

MONARCH CS WATER SOFTENERS — Effective March 2012.

PROGRAMMING & INSTALLATION INSTRUCTIONS

Thank you for choosing a Monarch Water Softener. Please read the following carefully, which if followed correctly, should ensure the installation is trouble free. If you have any queries please call Monarch on 01986 784 759.

Model No's: CS-10 CS15, CS20, HW65 & HW65/20

PLANNING THE INSTALLATION

Always observe the water byelaws. Ensure there is only one rising main, that you have **allowed space for access to the unit for salt filling and for any possible maintenance** in the future. Check the water pressure; locate the rising main, a drain facility and a power supply.

SITING THE SOFTENER – Fig 1

Where possible, this should be close to the rising main. Take care to allow hard water take off points for a drinking water facility and also an outside tap if applicable. The distance between the softener and the drain should be as short as possible. Ensure that both the drain and the overflow are not subject to freezing or over 120 degrees F. If siting the softener within a conventional kitchen unit ensure that the base is adequately supported. If you wish to use the smoked cover instead of the slide on cover provided, this is held on to the unit with the screw on the top of the controller. If the softener is being installed in your loft, 1st, 2nd floor etc, it is recommended to house the softener within a 25-gallon plastic tank and insulate well. The overflow on the plastic tank should be below the overflow of the softener and a minimum of 3/4" in size. Failure to install the softener in a suitable tank will void the Guarantee

NON-RETURN VALVE

In single dwellings a single check valve should be fitted. All other applications require a double check valve.

DRINKING WATER FACILITY – Fig 1.

In compliance with U.K. Water Regulations a tap for drinking water purposes should be left on the hard water supply.

MATERIAL CHECK LIST

Please ensure you have all materials necessary to conclude a successful installation.

WATER PRESSURE TEST

It is IMPORTANT that a pressure check is carried out. Low and high pressure can result in either damage to, or failure of the softener. If **daytime water pressure*** exceeds 3.5 bar (50psi) a pressure limiter should be fitted. Minimum dynamic pressure must exceed 1.4 bar. If in any doubt please call us on 01986 784759.

*50psi daytime pressure can reach over 70psi night time pressure!

INSTALL BYPASS VALVES & NON-RETURN VALVE

Form an installation as per Fig 1.

INLET & OUTLET CONNECTIONS

It is recommended to connect to the softener using flexible hoses. Do not use washing machine or similar O.D. sized hoses.

Using the hoses, connect to the in/out connections on the sides of the control valve; they are marked for your assistance. It is recommended to use 'elbow' connections here.

DRAIN CONNECTION – Fig 2.

Connect the drain hose to the white barbed fitting on the side of the control valve using a jubilee clip to fix.

Run the drain hose to either an upstand or an outside drain. A minimum air gap of 20mm must exist at the end of the drain line. Softened water will have no adverse effect on a septic tank. If you need to extend the drain hose this can be done by connecting to a 15mm copper tube for a maximum run of 8 metres with a minimum daytime pressure of 40 psi.

Ensure that the drain hose is adequately fixed to the copper pipe. The drain hose must not dip or be kinked in any way as this will lead to an overflow of the machine.

UPHILL? The white flexible drain hose can run uphill internally for a maximum of 3 feet with a minimum water pressure of 40 psi.

OVERFLOW CONNECTION

The overflow connection is the 1/2" barbed hose spigot on the rear of the cabinet. No clip is required. The overflow must be run downhill through an outside wall without kinks or restriction.

It is recommended the overflow hose be visible when it exits the outside wall. A 22mm copper protective sleeve through the outside wall will help prevent kinking of the hose.

TEST INSTALLATION FOR LEAKS

Close Inlet and Outlet valves to the softener and open Bypass valve. Open mains stopcock slowly and flush the new pipe work and connections via an adjacent mains tap. Ensure the tap used is not a hard water tap. Check all connections for leaks.

ELECTRICAL CONNECTION

Connect the electrical lead to a continuous electrical supply; leave power off at this stage (13a plug top c/w 3a fuse supplied).

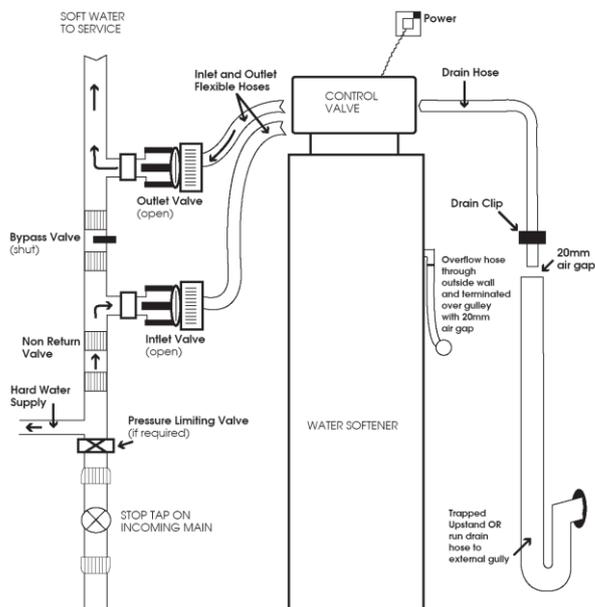
OBTAIN YOUR WATER HARDNESS

These instructions apply to the enclosed test kit only.

Run hard water for approx. 1 minute and rinse the test tube well. Fill the test tube up to the 10ml level. Add 2 drops of the dark solution and mix gently. If the water sample contains hardness it will turn red. Add the dark solution in batches of 5 drops, holding the dropper bottle at 45 degrees. Mix gently after each 5 drops. Count the drops needed until the colour of the sample in the test tube changes from a dark red to a dark blue/green.

You need this figure for when setting the regeneration frequency. Each drop equates to 10ppm. i.e. 30 drops = 300ppm

Fig 1



The Electro Mechanical Timer

Programming

The electro-mechanical timer is fully automatic.
It uses a 12-day skipper wheel to activate the regeneration.

Fig 1.

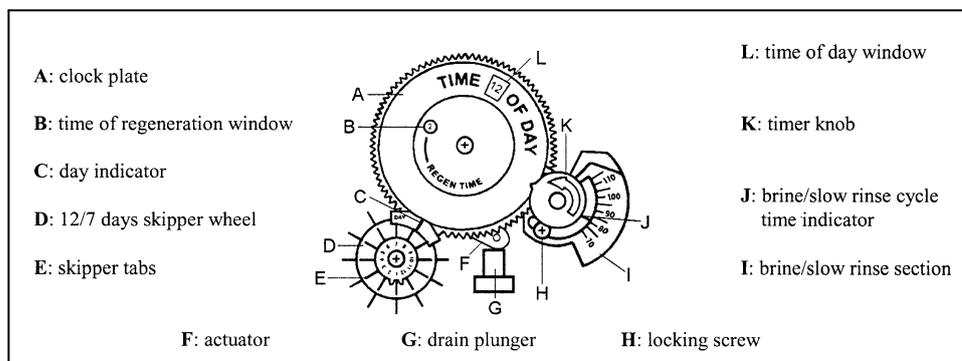
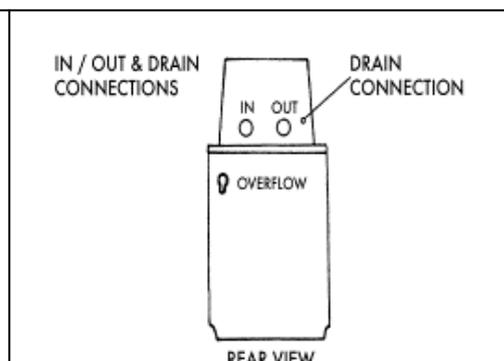


Fig 2.



Time of Regeneration

This has been pre-set to 2am. If Economy 7 electricity is used during the night, ensure that appliances do not use water between 2 and 3am.

Alternatively, you can alter the regeneration time by loosening the centre screw then turn the REGEN TIME wheel to the appropriate time and then retighten screw.

Time of Day

Turn the timer knob (k) anticlockwise until the correct time of day on the clock appears in the TIME OF DAY window.

Days of Regeneration

With all skipper pins (E) pulled out, push in the pins as determined by the chart and details below relevant to your softener.

Model CS-10

Litres use	300	400	500
Per day	ppm	ppm	ppm
200	B	B	B
300	C	D	D
400	D	D	E
500	D	E	E
600	E	E	E

Model CS-15 & HW65

Litres use	300	400	500
Per day	ppm	ppm	ppm
300	A	B	B
400	B	C	C
500	B	C	D
600	C	D	D
700	C	D	E

Model CS-20 & HW65/20

Litres use	300	400	500
Per day	ppm	ppm	ppm
500	A	B	C
600	B	C	C
700	B	C	D
800	C	D	D
900	C	D	D

Pin Settings

- A = push in pins 1 & 7
- B = push in pins 1, 5 & 9
- C = push in pins 1, 4, 7 & 10

- D = push in pins 1, 3, 5, 7, 9 & 11
- E = push in all pins or consider larger softener with greater capacity/less frequent regenerations.

Finalise Commissioning

1. **Fill softener with tablet salt only before you turn on the water supply.** Please advise customer to keep the softener full at all times using tablet salt – see USER MAINTENANCE below...
2. Turn on water and allow softener to pressurise and salt chamber to fill – approx 10 minutes.
3. Check for leaks.
4. Close bypass valve.
5. Turn on power.

USER MAINTENANCE

The softener requires minimal maintenance. Simply keep the unit topped up with salt. The softener will require topping up when or before you see water. We recommend that the softener be topped up twice weekly. Never let the salt go below the water level.

USE TABLET SALT IN EVERY INSTANCE. Water softener guarantee becomes void if granular salt is used!