# Water Softener Operating Manual

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## 1. Introduction

Thank you for choosing a Water Softener meticulously produced for you by Watersource. We take great care to ensure that you receive this product in the same perfect condition that it left us. An extensive testing program has been employed to guarantee the performance and reliability that you would expect from an appliance costing many times more.

The valve with which your water softener is fitted has been selected to provide the best balance possible for your requirements. Please identify your valve from the following to determine the correct set-up procedure.



The plumbing requirements are identical for both types of softeners. There are 4 connections to make: Inlet, Outlet, Drain and Overflow.

**Inlet:** This is the water supply from the mains or other source.

**Outlet:** This is the treated water leaving the softener to supply the rest of the house.

**Drain:** This is the water used during regeneration which is flushed to drain. This water will be at mains pressure and must be taken directly to a wastepipe.

**Overflow:** This is only used in the event of an over-fill of water to the salt cabinet. This should always be taken down and directly through the nearest wall. At this point it may be obvious that low water pressure, below 20 psi, or a frozen drain line, is causing over-fill. A service enquiry can be made to discuss this particular issue.

## **2. Installation Instructions**

A water softener is no more difficult than a dishwasher or washing machine to install. However, it is advisable for the installation to be carried out by either a plumber or a competent D.I.Y. person.

Firstly, determine where the water enters the house (usually under the Kitchen Sink).

Secondly, check to see that the water softerer will fit the space available. Remember to leave sufficient space for connections to be made at the back. In some kitchens it may be necessary to remove part of the cupboard base to ensure sufficient head-room. In other cases it may make more sense to locate the Water Softener in an outside cabinet to maintain the space under the sink.

As the ion exchange process used to soften water results in a slight increase in the sodium level of the water, it is often suggested to provide a lower sodium source of water for infant feeds, aquaria, etc. Irish law & EU directives do not set regulations for low sodium pipe feeds within private households. Softened water is often half of the 200 mg/L sodium EU limit.

There are a number of ways to achieve this:

- 1. Fit a Reverse Osmosis unit teed off a treated water line. This has the benefit of giving a soft water feed (free of Limescale) with low sodium and excludes virtually all undesireable contaminants, such as: fluoride, chlorine, aluminium, viruses, cysts (such as cryptosporidium), phosphates, pesticides, heavy metals and many more to 99.9 %.
- 2. Fit an extra tap to the sink with either filtered or unfiltered raw water. This water has not been treated and as such has only background Sodium levels.
- 3. Leave the cold tap at the kitchen sink untreated.

Once the above decisions have been made it is time to familliarise yourself with the hoses and fittings required to complete the installation.

The Water Softener has been designed to operate at between 1.7 and 5 Bar pressure. If your pressure falls outside these parameters it may be necessary to fit a booster pump or a Pressure Reduction Valve to prevent damage to the unit. The temperature range of the appliance is 0\*C and 49\*C.

### **The Installation**

The rising main is usually found under the sink. Once the stop-cock has been shut, open the cold water tap at the kitchen sink. This will release the pressure in the line. At this point, the pipe can be cut to allow fitment of the non-return valve and the "T" complete with shut-off valve. The next stage is to fit the by-pass valve and the outlet "T" for the return flow.

The two washing machine valves provide the threaded connections for the washing machine hoses, which in turn connect to the inlet and outlet ports of the valve. The drain line has a hose barb to connect a piece of hose from the rear of the softener to the drain. This should be secured with a hose clamp.

The overflow fitting must be connected to a hose dropping straight down and passing through the wall. This hose should always be visible to identify any discharge which would require a service call.

Connect the power supply and turn on.

With the machine powered up, press the up and down buttons until the lock symbol is replaced by the spanner symbol  $\partial_{C}$ . Press the  $\square$  button twice until the number 2 appears on the left side of the display. This is the "backwash" position. You may now open the inlet valve slowly.

The motor will engage again after the set period and move on to the next stage (3). Toggle the valve to the next position (4) and on to position 5. This will allow the salt bin to fill to the desired level.

At this point the time and days between regenerations can be set.

## **Connecting To The System**

To allow for connection to your plumbing system your new softener has been supplied with 3/4 bsp male threads. This means connections may be made with either washing machine hoses or hard plumbing. Remember with pex piping always use inserts when using compression fittings.





# **3.Settings**

### Time Controlled (T.C.)

- 1. Press up and down buttons together and hold until the  $5^{\circ}$  lock disappears.
- Press the button. The signifies that the engineering mode has been entered. Press the button again to make the hours flash. Use the up and down arrows to adjust the hour. Repeat to adjust the minutes. Press button again and the controller will beep to signify that the setting has been accepted.
- Press the down button to select the Regeneration time. Factory set for 2 am. To by-pass this step press down button again. To adjust, press the button to select the hour and use up and down buttons to adjust. Repeat for minutes.
- 4. Press button to adjust days between regenerations use up and down buttons. Factory set to 3 days.
- 5. Press 🥭 button to exit menu.

### **Metered or Volumetric**

- 1. Press up and down buttons together and hold until the  $\stackrel{L}{\bigcirc}$  lock disappears.
- Press the 
   to select. The 
   signifies that the engineering mode has been entered. Press the 
   button again to make the hours flash. Use the up and down arrows to adjust the hour. Repeat to adjust the minutes. Press 
   button again and the controller will beep to signify that the setting has been accepted.
- 3. Press down button. A-01 will show. Press down button again to adjust Regeneration time. Factory set for 2 am. To by-pass this step press down button again. To adjust, press the 🗊 button to select the hour and use up and down buttons to adjust. Repeat for minutes.
- 4. Press the down button again to adjust the softening capacity. Press button to adjust. Use up and down buttons to adjust. See capacity chart to find correct setting. Factory set to 380 ppm hardness.
- 5. The lock will set automatically. Programming is complete.

## 4. Controller Features

#### **Metered or Volumetric**

While in the service position, pressing the next button will "toggle" between the time, current flow rate in litres and the capacity remaining.

To force a regeneration a single press on the Regen button will cause the softener to regenerate at the set time the following morning. Press and hold to force an immediate regeneration. When the valve is regenerating it will show a countdown clock for each stage.

## 5. Trouble Shooting

#### **PROBLEM:** WATER STILL REMAINS HARD

1. Is there a minimum of 6 inches of salt in the Brine Cabinet? **Solution:** Fill the cabinet with salt.

2. Is the bypass valve closed, and the inlet and outlet valves open? **Solution:** Close the bypass valve and open the inlet and outlet valves.

3. Is the power on? **Solution:** Switch the power on and check the connections.

4. Is the hardness setting correct? **Solution:** Reset the hardness if required.

NOTE: If any of the above requires action, add 5 litres of water to the salt and initiate a REG (Regeneration).

#### **PROBLEM:** NO WATER

1. Is the water mains open? **Solution:** Open the water mains.

2. Are the inlet and outlet valves open? **Solution:** Open the inlet and outlet valves.

#### PROBLEM: UNIT REGENERATES AT THE INCORRECT TIME OF DAY

1. Is the present time correct? **Solution:** Reset the present time.

2. Is the recharge time correct? **Solution:** Reset the recharge time.

3. Has there been a powercut? **Solution:** No action required if the time is correct.

#### **PROBLEM:** NO REGEN, OR LITTLE OR NO SALT USAGE

1. Is the water soft? Solution: If yes no action is required.

2. Is the water level in the brine cabinet high? Solution: If yes, check the drain line is not frozen or blocked. Initiate an immediate regeneration and check the progress of the cycle. If the water level approaches the overflow level, shut off inlet and arrange a service call.

3. Press "Next" button to check remaining Capacity. Solution: If capacity remaining is still larger than 25% of full capacity press "Regen" button to force a regeneration.

#### **PROBLEM:** EXCESSIVE SALT USAGE

1. Check the hardness. **Solution:** Reduce the hardness setting if incorrect.

#### **PROBLEM:** NO WATER IN THE BRINE CABINET

1. Depending on the salt level you may not see the water. This is quite normal. Only a few inches of water are used." **Solution:** No action required.

#### **PROBLEM:** HIGH WATER LEVEL IN THE BRINE CABINET

1. Is the water level in the brine cabinet high? Solution: Initiate an immediate regeneration. If the problem does not return, further action is not required.

#### **PROBLEM:** WATER IS RUNNING FROM THE OVERFLOW

1. Is the water level in the brine cabinet approaching the height of the overflow pipe? **Solution:** If yes, bypass the water softener and call for service.

#### **PROBLEM:** WATER IS RUNNING FROM THE DRAIN CONSTANTLY

1. Is the unit in recharge mode? Solution: If yes, wait until it finishes, check the present time and recharge time settings, adjust if necessary.

2. Does an error code appear? e.g. Err I? Solution: Check all the connections are secure. Turn the power off for 10 seconds then turn back on.

### **PROBLEM: DISPLAY FAILURE**

1. Is the display blank? **Solution:** Check the power supply is turned on and that all electrical connections are secure.

## Warranty

This product is guaranteed for the period of one year from the date of purchase against mechanical and/or electrical defects. This guarantee is only valid if the unit has been installed and used in accordance with the manufacturers instructions.

### **Attic Installations**

It is not recommended to install any water softener in an attic. Should you have no choice but to locate the appliance in an attic, then the following should be put in place as a minimum: Ensure that the attic space is insulated so as to protect the softener from frost damage. Any water softener should be placed inside a tank or other container to ensure that any escape of water is caught and taken directly out of the roof space. Check with your insurance company to ensure compliance with their terms and conditions.

For more information and to register for your free extended warranty please visit:

# www.watersource.ie

Notes:



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