WATERSIDE

WATER SOFTENERS

INSTALLATION INSTRUCTIONS

Thank you for choosing a Waterside Water Softener. The following installation instructions have been painstakingly put together and if followed should ensure the installation is trouble free. If you have any queries please feel free to contact our Technical Department on 01376 550577.

PLANNING THE INSTALLATION

Bearing in mind the Water Board byelaws, check the water pressure (see note 1), locate the rising main, drain facilities and electricity supply. Allow room for access, maintenance and filling with salt. Ensure there is only one rising main to the property.

SITING THE SOFTENER

Where possible this should be close to the rising main. Take care to allow for hard water draw points, i.e. drinking tap and outside tap. The distance between the unit and a drain should be as short as possible, since salt must be added periodically to the softener, the location should be easily accessible. IMPORTANT - DO NOT locate unit where it or its connections (including the drain and overflow lines) will ever be subject to room temperatures under 32°F (0°C) or over 120°F (49°C). If siting the softener within a cupboard ensure that the base is adequately supported. If you are planning to install the water softener above ground level, e.g. in the loft, the following instructions should be strictly adhered to. The softener should be installed within a container of not less than 25 gallons capacity, to which there shall be connected an overflow pipe not less than 3/4 inch in diameter. The overflow shall be connected not less than 6 inches below the height of any electrical components mounted on the softener. Where necessary the softener and any additional pipework should be adequately lagged to prevent damage by freezing.

PLUMBING SYSTEMS

Types of Plumbing Systems:

Traditional:

For traditional plumbing systems with storage tanks our standard models are recommended and should be installed using the standard kit supplied.

Systems Using Combination Boilers (15mm):

For these systems we recommend that the standard installation kit is **not** used as it will reduce the water flow through the system. Appropriate size copper tube, fittings and our full bore hoses should be used to ensure adequate flow is maintained.

Unvented Fully Pressurised Systems (22mm):

As for combination boilers.

The DX500 Model will not work on a 22mm unvented system.

BACKFLOW PREVENTION DEVICE

In single dwellings a check valve complying with BS6282 part 1 should be correctly fitted. All other installations require a double check valve.

DRINKING WATER

The tap to be used for drinking water must be left on the hard water supply (see Fig. 2).

CHECK MATERIALS

Before commencing ensure you check the contents of the installation kit.

1 Pair of Inlet Hoses	1 Set of Bypass Valves	1 3/4" Screened Washer	1 Hose Clip
1 Drain Hose (2m)	3 3/4" Washers	1 Test Kit	1 Single Non-Return Valve

1. PRESSURE TEST

It is VERY IMPORTANT and must be carried out before you commence any further work. Low or high pressure could result in damage or non-operation of the softener (see Fig. 1). Test the pressure with a gauge at the kitchen tap or outside tap. If in doubt we advise you to fit a pressure limiting valve. If daytime pressure is above 70 psi (5 bar) fit a pressure limiting valve. If daytime pressure is less than 20 psi (1.4 bar) (25 psi (1.7 bar) for a DX500) a pressure pump is required.

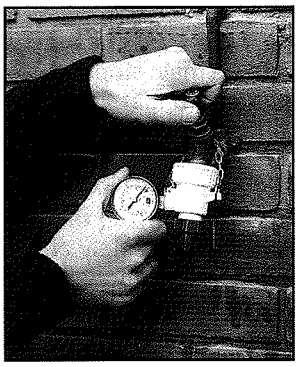


FIG 1

2. CONNECT BYPASS VALVES

Use the three valves provided to form a bypass, arrangements as shown in Fig. 2. Tee off to hard water services as shown. The check valve must be fitted to the rising main prior to the inlet valve. NOTE ensure there is only one rising main to the property, also bear in mind the possibility of the rising main being teed off to other locations before the main stopcock.

3. INLET AND OUTLET CONNECTIONS

The inlet and outlet connections may be run in hose as shown (supplied with kit) or in copper tube. DO NOT use washing machine hoses as they will contaminate the water. If running in copper tube use $^{3}/_{4}$ F1 elbows to connect to the valve. If using the supplied hoses screw onto inlet and outlet connections (Fig. 3). We recommend the use of hose as it facilitates plumbing and any subsequent servicing. Ensure that the screened washer is fitted inside the straight connector of the inlet hose.
(Read PLUMBING SYSTEMS on page 1).

4. DRAIN CONNECTION

Push the flexible drain hose onto the barbed connector as shown in Fig. 3 and secure with the jubilee clip provided. Run the drain hose to a stand pipe or to a drain. A minimum gap of 20mm must exist between the end of the drain hose and the top of the drain grid. Softened water will have no adverse effect on a septic tank. You may extend the hose using 15mm copper tube if required. You can extend up to 30ft if you have 40 psi daytime pressure. Drain hose must not be kinked or restricted in any way as this will cause overflowing.

FROST PROTECTION

If the drain hose is run outside it must be vented, to empty the pipe after regeneration, or insulated. This is to prevent freezing which would otherwise prevent regeneration and cause overflowing. NOTE: Drain Vent is available from the supplier if required.

RAISED DRAIN HOSE

If you have a water pressure of 40 psi or more you can raise the drain hose 8ft and another 2ft for every further 10psi.

5. OVERFLOW CONNECTION

Push fit overflow pipe should be connected to the bend at the rear of the cabinet. Run the pipe downhill to the outside of the building without kinks or restrictions (see Fig. 3). Take care that overflow does not discharge where damage could occur. If the softener is fitted in a cellar the overflow can be run to a storage tank. Do not elevate overflow hose.

6. SET PROGRAMMER

Obtain your water hardness by using kit provided. To set programmer refer to programming instructions relevant to your model.

7. ELECTRICAL CONNECTION

All models require a 3 amp supply. A fused connection incorporating a double pole switch is recommended to avoid the supply being interrupted. Switch on now. If in doubt consult a qualified electrician.

8. TEST AND CHECK ALL MODELS FOR LEAKS

Turn on main stopcock slowly, set the bypass valve to shut position, inlet and outlet valves to open positions. CHECK FOR LEAKS!!! The softener is now letting water pass through it to the supply. The first water produced may be amber coloured, this is quite normal.
All 250 models are factory set at rapid rinse stage. This will take approximately 20 minutes and will account for any water flow or noises immediately after installation. During this time the manual regeneration knob will move itself around to the soft position, this will take around 30 minutes provided the electrical supply has been switched on.

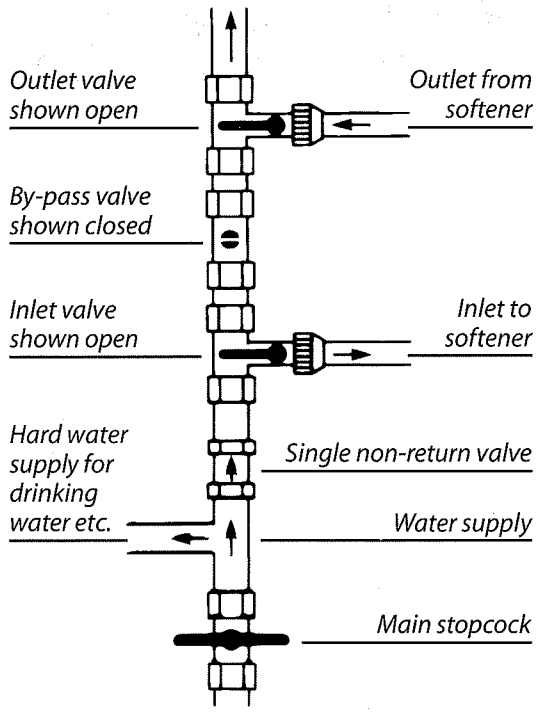


FIG 2
250 Models - Connections

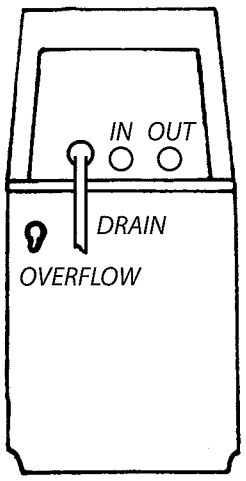


FIG 3

9. FILL WITH SALT

Now fill cabinet, about three to six inches from the top with salt. If using granular salt only fill the cabinet half way.
250 Models - maximum salt capacity 50 lbs. (23kg's)
DX500 Models - maximum salt capacity 55 lbs. (25kg's)

10. USER MAINTENANCE

Your Waterside softener requires minimal maintenance. Simply check that the clock is displaying the correct time of day, not necessary on DX500 model, and keep topped up with salt. If using tablet salt then fill to within three inches from the top. The softener will require topping up when red line can be seen inside cabinet.

Our Service Department is here to help. If you have any queries or problems please contact us on 01376 550577 for Service or 01376 348383 for technical advice.

Before calling out one of our Service Engineers please check through the installation and programming instructions as call-outs not due to the softener are chargeable.

TC250 PROGRAMMING INSTRUCTIONS

Your water softener has been pre-programmed to cope with average site conditions. However, the softener will not work efficiently unless programmed properly. By following the instructions below good performance will be obtained but for *maximum salt efficiency* and *economy* of water use contact Waterside on 01376 550577 for FREE commission service. Our trained service engineers will be pleased to answer any queries you may have.

First consult Fig. 6 to familiarise yourself with dials, etc. Referring to Fig. 7 ensure that all the trip fingers on the finger wheel are pushed inwards towards the centre. Now refer to the chart Fig. 4 and, having obtained the water hardness with the test kit provided, find the water hardness in degrees Clark on the left hand column and move across the column to your family size. This will show the number of days between regeneration required. Move to days between regeneration chart (Fig. 5) and set the finger wheel appropriately. The finger wheel has 12 fingers, each of which can be moved in and out by pushing the tab near the centre of the finger wheel. If the finger is pushed outwards then the softener will regenerate on that day.

Example

Hardness: 25° Clark
Family of: 4 people
Regenerate: Every third day.
Fingers 1, 4, 7 and 10 out.

The red pointer in the centre of the finger wheel indicates today, if the finger in line with the pointer has been pushed out the softener will regenerate tonight.

Set Time:

Press the red button and turn the 24 hours gear until the correct time of day is in line with time of day arrow. See Fig. 8.

Set Regeneration Time:

This softener is factory set to regenerate at 2.00am. If you prefer to have the unit regenerate at an earlier or later time, simply set the current time of day accordingly (e.g. to have the unit regenerate at 4am - 2 hours later - set the clock 2 hours earlier than the actual current time).

NOTE: When the softener is regenrating only hard water is available. Regeneration takes 3 hours.

Programming is now complete.

In the unlikely event that you should require an immediate regeneration turn manual regeneration knob clockwise to start position (see Fig. 9). Please note regeneration will take place approximately 30 minutes after turning knob.

Number of days between regeneration

Water Hardness Clark	Family of 2	Family of 3	Family of 4	Family of 5	Family of 6	Family of 7	Family of 8
10	12	6	6	6	4	4	4
11	12	6	6	6	4	4	3
12	12	6	6	4	4	4	3
13	12	6	6	4	4	3	3
14	12	6	6	4	4	3	2
15	6	6	4	4	3	3	2
16	6	6	4	4	3	3	2
17	6	6	4	4	3	2	2
18	6	6	4	3	3	2	2
19	6	4	4	3	3	2	2
20	6	4	4	3	2	2	2
21	6	4	4	3	2	2	2
22	6	4	3	3	2	2	1
23	6	4	3	2	2	2	1
24	6	4	3	2	2	2	1
25	6	4	3	2	2	1	1
26	6	4	3	2	2	1	1
27	6	4	3	2	2	1	1
28	6	4	3	2	2	1	1
29	4	3	2	2	1	1	1
30	4	3	2	2	1	1	1
31	4	3	2	2	1	1	1
32	4	3	2	2	1	1	1
33	4	3	2	2	1	1	1
34	4	3	2	2	1	1	1
35	4	3	2	1	1	1	1

If hardness figure is obtained in p.p.m. (parts per million) divide this figure by 14.3 to obtain degrees Clark.

FIG 4

FIG 5

Days between regeneration required	
Every day	All trip fingers out
Every 2 days	Fingers 1, 3, 5, 7, 9 and 11 out
Every 3 days	Fingers 1, 4, 7, and 10 out
Every 4 days	Fingers 1, 5 and 9 out
Every 6 days	Fingers 1 and 7 out
Every 12 days	Fingers 1 out only

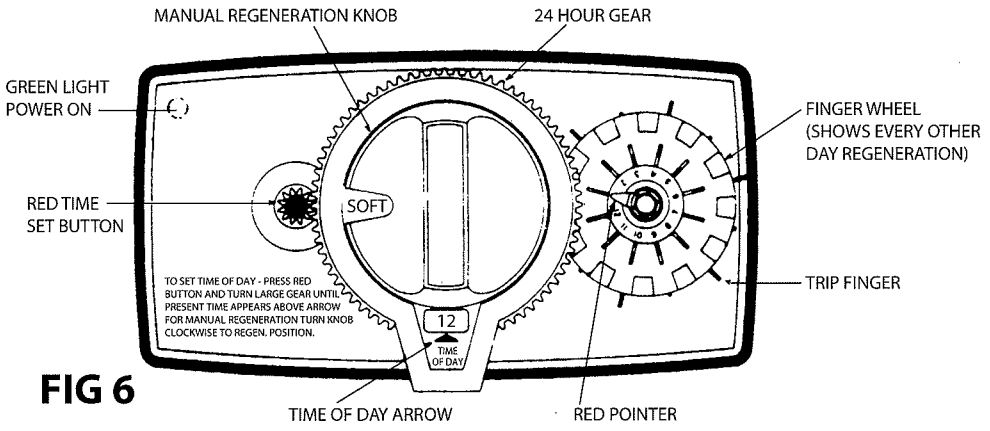


FIG 6

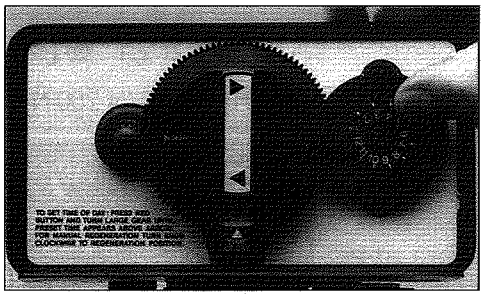


FIG 7

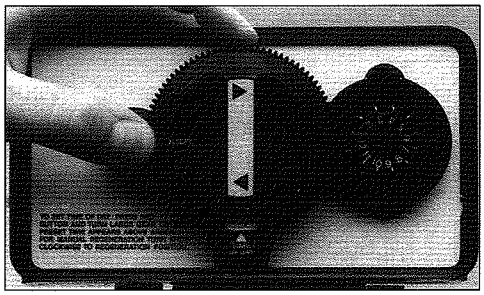


FIG 8

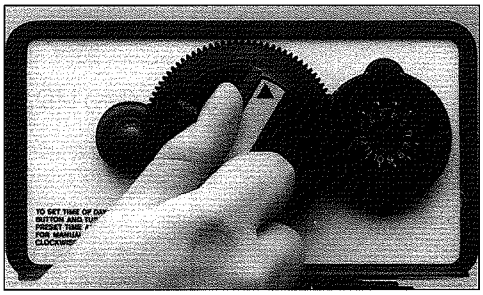


FIG 9

DX500 PROGRAMMING INSTRUCTIONS

Your water softener has been pre-programmed to cope with average site conditions. However, the softener will not work efficiently unless programmed properly. By following the instructions below good performance will be obtained but for *maximum salt efficiency* and *economy* of water use contact Waterside on 01376 550577 for FREE commission service. Our trained service engineers will be pleased to answer any queries you may have.

To program the unit yourself first consult Fig. 11 to familiarise yourself with dials, etc.

REMOVE TOP COVER

Undo the four screws (two on each side) and wing nuts. The top cover can then be removed (see Fig. 10).

SET HARDNESS DIAL

Use the test kit provided to obtain the hardness then grasp the centre of the hardness dial and pull gently forward. Now rotate the dial until the correct hardness aligns with the white dot (in Fig. 11 the hardness is set at 20°). Replace top cover.

PRIME SALT TANK

Pour one gallon of tap water into salt container.

Programming is now complete. Except for filling with salt (see No.10, User Maintenance), no further action is required.

NOTE: This softener regenerates on demand and therefore will do so automatically any time day or night.

This machine is not suitable for installation on a 22mm unvented supply system.

DX500 CONNECTIONS

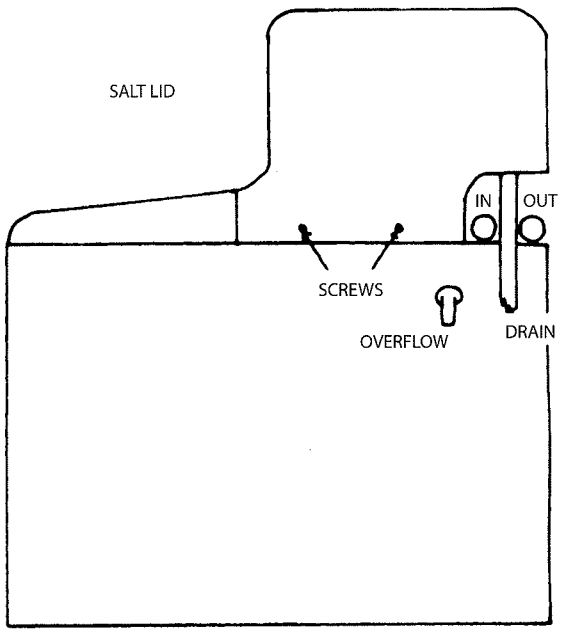


FIG 10

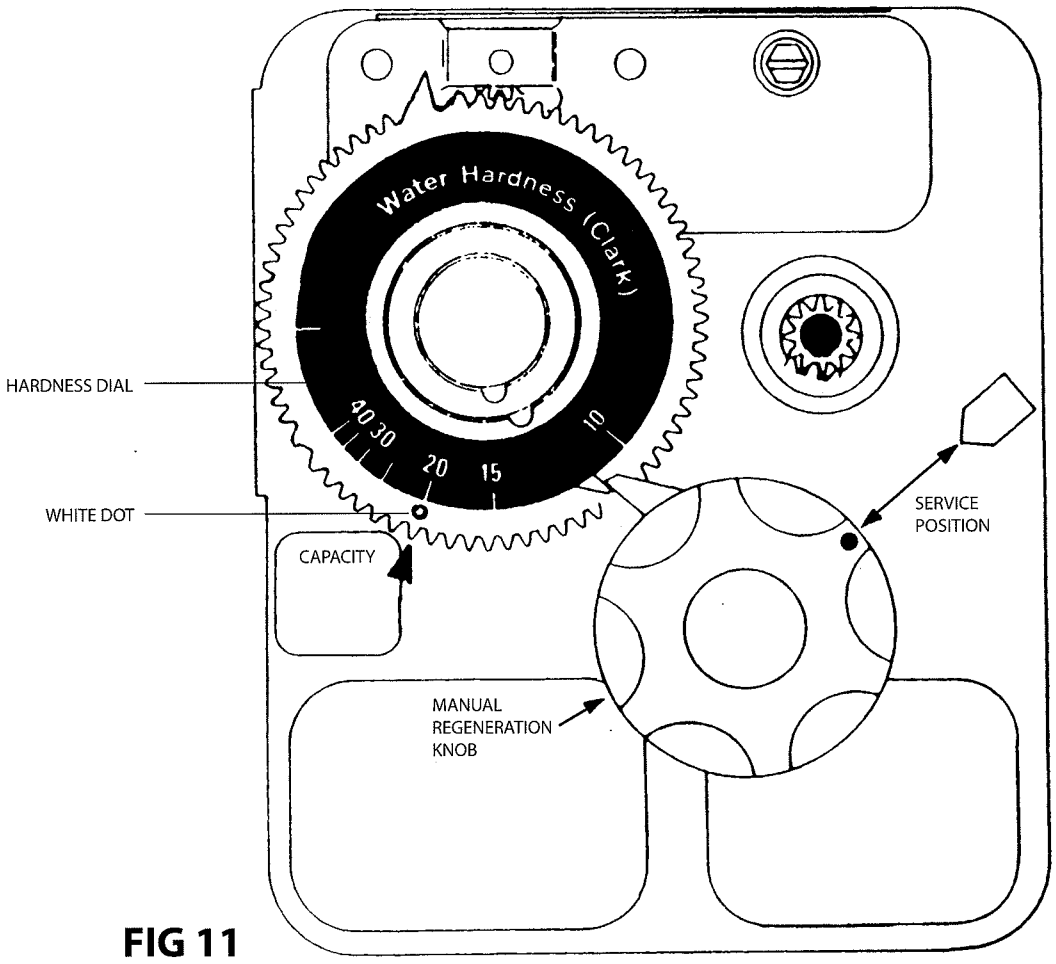
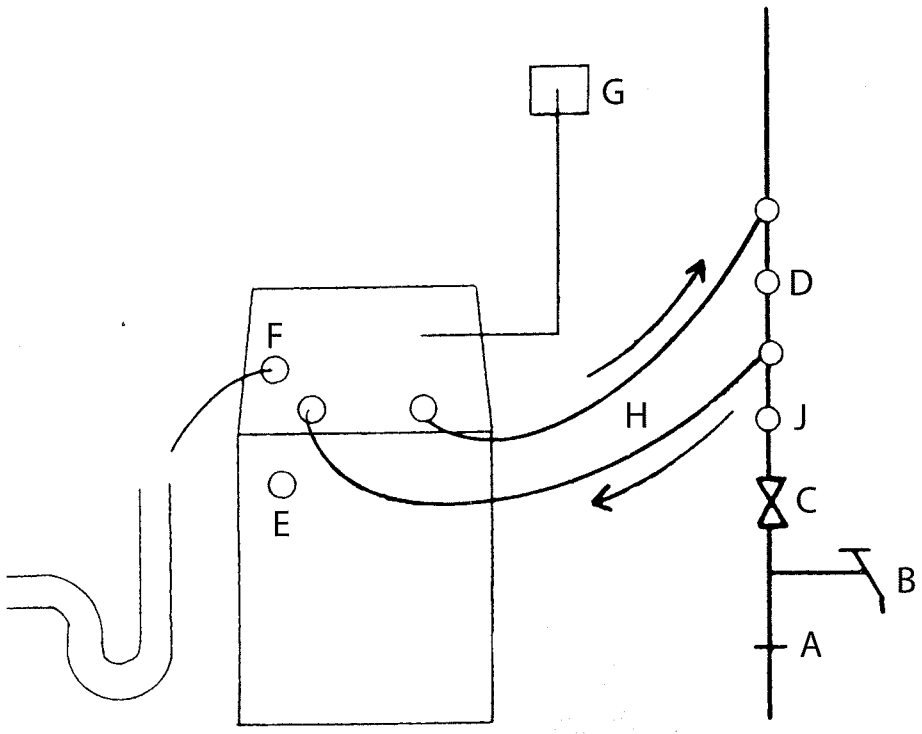


FIG 11

CONNECTION LAYOUT



A STOP COCK
B DRAW OFF FOR HARD WATER
C PRESSURE LIMITING VALVE (if required)
D BYPASS VALVES
E OVERFLOW FITMENT
F DRAIN HOSE
G POWER SUPPLY
H CONNECTION HOSES
J SINGLE NON-RETURN VALVE