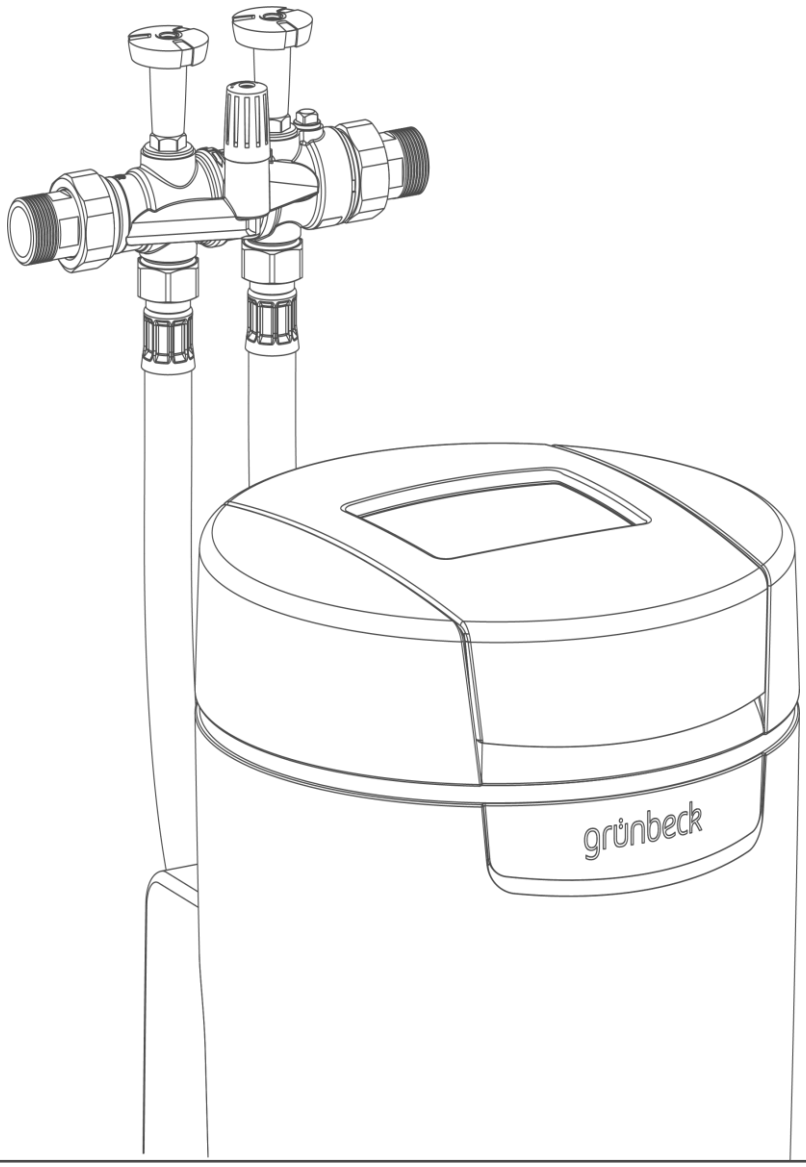
Библиотека СОК

We understand water.



Water softener | softliQ:SD

Operation manual

grünbeck

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1 Introduction

This manual is intended for owners/operators/operating companies, users and qualified specialists and ensures the safe and efficient handling of the product. The manual is an integral part of the product.

- ► Carefully read this manual and the included manuals on the components before you operate your product.
- ► Obey all safety and handling instructions.
- ► Keep this manual and all other applicable documents, so that they are available when needed.

Illustrations in this manual are for basic understanding and can differ from the actual design.

1.1 Validity of the manual

This manual applies to the products below:

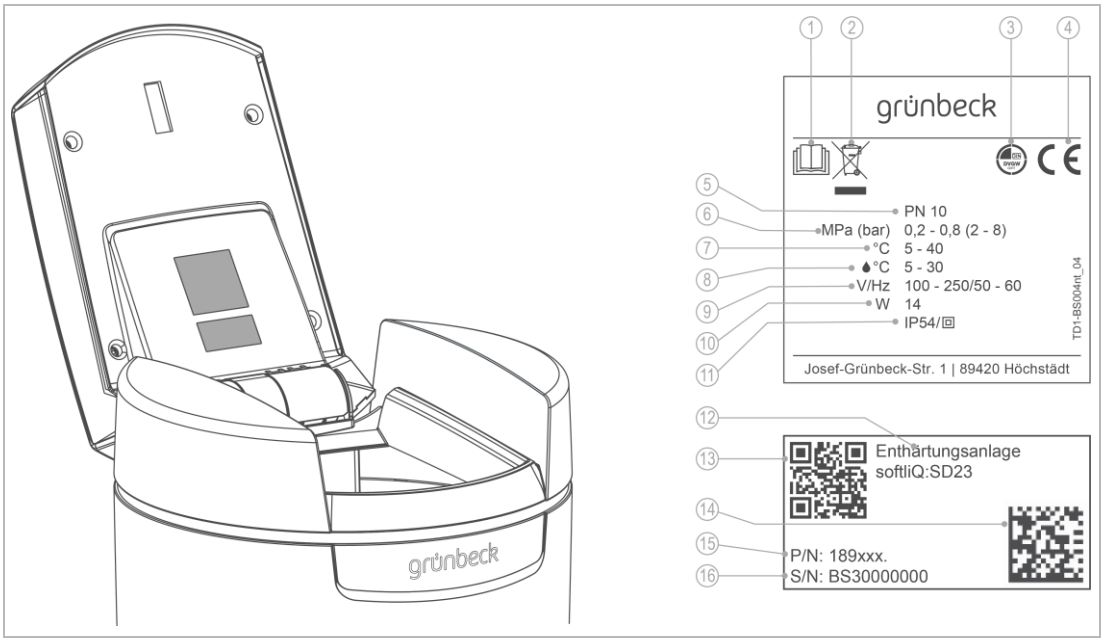
- Water softener softliQ:SD18
- water softener softliQ:SD21
- water softener softliQ:SD23

1.2 Product identification

You can identify your product based on the product designation and the order no. indicated on the type plate.

- ► Check whether the products given in chapter 1.1 correspond to your product.

The type plate is located on the inside of the brine tank lid.



	Designation
1	Obey the operation manual
2	Disposal information
3	DVGW test mark
4	CE mark
5	Nominal pressure
6	Operating pressure
7	Ambient temperature
8	Water temperature

	Designation
9	Rated voltage range/frequency
10	Power input
11	Protection/protection class
12	Product designation
13	QR code
14	Data matrix code
15	Order no.
16	Serial no.

1.3 Symbols used

Symbol	Meaning
	Danger and risk
	Important information or requirement
	Useful information or tip
	Written documentation required
	Work that must be carried out by qualified specialists only
	Work that must be carried out by technical service personnel only

1.4 Depiction of warnings

This manual contains information and instructions that you must obey for your personal safety. The information and instructions are highlighted by a warning symbol and are structured as shown below:



SIGNAL WORD Type and source of hazard

- Possible consequences
- ► Preventive measures

The signal words below are defined subject to the degree of danger and might be used in the present document:

Warning symbol and signal word		Consequences if the information/ instructions are ignored
 **DANGER**	Personal injury	Death or serious injuries
 **WARNING**		Possible death or serious injuries
 **CAUTION**		Possible moderate or minor injuries
NOTE	Damage to property	Possible damage to components, the product and/or its functions, or an object in its vicinity

1.5 Demands on personnel

During the individual life cycle phases of the product, different people carry out work on the product. This work requires different qualifications.

1.5.1 Qualification of personnel

Personnel	Requirements
User	• No special expertise required • Knowledge of the tasks assigned • Knowledge of possible dangers in case of incorrect behaviour • Knowledge of necessary protective equipment and protective measures • Knowledge of residual risks
Owner/operator/ operating company	• Product-specific expertise • Knowledge of statutory regulations on work safety and accident prevention
Qualified specialist • Electrical engineering • Sanitary engineering (HVAC and plumbing) • Transport	• Professional training • Knowledge of relevant standards and regulations • Knowledge of detection and prevention of potential hazards • Knowledge of statutory regulations on accident prevention
Technical service (Grünbeck's technical service/ authorised service company)	• Extended product-specific expertise • Trained by Grünbeck

1.5.2 Authorisations of personnel

The table below describes which tasks may be carried out by whom.

	User	Owner/ operator/ operating company	Qualified specialist	Technical service
Transport and storage		x	x	x
Installation and mounting			x	x
Start-up/commissioning			x	x
Operation and handling	x	x	x	x
Cleaning	x	x	x	x
Inspection	x	x	x	x
Maintenance semi-annually		x	x	x
annually				x
Troubleshooting	x	x	x	x
Repair				x
Decommissioning and restart/recommissioning			x	x
Dismantling and disposal			x	x

2 Safety

2.1 Safety measures

- Only operate your product if all components are installed properly.
- Obey the local regulations on drinking water protection, accident prevention and occupational safety.
- Do not make any changes, alterations, extensions or program changes on your product.
- Only use genuine spare parts for maintenance or repair.
- Keep the premises locked against unauthorised access to protect imperilled or untrained persons from residual risks.
- Comply with the maintenance intervals (refer to chapter 8.2). Failure to comply can result in microbiological contamination of your drinking water system.

2.1.1 Mechanical hazards

- You must never remove, bridge, or otherwise tamper with safety equipment.
- For all work on the product that cannot be carried out from the ground, use stable, safe and self-standing access aids (e.g. stepladders).

2.1.2 Pressure-related hazards

- Components can be under pressure. There is a risk of injuries and damage to property due to escaping water and unexpected movement of components. Check the pressure lines on the product at regular intervals.
- Before starting repair and maintenance work, make sure that all affected components are depressurised.

2.1.3 Electrical hazards

There is an immediate danger of fatal injury from electric shock when touching live parts. Damage to the insulation or individual components can be life-threatening.

- Only have qualified electricians carry out electrical work on the product.
- In case of damage to live components, switch off the voltage supply immediately and arrange for repair.
- Switch off the supply voltage before working on electrical components. Discharge residual voltage.
- Never bridge electrical fuses. Do not disable fuses. Use the correct current ratings when replacing fuses.
- Keep moisture away from live parts. Moisture can cause short-circuits.

2.1.4 Groups of persons requiring protection

- Children must not play with the product.
- This product can be used by children over 8 years of age and persons with limited abilities or lack of experience if they are supervised or instructed in the safe use of the product and understand the resulting hazards.
- Cleaning and maintenance must not be carried out by children.

2.2 Product-specific safety instructions

2.2.1 Signals and warning devices on the product

Labels on the product



Risk of electric shock

► Obey all warnings and safety instructions.

► Immediately replace illegible or damaged symbols and pictograms.

3 Product description

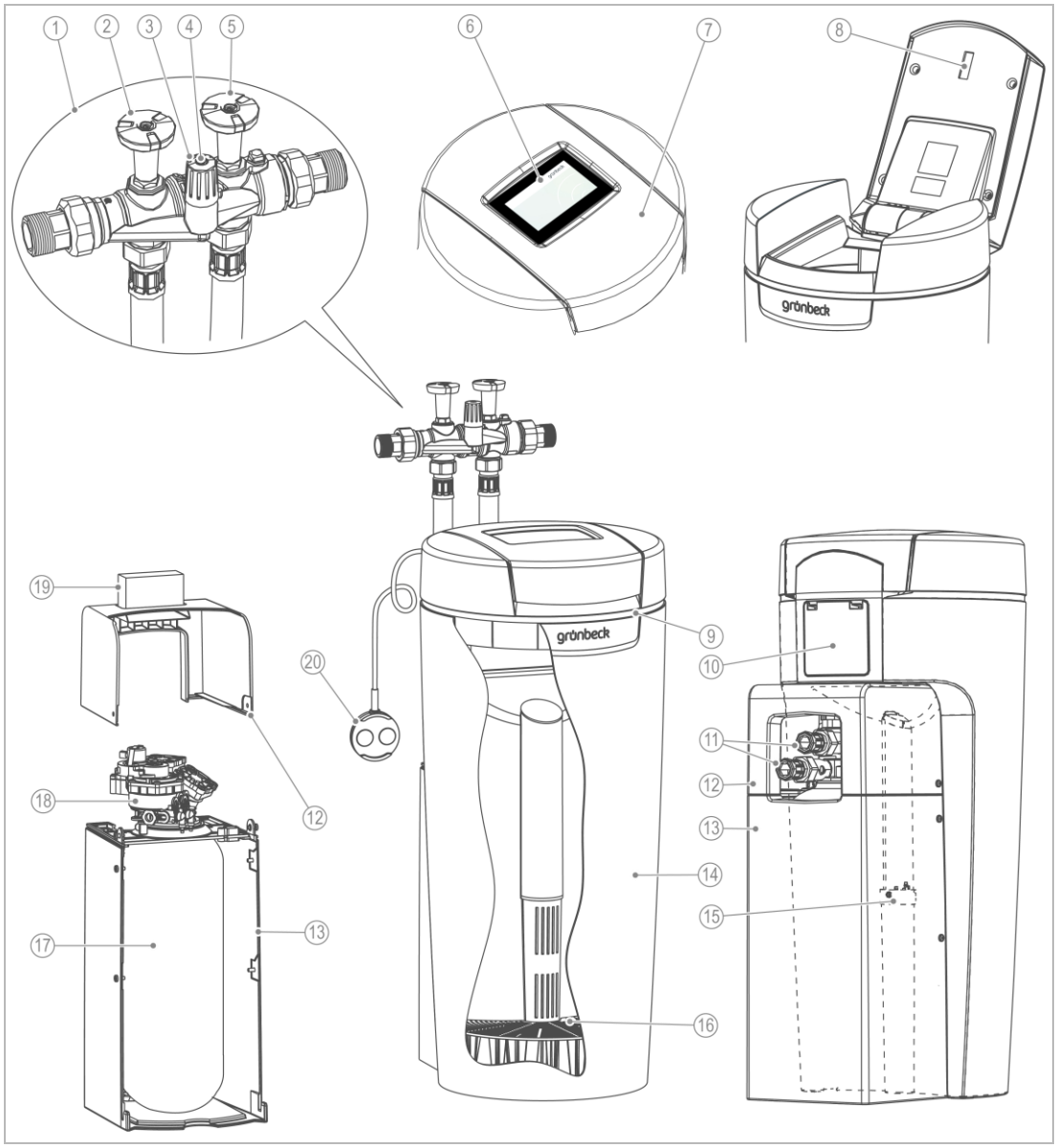
3.1 Intended use

- The softliQ water softener must only and exclusively be used for the softening and partial softening of cold drinking water.
- The softliQ water softener protects water pipes and connected water-carrying systems from scaling as well as from malfunctions and damage caused by scaling.
- The water softener softliQ:SD18 is designed for the continuous supply of one and two-family homes (max. 4 persons) with soft water.
- The water softener softliQ:SD21 is designed for the continuous supply of one to four-family homes (max. 9 persons) with soft water.
- The water softener softliQ:SD23 is designed for the continuous supply of one to five-family homes (max. 12 persons) with soft water.
- The softliQ water softener protects water pipes and connected water-carrying systems from scaling but cannot prevent corrosion.



Observe the country-specific stipulations for soft water hardness in the drinking water sector.

3.2 Product components



	Designation
1	Connection block
2	Raw water shut-off valve
3	Blending valve
4	Locking screw
5	Soft water shut-off valve
6	Control unit (display)
7	Brine tank lid
8	Sensor of salt supply indicator*
9	Illuminated LED ring*
10	Cover of connections (customer interface)*

	Designation
11	Water connection pipes
12	Housing of technical equipment, upper part
13	Housing of technical equipment, lower part
14	Brine tank
15	Brine valve
16	Sieve bottom
17	Exchanger
18	Control valve
19	Water test kit “Total hardness”
20	Water sensor*

* Not for softliQ:SD18

3.2.1 Additional features of softliQ:SD21 and softliQ:SD23

Salt supply indicator

Once per regeneration, a light sensor checks the filling level of the salt tablets. If the filling level is below the minimum, the control unit issues a warning message. The control unit calculates how many days the salt supply is expected to last and indicates this value in days.

Illuminated LED ring

The illuminated LED ring is designed as a visual signal during water treatment, operation and in case of a malfunction. In the standard setting, the illuminated LED ring behaves as follows:

- Lights up during water treatment
- Lights up during operation of the control unit
- Intermittent flashing in case malfunctions do occur
- Intermittent flashing in case of pre-alarm salt supply

The illuminated LED ring can be set to continuous illumination or be deactivated completely.

Water sensor

The water sensor detects water at the installation site of the softliQ system, reports this via the control unit of the softliQ or via Grünbeck's myProduct app and (if activated) triggers an audio signal.

Drain connection

The DN 50 drain connection with siphon is designed for professional installation in accordance with DIN EN 1717.

3.3 Functional description

3.3.1 Process

The softliQ water softener works according to the ion exchange principle. The exchange of calcium and magnesium ions for sodium ions causes the water to become soft.

3.3.2 Intelligence of the softliQ:SD water softener

Based on the consumption values of the past four weeks, the system capacity is automatically adjusted to the individual water consumption of the owner/operator/operating company. softliQ water softeners offer several selection options (= modes of operation). The factory setting is Comfort. In case of considerable fluctuations in the water consumption, it is

possible to switch to the Power mode in the Settings menu. In case of low water consumption, Eco is an energy and resource-saving option.

The current setting is displayed in Information menu 1.

A regeneration is released daily, if at least 50 % of the current system capacity is used up. The time of regeneration is automatically scheduled in a period where usually no water is consumed. The time of regeneration can also be set at a fixed time. If water is required during the regeneration process, non-softened water is available.

During each regeneration, only the used-up system capacity is regenerated and only as much salt is used as necessary. As required by DIN standard 19636-100, the system releases a complete regeneration for hygienic reasons no later than after four days without regeneration.

The intelligence of the softliQ water softener allows for an efficient operation at the lowest salt and power consumption possible.

3.3.3 Modes of operation

The softliQ:SD water softener offers five selection options:

- **Comfort** (factory setting)
  Optimum use of resources and system capacity.
- **Eco**
  Minimum use of resources in case of normal consumption.
- **Power**
  Maximum performance for highest demands.
- **Individual**
  To enter your individual user profile.
- **Fix**
  To enter a permanently fixed capacity figure without consideration of the past and without adjustment of the capacity figure.

3.4 Admissible regenerant

softliQ water softeners must only be operated with the regenerant below:

- Salt tablets according to DIN EN 973 type A

3.5 Product registration

Registering your product extends your warranty by 1 year.

You can register your product as indicated below:

- Registration on Grünbeck's website (www.gruenbeck.com).
- Registration using Grünbeck's myProduct app (refer to chapter 7.3).
- Registration via the enclosed postcard.

3.6 Accessories

You can retrofit your product with additional accessories. Please contact your local Grünbeck representative or Grünbeck's headquarters in Hoechstaedt/Germany for details.

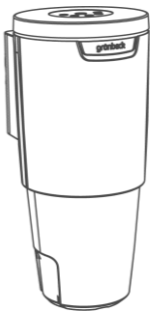
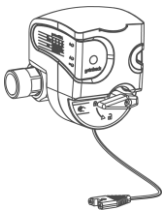
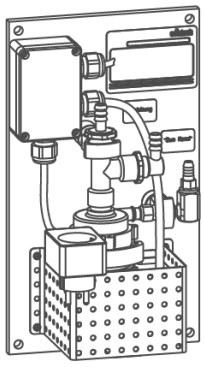
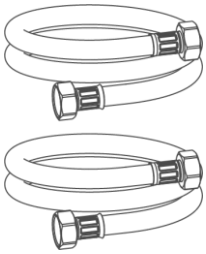
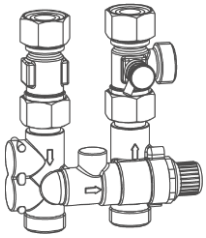
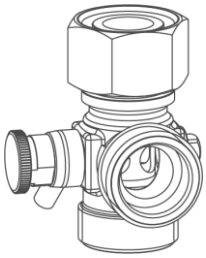
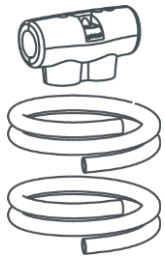
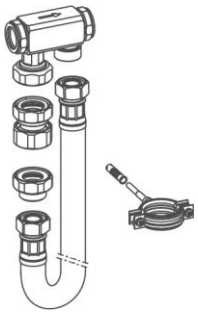
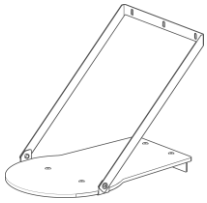
Illustration	Product	Order no.
	**Dosing system exaliQ:KC6**	**117 400**
	Dosing system exaliQ:SC6	**117 405**
	Electronically controlled dosing technology to protect the water pipe against corrosion or to stabilise the total hardness.	
	Dosing system exaliQ:KC6-e (not possible for softliQ:SD18)	**117 460**
	Dosing system exaliQ:SC6-e (not possible for softliQ:SD18)	**117 465**
	Electronically controlled dosing technology to protect the water pipe against corrosion or to stabilise the total hardness. Due to the integrated iQ interface, no additional water meter fitting is required.	
	**Safety device protectliQ:A20**	**126 400**
	Product to protect against water damage in one and two-family homes. For other sizes, please inquire.	
	**Delivery pump for regeneration water**	**188 800**
	To discharge the regeneration water into drain pipes located at a higher level. Only suitable for softliQ:SD23	
	**Drain connection DN 50**	**188 875**
	For professional installation acc. to DIN EN 1717. Included in the scope of supply of softliQ:SD23.	

Illustration	Product	Order no.
	**Extension kit for connection hoses**	**187 860e**
	To extend the hose to 1.6 m.	
	**Supplementary blending valve**	**187 870**
	To generate an additional blending water hardness. Can directly be connected to the connection block.	
	**Supplementary soft water outlet**	**187 875**
	Installation in the soft water outlet between the water softener and the connection block, including sampling valve and non-return valve.	
	**Insulating kit softliQ**	**188 870**
	For professional insulation of the connection equipment. Included in scope of supply of softliQ:SD23.	
	**Installation kit softliQ**	**188 865**
	Space-saving combined connection of water softener and filter.	
	**Wall bracket softliQ:SD**	**189000010000**
	For raised placing (raising the overflow)	

3.7 Inputs and outputs of the control unit

The control unit features voltage-free inputs and outputs (refer to chapter 7.9)

3.7.1 Data circuit board (for softliQ:SD21 and softliQ:SD23 only)

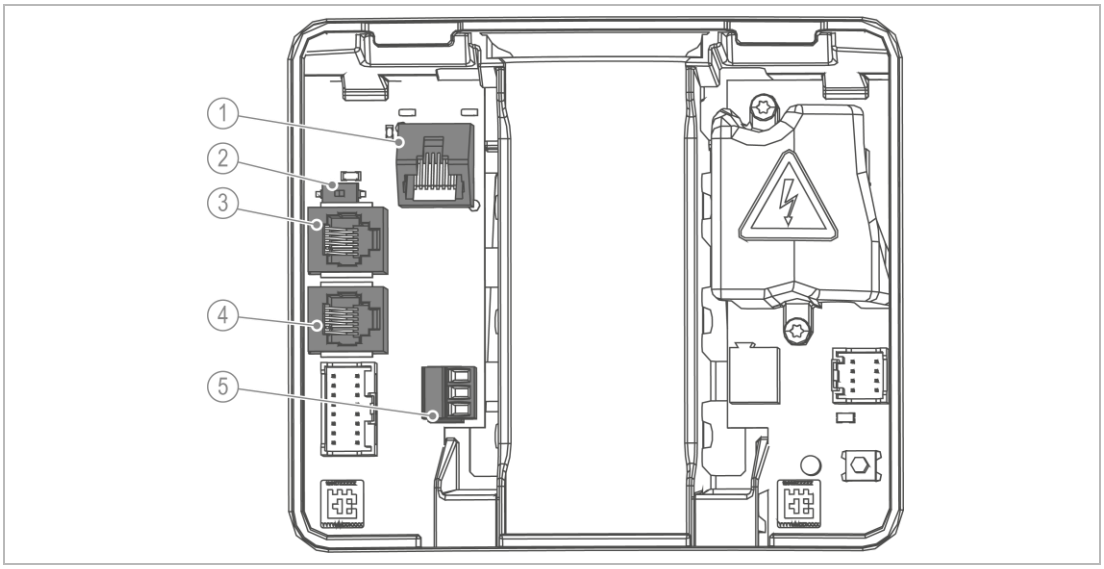


Abb. 1

	Designation
1	LAN connection
2	DIP switch
3	iQ Comfort 1

	Designation
4	iQ Comfort 2
5	Water sensor (digital input)

► Disconnect the water sensor if you want to assign the digital input a different function.

► Use LiYY 2x0.5 mm² or similar cable as connection cable.
(A larger line cross-section is unsuitable.)

Water sensor (digital input)

Pin configuration

- Top terminal + middle terminal = Water sensor
- Bottom terminal + middle terminal = Regeneration release or regeneration lock

► Do not apply voltage signals to any of the 3 terminals.

iQ Comfort interfaces

The iQ Comfort interfaces are designed for interconnecting Grünbeck products such as exaliQ, for instance.

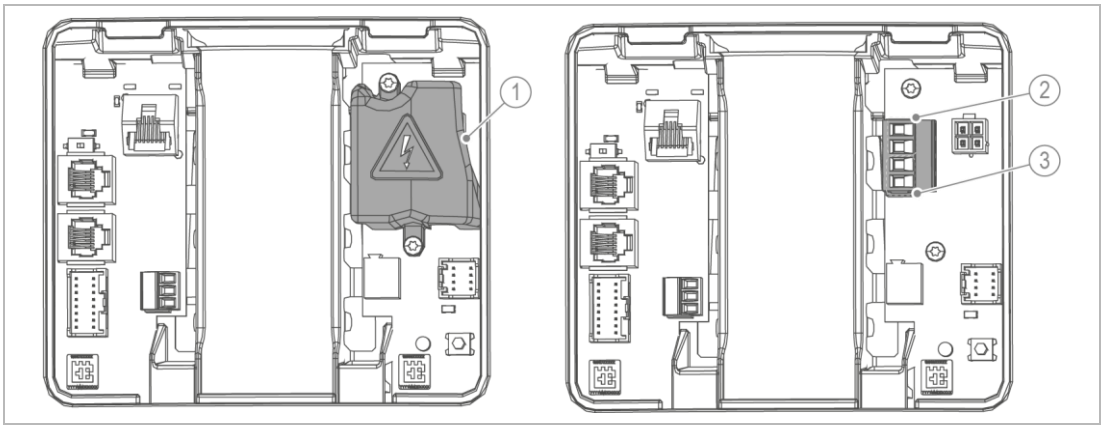
► Switch the DIP switch to ON (left position) to enable the iQ Comfort interfaces.

3.7.2 Power circuit board (for softliQ:SD23 only)

WARNING Electrical voltage beneath the touch protection

- Electric shock

► Pull the mains plug before you remove the touch protection.



	Designation		Factory setting
1	Touch protection		
2	Fault signal contact (upper two terminals)	max. 230 V/max. 1 A	NCC
3	Programmable output (lower two terminals)	max. 230 V/max. 1 A	Delivery pump for regeneration water

1. Remove the touch protection to access the power circuit board.
2. Use the following connection lines for connection to the fault signal contact or the programmable output:
   - Flexible lines of H05xx F 2x0.75 mm² quality or similar, because consumers operated with mains voltage might be connected.
3. After the connection has been made, attach the touch protection.

4 Transport, set-up and storage

4.1 Shipping/Delivery/Packaging

- ► Upon receipt, immediately check for completeness and transport damage.
- ► In case of visible transport damage, proceed as follows:
  - Do not accept the delivery or only accept it under reserve.
  - Record the extent of damage on the transport documents or on the delivery note of the carrier.
  - Initiate a complaint.
- ► Only ship the product by forwarding agent (not be a parcel service provider)

4.2 Transport/Set-up

- ► Transport the product to the installation site in an upright position and in its original packaging.
- ► Obey the symbols and instructions on the packaging.
- ► Only remove the packaging shortly before installation.
- ► Only carry the product with the assistance of a second person.
- ► Use the recessed grips for carrying.

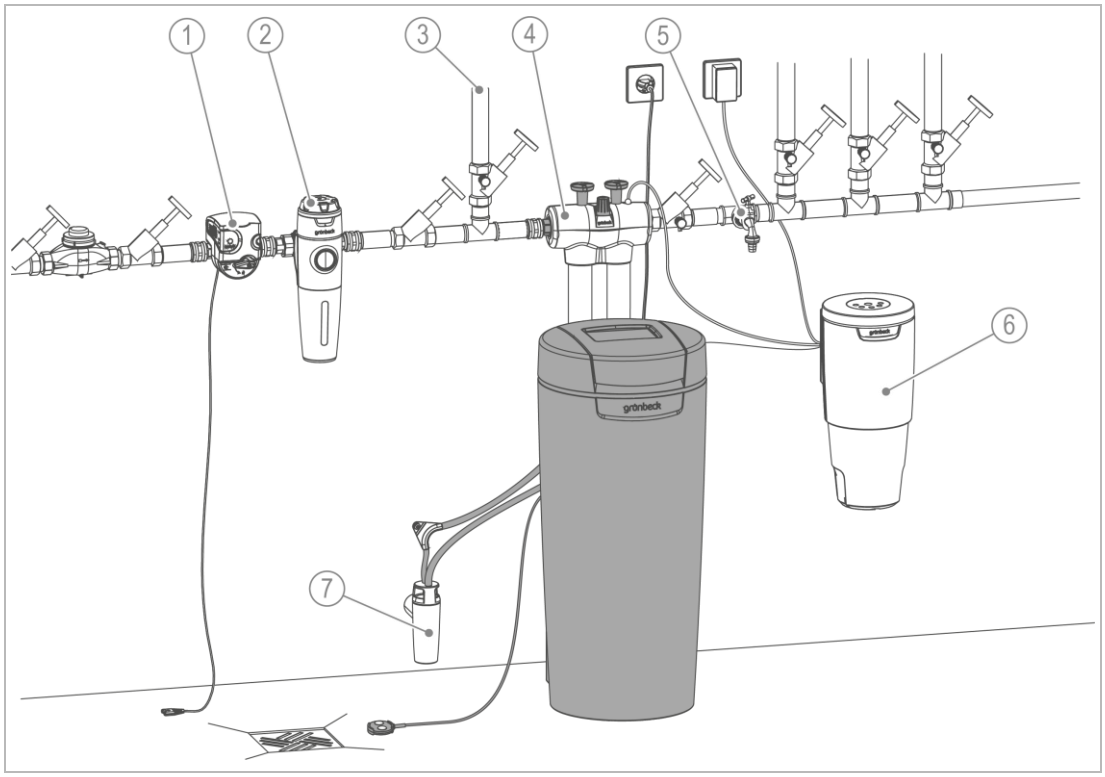
4.3 Storage

- ► Protect the product from the impacts below when storing it:
  - Dampness, moisture
  - Environmental impacts such as wind, rain, snow, etc.
  - Frost, direct sunlight, severe heat exposure
  - Chemicals, dyes, solvents and their vapours

5 Installation

The installation of a water softener represents a major intervention into the drinking water system and must be performed by a qualified specialist only.

The softliQ water softener is DVGW-certified, and thus intrinsically safe. There is no need for a system separator as additional safety device upstream of the product



	Designation
1	Safety device protectliQ
2	Drinking water filter pureliQ
3	Garden water pipe
4	Insulating kit softliQ

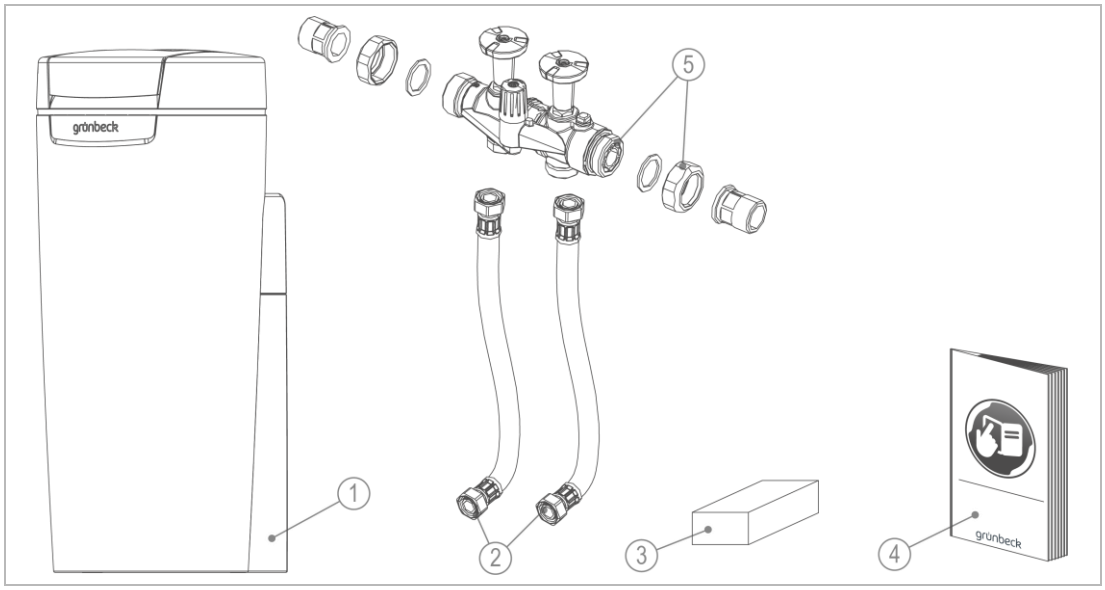
	Designation
5	Water withdrawal point
6	Dosing system exaliQ
7	Drain connection DN 50 acc. to DIN EN 1717

The connection block can be installed horizontally or vertically in the drinking water system. We recommend horizontal installation in combination with a dosing system exaliQ.

5.1 Requirements for the installation site

- Obey the local installation directives, general guidelines and technical specifications.
- The installation site must be frost-proof and protect the product from direct sunlight, chemicals, dyes, solvents and their vapours.
- If the softened water is intended for human consumption as defined by the German Drinking Water Ordinance, the ambient temperature must not exceed 25 °C. For applications that are purely technical, the ambient temperature must not exceed 40 °C.
- A drinking water filter and, if required, a pressure reducer (e.g. fine filter pureliQ:KD) must be installed upstream of the product.
- A Schuko socket is required within a distance of approx. 1.2 m from the system. The socket outlet requires permanent power supply and must not be coupled with light switches, emergency heating switches or the like.
- A drain connection (DN 50) must be available to discharge the regeneration water.
- A floor drain suitable for the respective system size must be available at the installation site. Otherwise, a safety device such as a protectliQ (refer to chapter 3.6), or a safety device with water stop of the same quality must be installed. Floor drains that discharge to a lifting system do not work in case of a power failure.
- Make sure that lifting systems are resistant to salt water or use our delivery pump for regeneration water (refer to chapter 3.6).
- The connection block features a non-return valve on the inlet side. Safety relief valves must be installed in flow direction downstream of the softliQ.
- A water withdrawal point must be available near the product.
- In case of water pipes made of copper and/or galvanised steel, we generally recommend dosing exaliQ mineral solutions (refer to chapter 3.6) to protect against corrosion, irrespective of a water softener.

5.2 Checking the scope of supply



	Designation
1	Completely assembled water softener
2	2 Connection hoses
3	Water test kit “Total hardness”

	Designation
4	Operation manual
5	Connection block including water meter screw connection

► Check the scope of supply for completeness and damage.

5.3 Installing the product

WARNING Contaminated drinking water due to stagnation

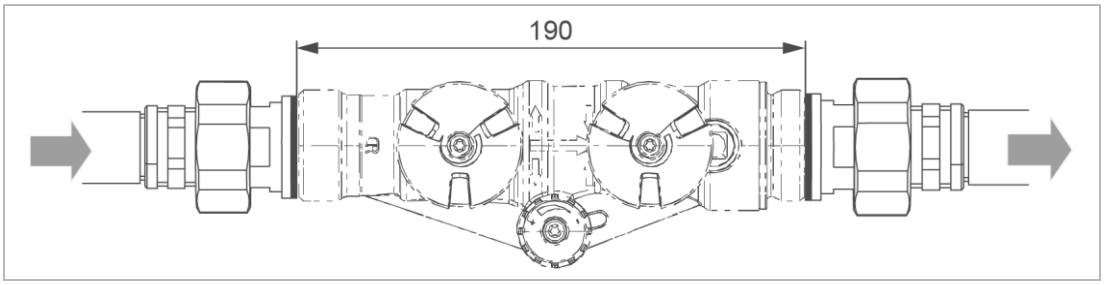
- Infectious diseases

► Do not connect the product to the drinking water installation until immediately before start-up/commissioning.

► Only carry out the leak test during start-up/commissioning.

5.3.1 Installing the connection block

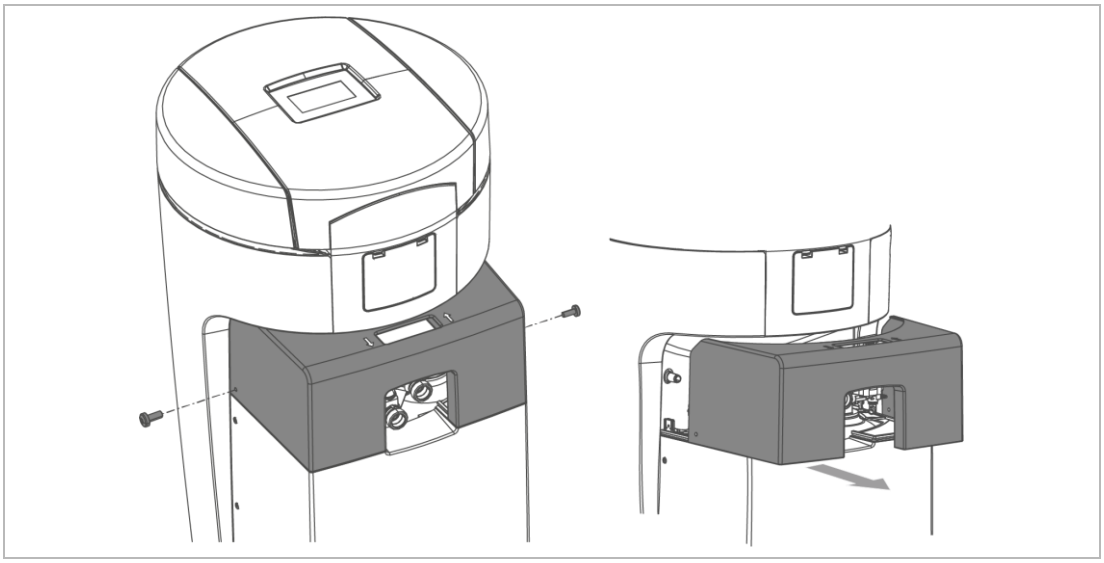
The connection block can be installed horizontally or vertically.



1. Install the water meter screw connection in the pipe.
2. Check the flow direction.
3. Respect the flow direction on the connection block (indicated by an arrow).
4. Make sure that the strainer insert is inserted on the inlet side.
5. Mount the connection block by tightening the union nuts without mechanical stress.

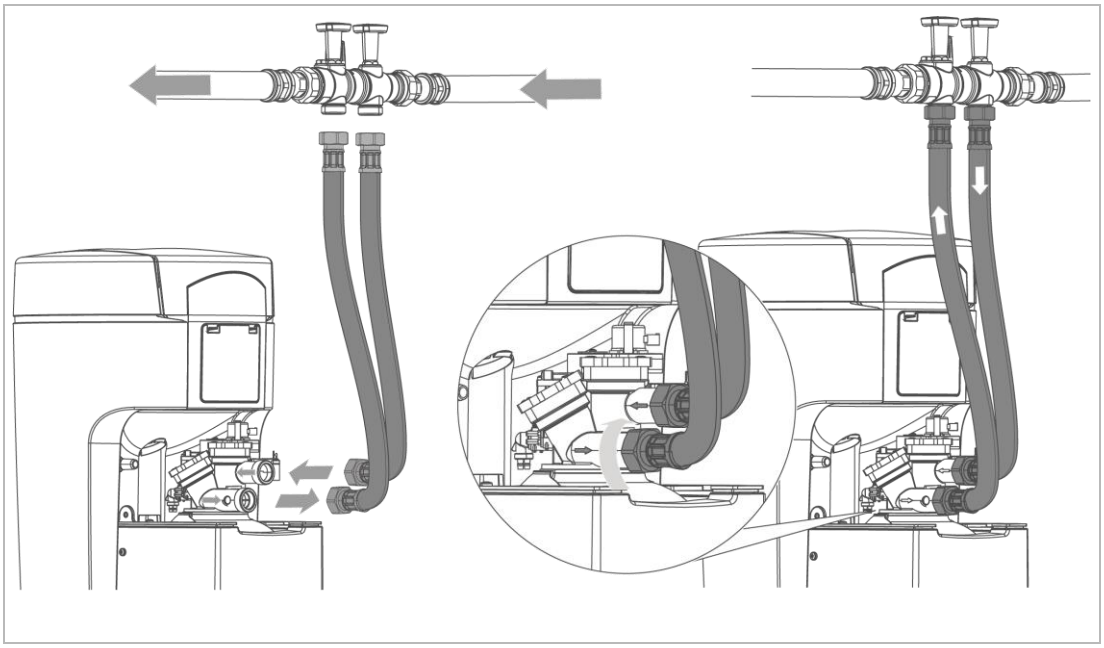
» The connection block is installed.

5.3.2 Installing the connection hoses



1. Loosen both screws on the side of the upper part of the housing for the technical equipment.
2. Remove the upper part of the housing for the technical equipment.

3. Respect the flow direction indicated by arrows on the connection block and on the control valve.



4. Install the connection hoses using suitable tools.

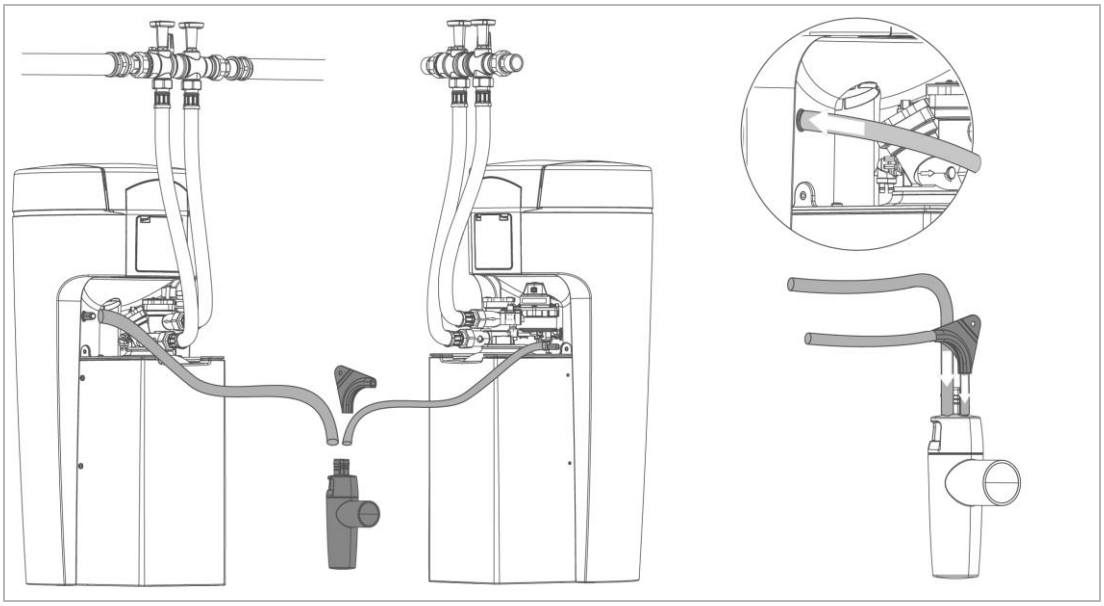
» The connection hoses are installed.

5.3.3 Establishing a waste water connection as per DIN EN 1717.

NOTE Waste water backing up due to kinked hoses.

- Water damage

► Run the hoses to the drain with a downward slope and without any kinks.



1. Shorten the flushing water hose (Ø 12 mm) to the required length.

2. Fasten the flushing water hose.

» The regeneration water emerges under pressure.

3. Shorten the overflow hose (Ø 16 mm) to the required length.
4. Run the overflow hose to the drain with a downward slope.
5. Fasten the overflow hose.

If the flow pressure is at least 3 bar, the flushing water hose can be routed up to 2 m above the floor. Connecting the overflow hose is not possible then, however.

» The installation is completed.

► Protect the product from contamination until commissioning by slipping the protective cover (packaging) over the product.

6 Start-up/commissioning

6.1 Putting the product into operation

The start-up program assists you in starting up the product. The display guides you step-by-step. Input is required at some points, however.

► Follow the instructions on the touchscreen (refer to chapter 7.1).

- Use ◀ or ▶ to navigate through the program.
- Use ⮌ to go to the previous menu level.
- Use ✓ to confirm your selection and proceed to the next menu level.

6.1.1 Starting the start-up program

► Have salt tablets at hand.

► Have the value of the raw water hardness at hand.

a Ask your water supplier for the respective value or

b Determine the value by using the water test kit (refer to chapter 7.6).

1. Plug in the mains plug.
2. Choose the language you want.
3. Select the continent where the system is installed.
4. Choose the hardness unit you want.
5. Select start Guided start-up.

» The start-up program starts.

6.1.2 Sequence of the start-up program

1. Confirm the proper installation of the product.
2. Select the drain connection used.
3. Check whether the hoses to the drain have been laid with a downward slope.
4. Place the water sensor flat on the floor.
5. Do not fill any water into the brine tank.
6. Fill salt tablets into the brine tank.
7. Set the time.
8. Set the date.
9. Set the raw water hardness.

» The positioning process of the control valve starts.

10. Open the raw water shut-off valve.
11. Open the soft water shut-off valve.

» Water flows through the flushing water hose to the drain.

Venting program

The venting program runs automatically in 9 steps.

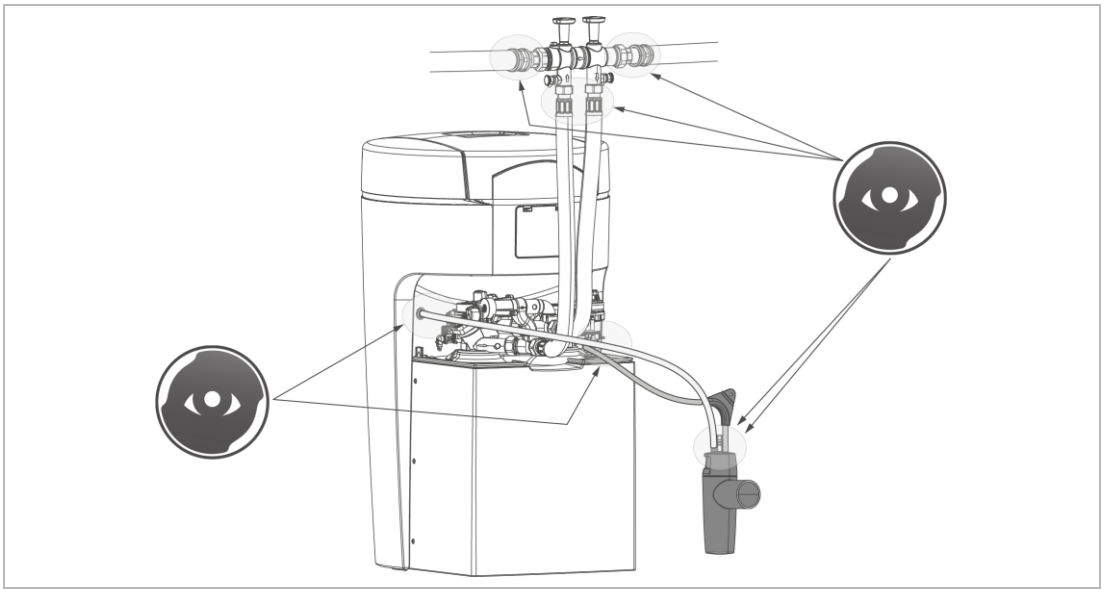
12. Start the venting program.

» After the venting program has been completed, the functional check starts.

Functional check

The functional check runs in 5 steps.

13. Have the water test kit at hand (refer to chapter 7.6).



14. Visually check the connection points for leaks.

Test regeneration

The test regeneration takes approx. 12 minutes.

15. Start the test regeneration.

» After conclusion of the test regeneration, the start-up program is completed.

► Check whether the water sensor is lying flat on the floor.

► Fill in the start-up/commissioning log (refer to chapter 13).

» Start-up/commissioning is completed.

Softened drinking water with optional blending

For the production of softened drinking water by means of the softliQ:SD, the specifications of the German Drinking Water Ordinance do apply.

- ► Set a soft water hardness between 3 °dH and 8 °dH.
- ► Do not exceed the max. sodium content of 200 mg/l.

Country-specific requirements

- Austria:
  In Austria, softened drinking water must have a soft water hardness of at least 8.4 °dH.
- Czech Republic:
  According to the Czech decree no. 252/2004 softened drinking water should not fall below a soft water hardness of 2 mmol/l (approx. 11°dH)

6.1.3 Manual start of the start-up program

The start-up program cannot be started while a regeneration is running.

`Menu level>Start-up`

- ► Press and hold  for 2 seconds.
- ► Follow the instructions on the display.

The sequence of the steps is analogous to the automatic start-up-program.

6.2 Handing over the product to the owner/operator/operating company

- ► Explain to the owner/operator/operating company how the water softener works.
- ► Use the manual to brief the owner/operator/operating company and answer any questions.
- ► Inform the owner/operator/operating company about the need for inspections and maintenance.
- ► Hand over all documents to the owner/operator/operating company for keeping.

7 Operation/handling

NOTE The valves of the system are operated electrically.

- Water can flow to the drain if there is a power failure during regeneration.
- ► In the event of a power failure, check your product and shut off the water supply, if necessary.

7.1 Touchscreen

7.1.1 Basic display

By default, the touchscreen is switched off.

- Tapping the touchscreen activates it.
- If there is no tap for 2 minutes, the control unit returns to the basic display. The display switches off.

» Parameters that have not been saved are discarded.



	Designation
1	Menu level (permanently visible)
2	Work area/information display (changing symbols)

	Designation
3	Control elements (changing symbols)

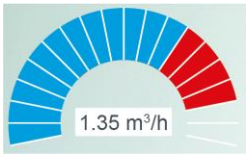
7.1.2 Menu level

To access a menu, tap the corresponding button. The selected button is displayed in yellow. In the menus, you can start actions or change settings.

Illustration	Explanation
	**Information** This menu provides useful information on the water softener.
	**Manual regeneration** In this menu, you can start a regeneration manually (refer to chapter 7.5).
	**Settings** In this menu, you can adapt your water softener individually (refer to chapter 7.2).
	**Water hardness** In this menu, you can enter current values (refer to chapter 7.6).
	**Start-up/commissioning** In this menu, you can start the automatic start-up program (refer to chapter 6.1).

7.1.3 Information display

Illustration	Explanation	
	blue	In operation The system capacity decreases from top to bottom. One bar corresponds to 20 %. The highlighted bars indicate the available system capacity.
	grey	in regeneration The bars correspond to the following regeneration steps from the bottom upwards: • Filling brine tank (lowermost bar) • Salting + Slow rinse • Backwash • Washing out I • Washing out II

Illustration	Explanation
	**Current flow rate** The current flow rate is displayed as a numerical value and in the form of a "tachometer". If the nominal flow of the system is exceeded, the circular segments are red.
	**Mode of operation** The selected mode of operation appears in a green circle segment.
 Perform maintenance since … days	**Yellow symbol** Maintenance due! ► Contact technical service.
 Leak at softliQ installation site	**Yellow symbol (not for softliQ:SD18)** Check the system site (detection by way of water sensor) for leaks and close the main valve of the building installation, if necessary.
 … days	**Yellow symbol (not for softliQ:SD18)** The salt supply will be used up soon. The expected time for the salt to last is displayed in days. ► Fill salt tablets into the brine tank.
	**Red symbol** The water softener is not working properly. ► Fill salt tablets into the brine tank. ► Wait for 10 minutes. ► Start a manual regeneration (refer to chapter 7.5).
	**Red symbol** The water softener is not working properly. A malfunction has occurred (refer to chapter 9).
	**Wi-Fi symbol** This is displayed when there is a Wi-Fi connection to a router.
	**LAN symbol** This is displayed when there is a LAN connection to a router.
	**Cloud symbol** This is displayed when the connection to the Grünbeck Cloud has been established.

7.1.4 Control elements

Button	Description
	Returning to the basic display
◀ and ▶	Scrolling through the menu level
▲ and ▼	Marking a selection, scrolling to the menu items, selecting settings
	Returning to the previous menu level, aborting unwanted actions
	Confirming display messages and saving settings

Buttons that currently do not have a function are displayed in light green.

To change a value or content, tap the corresponding field.
The field turns white and can be changed.

In some extensive menus, functionally related parameters are grouped together into tabs under the header. Tapping the tab opens the corresponding page. You can switch between the tabs using ◀ or ▶.

7.2 Menu structure

Values that can be selected or changed are displayed *in italics.*

Menu	Menu items	Values/settings	
Information	Basic display	Refer to chapter 7.1	
	System data	System flow rate Raw water hardness Capacity figure	
	Counter readings, date and time	Regeneration Soft water volume Perform maintenance in xx days (if activated) Date and time (display)	
	Contact details of installer	*Name* *Phone no.* *Email*	
		Technical service The technical service menu is reserved for technical service personnel and is protected by a code.	
Manual regeneration		Press and hold  for 2 seconds to start.	
Settings	Language	*German* *English* *French* *Spanish*	*Dutch* *Danish* *Italian* *Russian (planned)* Chinese (planned) Taiwanese (planned)
	Hardness unit	*°dH* *°f* *mol/m³*	*ppm* *°e*
	Date, time, time synchronisation		
	Date, time	Current time Current date	Current continent Current time zone

Menu	Menu items	Values/settings	
	Time synchronisation	Switch-over DST to ST Get date/time automatically (NTP) URL NTP server	
	Cloud connection, Wi-Fi/LAN connection, network status		
	Cloud connection	Connection to Grünbeck Cloud Pairing Grünbeck Cloud and user account URL Cloud URL certificate	
	Wi-Fi/LAN connection	Network type Router connection Automatic IP address (DHCP) Automatic Wi-Fi connection (WPS) Wi-Fi search Wi-Fi networks found Wi-Fi password	
	Network status	Parameter, value (display only)	
	Time of regeneration	*Automatic*	*Fixed*
	Modes of operation	*Eco* *Comfort* *Power*	*Individual* *Fix*
	Display, audio signal, illuminated LED ring		
	Display – Display in standby	*Deactivated*	*Activated*
	Audio signal – Behaviour in case of malfunctions	*Deactivated*	*Activated*
	Audio signal enabled from … to …		
	Illuminated LED ring – function setting (SD21 and SD23)	*Water treatment + operation + malfunction* *Operation + malfunction* *Malfunction* *Permanent illumination* *Deactivated*	
	Illuminated LED ring – Illuminated LED ring flashes on signal	*Deactivated*	*Activated*
	Illuminated LED ring Brightness	*…%*	
	Updates and profiles, manual update When switching to manual software updates, the latest security features and functions are not automatically available to you.		
	Software update	*Automatic*	*Manually*
	Saving Settings profile	No / Yes The parameter settings are saved here as a "Private" profile in the Grünbeck Cloud.	
	Loading Settings profile	Private profile	Installer profile
	Software update	Only possible if software updates are not automatic!	
	Resetting factory settings	*Start*	
	Device info, consumption histories, regeneration history		
	Device info	Software version Hardware version Bootloader version Serial number of control unit Maintenance interval	
	Consumption histories	Water consumption Salt consumption	

Menu	Menu items	Values/settings
	Regeneration history	
Water hardness	Setting the water hardness	Press and hold for 2 seconds to start. Raw water / soft water
Start-up/ commissioning	Start-up/commissioning	Press and hold for 2 seconds to start.

7.3 Connection to Grünbeck Cloud

The use of the Grünbeck Cloud and app functionalities depends on the service availability of the required Azure services in the data centre region of the respective country. Geopolitical changes or restrictions in the respective country can limit or prevent the availability of the services of the data centre currently located in the EU.

It is possible to control your softliQ water softener via a mobile device and to request information.

To do so, Grünbeck's myProduct app must be installed on your mobile device.

The connection between your water softener and the mobile device does not work directly, but via the Grünbeck Cloud.

The connection between Grünbeck's myProduct app and the control unit of the softliQ system is established in the following way:



	Designation
1	Grünbeck product
2	Router

	Designation
3	Grünbeck Cloud
4	Mobile device

As soon as a user account has been created via Grünbeck's myProduct app and the anonymous data is assigned to your user account by pairing, the data is personalised as defined by the Data Protection Act.

7.3.1 Installing Grünbeck's myProduct app

Grünbeck's myProduct app is the link between your Grünbeck product and your mobile device. You can access your Grünbeck product all over the world.



- ► Download Grünbeck's myProduct app and install it on your mobile device.
- ► Create your personal user account.
- ► Add your softliQ to the user account in the Grünbeck myProduct app using + .
- ► Follow the instructions of Grünbeck's myProduct app.

Product registration

Using Grünbeck's myProduct app, you can conveniently register your product

- ► Call up Registration and Product registration in the device overview of Grünbeck's myProduct app.
- ► Enter your personal data.
- » Registering your product extends your warranty by 1 year.

7.3.2 Allowing connection to the Grünbeck Cloud

After the connection to the Cloud has been allowed and the connection to the router has been established, the control unit automatically checks whether a new firmware update is available in the Cloud.

- ► Do not interrupt the power supply while a firmware download and firmware processing is in progress (max. 20 minutes).

If your softliQ water softener is linked to your user account in the Grünbeck Cloud, you will be notified by email in the event of a malfunction.

7.3.3 Establishing a connection to the router

`Menu level>Settings>Wi-Fi/LAN connection`

As soon as the connection to the Grünbeck Cloud has been allowed and a connection to the router has been established, the control unit cyclically sends anonymous data to the Grünbeck Cloud.

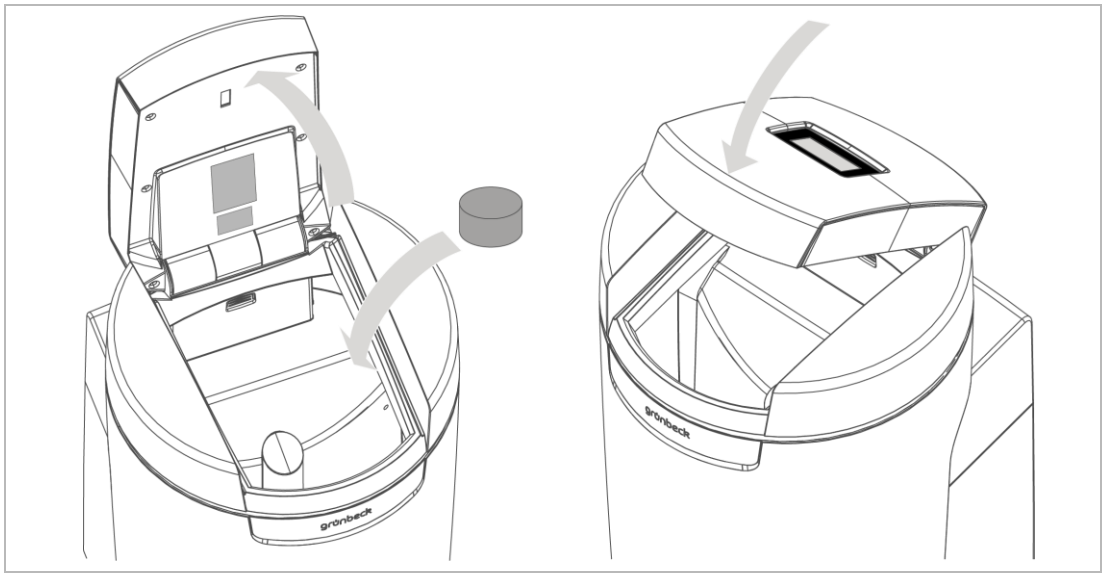
7.3.4 URL certificate

To make sure the connection to the Grünbeck Cloud is secure, the control unit always loads the current URL certificate automatically.

The entry below must be present in Settings/Cloud connection/URL certificate: prodeugruenbeckfirmware.blob.core.windows.net/cert

- ► Check whether this entry is present.
- ► Add the entry, if necessary.

7.4 Refilling salt tablets



The salt supply in the brine tank must always be higher than the water level. Normally, the water level is approx. 1 cm above the sieve bottom.

1. Open the brine tank lid.

   The sensor of the salt supply indicator is located in the brine tank lid (not for softliQ:SD18). This sensor does not work with laser light and thus is safe for the eyes. The function of the salt supply indicator is explained in chapter 3.2.

2. Fill salt tablets into the brine tank.

3. Dispose of the dust-like fine fraction from the bag with your residual waste.
4. Close the brine tank lid.
5. Document the refill in the operation log (refer to chapter 13).

7.5 Starting a manual regeneration

`Menu level>Manual regeneration`

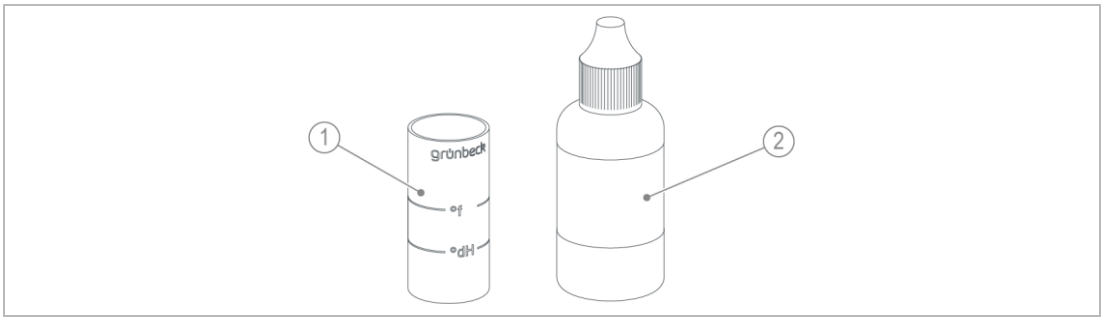
A manual regeneration is necessary in the cases below:

- If the product is put into operation again after a longer period of standstill.
- After maintenance or repair work was performed.
- After a longer power failure.

Manual regenerations are always complete regenerations with maximum capacity figure.

7.6 Determining and entering the water hardness

The water test kit is designed for the determination of the water hardness in °dH or in °f. The unit mol/m³ (mmol/l) can be determined from °f.



	Designation		Designation
1	Test tube	2	Titration solution

7.6.1 Taking a water sample

1. Open a sampling valve on the connection block.
   a. Use the raw water sampling valve to take a raw water sample.
   b. Use the soft water sampling valve to take a soft water sample.
2. Take a water sample using the test tube:
   a. Fill the test tube up to the °dH mark to determine the water hardness in °dH.
   b. Fill the test tube up to the °f mark (x 0.1 = mol/m³) in order to determine the water hardness in °f, mol/m³ or mmol/l.

7.6.2 Determining the water hardness in °dH/°f

1. Add one drop of titration solution (1 drop = 1 °dH or 1 °f).
2. Shake the test tube until the titration solution is mixed with the water.
3. In case of red colouring, repeat steps 1 and 2 and count the drops until the colour changes to green.

» If the colour changes from red to green, the water hardness has been determined.

- Test tube filled up to the °dH mark: 6 drops = 6 °dH.
- Test tube filled up to the °f mark: 6 drops= 6 °f.

7.6.3 Determining the water hardness in mol/m³ (mmol/l)

1. Determine the water hardness in °f as described.
2. Divide the value in °f by 10.
   6 drops = 6 °f = 0.6 mol/m³ = 0.6 mmol/l.

» You get the water hardness in mol/m³.

7.6.4 Entering the water hardness

`Menu level>Water hardness`

1. Press and hold  for 2 seconds.
2. Tap Raw water hardness.
3. Enter the value of the raw water hardness.
4. Confirm with ✓.

7.7 Selecting the time of regeneration

`Menu level>Settings>Regeneration time`

1. Use ▲ and ▼ to select the required function.
2. Confirm with ✓.

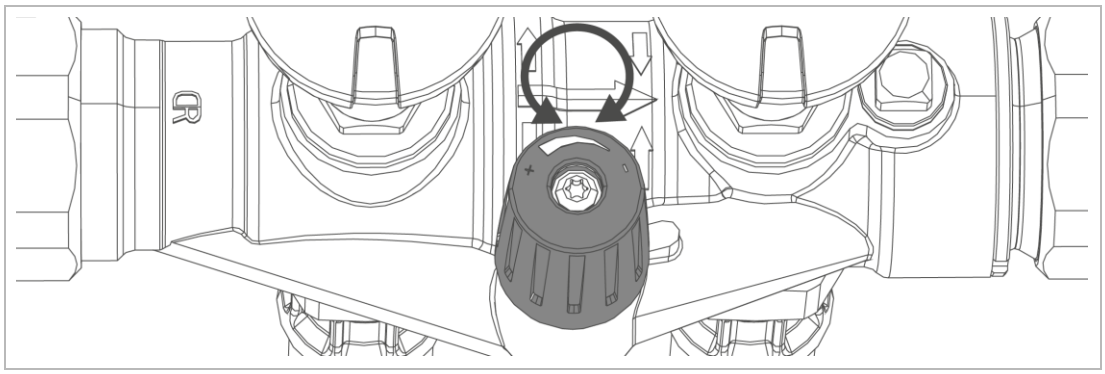
7.7.1 Setting the time of the fixed regeneration

Select a time at which you have no water consumption for > 1 h, e.g. at 02:00 o'clock at night.

1. Select the Regeneration time.
2. Enter the time.
3. Confirm with ✓.

7.8 Setting the blending valve

The blending valve must only be set while the water is running (approx. 400 – 600 l/h).
Recommended soft water hardness: 3 – 6 °dH (5…11 °f)



1. Measure the raw water hardness (refer to chapter 7.6).
2. Move the blending valve to the middle position.
3. Measure the soft water hardness (refer to chapter 7.6).
4. Set the soft water hardness to the required value:

► Turn the blending valve to the right.

» The soft water hardness is reduced.

► Turn the blending valve to the left.

» The soft water hardness is increased.

5. Enter the set value in the control unit.
   `Menu level>Water hardness`

7.9 Installer level (Code 005)

The settings described here must be made by qualified specialists only.

While the function below is in progress, the product must not be disconnected from mains:

- Filling operating water into brine tank

Otherwise, the reference position of the exchanger that is not in the operation must be found manually afterwards (grey symbol in the basic display).

`Menu level>Information>Contact data of installer`

1. Tap .
2. Enter the Code using the numerical keypad.
3. Confirm with ✓.

» You can change parameters and values.

Menu structure

Menu items		Settings/remarks
Wi-Fi access point (Can only be selected in combination with Grünbeck's complementary mySettings app for qualified specialists.)	Page 1/2	Activate
		Deactivate
	Page 2/2	IP address
		SSID
		Password
Exchanger	Page 1/2	Flow rate, l/h
		Capacity figure, m³ x °dH
		Remaining capacity, m³
		Regeneration step
	Page 2/2	Regeneration flow rate, l/h
		Last regeneration, date/time
		on xxx, %
Flow rate Exchanger	(Display only)	Exchanger peak value, m³/h
		for xxxxx, min
Water volumes	(Display only)	Soft water, m³
		Make-up water volume, l
Counter readings	(Display only)	Salt consumption, kg
		Regeneration counter
Find referencing	Start	Moving to reference position. Ongoing regeneration is aborted. After completion, the factory setting is active again.
Filling operating water into brine tank	Start	Filling the brine tank to a minimum water level (e.g. after cleaning the brine tank). After completion, the factory setting is active again.
Test regeneration	Start	Functional check of all components involved in the regeneration.

Menu items		Settings/remarks
Time of regeneration	Automatic (factory setting)	
	Fixed	Programming a fixed regeneration time. Regeneration only takes place, if required.
	Weekly timer	Mon ... Sun Time of the regeneration on each day of the week (factory setting: Mon - Fri at 7:00 am)
	Yes	Saving all current parameter settings of the control unit in the Grünbeck Cloud, so that they can be downloaded to the control unit again later, if necessary. Here, the parameter settings are saved as "Installer" profile in the Grünbeck Cloud.
Saving Settings profile	None (factory setting)	
	Yes	Saving all current parameter settings of the control unit in the Grünbeck Cloud, so that they can be downloaded to the control unit again later, if necessary. Here, the parameter settings are saved as "Installer" profile in the Grünbeck Cloud.
Function Programmable output	Delivery pump for regeneration water (factory setting)	This setting is required in conjunction with the delivery pump for regeneration water available as an accessory (refer to chapter 3.6). Contact closed (delivery pump for regeneration water running) during the regeneration steps First filtrate, Salting, Slow rinse and Backwash.
	Regeneration signal	Contact closed during the entire regeneration.
Function Fault signal contact	Normally closed (N.C. = normally closed) (factory setting)	Contact normally closed. Opened in the event of a fault signal.
	Normally open (N.O. = normally open)	Contact normally open. Closed in the event of a fault signal.
Function Programmable input	Leak detection (factory setting)	If the water sensor detects a leak at the installation site of the softliQ, the message Leak at softliQ installation site is displayed.
	Regeneration lock	The regeneration lock is active as long as the contact at the programmable input is closed; manually released and automatic regenerations after a power failure take priority. A regeneration that has already been started is not aborted.
	Release of regeneration	Starting regeneration when the contact at the programmable input closes.

8 Maintenance and repair

Maintenance and repair includes cleaning, inspection and maintenance of the product.

WARNING Contaminated drinking water

- Infectious diseases

► Pay attention to hygiene when working on the product.

The responsibility for inspection and maintenance is subject to local and national requirements. The owner/operator/operating company is responsible for compliance with the prescribed maintenance and repair work.

By concluding a maintenance contract you make sure that all maintenance work will be carried out on time.

► Only use genuine spare and wearing parts from Grünbeck.

8.1 Cleaning

NOTE Do not clean the product with cleaning agents containing alcohol/solvents

- Plastic components are damaged
- Varnished surfaces are affected

► Use a mild/pH-neutral soap solution.

► Only clean the outside of the product.

► Do not use any strong or abrasive cleaning agents.

► Wipe the housing with a damp cloth.

The technical service personnel clean the brine tank once a year during maintenance.

8.2 Intervals

By way of regular inspections and maintenance, malfunctions can be detected in time and product failures can be prevented.

DIN EN 806-5 recommends semi-annual and annual maintenance.

Task	Interval	Execution
Inspection	2 months	• Check for function • Check for leaks • Check salt supply
Maintenance	6 months	• Evaluate condition and consumption of salt • Check water sensor
	annually	• Check operating values and function • Clean components • Check wearing parts and replace them, if necessary.

8.3 Inspection

You as owner/operator/operating company can carry out the regular inspections yourself. Regular inspections increase the operational reliability of your product.

► Carry out an inspection at least every 2 months.

To carry out an inspection, proceed as follows:

1. Check the soft water hardness (refer to chapter 7.6).
2. Check that there are enough salt tablets in the brine tank.

The level of salt tablets in the brine tank must always be higher than the water level. Normally, the water level is approx. 1 cm above the sieve bottom.

3. Check the connection hoses for leaks.
4. Check the control valve to the drain for leaks.

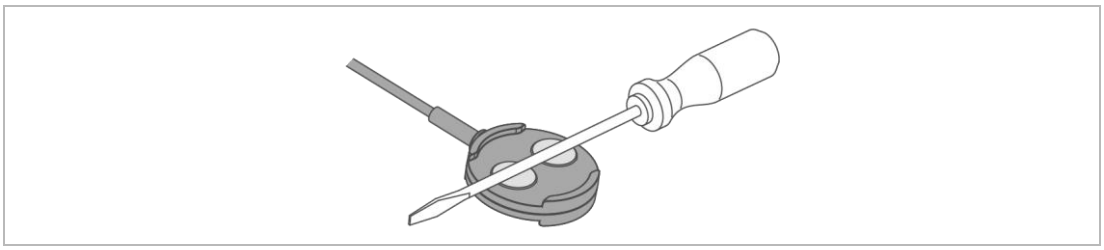
No water must drip from the flushing water hose during operation (blue symbol in the basic display).

8.4 Maintenance

8.4.1 Semi-annual maintenance

Proceed as follows to carry out semi-annual maintenance:

1. Check the soft water hardness (refer to chapter 7.6).
2. Evaluate the salt consumption subject to the water volume consumed.
3. Check the condition of the salt (no salt clumps!).
   Break up incrustations with a suitable tool.
4. Check the water sensor for function by bridging it with a metal object.



» The water sensor is working if the water softener issues a warning message after 30 seconds at the latest.

8.4.2 Annual maintenance

Carrying out annual maintenance work requires specialist knowledge. This kind of maintenance work must be carried out by technical service personnel only.

In addition to the semi-annual maintenance, the following work must be carried out as well:

Operating values

1. Measure the raw water hardness.
2. Compare the raw water hardness with the setting in the control unit and adjust it accordingly.
3. Measure the soft water hardness.
4. Readjust the blending valve, if necessary, and check the soft water hardness.
5. Read off the water and flow pressure.
6. Read off the residential water meter.
7. Read off the regeneration counter.
8. Read off the soft water meter.
9. Read out the error memory.

Maintenance work

10. Check the hose connections for leaks and damage.
11. Check the soft water meter for pulse emission
    (current flow during operation, refer to chapter 7.1.3).
12. Check all cables and connections for damage and a tight fit.
13. Check the injector and the injector sieve and clean them, if needed.
14. Check the brine filling orifice in the brine connection angle (red).
15. Check the brine valve and the level electrodes and clean them, if needed.
16. Clean the brine tank.
17. Start a manual regeneration.
18. Check the suction power of the injector.
19. Check the chlorine current during salting.

20. Check the regeneration counter for function during backwash (installer level).
21. Check the control valve at the drain outlet in operating position for leaks (flushing water hose, filling hose and suction hose).
22. Check the filling hose and the suction hose to the brine valve for leaks.
23. Reset the service interval, if activated.
24. Record the maintenance in the operation log (refer to chapter 0).

8.5 Consumables

Product	Order no.
Regeneration salt tablets (25 kg) acc. to DIN EN 973 type A	127 001
Water test kit "Total hardness“	170 187

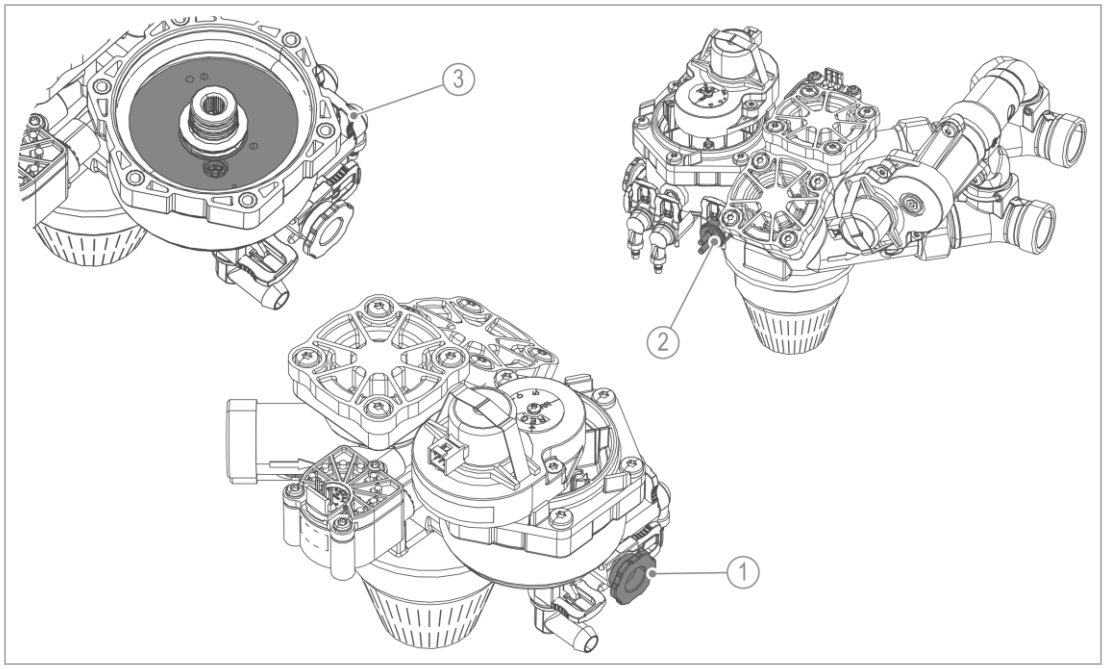
8.6 Spare parts

For spare parts and consumables please contact your local Grünbeck representative who you may find on the internet at www.gruenbeck.com.

8.7 Wearing parts

Wearing parts are listed below:

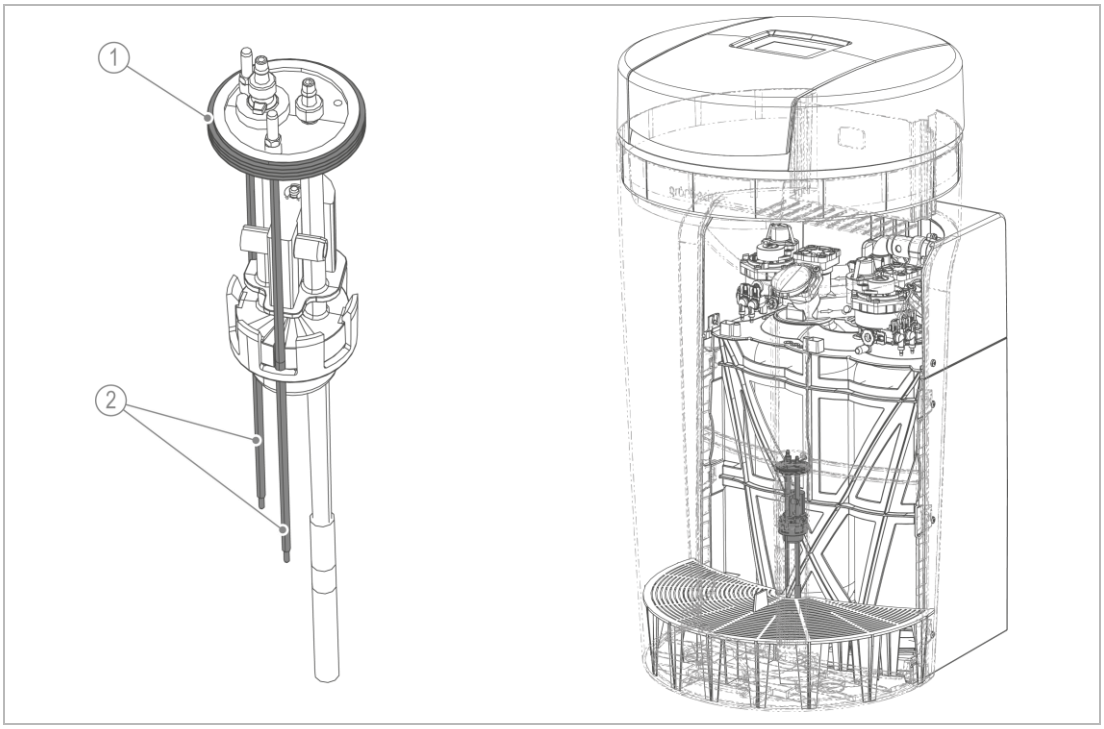
- Control valve: Seals, pair of discs, injector and chlorine cell



	Designation
1	Injector (with circlip)
2	Chlorine cell (with circlip)

	Designation
3	Pair of regeneration discs (with flow stabiliser)

- Brine valve: Seals and electrodes



	Designation		Designation
1	Seal	2	Electrodes

9 Troubleshooting

WARNING Contaminated drinking water due to stagnation

- Infectious diseases

► Have malfunctions eliminated immediately.

The softliQ water softener indicates malfunctions on the display. As soon as a fault appears, the touchscreen changes to the basic display and remains active until the condition has been rectified.

► If you cannot eliminate malfunctions with the instructions given below, contact the technical service.

► Have your system data (refer to chapter 1.2) at hand.

9.1 Display messages

1. Acknowledge the display message with Rectify.
2. If the fault occurs again, compare the display message with the table below.

9.1.1 Warning signals (yellow symbols)

Display	Explanation	Remedy
 Service overdue by … days	Only displayed if maintenance interval is activated.	► Contact technical service.
 Leak at softliQ installation site	Water sensor has electrical connection.	► Check whether water is leaking. ► If necessary, close the main valve of the building installation.
SD21 and SD23 only:  **Salt supply low!** Please refill! Sufficient for: xy days (Order no. 127 001)	Salt supply low.	► Fill salt tablets into the brine tank. ► Confirm with Rectify.

9.1.2 Fault signals (red symbols)

Display	Explanation	Remedy
 **Power failure > 5 minutes**	Only displayed if detection was activated by technical service personnel. Upon return of power, the water softener will perform a regeneration. If there is a power failure, any regeneration in progress at the time is stopped and continued afterwards.	► Check the electrical connection. ► Set the time. ► Start a manual regeneration (refer to chapter 7.5).
 **Salt supply used up!** Refill immediately! (Order no. 127 001)	Hollow area below the salt.	► Break up incrustations with a suitable tool.
	Salt supply used up.	► Fill salt tablets into the brine tank. ► Confirm with Rectify.
	Water pressure too low.	► Increase the flow pressure to min. 2.0 bar.
	Chlorine cell worn. Brine filling orifice, injector, injector sieve or brine valve clogged.	► Contact technical service.
 **Drive failure** of regeneration control valve!	Step monitoring of regeneration motor or connecting cable defective.	► Contact technical service.
 **Regeneration water meter** Volume not reached!	Regeneration water meter is not emitting pulses. Connecting cable defective. Water supply is interrupted. Safety float on brine valve closed.	► Check water supply. ► Contact technical service.
 **Soft water meter defective**	Connecting cable defective.	► Check water supply. ► Contact technical service.
 **Regeneration water meter defective**	Connecting cable defective.	► Check water supply. ► Contact technical service.
 **System is not drawing brine from brine tank effectively**	Minimum contact during Salting not reached. Monitoring time exceeded. Injector clogged or raw water pressure too low.	► Contact technical service.

Display	Explanation	Remedy
 **Nominal flow rate exceeded**	Only displayed if monitoring was activated by qualified specialist. System is being operated with excessive flow rates.	► Reduce flow rate. ► If the fault persists, contact technical service.
 **Water loss to drain**	Water loss to drain.	► Contact technical service.
 **Failure of power supply to drives!**	Short-circuit on the motor or on the connecting cable to the motor.	► Contact technical service.

Fault signals during start-up/commissioning

Display	Explanation	Remedy
 **Error during start-up** (Venting)	Time monitoring of venting (backwash) has responded. No flow was detected at the regeneration water meter.	► Check whether the shut-off valves on the connection block are open.
 **Error during start-up** (Filling brine tank)	Time monitoring for filling the brine tank has responded.	► Check whether the raw water shut-off valve is open. ► Confirm with Rectify. ► Repeat start-up/commissioning.
 **Error during start-up** (Chlorine current too low)	Monitoring of current during test regeneration has responded.	► Fill salt tablets into the brine tank. ► Confirm with Rectify. ► Repeat start-up/commissioning.
 **Error during start-up** (Referencing)	Step monitoring of regeneration motor or connecting cable defective.	► Confirm with Rectify. ► Repeat start-up/commissioning. ► Contact technical service if the fault reoccurs.

9.2 Other observations

Observation	Meaning	Remedy
No soft water	Excessive water consumption (water softener has exceeded its capacity).	► Restrict your water consumption to the maximum flow rate permitted (refer to chapter 12). ► Start a manual regeneration (refer to chapter 7.5).
	Water softener does not have a permanent power supply.	► Check the electrical connection.
	Soft water meter is not emitting pulses.	► Contact technical service.
	Raw water hardness is set too low.	► Measure the raw water hardness (refer to chapter 7.6). ► Update the value in the control unit.
	Incorrect setting of blending valve	► Set the blending valve (refer to chapter 7.8).
	Water supply is interrupted.	► Check whether the shut-off valves on the connection block are open.
Resin beads in flushing water hose or in tap aerator	Defective nozzle system.	► Contact technical service.
Water pressure at the withdrawal point is too low. (Pressure loss too high.)	Resin might be polluted by undissolved particles.	► Contact technical service if the problem originates from the water softener.
Start-up program: During the venting program or test regeneration, the display remains unchanged for more than 20 minutes.	Connection hoses are connected the wrong way round (raw water and soft water).	► Check the connection hoses. ► Close both shut-off valves on the connection block. ► Start a manual regeneration. ► Swap the connection hoses. ► Open the shut-off valves.
Rattling noise at the connection block during water withdrawal		

For information on malfunctions regarding the Grünbeck Cloud, go to the following address on the internet: https://www.gruenbeck.de/en/become-a-water-expert/faq/

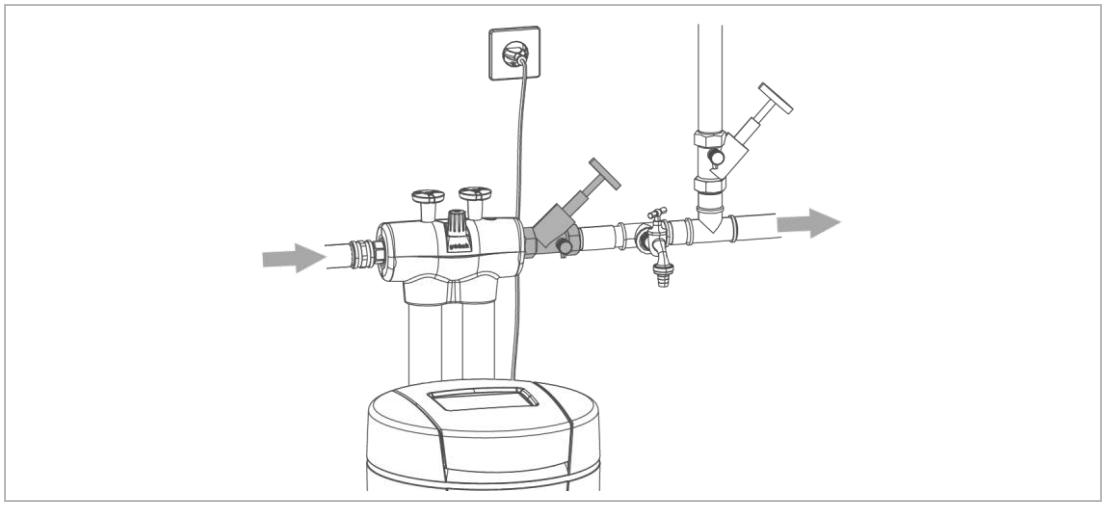
10 Decommissioning

10.1 Temporary standstill

In accordance with DIN 19636-100, your water softener regenerates after 4 days, even if the capacity has not yet been exhausted by that time. The stagnation of water is prevented. It is not necessary to temporarily shut down your product.

► Leave your product connected to electricity and water.

If you still want to temporarily shut down your product, proceed as follows:



► Close the shut-off valve downstream of the product.

» The product remains in an operating state which is considered to be safe with regard to hygiene and which is admissible according to DIN EN 19636-100.

If you need to remove your product temporarily, you can leave the connection block in the pipe. The connection block features an overflow valve.

10.2 Final shutdown

Refer to the next chapter

11 Dismantling and disposal

11.1 Deleting personal data

For security reasons, delete your personal data before disposing of your product.

► Please contact Grünbeck's technical service

11.2 Dismantling



The work described herein represents an intervention into your drinking water system. Have this work carried out by qualified specialists only.

1. Close the raw water shut-off valve.
2. Open a water withdrawal point.
3. Wait for a few seconds.

» The pressure in the product and the pipe network is being relieved.

4. Close the water withdrawal point.
5. Pull the mains plug.
6. Keep a collecting vessel (e.g. a bucket) handy to catch escaping water.
7. Disconnect the connection hoses from the product.
8. Disconnect the connection hoses from the connection block.
9. Remove the connection block.
10. Close the gap in your drinking water installation, e.g. by using an adjusting piece (order no. 128 001).
11. Drain the brine tank.
12. Drain all liquids from the product.

11.3 Disposal

► Obey the applicable national regulations.

Packaging

► Dispose of the packaging in an environmentally sound manner.

NOTE Danger to the environment due to incorrect disposal

- Packaging materials are valuable raw materials that can be reused in many cases.
- Incorrect disposal can cause hazards to the environment.

► Dispose of packaging materials in an environmentally sound manner.

► Obey the local disposal regulations.

► If necessary, commission a specialist company with the disposal.

Product



If this symbol (crossed-out wheelie bin) is on the product, this product or its electrical and electronic components must not be disposed of as household waste.

► Find out about the local regulations on the separate collection of electrical and electronic products.

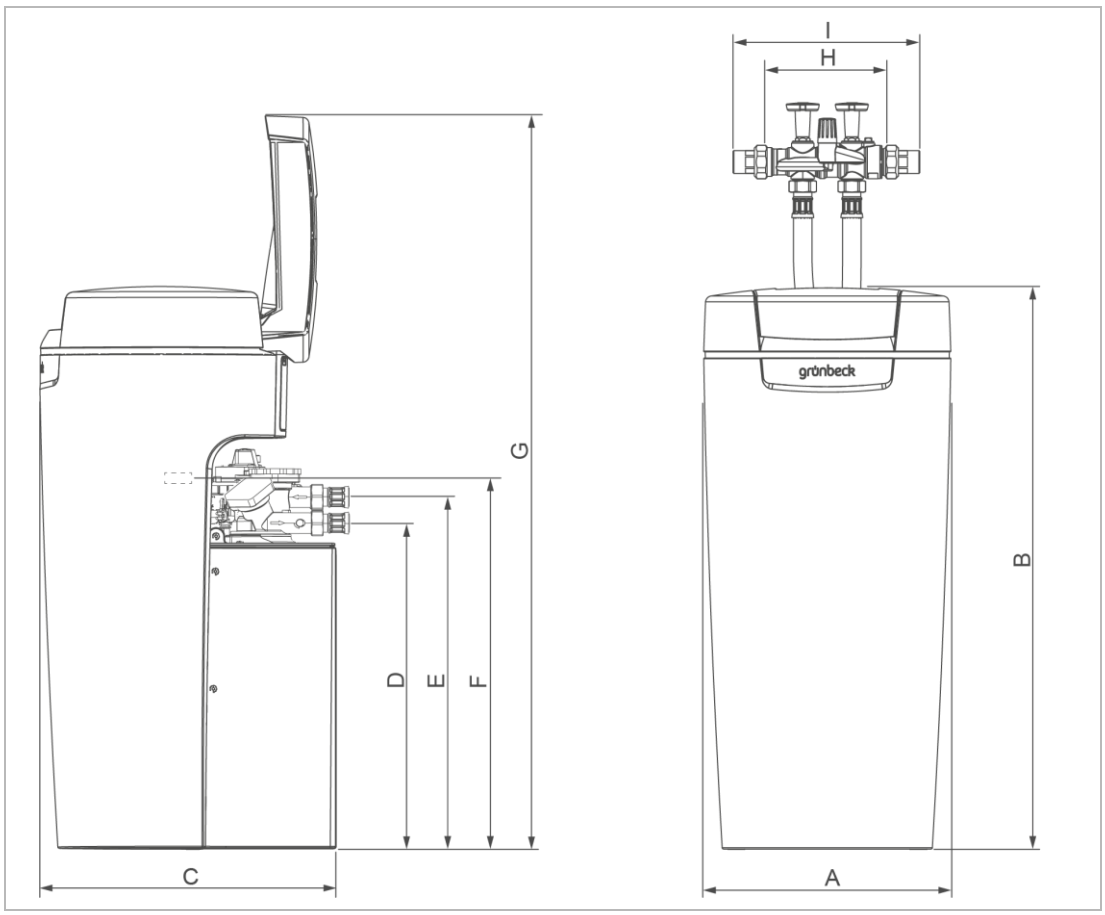
► Make use of the collection points available to you for the disposal of your product.

► If your product contains batteries or rechargeable batteries, dispose of them separately from your product.



For more information on take-back and disposal, go to www.gruenbeck.de.

12 Technical specifications



Dimensions and weights		softliQ:SD18	softliQ:SD21	softliQ:SD23
A System width	mm	360		
B System height	mm	815		
C System depth	mm	430		
D Connection height of control valve (soft water)	mm	470		
E Connection height of control valve (raw water)	mm	510		
F Height of safety overflow of brine tank	mm	520		
G Height with open lid	mm	1060		
H Installation length without screw connection	mm	190		
I Installation length with screw connection	mm	271		
Operating weight, approx.	kg	65	69	73
Shipping weight, approx.	kg	22	24	26

Connection data		softliQ:SD18	softliQ:SD21	softliQ:SD23
Nominal connection diameter		DN 25 (1" male thread)		
Drain connection		≥ DN 50		
Rated voltage range	V	100 - 250		
Rated frequency	Hz	50 - 60		
Power input (during regeneration, temporarily)	W	8	14	
Power input for softening if display, Wi-Fi and illuminated LED ring are switched off (illuminated LED ring for softliQ:SD21 and softliQ:SD23 only)	W	< 3.5		
Protection/protection class		IP54/⧈		
Wi-Fi frequency band	GHz	2.4		

Performance data		softliQ:SD18	softliQ:SD21	softliQ:SD23
Nominal pressure		PN 10		
Rated pressure	MPa/ bar	+1.0/10		
Min./max. operating pressure (recommended)	bar	2.0/8.0 (4.0)		
Nominal flow (0 °dH, 0 °f, 0 mol/m³) acc. to DIN EN 14743 at a pressure loss of 1.0 bar (theoretical value)	m³/h	1.8	2.1	2.3
Nominal flow at a pressure loss of 1.0 bar following DIN 19636 (raw water hardness 20 °dH (35.6 °f, 3.56 mol/m³), soft water hardness 8 °dH (14.2 °f, 1.42 mol/m³))	m³/h	3.0	3.5	3.8
Nominal capacity variable	m³x°dH m³ x °f mol	6 - 14 11 - 25 1.1 - 2.5	8 - 20 14 - 36 1.4 - 3.6	9 - 23 16 - 41 1.6 - 4.1
Capacity per kg of regeneration salt	mol/kg	6.7 - 4.5	7.1 - 4.5	
Regeneration time for a complete regeneration	min	20 - 40		
Regeneration (1x per day) on capacity reduction	%	> 50		

Filling volumes and consumption data		softliQ:SD18	softliQ:SD21	softliQ:SD23
Resin volume	l	5	7.5	9
Salt consumption*	kg	0.15 - 0.55	0.20 - 0.80	0.23 - 0.95
Regeneration salt supply	kg	≤ 35		
Salt consumption per m³ and °dH per m³ and °f per m³ and mol	 kg/(m³ x °dH) kg/(m³ x °f) kg/mol	 0.025 - 0.040 0.014 - 0.022 0.140 - 0.221		
Flushing water flow	m³/h	≤ 0.3	≤ 0.4	≤ 0.6
Total waste water volume*	l	21 - 31	28 - 43	32 - 51
Waste water volume* per m³ and °dH per m³ and °f per m³ and mol	 l/(m³ x °dH) l/(m³ x °f) l/mol	 3.5 - 2.2 1.9 - 1.2 19 - 12		

*For a complete regeneration

General data		softliQ:SD18	softliQ:SD21	softliQ:SD23
Range of application: family home size (up to ... people)		1 - 2 (4)	1 - 4 (9)	1 - 5 (12)
Water temperature	°C	5 - 30		
Ambient temperature (drinking water)	°C	5 - 25		
Ambient temperature (technical application)	°C	5 - 40		
Humidity (non-condensing)	%	≤ 90		
DVGW registration number		NW-9151CT0491		
SVGW registration number		1902-6824		
ÜA registration number The Office of the Vienna Provincial Government – City of Vienna		R-15.2.3-21-17496		
Order no.		**189 100**	**189 200**	**189 300**

13 Operation log



- ► Document the initial start-up/commissioning and all maintenance activities.
- ► Copy the maintenance report.

Water softener softliQ:SD

Serial no.: _____

13.1 Start-up/commissioning log

Customer					
Name:					
Address:					
Installation/Accessories					
softliQ connected to Cloud	☐ Wi-Fi	☐ LAN	☐ No		
Drinking water filter (make/type):					
Drain connection acc. to DIN EN 1717	☐ Yes	☐ No			
Floor drain present	☐ Yes	☐ No			
Safety device	☐ Yes	☐ No			
Regeneration water lifting system	☐ Yes	☐ No			
Make:					
Dosing	☐ Yes	☐ No			
Active agent:					
Operating values					
Water pressure	bar				
Residential water meter reading	m³				
Hardness unit	☐ °dH	☐ °f	☐ mol/m³	☐ °e	☐ °ppm
Raw water hardness (measured)					
Raw water hardness (set)					
Soft water hardness (set)					
Remarks					
Start-up/commissioning					
Company:					
Service technician:					
Work time certificate (no.):					
Date/signature:					

Maintenance no.: ____

- ► Enter the measured values and operating data.
- ► Confirm the checks with **OK** or record any repairs done.

Operating values	
Raw water hardness measured/set	/
Soft water hardness measured/set	/
Soft water hardness 0 °dH test	☐ OK
Operating pressure	bar
Residential water meter reading	m³
Soft water volume meter	m³
Regeneration counter	

Reading out the error memory			
	Error	**Date**	**Time**
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Maintenance work		OK
Hose connections checked for leaks and damage		☐
Soft water meter checked for pulse output		☐
Regeneration water meter checked for pulse output		☐
Cables checked for damage and for tight fit		☐
Injector and injector sieve cleaned/checked		☐
Chlorine cell checked		☐
Level electrodes of brine valve cleaned/checked		☐
Brine tank cleaned		☐
Salt tablets checked for cleanliness		☐
Reference position moved to manually (C 005)		☐
Suction power of the injector checked during Salting:	0.1 l in 60 – 120 s	☐
Current at the chlorine cell during Salting		☐
Water sensor checked for function		☐
Product/control valve checked for leaks		☐
Drain connection cleaned		☐
Flushing water hose checked for leaks during operation		☐
Filling and suction hose to the brine valve checked for leaks during operation		☐
Maintenance interval reset		☐

Remarks

Carried out by	
Company:	
Service technician:	

Documentation of salt consumption

1. Read off the meter reading for the soft water volume.
   `Information>Meter readings, date and time>Soft water volume`
2. Enter the value read.
3. Enter the amount of salt refilled.
4. Evaluate the salt consumption subject to the water volume consumed.

Date	Meter reading of soft water meter	Amount of salt refilled in kg	Salt consumption OK	
			☐ Yes	☐ No
			☐ Yes	☐ No
			☐ Yes	☐ No

EU Declaration of Conformity

In accordance with the Radio Equipment Directive 2014/53/EU, Appendix VI

CE

This is to certify that the system designated below meets the safety and health requirements of the applicable European guidelines in terms of its design, construction and execution.

This certificate becomes void if the system is modified in any way not approved by us.

Water softener softliQ:SD

Serial no.: Refer to type plate

The aforementioned system also complies with the following directives and provisions:

- Directive on the Restriction of Hazardous Substances RoHS (2011/65/EU)

The following harmonised standards have been applied:

- EN 60335-1:2012 + AC:2014 + A11:2014
- EN 61000-3-2:2014 Class A
- ETSI EN 300 328 V 2.1.1 (2016-11)
- EN 61000-6-2:2005 + AC:2005
- EN 61000-6-3:2007 + A1:2011+AC:2012

The following additional standards and regulations have been applied:

- ETSI EN 301 489-1 V2.1.1 section 8 and/or 9 (version included in addition: V1.9.2)
- ETSI EN 301 489-17 V3.1.1

Responsible for documentation: Dipl.-Ing. (FH) Markus Pöpperl

Manufacturer: Grünbeck Wasseraufbereitung GmbH
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Hoechstaedt/Germany, 26/02/2020



By power of attorney Dipl.-Ing. (FH) Markus Pöpperl

Head of Technical Product Design

Publisher's information

Technical documentation

Should you have any questions or suggestions regarding this operation manual, please contact Grünbeck Wasseraufbereitung GmbH's Department for Technical Documentation directly.

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