

Domestic water softener



Instruction manual

Contents

Location	4
Plumbing systems	4
1. Water pressure test	5
2. Installing the inlet, outlet & bypass valves and hard supply to drinking / garden taps	5
3. Connecting inlet/outlet hoses	6
4. Drain connection	6
5. Overflow connection	6
6. Power to the softener - Battery or Mains Power	6
7. Set programme	6
8. Switch on water supply and test	6
9. Prime salt tank	7
10. Salt	7
11. Servicing	7
12. Switching off your water softener	7
Electronic control programming instructions	8-9
Battery instructions	9-10
User information	11

Thank you for purchasing this Water Softener. Please read these instructions and warnings carefully before use, to ensure safe and satisfactory operation of this product.

Keep this manual in a safe place for future reference.

Location

The water softener should be fitted as close as possible to the rising main (stop cock), along with the drain and overflow facilities (typically under the sink). Any drinking water and garden taps should be plumbed from the mains before the inlet supply to the water softener. We recommend that the distance from the softener to the drainage point should be as short as possible to avoid possible bending or kinking of the pipe.

Your water softener model may either be battery operated or mains powered by a UK 3 pin plug, if so you will need a socket close by.

The softener must NOT be positioned where it or any other connections, which include the drain and overflow, are subject to room temperatures under 1°C (34°F) or over 49°C (120°F). If positioning the softener within a cupboard, the cupboard base must be adequately supported. If the softener is to be installed above ground level, e.g. within a loft, the following instruction must be applied: The softener should be installed within a container to which an overflow pipe with a minimum $\frac{3}{4}$ inch diameter is fitted. The overflow should be a minimum of six inches below any electrical connection mounted on the softener. Please allow room for filling with salt, and maintenance of the system.

Plumbing Systems

Vented systems

For vented plumbing systems with cold water storage tanks, the softener should be installed using a 15mm fitting kit.

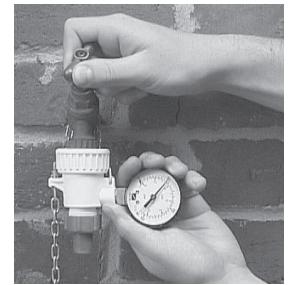
Unvented fully pressurised systems

These modern systems require high flow rates. The softener should be installed with a 22mm Hiflow fitting kit.

Backflow prevention valve

A non-return valve complying with BS EN 13959:2004 should be correctly fitted.

Fig. 1



Drinking water

Your water supply to the tap used for drinking water must be untreated (hard water). See **Fig. 2** as recommended by British Water

1. Water pressure test

High water pressure can potentially damage the water softener, and therefore a water pressure test must be carried out to ensure efficient operation of your water softener. Use a pressure-testing gauge on the kitchen or garden tap as in **Fig. 1**. The daytime pressure must be within the limits of minimum pressure 25psi (1.7 Bar) & maximum pressure 70psi (5.0 Bar). If the daytime pressure exceeds 70psi a pressure-limiting valve must be fitted. However, if daytime pressure is below 25psi a pressure pump is required.

2. Installing the inlet, outlet & bypass valves and hard supply to drinking / garden taps

Switch off the mains stopcock and drain off any excess water left in the rising main. Immediately after the mains stopcock, tee off your hard drinking water tap and any garden taps. The non-return valve should be installed between hard water tee-off point and the inlet to the water softener. Install the 3 valves (inlet, outlet and bypass) as shown in **Fig. 2**. If required (see section 1) a pressure-limiting valve should be installed before the inlet to the softener.

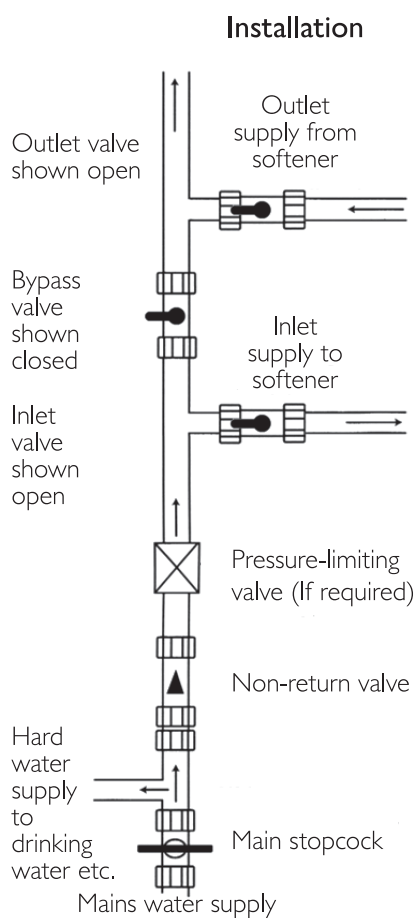


Fig. 2

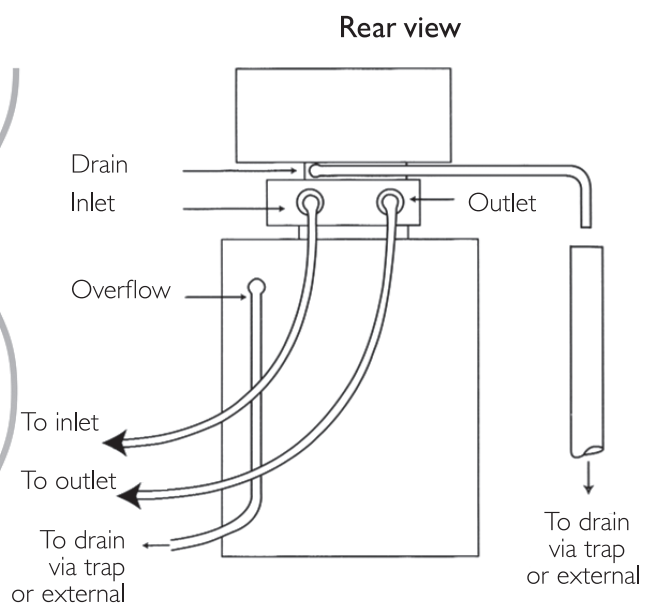


Fig. 3

3. Connecting inlet/outlet hoses

Connect hoses to the inlet and outlet connection on the rear of the water softener **Fig. 3**. The hoses should be hand-tightened, and then turned another half a turn using hose pliers. Connect the hoses to the inlet and outlet taps in the same manner. Do not use washing machine hoses as they can contaminate the water.

4. Drain connection

Use an appropriate drain/overflow hose. Connect the drain hose onto the barbed connector as shown in **Fig. 3** and secure with a jubilee clip. The drain operates under mains pressure, therefore can be elevated (see below). It can also be extended up to 20ft using 15mm copper pipe, provided there is a minimum of 40psi pressure. Run the drain hose to a standpipe or drain. Always ensure an air gap exists between the end of the drain hose and drain water level. The drain hose must not be kinked or restricted in any way, as this will cause the softener to overflow.

If the drain hose is run outside, it must be insulated to prevent it from freezing, which would cause the softener to overflow.

Elevated drain hose

The drain hose can be elevated 8ft (2.45m), provided there is a minimum of 40psi and a further 2ft (60cm) for every additional 10psi.

5. Overflow connection

Cut the required length of pipe from the drainhose and connect to the ½ inch hose spigot on the rear of the cabinet. **The over flow must not be elevated.** The overflow must be run downhill to the outside of the building or to a standpipe. No securing clip is required. The overflow must not be kinked or restricted and must not be allowed to discharge where damage could occur.

6. Power to the softener

The softener is either fitted with 2 x D cell batteries or is powered by a 240V transformer with a UK 3 pin plug.

7. Set programme

Use the hardness test kit to find out your water hardness. Refer to relevant programming instructions on the following pages to set programmer.

8. Switch on water supply and test

Turn on the mains stopcock. Open the inlet valve to the water softener slowly, then open the outlet valve and close the bypass valve (see **Fig. 2**). Check all the connections for leaks; water is now passing through the water softener. The first water drawn off may be amber coloured. This is quite normal.

9. Prime salt tank

Prime salt tank with 4 litres (one gallon) of water.
This is only required when the softener is first installed.

10. Salt

We recommend the use of salt tablets or block salt in your water softener. Fill the cabinet to approximately 2 inches (5cm) from the top of the water softener. The softener will require topping up once the salt has dropped to within 3-4 inches (8-10cm) from the bottom of the cabinet.

11. Servicing

It is recommended that your water softener be serviced every two years.

- This product should only be repaired or serviced by an authorised service engineer and only genuine approved spare parts should be used.

12. Switching off your water softener

To switch off your water softener close the inlet and outlet valves and open the bypass valve. All three valves must be turned to 90 degrees. As shown in **Fig.4**

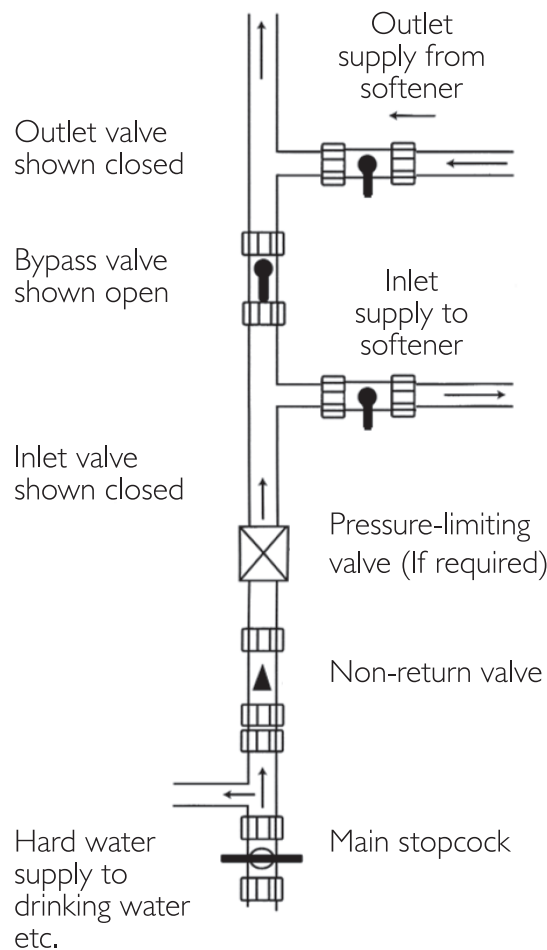


Fig. 4

Electronic control programming instructions

Display:

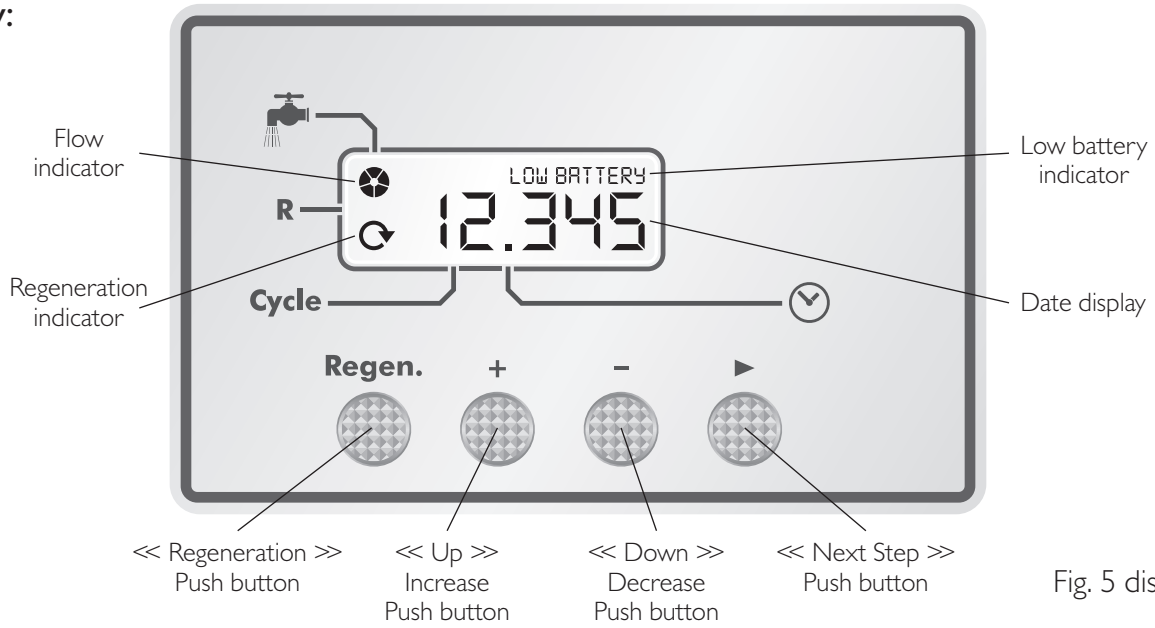


Fig. 5 display

1. Ascertain your water hardness with a hardness test kit.

2. Setting up the control valve. (Fig. 5)

Use the Up + and Down - buttons to set correct time of day.

3. Programming

Press and hold Next Step ▷ button for 8 seconds. Until display reads *F-of*.

This is the calendar override feature, and to adjust use the Up + and Down - buttons to set the numbers of days. (For most domestic properties this feature remains on *F-of*).

4. Programming water hardness

Press Next Step ▷ once again to set the hardness setting.

The display will change and the display will read H 21.

Use Up + and Down - buttons to enter correct hardness.

5. Setting reserve capacity

Press Next Step ▷ once again to set capacity.

Use Up + and Down - buttons to set capacity using chart below.

Number of persons in Household	1	2	3	4	5	6	7	8
Reserve Capacity to be programmed	o0:16	o0:32	o0:48	o0:64	o0:80	o0:96	o1:20	o1:28

6. Setting time of regeneration

Press Next Step ▷ once again to show time of regeneration.

This is factory-set at 2am (02: H1) and can be altered by using Up + and Down - buttons if required. Press the Next Step ▷ button 3 times to complete programming, the time of day will then show again.

7. Extra regeneration cycle

To activate an extra regeneration cycle:

1. Press the R button; the service icon will flash and the water softener will now regenerate at the preset regeneration time.
2. Press and hold the extra cycle button for 5 seconds; this will activate a regeneration immediately.

In both cases, once regeneration cycle is completed the water softener will automatically revert to regeneration on demand.

8A. Valve user information (Electric Option)

Please note: In the event of the power supply being interrupted, the water softener display screen will come back to life with the screen showing 0000 when the power returns, this is normal.

After 10 minutes, the clock will begin to start counting 0001 upwards, at this point you can now alter the clock to the correct time of day using the two central Up + and Down - buttons and the softener will operate normally.

8B. Valve user information (Battery Option)

Please note: In service position, the display turns off after 3 minutes, in order to optimise the life of batteries.

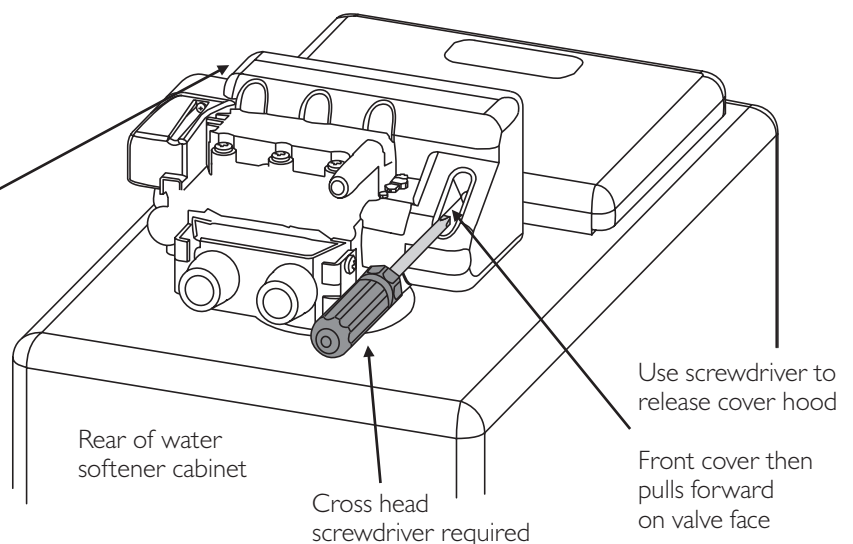
To reactivate the display for 3 minutes, press any one of the four buttons. When the display is blank, the microprocessor is always active, in ULTRA LOW consumption mode.

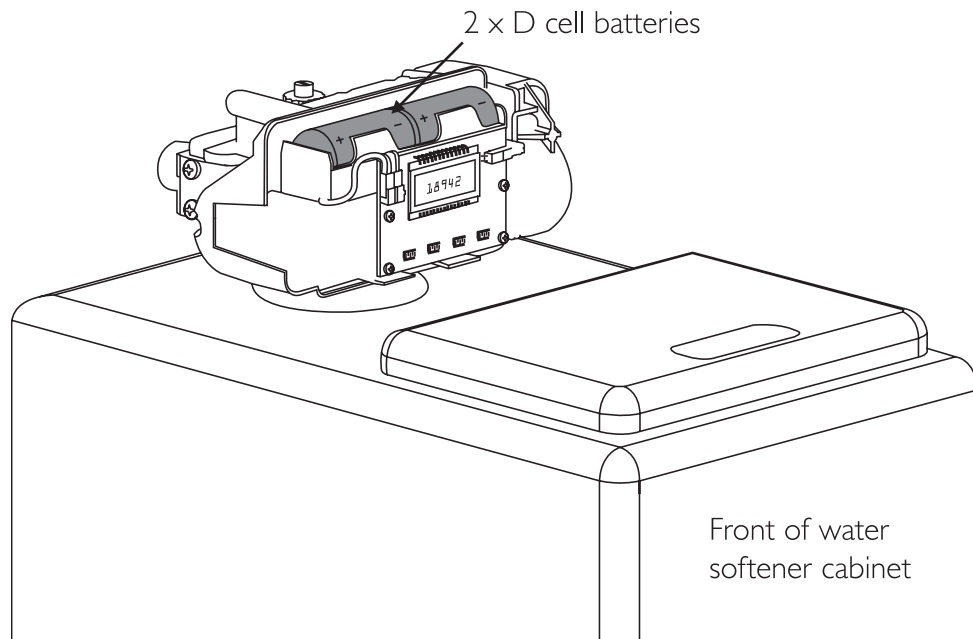
On the battery option valve only, the screen may indicate **LOW BATTERY (Fig 5)**.

See below on how to change D cell batteries.

To change the batteries

Life off valve cover hood to gain access to batteries.






Batteries should be removed and replaced by adults only.

- Only use recommended batteries or those of the same or equivalent type.
- Do not mix old and new batteries or batteries of different types.
- Batteries are to be inserted with the correct polarity.
- The supply terminals are not to be short-circuited.
- Remove exhausted batteries from the item.
- Batteries contain substances that may be harmful to the environment and human health.
- Keep out of the reach of children and seek immediate medical help if swallowed.
- Never throw batteries in a fire or attempt to open outer casing.



This symbol  indicates that this product should not be treated as normal household waste and it should be recycled. Please take it to your nearest collection facility or for further details contact your local council or visit www.recycle-more.co.uk

Some more information to help you!

- 1. How does my Water Softener work?** Think of your machine as a 'water washing machine', it simply washes the hardness out of your water, it works automatically and rarely requires adjustment apart from adding salt as required. (See Question 7).
- 2. What is a Regeneration and when does it happen?** The ion exchange resin bed inside your water softener becomes exhausted every few days and needs to be flushed clean with a brine solution to resume softening your water again. This process takes place automatically as the water softener meters the water you use before regenerating usually at 2am.
- 3. How do I know if it's working?** The main way you can tell is when you wash your hands, they will lather quickly however if you are in any doubt use a hardness test kit which was supplied with your softener.
- 4. It's not making a noise?** That's fine, it's simply working normally.
- 5. It's making a noise?** Then it's regenerating, you will hear occasional whirring and some water swooshing noises, nothing to worry about and all perfectly normal.
- 6. Why is Salt used?** Salt is the cleaning agent used to make the brine that cleans the softeners ion exchange resin bed. Salt never enters your soft water, it's simply flushed down the drain during regeneration.
- 7. What type of Salt and how often do I top up?** You can use either tablet or block salt in your water softener, top it up no higher than 2-3 inches from the top of the cabinet lid. Thereafter top up your salt either once a week or you can wait until the salt level has fallen to about 4-5 inches from the bottom. Your salt usage will depend on your household water usage, how hard your water is and your water softeners resin bed capacity.
- 8. Does it need servicing?** We recommend that a routine service is carried out on your water softener on a regular basis, certain models have extended guarantees that make a service obligatory for the guarantee to be maintained.
- 9. How long does the resin bed last?** Your resin bed is likely to last many years if looked after, 10 to 15 years is not uncommon however it depends on its usage pattern throughout its life.
- 10. Where do I find my softeners serial number?** This will be found on the control valve.
- 11. How can I bypass my water softener?** Look for the label on the underside of the salt lid or on page 7 of this installation manual for the correct procedure.

 Retain these instructions for future reference.