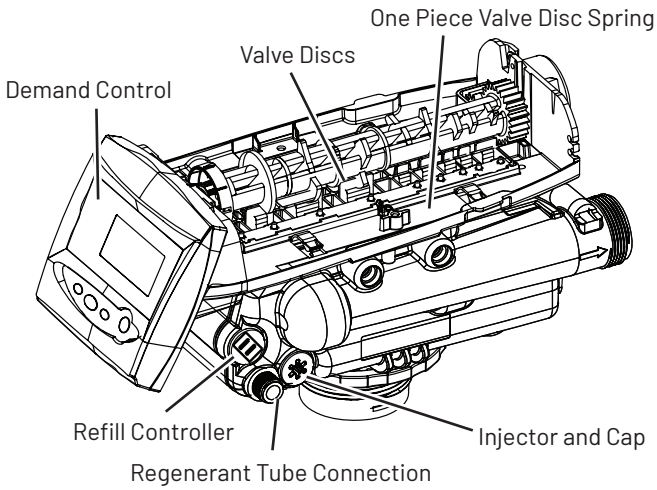
WARNING: Dry location use only, unless used with a Listed Class 2 Power Supply suitable for outdoor use.

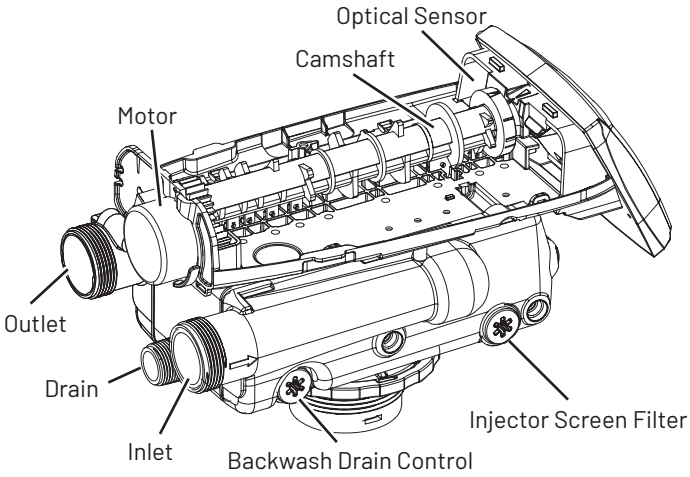
- To disconnect power, unplug the AC adapter from its power source.
- Observe drain line requirements. The drain line must be a minimum of 1/2-inch diameter. Use 3/4-inch pipe if the backwash flow rate is greater than 5 gpm (19 Lpm) or the pipe length is greater than 20 feet (6 m).
- Do not support the weight of the system on the control valve fittings, plumbing, or the bypass.
- Do not allow this water conditioning system to freeze. Damage from freezing will void this water conditioning system's warranty.
- Operating ambient temperature: 34° to 120°F (1° to 49°C).
- Operating water temperature: 35° to 100°F (1.7° to 38°C).
- Operating water pressure range : 20 to 125 psi (1.38 to 8.62 bar). In Canada the acceptable operating water pressure range is 20 to 100 psi (1.38 to 6.89 bar).

WARNING: The valve and tank components of this Pro Elite 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 (PN1010154).

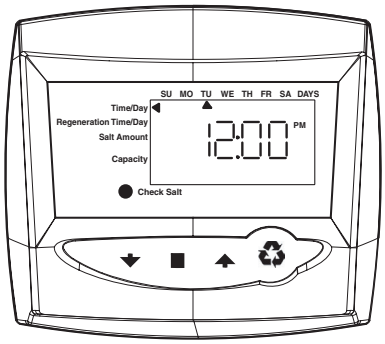
- Keep the media tank in the upright position. Do not turn upside down or drop. Turning the tank upside down or laying the tank on its side can cause media to enter the valve.
- Ensure that all wiring and plumbing connections on the mineral and brine tanks are installed correctly.
- Use only regenerants designed for water conditioning. Do not use ice melting salt, block salt or rock salt.

Valve Layout

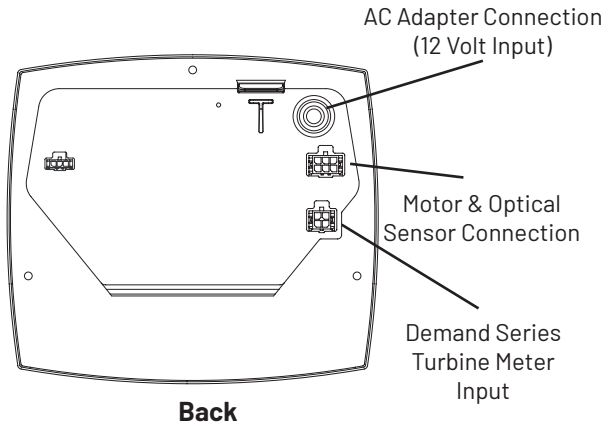




Demand Control Layout



Front



Back

System Specifications 762

Model Number	268-762-100-1044	268-762-150-1248	268-762-200-1248
Recharge Style	Demand	Demand	Demand
Media Tank Size	10" x 44" (25 x 112 cm)	12" x 48" (30.5 x 122 cm)	12" x 48" (30.5 x 122 cm)
Resin Volume	1 ft^3 (0.03 m^3)	1.5 ft^3 (0.04 m^3)	2 ft^3 (0.056 m^3)
Recharge (Salt) Tank Size	19" x 36" (48.3 x 91.5 cm)	19" x 36" (48.3 x 91.5 cm)	19" x 36" (48.3 x 91.5 cm)
Salt Storage	240 lbs (109 kg)	240 lbs (109 kg)	240 lbs (109 kg)
Drain Water Rate	2.7 gpm (10.2 L/m)	3.9 gpm (14.7 L/m)	3.9 gpm (14.7 L/m)
Service Connection Size	1" NPT	1" NPT	1" NPT
Drain Connection Size	3/4" NPT	3/4" NPT	3/4" NPT
Recharge (Brine) Connection Size	3/8" NPT	3/8" NPT	3/8" NPT
Installation Space Requirements	21" x 42" x 72" (53.3 x 106.6 x 182.8 cm)	21" x 42" x 72" (53.3 x 106.6 x 182.8 cm)	21" x 42" x 72" (53.3 x 106.6 x 182.8 cm)
Shipping Weight	140 lbs (63.5 kg)	165 lbs (74.8 kg)	200 lbs (90.7 kg)

Location Selection

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

- Level platform or floor.

Note: The Pro Elite System can be provided with optional leveling feet that may be used on the two tanks. Order part number 4000409.

- 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 125 psi (8.62 bar) and above 20 psi (1.38 bar).
- In Canada the water pressure must be below 100 psi (6.89 bar).
- Constant electrical supply to operate the control.
- 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: Dry location use only, unless used with a Listed Class 2 Power Supply suitable for outdoor use.

Outdoor Locations

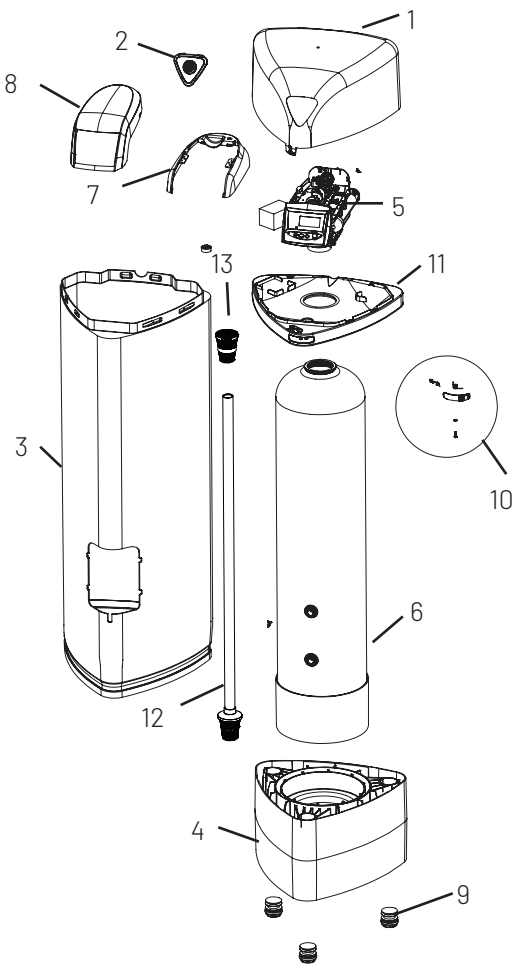
It is recommended that the Pro Elite conditioner be installed in a protected environment.

When installing the water conditioning system outdoors, several items must be considered:

- Moisture – The valve and control are rated for NEMA 3 locations. Falling water should not affect performance. The system is not designed to withstand extreme humidity or water spray from below. Examples are: constant heavy mist, near corrosive environment, or upwards spray from sprinkler.
- Direct Sunlight – The materials used will fade or discolor over time in direct sunlight. The integrity of the materials will not degrade to cause system failures.
- Temperature – Extreme hot or cold temperatures will cause damage to the valve or control. Freezing temperatures will freeze the water in the valve. This will cause physical damage to the internal parts as well as the plumbing and conditioning resin. High temperatures will affect the control. The display may become unreadable but the control should continue to function. When the temperature returns to normal operating limits, the display will re-appear. A protective cover should assist with high temperature applications.
- Insects – The control 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 duct tape. The top cover should be installed securely in place.

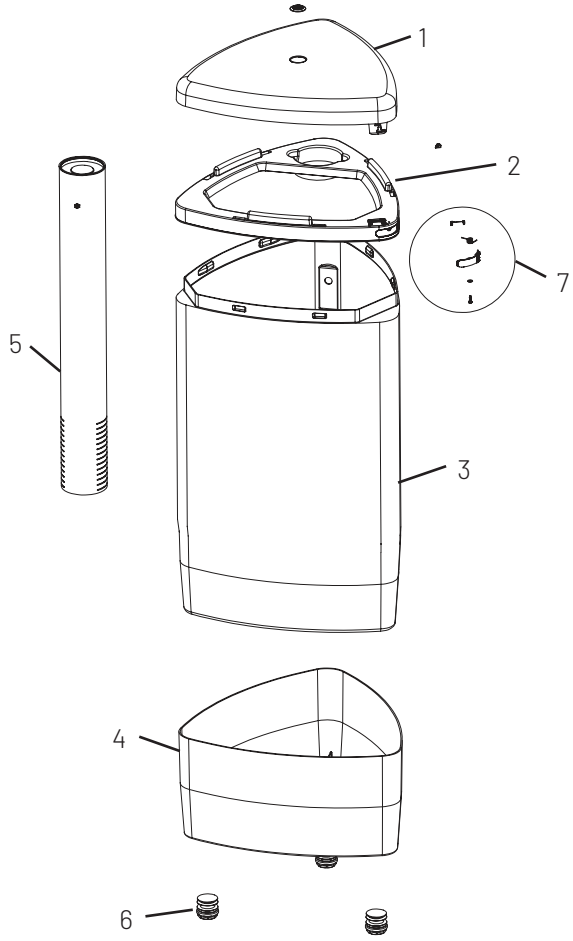
System Features

Resin Tank



1	Cover	8	Cover
2	Cap, Cover	9	Foot, Leveling
3	Jacket,Resin Tank	10	Latch Mechanism
4	Base	11	Tank Collar
5	268 Logix PE Valve w/762 Control	12	Riser Tube
6	Resin Tank	13	Upper Basket
7	Shield		

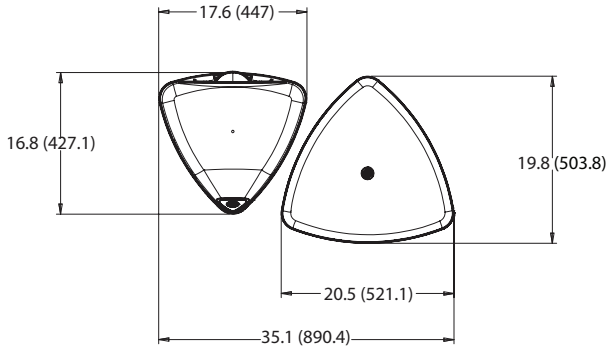
Brine Tank

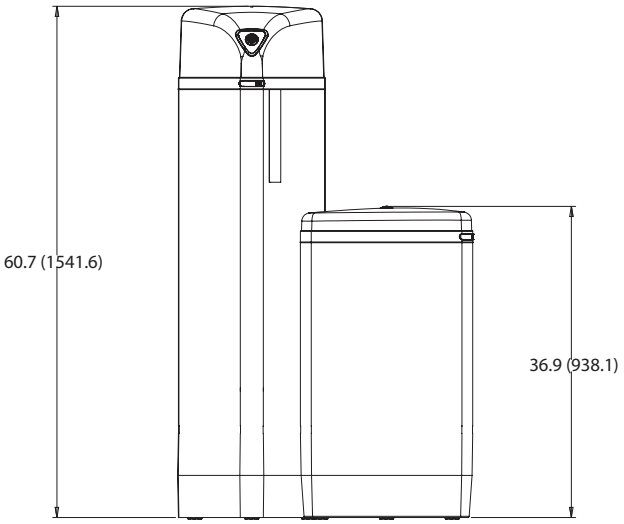


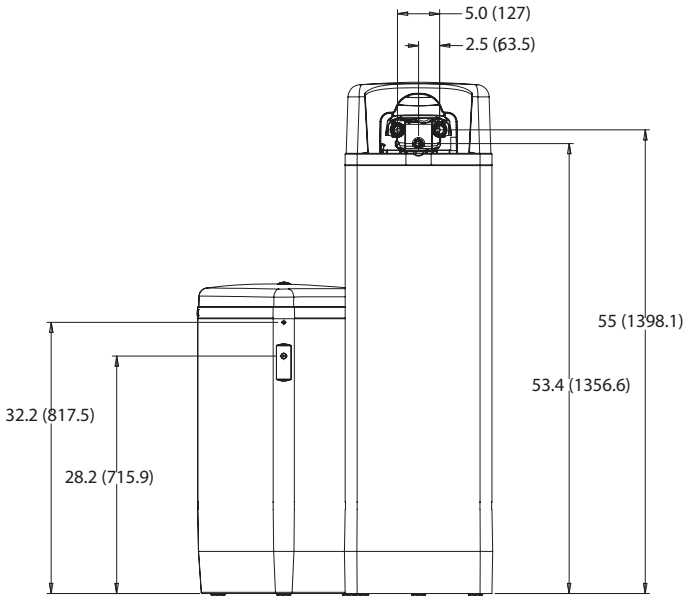
1	Cover	5	Brine Tube Assembly
2	Collar, Tank	6	Foot, Leveling
3	Tank, Brine	7	Latch Mechanism
4	Base, Tank		

Equipment Installation

Dimensions







Typical System Layout

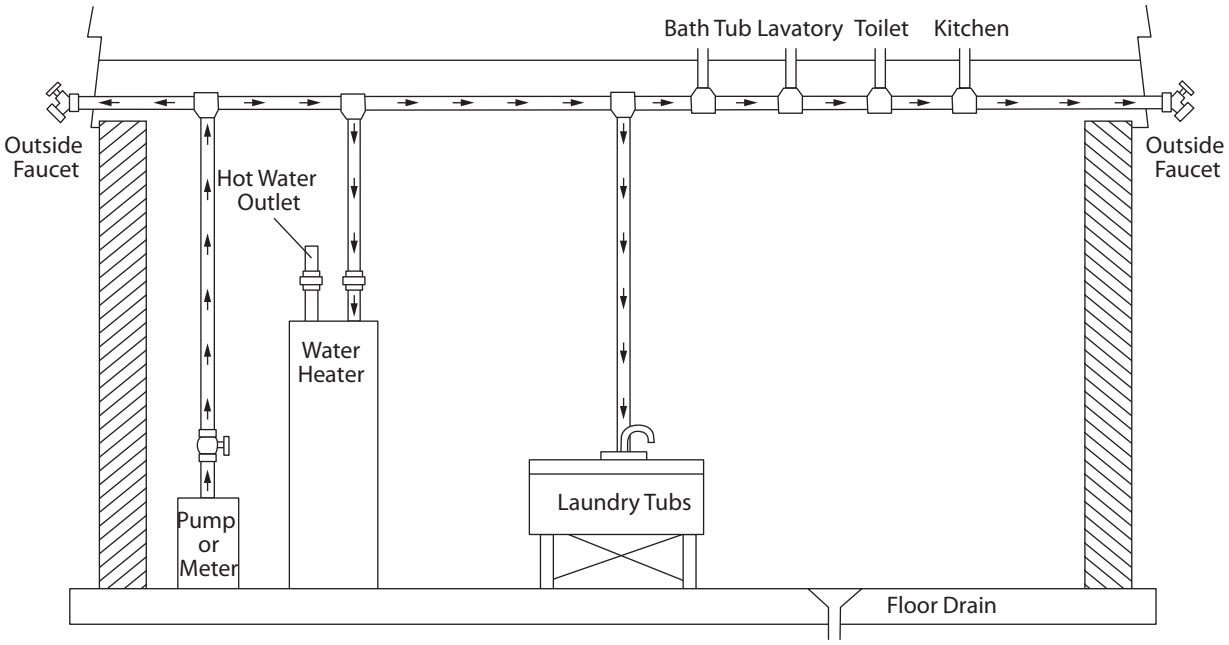


Figure 1 Standard Basement Before Installation. Cold water lines shown.

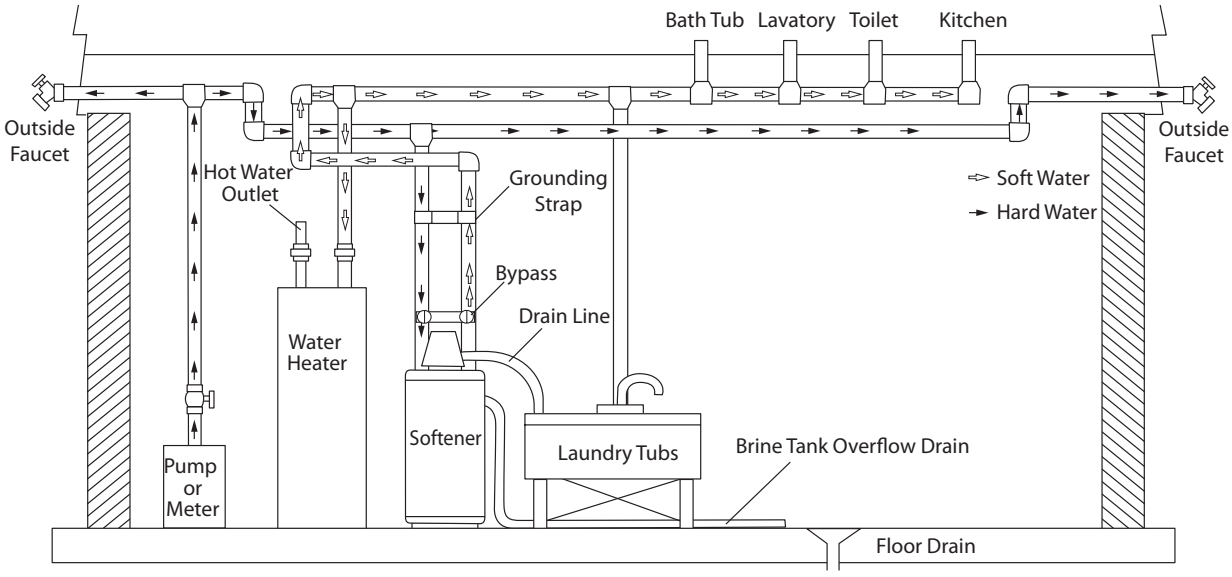


Figure 2 Softened Water Flow Diagram.

Inspection

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 handling the media tank do not turn it upside down or drop on its side.

When the carton is first opened, the softener will be standing upright. The salt tank will be turned over and covering the softener (Figure 3).

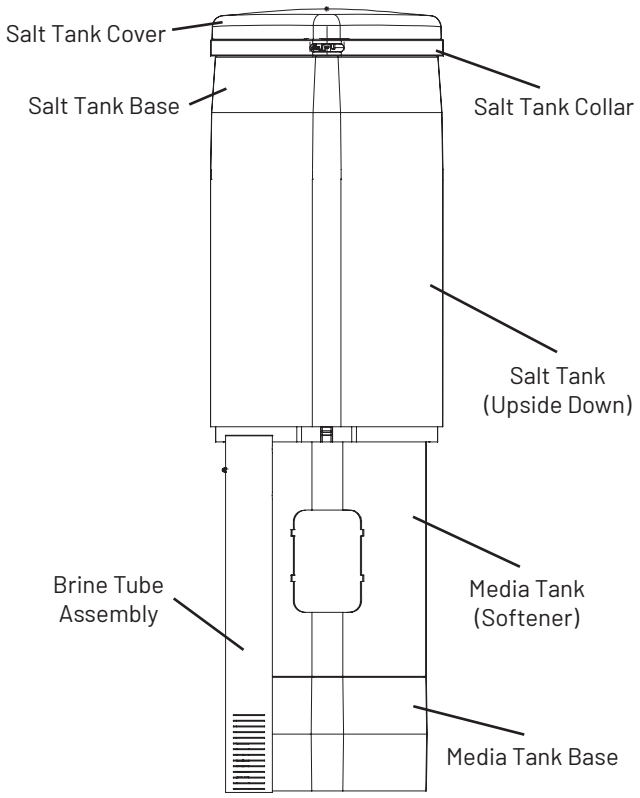


Figure 3

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:

1. If the floor under the salt tank is uneven, the leveling feet may be installed. Lay the empty salt tank on its side. Press or tap the feet into the pockets.
2. Stand the salt tank up and in position. Level as needed. The tank has two ports that will be connected. One to a drain and one to the valve.
3. Place the brine tube in position inside the pocket at the bottom of the tank. Install the overflow fitting.
4. Place the tank collar over the top of the brine tube. Position the collar and push it down into the tank. Lay the cover aside for now.

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.

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

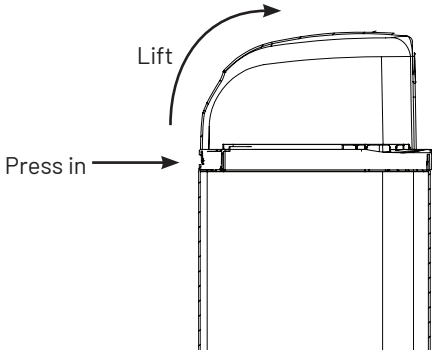


Figure 4

Water Line and Bypass Connections

A bypass valve system should be installed on all water conditioning systems. A model 1265 bypass is included with this system. The bypass valve isolates the conditioner from the water system and provides unconditioned water to service during routine maintenance and servicing procedures. See Figure 5 Model 1265 Bypass (Included) and Figure 6 Typical Three Valve Bypass Configuration (Not provided by manufacturer).

Note: Before turning on the water to the valve, rotate the two handles on the bypass valve 2-3 times. This will help seat the O-rings and prevent leaking.

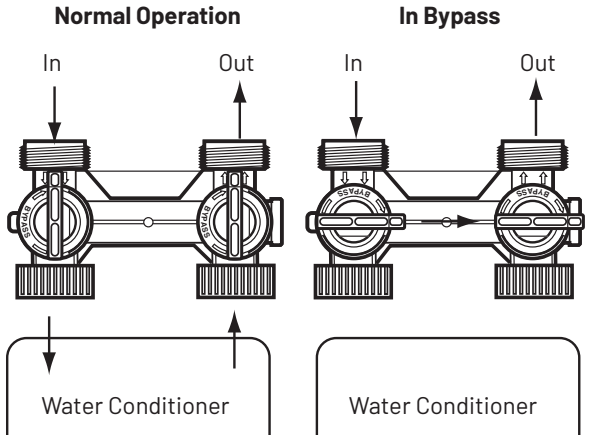


Figure 5 Model 1265 Bypass (Included)

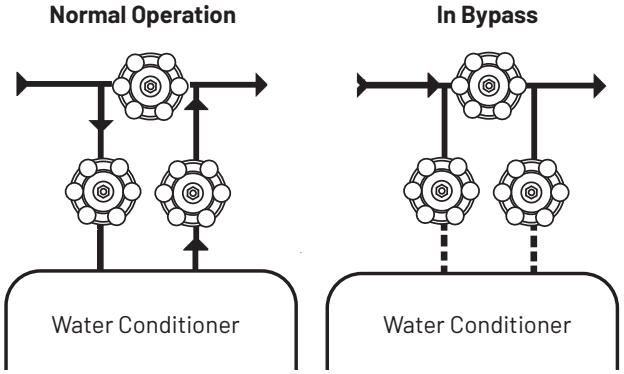


Figure 6 Typical Three Valve Bypass Configuration (Not provided by manufacturer)

WARNING: Do not use tools to tighten plastic fittings. Over time, stress may break the connections. Hand tighten the nuts.

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

WARNING: The inlet water must be connected to the inlet port of the valve. When replacing non-Pro Elite valves, it is possible that the inlet and outlet plumbing is installed in a reversed position. Ensure that the plumbing is not installed in the opposite order. Tank media may be pushed into the valve.

Drain Line Connection

Note: Standard commercial practices are expressed here. Local codes may require changes to the following suggestions. Check with local authorities before installing a water conditioning system.

1. The unit should be above and not more than 20 feet (6.1 m) from the drain. Use an appropriate adapter fitting to connect 1/2-inch (1.3 cm) plastic tubing to the drain line connection of the control valve.
2. If the backwash flow rate exceeds 5 gpm (22.7 Lpm) or if the unit is located 20-40 feet (6.1 – 12.2 m) from drain, use 3/4-inch (1.9 cm) tubing. Use appropriate fittings to connect the 3/4-inch tubing to the 3/4-inch NPT drain connection on valve.
3. The drain line may be elevated up to 6 feet (1.8 m) provided the run does not exceed 15 feet (4.6 m) and water pressure at the conditioner is not less than 40 psi (2.76 bar). Elevation can increase by 2 feet (61 cm) for each additional 10-psi (.69 bar) of water pressure at the drain connector.
4. When the drain line is elevated but empties into a drain below the level of the control valve, form a 7-inch (18 cm) loop at the far end of the line so that the bottom of the loop is level with the drain line connection. This will provide an adequate siphon trap. Tie or wire the hose in place at the drain point. Also provide an air gap of at least 1-1/2 inch between the end of the hose and the drain point.
5. When the drain empties into an overhead sewer line, a sink-type trap must be used.
6. Secure the end of the drain line to prevent it from moving.

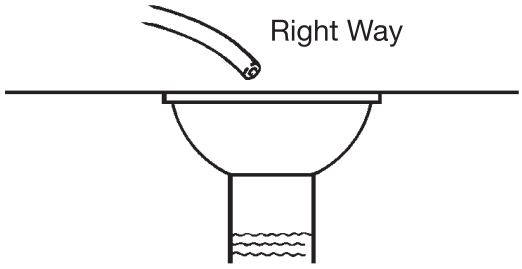


Figure 7 Drain Line Connection

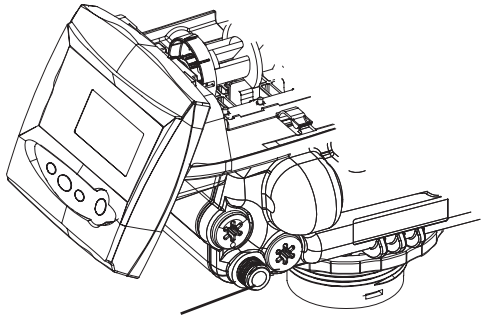
WARNING: Never insert drain line directly into a drain, sewer line or trap (Figure 9). Always allow an air gap between the drain line and the wastewater to prevent the possibility of sewage being back-siphoned into the conditioner.

Regenerant Line Connections

The regenerant line from the brine tank safety brine valve (Figure 11) connects to the valve. Make sure both safety valve tube fittings are tight. Make the connections and hand tighten.

Note: Be sure that the regenerant line is secure and free from air leaks. Even a small leak may cause the regenerant line to drain out, and the conditioner will not draw regenerant from the tank. This may also introduce air into the valve causing problems with valve operation.

Ensure that plumber tape pipe sealant is applied to the 3/8-inch NPT regenerant line connection (Figure 1 Standard Basement Before Installation. Cold water lines shown.)



Regenerant Line Connection

Figure 8

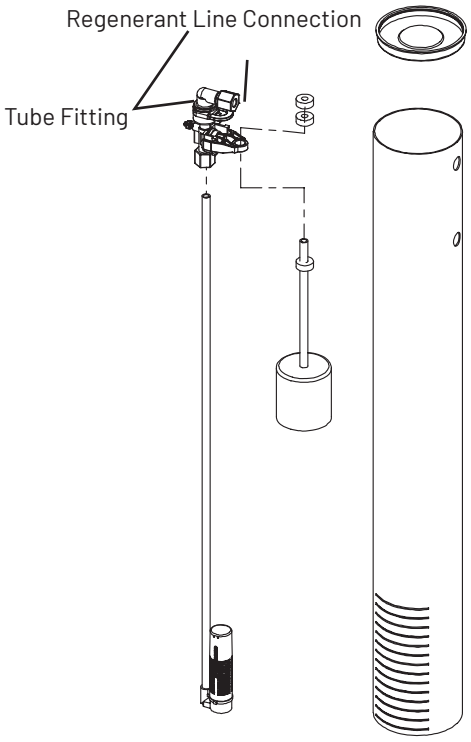


Figure 9 Salt Tank Safety Brine Valve and Brine Well Assembly

Overflow Line Connection

In the event of a malfunction, the regenerant tank overflow will direct "overflow" to the drain instead of spilling on the floor. This fitting should be on the side of the cabinet or regenerant tank, Figure 10.

To connect the overflow line, locate the connection on side of the regenerant tank. Insert overflow fitting into tank and tighten with plastic thumbnut and gasket. 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 with an air gap at the drain.

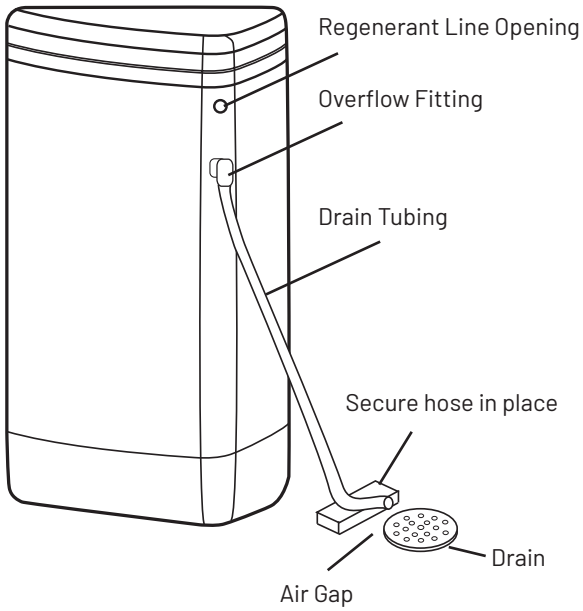


Figure 10

Electrical Connection

Note: There are no user serviceable parts in the AC adapter, motor or the control board.

The Demand control operates on a 12-volt alternating current power supply. This requires use of the Pentair Water supplied AC adapter. AC adapters are available from your supplier for different applications.
They include:

AC Adapter	Input Voltage	Application	Part Number
Standard wall-mount	230V, 50/60 Hz	for dry locations only	1000813

120V AC Adapters:

Make sure power source matches the rating printed on the AC adapter.

Note: The power source should be constant. Be certain the AC adapter is not on a switched outlet. Power interruptions longer than eight hours may cause the control to lose the day and time settings. When power is restored, the control will display four dashes (- - :- -) indicating that the day and time settings must be re-entered.

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

Flow is reversed by the control valve, directed down the riser, up through the resin bed and sent to drain. The bed is expanded and debris is flushed to the drain.

Regenerant Draw (Downflow) – Cycle C2*

Water passes through the injector and regenerant is drawn from the regenerant tank. The regenerant is directed to the resin bed. The hardness ions are displaced by sodium ions. Regenerant draw is completed when the air check closes.

Slow Rinse (Downflow) – Cycle C3*

Water flow moves the regenerant through the resin at a specific rate and rinses to the drain. The resin is regenerated.

Repressurization – Cycle C4

Pressure is balanced in the valve before continuing the regeneration.

Fast Rinse (Downflow) - Cycle C5

Water passes through the resin bed and up through the riser to drain. All remaining regenerant residual is rinsed from the resin bed.

2nd Backwash (Upflow) – Cycle C6

Flow is identical to C1 Backwash. The resin is reclassified.

2nd Rinse (Downflow) - Cycle C7

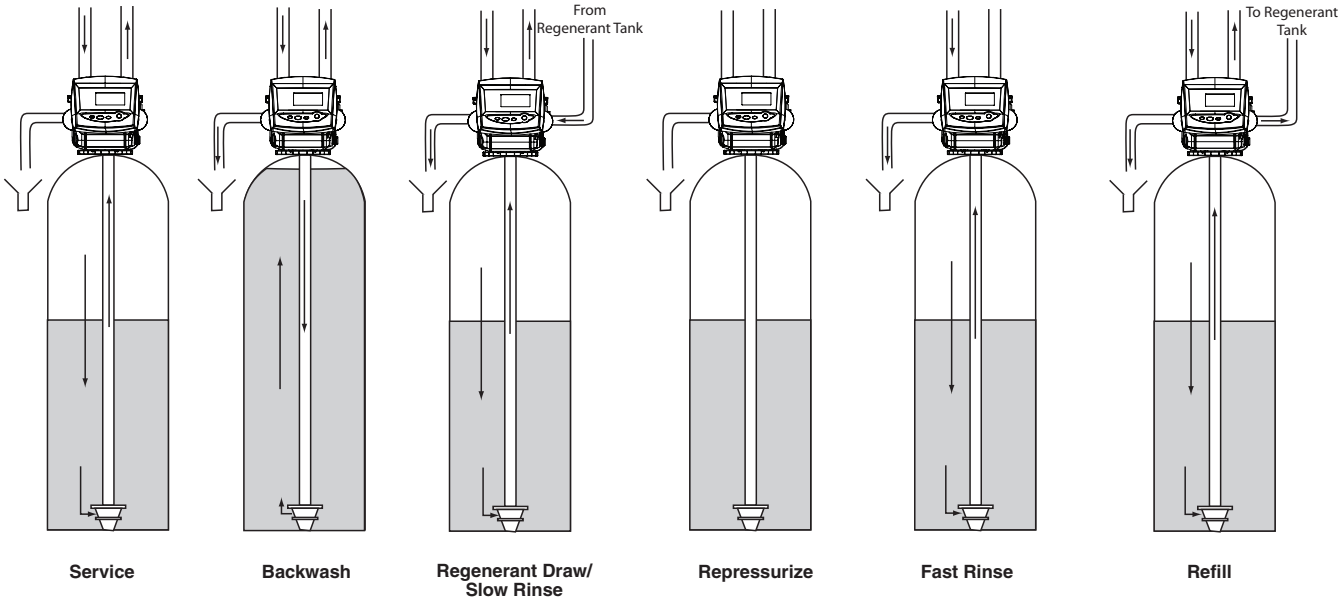
Flow is identical to C5 Fast Rinse. The resin bed is rinsed to quality.

Regenerant Refill Last – Cycle C8

Refill last only occurs if the model selected at first power up was 268.

Water is directed to the regenerant tank to create regenerant for the next regeneration.

Cycle Water Flows



Camshaft Cycle Positions

The front end of the camshaft has an indicator cup. The cup has slots in the outer edge and cycle numbers on the inside face (Figure 18).

Remove the cover and look over the top of the Demand control to view the cycle numbers. The number at the top indicates the current cycle position of the control valve. The corresponding slot for the number is positioned at the optical sensor, which is rotated approximately 90 degrees out of phase.

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

Cycle Indicators:

0 = Treated Water or brine make-up if recharge cycle has started.

1 = Backwash Cycle

2 = Regenerant Draw Cycle

3 = Slow Rinse Cycle

4 = System Pause

5 = Fast Rinse Cycle 1

6 = 2nd Backwash

7 = 2nd Fast Rinse

8 = Regenerant Refill (if system is 268r, regenerant refill takes place before backwash cycle #1)

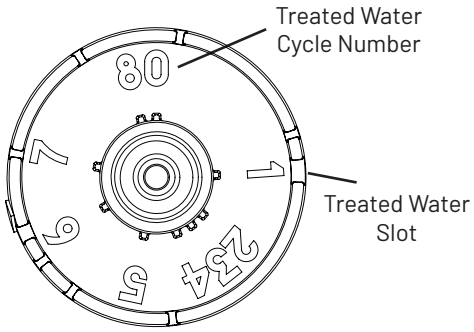


Figure 11

Valve Disc Location/Function

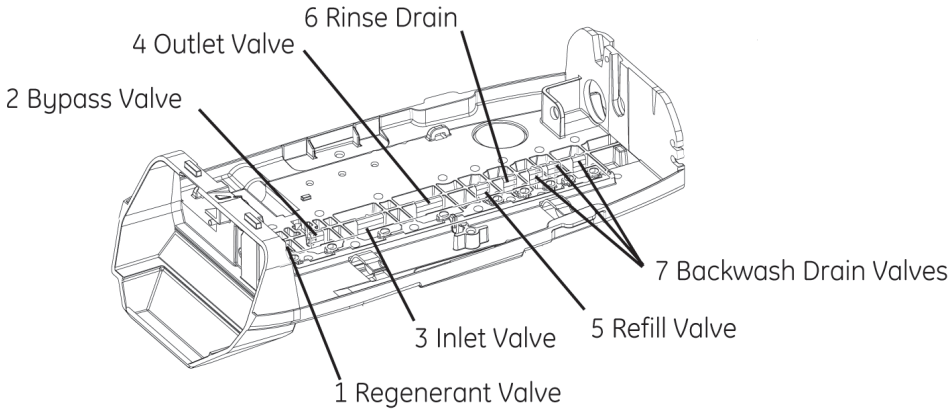


Figure 12 Valve

Disinfection of Water Conditioning Systems

The materials of construction in the modern water conditioning system 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

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

5.25% Sodium Hypochlorite (Liquid)

If stronger solutions are used, such as those sold for commercial laundries, adjust the dosage accordingly.

1. Dosage

- Polystyrene resin; 1.2 fluid ounce (35.5 mL) per cubic foot.
- Non-resinous exchangers; 0.8 fluid ounce (23.7 mL) per cubic foot.

2. Regenerant 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.

Calcium Hypochlorite (Tablets and Granules)

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.

Displays, Icons and Cursors

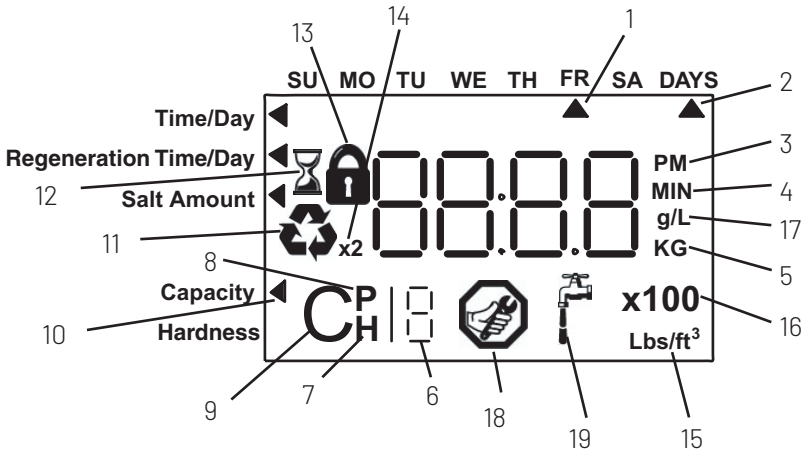


Figure 13

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 cancelled 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. Normally off. Will glow red if salt brine is not reaching the valve during recharge. Indicates out-of-salt condition.
16. Maintenance display turns on if the months in service exceed the value programmed in P11 "Service Interval".
17. When Lbs/ft^3 is displayed, the value for regenerant amount entered is in pounds per cubic foot.
18. X100 multiplier for large values.
19. When "g/L" is displayed the valve is in grams per liter.

Button Functions

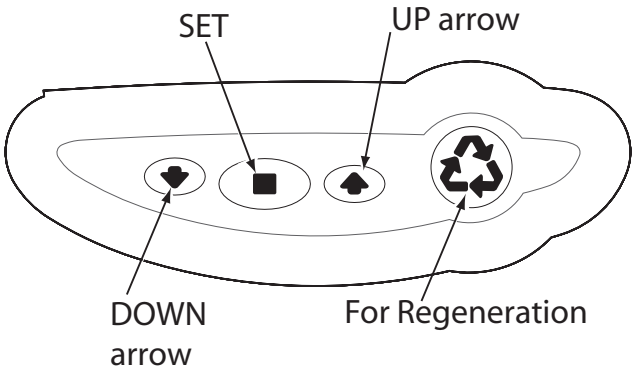


Figure 14

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 Demand 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.

Demand Control Operation

Power Loss Memory Retention

The Demand 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 Demand 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.

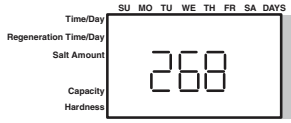
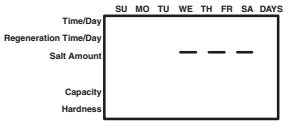
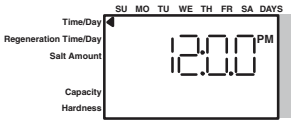
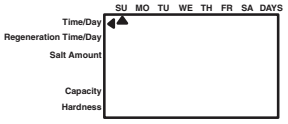
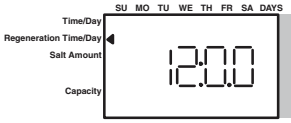
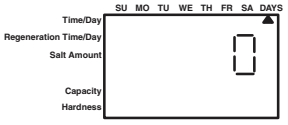
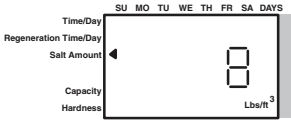
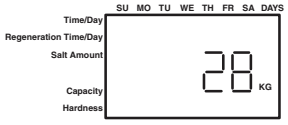
Level I Programming

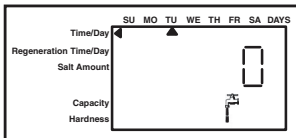
The Demand control can be quickly programmed by following the sequential procedure on the following page. Level I program parameters are those that can be accessed by pressing the UP or DOWN buttons.

- Valve Type: Select 268 for traditional refilling the salt tank last.
- Resin Volume Setting: Set to match the volume (cubic feet) of resin in the mineral tank.
- 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.
- Days Override: Range 0.5 to 99 days. Leave at 0 to disable.
- Salt Dosage: Set at pounds of salt per cubic foot of resin in the conditioner tank.

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.

Level I Programming - Demand Conditioner

Screen	Buttons to Press	Description	Range
	*press* ■ *then* ▼ or ▲ *press* ■	1. Valve Type Select Model	Model: 268 (Refill Last)
	*then* ▼ or ▲ *press* ■	2. Resin Volume Select correct resin volume	Cubic feet: 1.0 to 2.0
	*press* ■ *then* ▼ or ▲ *press* ■	3. Time of Day (12 hr.) Set to time of day Note: Setting includes PM indicator.	
	*press* ■ *then* ▼ or ▲ *press* ■	4. Day of Week Set to actual day of the week	
	*press* ■ *then* ▼ or ▲ *press* ■	5. Time of Regeneration Set to desired time of regeneration	
	*press* ■ *then* ▼ or ▲ *press* ■	6. Days Override Leave at 0 to disable or Set to desired days between regeneration	Days:1 to 30
	*press* ■ *then* ▼ or ▲ *press* ■	7. Salt Dosage Set to desired desired dosage lbs per cubic feet of resin	Lbs/ft^3 : 3 to 18
	*press* ▼	**Programming is complete** Estimated exchange capacity (view only) based on resin volume and salt setting	



Service Display
Displays alternates between Flow Rate and Capacity Remaining.

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 I Programming – P Values

Pressing the SET key will enter the change mode at "Time of Day". The change mode will be entered at the displayed parameter if the control is in data mode when the SET key is pressed. The displayed parameter will flash. Pressing the Up or Down key will change the flashing value of the parameter. Holding the UP or DOWN key will scroll the flashing parameter value. Pressing the SET key again will enter the flashing value in the appropriate parameter and advance to the next parameter.

P#	Description	Range	Minimum Increments	Default	Units	Notes
P1	Time of Day	1:00 - 12:59 AM or PM 00:00 - 23:59	1 Min	12:00 PM	Hr./Min.	Range dependent on value selected for P10. Clock mode.
P2	Day of Week	N/A	1 Day	None	N/A	Uses arrows under days of week on overlay.
P3	Time of Regen	1:00 - 12:59 AM or PM 00:00 - 23:59	1 Min	2:00 AM	Hr./Min.	Range dependent on value selected for P10. Clock mode.
P4	Calendar Override	0 - 99	1	3	Days	0 = No calendar override. 0.5 = Regeneration twice a day at time of regeneration and 12 hours later. Calendar Override skipped if at least one Day of Regeneration selected. Can be locked out of changes in Level I Programming.
P5	Day of Week Regeneration	N/A	1 Day	None	N/A	Uses bars under days of week on overlay. Day of Week Regeneration is skipped if calendar override is more than zero.
P6	Salt Setting	3-18 50-290	1 10	9 110	Lbs/Cu ft^3 g/L	Unit of measure depends on value in P9. Units of Measure.
P7	Capacity of Unit (Demand Only)	1 - 900 0.1 - 90.0	1 0.1	(1)	Kilograins Kilograms	Unit of measure depends on value in P9. Units of Measure.
P8	Hardness of Water	3 - 200 30 - 2000	1 10	25 250	Grains per Gallon Milligrams per liter	Unit of measure depends on value selected for P9. Units of Measure.
Notes: (1) Calculated depending on salt setting and resin volume.						

Level II Programming – P Values

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 control must be in the 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.

P#	Description	Range	Minimum Increments	Default	Units	Notes
P9	Units of Measure	0 - 1	1	(2)		0 = US 1 = Metric
P10	Clock Mode	0 - 3	1	(2)		0 = 12 Hr Clock, flow rate displayed 1 = 24 Hr Clock, flow rate displayed 2 = 12 Hr Clock, time of day displayed 3 = 24 Hr Clock, time of day displayed
P11	Service Interval	0 - 250	1	0	Months	Uses 30 days for each month.
P12	Remote switch delay for regeneration	3 - 250	1	60	Seconds	Time remote switch must be active to start regeneration on 742 time clock units.
P13	Chlorine Generator Options	0 - 2	1	0		0 = No Chlorine Generator 1 = Salt Check Only 2 = Generate Chlorine
P14	Refill Rate	1 - 700	1	(1)	gpm x 100	
P15	Draw Rate	1 - 700	1	(1)	gpm x 100	
P16	Reserve Type	0 - 3	1	0		0 = Variable reserve delayed regeneration 1 = Fixed reserve delayed regeneration 2 = Variable reserve immediate regeneration 3 = Fixed reserve immediate regeneration
P17	Initial average or fixed reserve	0 - 70	1	30	% of Capacity	Depends on value entered in P16.
P18	Flow sensor select	0 - 5	1	(1)		0 = Internal Magnum NHWB 1 = 1" Pro Elite turbine 2 = 2" Pro Elite turbine 3 = User define K-factor 4 = User define Pulse Equivalent 5 = Internal Magnum HWB
P19	K-factor or Pulse Equivalent	1.0 - 99.99 0 - 9999	0.01 1	0.01 1		K-factor P18 = 3 Pulse Equivalent P18 = 4
P r	Refill First	0 - 1	1	0		0 = Refill first off 1 = Refill first on
P d	Remote switch operation	0 - 1	1	0		0 = Immediate Regeneration 1 = Delayed Regeneration
Notes: (1) Default selected with valve type and resin volume. (2) Factory Default is "0" for North America and "1" for World Units.						

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 specific setting has been locked out. When locked out, 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	10	Flow rate dictated by size of drain line flow controller
C2	Regenerant Draw	Not Adjustable	1 Min	See Notes	Automatically calculated from resin volume and salt dosage settings
C3	Slow Rinse	0 – 200	1 Min	See Notes	Automatically calculated from resin volume and salt dosage settings
C4	Repressurization	0 – 200	1 Min	3	Allows system to equalize water pressure across valve discs
C5	Fast Rinse	0 – 200	1 Min	4	Rinses residual regenerant from tank
C6	2nd Backwash	0 – 200	1 Min	1	Disperses non-regenerated areas of the resin bed
C7	2nd Fast Rinse	0 – 200	1 Min	1	Rinses to Quality
C8	Regenerant Refill	Not Adjustable	1 Min	See Notes	Automatically calculated from resin volume and salt dosage settings
C0	Service/Brine Prep	0 - 200	1 Min	120	Used when P r is set to 1. Brine prep allows brine to come up to concentration after refill.

Level IV Viewing History - H Values

Historical information can be viewed by pressing the SET and DOWN buttons simultaneously with the Demand control in the home position. Release both buttons when the control displays an "H" value. Press the UP or DOWN buttons to navigate to each setting.

H#	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 - 1,310.70 m^3	762 only
H4	Water used since last regeneration in gallons/m^3	0 - 131,070 gallons or 0 - 1,310.70 m^3	762 only
H5	Total water used since reset in 100s	0 - 999,900 gallons or 0 - 0000 m^3	762 only
H6	Total water used since reset in 1,000,000s	4,294 x 10^6 gallons or 4,264 x 10^4 m^3	762 only
H7	Average usage for Sunday in gallons or m^3	0 - 131,070 gallons or 0 - 1,310.70 m^3	762 only
H8	Average usage for Monday in gallons or m^3	0 - 131,070 gallons or 0 - 1,310.70 m^3	762 only
H9	Average usage for Tuesday in gallons or m^3	0 - 131,070 gallons or 0 - 1,310.70 m^3	762 only
H10	Average usage for Wednesday in gallons or m^3	0 - 131,070 gallons or 0 - 1,310.70 m^3	762 only
H11	Average usage for Thursday in gallons or m^3	0 - 131,070 gallons or 0 - 1,310.70 m^3	762 only
H12	Average usage for Friday in gallons or m^3	0 - 131,070 gallons or 0 - 1,310.70 m^3	762 only
H13	Average usage for Saturday in gallons or m^3	0 - 131,070 gallons or 0 - 1,310.70 m^3	762 only
H14	Average service cycle	0 - 255 days	762 only
H15	Peak Flow Rate	0 - 200 gpm or 1000 lpm	762 only
H16	Day and Time of Peak Flow Rate	Time and day that peak flow rate occurred	762 only
H17	Months since last serviced	0 - 2,184 Months	
H r	Number of regenerations since last serviced	0 - 65,536	

Program Reset

The Demand control can be reset to original factory parameters when viewing the H0 parameter. Press and hold the SET button for three seconds while H0 is displayed. Release the button. All settings except for Time of Day and Day of Week will be reset. The Demand control will now display three dashes indicating that the resin volume must be set.

System Capacities

The Demand control software contains the following preloaded system capacities for each salt setting (please see the Performance Data Sheet on page 3 for certified claims):

Salt: Lbs/Ft^3	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Cap KG: 10x44 1.00	14	18	21	23	25	27	28	30	31	32	33	34	35	36	36	37
Cap KG: 12x48 1.50	21	27	31	35	38	40	43	45	46	48	50	51	52	54	55	56
Cap KG: 12x48 2.00	28	36	42	46	50	54	56	60	62	64	66	68	70	72	72	74

Placing 268 Water Conditioning System Into Operation (Fill Brine Tank Last)

Quick Cycling the Demand Control

It is required that the control be quick cycled to specific regeneration cycles when placing the conditioner into operation. Please review the following instructions for quick cycling the control before proceeding to startup.

1. With the control in the treated water position, press and hold the REGEN button on the control for five seconds. This will initiate a manual regeneration. The control will display an hourglass indicating that the motor and camshaft are turning. The control also displays the total regeneration time remaining. When the control reaches the backwash cycle, the hourglass is no longer displayed and the motor will turn off. Pressing the SET button will display the time remaining for the current cycle.
2. Press and release the UP and SET buttons to move the control to the next cycle.

Note: The control can be sent directly back to the treated water position from any regeneration cycle. Press the UP and SET buttons (about five seconds) until the hourglass icon appears solid. The control will now skip all remaining regeneration cycles.

Startup

After you have programmed the control, the conditioner will need to be placed into operation. Follow these steps carefully, as they differ from previous Pro Elite valve instructions.

1. Remove the cover from the valve. Removing the cover will allow you to see that the camshaft is turning, and in which cycle the camshaft is currently positioned.
2. With the supply water for the system still turned off, position the bypass valve to the "not in bypass" (normal operation) position.
3. Press and hold the REGEN button on the Demand control for five seconds. This will initiate a manual regeneration. The control will display an hourglass, indicating that the motor and camshaft are turning to the backwash cycle (C1). The control also displays the total regeneration time remaining. When the control reaches the backwash cycle, the hourglass is no longer displayed and the motor will turn off. Pressing the SET button will display the time remaining for the current cycle.
4. Fill the media tank with water.
    A. While the Demand control is in cycle (Backwash), open the water supply valve very slowly to approximately the 1/4 open position. Water will begin to enter the media tank. Air will begin to be purged to drain as the media tank fills with water.

WARNING: If the supply valve is opened too rapidly or too far, media may be lost out of the tank into the valve or the plumbing. In the 1/4 open position, you should hear air slowly escaping from the valve drain line.

    B. When all of the air has been purged from the media tank (water begins to flow steadily from the drain line), open the main supply valve all of the way. This will purge the remaining air from
    the tank.
    C. Allow water to run to drain until the water runs clear from the drain line. This purges any debris from the media bed.
5. Add water to the regenerant tank.
    A. With a bucket or hose, add approximately 4 gallons (15 liters) of water to the regenerant tank.
    If the tank has a salt platform in the bottom of the tank, add water until the water level is approximately 1 inch (25 mm) above the platform.

Note: It's recommended 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.

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6. Prime the regenerant line.
    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. Quick cycle the control to the regenerant tank Refill position (C8).

Note: 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 regenerant draw and slow rinse cycles. This cycle (C4) is a repressurization cycle and is designed to allow the water pressure to equalize on each side of the valve discs. Allow the control to repressurize (three minutes) before cycling the control to the regenerant tank refill position.

C. The control will cycle to the regenerant tank refill cycle and water will be directed down through the regenerant line to the regenerant tank. Let the water flow through the line until all air bubbles have been purged from the line.

D. Once the air is purged from the line, press the SET button and the UP button simultaneously to advance to Treated Water position.

7. Check Regenerant Draw.

   A. From the treated water position, initiate a manual regeneration.

   B. The control will begin a manual regeneration, and advance the control valve to the backwash cycle. Press the SET and UP button to advance to regenerant draw/slow rinse cycle.

   C. C2 will be displayed. With the control in this position, check to see that the water is being drawn out of the regenerant tank. The water level in the regenerant tank should recede very slowly.

   D. Observe that water is being drawn from the regenerant tank for at least three minutes. If the water level does not recede, check all regenerant line connections for air leaks.

8. If the water level is receding from the regenerant tank, you can quick cycle the control back to the treated water position by pressing SET and the UP buttons simultaneously.

9. Finally, turn on a faucet plumbed after the water conditioner. Run the faucet until the water runs clear.

10. Add the appropriate amount of regenerant to the regenerant tank.

The Water Conditioning System is Now Fully Operational.

Refill First Operation

The ProElite Demand system operates using a wet salt tank. When the system is started up and 268 is selected as the valve type, the salt tank will fill with water at the end of the regeneration cycle. In this "Refill Last" system, the water turns to brine between regenerations. The ProElite Demand system can be programmed to have a dry salt tank between regenerations. This operation refills the salt tank first. Cycles for a "Refill First" system will change to fill first. Then, after the brine make-up cycle (120 minutes), the regeneration continues.

Cycle Sequence Table

C#	Cycle Description	Time in Minutes
C0	Service	
C4*	Repressurize	3
C8	Brine Refill	Calculated
C0	Brine Make-up	120
C1	Backwash	14
C2	Brine Draw	Calculated
C3	Slow Rinse	Calculated
C4*	2nd Repressurize	3
C5	Fast Rinse	6
C6	2nd Backwash	1
C7	2nd Fast Rinse	1
*Note: C4 repressurization does not have flow to drain.		

To change to a refill first operation, enter the Level II Programming. Change value P r to 1.

Water levels in the salt tank will adjust automatically after the first cycle.

Manual Regeneration Options

The Demand control features several options that offer additional flexibility for manually regenerating the conditioner.

Delayed Manual Regeneration

Pressing and releasing the REGEN button starts a delayed manual regeneration. The Regeneration icon on the display will flash indicating a regeneration will start when the time of day reaches the programmed time of regeneration. Pressing the REGEN button again will turn off the regeneration icon and cancel the delayed regeneration.

Immediate Manual Regeneration

Pressing and holding the REGEN button for three seconds starts an immediate manual regeneration.
A solid regeneration icon will be displayed. The control will immediately begin a regeneration.

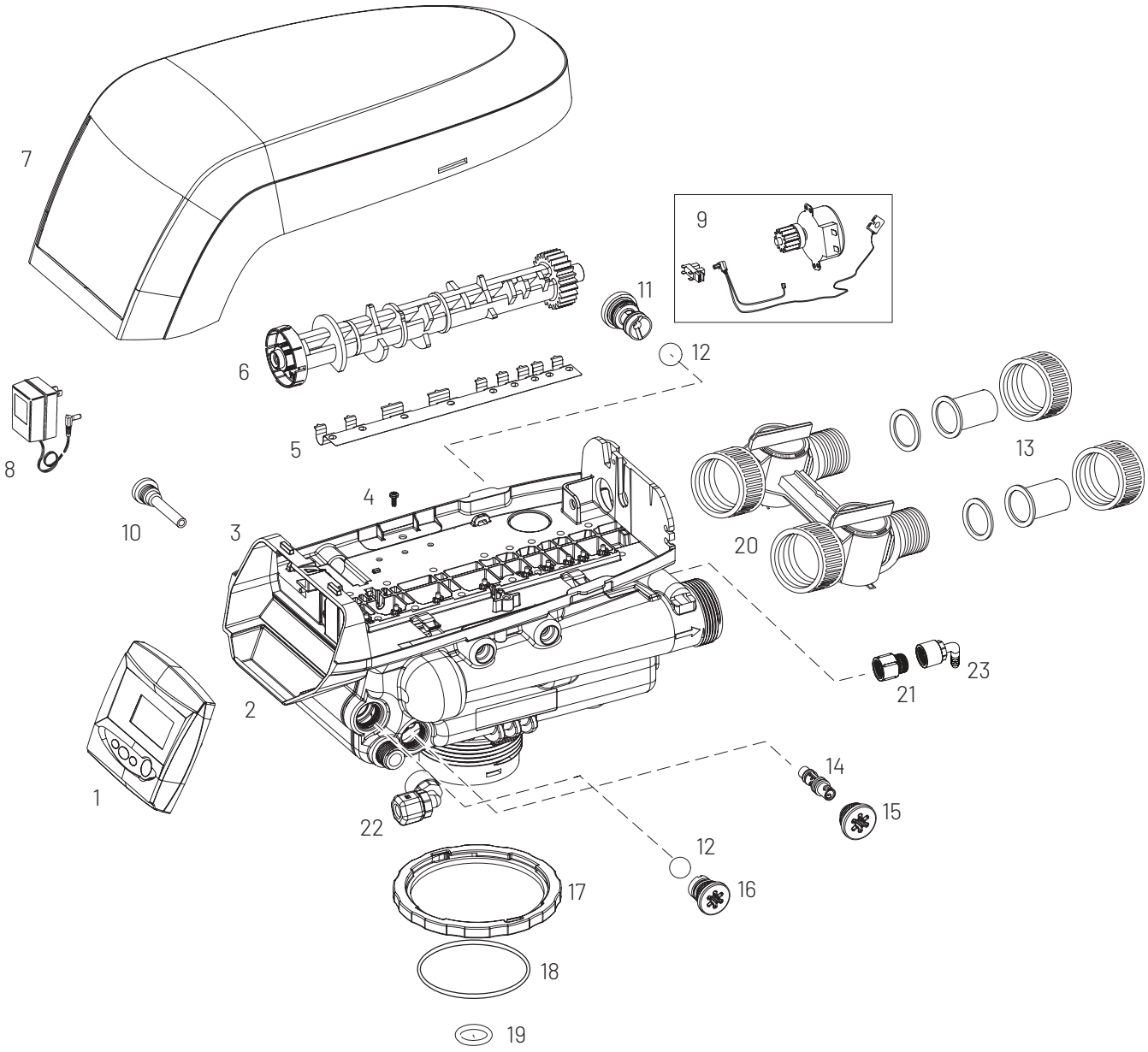
Delayed Second Regeneration

Pressing and releasing the REGEN button while the control is in regeneration will program the control for a delayed second regeneration. A flashing x2 icon next to the regeneration icon will appear, indicating a second regeneration will start when the time of day reaches the programmed time of regeneration.

Double Immediate Manual Regeneration

Back-to-Back manual regenerations are initiated by pressing and holding the REGEN button for three seconds while the control is in the regenerating mode. A solid x2 icon next to the regeneration icon will appear, indicating a second manual regeneration will start immediately after current regeneration is complete.

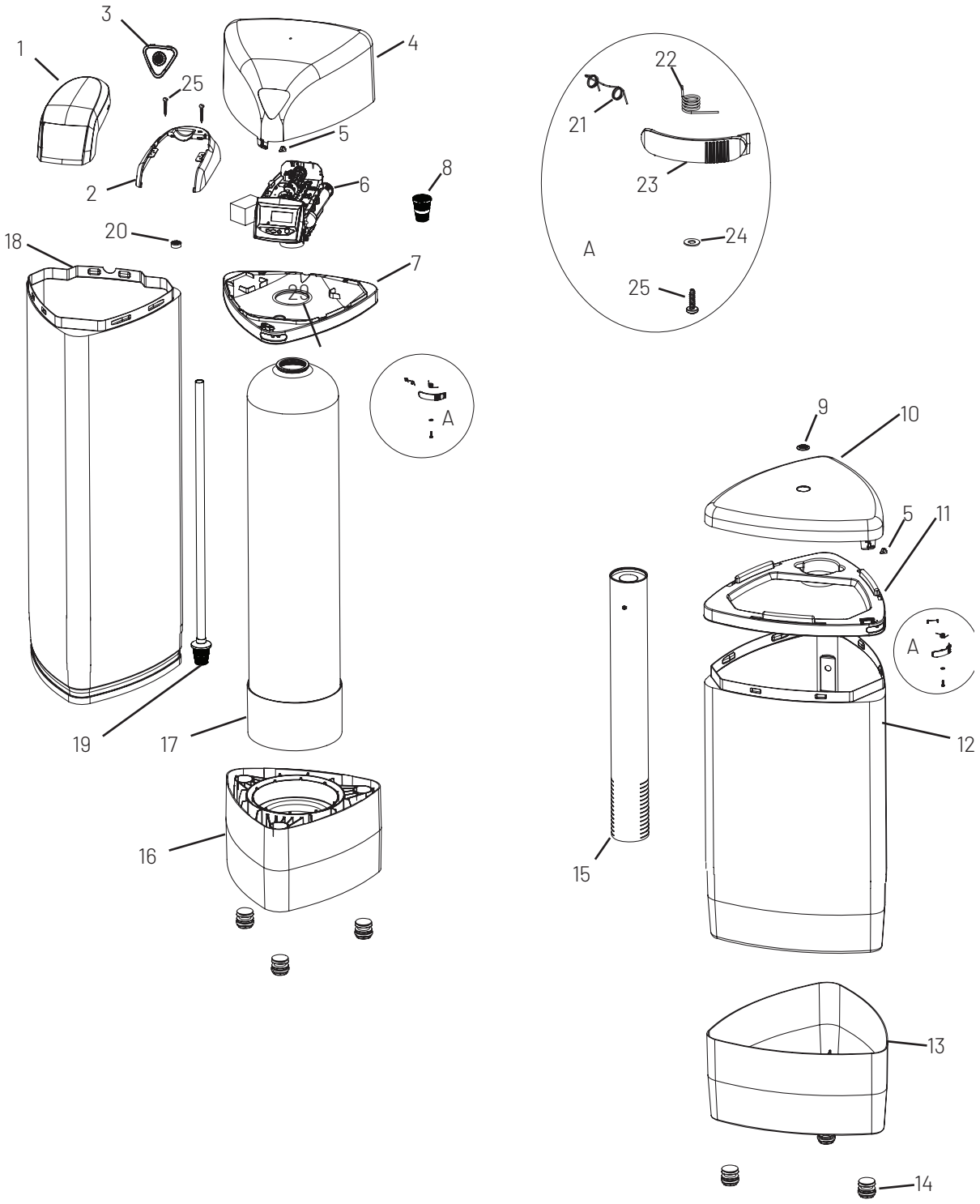
Pro Elite Valve - Exploded View and Parts List



Item	Part Number	Description	Qty.	Item	Part Number	Description	Qty.
1	3022430	Demand Control	1	14		Injector Options:	1
2	1244651	Valve Assembly w/o Flow Controls	1		1035734	"J" Injector, Lt Blue 10-inch tank	
3	1235338	Top Plate, Valve	1		1035735	"K" Injector, Pink 12-inch tank	
4	1234170	Screw, Top Plate	18	15	1000269	Injector Cap with O-Ring	1
5	1235339	Valve Disc Spring, Valve	1	16	1243511	Refill Ball & Cone Type Flow Controller	1
6	1235352	Cam Valve, Black	1	17	1035622	Tank Ring	1
7	4000584	Cover, Pro Elite Lt Gray	1	18	1010154	O-Ring, Tank	1
*	4000585	Skirt, Pro Elite Lt Gray	1	19	1232370	O-Ring, Riser Tube	1
8	1000813	Transformer 230/240 VAC, 50/60 Hz, 12 VAC British Plug	1	20	1040930	1265 Bypass, Valve	1
9	3019221	Motor/Optical Cable	1	21		Drain Line Flow Control Options:	1
10	1000226	Screen/Cap Assembly w/O-Ring	1		1264271	10" Drain Line Flow Control	
11		Drain Control Assembly:	1		1264402	12" Drain Line Flow Control	
	1000212	No. 10 (2.7 gpm; 10.2 Lpm)		22	4001129	Brine Fitting	1
	1000213	No. 12 (3.9 gpm, 14.8 Lpm)		23	1002449	Valve Drain Connection Fitting, Elbow, 3/4 NPT x 1/2 Hose (Tubing)	1
12	1030502	Ball, Flow Restrictor	2	*	1041174	Valve Disc Kit	1
13	Not Included	Adapter Kit, Multiple Options	1				

*Not Shown on Drawing

Conditioner Tank and Regenerant Tank Assembly - Exploded View and Parts List



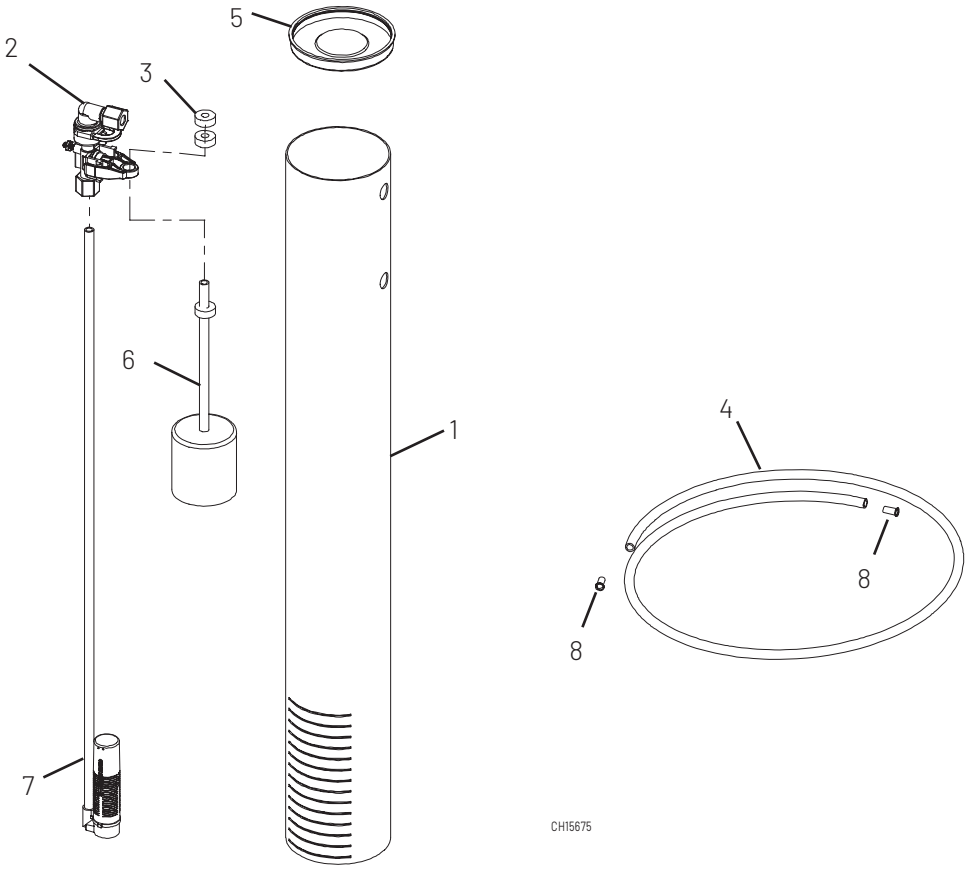
Item	Part Number	Description	Qty.	Item	Part Number	Description	Qty.
1	4000584	Cover, 268/762 Valve	1	15	CH15675	Brine Tube Assembly	1
2	4000585	Shield, Decorative, Performa Logix Valve	1	16	4000354	Base, Resin Jacket, Pro Elite	1
3	4005421	Assembly, Cover Plate w/Label, Pentair Analyzer Service Part	1	17	CH20093	Tank Assembly 12 x 48	1
4	4000351	Cover, Jacket, Resin Tank, Pro Elite	1		CH20529	Tank Assembly 10 x 44	1
5	4000458	Bracket, Lift Spring, | Double Torsion, Pro Elite	2	18	4000356	Jacket, Resin Tank, Pro Elite	1
6	4000521	268 Logix Valve W/762 Cont. 10" Tank	1	19	4000988	Lower Distributor Assembly 10x44" Tank	1
	4000522	268 Logix Valve w/762 Cont. 12" Tank	1		4000987	Lower Distributor Assembly 12x48" Tank	1
7	4000352	Collar, Jacket, Resin Tank, Pro Elite	1	20	1239647	Bushing All Fit, Adjustable	1
8	4000562	Distributor, Basket, Upper	1	21	4000357	Spring, Double Torsion	2
9	4005393	Label, Domed Button, 1.4", Pentair Logo	1	22	4000359	Spring, Torsion	2
10	4000347	Cover, Brine Tank, Pro Elite	1	23	4000358	Latch, Cover, Pro Elite	2
11	4000348	Collar, Brine Tank, Pro Elite	1	24	1396149	Washer Stainless Steel	2
12	4000349	Tank, Brine, Pro Elite	1	25	1234170	Screw, #8-18 x 9/16, Type 25	4
13	4000350	Base, Brine Tank, Pro Elite	1	*	4000871	Valve Brine Connection Fitting, Female Elbow, 3/8 NPT x 3/8 NPT	
14	4000409	Kit, Feet, Set of 6, Leveling, Pro Elite	N/A				

*Not Shown on Drawing

Kits - Not Shown on Drawing

Part Number	Description	Qty.
4000893	Assembly, Cover, Resin Tank; Includes Item Numbers 3, 4, and 5	1
4000892	Assembly, Cover, Brine Tank; Includes Item Numbers 5, 9, and 10	1
4002024	Resin Tank Collar Assembly Includes Latch; Assembly A, Item numbers 7, 21, and Silver Decorative Band	1
4002025	Brine Tank Assembly Complete; Includes Brine Well Assembly	1
4002026	Brine Tank Collar Assembly; Includes Latch Assembly A, Item Number 11, and Silver Decorative Band	1

Brine Well Assembly - Exploded View and Parts List



Item	Part Number	Description	Qty.
1	CH15013-1	Brine Well w/Slots	1
2	60014	Safety Brine Valve	1
3	CH15070	Grommet	2
4	CH16371-60	Tubing, 3/8" x 60" Long	1
5	CH15024	Cap, Brine Well 4" Dia. (Caplug STP -4)	1
6	60068-8.06	Brine Float w/One Grommet (As Purchased)	1
7	60002-27	Air Check Assembly	1
8	BR10332	Tubing Insert, Brass	2
*	CH20774	Overflow Fitting Assembly	1
	CH15031-1	Overflow Elbow	1
	CH15031-2	Overflow Nut	1
	CH16331	Gasket	1
	CH20731-1	Polypro Washer	1

*Items included, but not shown - Shipped in a plastic bag along with Brine Well Assembly

Troubleshooting

Demand Control – Error Codes

Problem	Possible Cause	Solution
ERR 1 is displayed.	Program settings have been corrupted.	Press any key and reprogram Level I settings.
ERR 2 is displayed.	The control is not a "North American" 60 Hz model.	Install 60 Hz Demand control.
ERR 3 is displayed.	Control does not know the position of the camshaft. Camshaft should be rotating to find Home position.	Wait for two minutes for the control 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 control 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: 1. Wire harness, motor, optical sensor assembly 2. Control
	Camshaft is turning 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: 1. Wire harness, motor, optical sensor assembly 2. Control

System Troubleshooting

Problem	Possible Cause	Solution
Regenerant tank overflow.	a. Uncontrolled refill flow rate. b. Air Leak in regenerant line to air check. c. Drain control clogged with resin or other debris.	a. Remove refill flow control to clean ball and seat. b. Check all connections in regenerant line for leaks. c. Clean drain control.
Flowing or dripping water at drain or regenerant 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.
Hard water leakage after regeneration.	a. Improper regeneration. b. Leaking of external bypass valve. c. O-Ring around riser pipe damaged. d. System capacity too low due to incorrect resin volume setting.	a. Repeat regeneration after making certain correct regenerant dosage was set. b. Replace bypass valve. (Contact dealer). c. Replace O-ring. d. Reset control and program resin volume to correct setting.
Control will not draw regenerant.	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).
Control will not regenerate automatically.	a. AC adapter or motor not connected. b. Defective motor.	a. Connect power. b. Replace motor. (Contact dealer).
Control regenerates at wrong time of day.	a. Control set incorrectly.	a. Correct the time setting according to instructions.
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).
No conditioned water after regeneration.	a. No regenerant in regenerant tank. b. Injector plugged.	a. Add regenerant to regenerant tank. b. Clean injector and screen (Contact dealer).
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 control (Contact dealer). b. Remove drain controller and clean ball and seat.
Run out of conditioned water between regenerations.	a. Improper regeneration. b. Incorrect resin volume setting.	a. Repeat regeneration. b. Reset control and program resin volume to correct setting.

الأعطال

1- رموز الأخطاء – جهاز التحكم:

رمز الخطأ	السبب الافتراضي	الحل
ERR 1	إعدادات البرمجة تم التلاعب بها	اضغط على أي مفتاح و قم بإعادة البرمجة حسب إعدادات المستوى I
ERR 2	جهاز التحكم المستخدم ليس ذو تردد 60 Hz	قم باستبداله بجهاز تحكم ذو تردد 60 Hz
ERR 3	لا يستطيع جهاز التحكم التعرف على وضعية ال cam shaft . هنا تقوم ال camshaft بالدوران بحثا عن وضعية ال Home	انتظر لمدة دقيقتين حتى يعود الجهاز لوضعية ال home .في هذه الأثناء ستظهر إشارة ساعة رملية على شاشة التحكم .
	Camshaft لا تقوم بالدوران خلال ظهور رمز الخطأ ERR 3	تأكد من أن الموتور موصول. تأكد من أن سلك الموتور قد تم توصيله بشكل صحيح. تأكد من أن المجس موصول بشكل صحيح. تأكد من أن مسننات الموتور متوافقة مع مسننات ال cam . إذا استمر الخطأ بعد ذلك،قم بتغيير التالي حسب الترتيب : 1. سلك توصيل الموتور ، الموتور ، المجس 2. جهاز التحكم
	دوران ال Camshaft لأكثر من 5 دقائق بحثا عن وضعية ال Home	تأكد من أن المجس موصول بشكل صحيح . تأكد من أن ال camshaft موصولة بشكل صحيح. تأكد من عدم وجود أية عوالق تمنع من دوران ال camshaft بشكل صحيح. اذا كان كل ما ذكر موصول بشكل صحيح، لكن يستمر الموتور بالدوران بدون توقف،قم باستبدال التالي حسب التسلسل : 1- سلك توصيل الموتور، الموتور، المجس. 2- جهاز التحكم.

2- أعطال الجهاز:

العطل	السبب الافتراضي	الحل
فائض في مستوى الماء في خزان الملح	1- عدم انتظام في معدل تدفق إعادة ملأ الخزان 2- تسريب هواء في خط ال air check 3- انسداد خط التصريف بسبب بعض العوالق	1- قم بإزالة قطعة refill control و تنظيفها من أية عوالق 2- قم بفحص خط سحب الملح للتأكد من عدم وجود نقطة لتسريب الهواء 3- قم بتنظيف خط التصريف
تدفق ماء من خط التصريف أو خط الملح بعد الانتهاء من عملية التنشيط	1- مشكلة في قطعة stem return spring 2- وجود عالق يمنع الصمام من الانغلاق	1- قم بتغيير ال spring 2- قم بإزالة العالق
تسرب جزء من الماء العسر في خط الناتج بعد الانتهاء من عملية التنشيط	1- عدم تناسب في عملية التنشيط 2- وجود تسريب من صمام bypass 3- تلف في سدادة أنبوب ال riser 4- خطأ في تحديد كمية الراتنج المستخدمة	1- إعادة عملية التنشيط بعد التأكد من أن كمية الملح مناسبة 2- قم بتبديل صمام ال bypass 3- قم بتبديل السدادة 4- قم بإعادة البرمجة مع تحديد المدخلات بشكل صحيح
عدم سحب الملح	1- ضغط الماء منخفض 2- انسداد خط الصرف 3- انسداد ال injector 4- خلل في ال injector 5- انسداد أقراص الصمام رقم 2/3 6- انسداد في aircheck	1- قم بتعديل الضغط حسب الضغط التشغيلي 2- قم بازالة العالق 3- قم بتنظيف ال injector 4- قم باستبدال ال injector 5- قم بإزالة أية عوالق ثم قم بفحص الأقراص و استبدالها في حالة التلف 6- قم بفحص ال aircheck و استبداله إن لزم
اعادة التنشيط لا يحدث بشكل اوتوماتيكي	1- الموتور غير موصول 2- عطل في الموتور	1- تأكد من توصيل الموتور بالكهرباء 2- قم باستبدال الموتور
يتم إعادة التنشيط في وقت خاطئ	1- خطأ في البرمجة	1- قم بتعديل وقت العملية في البرنامج

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