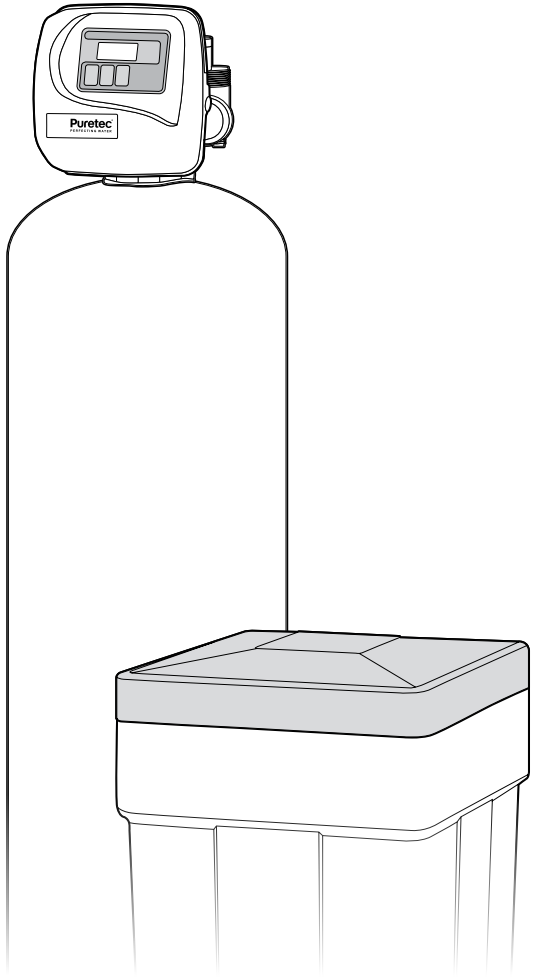
SOL-E3-C

Softrol™ E3 Volumetric Commercial Water Softening System User Guide



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PERFECTING WATER

WATER TREATMENT

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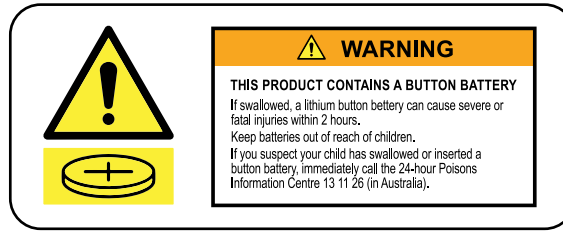

Puretec Customer Service

Thank you for purchasing a Puretec Softrol Volumetric Water Softening System. Your system is a proven performer manufactured from only quality materials and components. It will give years of reliability and trouble free operation if maintained properly.

This user guide is designed for Puretec SOL-E3 Water Treatment Systems. Be careful to ensure the information and illustration is applicable to your particular unit.

The systems are designed for metropolitan supply water but can be used in other situations. For other types of water supply, please contact your local Puretec dealer.

Puretec Water Softeners are designed to run economically for many years, dependent on the initial installation and periodic maintenance.

Flush system for 5 minutes or more, after any period of non-use, more than 2 weeks.

Note: Water softener salt not supplied.

Installation Note: A water filter system/tap, like any product, has a limited life and may eventually fail. Also sometimes failure happens early due to unforeseen circumstances. To avoid possible property damage, this product should be regularly examined for leakage and/or deterioration and replaced when necessary. A drain pan, plumbed to an appropriate drain or outfitted with a leak detector, should be used in those applications where any leakage could cause property damage, and/or the water supply should be turned off if no one is home/present.

INSTALLATION SHOULD BE COMPLETED BY QUALIFIED TRADESPEOPLE. FAULTY OPERATION DUE TO UNQUALIFIED PERSONS WILL RESULT IN VOIDED WARRANTY COVERAGE.

Warning: Chlorine (free chlorine) tolerance is 1ppm - high chlorine levels permanently damage the softening resin & is not covered under warranty. If chlorine exceeds this limit, we recommend a carbon pre-filter such as the WH2 or CFS Series. Please refer to Puretec for a specific recommendation. In any case, a carbon pre-filter is recommended to protect against chlorine spikes & prolong the resin life.

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Installation Record

For future reference, fill in the following data:

Product Information	
Model Number:	
Serial / Batch Number:	
Purchased from:	
Date of Installation:	
Installer / Plumber Details:	
Regen Frequency:	_____ Days

Water Analysis Information	
Hardness:	_____ ppm / mg/L
Iron:	_____ ppm / mg/L
Manganese:	_____ ppm / mg/L
pH:	_____
TDS (Total Dissolved Salts):	_____ ppm / mg/L
Conductivity:	_____ EC / uS/cm
Chloride:	_____ ppm / mg/L
Sodium:	_____ ppm / mg/L

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Before Installation

Professional Installation Required

- Installation requires shutting water off to home, cutting home water supply pipe and using a welding torch to add piping and fittings. Specialised tools and skills are required, this must be completed by a qualified tradesperson.

Make Sure Your Water Has Been Thoroughly Tested

- An analysis of your water should be made prior to the selection of your water conditioning equipment. Your dealer will generally assist with this service for you, and may send a sample to an independent laboratory for analysis and recommendations. Enter your analysis information on page 4 for your permanent record.
- Softeners are designed to reduce hardness but can handle reasonable amounts of soluble iron if consideration is given to content when selecting model and regeneration settings. For best results contact Puretec to discuss.

Install Water Conditioning Equipment Correctly

Select the location of your water softener with care. Various conditions which contribute to proper location are as follows:

- Install as close as possible to a drain.
- Install in correct relationship to other water treatment equipment. Contact Puretec for assistance.
- Install the softener in the supply line BEFORE the water heater. Temperatures above 40°C will damage the softener and void the warranty.
- DO NOT install the softener in a location where freezing temperatures occur. Freezing may cause permanent damage and will also void the warranty.
- DO NOT install where water hammer conditions may occur without installing an arrestor.
- Allow sufficient space around the installation for easy servicing. Provide a non-switched 240V power source for the control valve.
- Protect from pressure vacuum with a suitable vacuum breaker.
- Where line pressure exceeds 500 kPa, an approved pressure limiting device must be installed to comply with Australian & New Zealand Plumbing Standards. (Ref. AS/NZS 3500.1:2021, Clause 3.3.4).
- For point of entry installations an approved backflow prevention device must be installed.

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Things to Remember While Planning Your Installation:

- All installation procedures MUST conform to local plumbing codes.
- If lawn sprinklers, a swimming pool, or geothermal heating/cooling or water for other devices/activities are to be treated by the Softrol system, a larger model MUST be selected to accommodate the higher flow rate, treated water volume, plus the backwashing requirements of the Softrol system. Contact Puretec for assistance.

WARNINGS

WARNING: FOR THE CORRECT OPERATION OF THIS APPLIANCE, IT IS ESSENTIAL TO OBSERVE THE MANUFACTURER'S INSTRUCTIONS.

CAUTION: THIS SYSTEM MAY INCREASE THE BACTERIAL CONTENT OF THE WATER UNLESS SUPPLEMENTARY TREATMENT IS PROVIDED.

CAUTION: DO NOT USE WITH WATER THAT IS MICROBIOLOGICALLY UNSAFE OR WITH WATER OF UNKNOWN QUALITY WITHOUT ADEQUATE DISINFECTION BEFORE OR AFTER THE SYSTEM. SYSTEMS CERTIFIED FOR CYST REDUCTION MAY BE USED ON DISINFECTED WATER THAT MAY CONTAIN FILTERABLE CYSTS.

- The control valve, fittings and/or bypass are designed to accommodate minor plumbing misalignment but are not designed to support the weight of a system or the plumbing.
- Do not use petroleum jelly, oils, other hydrocarbon lubricants or spray silicone anywhere. A silicon lubricant may be used on the black o-rings but it is not necessary.
- Do not use pipe dope or other sealants on threads. Thread seal tape is the preferred sealant but is not necessary on the nut connection or caps because of o-ring seals.
- All plumbing should be done in accordance with local plumbing codes. The pipe size for the drain line should be a minimum of ⅝".
- Avoid getting primer and solvent cement on filter system.
- Install grounding strap on metal pipes if required.
- Ensure the system is protected against high pressure and extreme temperatures.
- Chlorine (free chlorine) tolerance is 1ppm - high chlorine levels permanently damage the softening resin & is not covered under warranty. If chlorine exceeds this limit, we recommend a carbon pre-filter such as the WH2 or CFS Series. Please refer to Puretec for a specific recommendation. In any case, a carbon pre-filter is recommended to protect against chlorine spikes & prolong the resin life.

Note: Solder joints must be done prior to connecting to the valve fittings. Leave at least 6" between the fitting and solder joints when soldering pipes. Failure to do this could cause heat damage to the fittings.

This should be carried out by a qualified tradesman.

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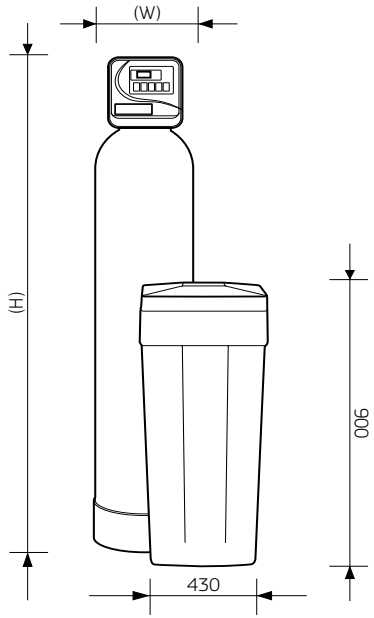
Specifications

Pressure Min/Max	138 - 862* kPa
Operating Temperature Min/Max:	5 - 40 °C (protect from freezing)
Electrical Connection:	240V / 50 Hz
Inlet/outlet Connection:	25 mm
Drain Connection:	⅝" Tube or ¾" BSP
Overflow Connection:	⅝"

* Where line pressure exceeds 500 kPa, an approved pressure limiting device must be installed to comply with Australian & New Zealand Plumbing Standards. (Ref. AS/NZS 3500.1:2021, Clause 3.3.4).

	SOL-45	**SOL-60**
Width (mm) (W):	260 mm	300 mm
Height (mm) (H):	1570 mm	1525 mm
Maximum Salt Storage Capacity:	75 kg	75 kg



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SOL45-E3 Model Information

System Inclusions - Kits & Components

Kit Type	Part no.	Description	Qty
Tank Kit (WTP2280-K)	WTD2130	Riser & Distributor, 1.05" x 72" (pre-installed)	1
	WTP2280	Pressure Tank with Grey Base, 10" x 54"	1
	WTV3030	Pressure Tank UV Collar Shield suits 2.5"	1
	LBL-WTSHEAD	Puretec Logo Label for Pressure Tank	1
Valve Kit (WTV4200-K)	WTV4200	Valve Softener Volumetric E3	1
	WTV5110	Valve Cover Almond (pre-installed)	1
	WTV5135	Transformer & Lead Suits Auto Valves (pre-connected)	1
	-	Drain Assembly	1
	WTD1010	Top Screen (Click Lock) (pre-installed)	1
	WTV5180	Spanner	1
	WTV5070	Plastic Fitting Kit, 1" Elbow (set of 2) (pre-installed)	1
Brine Kit (WTB2200-K)	WTB2200	Brine Tank, Commercial, 15" x 17" x 33"	1
	WTB4000	Brine Pickup Assembly (pre-installed)	1
	WTB3200	Brine Well Caps, 3" (pre-installed)	2
	WTB3000	Brine Well, 3.5" x 28" (pre-installed)	1
	WTB5150	2 Pce Overflow Kit (pre-installed)	1
	KTU6BK	Tubing, High Pressure, 3/8" Black	1m
	KEC66	Elbow Connector, 3/8" Tube (pre-installed)	1
Media Kit	WTM7550-5L	Multi-media High Performance Medium 5L	1
	WTM4400-15L	Resin Cation Softening 15L	1
	WTM4400-25B	Resin Cation Softening 25L Bag	1
Instruction Kit (WTI-SOL45-E3)	LBL-METALLICBLANK	Metallic Silver Model Label (60x100)	1
	UG-SOL-E3-C	Commercial SOL-E3 User Guide	1
	WTV1500	Media Funnel	1
	WTV5240	DLFC Washer, 10Lpm, 3/4"	1
	WTV5570	Injector, White	1

Vessel Media Filling Order

1st	2nd
1 x WTM7550-5L	1 x WTM4400-15L & 1 x WTM4400-25B

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SOL60-E3 Model Information

System Inclusions - Kits & Components

Kit Type	Part no.	Description	Qty
Tank Kit (WTP2280-K)	WTD2130	Riser & Distributor, 1.05" x 72" (pre-installed)	1
	WTP2360	Pressure Tank with Grey Base, 12" x 52"	1
	WTV3030	Pressure Tank UV Collar Shield suits 2.5"	1
	LBL-WTSHEAD	Puretec Logo Label for Pressure Tank	1
Valve Kit (WTV4200-K)	WTV4200	Valve Softener Volumetric E3	1
	WTV5110	Valve Cover Almond (pre-installed)	1
	WTV5135	Transformer & Lead Suits Auto Valves (pre-connected)	1
	-	Drain Assembly	1
	WTD1010	Top Screen (Click Lock) (pre-installed)	1
	WTV5180	Spanner	1
	WTV5070	Plastic Fitting Kit, 1" Elbow (set of 2) (pre-installed)	1
Brine Kit (WTB2200-K)	WTB2200	Brine Tank, Commercial, 15" x 17" x 33"	1
	WTB4000	Brine Pickup Assembly (pre-installed)	1
	WTB3200	Brine Well Caps, 3" (pre-installed)	2
	WTB3000	Brine Well, 3.5" x 28" (pre-installed)	1
	WTB5150	2 Pce Overflow Kit (pre-installed)	1
	KTU6BK	Tubing, High Pressure, 3/8" Black	1m
	KEC66	Elbow Connector, 3/8" Tube (pre-installed)	1
Media Kit	WTM7550-5L	Multi-media High Performance Medium 5L	1
	WTM4400-15L	Resin Cation Softening 15L	2
	WTM4400-25B	Resin Cation Softening 25L Bag	1
Instruction Kit (WTI-SOL60-E3)	LBL-METALLICBLANK	Metallic Silver Model Label (60x100)	1
	UG-SOL-E3-C	Commercial SOL-E3 User Guide	1
	WTV1500	Media Funnel	1
	WTV5270	DLFC Washer, 20Lpm, 3/4"	1
	WTV5580	Injector, Blue	1

Vessel Media Filling Order

1st	2nd
1 x WTM7550-5L	2 x WTM4400-15L & 1 x WTM4400-25B

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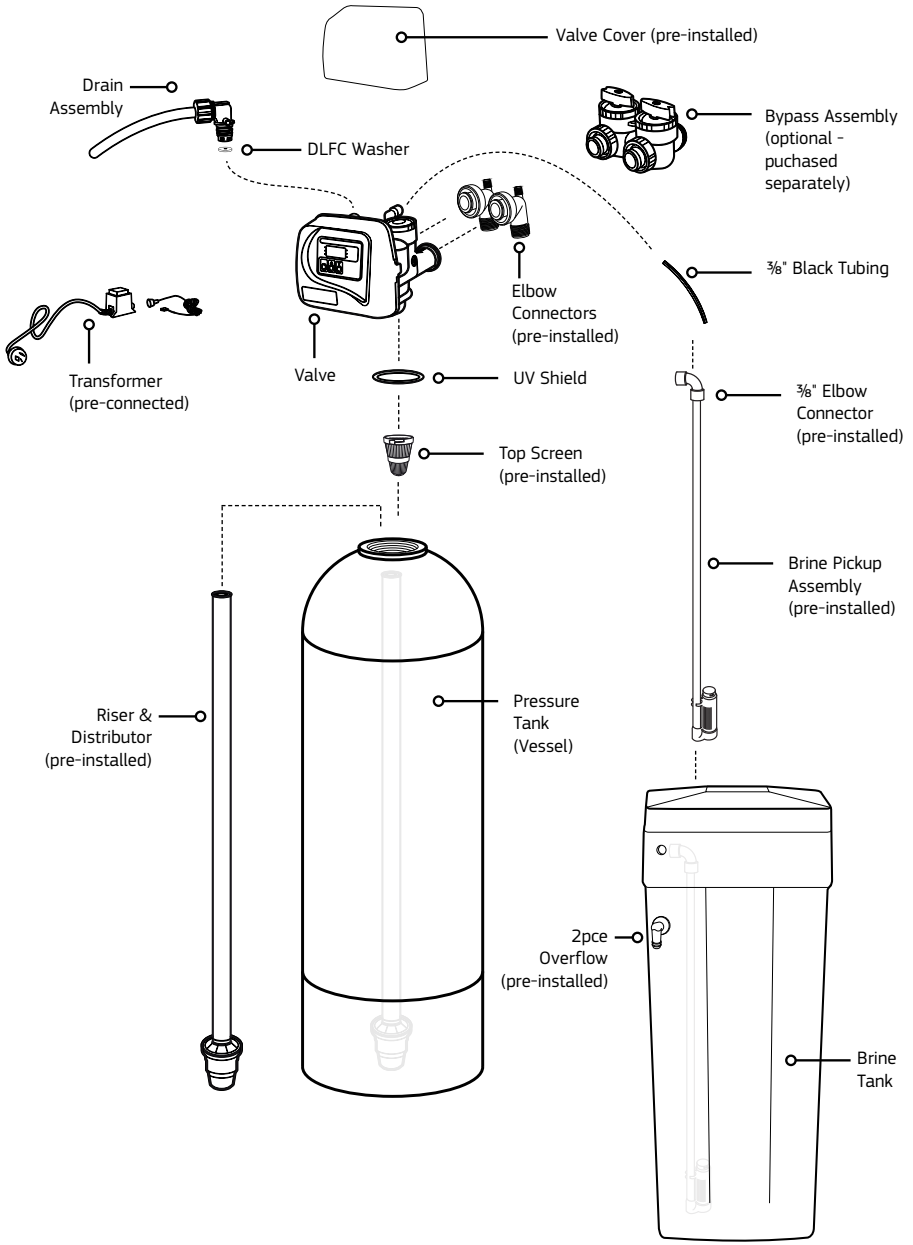
Exploded Diagram



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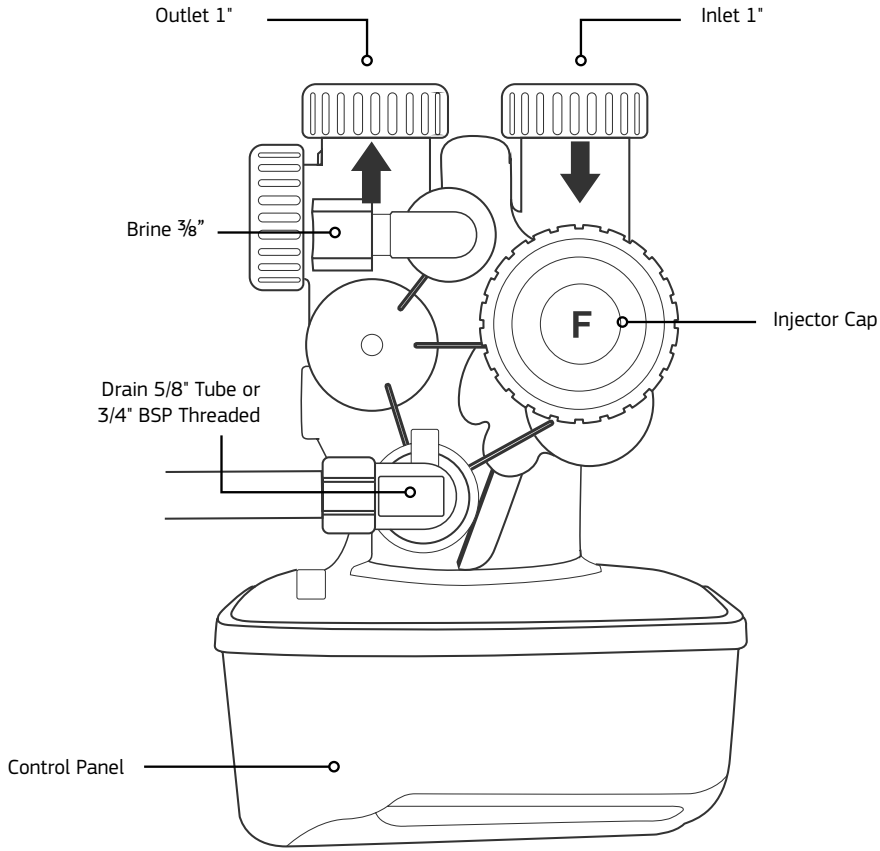
Valve Diagram Identification



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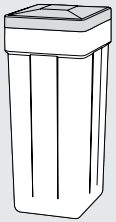
Installation Procedure

1 **Unpack the equipment.** Ensure all parts are present and have not been damaged in trasport. You should have:

Tank Kit


Brine Kit

Valve Kit

Media Kit

Instruction Kit

Bypass Assembly
(purchased separately)

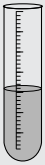
Note: For a detailed part listing of kit components see individual model specifications.

2 **Extra items required:**

A minimum of 25kg of salt (up to 75 kg) Refer to page 21 for the type of salt to be used.

⅜" Tubing for drain and overflow (refer to page 13)

3 **Ensure water has been tested.** Input values into Table on page 4 and the analysis has been inspected by Puretec.



Water Analysis Information	
Hardness	130 ppm / mg/L
Iron	0.3 ppm / mg/L
Manganese	0.1 ppm / mg/L
pH	7
TDS (Total Dissolved Salts)	275 ppm / mg/L
Conductivity	404 EC / uS/cm
Chloride	121 ppm / mg/L
Sodium	96 ppm / mg/L

Puretec PERFECTING WATER

Customer Service Helpline
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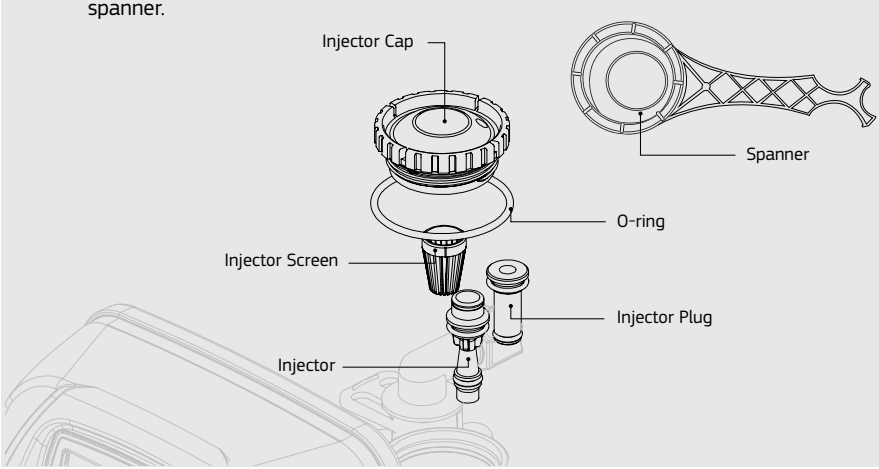
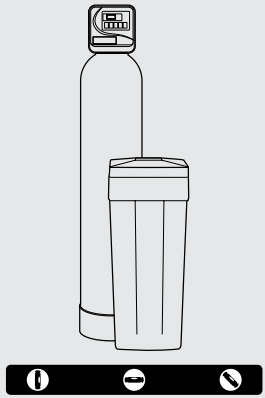
4 Install the Injector

Before attaching the valve the injector needs to be installed. Remove the injector from the Instruction, Injector & DLFC Kit and undo the injector cap on the valve using the spanner provided. Remove the white injector from the hole marked "DN" and replace with the new injector provided in the kit. Replace the injector cap, tightening with the spanner.



5 Position the Softrol System on a level surface.



Position the system on a level concrete or similar plinth, sturdy enough for the system.

Environmental conditions

Operating temperature: 5 - 40 °C

Water conditions

Temperature:	5 - 40 °C
Pressure:	138 - 862* kPa

* Where line pressure exceeds 500 kPa, an approved pressure limiting device must be installed to comply with Australian & New Zealand Plumbing Standards. (Ref. AS/NZS 3500.1:2021, Clause 3.3.4).

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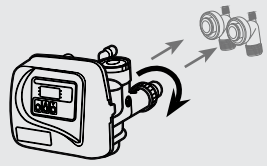
6 Media Installation

The Media has been shipped separately to avoid damage in transit.

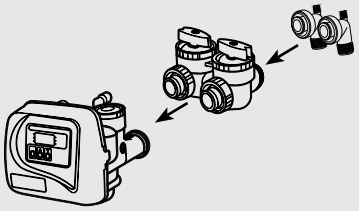
The length of the internal riser pipe is pre-set and does not need adjustment.

1. Position the system on a flat surface close to a drain or a properly trapped outlet, in a position where the system can service all lines requiring treated water. The system should be placed far enough away from any water heaters to avoid any hot water backflow into the system. A weatherproof power point and surge protector is recommended.
2. Plug or cover the top end of the riser pipe in the tank making sure no media can enter the tube.
3. Ensure that the riser pipe is sitting in the cradle at the base of the tank. Then using a wide mouth funnel, place the media in the tank as per the filling order on the individual model specification pages.
4. Remove the plug or cover from the riser pipe making sure you do not lift the riser pipe. Top up tank with water.
5. Place the UV shield on top of the opening of the vessel.
6. Screw valve onto the tank (hand tight is usually sufficient), making sure the distributor tube is properly inserted into the valve.

7 Installing the Bypass (optional - purchased separately)



Uninstall the plastic fittings by turning the knob counterclockwise.



Connect the bypass assembly followed by the plastic fittings. Hand tighten the knobs, do not overtighten.

Refer to page 17 for bypass operation.

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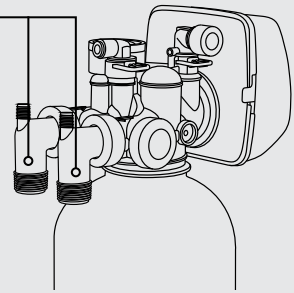
8 Connecting the Softrol System

Connect the Softrol System to main plumbing. Do not solder brass adapters while they are inserted in the control module.

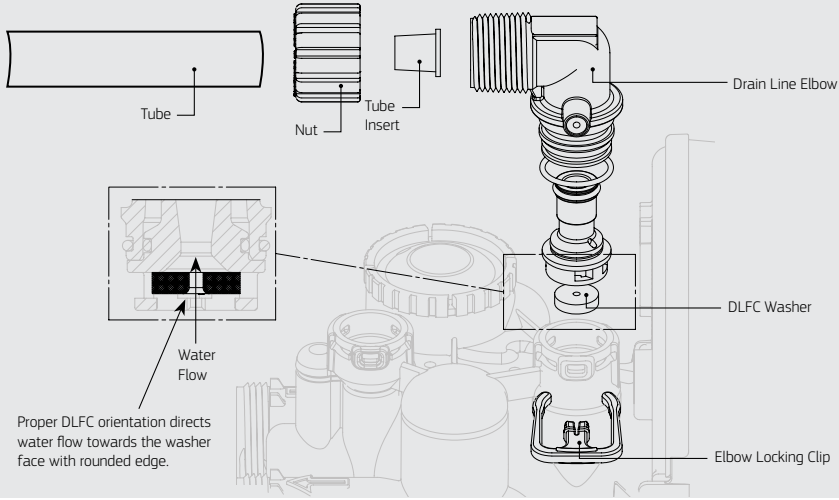
Apply plumbing tape to the nipple as required. Connect the pipe work to the valve, refer to page 9 for identification.



FOLLOW LOCAL PLUMBING CODES

9 Connecting the Drain Assembly

Unpack the Drain Assembly from the valve kit. Remove the DLFC washer from the instruction & injector kit and insert the washer into the elbow connector. **Note:** The numbers on the washer should be visible once inserted into the elbow. Remove the elbow locking clip and insert the drain assembly elbow into the drain line located on top of the valve. Secure with the locking clip.



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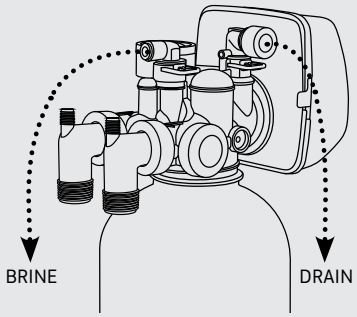
10 Connecting the Drain Line

Ensure both the drain line and overflow discharge over a tundish, gully trap or an approved method by the local authority with an adequate air gap of 2 times the pipe diameter or 25 mm, whichever is larger.

Ensure drain and overflow lines are not interconnected or kinked.

The drain line must not travel more than 2.4 m up and no more than 6 m long from the valve, otherwise increase the diameter of the drain line.

Either connect additional tube (tubing not supplied) onto the 5/8" drain line from the valve to the discharge point or alternatively, remove the nut and connect to the 3/4" BSP male connection.

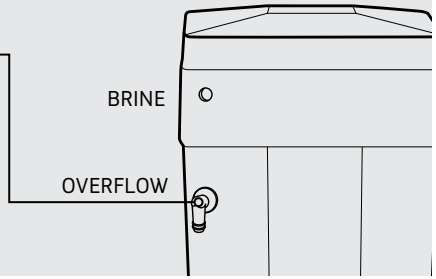


11 Connecting Brine Line

Locate Elbow Fitting in the Brine Tank, remove black tubing and dispose. Connect 1m length of 3/8 black tubing between Brine Line and Elbow Fitting.

12 Connecting the Overflow

Connect tubing onto the 5/8" overflow fitting (tubing not supplied) and run the line to the drain. **Do not connect the overflow into the drain line**, as it must be a direct and separate line to the drain. Allow an air gap as per the drain line. Make sure the drain is not higher than the overflow.



13 Programming

Plug into an uninterrupted electrical outlet. **Note:** All electrical connections must be connected accordingly to local codes. Gently remove almond cover. Proceed to 'Programming' section.

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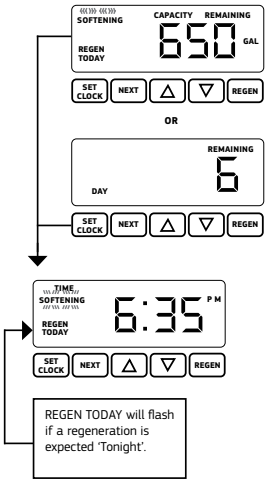
Programming - E3



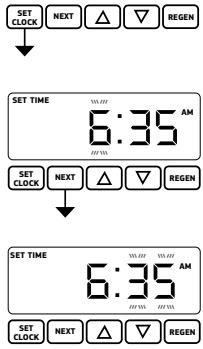
General Operation

When the system is operating one of two displays will be shown. Pressing NEXT will alternate between the displays. One of the displays is always the current time of day. The second display is one of the following: days remaining or gallons remaining. Days remaining is the number of days left before the system goes through a regeneration cycle. Capacity remaining is the number of gallons that will be treated before the system goes through a regeneration cycle. The user can scroll between the displays as desired.

If the system has called for a regeneration that will occur at the preset time of regeneration, the words REGEN TODAY will appear on the display.

When water is being treated (i.e. water is flowing through the system) the word “Softening” or “Filtering” flashes on the display if a water meter is installed.

Set Time Of Day



The user can also set the time of day. Time of day should only need to be set after expended power outages or when daylight savings begins or ends. If an extended power outage occurs, the time of day will flash on and off which indicates the time of day should be reset.

1. Press SET CLOCK
2. Current Time (hour): Set the hour of the day using or buttons.

   Press NEXT to go to step 3.
3. Current Time (minutes) : Set the minutes of the day using or buttons. Press NEXT to exit Set Clock.

   Press REGEN to return to the previous step.

continued on the next page

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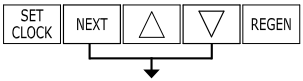
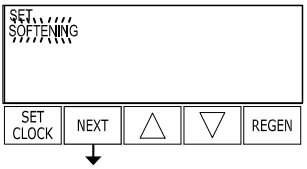
Setup Programming (MUST be performed prior to use)

Press REGEN at any time to return to the previous step.

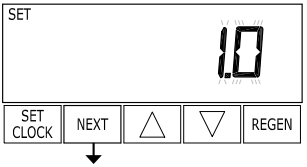


1. Press NEXT and ▼ simultaneously for 3 seconds. If screen in step 2 does not appear in 5 seconds the lock on the valve is activated. To unlock press ▼, NEXT, ▲, and SET CLOCK in sequence, then press NEXT and ▼ simultaneously for 3 seconds.



2. Choose Softening using ▼ or ▲.

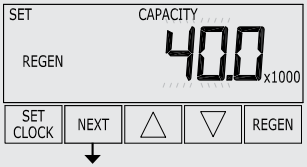
   Press NEXT to go to Step 3. Press REGEN to exit Softener System Setup.



3. Select valve type using ▼ or ▲. Available selections are 1.0 or 1.25.

   Press NEXT to go to Step 4.

SOL45-E3



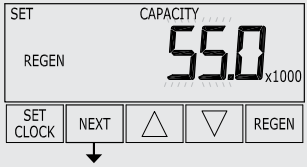
4. Enter the ion exchange capacity in grains of hardness as calcium carbonate for the system using ▼ or ▲.

   SOL45-E3 = 40.0

   SOL60-E3 = 55.0

   Press NEXT to go to Step 5.

SOL60-E3



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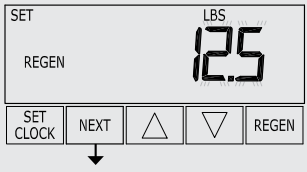
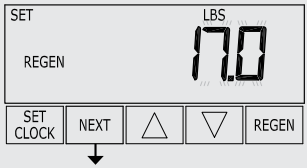
SOL45-E3



SOL60-E3

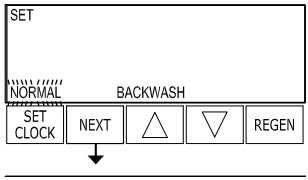


5. Enter the pounds of salt per regeneration using ▼ or ▲.

   SOL45-E3 = 12.5

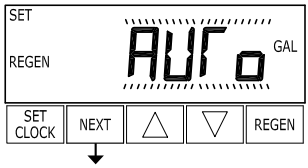
   SOL60-E3 = 17.0

   Press NEXT to go to Step 6.



6. Backwash: Select “NORMAL” using ▼ or ▲.

   Press NEXT to go to Step 7.



7. Set Gallons Capacity using ▼ or ▲. Select "AUTO"

   - “AUTO” (reserve capacity automatically estimated and gallons capacity automatically calculated from grains capacity and water hardness);
   - “oFF” (regeneration based on day override).

   Press NEXT to go to Step 8.

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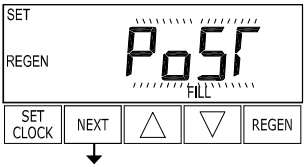
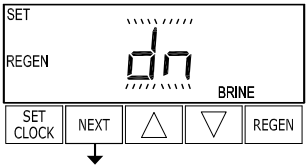


8. Set Refill option using ▼ or ▲. Select "PoST".
   - "PoST" to refill the brine tank after the final rinse; or
   - "PrE" to refill the brine tank two hours before the regeneration time set.

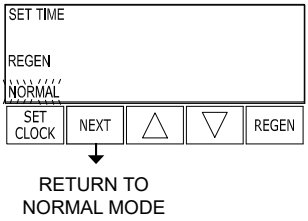
   Press NEXT to go to Step 9.



9. Set regenerant downflow or upflow using ▼ or ▲. Select "dn".
   - "dn" if the regenerant is to flow downward through the media; or
   - "UP" if the regenerant is to flow upward through the media.

   Prior to selecting a regenerant flow direction, verify the correct valve body, main piston, regenerant piston, and stack are being used, and that the injector or injector plug(s) are in the correct locations.

   Press NEXT to go to Step 10.



10. Set Regeneration Time Option using ▼ or ▲. Select "NORMAL".
    - "NORMAL" means regeneration will occur at the preset time;
    - "on 0" means regeneration will occur immediately when the gallons capacity reaches 0 (zero); or
    - "NORMAL + on 0" means regeneration will occur at one of the following:
    - The preset time when the gallons capacity falls below the reserve or the specified number of days between regenerations is reached which ever comes first; or
    - After 10 minutes of no water usage when the gallon capacity reaches 0 (zero).

    Press NEXT to exit Softener System Setup.

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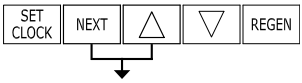
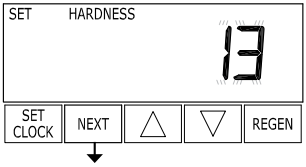
Installer Display Settings



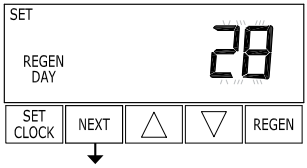
1. Press NEXT and ▲ simultaneously for 3 seconds.



2. Hardness: Set the amount of hardness in grains of hardness as calcium carbonate per gallon using ▼ or ▲. The default is 13 with value ranges from 1 to 150 in 1 grain increments. The conversion factor to mg/l or ppm is 17 (divide mg/l or ppm by 17 = grains/gallon).

   Note: The grains per gallon can be increased if soluble iron needs to be reduced. This display will show "–nA–" if "FILTER" is selected in Step 2 or if 'AUTO' is not selected in Step 6 in the Setup Programming.

   Press NEXT to go to step 3.



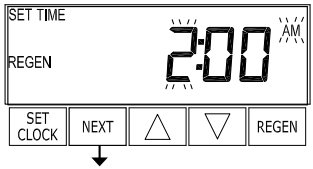
3. Day Override: When gallon capacity is set to off, Day Override sets the number of days between re generations. When gallon capacity is set to AUTO or to a number, Day Override sets the maximum number of days between re generations.

   If value set to "oFF" regeneration initiation is based solely on gallons used. If value is set as a number (allowable range from 1 to 28) a regeneration initiation will be called for on that day even if sufficient number of gallons were not used to call for a regeneration. Set Day Override using ▼ or ▲ (recommended setting is 28 days):

   • Number of days between regeneration (1 to 28); or

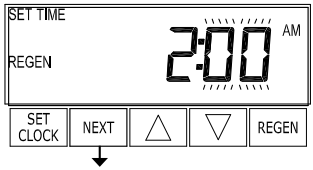
   • "oFF".

   Press NEXT to go to step 4.



4. Next Regeneration Time (hour): Set the hour of day for regeneration using ▼ or ▲. AM/PM toggles after 12. The default time is 2:00 a.m.

   Press NEXT to go to step 5.



5. Next Regeneration Time (minutes): Set the minutes of day for regeneration using ▼ or ▲.

   Press NEXT to exit Installer Display Settings.

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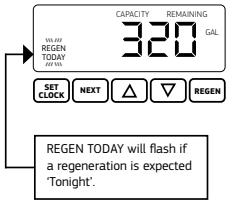
Regeneration Mode

Typically a system is set to regenerate at a time of low water usage. An example of a time with low water usage is when a household is asleep. If there is a demand for water when the system is regenerating, untreated water will be used.

When the system begins to Regenerate, the display will change to include information about the step of the regeneration process and the time remaining for that step to be completed.

The system runs through the steps automatically and will reset itself to provide treated water when the regeneration has been completed.



Manual Regeneration

Sometimes there is a need to regenerate the system sooner than when the system calls for it, usually referred to as a manual regeneration. There may be a period of heavy water usage because of guests or a heavy laundry day.

To initiate a manual regeneration at the preset delayed regeneration time, when the regeneration time option is set to 'NORMAL' or 'NORMAL + on 0', press and release 'REGEN'. The words 'REGEN TODAY' will flash on the display to indicate that the system will regenerate at the present delayed regeneration time. If you pressed the 'REGEN' button in error, pressing the button again will cancel the request.

Note: If the regeneration time option is set to 'on 0' there is no set delayed regeneration time so 'REGEN TODAY' will not activate if 'REGEN' button is pressed.

To initiate a manual regeneration immediately, press and hold the 'REGEN' button for three seconds. The system will begin to regenerate immediately. The request cannot be cancelled.

Note: For softeners, if brine tank does not contain salt, fill with salt and wait at least two hours before regenerating.

Power Loss

Your Puretec electronic control valve maintains the time for up to 8 hours using the internal PCB battery if power is interrupted. Nonvolatile memory stores the stats & programming & are not affected by power outages. After 8 hours of backup use, replace the battery with a type 2032, 3-volt lithium coin cell battery. If the time flashes on & off after a power loss the time of day should be reset & the flat battery replaced.

In the unlikely event of a power loss during backwash, when power is restored, a dry-reset should be performed, followed by a manual backwash/regeneration (refer to above) if convenient.

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Start-Up

Now programming is completed (if required) you are ready to start the system.

1. Fill the brine tank with 'water softener' salt to approximately half full (salt not included). This will require approximately 75 kg.
2. Add approximately 15 litres of water to the salt in the brine tank. This is only required for the initial setup. Note: the water level will change, this is normal.
3. Open the nearest tap downstream of the filter system (after the filter system).
4. Allow water to flow through the system slowly, and allow all air to escape out of the closest tap. Wait until the water is flowing out of the tap and then increase the flow slowly up to full flow. Allow to run for 5 - 10 minutes.
5. Close the opened tap and check for leaks.
6. Conduct a full manual regeneration.
7. Your system is ready for use.

Regeneration

E3 Valve (Regeneration Time: 90 mins)

The valve will automatically calculate the regeneration day based on the volume of water used. If the capacity is not reached by the "day override", the softener will regenerate at the next programmed time. To change the regeneration settings refer to the programming section.

For an indication of volume treated per regeneration, please refer to the table below.

MODEL	**CAPACITY OF SYSTEM (L) WITH DIFFERENT HARDNESS LEVELS**				
	100 mg/L	200 mg/L	300 mg/L	400 mg/L	500 mg/L
SOL45-E3	27000	13500	9020	6770	5410
SOL60-E3	37200	18600	12400	9300	7440

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Replenishment of Salt Supply

The salt storage capacity of the brine tank is approximately 75 kg. During each regeneration a small amount of salt is consumed, thus requiring periodic replenishment for a continuous supply of treated water (the frequency and salt dosage level is dependent on the regeneration schedule).

We recommend to maintain the salt level in the brine tank to 1/2 to 2/3 full **(DO NOT EXCEED 2/3 FULL).** The water level in the brine tank is maintained automatically and does not require manual intervention. **NOTE**: The water level is usually below the salt level & therefore cannot be seen (this is as it should be).

Always replenish salt before the supply is exhausted.

Note: No extra water is required when topping up the salt level.

Type of Salt to Use

Any type of water softener salt may be used, but for best results, we recommend using coarse solar salt called "water softener salt" or alternatively "pool salt".

Brine Tank Clean-Out (Yearly)

To help prevent service problems the brine tank should be emptied and flushed out with a garden hose, when dirt and other insolubles accumulate on a regular basis. Shut off water inlet supply and depressurise the system before service.

Steps to follow:

1. Disconnect brine line at either end.
2. Turn brine tank upside down and discard old salt.
3. Rinse out with a garden hose.
4. Reconnect brine line.
5. Before loading salt, using a pail or garden hose, add approximately 15 Litres of water to the brine tank.

Media Replacement

Resin ordering code: **RMK-SOL45** for SOL45-E3, **RMK-SOL60** for SOL60-E3.
Customer Service Helpline at **1300 140 140** (AU) and **0800 130 140** (NZ) for more details.

The nuts and caps are designed to be unscrewed or tightened by hand or with the special plastic wrench. If necessary, use multi-grips with caution to loosen tight connections. Do not use a pipe wrench to tighten or loosen nuts or caps. Do not place screwdriver in slots on caps and/or tap with a hammer.

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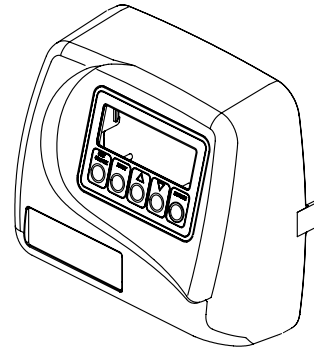
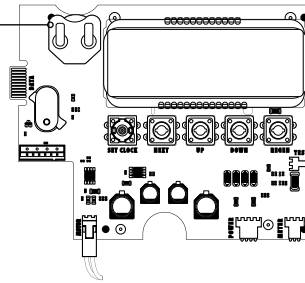
Replace the Backup Battery

The backup battery (CR2032 coin) keeps the time in case of a power outage. The battery should be replaced annually or after extended periods without power. Replacement batteries can also be ordered using code: BA-CR2032 through your local Puretec dealer.

1. Turn off the power to the unit and remove the valve cover.



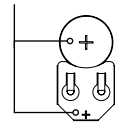
2. The coin battery (CR2032) is located in the top left hand corner of the PC Board.



3. Using a non conductive item (like the plastic end of a pen), poke the battery from underneath the battery mount and slide the old battery out.

4. Insert the new battery into the battery mount, ensuring is fully seated and in the correct orientation (as shown).

Correct battery orientation.



Battery is fully seated.

5. Replace the valve cover and switch the unit back on.

6. Reset the time if needed by following the time programming instructions in this user guide.

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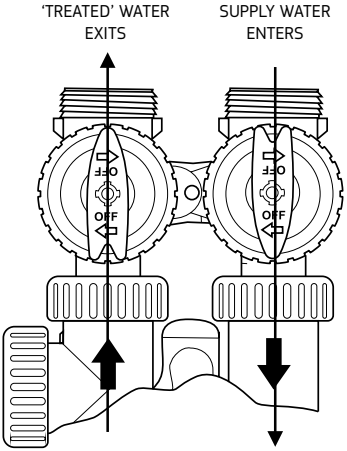
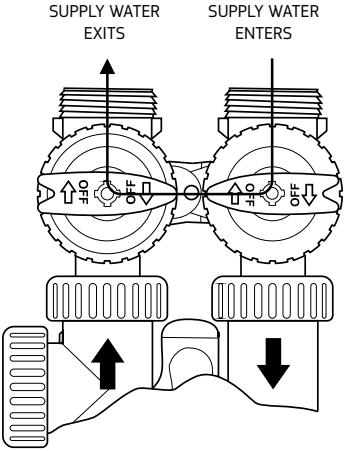
Bypass Valve Operation - *optional accessory*

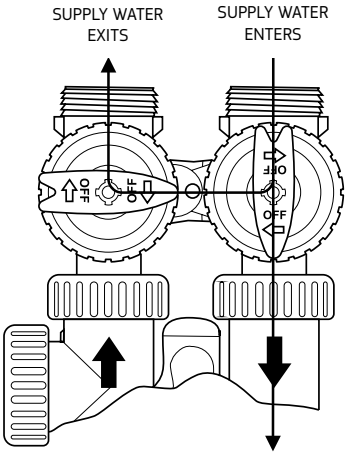
Normal Operation



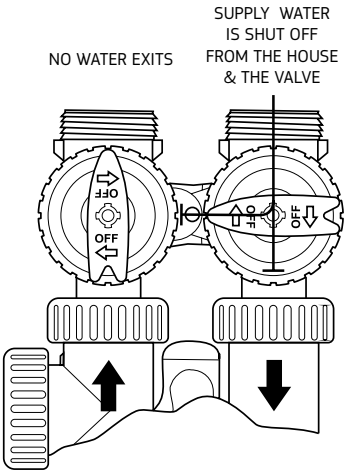
Bypass Operation



Diagnostic Mode



Shut Off Mode



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Troubleshooting Guide

'Dry' Reset Procedure	Remove the faceplate, opening the tabs on either side of the valve. This will expose the Power Circuit board with a number of wires connected. On the bottom right hand corner is a 4 pin adaptor labelled '12VAC PWR', disconnect the adaptor and reconnect after 5 seconds. The valve will then whir twice, and should return to the normal screen. If the error message is still present, refer to the troubleshooting guide.

PROBLEM	POSSIBLE CAUSE	SOLUTION
No display/blank screen on valve.	A. Transformer not connected.	A. Connect transformer.
	B. No power at outlet/source.	B. Use working outlet/repair outlet.
	C. Switched outlet/improper voltage.	C. Use uninterrupted outlet/ensure source is delivering proper voltage.
	D. Dead battery.	D. Replace battery (CR2032).
	E. Defective transformer.	E. Replace transformer.
	F. Defective PC Board.	F. Replace PC Board.
Valve does not display correct time of day.	A. Power outage(s).	A. Reset time of day, replace battery (CR2032).
	B. Time of day set incorrectly.	B. Reset to correct time of day.
	C. Switched outlet.	C. Use uninterrupted outlet.
	D. Tripped breaker switch.	D. Reset breaker switch.
	E. Defective PC Board.	E. Replace PC Board.
Valve regenerates at wrong time of day.	A. Power outage(s).	A. Reset time of day, replace battery (CR2032).
	B. Time of day set incorrectly.	B. Reset to correct time of day.
	C. Time of regeneration set incorrectly.	C. Reset regeneration time.
	D. Control valve set for immediate regeneration.	D. Contact Puretec for assistance.
	E. Control valve set for delayed and/or immediate regeneration.	E. Contact Puretec for assistance.
Time of day flashes on and off.	A. Power outage(s).	A. Reset time of day, replace battery (CR2032) and then perform a 'dry' reset.

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Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	SOLUTION
Valve does not regenerate when performing a manual regeneration.	A. No power to valve.	A. Refer to 'No display/blank screen on valve'.
	B. Broken drive gear or drive cap assembly.	B. Replace drive gear or drive cap assembly.
	C. Broken piston rod.	C. Replace piston rod.
Valve does not regenerate automatically, but does when performing a manual regeneration.	A. Bypass valve in bypass position/faulty.	A. Turn bypass to normal operation/replace bypass.
	B. Meter loosely/not connected to PC Board.	B. Connect meter into the three pin connector labelled METER on PC Board.
	C. Restricted/stalled meter turbine.	C. Remove meter and check for rotation or foreign material.
	D. Incorrect programming.	D. Contact Puretec for assistance.
	E. Defective meter.	E. Replace meter.
	F. Defective PC Board.	F. Replace PC Board.
Hard/Untreated water delivered to service.	A. Bypass valve is in bypass operation/faulty.	A. Turn bypass to normal operation/replace bypass.
	B. Media is exhausted due to high water usage.	B. Check program settings or diagnostics for abnormal water usage.
	C. Fouled media bed.	C. Clean/replace media.
	D. Meter not registering/faulty.	D. Remove meter and check for rotation or foreign material/replace meter.
	E. Water quality fluctuation.	E. Test water and contact Puretec for assistance.
	F. No regenerant or low level of regenerant.	F. Refill regenerant tank.
	G. Valve fails to draw regenerant.	G. Refer to 'Valve fails to draw in regenerant'.
	H. Insufficient regenerant level in regenerant tank.	H. Contact Puretec for assistance.
	I. Leak from seal/spacer stack assembly.	I. Clean/replace spacer stack assembly.
Control valve uses too much regenerant.	A. Incorrect refill setting.	A. Contact Puretec for assistance.
	B. Incorrect program setting.	B. Contact Puretec for assistance.
	C. Valve regenerating frequently.	C. Check for leaking fixtures or system undersized.

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Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	SOLUTION
Regenerant being delivered to service	A. Low water pressure	A. Check incoming water pressure – water pressure must remain at minimum of 25 psi
	B. Incorrect injector size	B. Replace injector with correct size for application
	C. Restricted/kinked drain line	C. Check drain line for restrictions or debris, or unkink drain line
Excessive water in regenerant tank.	A. Incorrect program settings.	A. Contact Puretec for assistance.
	B. Plugged injector.	B. Clean/replace injector.
	C. Loose/damaged drive cap assembly.	C. Tighten/replace drive cap assembly.
	D. Leak from seal/spacer stack assembly.	D. Clean/replace spacer stack assembly.
	E. Restricted/kinked drain line.	E. Check drain line for restrictions or debris, or unkink drain line.
	F. Plugged backwash flow controller.	F. Clean/replace backwash flow controller.
	G. Plugged refill flow controller.	G. Clean/replace refill flow controller.
Valve fails to draw in regenerant.	A. Plugged injector.	A. Clean/replace injector.
	B. Regenerant piston failure.	B. Clean/replace regenerant piston.
	C. Leak in regenerant line.	C. Inspect regenerant line for air leak.
	D. Restricted/kinked drain line.	D. Check drain line for restrictions or debris, or unkink drain line.
	E. Drain line too long or too high.	E. Shorten length and or height.
	F. Low water pressure.	F. Check incoming water pressure – water pressure must remain at minimum of 25 psi.
Water running to drain.	A. Power outage during regeneration.	A. Upon power being restored control will finish the remaining regeneration time. Reset time of day, replace battery (CR2032).
	B. Foreign material present in valve.	B. Remove drive cap, piston and spacer assemblies. Clean and relubricate components, assemble the valve and run a manual backwash.
	C. Leak from seal/spacer stack assembly.	C. Clean/replace spacer stack assembly.
	D. Piston assembly failure.	D. Clean/replace piston assembly.
	E. Loose/damaged drive cap assembly.	E. Tighten/replace drive cap assembly.

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Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	SOLUTION
Error Code - E1 Control unable to sense motor movement.	A. Motor not inserted fully into engage position, motor wires broken or disconnected.	A. Disconnect power, make sure the motor is fully engaged, check for broken wires, make sure two pin connector is connected to the two pin connection on the PC Board labelled MOTOR. Connect power and perform a 'dry' reset.
	B. PC Board not correctly installed.	B. Ensure PC Board is correctly clipped into drive bracket and perform a 'dry' reset.
	C. Board unable to read middle reduction gear.	C. Check foil on reduction gear; clean any foreign material on the foil.
	D. Missing/damaged reduction gears.	D. Replace missing gears.
	E. Defective PC Board.	E. Replace PC Board.
Error Code - E2 Control valve motor ran too short and was unable to find the next cycle position and stalled.	A. Foreign material lodged in valve.	A. Clean/replace piston/spacer stack assembly. Perform a 'dry' reset.
	B. Mechanical binding.	B. Check piston, spacer stack assembly, drive bracket and main drive gear interface. Perform a 'dry' reset.
	C. Main drive gear too tight.	C. Loosen main drive gear. Perform a 'dry' reset.
	D. Incorrect voltage being delivered to valve.	D. Check voltage of power source. Perform a 'dry' reset.
	E. Incorrect programming.	E. Contact Puretec for assistance.
Error Code - E3 Control valve motor ran too long and was unable to find the next cycle position.	A. Motor failure during regeneration.	A. Check motor connections. Perform a 'dry' reset.
	B. Foreign material lodged in valve.	B. Clean/replace piston/spacer stack assembly. Perform a 'dry' reset.
	C. Drive bracket not correctly installed.	C. Snap drive bracket in correctly. Perform a 'dry' reset.
Error Code - E4 Control valve motor ran too long and timed out trying to reach home position.	A. Drive bracket not correctly installed.	A. Snap drive bracket in correctly. Perform a 'dry' reset.
Valve does not indicate that water is flowing.	A. Bypass valve is in bypass operation/faulty.	A. Turn bypass to normal operation/replace bypass.
	B. Meter not connected.	B. Connect meter to three pin connection labelled MOTOR on PC Board.
	C. Restricted/stalled meter turbine.	C. Remove meter and check for rotation or foreign material/replace meter.
	D. Defective meter.	D. Replace meter.
	E. Defective PC Board.	E. Replace PC Board.

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Warranty

Any claim under this warranty must be made within 1 year of the date of purchase of the product. This product is warranted to be free of defect of material and workmanship for 1 year from date of purchase.

Puretec is renowned for its quality and after-sales support so if you have any issues please call 1300 140 140 (AU) or 0800 130 140 (NZ). To make a warranty claim, contact us directly or the place of original purchase. All costs relating to a warranty claim must be approved by Puretec prior to any work being carried out. 1 year warranty is 1 year parts and labour. Excludes consumables.

Puretec will pay your reasonable, direct expenses of claiming under this warranty. You may submit details and proof of your expense claim to place of purchase for consideration.

The warranty only applies if the product was used and/or installed in accordance with the user guide and/or installation instructions. This warranty is given in lieu of all other express or implied warranties and manufacturer shall in no circumstance be held liable for damages consequential or otherwise or delays caused or faulty manufacturing except as excluded by law.

Applicable to all above, is that the warranties need to be approved by Puretec to ensure product was not incorrectly used, installed or claimed. False and incorrect claims will be pursued at Puretec's discretion, including chargeable inspection and labour costs incurred.

All installation and service work should be completed by qualified tradespeople. Faulty operation due to unqualified persons will result in voided warranty coverage.

Warranty/Australia

This warranty is given by Puretec Pty Ltd, ABN 44 164 806 688, 37-43 Brodie Road, Lonsdale SA 5160, telephone no. 1300 140 140 and email at sales@puretec.com.au.

This warranty is provided in addition to other rights and remedies you have under law: Our goods come with guarantees which cannot be excluded under the Australian Consumer Law. You are entitled to replacement or refund for a major failure and to compensation for other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Warranty/New Zealand

This warranty is given by Puretec NZ LP, Reg. No 50081773, 178A Savill Drive, Favona, 2024, New Zealand, telephone no. 0800 130 140 and email at sales@puretec.co.nz.

This warranty is provided in addition to other rights and remedies you have under law: Our goods come with guarantees which cannot be excluded under the Consumer Guarantees Act. You are entitled to replacement or refund for a major failure and to compensation for other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

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