

Operating Manual

for the Operator

Water softener

LEYCOsoft Pro 9 (1417)

LEYCOsoft Pro 15 (1418)



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1 Safety

1.1 Explanation of symbols

1.1.1 Safety notices

Safety notices are marked with symbols in this manual. The safety notices are introduced by signal words that emphasise the extent of the hazard.

WARNING

This combination of symbol and signal word indicates a possibly dangerous situation which could lead to death or severe injury if not avoided.

CAUTION

This combination of symbol and signal word indicates a possibly dangerous situation which could lead to minor or slight injuries if not avoided.

NOTE!

This combination of symbol and signal word indicates a possibly dangerous situation which could lead to property damage if not avoided.

1.1.2 Tips and recommendations



This symbol highlights useful tips, recommendations and information for efficient and fault-free operation.

2 Your water softener at a glance

- A Control panel and display
- B Salt reservoir lid
- C Salt reservoir
- D Injector
- E Valve assembly
- F Chlorine disinfection unit bracket
- G Upper filter nozzle
- H Resin tank
- I Lower filter nozzle
- J Resin bed
- K Chlorine disinfection unit
- L Brine valve assembly

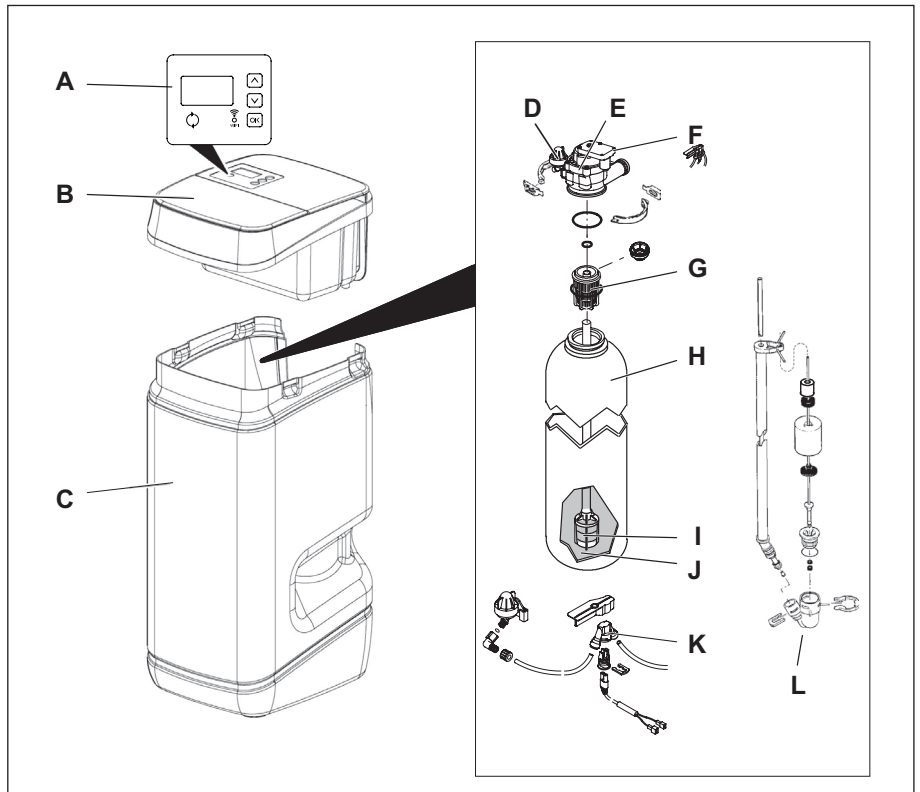


Fig. 1: Components of the water softener

The water softener works automatically in two operating phases:

- Water softening
- Recharge

2.1 Water softening

With the help of the water softener, (hard) untreated water of drinking water quality is converted into (soft) drinking and process water. During softening, the untreated water passes through the ion exchanger. In the exchanger, the hardness-forming components are removed from the water. These components (calcium and magnesium) are exchanged for sodium.

The water leaves the ion exchanger softened and is available as soft drinking water or process water.

2.2 Recharge

The ion exchanger's ability to remove the hardness-forming substances from the (hard) untreated water is limited. After its softening capacity is exhausted, the softening process must be reversed.

This reversal is referred to as recharging:

A brine (solution of water and salt) is fed into the ion exchanger and displaces the hardness-forming substances in it.

The resulting recharging water drains from the water softener as wastewater. After recharging is ended, the entire capacity of the ion exchanger is once again available for softening.

The brine is created in the salt reservoir of the water softener.

So that the water softener operates without faults, the operator must regularly check the salt level and, if necessary, add salt.

Untreated (hard) drinking and process water is available during recharging.

2.3 Disinfection

The water softener has a disinfection unit to prevent contamination between two recharges. All water-conveying components are disinfected during each recharge.

To prevent contamination, the operator must carry out the following measures:

- Do not disconnect the water softener from the mains electricity and water supply when you go away.
- After long periods without use, perform a water softener recharge.
- Adhere to the specified recharge intervals.
- After two years, the chlorine disinfection unit must be replaced by a qualified installer.

2.4 Avoidance of risks

2.4.1 Microbial contamination of the drinking water

⚠ WARNING

Danger to health due to microbial contamination of the water softener!

If the water softener is not used for a long time, the drinking water can become contaminated. Recharging of the water softener counteracts this.

- ▶ Do not disconnect the water softener from the mains electricity and water supply when you go away.
- ▶ After long periods without use, perform a water softener recharge.
- ▶ Adhere to the specified recharge intervals.
- ▶ Replace the chlorine disinfection unit after two years.

2.4.2 Power failures

⚠ CAUTION

Risk of flooding in the event of a power failure!

The electrically operated control valve does not shut off the water supply if there is a power failure.

- ▶ In the event of a power failure, shut off the water supply to the water softener.
- ▶ The water softener overflow routes overflowing water to the wastewater connection.

2.4.3 Salt

⚠ CAUTION

Danger to health due to inhalation, skin/eye contact or swallowing of salt!

Salt can be harmful to health in the event of direct skin/eye contact, inhalation or swallowing.

- ▶ After filling the salt reservoir, wash the hands thoroughly with plenty of water.
- ▶ If inhaled, go to an area with fresh air.
- ▶ In the event of skin contact, rinse off the affected area with plenty of water.
- ▶ In the event of eye contact, flush the eyes with open lids and running water.
- ▶ If swallowed, rinse out your mouth and drink plenty of water.
- ▶ If symptoms persist, consult a doctor.

2.4.4 Contact with wastewater

⚠ CAUTION

Danger to health due to contact with wastewater!

The wastewater has a high salt concentration; in case of contact, there is a health risk.

- ▶ In the event of skin contact, rinse off the affected area with plenty of water.
- ▶ In the event of eye contact, flush the eyes with open lids and running water.
- ▶ If swallowed, rinse out your mouth and drink plenty of water.
- ▶ If symptoms persist, consult a doctor.

2.4.5 Microbiological and sensory water quality

⚠ WARNING

Danger to health due to improper installation and operating conditions!

The microbiological and sensory quality of softened water is highly dependent on the installation and operating conditions of the water softener. There is a danger to health if the water softener is used improperly.

Moreover, odours can also form.

- ▶ Avoid long shutdown periods of the water softener. To do this, observe the specified recharge intervals.
- ▶ Only use salt compliant with DIN EN 973 Type A.
- ▶ Only use salts approved according to biocide legislation.
- ▶ The water softener must be serviced annually.
- ▶ Comply with the operating and ambient conditions given in the operating data (see technical data in the service manual).
- ▶ The raw water used must as a minimum be of drinking water quality.
- ▶ Do not feed the water softener with water from a well.
- ▶ When assessing the water quality, in addition to the function of the water softener consider other influencing factors:
 - Pipe material
 - Possible other additional equipment (water heaters, hot water tanks, etc.)
- ▶ Regularly clean the drinking water filter to prevent algae formation.

2.4.6 Incompatibility

NOTE!

Property damage due to the use of softened water!

The quality of softened water differs from that of normal tap water. If used without care, plants or aquatic animals may be harmed.

Plants and aquatic animals have special requirements in respect of the composition of water.

- ▶ Check the tolerance of plants or aquatic animals before using softened water.

2.5 DVGW certification



2.5.1 DVGW standards

Your water softener is certified according to DVGW standards (German Technical and Scientific Association for Gas and Water). The certification ensures that recognised codes of practice have been complied with and that safety criteria (e.g. prevention of microbial contamination, guaranteed effectiveness of the water softener) have been fulfilled.

To maintain this certification, certain water softener settings must not be changed.

- ▶ Only add salt tablets marked as DIN EN 973 Type A. They can be obtained from retailers.
- ▶ Only use salt tablets approved according to biocide legislation.

⚠ CAUTION

Health and environmental hazards due to loss of DVGW certification!

To maintain DVGW certification, preset values must not be changed and maintenance intervals must be complied with.

If certification is lost, the result can be increased health and environmental impacts.

- ▶ Only a qualified installer can make control settings.
- ▶ Comply with maintenance intervals.

2.6 Responsibility of the operator

The operator is the person who operates the water softener themselves or charges a third party with its use/application while continuing to bear the legal product responsibility for protection of the user, personnel or third parties during operation.

2.6.1 Operator duties

In addition to the safety instructions in this manual, the safety, accident prevention and environmental protection regulations applicable to the area of use of the water softener must be complied with.

The following is particularly relevant:

- ▶ The operator of the water softening system is obliged to carry out checking and inspection work at regular intervals and to arrange for annual maintenance by a trained technician. You can find more information in section „6 Maintenance“ on page 19.
- ▶ The operator must ensure that there are always sufficient consumables (salt tablets) available as a reserve.

3 Adjusting the water softener



3.1 Setting the current time

1. Press **OK**, until the menu "SET TIME" is selected.
2. Press **^** or **v**, until the desired time is displayed.



Keep **^** or **v** pressed to change the time quickly.

3. Press **OK** two times.
- ⇒ The set time is applied.

3.2 Setting the time format



Time format

By default, the water softener is set to a 24-hour time format.

This can optionally be changed to a 12-hour format.

- For times from midday to midnight, the addition **PM** is displayed.
- For times from midnight to midday, the addition **AM** is displayed.

If the time is set incorrectly, recharging takes place in the day rather than at night.



1. Press and hold **OK** until the menu "000 --" is displayed.



2. Press **OK** six times.
- ⇒ The setting "SET TIME 24 HR" flashes.



3. Press **^** or **v** to select the desired time format.
4. Press **OK** until the normal display (time) is displayed again.

3.3 Manual recharge

Recharge types



Manual recharge (Starts a recharge cycle)

A manual recharge makes sense in the following cases:


- The water consumption is higher than usual and it can be assumed that there is no longer any soft water available.
- The salt reservoir has been completely emptied and it must be refilled.
- After long periods during which the water softener has not been used.

Planned recharge

The recharge is performed at the set recharge time.



3.3.1 Manual recharge

- ▶ Press  and keep pressed for 3 seconds until there is an audible signal.
- ⇒ “RECHARGE NOW” flashes on the display and the recharge is carried out.



Recharge start

The motor starts up audibly when recharging starts.



Recharge duration


The recharge duration is:

- 1.5 hours for LEYCOsoft Pro 9
- 2.5 hours for LEYCOsoft Pro 15

During a recharge, only unsoftened water is available.



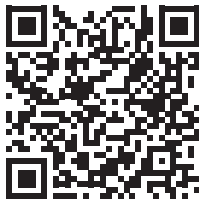
3.3.2 Planned recharge

- ▶ Press .
- ⇒ “RECHARGE TONIGHT” flashes on the display.
- ⇒ The recharge takes place at the set recharge time (default setting 02:00 a.m.).
Setting the recharge time, see Service Manual section “Setting the recharge time”.

4 Connecting to the Internet/WiFi and setting up the app

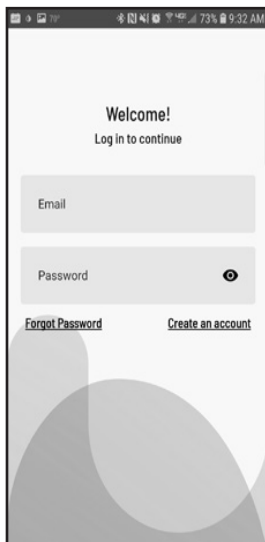
4.1 Downloading the iQua™ App

Go to the App Store or Google Play and download the iQua™ App. This must be installed on a smartphone to set up an account and connect the water softener to the cloud.

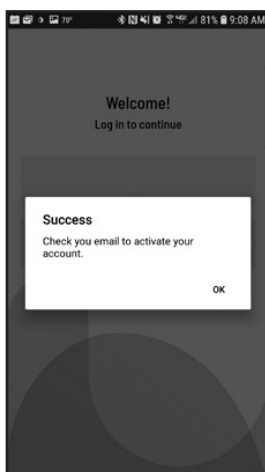


4.2 Setting up the account

1. Start the iQua™ App.
2. On the start screen press “*Create an account*”.
3. Fill in the necessary fields. In doing so, ensure the mandatory fields, marked with an *, are filled out.
4. Agree to the conditions and optionally select whether you would like to receive further information and confirm with “*Complete*”.



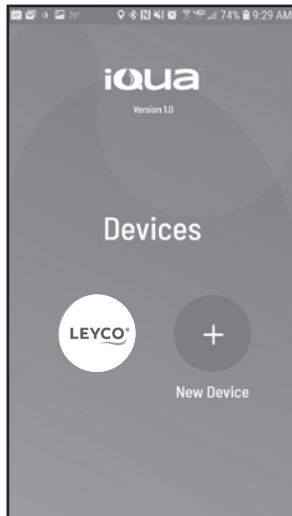
5. A message with a request for final account activation is displayed. In accordance with this message, you should have received an activation email at the specified email address. If you cannot see this in your inbox, check the spam or junk folder and set the myiqua.com email address as safe in your email settings so that future messages will not be blocked.



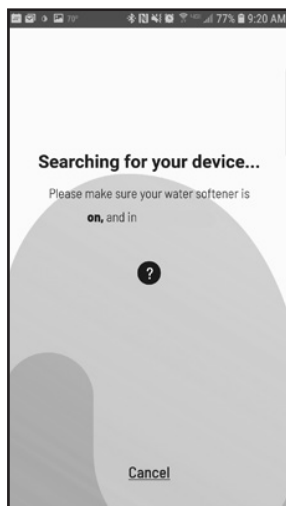
6. Activate your account by following the instructions in the email.

4.3 Connecting and registering the water softener

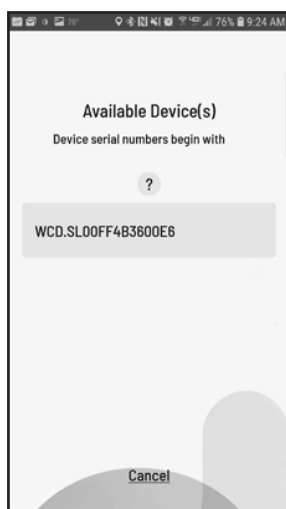
1. Login with your email address and the password you were given.
2. Press on the “+” symbol to add your water softener.



3. Follow the instructions on the smartphone display to place the water softener in pairing mode or see under „Pairing mode / connection status light“ on page 16 in this manual for more instructions.



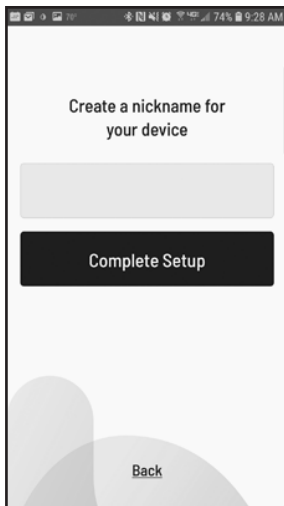
4. The app screen now displays a list of devices that are in range. The list should include a name that begins with **WCD** and is followed by a number. This is your LEYCOsoft Pro water softener. Select the water softener and your screen changes to “**Pairing your device...**”.
5. When the water softener’s display changes from “Conn” to “C-1”, then it is communicating with your smartphone.





- 6. The app screen now displays a list of WiFi networks that are in range. Select the desired WiFi network and enter the WiFi password. This WiFi network must have a live Internet connection. Confirm with “Save & Continue”.

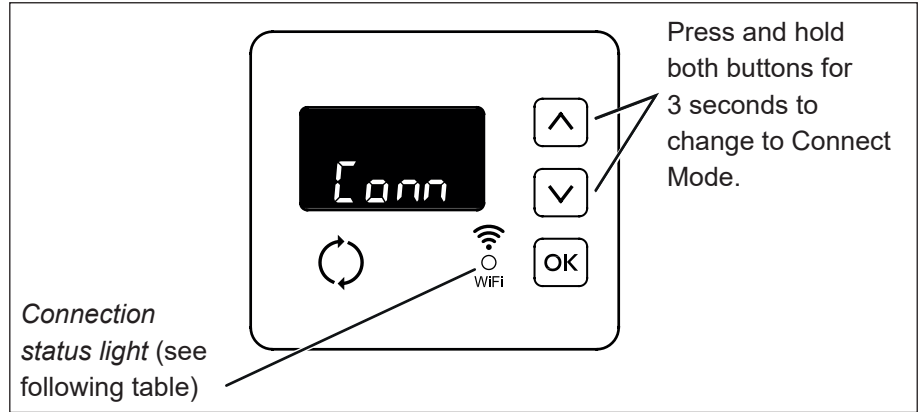
- 7. The water softener’s display changes to “C-2” once the system has created a connection to the home’s wireless network. Then it changes to “C-3” when it has connected to the iQua™-Server in the cloud.



- 8. The app asks you to create a nickname for your device (water softener). This is displayed in the “Devices” list upon logging in. After entering the name, press “Complete Setup”. The water softener changes to normal operating status.

4.4 Pairing mode / connection status light

1. Ensure that the water softener is in the normal status display (time without any other information).
2. Press and simultaneously and keep pressed for 3 seconds.



3. Release the buttons once “Conn” is displayed and the connection status light starts to flash in yellow.
4. The system is now in pairing mode, which it remains in for 15 minutes during which it is ready for connection to the cloud. If the coupling mode displays “Timed out” and the connection status indicator is off, pairing mode must be reactivated.

Display of the connection status light	Status
Flashing yellow	The system is in pairing mode and is waiting for a connection.
Green	System successfully connected to the cloud and registered.
Red	The system is currently receiving an over-the-air update.
No light	System not currently connected to the cloud.

5 Salt

5.1 Add salt

NOTE!

Property damage due to incorrect salt selection!

If unapproved salt tablets are used, there is a danger of property damage and malfunctions.

- ▶ Only use salt qualities corresponding to DIN EN 973 Type A.

1. Fill the salt reservoir to half the container height with approved salt (corresponding to DIN EN 973 Type A).
2. Position the salt reservoir lid.



Check the salt level regularly

Check the level in the salt reservoir at least every two weeks.

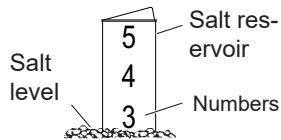
If the salt level remains largely unchanged, this can be an indication of a salt bridge. For more information, refer to section „7.2 Salt bridge“ on page 22.

5.2 Salt level monitoring system



After each addition of a water softener, the salt level must be set. The salt monitoring system estimates the salt level, with the accuracy varying depending on the type of salt. If the salt level is 2 or lower, the display flashes “LOW SALT LEVEL“ to remind you that the salt must be refilled.

5.3 Setting the salt level



1. Take off the salt reservoir lid and smooth the salt level in the reservoir. The salt should be evenly distributed in the salt reservoir to obtain the best possible monitoring result.
2. Inside the salt reservoir there is a tube with numbers from 0 - 5. The last number that can be seen is used in the following setting.
3. Press until "Set Salt Level" appears.



4. Press or until the number on the screen matches the actual salt level. If the salt level is 2 or lower, the display flashes "LOW SALT LEVEL". The function can also be disabled using the "OFF" setting.

5. After setting the salt level, press .
 - ⇒ The time of day is now displayed.

6 Maintenance

6.1 Checking and inspection work

The operator of the water softening system is obliged to carry out checking and inspection work at regular intervals.

The following work must be carried out at least every **2 weeks**:

- Checking the salt level (see „5.1 Add salt“ on page 17).
This type of check can be omitted if the salt level monitoring system including active connection to the iQua app is used. In this case the salt level is checked via the app.

The following work must be carried out at least every **2 months**:

- Checking of the raw water hardness and comparison with the value set in the water softener (see Service Manual, section “Setting the hardness”)
- Checking the soft water hardness (see Service Manual, subsection “Measuring the soft water hardness and readjusting the mixing” in the section “Ventilating the water softener and checking for leaks”)
- Visual checking for integrity and for possible leaks
- Water level in the salt reservoir
Under normal operating conditions and with a sufficient stock of salt, the water level cannot normally be seen. It may only be a few centimetres from the ground.
- Checking the wastewater flow
Under normal operating conditions, water must not flow through either the overflow hose or the wastewater hose.

The following work must be carried out at least every **6 months**:

- Checking for salt bridges (see „7.2.1 Checking for salt bridges“ on page 23)
- Cleaning of the salt reservoir

6.2 Maintenance work

In addition to the actions carried out by the operator, maintenance work must be carried out by a trained technician. The appointment of the technician and checking of the timely execution are the responsibility of the operator.

Every **12 months** a **minor service** must be carried out with the following work:

- General visual and operating check
- Checking of the brine line
- Leak check
- Servicing of the injector
- Servicing of the brine valve

Every **24 months** a **major service** must be carried out with the following work:

- All tasks of the minor service (so that a minor service is not required)
- Servicing of the control head
- Replacement of the chlorine cell

Separate, detailed instructions and content for the minor and major services by the technician are included in the respective maintenance kits or can be requested from support.

The contents of the separate instructions are defining for the maintenance work (minor and major service). The points mentioned here are for orientation only.

7 Troubleshooting

7.1 Possible errors and remedies

⚠ CAUTION	
Health hazard due to loss of DVGW certification!	
To maintain DVGW certification, preset values must not be changed and maintenance intervals must be complied with.	
If certification is lost, the result can be increased health and environmental impacts.	
<ul style="list-style-type: none"> ▶ Only a qualified installer can make control settings. ▶ Comply with annual maintenance intervals. 	

Error description	Cause	Remedy
No soft water at all	No salt in the salt reservoir.	Add salt and start a manual recharge („Recharge types“ on page 12).
	Salt bridge in the salt reservoir.	Break the salt bridge („7.2.2 Breaking salt bridges“ on page 24).
	Water softener not connected to the power supply.	Connect the water softener to the power supply. Finally, set the current time („3.1 Setting the current time“ on page 11).
Intermittently no soft water	Current time incorrectly set.	Reset the current time („3.1 Setting the current time“ on page 11).
	Recharge time incorrectly set.	Contact a qualified installer.
The water tastes salty		Contact a qualified installer.
No display	Power supply interrupted.	Remake power supply.
	Power supply interrupted.	Check site fuses.
Error code in the display		Contact a qualified installer.

7.2 Salt bridge

- A Salt reservoir
- B Salt
- C Salt bridge
- D Empty space
- E Water

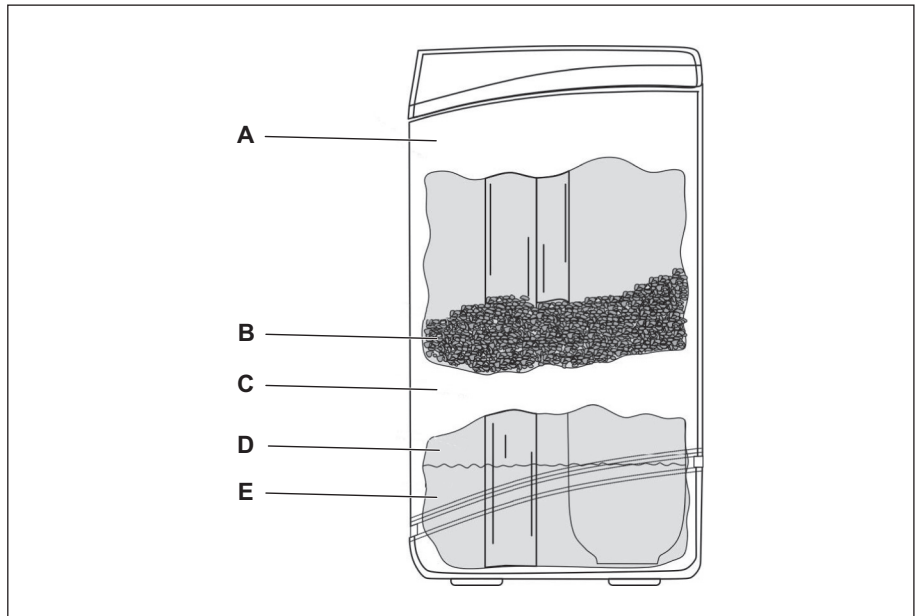


Fig. 2: Salt bridge

A salt bridge is a hard salt crust (C) caused by high humidity or use of the wrong type of salt in the salt reservoir (A).

If a salt bridge forms, an empty space (D) is created between water (E) and salt (B).

The salt cannot dissolve, and no brine can be formed.

The water cannot be softened without brine.

7.2.1 Checking for salt bridges

- A** Salt reservoir lid
- B** Rod
- C** 3 - 5 cm distance from the edge of the salt reservoir
- D** Marking

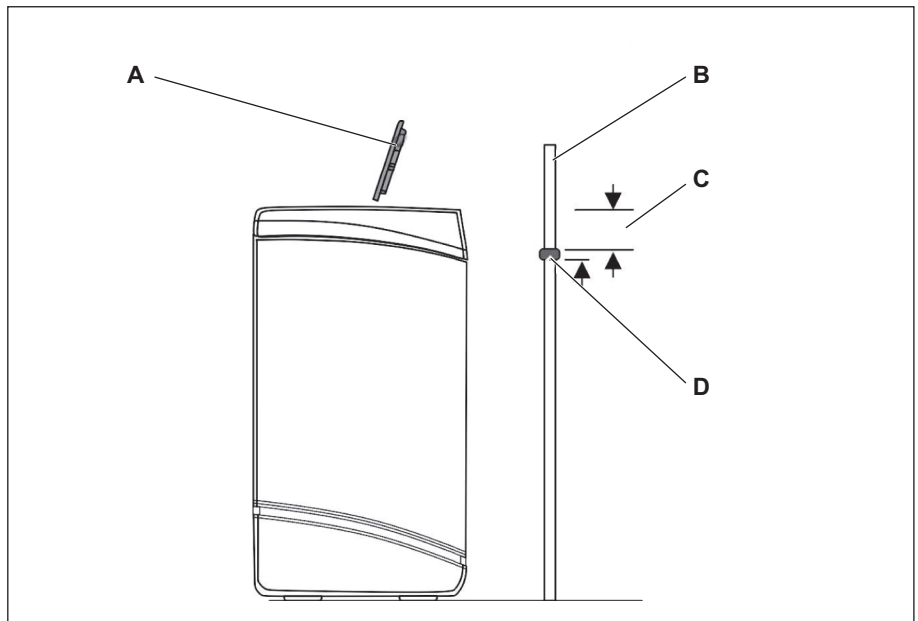


Fig. 3: Marking the reservoir height

1. Take off the salt reservoir lid (A) in an upwards direction.
2. Position the rod (brush handle, wooden pole or similar, B) vertically on the outside next to the salt reservoir.
3. Apply a marking (D) about 3 – 5 cm (C) below the edge of the reservoir on the rod (B).
⇒ The marking indicates how high the salt reservoir could be filled to its maximum.
4. Position the rod (B) vertically in the salt reservoir.



A salt bridge is present when noticeable resistance is felt before the mark (D) on the wooden rod reaches the edge of the salt reservoir.

7.2.2 Breaking salt bridges

- A Rod
- B Salt bridge

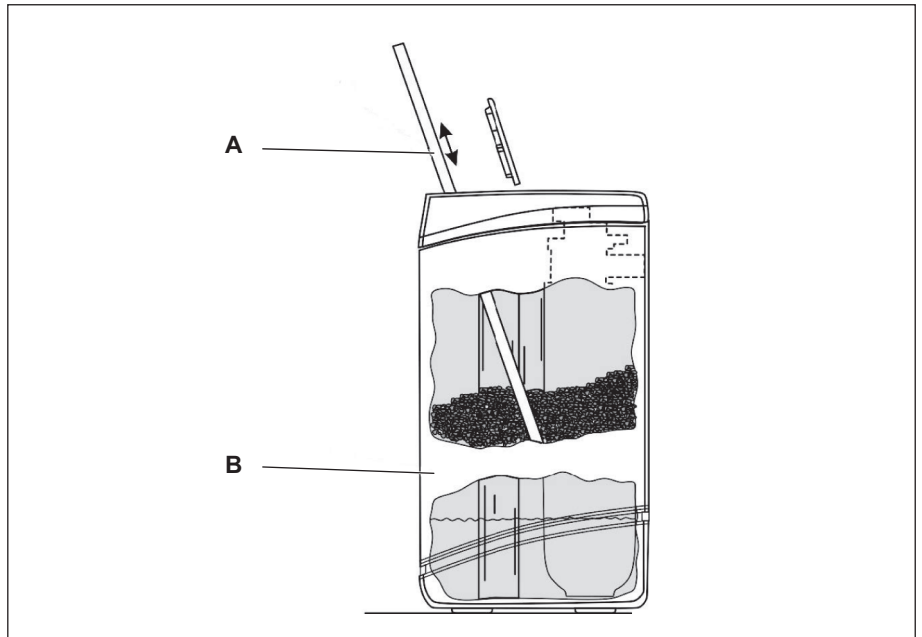


Fig. 4: Breaking salt bridges

NOTE!

Salt reservoir damage caused by external knocks!

- ▶ Do not apply force to the container from the outside or hit it with other objects.

1. If a salt bridge is present: Carefully press on the salt bridge (B) in several places using the rod (A).
⇒ The salt bridge will break off.

7.3 Procedure following a power failure

The water softener saves the following basic settings that were set during commissioning by the qualified installer:

- Model code
- Untreated water hardness
- Recharge time
- DVGW-specific settings



The internal memory of the water softener ensures that settings can be saved for 48 hours in spite of an interrupted power supply.

- ▶ If the time indication on the display flashes after a power failure, reset the current time ("SET TIME") (see „3.1 Setting the current time“ on page 11).

7.4 Procedure in the event of non-rectifiable faults

- ▶ In the event of non-rectifiable faults contact a qualified installer.

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