



MANUAL

Instructions for Use and Maintenance

LEX Plus 10 Connect Water Softener



Innovative solutions for smart people



Read the instructions for use attentively prior to starting the device!

Should these instructions not answer all your questions, please contact the manufacturer SYR first.

Competent assistance for all technical questions on our products, 24 hours a day under:

SYR 24-hour service
0800 61 05 000

From abroad
+49 2161 6105-0

For any information on the web control, the software and the SYR App, contact:

SYR Connect Hotline
0800 61 05 100

From abroad
+49 2161 6105-0

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1. Safety instructions

1.1 Symbols



Danger to life and limb! Caution!



**Important instruction regarding the correct operation of the device
Observe strictly!**

1.2 General safety instructions

Use only original spare parts and accessories that have been tested and approved by the manufacturer. The manufacturer is not liable for damages caused by the use of non-original spare parts and accessories or improper handling. Should these instructions not answer all your questions, please contact the manufacturer first.

1.3 Safety instructions - Electricity

An electric shock can be lethal or cause serious injuries; any non-authorized work on the electric system is strictly forbidden!



Prior to cleaning works on the device or close to it, always unplug the apparatus as water and current form a lethal mixture!



Only qualified installers are authorized to install the device.

Ensure that the socket is always readily accessible. If the cable of the device is damaged, replace it in order to avoid any risk. Unplug the device prior to changing any setting in the electronic system. The apparatus is delivered with a mains adapter.

1.4 Safety instructions - Salt

The residual regeneration salt will be flushed out of the regeneration tank along with the waste water, which should not be used for watering flowers or similar purposes. Observe the instructions in chapter „Installation site requirements“ to ensure perfect safety when draining the waste water and the salt.



The indicated salt quantities refer to salt tablets. When using industrial salt (salt pellets or blocks) quantities may vary.

1.5 Safety instructions - Temperature



Danger of scalding! Load resistances may become hot in operation and should not be touched.

Vent the water softening system right after the connection to the water mains to ensure perfect safety.

2. Foreword

To the customers' attention!

you made a very good decision in selecting this water softening system, as it stands for the latest developments in the water conditioning technology.

The SYR LEX Plus 10 Connect Water Softener is designed to protect pipes and water heaters against lime deposits, which reduce the water flow through the pipes and lead to a high energy consumption. By protecting appliances and valves, the device prevents expensive repair works.

There are no restrictions for the field of application according to DIN 1988.

The ion exchanger resin is located in a tank. The ion exchanger resin is regenerated in several cycles. The regeneration time is preset to 02.00 am. The control unit automatically adapts to the consumers' habits. The LEX Plus 10 Connect Water Softeners do not provide softened water during regeneration.

Synthetic pipes or other corrosion resistant pipes shall be installed in all cases, where water (process water) of 0 ° dH (German hardness degree) flows through the pipes to prevent corrosion. Galvanized or copper tubes can also be used in case of partial softening (approximately 8 °dH). This stabilizes the remaining carbonate hardness particles and forms the prerequisite for building up a homogenous protective coating in the downstream piping system. Some particular cases require an additional dosage of minerals/mineral solutions.

The functional parts are made of high-quality materials, which all meet the local regulations and specifications.

Verify that the device shows no visible damages as soon as it is delivered. In case of damage caused by transport, directly contact the forwarding agency.

The warranty does not cover damages caused by improper handling or operation.

Please refer to the terms of delivery and payment of your local dealer for any further or other claims.

To ensure trouble-free functionality, the regeneration salt used must comply with the requirements of the European Standard EN 973 (former DIN 19604 standard). We recommend Broxo or Solvay salt tablets.



We recommend to conclude a service contract to make sure that the perfect functionality of all water treatment devices is verified on a regular basis.

The ion exchanger resin is made up of small synthetic resin beads, which replace the calcium ions causing water hardness with sodium ions.

3. How the system works

The water becomes „soft“. However, the ion exchanger resin absorbs only a limited amount of hardness particles. Depending on the water hardness, the absorbing capacity of the resin becomes depleted sooner or later and has to be regenerated.

Regeneration with this system means removing the hardness particles from the ion exchanger resin.

The diluted salt brine that flows through the resin bed removes the hardness particles, which are then directed to the sewer.

The regeneration process requires only a small amount of salt and complies with EN 14743 and DIN 19636-100.

The water softening system undergoes automatic disinfection on a regular basis in order to prevent microbial growth. The small amount of chlorine required for that process is generated electrolytically from the brine sucked in during regeneration.

The regeneration is carried out automatically.

A water meter integrated in the device records the quantity of produced soft water, which is summed up in the electronic system. When the value set for the raw water hardness is reached, the electronic system triggers the required regeneration process.

4. Installation site requirements



Follow these instructions in order to prevent any problem with the LEX Plus 10 Connect Water Softener.

Install the water softener in a dry room, which is not liable to frost. The ambient temperature should not exceed 30 °C.

The system requires a power supply (230 V, 50 Hz) under constant voltage.

It also requires a gravity flow connection to the sewer for the waste water hose and the salt tank's safety overflow.

The water softening system is usually installed downstream of the protecting filter, the pressure reducing valve (compulsory when the static pressure is equal to or exceeds 5.0 bar) and upstream of a dosing pump (optional).

To prevent huge damage on the installation site due to a leaking device or supply line (for instance in an office, medical practice etc.), it has to be ensured that during the personnel's absence the water and power supply are interrupted upstream of the system.

We recommend our leakage detector Safe-T Connect with an integrated floor sensor (serial number: 2421.00.010).

Do not disconnect during the regeneration process.

When restarting the device after a service interruption, repeat the same steps as for the initial start-up (cf. the instructions for installation and start-up).

The water to be softened has to be clear, free of solid impurities as well as iron and manganese-free.

An additional water analysis may be helpful: we will be glad to offer you support by analyzing your water sample free of charge. Send us your sample with our accompanying letter that you can download in the Internet under www.syr.de > Service > [Formulare](#).

Contact us for further details.

5. Instructions of use

5.1 Menu level 1

The display is deactivated as a standard setting.

Simply touch the display to activate it. The start screen will be displayed.



Start screen
LEX Plus Connect



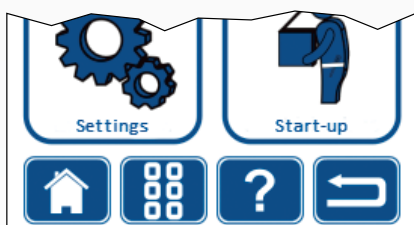
Menu key

Touch the display again to go to the main menu.

Basic settings for refilling salt, triggering regenerations, setting or changing the water hardness, information on the status of the device or statistics, further settings and start-up.

Touch the display again to go to the next submenu.

Use the following symbols in the lower section of the display when navigating.



Home - directs you immediately to the start screen



Menu - directs you to the main menu



Help - offers help and gives explanations regarding the settings.



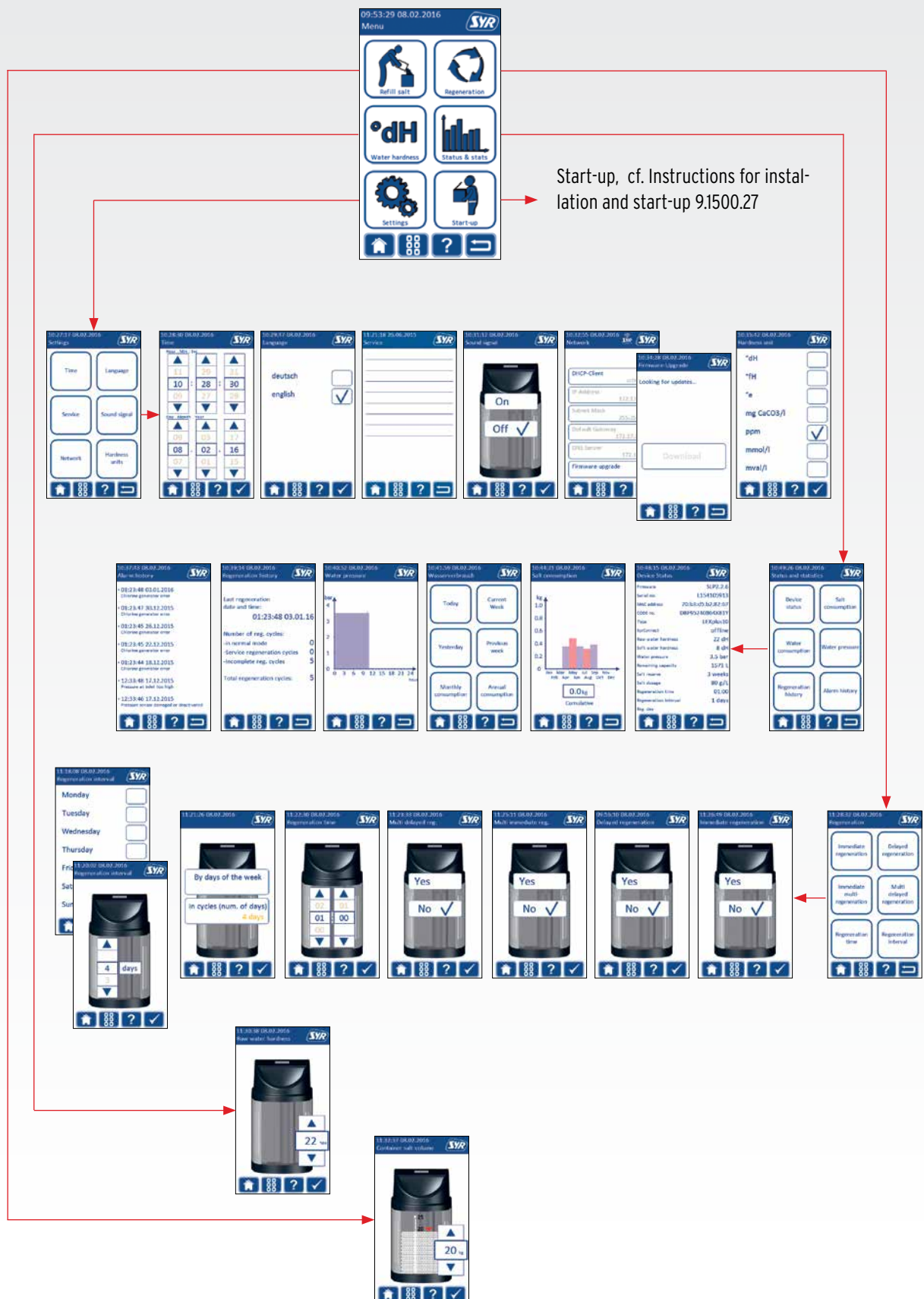
Back - goes back to the previous menu



Save - saves the setting

5.2 Menu structure - Menu level 1

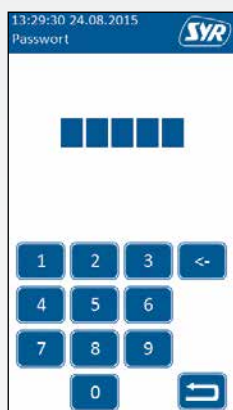
Touch the start screen to activate the main menu:



5.3 Menu level 2



To access menu level 2, touch the display for about two seconds until the symbol of an hourglass appears.



You will be asked to enter the following password:

41352

This will give you access to the overview of menu level 2.



Make the required settings for an immediate or time-delayed regeneration or for additional parameters.

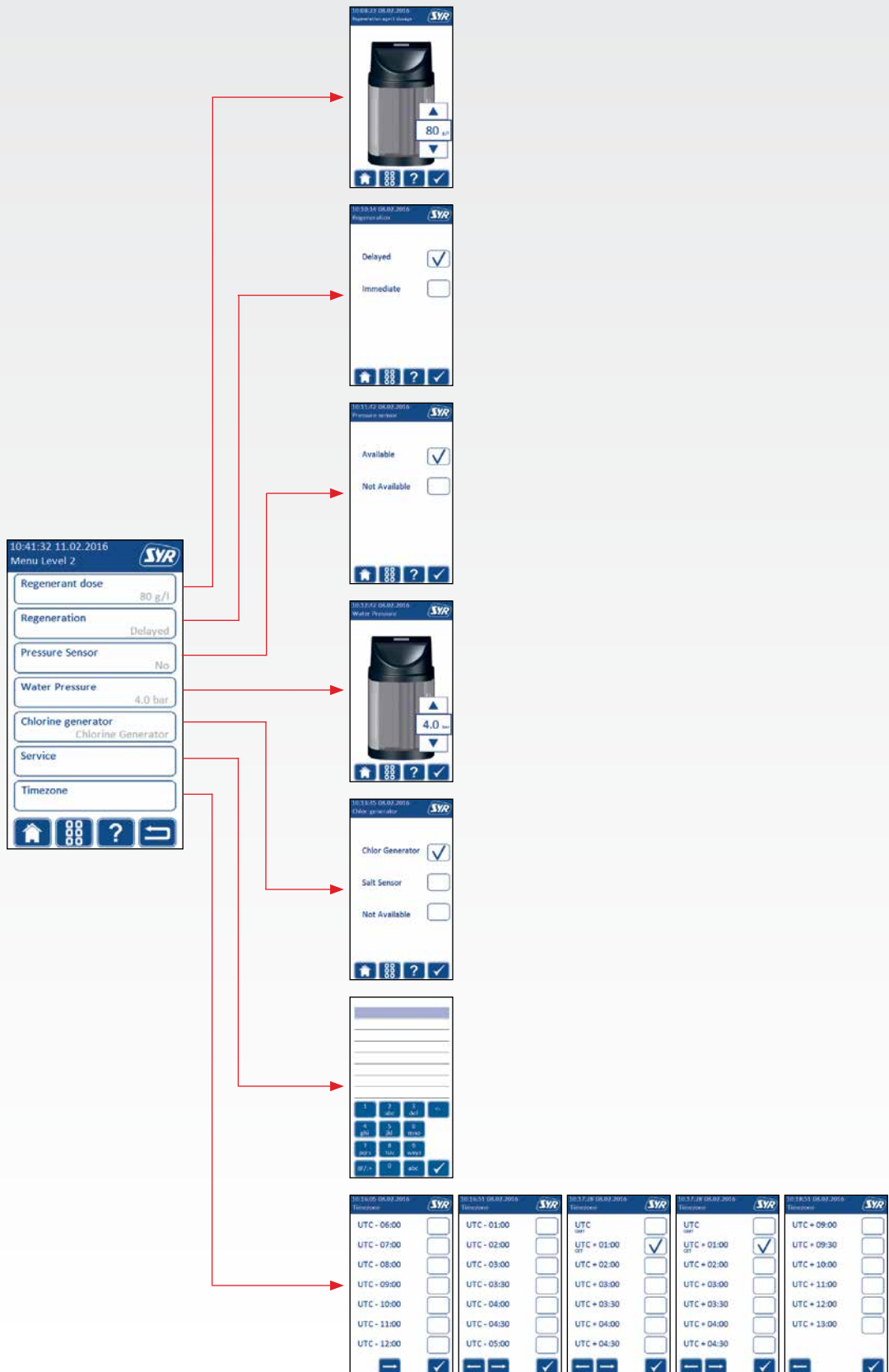


Press any menu point to access the next submenu.

Press „Exit“ to confirm settings you possibly changed and quit the menu

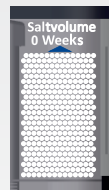
In case of submenus including several pages, press the arrow keys to navigate through these menus.

5.4 Menu structure - Menu level 2



6. Service / Service interruption

6.1 Service



Display:
Salt tank is full



Display:
Salt tank is empty

As the water softener works automatically, you will have to refill salt from time to time only, but at the latest when the display signals that the salt level is low. The SYR Connect control indicates the number of weeks left until the salt stock has to be refilled.

The salt stock should not be reduced to the extent that the liquid level is above the salt, as otherwise it will rise excessively when refilling salt. The SYR Connect control will signal a malfunction.

When using SYR Connect via Internet with SYR's App or the web interface of a PC, the SYR Connect control will indicate in due time that the salt level is too low.

When no softened water or just a little quantity of softened water is drawn off, the water softener will automatically carry out a forced regeneration after 4 days at the latest to ensure perfect hygiene (in compliance with EN 14743 and DIN 19636-100 (DVGW-test guideline)).

6.2 Service interruption

When restarting the water softener after a service interruption, the start-up process has to be carried out again (cf. the relevant instructions for installation and start-up).



Should the main water supply of the water softener be interrupted (main shut-off valve closed or on „bypass“), the power supply of the device has to be interrupted as well.

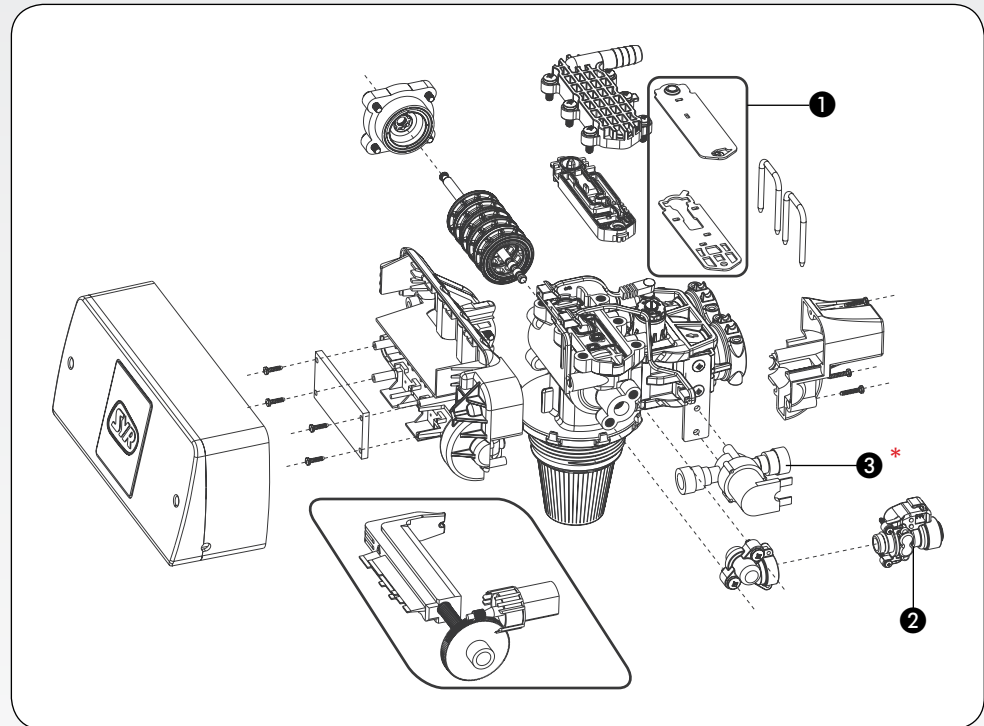
7. Maintenance / Intervals

7.1 Maintenance / Intervals



Remove the cover of the device.
Unplug and depressurize the device prior to maintenance works.
Put the bypass and blending valve in the bypass position.

- ❶ Seal kit
- ❷ Chlorinator cell
- ❸ Solenoid valve



* In the LEX Plus 10 Connect, the solenoid valve is mounted on the opposite side.

For a durable trouble-free operation of the system, we recommend the maintenance kit 1500.01.900, which includes:

- a seal kit
- a chlorinator cell
- a solenoid valve

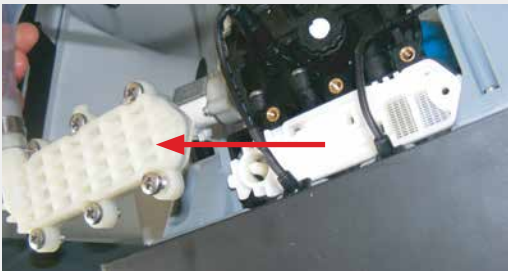
Replace the spare parts included in the maintenance kit every two years.

Maintenance	Interval	
Check Hardness setting	Every 3 months	Operator
Check Sealing kit	once per year	Installer
Exchange Sealing kit	every 2 years	Installer
Cleaning Salt tank	once per year	Installer
Cleaning Chlorinator cell	once per year	Installer
Exchange Chlorinator cell	every 2 years	Installer
Functional test	once per year	Installer

7.1.1 Check / Exchange Seal Kit



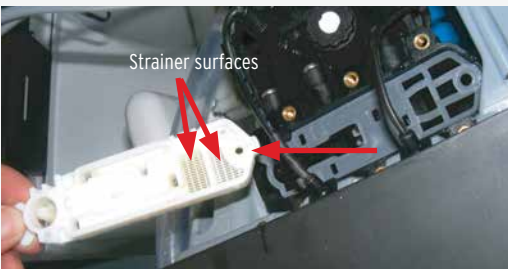
Remove the six screws with a screw driver.



Remove the mount of the seal kit.



Replace the seal, if necessary.



Remove the mount and clean especially the strainer surfaces with clear and cold water.



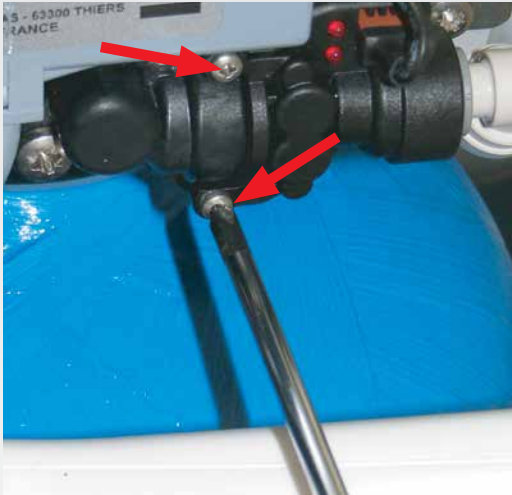
Replace the second seal, if required.



Make sure that the second seal is in correct position - the small strap must be visible on the right side at the top!

Re-assemble in reversed order.

7.1.2 Check / Replacement Chlorinator Cell



Remove both screws with a screw driver.



Remove the John Guest angle by pushing-in the angle's grey ring with two fingers and using the other hand to remove the angle.



Remove the push-in connections.



Remove the chlorinator cell.

Clean the chlorinator cell with cold and clear water or replace if necessary.

Re-assemble in reversed order.


7.2.3 Check / Exchange Solenoid Valve



Remove the John-Guest angle by pushing-in the angle's grey ring with two fingers and using the other hand to remove the angle.



Remove the second John-Guest angle, which leads into the salt container, in the same way.

 We recommend to pull the cabinet slightly forward.



Remove the connections.



Remove both screws of the solenoid valve's fixing bracket.



Remove two further screws from the fixing bracket.

Once the solenoid valve is unscrewed from the fixing bracket, it can be replaced.

Re-assemble in reversed order.

7.2.4 Cleaning Salt Tank



Carefully remove the cover of the brine line.
Attention: The cover is clipped-on!



Remove the connectors of the salt tank's LED.



Remove the four connectors of the electrodes.

The positions of the connectors are marked with colored dots and correspond to the cable's colors.



Remove the brine line by pushing-in the John-Guest angle's grey ring with two fingers and removing the angle with the other hand.



Remove both captive nuts.



Remove the filling level unit.

Verify the float and the check valve of the brine line - clean, if necessary.

Clean the salt tank and remove any incrustations or residues.

Remove the remaining salt from the salt tank and store it temporarily as hygienically as possible.

We recommend for instance a clean plastic container, disposable garbage bags, etc.

After cleaning, put the collected salt back in the tank.

Re-assemble in reversed order.

7.2.5 Restart



When using the LEX Plus 10 Connect Single Water Softener, open the bypass valve again, vent the pipe at a close draw-off point and re-plug the device.

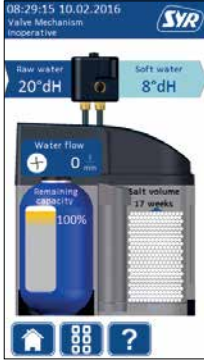

Restart the device and observe the steps of the instructions „Installation and Start-Up“, chapter „Start-Up“.

Verify the inlet water and blended water hardness and adjust the settings if required.

Record the maintenance works in the maintenance report (chapter 14).


8. Malfunctions

8.1 Troubleshooting - LEX Plus 10 Connect

Malfunction	Description - Cause	Solution
	<p>The system cannot access the basic mode.</p>	<p>Contact the manufacturer.</p>
	<p>The pressure sensor is deactivated.</p> <p>Faulty pressure sensor</p>	<p>Check whether the sensor is activated.</p> <p>Check the pressure sensor, clean or replace, if necessary contact the manufacturer.</p>
	<p>The inlet pressure remains below 2 bar.</p> <p>The upstream pressure reducing valve is defective.</p>	<p>Increase the inlet pressure to at least 2 bar</p> <p>Repair the pressure reducing valve.</p>
	<p>The inlet pressure exceeds 8 bar.</p> <p>The upstream pressure reducing valve is defective.</p> <p>No pressure reducing valve.</p>	<p>Lower the inlet pressure to a maximum of 8 bar.</p> <p>Repair the pressure reducing valve.</p> <p>Mount a pressure reducing valve.</p>



Malfunction	Description - Cause	Solution
	<p>The chlorination flow remains below 150 mA and the salt container contains less than 5 kg.</p> <p>Leaky brine line.</p> <p>Dirty filling level unit</p>	<p>Refill salt, wait for 30 min. Regenerate</p> <p>Eliminate the leak.</p> <p>Remove the dirt.</p>
	<p>Dirty or defective solenoid valve.</p> <p>Faulty control head.</p> <p>Dirty electrodes.</p> <p>Defective cable connection. in Ordnung.</p>	<p>Clean or replace the solenoid valve.</p> <p>Contact the manufacturer.</p> <p>Clean the electrodes.</p> <p>Verify the cable connection.</p>
	<p>Dirty or defective solenoid valve.</p> <p>Faulty control head.</p> <p>Dirty electrodes.</p> <p>Defective cable connection.</p>	<p>Clean or replace the solenoid valve.</p> <p>Contact the manufacturer.</p> <p>Clean the electrodes.</p> <p>Verify the cable connection.</p>
	<p>The salt reserve is less than two weeks.</p>	<p>Refill salt, wait for 30 min. Regenerate.</p>

Malfunction	Description - Cause	Solution
	The chlorination flow remains below 150 mA and the salt container contains more than 5 kg.	Check, if the brine is properly sucked.
	Leaky brine line.	Check the connection of the brine line and eliminate the leak.
	Dirty filling level unit.	Remove the dirt.
	Defective cable connection.	Verify the cable connection.
	Faulty chlorine cell.	Contact the manufacture.

8.2 General causes and remedies

Malfunction	Probable cause	Remedy
Hard water at the outlet	Flow rate too high.	Contact the manufacturer. Check the operating conditions.
	The settings in the control are wrong.	Verify the settings of the inlet and outlet hardness.
	Dirty /damaged turbine (blending)	Clean the turbine with clear water or replace it, if necessary.
Unstable quality of the softened water	Unstable raw water hardness	Contact your water supplier. Check the raw water hardness at regular intervals and adjust the corresponding setting in the control, if necessary.
	Power supply out of order.	Check the power supply (switchable socket etc.).
The display cannot be activated.	Mains-adapter not connected or faulty	Connect the mains adapter or replace it.
	Power supply (socket out of order)	Ask an electrician to verify the socket.
	Faulty control unit	Replace the control unit.
The display shows no flow rate when water is drawn.	Dirty or faulty turbine (blending)	Clean the turbine with clear water or replace it, if necessary.
	Cable connections out of order	Check the cable connections.
	The turbine (control head) is dirty or faulty.	Contact the manufacturer.
Hard water before regeneration is due.	Wrong settings in the control unit	Verify the settings of the inlet and outlet hardness.
No regeneration of the water softener.	The device is disconnected.	Connect the device.
	Faulty control unit	Replace the control unit.
	Faulty drive motor	Contact the manufacturer.
	Failing power supply	Verify the power supply.

9. Warranty

According to DIN EN 806, part 5, the operator has to make an inspection at least every two months. Warranty claims may not apply when this inspection interval has not been observed.

Servicing by the manufacturer or qualified installers is also required at least once a year and in case of multi-family houses twice a year.

We recommend concluding a service contract to ensure best functionality, also beyond the warranty period.

Make sure that qualified installers or the manufacturer's customer service regularly carry out maintenance works and provide the necessary consumables or wear-out parts etc.

The warranty period lasts 24 months as of the date of installation.

We commit ourselves to repair or replace as quickly as possible all parts that become unserviceable during the warranty period as a result of verifiably bad materials, a defective construction or a faulty model.

Our highest objective is to manufacture high-quality products.

Should you be faced with a problem, for which no solution is proposed in this instructions manual, contact us. We will be glad to help you.

Always indicate the model and the serial number of the device.

Postal address:

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10. Technical specifications

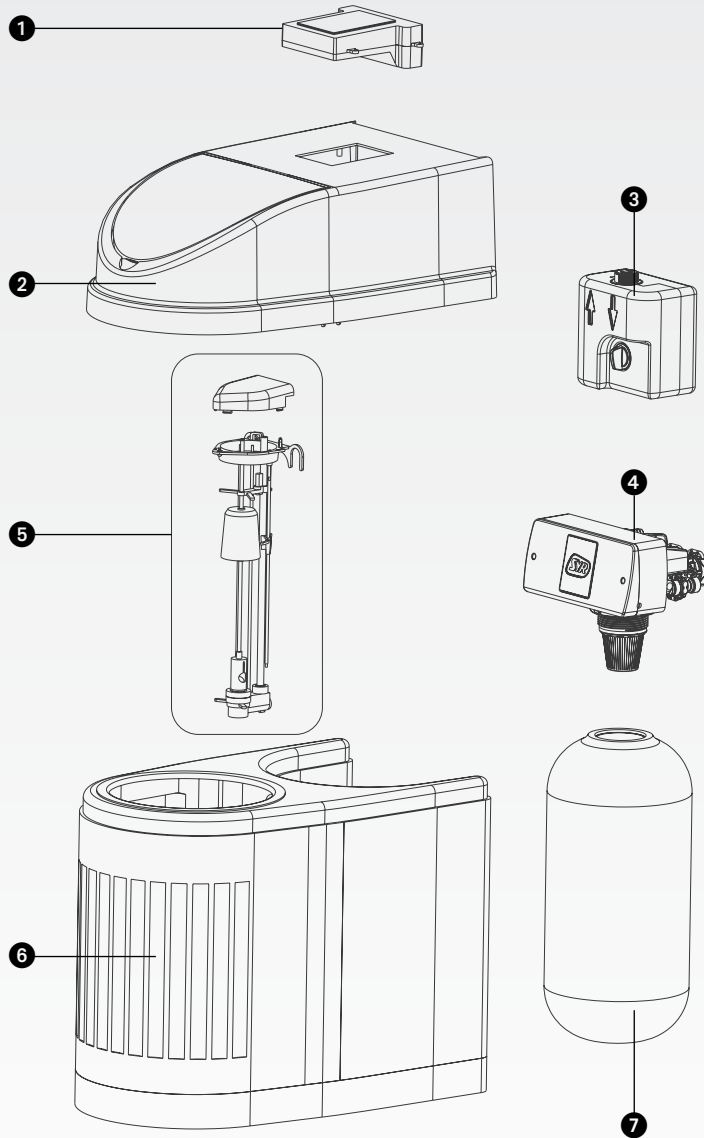
Technical specifications

Nominal flow rate	2.1 m ³ /h
Nominal capacity	4.6 mol
Nominal pressure	PN 10
Min. service pressure	2 bar
Max. admissible service overpressure	8.0 bar (the central installation of a pressure reducing valve is compulsory when the static pressure is \geq 5.0 bar)
Operating temperature	min. 5 °C, max. 30 °C
Ambient temperature	min. 5 °C, max. 40 °C
Pressure loss at nominal flow rate	1.0 bar
Salt stock	LEX 10 25 kg
Power supply	230V / 50Hz / 6W
Unit voltage	12V DC
Salt consumption per regeneration	about 0.8 kg
Flushing water quantity	about 31 l (value measured at 3 bar upstream pressure, may vary with other pressures)
Regeneration time	27 min.
Volume of the exchanger resin	22 m ³ x °dH



11. Spare parts

- 1** Control unit
1500.01.906
- 2** Cover of cabinet
1500.01.907
- 3** Bypass and blending valve
1500.01.916
- 4** Control head
1500.01.901
- 5** Fill-level unit
1500.01.905
- 6** Cabinet
1500.01.908
- 7** Resin bottle
1500.01.904



No figure

Cable harness vertical pipe
1500.01.911

Cable harness control head
1500.01.912

Cable harness blending
1500.01.913

Mains adapter control unit
1500.01.915

Tundish
0214.00.908

1 Seal kit
1500.01.921

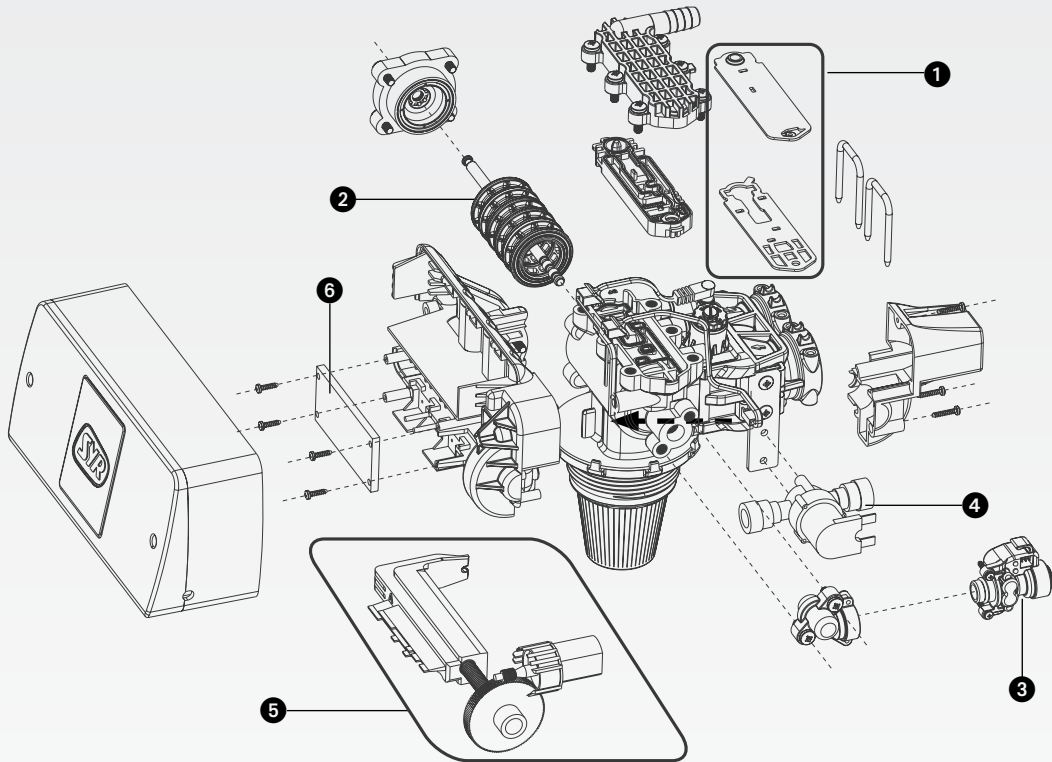
2 Piston
1500.01.902

3 Chlorinator cell
1500.01.920

4 Solenoid valve
1500.01.922

5 Drive unit
1500.01.903

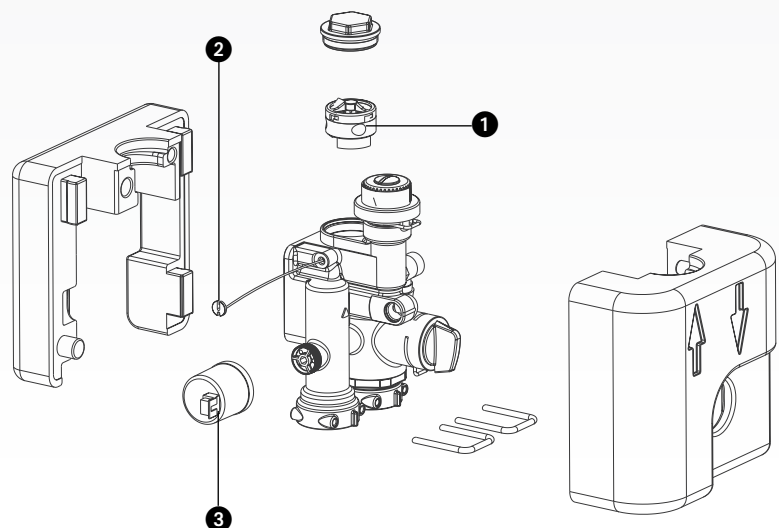
6 Board control head
1500.01.914



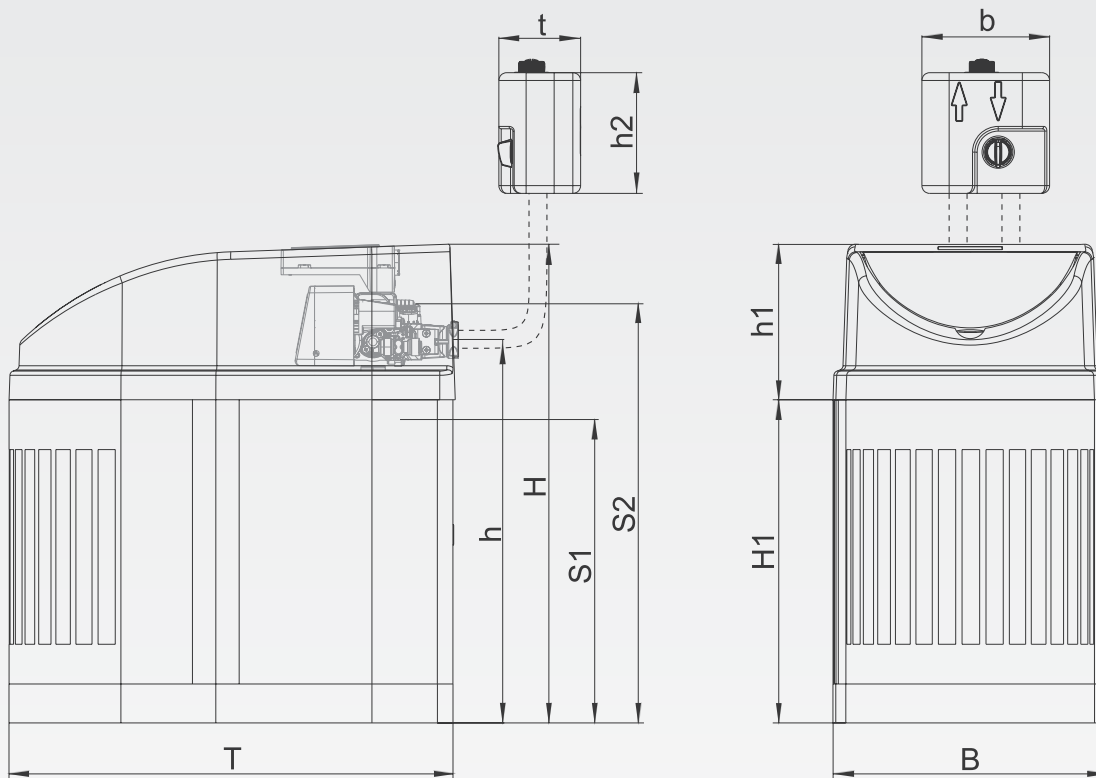
1 Turbine
1500.01.919

2 Reed-contact
1500.01.918

3 Pressure sensor
1500.01.917



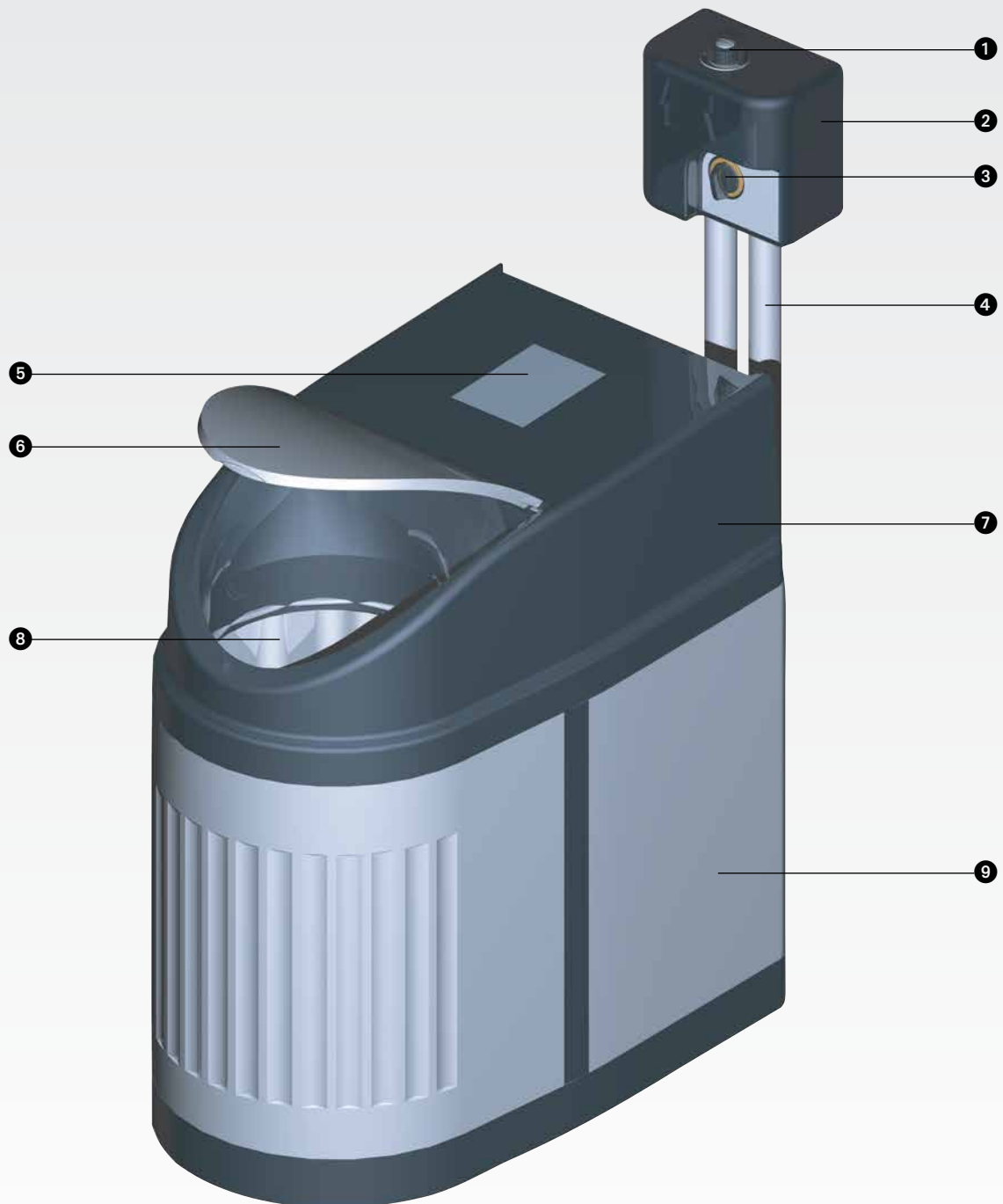
12. Dimensions



Connection flange (DN 20 - 32) not included in delivery!

Dimensions (mm)	LEX 10
t	105
b	164
H	615
h	492
H_1	415
h_1	200
h_2	155
T	570
B	352
Safety overflow (S1)	390
Flushing water overflow (S2)	541

13. Overview



- ① Blending valve
- ② Bypass and blending valve
- ③ Bypass valve
- ④ Connection hoses
- ⑤ Control unit

- ⑥ Lid salt tank
- ⑦ Cover cabinet
- ⑧ Salt tank
- ⑨ Cabinet



13. Maintenance report

Date of installation:

done

Date:

Raw water hardness, measured [°dH]:

set [°dH]:

Blended water hardness, measured [°dH]:

Water meter [m³]:

Cleaning water tank

Check / Exchange strainer

Check / Exchange optical eye

Cleaning / Exchange chlorinator cell

Cleaning / Check injector

