



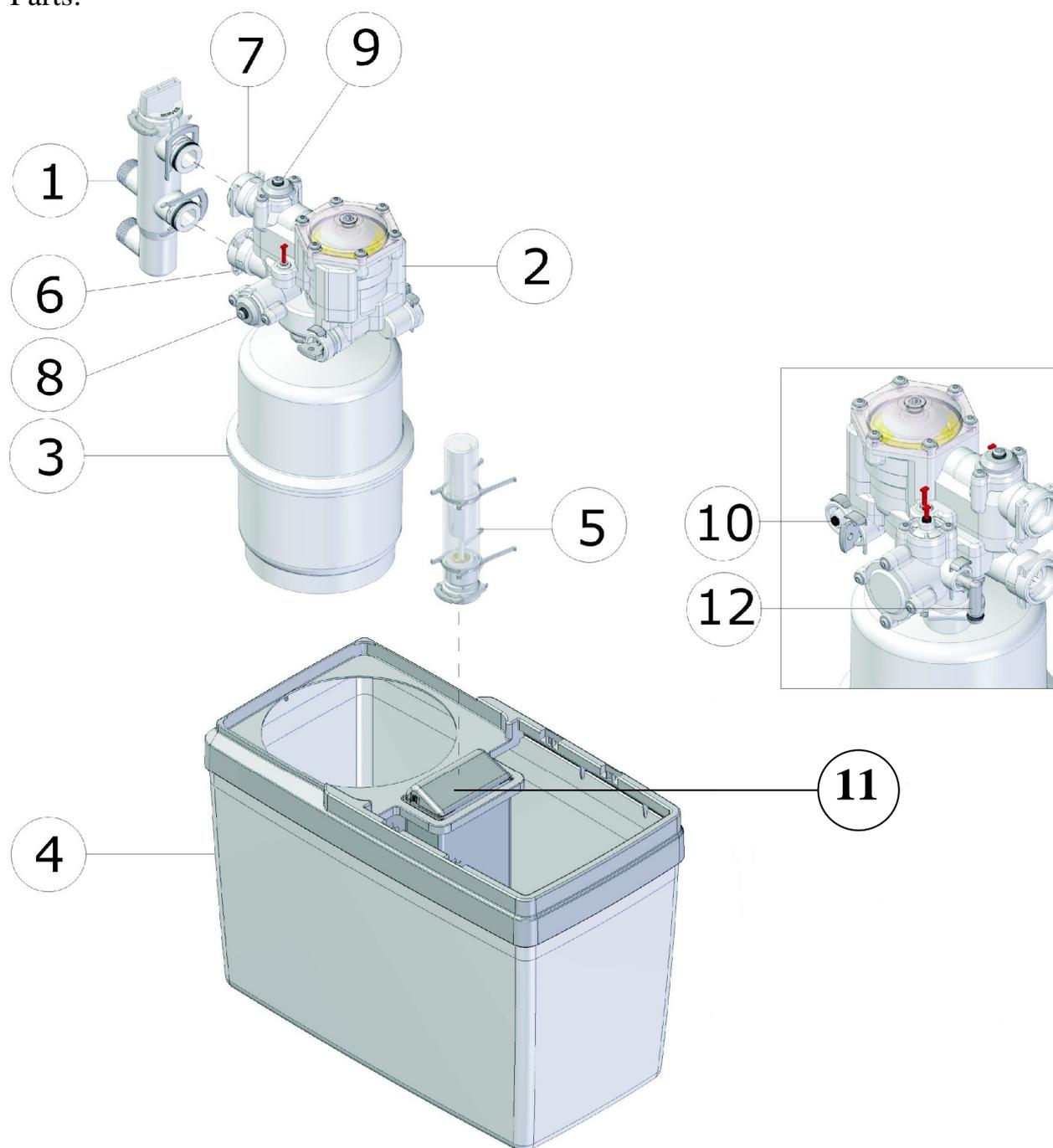
# Delta Water Softener

## Installation & Operating Instructions



## Delta Water Softener

Parts:



Parts (as numbered above)

1. Bypass set (Optional)
2. Valve housing
3. Resin cylinder
4. Cabinet
5. Brine valve
6. Water inlet
7. Water outlet
8. Blending regulator
9. Hardness controller

10. Brine valve connection
11. Brine valve chamber
12. Drain outlet

Items supplied but not shown:

- 3 meters of hose for drain and overflow
- 2 washing machine style tap elbows
- 1 5mm Allen (Hex) key
- 1 overflow elbow
- 1 pair of flexible connection hoses

## Precautions:

- Make sure you have all necessary tools on hand before starting the installation, including a 5mm Allen (Hex) key (supplied).
- This unit must be installed according to local water regulations.
- **Read this manual carefully.** If you have any questions or remarks, please contact your Delta supplier.
- Check incoming pressure: minimum 1 bar (dynamic), maximum 6 bar (static) (15 - 100 PSI). If necessary fit a pressure limiting valve (PLV).
- Do not install the Delta Softener close to a heating source (environment temperature must be below 50°C).
- Protect softener drain (12) and drain overflow against frost.

## Installation:

This information is intended for the person fitting this unit. An installation kit will be required and is available from your dealer if not already obtained.

Close the mains valve (stop cock) and make sure the pressure is released from the piping; this can normally be done by opening the kitchen tap.

### **Installation without the bypass installation kit.**

Cut open the mains water supply in order to install stop taps with ¾" BSP connections, non return valve and bypass (see picture). These connections can be purchased from you Delta dealer.



### **Installation with the bypass installation kit.**

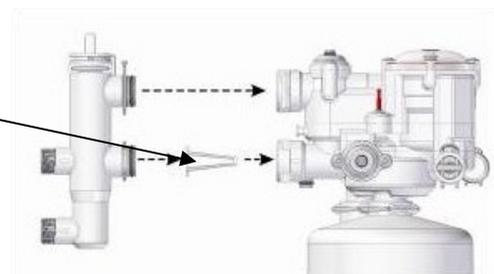
Cut open the mains water supply in order to install the angled stop taps supplied.

The connections to the softener will be by either ¾" BSP adaptors or the Delta Bypass, the bypass comes with a non return valve fitted to comply with regulations. Connect the softener to the stop taps using flexible hoses (supplied in the bypass installation kit) following the arrows on both Bypass and softener for water inlet and outlet.

**Pay attention that the inlet filter doesn't fall out.**



Inlet Filter

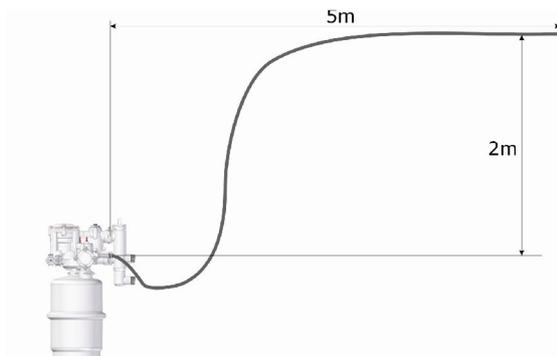


*Optional Delta Bypass*

**Caution:** Make sure the bypass set is set in 'bypass' and not in 'service'. This applies to both types of bypass installation.

## Installation Cont:

Connect the straight drain outlet (12 shown on first page and highlighted below) to a local drain by means of a 13 mm corrugated drain hose as supplied with the softener. This drain hose has been reinforced to avoid problems caused by the hose kinking. Please protect the drain against frost and heat (min. temp. 5°C, max. temp. 50°C).

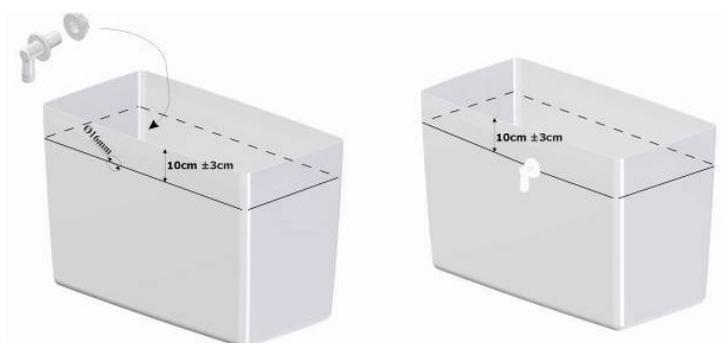


The maximum height and distance that the drain hose can be run is shown above. The drain can be run to an open gully or to a fixed drain outlet. In the latter instance an air gap device must be used to meet bylaw requirements.

If the brine system (5 on first page) is not already in place undertake the following. Connect the brine valve to the softener (see diagram below) by means of the Ø4mm flexible tube. Insert the tube as far as possible (to stop) into the quick-release couplings. Make sure not to squeeze the tube; avoid kinks.

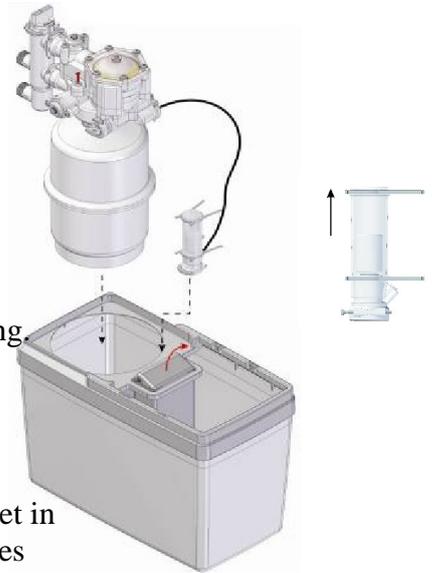


Make sure to install the supplied overflow. **Remove softener from the salt bin before drilling;** drill a hole (Ø16 mm) in the side wall of the cabinet. The location of the hole is not important; make sure however that it is approx. 10cm down from the top edge of the cabinet. Once the hole has been drilled, mount the overflow elbow and secure it with the supplied nut (see below). After drilling, remove all bits of plastic that have fallen into the cabinet. Attach a length of the corrugated hose (supplied) to this elbow (no securing clip is needed) and feed out through an adjacent wall so that a small amount is visible on the external wall. Make sure the hose has a constant downhill run to where the end is visible.



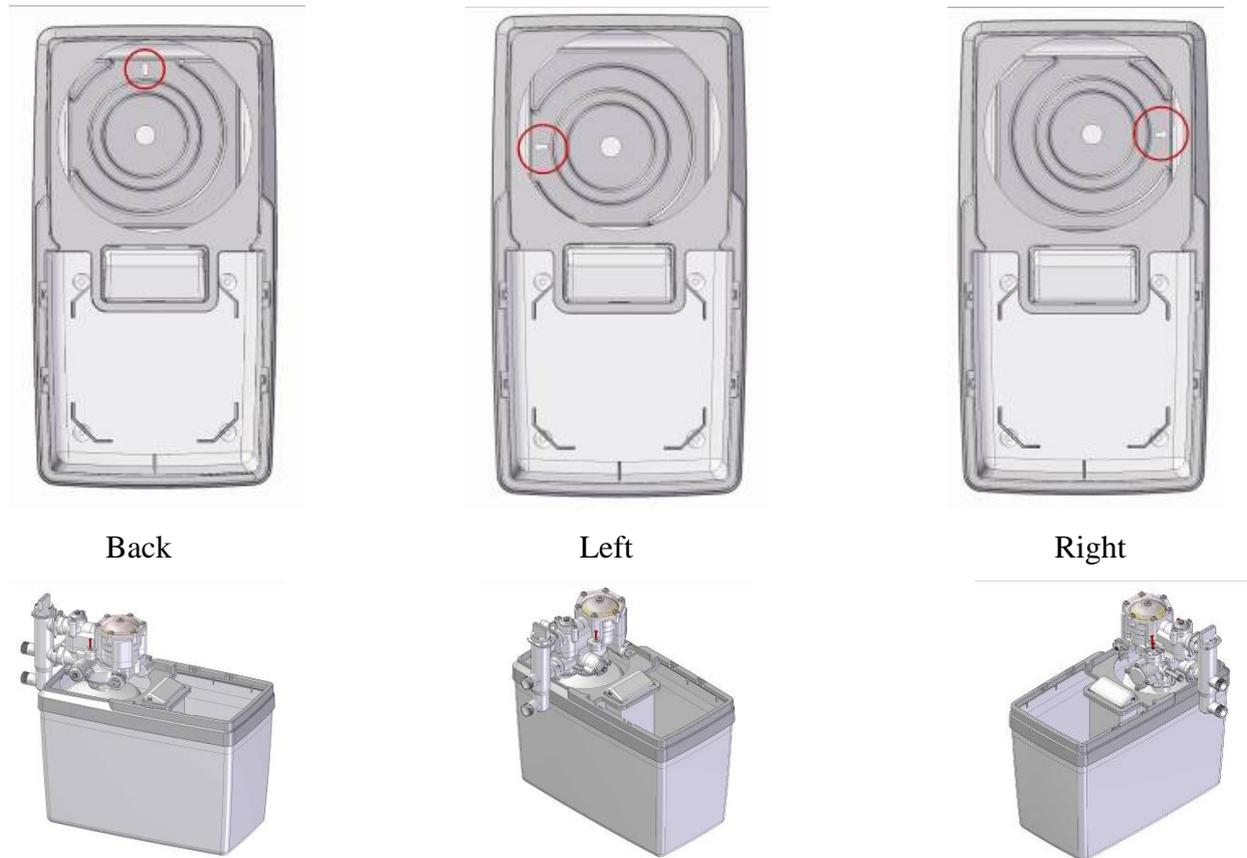
## Placing the resin cylinder and valve assembly into the cabinet and adjusting orientation.

To place the main resin cylinder and valve assembly back into the cabinet, lower into the rear recess. To install the brine valve, open the cover of the brine valve chamber (11 on first page) by pressing it gently at both sides (see diagram below). Now put the brine valve in the provided space, with the top side up. Make sure that the brine valve goes all the way down to the bottom of the brine valve chamber. Make sure not to squeeze the tube and avoid kinking. Disconnect if necessary and reconnect correctly. Close the cover.



The resin cylinder and valve assembly can be installed in the cabinet in three different ways; at the back, to the left or to the right. This gives flexibility as to how the main connections to the softener are orientated to the cabinet location.

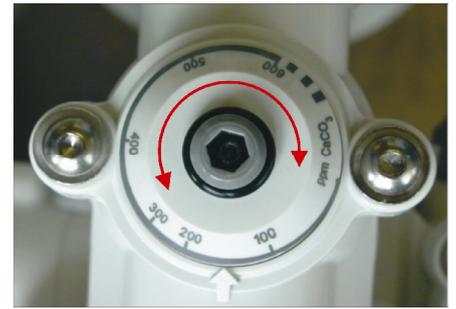
The support at the bottom of the cabinet must be altered to face in the same direction as the outlet ports. There is an arrow indicating the direction (see diagram opposite – the arrow is indicated by the circle)



## Set Up

Adjusting the water hardness.

Your softener must be adjusted to operate to the local water hardness. This is done by using the 5mm Allen (Hex) key to set the hardness dial (9 on the first page and below)



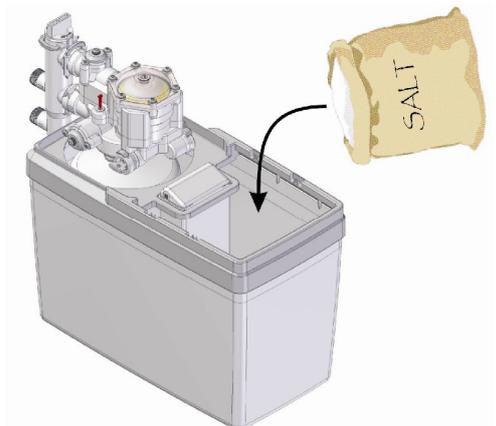
Blending water quality

The Delta is unique in that the soft water can be blended back with the hard water. In some cases this may be required if the water seems softer than required. Any blend will attract scale and scum problems so we would not normally recommend you to do this. If blending is required the dial (8 on the first page) can be adjusted with the 5mm Allen (Hex) key. The setting is proportional, i.e. 1/10 – 1/5 – 1/3 or 1/2 of total incoming hardness. For maximum softening set dial to 0 as shown.



## Start up

Make sure all connections are made secure before starting up the softener. Check that the inlet valve, outlet valve and bypass are all closed. Open the main water valve (stop cock) to the property and allow the water system to settle down.



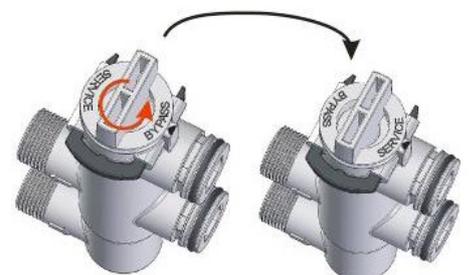
While this is happening fill the softener with salt up to the lip of the cabinet (see right)

Add water into the softener cabinet, via the aperture, until the water level is 10cm (4") high in the brine valve chamber – see below ( the float on the brine valve must be afloat)



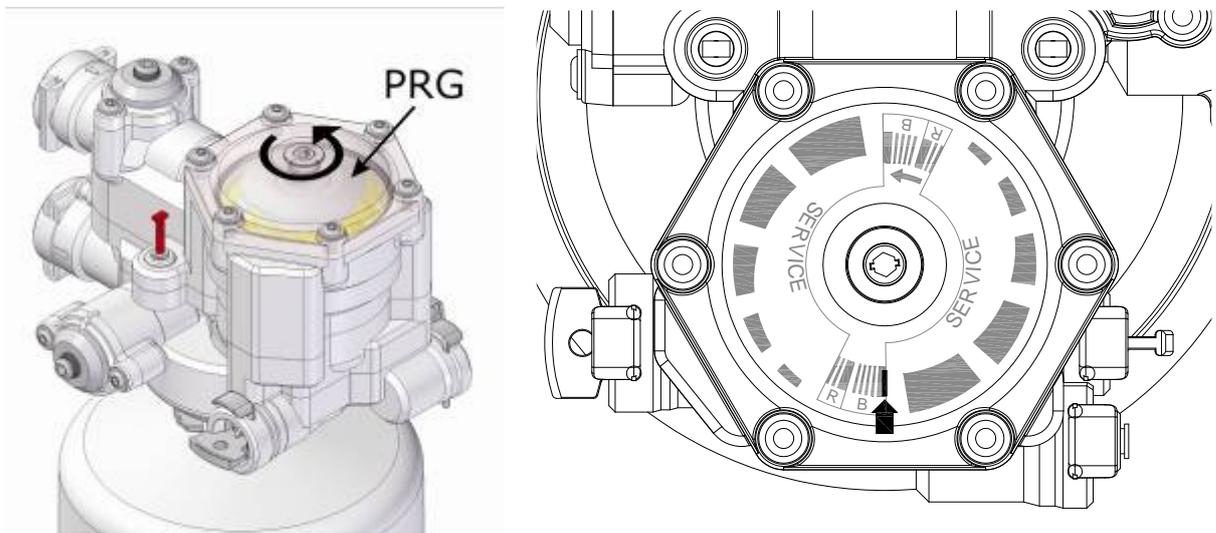
Slowly open the inlet valve to fill the resin cylinder. Open the nearest tap (that will be on softened water) and then slowly open the outlet valve. Alternatively turn the optional 'bypass' to 'service.'

There will be a spluttering from the tap as air is purged from the system. Once water is running freely this tap can be closed.



Undertake a manual regeneration

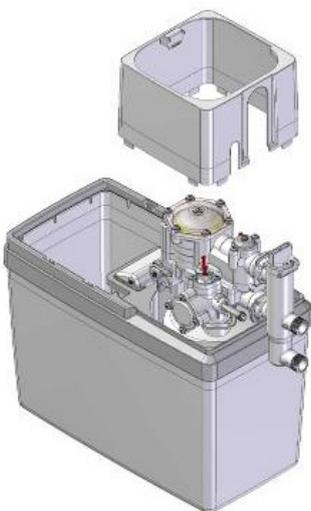
Use the 5mm Allen (Hex) key provided to turn the program disk (PRG) manually.



Turn the programme disc counter (PRG) counter clockwise until it is in the above position. When the arrow and the small line on the transparent cover reach the area marked by “B” (brining), the regeneration will start. Immediately, the PRG will drop down a little (you will be able to see and hear this). “R” stands for refill (refilling the cabinet with water at the end of the regeneration stage). To make sure the softener is in regeneration, there should be a small water flow to the drain, and the water level in the container should drop.

Let the regeneration perform until it stops automatically. The estimated time is approx. 12 minutes. When the regeneration has stopped, no more water flows to the drain. This is a clear indication that the regeneration stage is over.

Open the nearest cold water tap. Allow the water to run for a while to allow hard water within the pipes to purge through. The water should now be soft. If you have a hardness test kit to use this will indicate to you that you now have softened water. With a traditional indirect water system, with header tanks in your loft, it may take a few days for the softened water to be supplied around your property.



Place the square shaped valve cover onto the valve. Make sure that the fittings fit in the large opening and the drain outlet is in the small opening. Then place the main cover into position. For future salt replenishment you only need to remove the top cover.



Please contact your supplying dealer should you have any queries with these instructions.

**Soft:** *Less than 100ppm*

**Slightly hard to moderately hard:** *100 – 200ppm*

**Hard to very hard:** *Above 200ppm*

### REMARKS:

It is recommended that a water softener is installed by a professional. Although the DELTA softener is probably the easiest and safest softener on the market, it is imperative that all necessary precautions are taken and **local legislation is followed**.

This installation guide is written to help the professional installer keeping in mind that this person has essential knowledge about hydraulic softeners and domestic plumbing.

Proper working of the softener will be determined by correct installation.

**An annual inspection** of your Delta softener will guarantee optimal functioning and a long operating life.

*The DELTA WATER ENGINEERING team is proud of its achievement in having provided in what we believe to be the best softener available today.*

*Moreover, we are proud to have you as a customer. We will do our utmost to deserve your trust.*