

Steam Irons

We do not recommend that you use softened water in steam irons as they are usually designed for use with hard water. This is because occasionally softened water can damage the surface of the iron.

Outside Tap

During the winter the internal stopcock should be turned off and the outside tap opened to allow the water to run out and prevent freezing problems. If you feel the need to use the outside tap during the winter the tap may be turned on internally as required and then turned off again. In spring, after the last freeze-up, the tap can be left on permanently throughout the summer.

Descaling Your Pipes

Softened water will descale your pipes and appliances.

Your hot water cylinder and pipework will take longer. You may notice a hardness in the bath water for a month or so. This is because of the descaling of the hot water cylinder.

Your central heating system's fed from a separate storage tank in the loft. The water in the tank will be softened and will slowly percolate through the boiler and pipework.

Green Stains

You may notice a slight green stain under taps. This is caused by poor quality pipework leaching into the water and is not detrimental. Clean off with a proprietary cleaner.

REMEMBER
don't guess...
ASK!

Parts are available from your local stockist. Service contracts are available on request from Calmag.

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Water Softener

for households of up to 8 people

HOW CALSOFT WORKS

Water from the mains is connected to an inlet port and water to service is connected to the outlet port. There is also a connection for the drain and another for the overflow from the softener cabinet.

Water travels through the inlet, along to the vessel connector and down the connecting pipe to the bottom of the resin vessel. The water then travels up through the resin bed, being softened as it travels up to the outlet port and out to service the house.

Daily Cleansing

An automatic cleansing programmer switch is preset which comes on and opens a solenoid, water is then diverted down the drain line, in doing so the diaphragm piston is allowed to move across the valve port. Water is then diverted to the outlet port where it is pushed through the drain cap area, then along the pipe through the injector port (as the water passes through the Injector it creates a vacuum, drawing up the brine through the brine valve) and the water and brine pass down through the resin. The resin is then cleaned with the brine and the exchange of lime scale in the resin is cleaned out leaving the resin clean and ready for service.

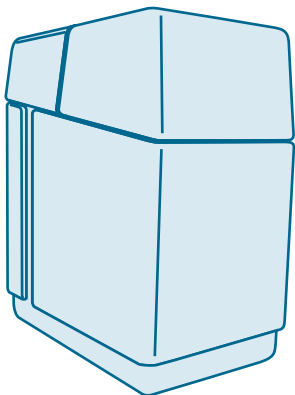
The automatic cleansing programmer switch clicks off at a preset time. The water stops running to drain, the diaphragm piston will close and the softener resumes its job of softening the hard water.

Cal Soft

CalSoft

SPECIFICATION

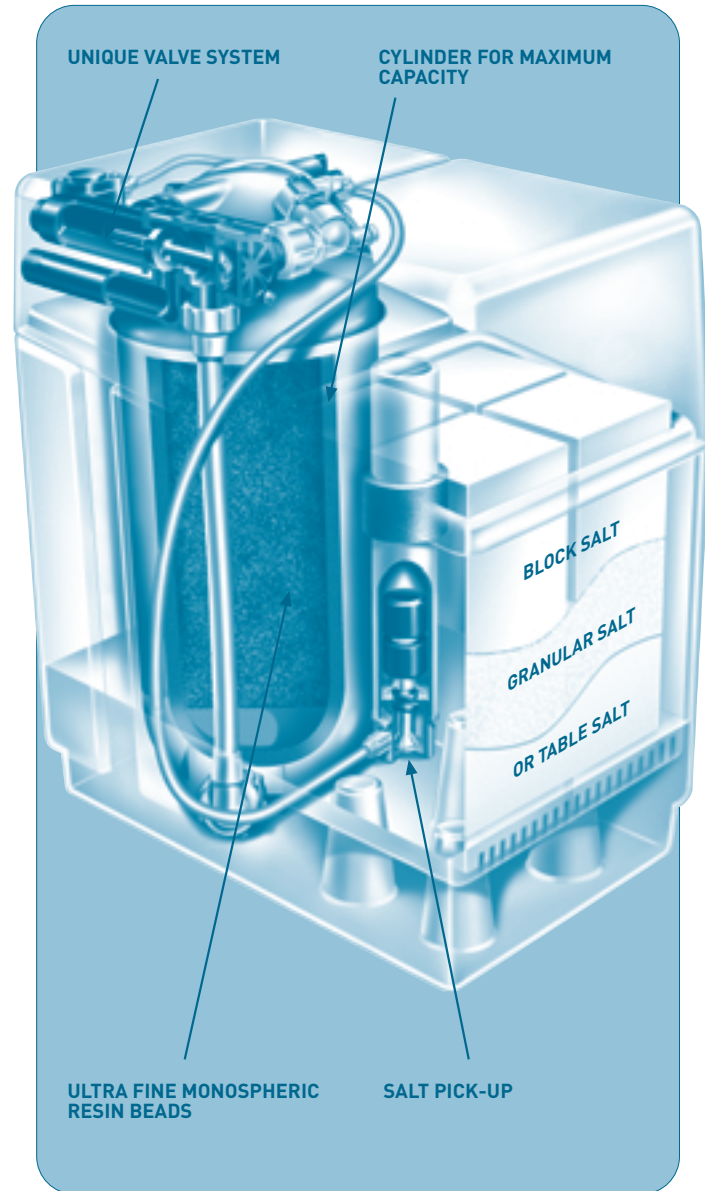
Height:	480mm.
Width:	260mm.
Depth: (depth includes connections)	410mm.
Colour:	Speckled grey.
Material:	Polypropylene.
Inlet (hard) connection height:	410mm.
Outlet (soft) connection height:	450mm.
Drain height:	450mm.
Over flow height:	270mm.
Inlet & outlet connections:	3/4" BSP.
Salt type:	Block, tablet or granular.
Salt storage capacity:	4 x 4kg blocks or 12kg tablet or granular.
Maximum working pressure:	10 Bar (140 PSI).
Minimum working pressure:	1 Bar (14 PSI).
Maximum flow rate:	50lpm.
Maximum temperature:	45°C.
Minimum temperature:	Protect from freezing.
Electrical supply:	240 V 50hz. 13 amp 3 pin plug.
Water softened between flushes:	300 ppm = 1000 litres. 350 ppm = 860 litres. 400 ppm = 750 litres.
Maximum persons per day at 120 litre person (national average):	300 ppm = 8 persons. 350 ppm = 7 persons. 400 ppm = 6 persons.



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CONTENTS

- Water hardness test kit.
- Cabinet.
- Resin vessel.
- Softener valve.
- Inlet valve 3/4 BSP.



- Outlet valve 3/4 BSP.
- Bypass valve 3/4 BSP.
- Non Return valve (NRV).
- Brine injector.
- Brine valve.
- 2 X 1.5 Metre hose
(Includes end fittings).
- Overflow hose connector.
- Drain hose connector.
- Solenoid valve.
- 5 Metre electrical cable.
- Automatic control switch.
- 13 Amp 3 pin plug.
- Guarantee Registration card.

CalSoft

Installation and Operation Manual

BEFORE YOU START

Water Hardness

Before proceeding you must be sure that the softener is capable of providing you with enough softened water for your needs. This is done by measuring the hardness of your water and following the recommendations of the capacity chart below:

Parts Per Million	Degrees Clark	Daily Maximum Family Members	Daily Softening Capacity
300 ppm	21°	8 persons	1000 litres
350 ppm	25°	7 persons	860 litres
400 ppm	29°	6 persons	750 litres

You can call your local water company who will advise you of the hardness of the water in your area; look up WATER in your telephone book. You can also call us here at **Calmag** where we'll be happy to answer your questions on water hardness.

Water Pressure

This can be tested with a gauge, or again, you can contact your local water company. The ideal pressure is 3 to 5 bar, but it must not be below 1 bar or above 10 bar. If the pressure is above 5 bar we recommend installing a pressure reducing valve which is available from your supplier.

Drinking Water

Calmag advise that a separate, non softened drinking water tap is installed.

Note: Softened water should not be used for any drinks for babies, also, people on a low sodium diet should not drink softened water.

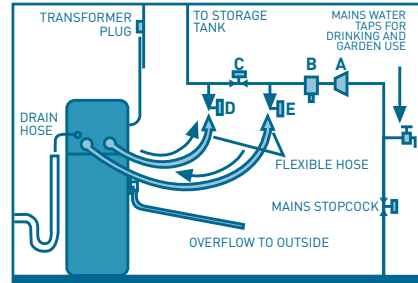
Finding a place for your Softener

Remove the softener carefully from the packaging. Lift off the two covers from the top of the softener and remove packing inside the covers.

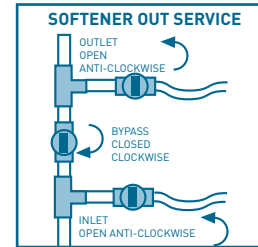
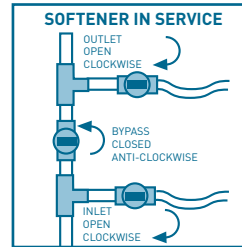
Find a suitable position for your water softener. It should be local to the water supply to the whole house, a power point and a drain. This water softener is suitable for positioning under a kitchen sink. Height: 480mm Width: 260mm Depth: 410mm.

Plumbing

Before starting to plumb in your water softener make sure you have all the necessary plumbing fittings. The diagram shows how the softener should be plumbed in.



- A. Check Valve (non return valve)
- B. Pressure Reducing Valve (if required)
- C. Bypass Valve
- D. Inlet Valve
- E. Outlet Valve



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INSTALLATION

Water Supply

1. Turn off the mains water supply to the house by closing the stopcock. Then, drain the pipe by opening the kitchen tap until the water flow stops.
2. Cut the pipe after the stopcock and install the check valve, inlet, outlet and bypass valves. Take care to install the valves with direction of flow arrows in line with the water flow. To comply with the bylaws a check valve must be installed. Please note, installation kits can have the check valve fitted inside the inlet and bypass valves.
3. Connect a hose between the inlet valve and the inlet connection on the softener, then connect a hose between the outlet valve and the softener outlet connection.
4. Turn off the inlet, outlet and bypass valves.
5. The drinking water tap connection should be made in the pipe between stopcock and the bypass valve.
6. The garden tap connection should be made in the pipe between the stopcock and bypass valve.

Drain Connection

Connect a 1/2" hose to the drain hose connector on the softener and secure using the hose clip. Run the hose to the nearest waste pipe using a gap trap or plumbing out kit, both of which are available from your supplier. Alternatively, the hose may be run to a washing machine stand pipe.

Overflow Connection

Connect 1/2" hose from the overflow elbow and run the hose downhill all the way to the outside of the building or to a local drain standpipe.

Electrical Connection

Plug the timer into a local 13 amp socket with the power off. Plug the 13 amp plug from the softener into the front of the timer. Check the power is off. See 'Setting to Work'.

Note: If the electrical cable requires replacement you must consult a qualified electrician and obtain a replacement cable kit which contains detailed instructions on how to fit it.

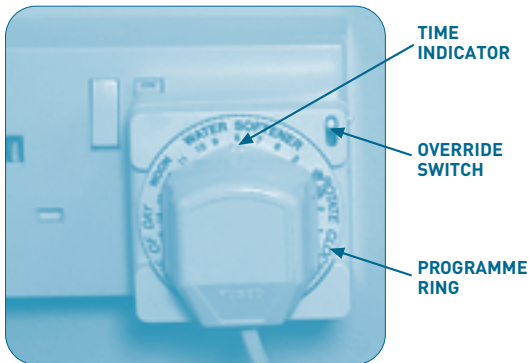
Setting to Work

Open main stop cock together with all the other valves, open tap at kitchen sink for 2 minutes then close, leave for 5 minutes and check for pipework leaks. Note: the inside of the cabinet will start to fill with water, don't worry this is normal and will stop just above the bottom of the salt compartment.

Close the bypass valve.

Automatic Cleansing Programmer

Set the timer by rotating the programme ring clockwise until the correct time of day is above the time indicator. See diagram.



Switch on power supply, then switch override switch to on (I). The softener will now regenerate and water will flush to drain. Check for leaks in the drain pipework. After 30 minutes, switch off the override (O).

Note: The softener is preset to regenerate each night at 3.00am.

The softener will now start softening the water. Taps connected directly to the softened water main will give softened water immediately. It will take a while for softened water to work its way through your hot water system. You should have partially softened water in 1 to 2 days and completely softened water in 3 to 7 days.

HINTS AND TIPS

In the Bathroom

Softened water uses less soap, shampoo and shaving cream. You will notice the bathroom fittings stay cleaner and your skin will feel much smoother. If you suffer from skin problems, try using a pure soap. We recommend that you do not use detergent soaps. Shaving with softened water avoids skin irritation, so if you electric shave, try wet shaving again. You will find it much more pleasurable. The silky feeling you get after washing is normal. There is no need to use bubble bath liquids. Some of them react with natural soap and create a scum, even though the water is soft.

The Washing Machine

Softened water dramatically reduces soap powder and washing liquid consumption - often up to 75%. We suggest you experiment with the quantity of powder until a satisfactory result is obtained. A partially soiled load may be wash with only one tablespoon of powder. Cut your fabric conditioner by half. Many people prefer not to use a fabric conditioner at all, so try washing without it and see whether you notice any difference. A fabric conditioner will still reduce cling when ironing and tumble drying. We recommend that you use a non-biological soap powder.

Washing Up

You will use about half the amount of washing up liquid. The sink will stay much cleaner and you will not have to wipe it dry. Glasses will dry spotless. Washing up liquids contain a bubble additive to create a lather and it is designed to work in hard water. In softened water it is normal to get less bubbles, but this does not affect the cleaning ability. If you are not happy with your washing up using softened water, try changing the washing up liquid. Some work better than others in softened water. To ensure that you only use half the amount, may we suggest that you retain an empty bottle, half fill with liquid and top up with water. That way you guarantee it goes twice as far.

Dishwashers

On most installations the dishwasher is connected up to the softened water supply. We do recommend, however, that crystal glass and silver plate should not be washed in the dishwasher as etching can occur. We suggest you use much less dishwasher powder of liquid, and many customers find they do not need rinse aid at all.

On dishwashers connected to the hard water supply, you should continue to put salt in the dishwasher's own softener.