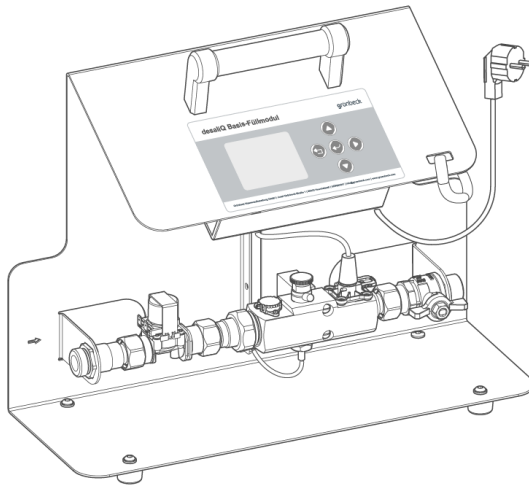


We understand water.



Heating water treatment system |
desaliQ basic filling module

Operation manual

grünbeck

**General Contact
Germany**

Phone +49 9074 41-0
Fax +49 9074 41-120

Availability

Monday to Thursday
7:00 am - 6:00 pm

Friday
7:00 am - 12:00

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1 Introduction

This manual is intended for owners/operating companies, operators/users as well as qualified specialists in the heating sector 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 the product.
- ▶ Comply with all specified safety and handling instructions of this manual.
- ▶ Keep this manual and all other applicable documents, so that they are available when needed.

1.1 Validity of the manual

This manual applies to the products below:

- desaliQ basic filling module
- desaliQ basic filling module (country-specific version for Switzerland, Denmark and Uruguay)

1.2 Other applicable documents

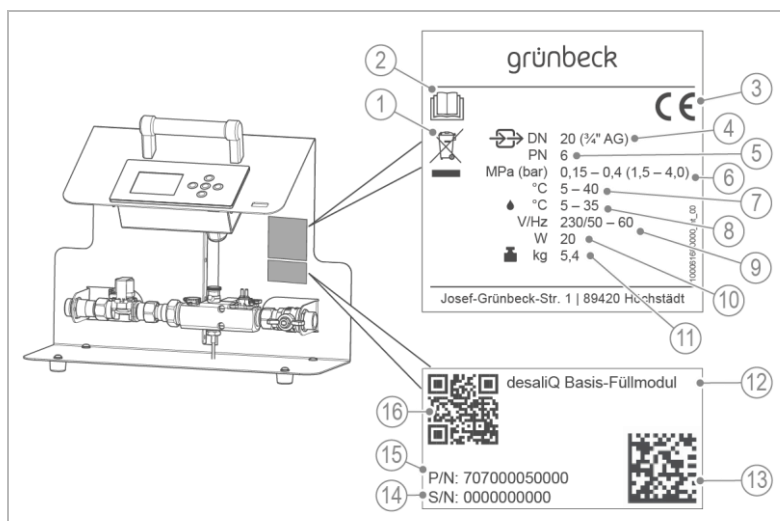
- Operation manual of mixed bed cartridge desaliQ:MB9
- Operation manual of mixed bed cartridges desaliQ
- Operation manual of softening cartridges decaliQ

1.3 Product identification

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









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

The type plate is located on the device.



Item	Designation	Item	Designation
1	Disposal information	2	Obey the operation manual
3	CE mark	4	Nominal connection diameter of inlet and outlet
5	Nominal pressure	6	Operating pressure (circuit)
7	Ambient temperature	8	Water temperature
9	Power supply	10	Rated power
11	Weight	12	Product designation
13	Data matrix code	14	Serial no.
15	Order no.	16	QR code

1.4 Symbols used

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

1.5 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 following signal words 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 injuries	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 function or damage to an object in its vicinity

1.6 Demands on personnel

During the individual life cycle phases of the product, different people carry out activities on the product. The respective tasks require different skills.

1.6.1 Qualification of personnel

Personnel	Requirements
Operator/user	<ul style="list-style-type: none"> • 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/operating company	<ul style="list-style-type: none"> • Product-specific expertise • Knowledge of statutory regulations on work safety and accident prevention
Qualified specialist <ul style="list-style-type: none"> • Electrical engineering • Sanitary engineering (HVAC and plumbing) • Transport 	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • Extended product-specific expertise • Trained by Grünbeck

1.6.2 Authorisations of personnel

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

	Operator/user	Owner/operating company	Qualified specialist	Technical service
Transport and storage		X	X	X
Installation and mounting			X	X
Start-up			X	X
Operation and handling	X		X	X
Cleaning	X		X	X
Inspection	X		X	X
Maintenance		X	X	X
Troubleshooting		X	X	X
Repair				X
Decommissioning and restart/ recommissioning		X	X	X
Dismantling and disposal		X	X	X

1.6.3 Personal protective equipment

- ▶ As an owner/operating company, make sure that the required personal protective equipment is available.

The components below fall under the heading of personal protective equipment (PPE):



Protective gloves



Protective footwear



Protective overall



Protective goggles

2 For your safety

2.1 Safety measures

- Only use genuine spare parts for maintenance or repair.
- Do not make any changes, alterations, extensions or program changes on your product.
- Risk of slipping due to escaping water.
- Risk of tripping due to hoses and mains cable on the floor. Lay the hoses and the mains cable away from traffic routes.
- Keep the premises locked against unauthorised access to protect imperilled or untrained persons from residual risks.
- Protect the product from frost. Fully drain the device after each use.

2.1.1 Mechanical hazards

- You must never remove, bridge, or otherwise tamper with safety equipment.
- Make sure that the device is set up in a way that it cannot tip over and that the stability of the device is guaranteed at all times.
- Potential risk of pinching and cuts on threaded connections. Use protective gloves when connecting the device.

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.
- 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.

- Check the mains cable for damage before each use.
- Only have qualified electricians carry out electrical work on the device. If the device is used commercially, have it subjected to an electrical safety inspection every year.
- 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 system parts. 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.
- Make sure, that the socket has a protective earth conductor. Otherwise retrofit the socket with an adapter with a protective earth contact.

2.1.4 Groups of persons requiring protection

- This product is not designed to be used by persons (including children) with reduced capabilities, lack of experience or lack of knowledge. Unless they are supervised, have been instructed on the safe use of the product and understand the resulting hazards.
- Children should be supervised to make sure that they do not play with the product.
- Cleaning and maintenance must not be carried out by children.

2.2 Product-specific safety instructions



WARNING

Contaminated drinking water due to missing system separation according to DIN EN 1717

- Infectious diseases due to bacterial growth in the drinking water
- ▶ Make sure that the connection is secured by a system separator during filling and make-up water feed of the heating circuit with drinking water.

NOTE

Breakage of components in case of fixed installation

- If installed with mechanical stress, e.g. in case of fixed piping, connections may break.
- ▶ Connect the device with flexible connection hoses only (refer to chapter 3.4).
- ▶ Before start-up, check that the device is connected without any mechanical stress.



Before the treatment, check the heating water for quality and possible substances contained such as inhibitors.

NOTE

Inhibitors contained in the heating circuit

- If inhibitors were added to the heating water, these will be removed by the resin of the softening or mixed bed cartridge and/or the concentration is reduced during make-up water feed.
- ▶ Check the dosing of the inhibitor during softening and demineralisation operation.
- ▶ Re-establish the required inhibitor concentration, if necessary.

Labels on the product



Risk of electric shock



The affixed information and pictograms must be clearly legible. They must not be removed, soiled or painted over.

- ▶ Obey all warnings and safety instructions.
- ▶ Immediately replace illegible or damaged symbols and pictograms.

2.3 Conduct in emergencies

2.3.1 In case of water leaks

1. De-energise the device – pull the mains plug.
2. Close the shut-off valves at the inlet and outlet of the device.
3. Locate the leak.
4. Eliminate the cause of the water leak.

3 Product description

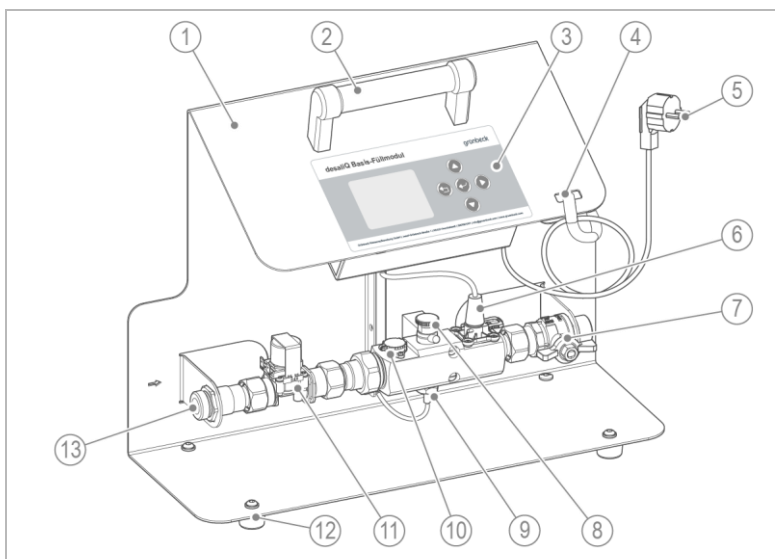
3.1 Intended use

- The desaliQ basic filling module is designed for filling heating circuits in mobile as well as temporary stationary use.
- In combination with the cartridges below, the desaliQ basic filling module can be used for quality-monitored full demineralisation or softening of raw water for the initial filling or make-up water feed of heating systems:
 - Mixed bed cartridge desaliQ
 - Softening cartridge decaliQ

3.1.1 Foreseeable misuse

- The desaliQ basic filling module must not be used for the treatment of raw water that is to be used as drinking water.

3.2 Product components



Item	Designation	Item	Designation
1	Console	2	Carrying handle
3	Key-operated control panel	4	Cable holder
5	Mains cable with Schuko plug	6	Conductivity sensor
7	Outlet shut-off valve	8	Valve for venting/sampling (pure water)
9	Temperature sensor	10	Turbine water meter (TWZ)
11	Solenoid valve	12	Rubber feet
13	Inlet connection		


3.2.1 Version for Switzerland

Instead of the Schuko mains plug, a country-specific mains plug is supplied.

Illustration	Product
	Mains plug for Switzerland

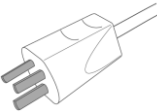
3.2.2 Version for Denmark

Instead of the Schuko mains plug, a country-specific mains plug is supplied.

Illustration	Product
	Mains plug for Denmark

3.2.3 Version for Uruguay

Instead of the Schuko mains plug, a country-specific mains plug is supplied.

Illustration	Product
	Mains plug for Uruguay

3.3 Functional description

The function of the desaliQ basic filling module is based on the well-proven processes of softening or demineralisation.

The desaliQ basic filling module works with the following automatically monitored operating modes.

- Filling
 - Demineralisation
 - Softening

The desaliQ basic filling module measures the conductivity (LF), the temperature and the flow rate.

The remaining capacity of the cartridge is calculated during softening. This allows for quality-monitored filling of the heating circuit.

Via the integrated solenoid valve, the control unit of the desaliQ basic filling module interrupts the water supply if the conductivity (LF) limit value is exceeded or the capacity limit of the cartridge has been reached during softening.

Demineralisation

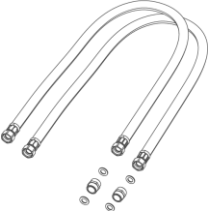

In combination with the desaliQ resin bags, fully demineralised water is generated in the heating circuit.

Softening

In combination with the softening cartridge decaliQ, the raw water for the heating circuit is softened according to the ion exchange principle.

3.4 Accessories

Your product can be retrofitted with accessories. Please contact your local Grünbeck representative or Grünbeck’s headquarters in Hoechststadt/Germany for details.

Illustration	Product	Order no.
	<p>Hose kit DN 20, straight/straight</p> <p>Consisting of: 2 hoses of 1.5 m in length with straight connections, 2 double nipples, including seals</p>	<p>707 840</p>
	<p>Hose kit DN 20, straight/90°</p> <p>Consisting of: 2 hoses of 1.5 in length with straight connection on one side and connection with 90° angle on the other side, 2 double nipples, including seals</p>	<p>707 845</p>

4 Transport and storage

4.1 Transport

- ▶ Transport the product in its original packaging only.
- ▶ Do not discard the packaging. Use the packaging for transport between uses.

NOTE

Residual water in the device after use

- In the event of frost, the remaining, freezing residual water in the device can damage the components beyond repair.
- ▶ Only transport and store the device in a frost-free environment.
- ▶ Drain and flush the device with clear water after each use.

4.2 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

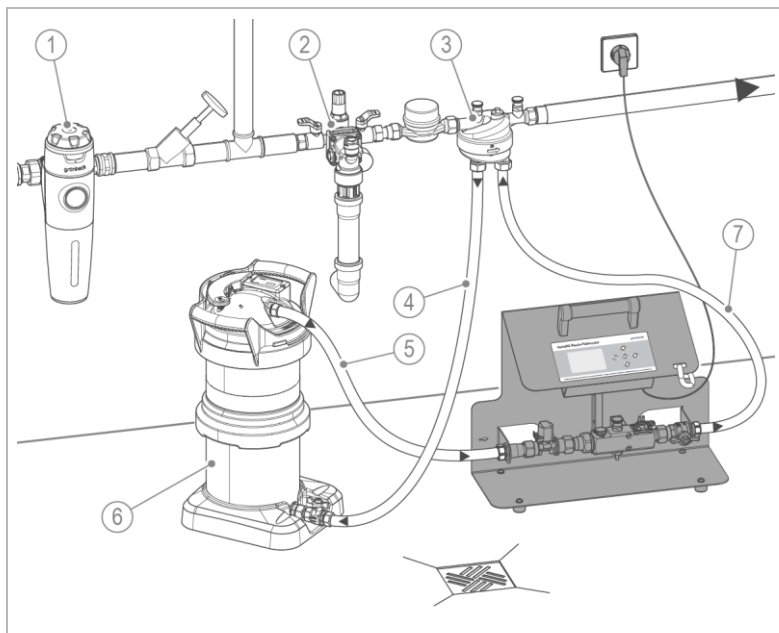


The work below must be carried out by qualified specialists only.



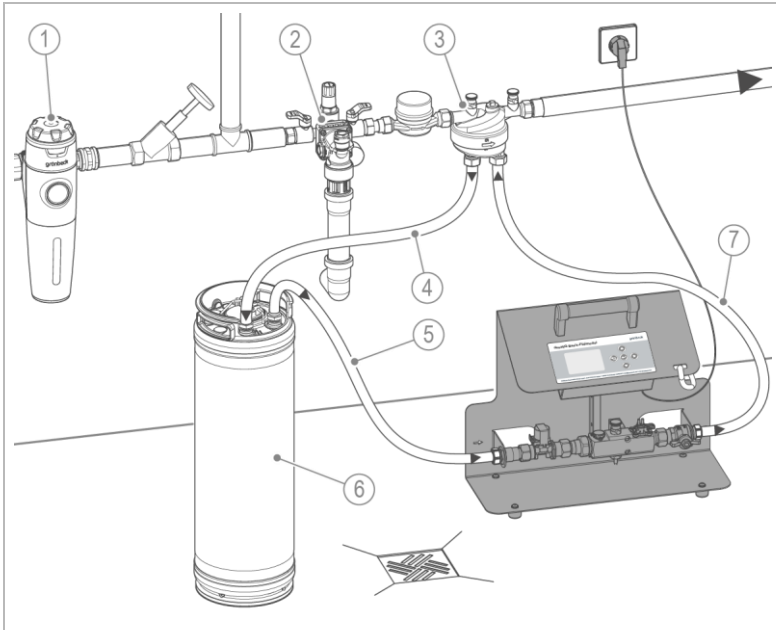
The device must only be connected with flexible connection hoses.

Installation example for demineralisation



Item	Designation	Item	Designation
1	Drinking water filter	2	Filling section thermalIQ:FB13i
3	Filling adapter	4	Inlet to desaliQ:MB9
5	Outlet of desaliQ:MB9	6	Mixed bed cartridge desaliQ:MB9
7	Outlet of desaliQ basic filling module to heating circuit		

Installation example for softening



Item	Designation	Item	Designation
1	Drinking water filter	2	Filling section thermalIQ:FB13i
3	Filling adapter	4	Inlet to decaliQ cartridge
5	Outlet from decaliQ cartridge	6	Softening cartridge decaliQ
7	Outlet from desaliQ basic filling module to heating circuit		

5.1 Requirements for the installation site

- The installation site must be frost-proof and protect the product from direct sunlight, chemicals, dyes, solvents and their vapours.
- The installation room must have a floor drain. If no floor drain is available, an appropriate safety device must be installed.
- The installation site must be adequately illuminated and ventilated.
- Always install a drinking water filter and a system separator upstream of the system.
- A Schuko socket (type F, CEE 7/3) is required for electrical installation.
- For versions for Switzerland, Denmark and Uruguay, a country-specific socket is required.



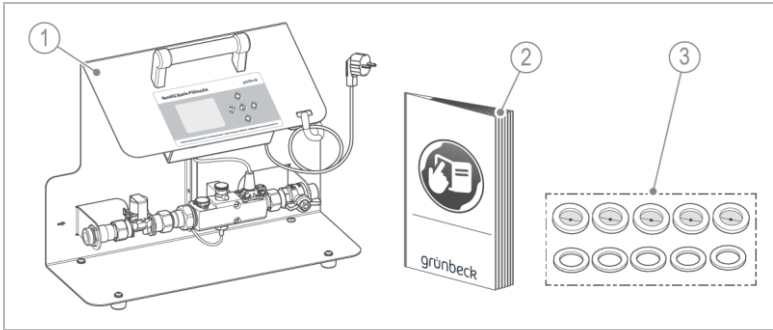
Do not couple the socket with a light switch, heating emergency switch or the like.

5.2 Checking the scope of supply



The product is packed in a cardboard box.

The cardboard box simultaneously is intended for safe transport and proper storage between uses (refer to chapter 4)



Item	Designation	Item	Designation
1	desaliQ basic filling module	2	Operation manual
3	Seal kit (5x flat seal, 5x sieve seal)		

- ▶ Check the scope of supply for completeness and damage.

5.3 Water installation



Obey the operation manuals below:

- Mixed bed cartridge desaliQ:MB9
- Softening cartridge decaliQ

- ▶ Connect the respective cartridge subject to the application (demineralisation or softening).



In order to increase the demineralisation or softening capacity, several cartridges can be connected in series.



The connection hoses must be selected and laid according to the respective situation on site (refer to chapter 3.4). All connection hoses must be secured against water leaks by means of a seal.



CAUTION

Sharp thread and pinching points on connections

- Cuts and pinching of fingers
- ▶ Use protective gloves when connecting the connection hoses.

NOTE

Breakage of components in case of fixed installation

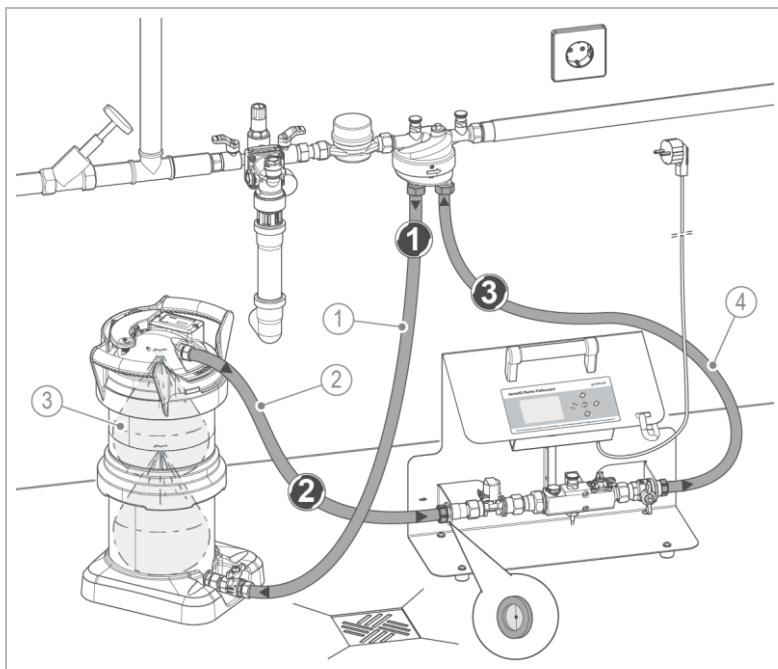
- If installed with mechanical stress, e.g. in case of fixed piping, connections may break.
- ▶ Connect the device with flexible connection hoses only (refer to chapter 3.4).
- ▶ Before start-up, check that the device is connected without any mechanical stress.

NOTE

Incorrect installation and routing of the connection hoses

- Risk of damage due to twisting, contortion, kinking and laying with tensile stress.
- ▶ Make sure that the connection hoses are not squeezed, kinked or twisted when connecting them.
- ▶ Firmly hold the connection hoses when tightening the union nuts.
- ▶ Make sure that the bending radius of the connection hoses is not too small (at least 10x hose Ø).
- ▶ Lay the connection hoses without tensile stress.
- ▶ In the installation room, place the device in a way that the connection hoses do not pose an immediate risk of tripping.
- ▶ Route the connection hoses away from traffic routes.

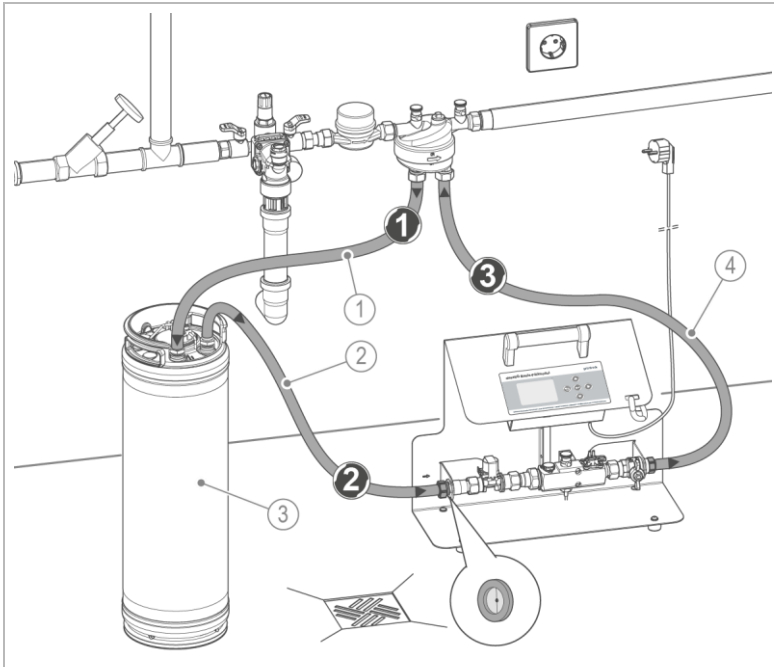
Mixed bed cartridge desaliQ:MB9



Item	Designation	Item	Designation
1	Connection hose 3/4" to cartridge (raw water)	2	Connection hose 3/4" from cartridge (fully demineralised water)
3	desaliQ resin bags	4	Connection hose 3/4" to heating circuit

1. Mount the connection hose from the filling adapter on the inlet to the cartridge.
2. Mount the connection hose from the cartridge on the inlet of the desaliQ basic filling module.
 - a Insert the sieve seal.
3. Mount the connection hose from the outlet of the desaliQ basic filling module on the filling adapter.

Softening cartridge decaliQ:BA12/BA16 VARIO mini

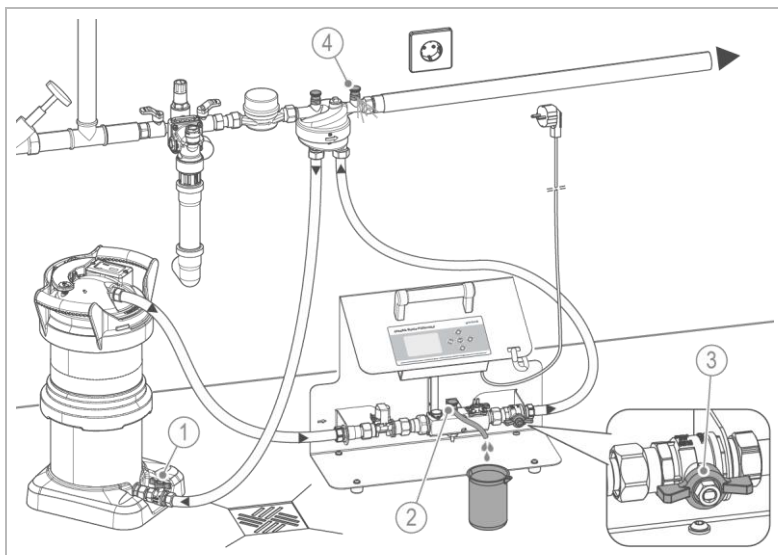


Item	Designation	Item	Designation
1	Connection hose $\frac{3}{4}$ " to cartridge (raw water)	2	Connection hose $\frac{3}{4}$ " from cartridge (fully demineralised water)
3	Softening cartridge decaliQ (decaliQ:BA12 or decaliQ:BA16)	4	Connection hose $\frac{3}{4}$ " to heating circuit


1. Mount the connection hose from the filling adapter on the inlet to the cartridge.
2. Mount the connection hose from the cartridge on the inlet of the desaliQ basic filling module.
 - a Insert the sieve seal.
3. Mount the connection hose from the outlet of the desaliQ basic filling module on the filling adapter.

6 Start-up

6.1.1 Venting the system



Item	Designation	Item	Designation
1	Shut-off valve on cartridge	2	Valve for venting/sampling
3	Outlet shut-off valve	4	Valve on connection adapter

4. Open the shut-off valves for drinking water supply.
5. Open the shut-off valve on the cartridge.
6. Vent the cartridge.
7. Open the solenoid valve by pressing the enter key .
8. Open the outlet shut-off valve on the desaliQ basic filling module.

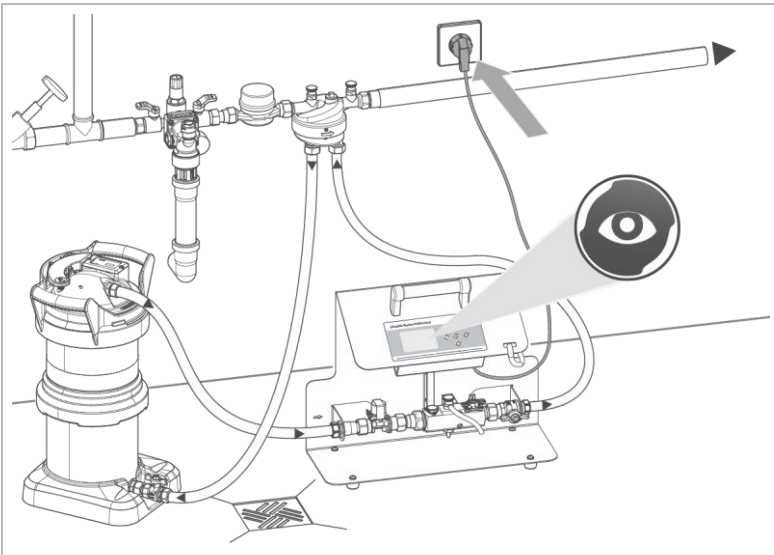


Only a system that has been fully vented works without major noise emission.

6.1.2 Checking for leaks

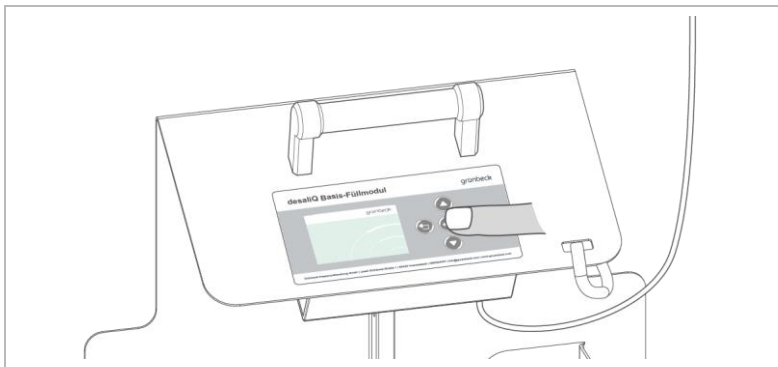
- ▶ Visually check all connections on the device and on the entire system for leaks.
- » No leakage water must escape.

6.1.3 Starting up the product



1. Loosen the cable holder and unwind the mains cable.
2. Plug the mains plug into a socket.
- » After a couple of seconds, the control unit switches on.

Setting the control unit



1. During the initial start-up, set the language and hardness unit in the control unit (refer to chapter 7.1).
2. Obey the instructions given in the control unit.

7 Operation/handling



Permanent monitoring of the device during operation is not required.

The control unit outputs information such as a warning or fault message (refer to chapter 9).

7.1 Operation of the control unit

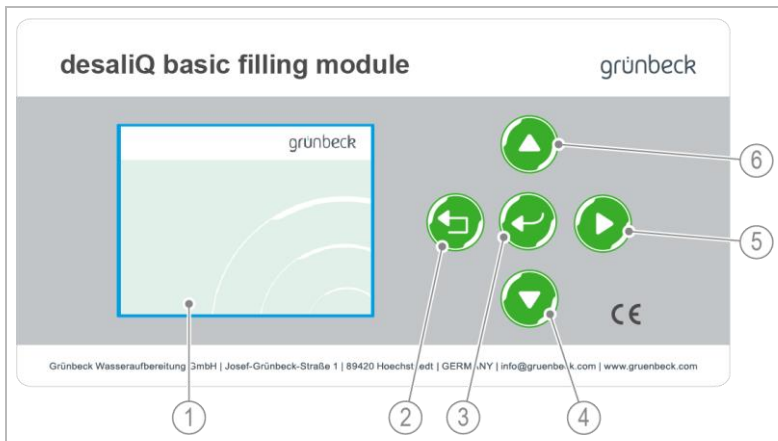
The control unit controls the operation during filling and indicates when interventions are necessary.

An acoustic buzzer is activated in the event of a success or fault signal. The respective signal is repeated three times at intervals.

The signal intervals can be deactivated by confirming the signal.

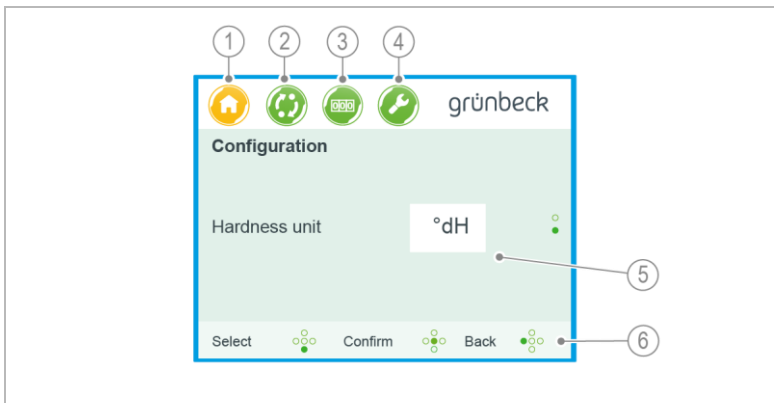
- ▶ Obey the instructions in the display of the desaliQ basic filling module.





7.1.1 Control panel







Designation	Meaning/Function
1 Display	<ul style="list-style-type: none"> To read off the current values
2 Operating key 	<ul style="list-style-type: none"> Going back Quitting the menu
3 Operating key 	<ul style="list-style-type: none"> Saving a parameter Aborting or confirming/starting a program step
4 Operating key 	<ul style="list-style-type: none"> Setting values Decreasing the numerical value of a parameter Selecting a program step
5 Operating key 	<ul style="list-style-type: none"> Selecting a menu Changing a program step
6 Operating key 	<ul style="list-style-type: none"> Setting values Increasing the numerical value of a parameter Selecting a program step

7.1.2 Display



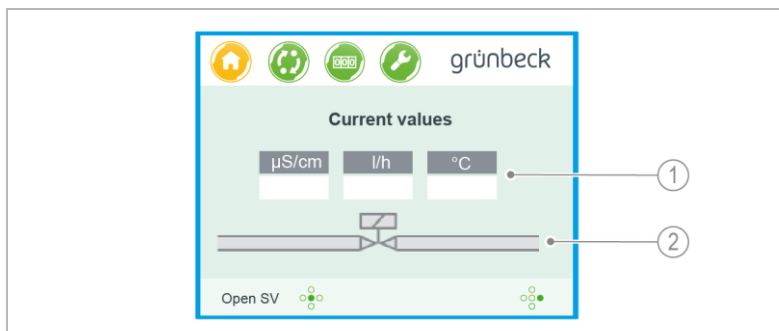
Designation	Meaning/Function
1 Menu display 	Home <ul style="list-style-type: none"> • Basic display for current values • Green = selectable, inactive level • Orange = active level
2 Menu display 	Program selection
3 Menu display 	Water meter <ul style="list-style-type: none"> • Current value • Resetting the meter
4 Menu display 	Technical service <ul style="list-style-type: none"> • Code-protected area for settings
5 Main display	Values and work mode <ul style="list-style-type: none"> Grey = passive (selection or setting mode) Coloured = active (device in work mode) <ul style="list-style-type: none"> • Parameters • Indication of current values
6 Navigation bar	Information on possible operation with operating keys <ul style="list-style-type: none"> • Select, Confirm • Start, Stop • Continue, Back

7.1.3 Signals

Illustration	Meaning/Function
	Information (green) <ul style="list-style-type: none"> • Program completed successfully
	Information with exclamation mark (orange) <ul style="list-style-type: none"> • Program completed; goal not reached, however • Aborting program
	Warning signal (red) <ul style="list-style-type: none"> • Program interrupted
	Fault signal (red) <ul style="list-style-type: none"> • Program aborted

7.1.4 Basic display Home

In the basic display Home, current values are displayed




Item	Designation	Item	Designation
1	Parameter (current values)	2	Program symbol for operating modes



By pressing the enter key  in this display, the solenoid valve can be operated outside of a program.

7.2 Program selection and sequence


- ▶ Select the required operating mode in the  menu:
 - Filling (refer to chapter 7.2.1).
 - Demineralisation, Softening
- ▶ Obey the instructions in the control unit.

The run time of the program depends on the conductivity or hardness of the raw water and the capacity of the connected cartridge.


The program can be aborted manually if the required filling pressure in the heating system is reached before the end of the program.


- ▶ Confirm a successfully completed program.



You can manually abort a started program by pressing the enter key .

In the event of a warning signal , you can continue or abort the program after the malfunction has been rectified.

In case of a fault signal , you can interrupt or abort the program.

You can change the set parameters in the program selection menu  while a program is running.

7.2.1 Filling operating modes



- ▶ Before carrying out the work, you need to decide whether you want to fill in softened or demineralised water.
- Grünbeck's recommendation: Use fully demineralised water in combination with thermalIQ safe.

Before carrying out the work, the proper cartridge must be installed and prepared.

NOTE

The heating circuit is filled by means of the water pressure of the drinking water system

- Damage to the heating circuit due to excessive pressure.
- ▶ Check the admissible pressure of the heating circuit to be filled.
- ▶ Set the admissible pressure at the pressure reducer of the heating filling fitting or the drinking water system.

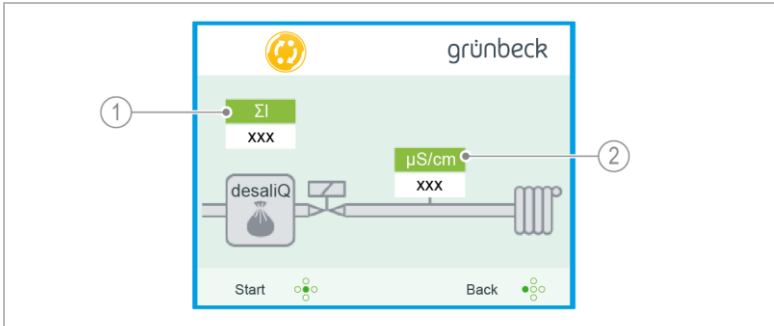
A pressure-dependent switch-off (system pressure) of the **Filling** program is not possible.



The water meter in the display tells you whether water is flowing through the system.

- ▶ Make sure that the heating circuit is vented at a suitable location.

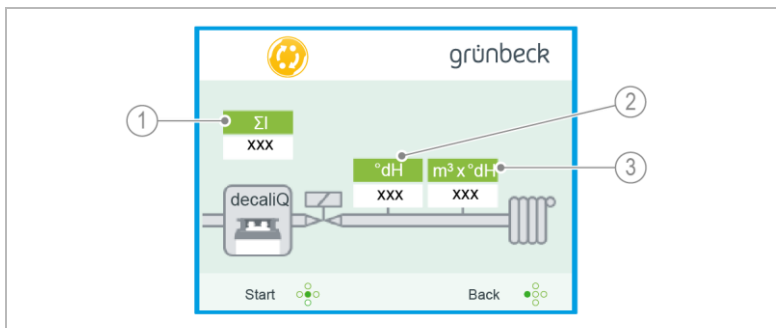
Demineralisation



Item	Designation	Item	Designation
1	Water meter	2	Conductivity limit value

1. Reset the **water meter**.
2. Set the **Conductivity limit value** at the cartridge outlet.
3. Start the demineralisation operation.
 - » The heating circuit is being filled.
 - » The solenoid valve of the desaliQ basic filling module closes automatically as soon as the conductivity limit value is reached.
4. Document the water volume you have made up or have required for filling in the system log of the heating system.
5. Measure the water parameters and document them in the system log of the heating system.

Softening



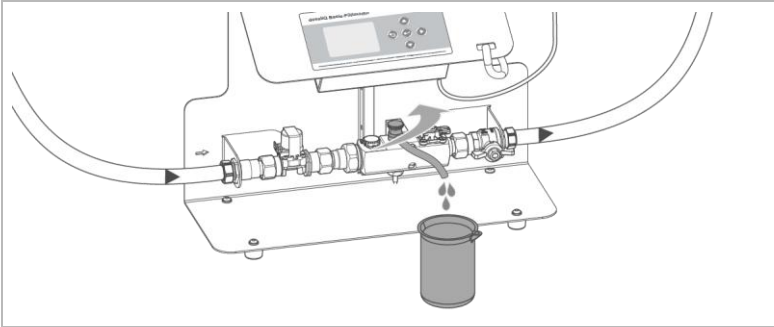
Item	Designation	Item	Designation
1	Water meter	2	Raw water hardness
3	Capacity figure of cartridge		

1. Reset the **water meter**.
2. Set the **Raw water hardness**.
3. Set the **Capacity figure of cartridge**.
4. Start the softening operation.
 - » The heating circuit is being filled.
 - » The solenoid valve of the desaliQ basic filling module closes automatically as soon as the conductivity limit value is reached, or the capacity of the cartridge is exhausted.
5. Document the water volume you have made up or have required for filling in the system log of the heating system.
6. Measure the water parameters and document them in the system log of the heating system.

7.2.2 Taking samples




In order to determine the water hardness, pH value and conductivity, you can use the GENO-therm analysis case (order no. 707 190).



1. Fill the sampling container slowly to prevent the introduction of oxygen into the water sample.
 2. Take the water sample at the sampling valve.
 3. Measure the pH value and the conductivity.
- Compare the measured values with the requirements of VDI 2035 and the specifications of the manufacturers of the circuit components.


7.3 Resetting the water meter

You can reset the water meter at any time, e.g. after the program has been completed.

1. Select the water meter menu .
 - » The current value is displayed.
2. Reset the meter with **Yes**.

7.4 Changing the basic settings

In the code-protected area, you can change the basic settings.

1. Select the technical service menu .
2. Enter the respective Code `xxx`.

7.4.1 Code `005`

- ▶ Set the values below:
 - Desired hardness unit (factory setting °dH)
 - Operating language
 - Display function in the monitoring mode
 - Limit value of the maximum temperature

7.4.2 Code 245

- ▶ Read the device information:
 - Total waste water volume
 - Temperature of circuit board

7.4.3 Code 669

- ▶ Reset all values to the factory settings.

7.5 Calibrating the conductivity sensor



The work below must be carried out by a qualified specialist only.

In Code 121, you can recalibrate the temperature sensor and the conductivity sensor.

7.5.1 Code 121

The calibration of the conductivity sensor and the temperature sensor must be carried out annually during maintenance, or as needed if the values deviate.

All recalibration procedures must be carried out with acclimatised devices and calibration solutions.



- ▶ Leave the device and the calibration solution in the same room for approx. 3 hours.
- » The device and the calibration solution must have the same temperature.

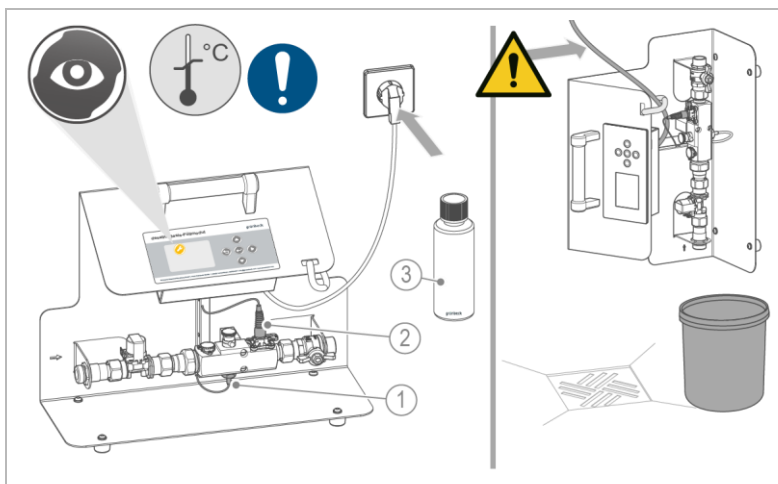
NOTE

Do not crush the cable

- When tilting the device, the cable may be crushed under the device and damaged.
- ▶ When tipping the device over, take care to guide the cable – do not place it under the console.
- ▶ Carefully tilt the device on the respective side – use the carrying handle to do so.

When calibrating the conductivity sensor, you either need a floor drain for discharge or a vessel to receive the calibration solution.


Preliminary work



Item	Designation	Item	Designation
1	Temperature sensor	2	Conductivity sensor
3	Calibration solution Conductivity LF 1413 $\mu\text{S}/\text{cm}$ (order no. 203 624)		

- ▶ Drain the device completely.
- ▶ Clean the conductivity sensor, if required
(refer to chapter **Fehler! Verweisquelle konnte nicht**

gefunden werden.Fehler! Verweisquelle konnte nicht gefunden werden.)).

- ▶ Connect the device to the power supply.
- ▶ Enter Code 121 in the technical service menu .

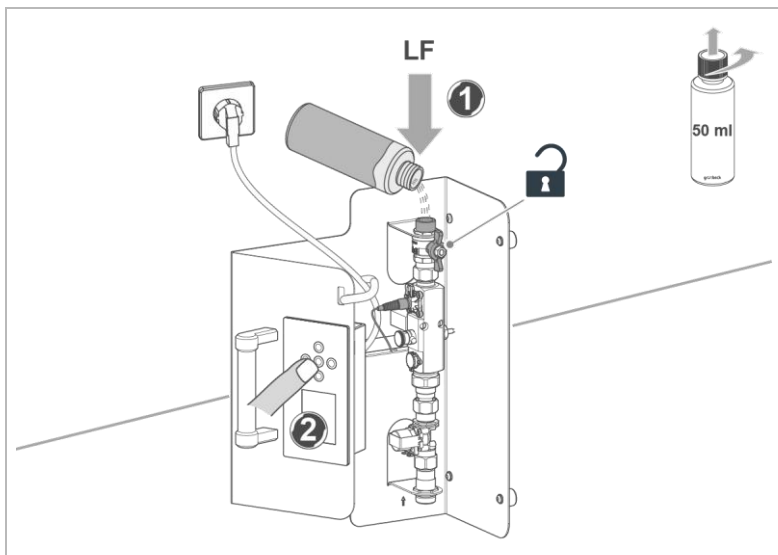
Calibrating the temperature sensor

1. Measure the room temperature using a reference thermometer.
2. Enter the measured value in the program and confirm the entry.

Calibrating the conductivity sensor

You need 1 bottle of calibration solution (order no.: 203 624).

Conductivity sensor



- ▶ Tilt the device to the left.
- ▶ Make sure that the solenoid valve is closed.
- 1. Fill 1 bottle of calibration solution (50 ml) into the opening of the sensor section – the ball valve must be open.
 - » The calibration solution must be visible in the ball valve.
- ▶ Make sure that there are no air pockets.
 - » The closed solenoid valve prevents the calibration solution from escaping.
- 2. Carry out the calibration of the conductivity sensor by following the menu prompts in the control unit.
 - ▶ Pour the calibration solution out of the device after successful calibration. Discard the calibration solution.

Final work

- 1. Completely rinse the sensor section with water.

- a Make sure the device is vented.
2. Check the conductivity value – it must match the flushing water.
 - » The device is recalibrated.

8 Maintenance and repair

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



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

- ▶ Only use genuine spare and wearing parts from Grünbeck.

8.1 Cleaning



Have the cleaning work only carried out by persons who have been instructed on the risks and dangers that can arise from the device.

NOTE:

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

- These substances damage the plastic components.
- 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 surfaces with a damp cloth.
- ▶ Flush the device with clear water after use (refer to chapter 10).

8.2 Intervals



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

The interval table below shows the minimum intervals for the tasks to be carried out.

Task	Interval	Execution
Cleaning	After every use	<ul style="list-style-type: none">• Clean the outside of the device• Drain the device• Flush the device
Inspection	6 months	<ul style="list-style-type: none">• Check for function and leaks• Visual inspection for damage and corrosion• Check the shut-off valve and the sampling valve• Check the mains cable
Maintenance	12 months	<ul style="list-style-type: none">• Clean and adjust the conductivity sensor and check for tight fit• Check the solenoid valve for function
Repair	5 years	<ul style="list-style-type: none">• Recommendation: Replace wearing parts

8.3 Inspection

You as owner/operating company can do the regular inspections yourself.

- ▶ Carry out an inspection at least every 6 months and proceed as follows to do so:
 1. Check all water-carrying parts for leaks.
 2. Check the control unit for function.
 3. Check all components for damage and corrosion.
 4. Check that the shut-off valve and sampling valve are easy to operate.
 5. Check the mains cable with Schuko plug and the cable holder for damage.

8.4 Maintenance

In order to ensure the proper functioning of the product in the long term, certain tasks have to be performed at regular intervals.



WARNING

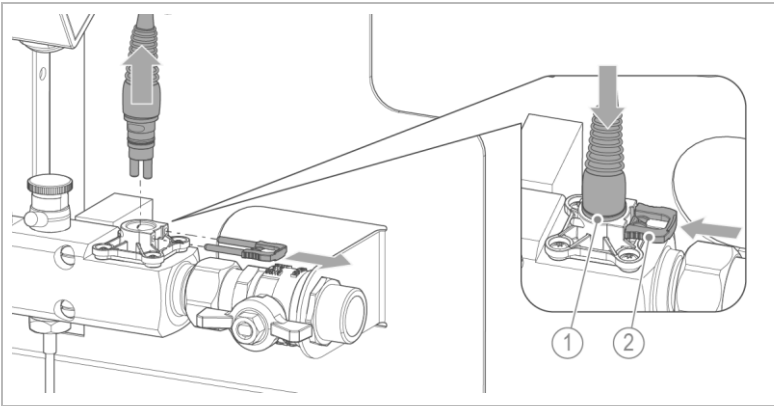
Life-threatening voltage on electrical components

- Severe burns, cardiovascular failure, fatal electric shock.
- ▶ Switch off the supply voltage before working on electrical components.
- ▶ Secure the device against restart.

- ▶ In addition to the inspection, carry out the activities below every 12 months:

8.4.1 Cleaning/calibrating the conductivity sensor

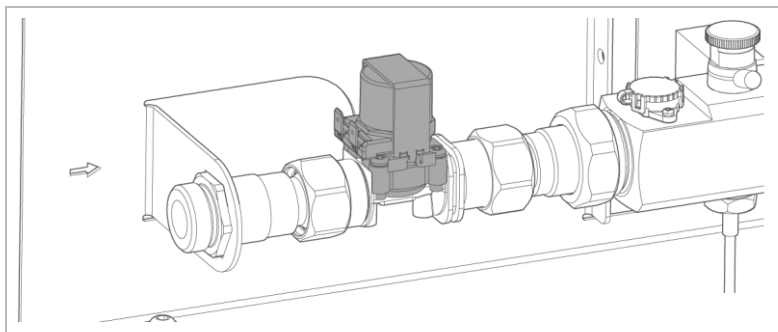
► Proceed as follows to clean the conductivity sensor:



Item	Designation	Item	Designation
1	Conductivity sensor	2	Retaining clip

1. Pull out the retaining clip.
2. Pull out the conductivity sensor.
3. Clean the conductivity sensor with drinking water.
 - a Dry the conductivity sensor.
 - b In case of severe impurities, use a cloth or a soft brush.
4. Reinsert the conductivity sensor.
5. Firmly insert the retaining clip.
6. Calibrate the conductivity sensor (refer to chapter 7.4.3)

8.4.2 Checking the solenoid valve



1. Clean the solenoid valve with a dry cloth.
2. Check the solenoid valve for function.
 - ▶ Check all electric lines for damage.
 - ▶ Replace damaged components.

8.5 Spare parts

For an overview of the spare parts, refer to our spare parts catalogue at www.grünbeck.com. You can obtain the spare parts from your local Grünbeck representative.

8.6 Wearing parts



The replacement of wearing parts must be carried out by technical service personnel only.




Wearing parts are listed below:

- Seals
- Turbine water meter
- Non-return valve
- Conductivity sensor
- Solenoid valve

9 Troubleshooting

9.1 Messages

1. Eliminate the fault (refer to fault table).
2. Acknowledge the fault.
3. Monitor the display of the control unit.
4. If the malfunction reoccurs, compare the display message with the fault table below.

Display	Explanation	Remedy
 Low flow rate Program interrupted	Inlet and return line to the cartridge mixed up	▶ Swap the inlet and return lines to the cartridge
	One or several shut-off valves closed	▶ Check shut-off valves
	Hose line kinked	▶ Check hose lines
	Air in circuit	▶ Vent circuit
	Sieve element in mixed bed cartridge clogged	▶ Drain mixed bed cartridge and clean sieve element
 Cartridge exhausted Program interrupted	Insufficient exchanger capacity of cartridge	▶ Replace cartridge or resin
	Insufficient venting	▶ Repeat venting
	Target hardness is not reached because resin is exhausted	▶ Replace cartridge or resin
	Conductivity limit value exceeded	▶ Replace cartridge or resin
 Maximum temperature exceeded Program aborted or terminated	Temperature too high	▶ Check the temperature. ▶ Lower the temperature



If a malfunction cannot be eliminated, the technical service personnel or a qualified specialist trained by Grünbeck can take further measures.

- ▶ Contact technical service.

10 Decommissioning

Between uses, the desaliQ basic filling module must be taken out of operation and stored temporarily.

- ▶ Proceed as follows to take the desaliQ basic filling module out of operation:

1. Flush the device with clear water.



In order to avoid damage from frost the device must be fully drained after each use.

2. Drain the device.
3. Remove the connection hoses.
4. Clean the outside of the device.
5. Wind up the mains cable and secure it at the console using the cable holder.
6. Put the device into the packaging.
7. Transport the device in its packaging.

10.1 Restart

- ▶ Put the device into operation again (refer to chapter 6.1.3).

11 Disposal

- ▶ Obey the applicable national regulations.

Packaging

- ▶ Dispose of the packaging in an environmentally sound manner.

Product



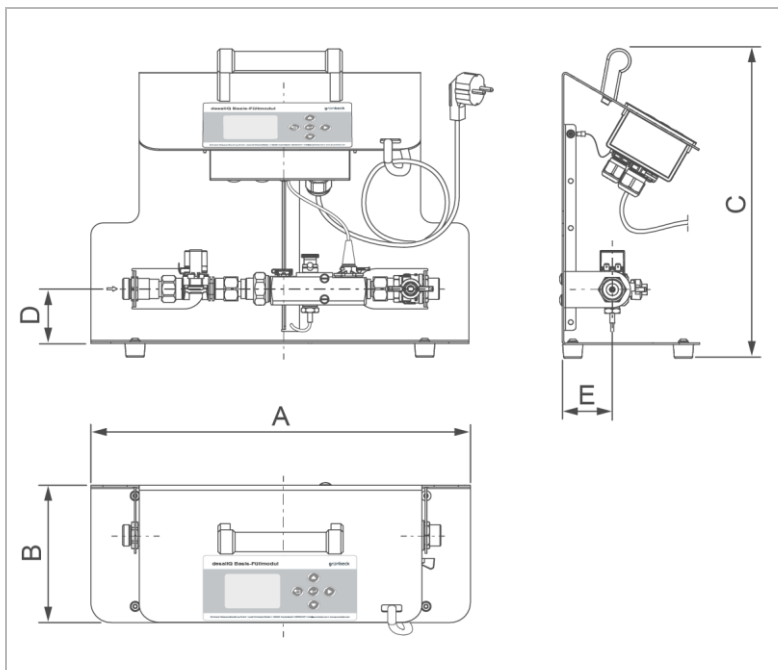
If this symbol (crossed-out wheeie bin) is on the product, this product or its electrical and electronic components must not be disposed of as household waste.

- ▶ 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.com.

12 Technical specifications



Dimensions and weights

A	Width	mm	470
B	Depth	mm	170
C	Height	mm	383
D	Connection height of sensor section	mm	68
E	Connection depth of sensor section	mm	62
Approx. weight		kg	5.4

Connection data

Nominal connection diameter of inlet and outlet		DN 20 (¾" m. thr.)
Power supply	V/Hz	230/50 – 60
Rated power (operation)	W	20
Protection		IP 54

• Technical specifications

Performance data		
Nominal pressure	PN	6
Operating pressure (circuit)	bar	1.5 – 4
Flow at Δp 1 bar (in combination with desaliQ:MB9)	l/h	720
Nominal flow (in combination with desaliQ:MB9)	m ³ /h	0.9
Flow rate of device	m ³ /h	1.3
General data		
Water temperature	°C	5 – 35
Ambient temperature	°C	5 – 40
Order no.		707000050000
Order no. Version for Switzerland (CH)		707000056700
Order no. Version for Denmark (DK)		707000056800
Order no. Version for Uruguay (UY)		707000058200

13 Operation log



- ▶ Document the initial start-up/commissioning and all maintenance activities.

desaliQ basic filling module

Serial no.: _____

13.1 Start-up/Commissioning log

Customer	
Name: _____	
Address: _____	
Installation/Accessories	
_____	_____
_____	_____
_____	_____
Remarks	

Start-up	
Installer/Owner/Operating company:	_____
Company:	_____
Work time certificate (no.):	_____
Date/signature:	_____

13.2 Maintenance

Work performed		
<input type="checkbox"/> Inspection	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Repair
Description		
<hr/>		
<hr/>		
<hr/>		
Execution confirmed		
Company:		
<hr/>		
Name:		
<hr/>		
Date:	Signature:	
<hr/>	<hr/>	

Work performed		
<input type="checkbox"/> Inspection	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Repair
Description		
<hr/>		
<hr/>		
<hr/>		
Execution confirmed		
Company:		
<hr/>		
Name:		
<hr/>		
Date:	Signature:	
<hr/>	<hr/>	

Work performed

Inspection

Maintenance

Repair

Description

Execution confirmed

Company:

Name:

Date:

Signature:

Work performed

Inspection

Maintenance

Repair

Description

Execution confirmed

Company:

Name:

Date:

Signature:

EU Declaration of Conformity

In accordance with Low Voltage Directive 2014/35/EU



This is to certify that the system designated below meets the safety and health protection requirements of the applicable EU 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.

Heating water treatment system desaliQ basic filling module

Serial no.: Refer to type plate

The aforementioned system also complies with directives and provisions below:

- EMC 2014/30/EU
- RoHS 2011/65/EU

The following harmonised standards have been applied:

- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 62233:2008
- DIN EN ISO 12100:2011-03
- EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 (partly) + A15:2021

The following national standards and regulations have been applied:

- EN IEC 55014-1:2021
- EN IEC 55014-2:2021

Responsible for documentation:

Mirjam Müller

Manufacturer:

Grünbeck Wasseraufbereitung GmbH
Josef-Grünbeck-Str. 1
89420 Hoechstädt/Germany

Hoechstädt, 02.05.2023

A handwritten signature in blue ink that reads 'T. Vogl'.

Tobias Vogl

Head of Research & Development

Grünbeck Wasseraufbereitung GmbH
Josef-Grünbeck-Str. 1
89420 Hoechstädt
GERMANY



+49 9074 41-0



+49 9074 41-100

info@gruenbeck.com
www.gruenbeck.com



For more information go
to www.gruenbeck.com