

 MONARCH WATER

CS RANGE

PRO-FLO

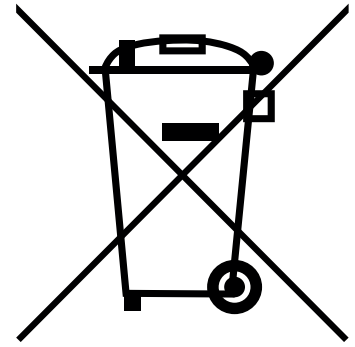
INSTALL GUIDE

CS100 / CS150 / CS200 / CS300

EVOLUTION SINCE 1964

The symbol opposite means that according to United Kingdom and European Union member countries laws and regulations your product and/or its battery shall be disposed of separately from household waste.

When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product and/ or its battery at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.



Model	Dims H x W x D (mm)	Daily capacity (litres @ 300 ppm)	Tablet salt use per regen (kg)	Max flow rate (lpm)	Water Pressure (bar)	Max Op. Temp (°C)	Connection
CS100HE	480 x 275 x 550	1,471	0.9 - 1.4	83	1.5 - 5	49	3/4" mbsp
CS150HE	555 x 275 x 550	2,280	1.0 - 1.7	78	1.5 - 5	49	3/4" mbsp
CS200HE	710 x 275 x 550	3,420	1.6 - 2.7	78	1.5 - 5	49	3/4" mbsp
CS300HE	1038 x 275 x 550	5,500	3.1 - 4.5	75	1.5 - 5	49	3/4" mbsp

220v 3 pin plug via inline transformer, or suitable for fused spur outlet.

/ MONARCH PRO-FLO SERIES WATER SOFTENER PROGRAMMING & INSTALLATION INSTRUCTIONS

Thank you for choosing our water softener. Please read the following carefully, which if followed correctly, should ensure the installation is trouble free.

/ A. PLANNING THE INSTALLATION

- Always observe the water byelaws.
- Ensure there is only one rising main.
- Make sure you have allowed space for access to the unit for salt filling and for any possible maintenance in the future.
- Check the water pressure and locate the rising main, a drain facility and a power supply. Be aware of condensation occurring in warm environments.

/ B. SITING THE SOFTENER - Fig 1

- Where possible, this should be close to the rising main.
- Tee off for mains water supply to outside tap if applicable.
- The distance between the softener and the drain should be as short as possible, to ensure that both the drain and the overflow are not subject to freezing, or over 120°F/49°C.
- If siting the softener within a kitchen cupboard, loft etc. ensure that the base/floor is adequately supported.
- If the softener is being installed in your loft, 1st, 2nd floor etc, it is strongly recommended to house the softener within a 25-gallon plastic tank and insulate well. Monarch take no responsibility of any water damage etc if this recommendation is not applied.
- The overflow on the plastic tank should be below the overflow of the softener and a minimum of ¾" in size. Failure to install the softener in a suitable tank will void the warranty.

/ C. CHECK VALVE

Softened water for drinking or food preparation is category 2 which requires a single check valve type EA or EB.

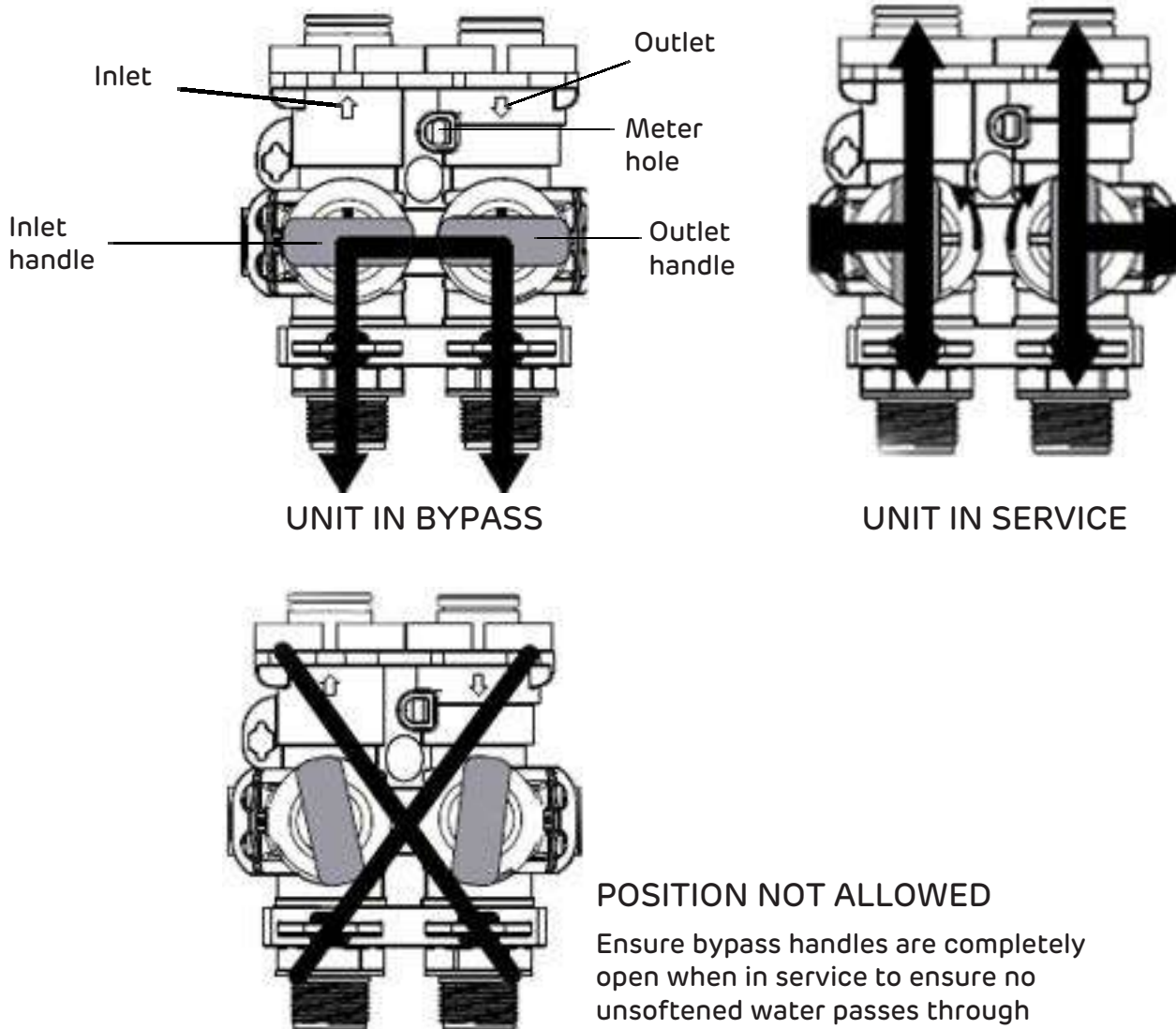
/ D. DRINKING WATER FACILITY - See Installation Requirements Diagram

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

/ E. MATERIAL CHECK LIST

Ensure all installation components comply with appropriate water regulations.

/ F. INTEGRATED BYPASS OPERATION



/ INSTALLATION

1. Rotate the handles by hand or use a bypass tool
2. The water supply will be in Bypass when the handles are horizontal
3. The unit will be in Service when the handles are in the Vertical position
4. When the unit is in the Service position, it is available to take raw water and filtered water samples for testing at the water taking port on both sides of the bypass
5. Insert the meter sensor into the meter sensor hole

/ NOTES

1. Water pressure: 1.5 - 5 bar
2. Operating temperature: is 2-49°C
3. Only use food grade silicon grease for maintenance, any other kind of grease will affect the lifetime of the bypass.
4. Do not remove the clips when the system is operating, relieve the pressure before removing the clips.

/ G. INTEGRATED BYPASS INSTALLATION (MMB063)

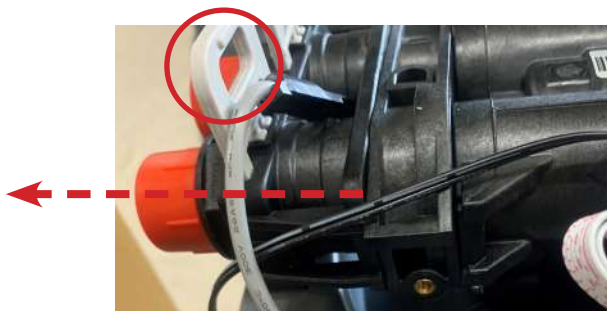
1. Remove both salt lid and main cover by lifting off the salt lid and sliding the back cover backwards and lifting off, this will allow access to the inlet and outlet connections.
2. Remove the flow meter cable by unclipping it from underneath the connector assembly.



3. Remove the two grey side panels and unscrew the two screws and brackets.



4. Remove the 2 grey clips from the back of the softener. The inlet and outlet connector assembly is now ready to be removed, to do this pull it out of the inlet and outlet connections.



5. Grease the O Rings on the integrated bypass and insert the bypass in place and reconnect the flow meter cable.



6. The new integrated bypass comes with metal brackets and screws. Use these to attach the bypass to the valve body.

7. Remove the connectors from the the old connector assembly and insert them in to the new bypass connection, then reattach the grey clips grey side panels back into their slots.

8. The bypass is now fitted, please place the grey cover and salt lid back on top of the softener and continue with installation.

/ H. 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 unit.
- If daytime static water pressure* exceeds 3.5 bar (50psi) a 5 bar (70psi) pressure limiter should be fitted. *50psi daytime pressure can reach nearly 100psi at night!
- Minimum dynamic pressure must exceed 1.5 bar.
- If in any doubt please call us on +44 (0)1986 784 759

/ I. FORM AN INSTALLATION AS PER FIG 1 BELOW

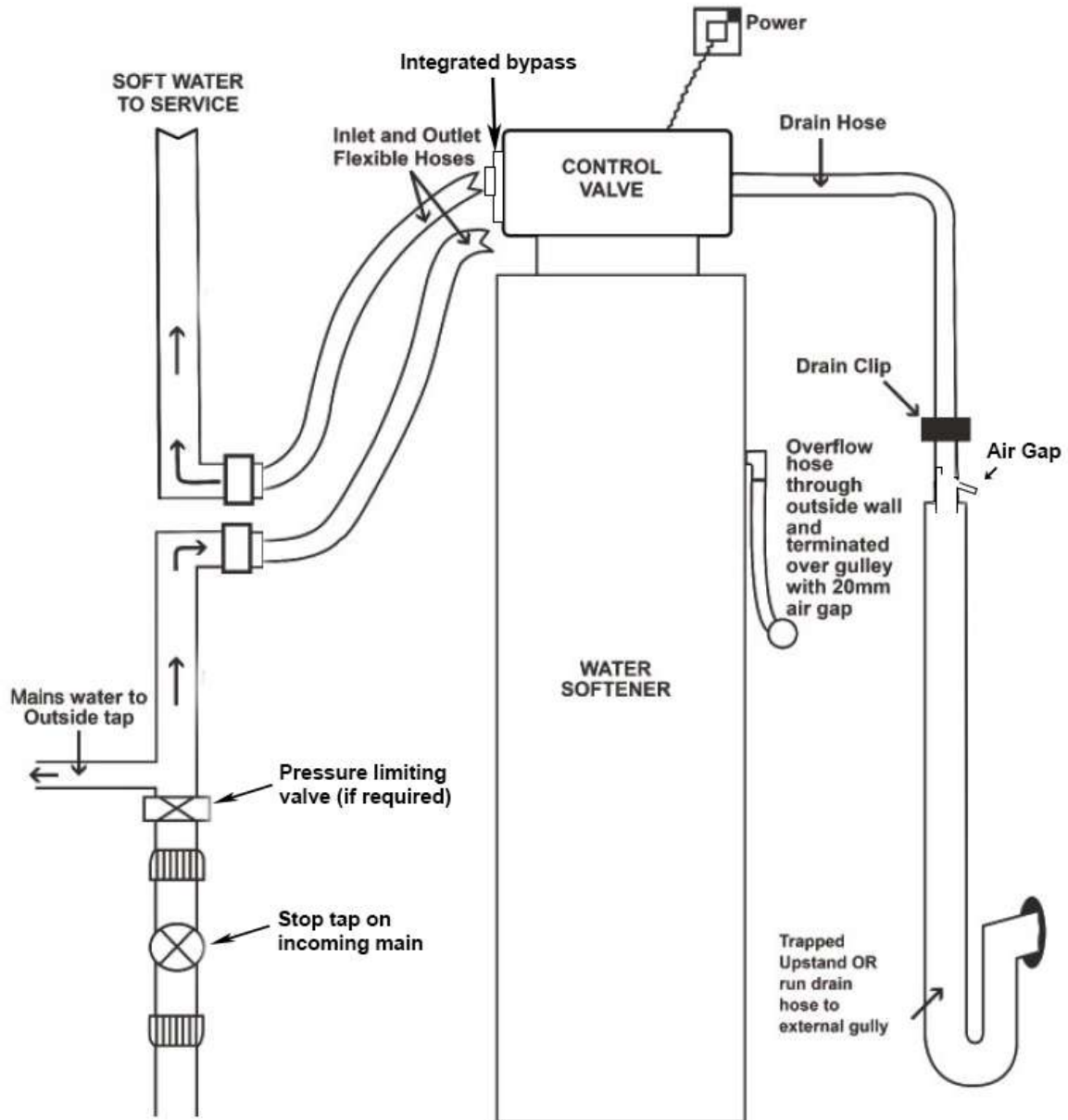


FIG 1

/ Check List

- Water pressure 1.5 – 5 bar (20 –70psi)
- Access to incoming water supply
- Access to 3 pin socket
- Access to drain
- Installation preferably on an outside wall for the overflow
- Easy access to fill unit with salt

/ J. INLET & OUTLET CONNECTIONS - See Fig 2

- Remove the main cover to access inlet and outlet connections.
- Remove grey retaining clips and also BSP connection points. Connect hoses to male BSP connection points, tighten to seal, then reinsert BSP connection points back into valve body. Fit grey clips. The connection points are designed to rotate once inserted in valve body.
- We recommend you fit the elbow end of the hose to the inlet/outlet connection points on the softener.

Under no circumstances use washing machines hoses or plumb the softener in solid copper pipe.

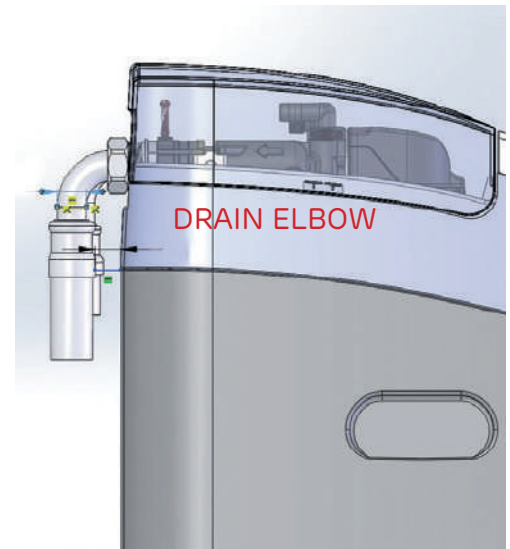


FIG 2

/ K. DRAIN CONNECTION

- 2.5mtrs of white low pressure drain hose is supplied with the unit. This is to be used for both the drain and overflow. The drain connection is the black barbed elbow under the rear top cover. To remove rear top cover, simply slide forward out of fixing, and lift off. Fix drain hose to black barbed elbow with jubilee clip (supplied).
- Run the drain hose to either an upstand or an outside drain. Connect the drain hose to the spigot of the Air Gap provided to ensure a 20mm air gap exists at the end of the drain line.
- If you need to extend the drain hose, this can be done by connecting to a 15mm copper tube for a maximum run of 4 metres, with a minimum daytime pressure of 40 psi. Over 4 metres please use 22mm (or similar) copper tube.
- 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.
- Softened water will have no adverse effect on a septic tank.
- Under no circumstances should the softener drain and overflow share the same pipe. This could lead to foul smells entering the salt cabinet from the main drain via the overflow. Also if the common drain ever gets blocked, the regen water can re-enter the softener via the overflow pipe.

/ L. OVERFLOW CONNECTION - Important

- The hose for the overflow should be cut from the white low pressure hose supplied with the unit.
- The overflow connection is the 1/2" hose spigot on the rear right hand corner of the cabinet – no jubilee clip required.
- The overflow must be run downhill and terminate immediately through an outside wall without kinks or restriction.
- A 22mm (or similar) copper protective sleeve through the outside wall will help prevent kinking of the hose.

/ M. TEST INSTALLATION FOR LEAKS

Place the bypass handles in the horizontal Bypass position. Open mains stopcock slowly to flush the new pipe work. This can be done using a 'soft' mains tap i.e. utility room cold tap or wash hand basin in a bathroom. Check all connections for leaks.

/ N. ELECTRICAL CONNECTION

With the power off, connect the transformer – supplied – to a continuous electrical supply. Push the flying lead from the transformer into the adaptor on the lead coming from the controller.

/ O. 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 SET WATER HARDNESS as per R overleaf.

/ P. SETTING THE ELECTRONIC CONTROLLER

- Turn on power and the softener display will say WELCOME.
- The Display is a 2 line display showing both the Model No and also Time and Hardness. The Time and Hardness will alternate every 10 seconds.
- To finalise commissioning of the softener, you need to set both Time (24hr clock in hours and minutes) and the water Hardness as determined by the amount of drops in your water hardness test.




/ Q. SET TIME OF DAY

- Wait until display says Time of Day. If Time of Day is correct, skip to R. SET HARDNESS.
- Press Up button to show flashing Hours. Please note it is a 24hr clock.
- Press Up or Down button to set Hours.
- Press  to confirm Hours.
- After confirming Hours with (), display will show minutes flashing.
- Use Up and Down button to set Minutes.
- Press  to confirm Minutes.

Time: 8:00


/ R. SET WATER HARDNESS

- Wait until display changes to Hardness.
- Press Up Button to show Set Hardness with no flashing.
- Use Up Button to set number as determined by your water hardness test.
- Press  to confirm setting.

Hardness: 10

UP TO 30 DROPS	ADVANCE ELECTRONIC DISPLAY TO 30 (REC MIN SETTING)
31 -35 drops	advance electronic display to 35
36 - 40 drops	advance electronic display to 40
41 - 45 drops	advance electronic display to 45
46 - 50 drops	advance electronic display to 50

/ R.1 SET DAYS OVERRIDE

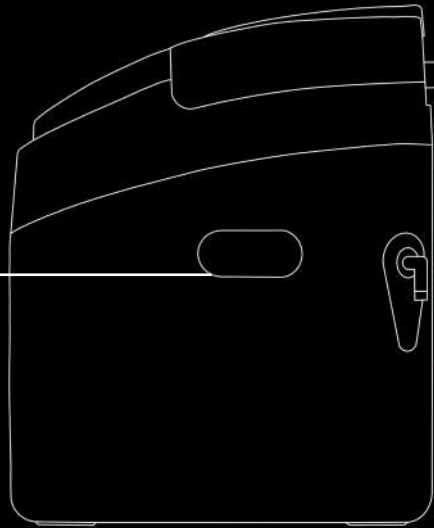
- Apply water hardness drops total from the chart below as Override figure in display.
- Wait until display changes to Override.
- Press Up button to show Set Override with no flashing.
- Press Down button until number corresponds with chart below.
- Press to  confirm settings.

Model CS 100 HE and PS12 HE					Model CS150 HE					Model CS200 HE				
Litres per day	31-35 drops	36-40 drops	41-45 drops	46-50 drops	Litres per day	31-35 drops	36-40 drops	41-45 drops	46-50 drops	Litres per day	31-35 drops	36-40 drops	41-45 drops	46-50 drops
150	4	4	3	3	300	5	4	4	3	500	6	4	4	3
300	3	3	2	2	450	4	3	3	3	600	5	3	3	3
450	2	2	2	2	500	3	3	2	2	700	4	3	3	2
500	2	2	NR	NR	600	3	2	2	2	800	3	3	2	2
600	2	NR	NR	NR	700	2	2	3*	NR	900	3	2	2	2



- You have finished the programming.
- The display will now automatically revert back to the alternating display.
- If at any time you need to reset any figure, wait until the display changes to the relevant setting and then re-programme as required.

/ TABLET SALT FILL LEVEL

FILL LEVEL



/ S. EXTRA REGENERATIONS

- To start an automatic regeneration, press the left hand button  and release, the display will count down from 15 to zero. If at any time you wish to cancel the count down, simply press  again.
- An automatic regeneration will start shortly.

/ T. BLENDING CONTROL – Blue/Green Stains

- All our water softeners are factory set to produce water that is 100% soft. If you require slightly blended water – recommended on Combi/Condensing Boilers and in areas of hard water that have a green/blue build up in the scale – open blender bypass on left hand side of softener control valve slightly – until it takes 6/7 drops of the dark liquid to get a red to green colour change, as per the original water hardness test.

/ NOTE

This blended water setting can only be done when the softener is in Service.

/ Further Information

- Do not worry if your softener regenerates during the day. This is the Self Protect Programme initiating an additional mini regeneration, as the softener does not have enough soft water to last you until the next programmed regeneration of 2am.
- A regeneration can last between 51 and 92 minutes depending on the model. During this time the softener goes into hard water bypass, ensuring a continuous supply of water.
- A Normal regeneration is programmed to 2am, a time when little, if any, water is being used.
- To change the regeneration time, simply offset the Time Setting i.e. to have the unit regenerate 2 hours later, set clock 2 hours slow- see Q.
- To ensure the softeners continuous operation, please do not let the salt drop below half way down in the cabinet.



FIG C

/ MONARCH WATER CS SOFTENER WARRANTY - Effective January 2023

This softener is fully covered by a 2 year parts and 1 year labour warranty for installation within mainland Great Britain from date of original purchase. Installations outside of these areas are automatically covered by a 12 months parts only 'exchange' warranty.

PLEASE NOTE - This warranty has the following conditions, and is not covered by the following.

1. Damage caused by high water pressure, we strongly recommend a 5 bar water pressure limiting valve on the inlet to your water supply, where daytime water pressure exceeds a static pressure of 3.5 bar (50psi).
2. This water softener is suitable for a mains water supply only.
3. The majority of debris in water is caused by local authority work on the water main. If notified in advance, by your local water authority, please put your softener onto 'bypass', see page 4.
4. Callouts due to incorrect installation. If you have any queries when installing your softener, please call us on +44 (0)1986 784759.
5. The wrong type of salt used and also the softener being allowed to run out of salt. NOTE: In all cases use TABLET SALT ONLY.
6. The use of any other hoses than those that are classified as food grade. Under no circumstances use washing machine hoses.
7. The build-up of salt fines in the bottom of the salt compartment. Although Monarch recommends Monarch Ultimate Tablet Salt, but recognises this is not always available, therefore please note it is the customers' responsibility to ensure the salt is of good condition and quality when used.
8. The effect of aggressive water, the degradation and/or blinding of resin and/or chlorine attack on resin.
9. Under no circumstances plumb in the softener in solid copper.
10. The installation kit is only covered by the OEM twelve-month parts 'exchange' warranty only.
11. Compensation as a result of cancelled appointments, damage caused by, or incorrect installation of the water softener. In the unlikely event of a fault, put the softener onto Bypass, see 3 above ref 'For Bypass' until an engineer calls.
12. Please note that any callouts within the warranty period that are due to external influences affecting the operation of the softener, may incur a charge.

/ THE ABOVE DOES NOT AFFECT YOUR STATUTORY RIGHTS SERVICE CARE

The manufacturer of your water softener includes 55+ years of manufacturing experience, to give you a water softener that is arguably the most reliable on the market today. One of the aspects incorporated into the manufacture of your softener is 'Prevention is better than cure'.

Monarch strongly recommends a service once every 2 years to ensure optimum continued performance.

/ MONARCH NATIONAL SERVICE COVERAGE AREAS - Effective January 2023

All postcodes within mainland Great Britain are automatically covered by a parts and labour warranty as set out in the relevant brochure for the individual model/range.

/ IMPORTANT

Monarch softeners sold outside of mainland Great Britain are to be strictly covered by a parts only 'exchange' warranty as determined by the model/range of softeners i.e. Unit with 12 months parts.

All parts sent back to Monarch are at the expense of the sending parties. All repaired or replaced items will be returned to the sender on a no charge basis whilst covered by the parts exchange guarantee.

Once the parts exchange guarantee has expired, Monarch reserves the right to make a charge for any postage/delivery, labour and parts charges that is deemed necessary. Monarch will endeavour to keep these charges at the lowest cost whenever possible.

monarchwater.co.uk



+ 44 (0) 1986 784759
monarchwater.co.uk
info@monarchwater.co.uk



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