

Navy Water Softener

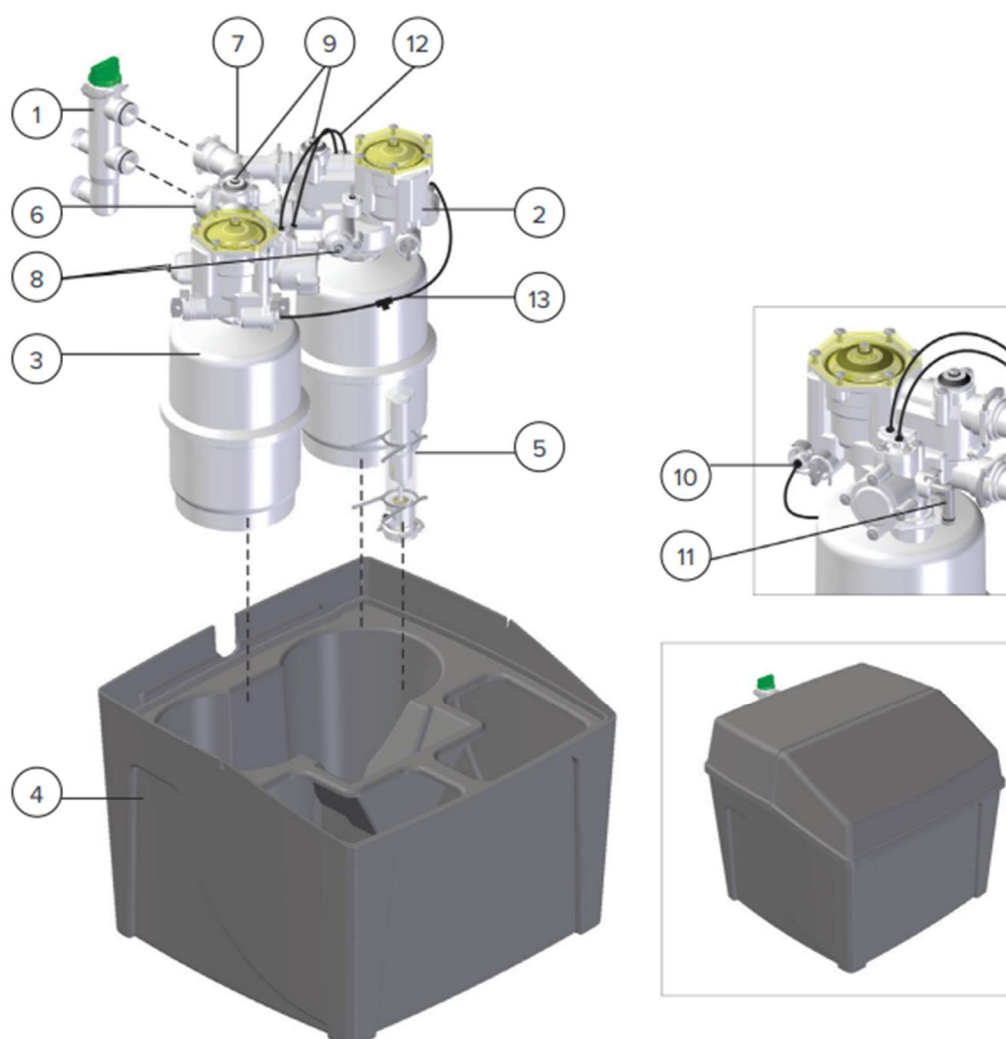
Product Manual



ULTRA SOFT
WATER SOFTENER SPECIALISTS



Parts And Assembly



- | | |
|----------------------------------|--------------------------|
| 1. Bypass | 8. Blending Regulator |
| 2. Valve Housing | 9. Hardness Regulator |
| 3. Resin Tank | 10. To Brine Valve |
| 4. Container For Device And Salt | 11. To Drain |
| 5. Brine Valve (Float) | 12. Communication Tubes |
| 6. Water Inlet | 13. Tubes To Brine Valve |
| 7. Water Outlet | |



General Information

Read this manual carefully. If you have any questions or remarks, please contact a member of our team. Make sure you have all necessary tools on hand before you begin with the installation and follow all local legal regulations.

It is recommended that a water softener is installed by a professional. 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 proper installation. An annual control of your softener will guarantee optimal functioning and a long operating life.

Water To Be Treated

Check incoming water pressure. Pressure should reach a minimum of 1 bar (dynamic), and maximum 8 bar (static) (15 PSI- 116 PSI). If necessary reduce incoming pressure.

The pressure behind the softener must be at least 1 bar to ensure a good functioning of the softener. If this pressure of at least 1 bar can't be guaranteed then a "Pressure Guard" is available for purchase separately. The water should be free of sediment, chlorine, iron and manganese.

Positioning The Softener

The softener has to be installed on a flat, stable base indoors and protected from direct sunlight. The softener must be installed on a dry location and certainly not in an acidic environment. Do not install the softener close to a heating source (temperature must be below 40°C) and ensure the system is protected from frost (including drain line).

The bypass is not designed to be left behind without the softener. It is not a shutoff valve. The provided overflow has to be installed and connected at all times.



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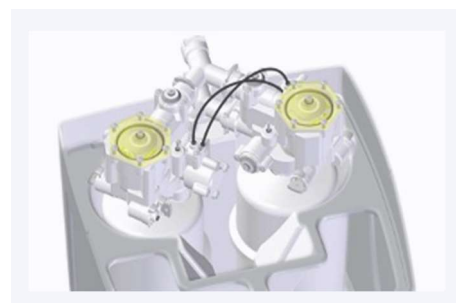
Starting The Installation

Release The Pressure

Close the main valve and make sure the pressure is released from the piping. This can be done by opening at least one tap.

Connect Units

Connect the two units by means of the provided Y-pieces. You can find them in the salt compartment. The Y-piece with the filter inside, needs to be mounted at the inlet of the valve. (= bottom connection) The other one must be mounted on the other connection. First connect the Y-piece to one unit and afterwards to the other unit. Secure them with the provided clips (4 pieces). You don't need to take the units out of the container to do this.



Check Communication Tubes

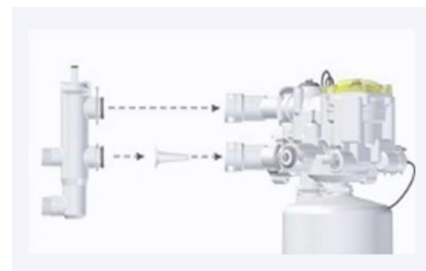
Check if all communication tubes are connected correctly. The two quick-release couplings marked with a green dot should be connected by a communication tube (0.157" diameter). The same should be done for the two couplings marked with a blue dot. Refer to the image above for more information.



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Install Bypass

Cut open the main water supply in order to install direct connections to the softener or to install the bypass (recommended). Follow the arrows on both, bypass and softener for the water inlet and outlet. Pay attention that the inlet filter doesn't fall out.



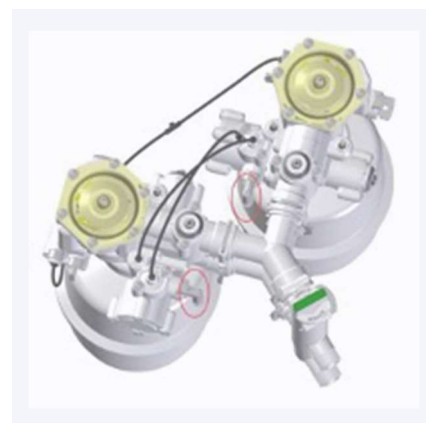
Before installing the softener, set bypass in 'bypass' mode and not in 'service'

Connect Drain

Connect both drain outlets (#12) to a local drain (with an air gap using the provided open drain connector, see next page) by means of the provided 13mm flexible drain pipe. In order to guarantee that the device will keep on functioning perfectly in the future, this drain pipe is spirally reinforced to avoid later blocking and/or kinks. It is possible that both drains are connected with each other through a Y-piece. In this case, connect the Y-piece to the local drain. Please protect the drain against frost and heat (min. temp. 5°C, max. temp. 40°C).

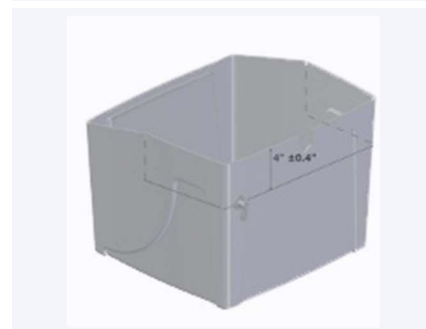
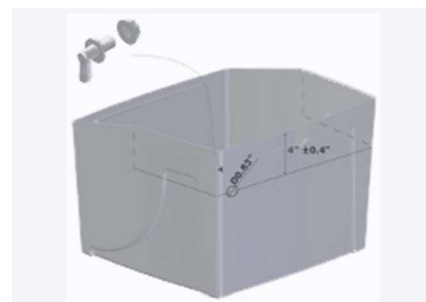


Please note that when another drain pipe is used the warranty on the softener is expired



Install Overflow Elbow

Make sure to install the supplied overflow tap. You can find the overflow in the salt container. The overflow needs also to be connected with the open drain connector (instructions on following page). First, pierce a hole (Ø21mm) in the side wall of the container. This hole should be located approx. 10cm down from the top edge of the container, on the line shown in the drawing below. Once the hole has been drilled, mount the overflow tap and secure it with the supplied nut. After drilling, remove all bits of plastic that have fallen into the container.





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Connect Drain Pipes To Open Drain Connector (ODC)

To connect the flexible drain pipe from the softener and from the overflow with a fixed drain pipe, you should use the provided O.D.C. (Open Drain Connector). This part provides the obligatory interruption according to the European standard EN1717. If the softener is connected to a fixed drain pipe without this ODC, the guarantee on the unit is expired.

The part with the two connections and the transparent part are snapped into one another. If they come apart, they can easily be snapped back together.

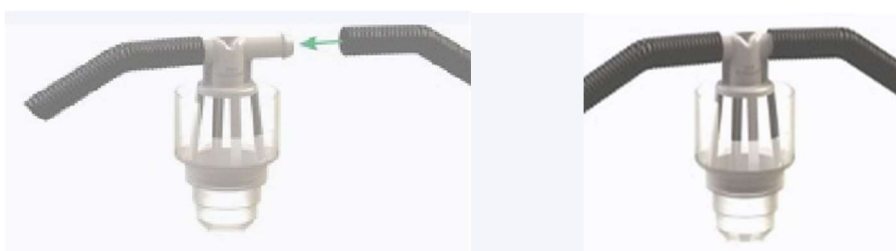
1. Connection 1 for spirally reinforced drain tube Ø13mm
2. Connection 2 for spirally reinforced drain tube Ø13mm
3. Connection 3 for socket (drain pipe Ø40mm)
4. Connection 4 for drain pipe Ø40mm



Step 1: Connect the spirally reinforced drain tube Ø13mm, that comes from the unit, with one of the two connections on the ODC. Push it on as far as possible.



Step 2: Connect the spirally reinforced drain tube Ø13mm, coming from the overflow, with the other connection. Push it on as far as possible. This is only possible if the overflow of the salt container is higher than the connection on the ODC.



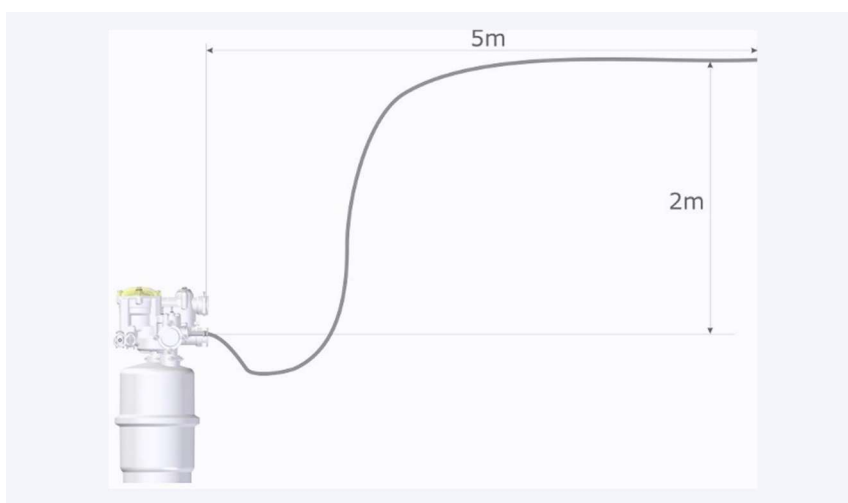


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Step 3: If the part with the connections for the tubes is disconnected from the transparent part, snap them back together. Even if the two parts are snapped together, they still can rotate. This means that the orientation of the connections can be adapted. In case the two parts keep disconnecting, you can glue them together.



Step 4: Now glue the complete ODC in a fixed drain pipe Ø40mm or a socket Ø40mm. Make sure that the ODC is mounted horizontally and that the part with the connections is still snapped in the transparent part. Respect a minimum distance of 100mm between the bottom of the ODC and the drain pipe.



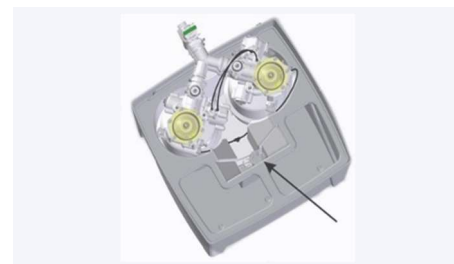
Maximum height and distance of flexible drain hose



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Check Brine Valve

Check if the brine valve is mounted correctly. This brine valve is located in the provided space in front of the unit. It must sit all the way at the bottom and with the right side up. See images for reference.



Check Connection

Verify if the brine valve is connected to the softener in the right way. The black tube Ø4mm comes from the brine valve, and must be connected with the small T-piece. This T-piece connects the two pieces of brine tube that come from both units.



Make sure that all tubes are fitted in the connections as far as possible. Check if there are no kinks in the tube and that the tube is not squeezed together.





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Settings

Hardness Regulator (Part Number 9 On Parts Diagram)

Measure the hardness of incoming water by means of a hardness test kit (supplied with unit if installation kit purchased). The setting of this unit is in CaCO₃. (10 ppm CaCO₃ = 1°fh) (1°dh = 1,78°fh). Adjust the hardness regulator to the measured value. This requires a hex key number 5.

Always set regulator on both units to the same setting.



Blending Regulator (Part Number 8 On Parts Diagram)

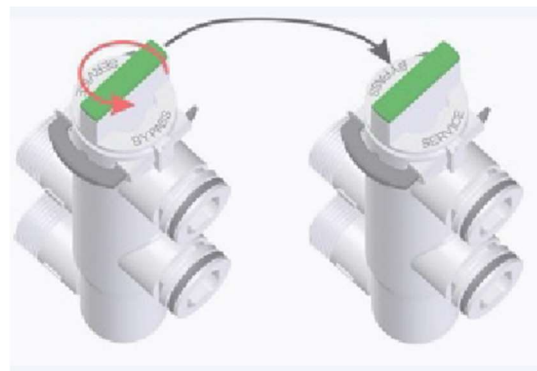
With the blending regulator, you can determine the outgoing hardness. Depending on the desired residual hardness, set outgoing hardness with a hex key number 5. The setting is proportional, i.e. 1/10 - 1/5 - 1/... of total incoming hardness.

Always set regulator on both units to the same setting.



Start Up

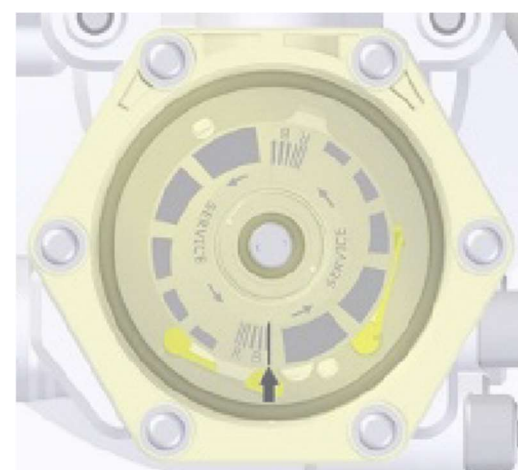
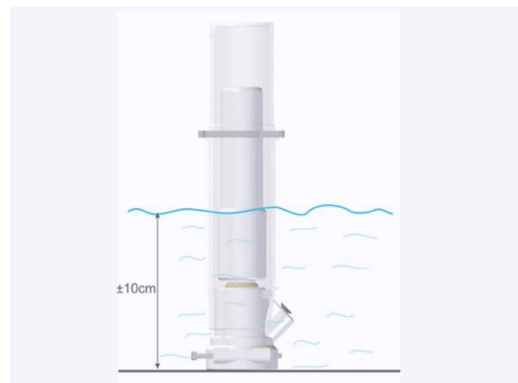
1. Leave Bypass in “bypass” mode, open main valve and flush for several minutes in order to avoid impurities from entering the softener. When you do not use a Bypass, open the main valve slowly as described in step 4.
2. Fill salt container with salt in the provided space. Use only specific salt tablets that are suitable for softeners.





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3. Add water in the salt bin until the water level is approx. 10cm (4") high. (the floater on the brine valve must be afloat).
4. Turn the bypass slowly to "service" mode. Open the main valve when you do not use a bypass.
5. Open a tap behind the softener so a flow runs through it. Some air may flow from the tap; this comes from the softener. This will happen only once; at start-up. Once only water flows from the tap, and no more air, close the tap.
6. Perform a manual regeneration.
 - a. Choose one of both units to perform a manual regeneration. Use a hex key number 5 to turn the program disk (PRG) manually.
 - b. Turn PRG counter clockwise until 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 container 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.
 - c. Let regeneration perform until it stops automatically. The estimated time is approx. 12 minutes. When regeneration has stopped, no more water flows to the drain. This is a clear indication that the regeneration stage is over.
 - d. Open a tap behind the softener for several minutes to allow residual water to be flushed.

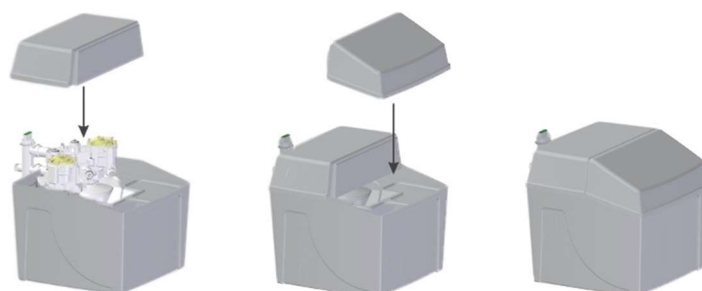


Check outgoing hardness with a hardness test kit and adjust blending if necessary



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7. Finally, place both lids on the container. First the cover fits over the Duplex softener, followed by the other cover which goes on top of the salt compartment. For future salt refills, only the front cover has to be removed. Connect the overflow to the drain as well.



Cleaning

When cleaning the unit, it is only recommended to clean the external with a damp cloth. The use of abrasives, detergents and soaps is not permitted.

Resin Cleaning

The only cleaning agent that is allowed for the resin is resin clean (available on our website). The use of liquid acids or bases will affect the working of the resin and damage the synthetic material. Failure to comply with these regulations, a failure of the device or accident claim will not be eligible for warranty and stops the product responsibility of the manufacturer.

1. Disconnect the black tubing $\text{Ø}4\text{mm}$ from the valve. Push the black ring on the coupling and pull out the black tube.
2. Connect the end of a 50cm part black tubing $\text{Ø}4\text{mm}$ with the valve. Push it in the press fitting as far as possible. The other end of the tubing $\text{Ø}4\text{mm}$ goes into the bottle of resin clean.
3. Use a hex key number 5 to turn the program disk (PRG) manually. Turn PRG counter clockwise until it is in the position as shown in the image on the following page. When the arrow and the small line on the transparent cover reach the area marked by "B" (brining), a regeneration will start. Immediately, the PRG will drop down a little (you will be able to see and hear this). Now the unit will start sucking up the resin clean.



4. Let the unit suck up 150ml Resin Clean. After sucking up the Resin Clean, disconnect the Ø4mm tubing from the valve and push the black Ø4mm tubing, coming from the brine valve, back in the press fitting on the valve. The unit will now complete its regeneration. After the suction, zone marked with the letter 'B' (=Brining), the program disk rotates until the arrow comes into the zone marked with the letter 'R'. The letter 'R' stands for refill (the refilling of the containers with water at the end of the regeneration).
5. Let regeneration perform until it stops automatically. The estimated time is approx. 15 minutes. When regeneration has stopped, no more water flows to the drain. This is a clear indication that the regeneration stage is over.
6. Repeat previous actions on the other unit.
7. Open a tap behind the softener for several minutes to allow residual water to be flushed from the tubing.

