We understand water.

Dosing system | exaliQ:KC6(-e), SC6(-e), SCxx

Operation manual

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Table of contents

1 Introduction

This manual is intended for owners/operating companies, operators, users as well as 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.

► Adhere to all safety information and handling instructions of this manual.

► Keep this manual and all other applicable documents, so that they are available when needed.

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

1.1 Validity of the instruction

This manual applies to following products:

● Dosing system exaliQ:KC6/KC6-e

● Dosing system exaliQ:SC6/SC6-e

● Dosing system exaliQ:SC10, SC20, SC30

● Special versions, which correspond in the main to the listed standard products

1.2 Other applicable documents

● For Grünbeck's technical service/authorised service company: Technical service manual dosing system exaliQ

● Safety data sheets for chemicals

1.3 Product identification

You can identify your product based on the product designation and the order number shown on the type plate.

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

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The type plate is located on the inside of the open door.
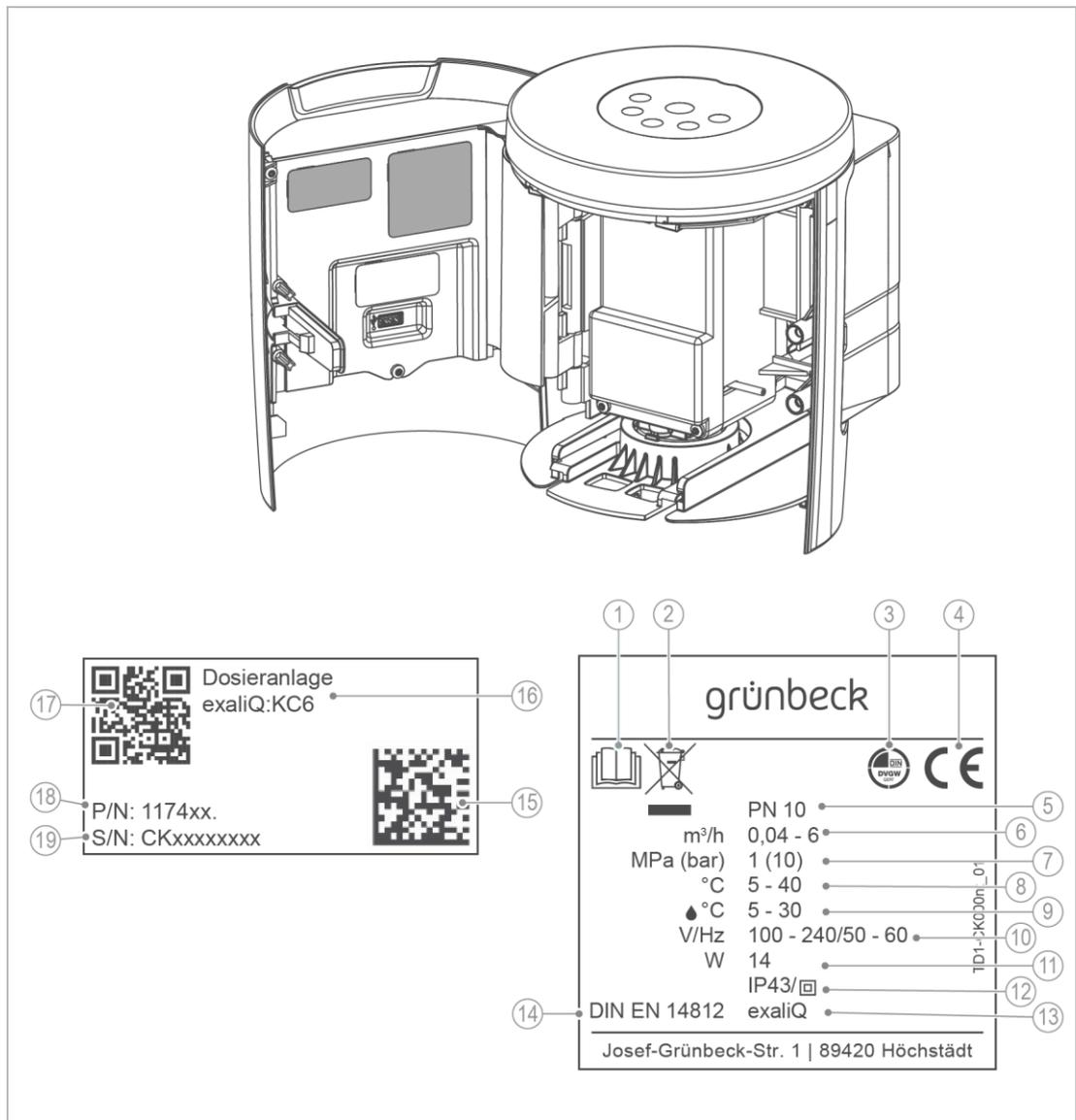
	Designation			Designation
1	Observe operation manual		**11**	Rated load
2	Disposal information		**12**	Protection/protection class
3	DVGW test mark		**13**	Suitable dosing agent
4	CE mark		**14**	DIN EN 14812 compliance
5	Nominal connection diameter		**15**	Data matrix code
6	Operating range		**16**	Product designation
7	Operating pressure		**17**	QR code
8	Ambient temperature		**18**	Order no.
9	Water temperature		**19**	Serial no.
10	Rated voltage range/frequency			

1.4 Symbols used

Symbol	Meaning
⚠	Danger and risk
❗	Important information or requirement
ℹ	Useful information or tip
✎	Written documentation required.
📖	Reference to further documents
👷	Work that may only be carried out by qualified specialists.
👷	Work that may only be carried out by qualified electricians.
👷	Work that may only be carried out by technical service personnel.

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1.5 Representation of warnings

This manual contains instructions that you must comply with for your personal safety. The information and instructions are highlighted by a warning symbol and have the following structure:

SIGNAL WORD   Type and source of danger

- ● Possible consequences
- ► Preventive measures

The following signal words were defined subject to the degree of danger and may be used in the present document:

Warning symbol and signal word		Consequences when disregarding the information/instructions
⚠ **DANGER**	Personal injuries	Death or serious injuries
⚠ **WARNING**		Possible death or serious injury
⚠ **CAUTION**		Possible moderate or slight injuries
NOTE	Property damage	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 phases in the service life of the product   of the system, different persons carry out work on the system. The respective tasks require different skills.

1.6.1 Qualification of personnel

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

1.6.2 Authorisations of personnel

The table below describes which tasks must be done 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	X
Cleaning	X		X	X
Inspection	X	X	X	X
Maintenance semi-annually			X	X
annually			X	X
Troubleshooting	X	X	X	X
Repair			X	X
Shutdown and restart		X	X	X
Dismantling and disposal		X	X	X

1.6.3 Personal protective equipment

► As an owner/user, make sure that the required personal protective equipment is available.

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

Protective gloves

Protective footwear

Protective goggles

2 Safety

2.1 Safety measures

- Only operate your product if all components are installed properly.
- Adhere to the applicable local guidelines 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/untrained groups of persons from residual risks.
- Observe the maintenance intervals (refer to chapter 8.2). Failure to comply can result in microbiological contamination of your drinking water system.
- Be aware of a possible risk of slipping due to leaking water on the floor.

2.1.1 Mechanical dangers

- Safety equipment must never be removed, bridged, or otherwise tampered with.
- For all work on the system that cannot be carried out from the ground, use stable, safe and self-standing climbing aids.
- Make sure that the system is set up in a way that it cannot tip over and that the stability of the system is guaranteed at all times.

2.1.2 Pressure-related risks

- Components can be under pressure. There is risk of injuries and damage to property due to escaping water and unexpected movement of system parts. Check the system's pressure lines for leak tightness at regular intervals.
- Prior to starting repair or maintenance work, make sure that all components concerned are depressurised/de-energised.

2.1.3 Electrical dangers

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

- Only have qualified electricians carry out electrical work on the systems.
- In case of damage to live components, switch off the voltage supply immediately and arrange for repair.
- Switch off the voltage supply before working on electrical system parts. Discharge residual voltage.

- Make sure, that the socket has a protective earth conductor. Otherwise retrofit the socket with an adapter with a protective earth contact.

- 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   Danger due to chemicals

- Chemicals can be hazardous to health and environment.
  They may cause skin and eye burns as well as irritation of the respiratory tract a allergic reactions.

- Avoid any skin/eye contact with chemicals.

- Use personal protective equipment.

- Read the safety data sheet before handling chemicals. Always obey the instructions for the different actions/situations.

- Current safety data sheets for chemicals are available for download at https://www.gruenbeck.de/en/info-centre/safety-data-sheets/.

- Obey internal instructions when handling chemicals. Make sure that protective and emergency equipment such as emergency showers and eye showers are available and functional.

Mixing and residual quantities of chemicals

- Never mix different chemicals. Unforeseeable chemical reactions with risk of death may occur.

- Dispose of residual quantities of chemicals in accordance with local regulations and/or internal company instructions.

- Residual quantities from used containers should not be filled into containers with fresh chemicals in order not to impair the effectiveness of the chemicals.

Labelling/minimum shelf life/storage of chemicals

- Check the labelling of the chemicals. Labels of chemicals must not be removed or made illegible.

- Do not use any unknown chemicals.

- Obey the use-by date (minimum shelf life) shown on the label.

- If stored incorrectly, chemicals might change their state of matter, crystallize, outgas or lose their effectiveness. Store and use the chemicals only at the specified temperatures.

Cleaning/Disposal

- Absorb spilled chemicals immediately with suitable binding agents.

- Collect and dispose of chemicals in such a way that they cannot pose a risk to people, animals, or the environment.

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2.1.5 Groups of persons in need of protection

● This product must not be used by persons (including children) with limited abilities, lack of experience or lack of knowledge. Unless they are supervised or instructed in the safe use of the product and understand the resulting hazards.

● Children must be supervised to ensure that they do not play with the product.

● Cleaning and maintenance must not be done by children.

2.2 Product-specific safety instructions

► Only operate the device with the supplied plug-in power supply unit.

► Lay lines such as dosing line, mains cable, iQ-Comfort connecting cable to the water softener softliQ and suction line outside any passage routes in order to avoid stumbling and pulling them out.

► Secure the lines of the dosing system at the installation site where public traffic can be expected.

2.2.1 About mineral solutions

► Only use exaliQ mineral solutions.

► Do not mix exaliQ mineral solutions.

► Do not transfer exaliQ mineral solutions into other containers.

► Do not use exaliQ mineral solutions if their shelf life has expired.

2.2.2 Safety-relevant components

Safety components are only allowed to be replaced by genuine spare parts.
► Have the safety components and wearing parts replaced by a qualified specialist (refer to chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**).

● Pump

● Dosing line, dosing valve

● All pressurised parts and parts that come into contact with media

2.2.3 Signals and warning devices

The attached instructions and pictographs must be clearly legible.
They must not be removed, soiled, or painted over.

► Comply with 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. Disconnect the product from mains. - Pull the mains plug.
2. Localise the leak.
3. Remove the cause of the leak.

2.3.2 Incorrect dosing/Overdosing

1. Disconnect the product from mains. - Pull the mains plug.
2. Contact the technical service.

3 Product description

3.1 Intended use

- The dosing system is designed for flow-dependent dosing of exaliQ mineral solution into the drinking and service water pipes of 1 - 10 family buildings.

- Dosing with exaliQ mineral solutions is mainly used to form a protective layer and to prevent corrosion damage to the inside of the pipe.

- In addition, the precipitation of lime can be prevented.

- The different exaliQ mineral solutions can be used for hardness stabilisation and corrosion protection of pipes as well as for the renovation of old pipes (with rust-brown water).

- The dosing system exaliQ:K6-e and SC6-e can be used in combination with a softening system softliQ:SD (from softliQ:SD21) or softliQ:MD.

3.2 Foreseeable misuse

- Dosing with chemicals other than exaliQ mineral solutions is **not** approved by Grünbeck Wasseraufbereitung GmbH and will lead to loss of warranty claims.

- Use in commercial and industrial buildings with high flow rates and/or removals of water. (Use of a GENODOS DME required.)

- Use of the mineral solution exaliQ neutra in combination with a dosing system exaliQ:KC6-e and exaliQ:SC6-e.

3.3 Product components
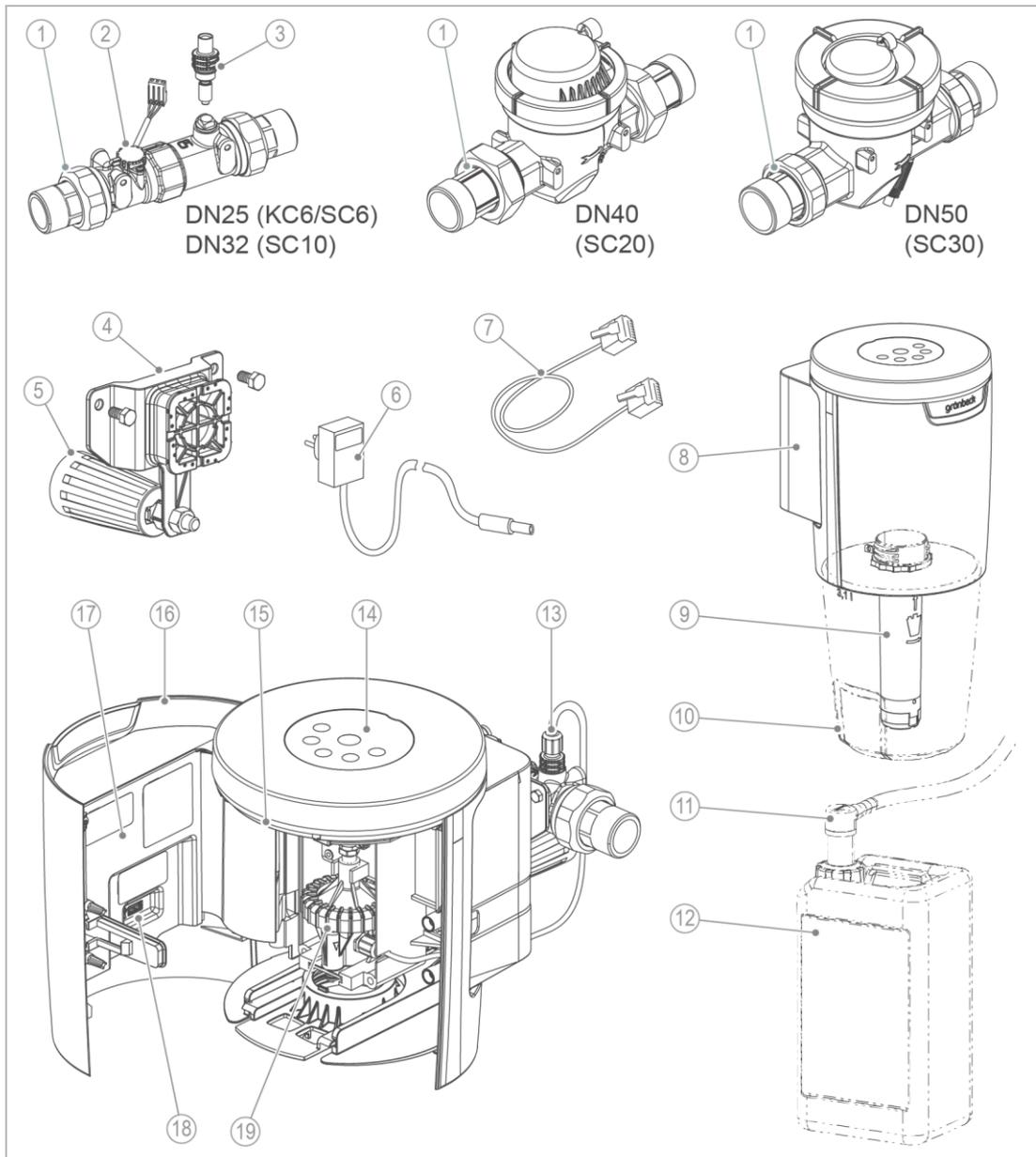
	Designation		Designation
1	Water meter with screw connections in the following sizes: DN25 (KC6/SC6) Turbine water meter DN32 (SC10) Turbine water meter DN40 (SC20) Water meter DN50 (SC30) Water meter	**8**	Basic housing exaliQ
		9	Suction lance (exaliQ:KC6, KC6-e)
		10	Bottle 3 l
		11	Suction lance (exaliQ:SCxx)
2	Pulse cable with Hall pulse sensor	**12**	15 l canister
3	Dosing valve	**13**	Dosing line
4	Attachment	**14**	Operating panel with LED buttons
5	Spacer	**15**	Illuminated LED ring
6	24 V plug-in power supply with power supply cable	**16**	Door
		17	Circuit board cover
7	IQ-Comfort connecting cable (for KC6-e/SC6-e)	**18**	USB interface / sticker
		19	Pump

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3.4 Functional description

A contact water meter with pulse generator records the volume of drinking water that has flowed through and sends pulses to the control unit depending on the quantity. The pulses are processed in the control unit. The control unit sends pulses to a step motor which drives the pump unit.

The mineral solution is sucked in and fed to a dosing point via a hose connection.

The backflow of drinking water into the hose line is prevented by a non-return valve located in the dosing point.

3.4.1 Possible applications

Depending on the variant, the dosing system can be used on its own or in combination with a water softener softliQ:SD (from softliQ:SD21) or softliQ:MD.

The dosing system can be mounted directly on the water meter (with the attachment and the spacer) or separately with the attachment on the wall (without the spacer).

3.4.2 Versions

The dosing system can be equipped with 3 different containers for mineral solutions.

- Dosing system exaliQ as compact unit with 3 l bottle (exaliQ:KC6 (-e))
- Dosing system exaliQ as suction lance device with 15 l canister (exaliQ:SC6 (-e) /10/20/30)
- Dosing system exaliQ as suction lance device with 60 l canister (conversion kit for 60 litre suction lance required for exaliQ:SCxx)

3.4.3 Illuminated LED ring

The illuminated LED ring is used as a visual signal in case of water treatment, pre-empty signal, empty signal and fault.

3.4.4 LED buttons

The LED buttons inform the user about the current operating state of the dosing system exaliQ.

3.4.5 USB interface

The data stored during the last 12 months can be read out via an integrated USB interface.

3.4.6 Wi-Fi access point

The Wi-Fi access point can be used to establish a connection to the Grünbeck mySettings app at the dosing system.

3.4.7 Buzzer

The buzzer is used as an acoustic signal in case of fault, empty signal and low filling level.

The function is muted from 10:00 pm to 08:00 am.

3.5 Product registration

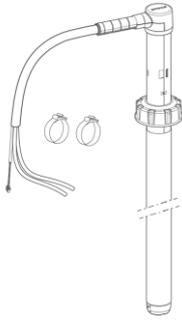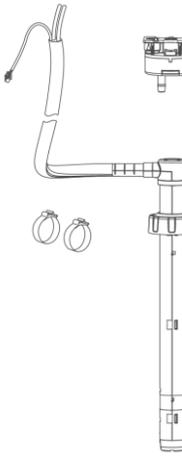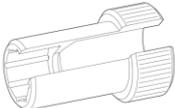You have the following options to register your product:

- Registration on Grünbeck's website (www.gruenbeck.de/en/service/product-registration).
- Registration via the Grünbeck mySettings app.
- Registration via the Grünbeck myProduct app (www.gruenbeck.de/en/info-centre/apps) in combination with a water softener
  - Refer to software instructions TD3-BS002: Cloud connection softliQ (www.gruenbeck.de/en/become-a-water-expert/faq/).

Registration extends your warranty by 1 year.

3.6 Accessories

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

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Illustration	Product	Order no.
	Conversion kit 60 litre suction lance	**117 490**
	Conversion from exaliQ:SCxx(-e) with 15-l canister to exaliQ:SCxx (-e) with 60-l canister Use of the exaliQ 60 litre dosing tank • 60 litres suction lance • 2 hose clamps	
	Conversion kit exaliQ:KC6(-e) to exaliQ:SC6(-e)	**117 495**
	Conversion from exaliQ:KC6(-e) with 3-l bottle to suction lance device exaliQ:SC6(-e) for 15 l canister Use of the exaliQ 15 litre dosing tank • 15 litres suction lance • adapter • 2 hose clamps	
	Universal drum wrench	**170 670e**
	For easier opening the srew cover of the 3-l bottle or the canister	
	Tool for dismantling the union nut	**188 881e**
	For tightening and loosening the union nuts at the dosing points	

3.7 Mineral solutions

Grünbeck Wasseraufbereitung GmbH confirms that the mineral substances contained in the colourless liquid concentrates correspond to the publication of the list of treatment substances and disinfection procedures in accordance with §11 of the German Drinking Water Ordinance – 19th amendment (status: December 2017).

Mineral solution	Effect	Material
exaliQ control	Rehabilitation	Galvanised pipes
For the rehabilitation of corroded zinc pipes (often visible due to brown-coloured water). After rehabilitation (approx. 6 months): Change to another exaliQ dosing agent.		
exaliQ safe	Corrosion protection	Galvanised pipes and copper materials/brass
For corrosion protection of water in the hardness range from soft to medium (up to 14 °dH), also after water softeners. For water temperatures up to 60 °C. For the reduction of heavy metal input (e.g. lead).		
exaliQ safe+	Corrosion protection and hardness stabilisation	Galvanised pipes and copper materials/brass
For hardness stabilisation and corrosion protection of waters in the hardness range up to 21 °dH and for the reduction of heavy metal input (e.g. lead). For water temperatures up to 60 °C. For water hardness > 21 °dH, a water softener (e.g. softliQ:SD21) is recommended for hardness treatment. Subsequent changeover to exaliQ safe.		
exaliQ pure	Hardness stabilisation	Galvanised pipes and copper materials/brass
For circulation water in solar systems or installation of dosing technology in the cold water inlet to the decentralised water heater. For high temperatures up to 80 °C and/or hard water > 21 °dH total hardness (> 15 °dH carbonate hardness). *Note: Copper and brass materials only suitable for hot water. Consultation by Grünbeck Wasseraufbereitung GmbH recommended before first use.*		
exaliQ neutra	Increase of pH value	Galvanised pipes and copper materials/brass
For corrosion protection in soft water with high carbon dioxide concentration, even after water softeners. Corrosion protection by binding free carbon dioxide and raising the pH value. *Note: The dosing agent exaliQ neutra is only allowed to be used with a "stand-alone exaliQ dosing system". Consultation by Grünbeck Wasseraufbereitung GmbH recommended before first use.*		

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The shelf life of the mineral substances is 2 years following the filling date (cold and protected against light).

- After the container is opened, it is recommended that the content should be used up within 6 months – and within 12 months at most.
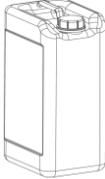
If the mineral solution is changed to another agent, the dosing system must be flushed (see chapter 8.6).

The mineral substances are hygienically packaged at the factory and sealed sterile with a secure screw cap.

The ready-to-use concentrates are designed for a pump capacity of 100 ml/m³ flow rate.

3.7.1 Container designs

Illustration	Product	Installation	Order no.
	Plastic bottle 2 x 3 l 1 bottle is sufficient for approx. 30 m³ drinking water treatment	exaliQ control	**114 031**
		exaliQ safe	**114 032**
		exaliQ safe+	**114 033**
		exaliQ pure	**114 034**
		exaliQ neutra	**114 035**
	15 l plastic canister, stackable 1 canister is sufficient for approx. 150 m³ drinking water treatment	exaliQ control	**114 071**
		exaliQ safe	**114 072**
		exaliQ safe+	**114 073**
		exaliQ pure	**114 074**
		exaliQ neutra	**114 075**
	60 l plastic canister, stackable 1 canister is sufficient for approx. 600 m³ drinking water treatment	exaliQ control	**114 081**
		exaliQ safe	**114 082**
		exaliQ safe+	**114 083**
		exaliQ pure	**114 084**
		exaliQ neutra	**114 085**

4 Transport and storage

4.1 Transport

► Transport the product in its original packaging only.

4.2 Storage

► Protect the product from the following impacts when storing it:

- Dampness, moisture
- Environmental influences such as wind, rain, snow, etc.
- Frost, direct sunlight, severe heat exposure
- Chemicals, dyes, solvents, and their vapours

4.3 Transport/storage of the containers

► Ensure that unauthorised persons, e. g. children, do not have direct access to mineral solutions.

► When storing the 15 l and 60 l canisters, do not stack more than 2 on top of each other.

► Secure the stacked canisters against falling over. Place the canisters against a solid wall or leave the canisters secured on the pallet.
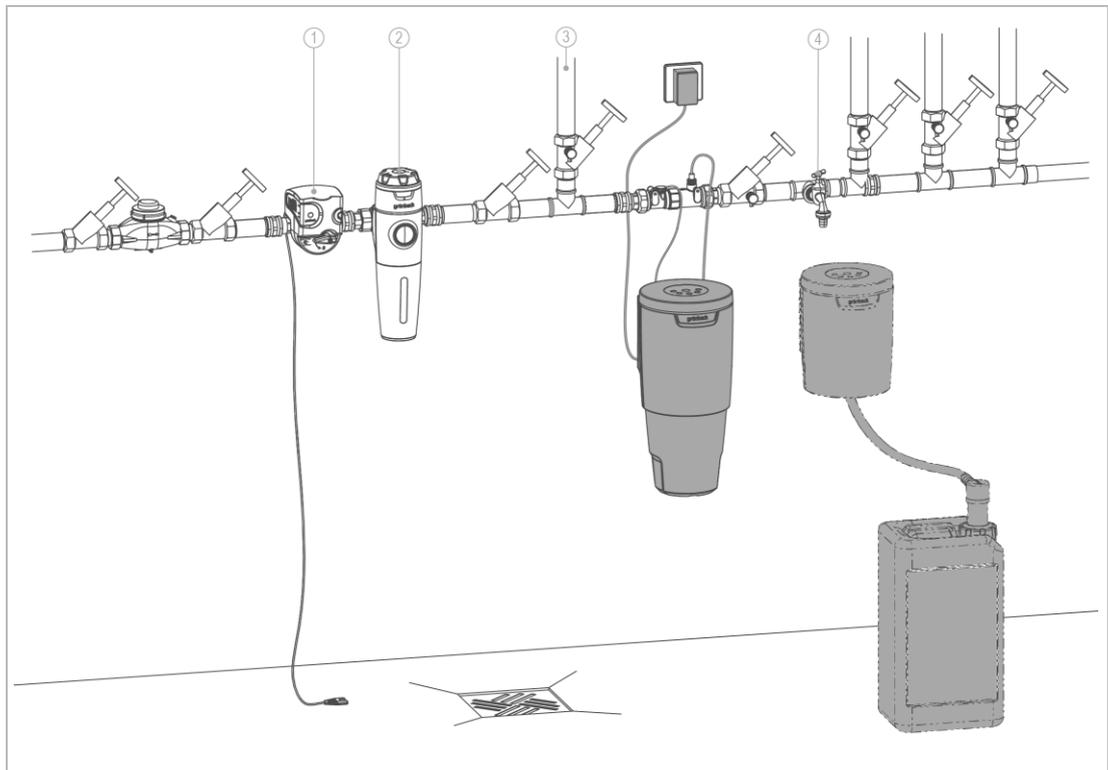
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5 Installation

The installation of a dosing system represents a major intervention into the drinking water system and only a qualified specialist should install these systems.
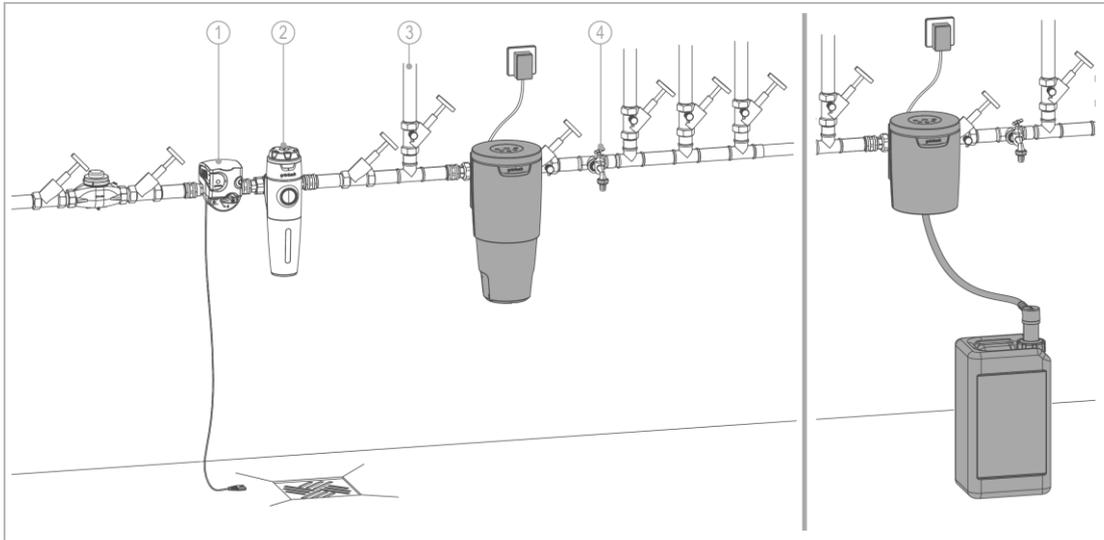
5.1 Installation examples

5.1.1 Stand-alone use dosing system exaliQ:KC6/SC6/SCxx (wall mounting)

	Designation		Designation
1	protectliQ safety device	**3**	Garden water pipe
2	Drinking water filter pureliQ	**4**	Water withdrawal point

5.1.2 Stand-alone use dosing system exaliQ:KC6/SC6/SCxx (mounting on water meter)

	Designation		Designation
1	protectliQ safety device	3	Garden water pipe
2	Drinking water filter pureliQ	4	Water withdrawal point

5.1.3 Dosing system exaliQ:KC6-e/SC6-e in combination with a water softener softliQ:SD/softliQ:MD
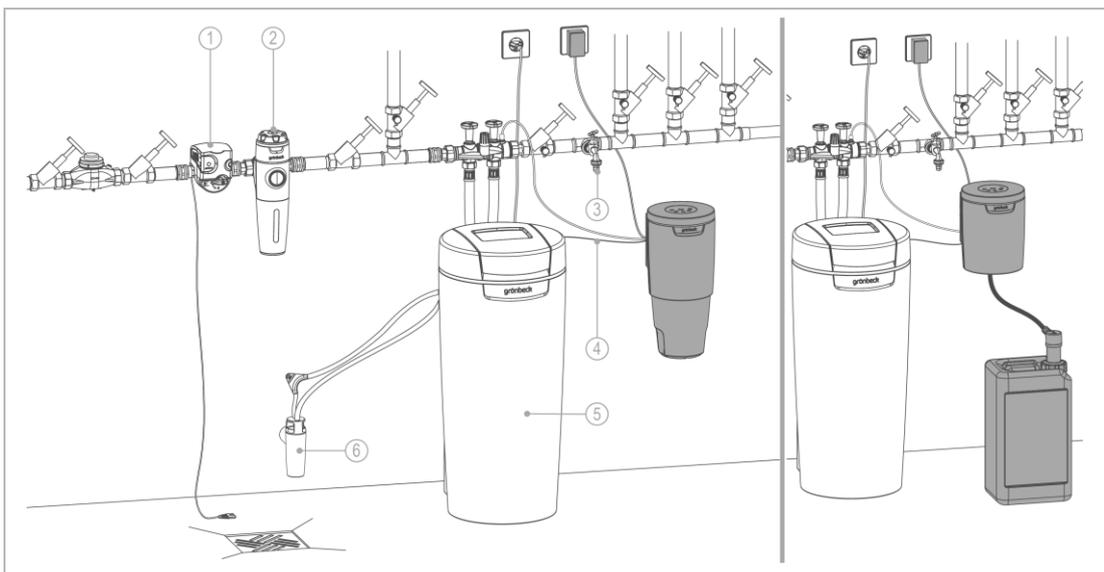
	Designation		Designation
1	protectliQ safety device	4	iQ-Comfort connection
2	Drinking water filter pureliQ	5	Water softener softliQ:SD21 & softliQ:MD
3	Water withdrawal point	6	Drain connection DN 50 acc. to DIN EN 1717

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5.2   Requirements for the installation site

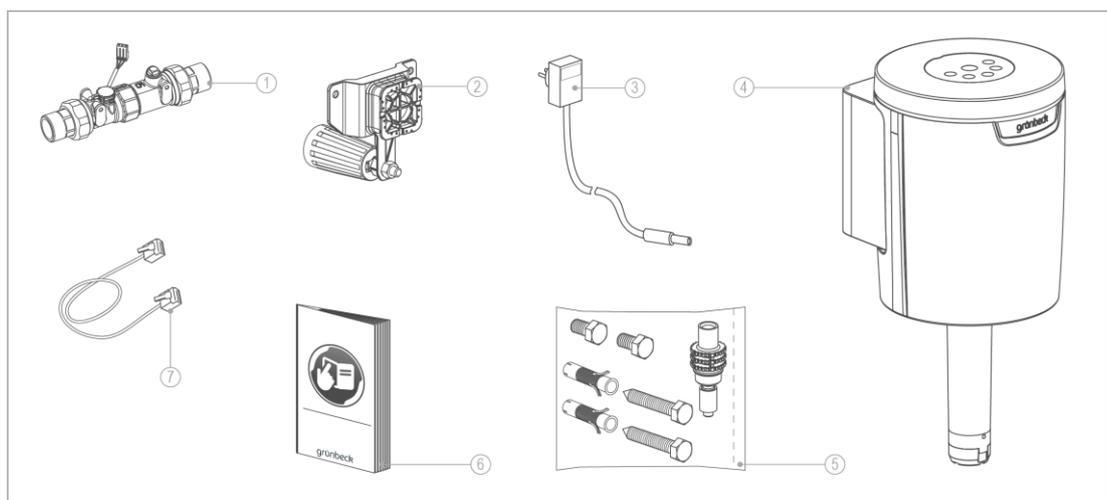Observe local installation directives, general guidelines and technical specifications.

- The installation site must be frost-proof and ensure that the product is protected from chemicals, dyes, solvents and vapours.

- The installation site must be adequately illuminated and ventilated.

- Always install a drinking water filter and, if required, a pressure reducer (e.g. fine filter pureliQ:KD) upstream of the product.

- A shock-proof socket (type F or CEE 7/3) is required within a distance of approx. 1.2 m of the system.

- A floor drain suitable for the system size must be available at the installation site or a protection device e.g. protectliQ or a protection device with water stop of the same quality must be installed.

- Downstream of the dosing point, a water withdrawal point must be available.

Space required:

- For operation/cleaning/maintenance of the dosing system + 800 mm to the front/side

- For changing the container (bottle) +300 mm downwards

- For operating the control unit +150 mm upwards
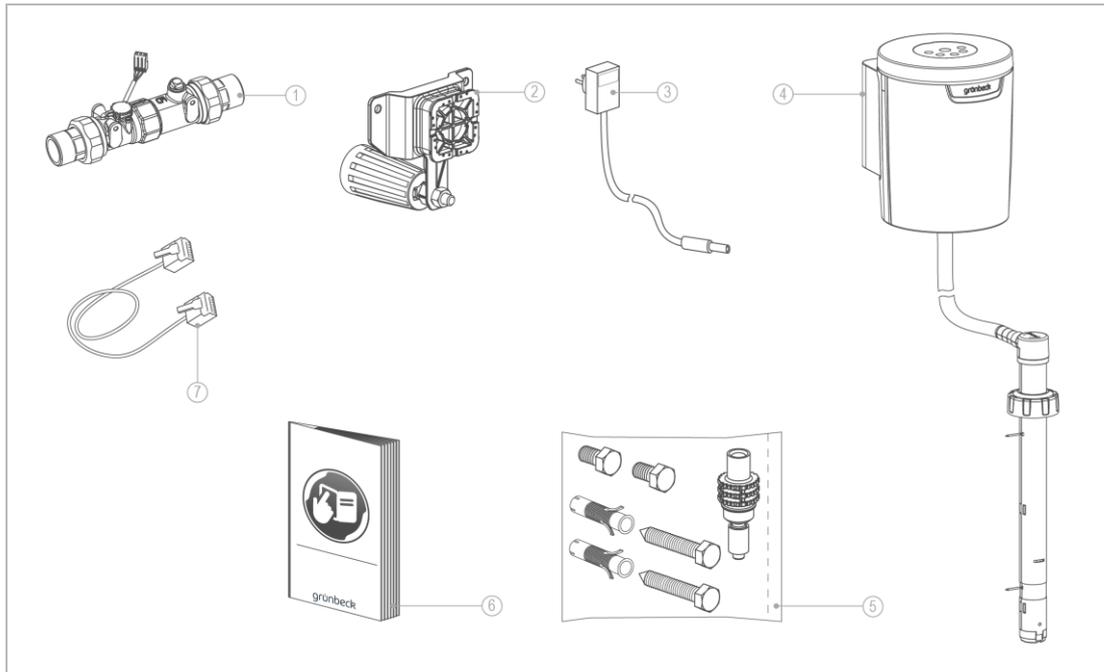
5.3   Checking the scope of supply

5.3.1   Dosing system exaliQ:KC6/KC6-e

	Designation			Designation
1	Turbine water meter with screw connections (Version: KC6)		4	Dosing system exaliQ
2	Holder		5	Fastening material with dosing valve
			6	Operation manual
3	24 V plug-in power supply with power supply cable		7	iQ-Comfort connecting cable (version: KC6-e)

5.3.2 Dosing system exaliQ:SC6/SC6-e/SC10

|	Designation			Designation
1	Turbine water meter with screw connections (Version: SC6, SC10)		4	Dosing system exaliQ with suction lance
2	Attachment		5	Fastening material with dosing valve
			6	Operation manual
3	24 V plug-in power supply with power supply cable		7	iQ-Comfort connecting cable (version: SC6-e)

► Check the scope of supply for completeness and damage.

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## 5.4 Installing the product

5.4.1 Installing the water meter

ℹ️ The turbine water meters can be mounted horizontally (preferably) or vertically.

► Install the water meter screw connection into the pipe.
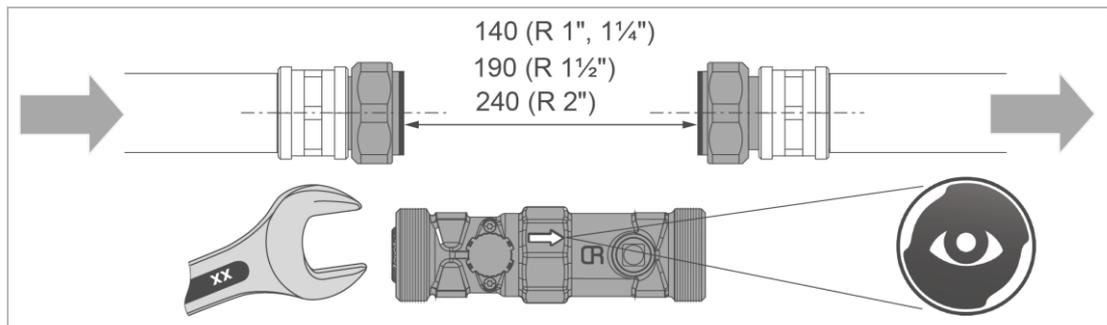
1. Check the flow direction given on site.

2. Position the water meter (observe flow direction).

3. Tighten the water meter with the union nuts without applying tension.

» The water meter is installed.

5.4.2 Mounting the dosing valve
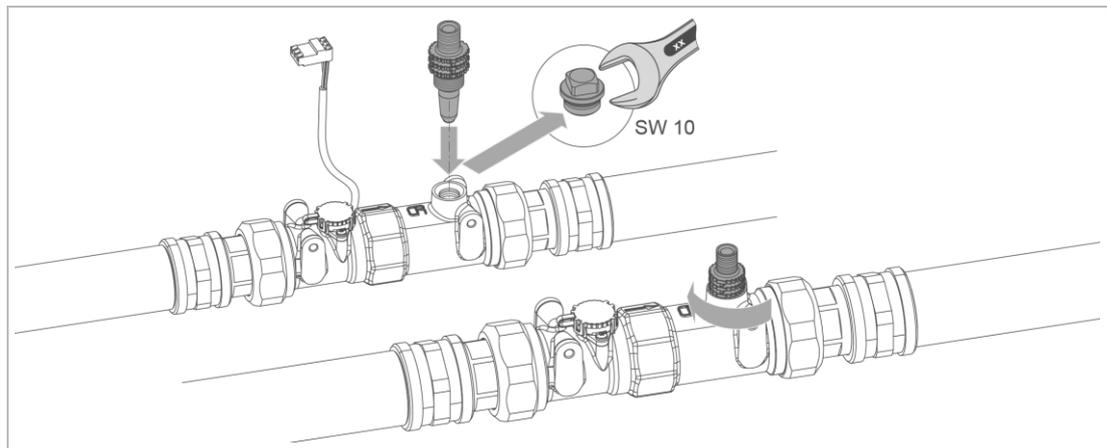
1. Unscrew the dummy plug. Keep the dummy plug.

2. Screw in the dosing valve finger tight.

» The water meter is prepared with the dosing valve mounted.

3. Mount the support on the water meter if necessary.
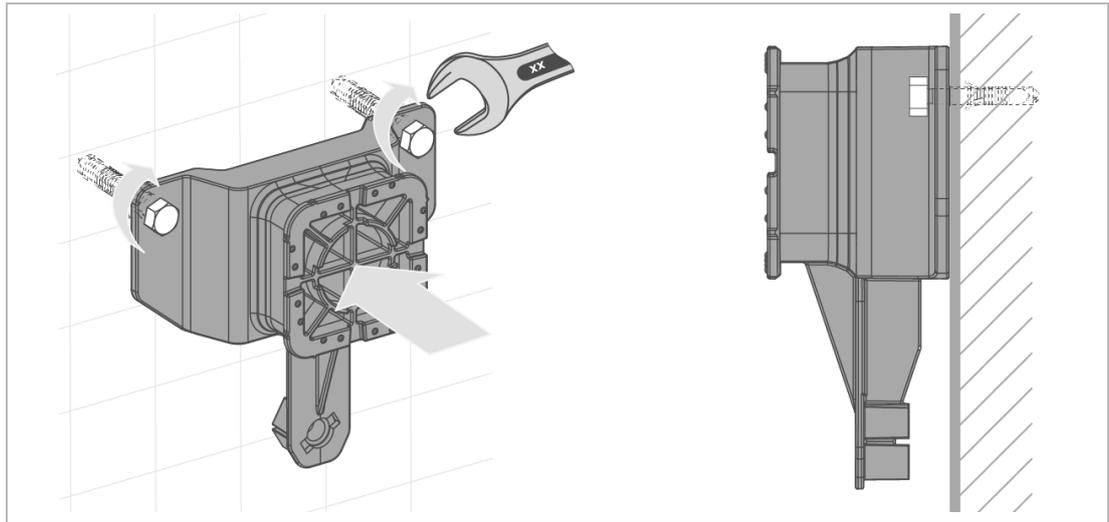
5.4.3   Mounting the support

The support can be mounted horizontally or vertically.

Wall mounting

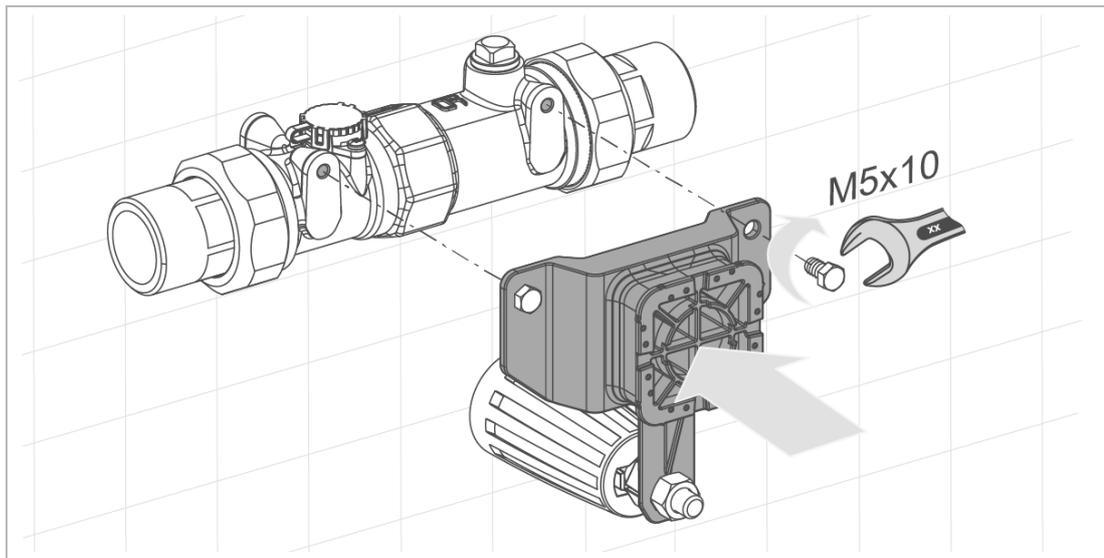► Remove the spacer (this is not required for wall mounting).
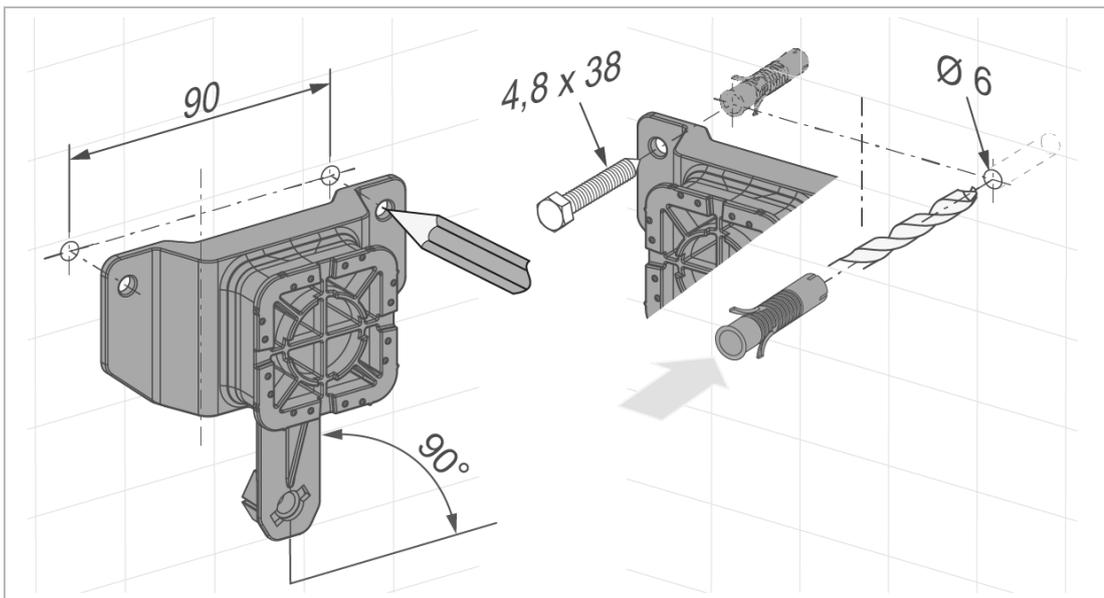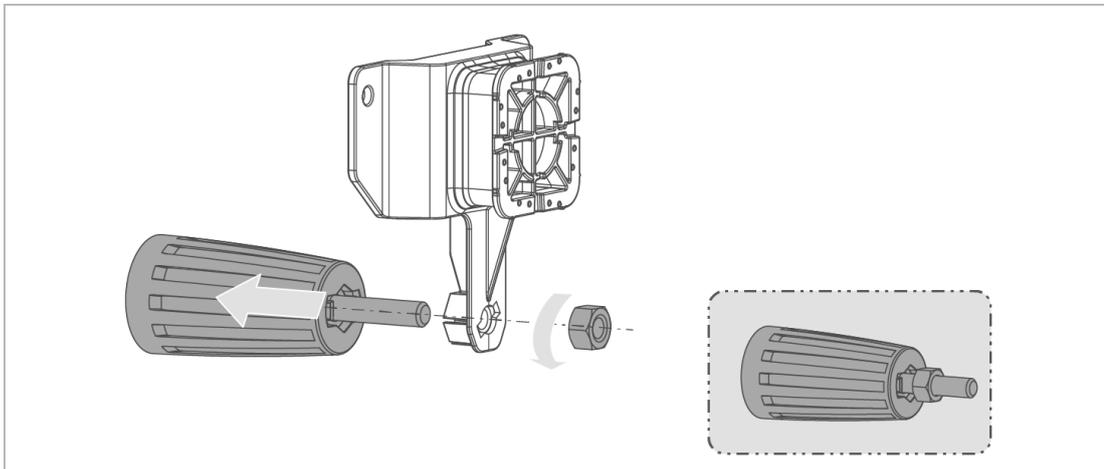
► Position the support flat on a fixed wall surface.
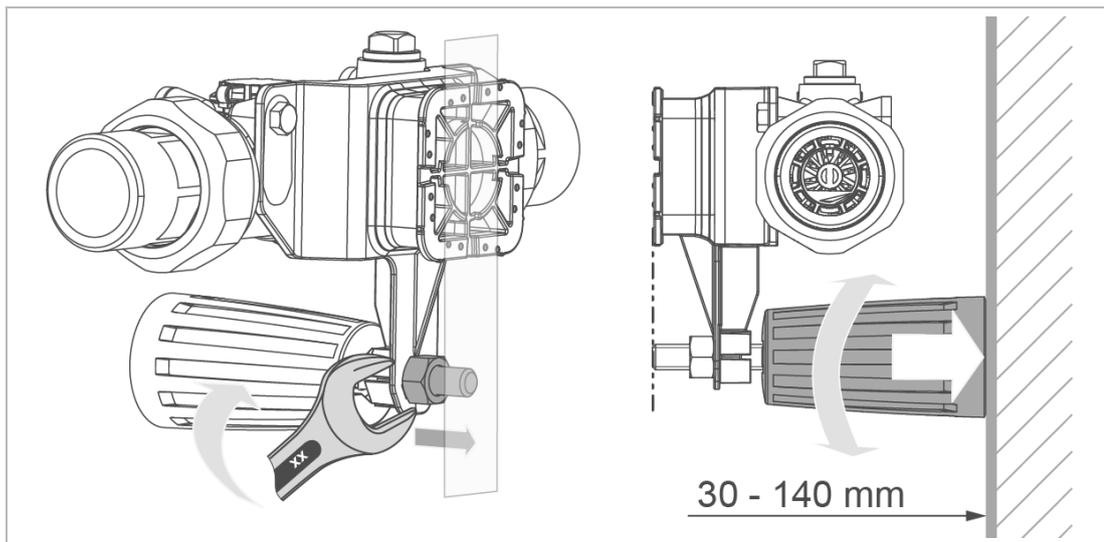
► Fasten the support with 2 screws and dowels.

► Tighten the fastening screws evenly – not too tight.

» The support is mounted on the wall surface.

» The dosing system can be hooked in.

Mounting on the water meter

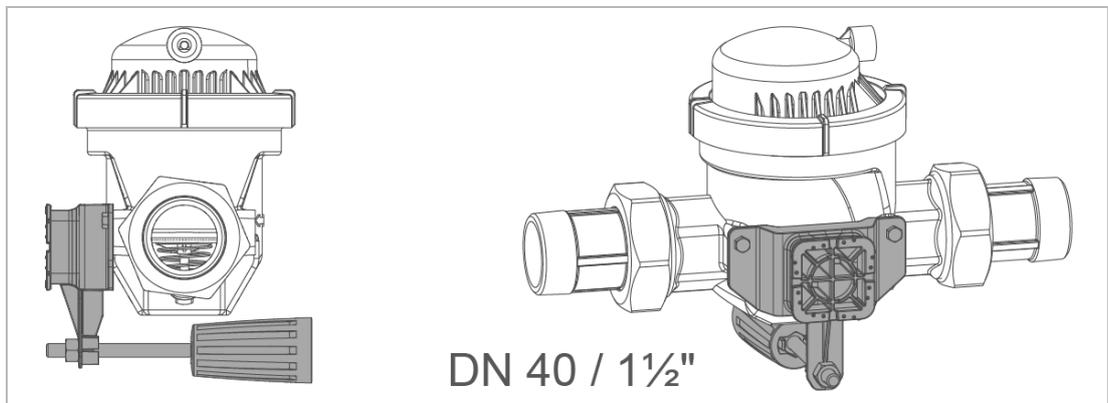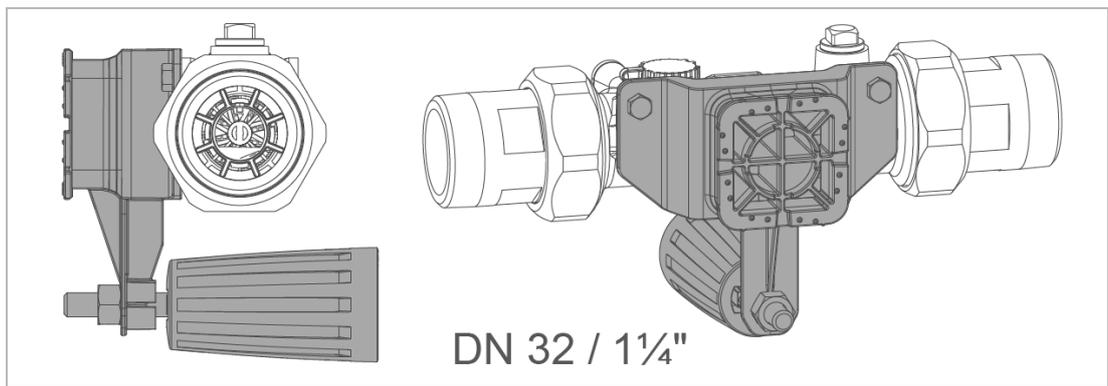► Screw the support to the water meter using the hexagon head bolts.

1. Adjust the threaded rod flush with the contact surface.

2. Secure the threaded rod with the lock nut.

3. Turn the counterholder to the wall surface.

» The support is mounted on the water meter.

» The dosing system can be hooked in.

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Fastening to different water meters

DN 25 / 1"

DN 32 / 1¼"

DN 40 / 1½"

DN 50 / 2"
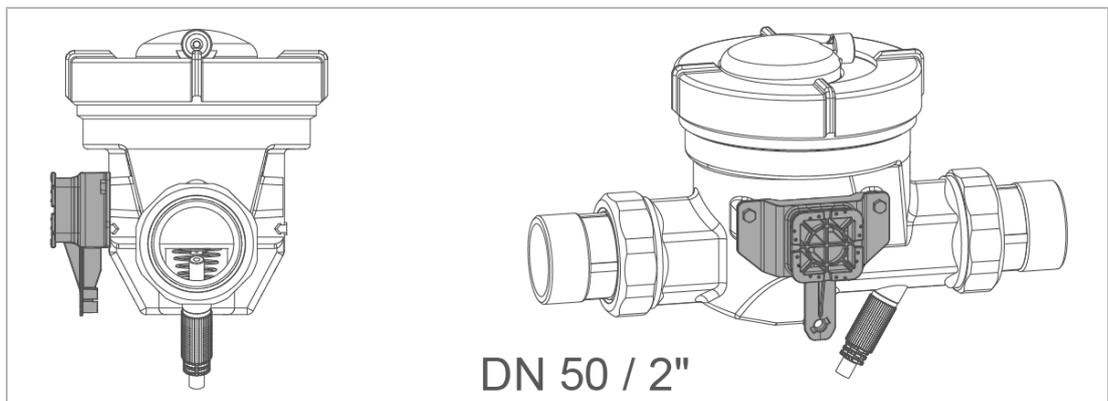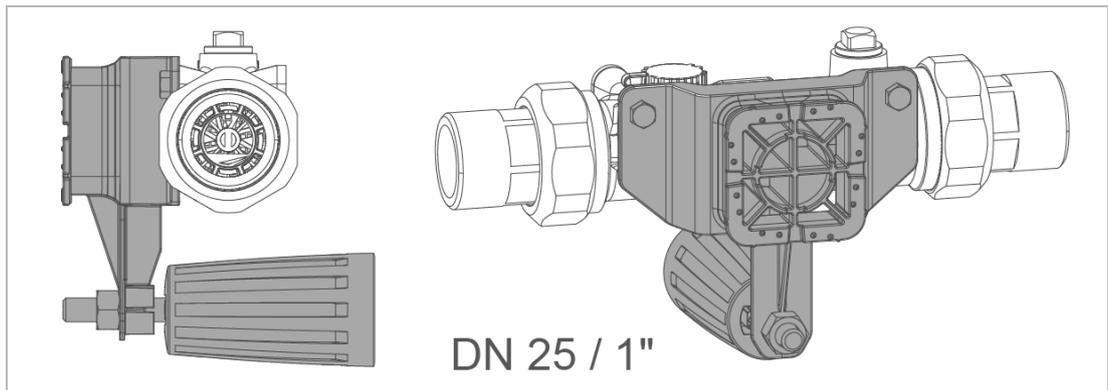
5.4.4 Hook in dosing system
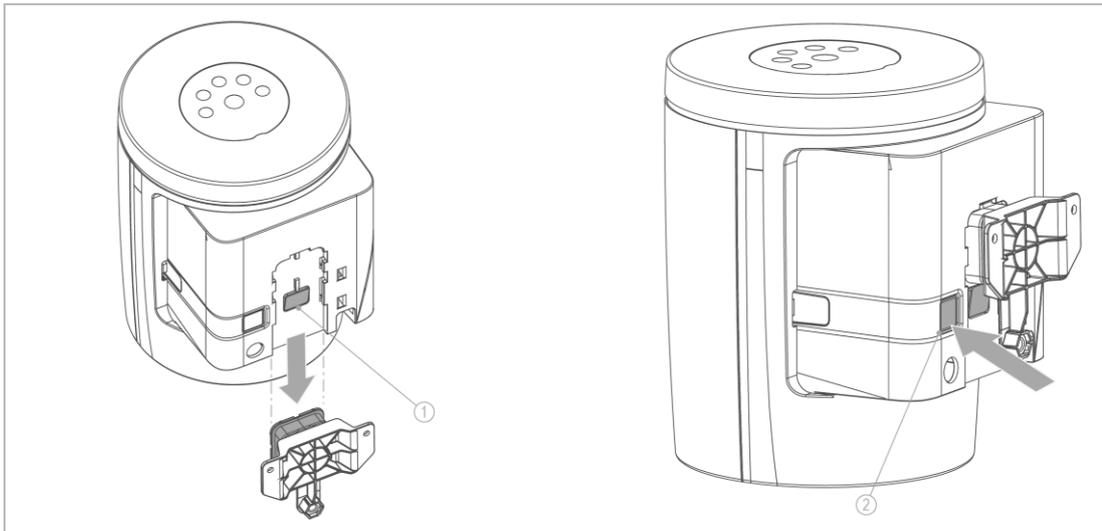
	Designation			Designation
1	Interlock		**2**	Release button

1. Align the dosing system with the support from above.

2. Carefully slide the dosing system onto the support from above until it clicks.

» The support is secured against removal with the interlock.

5.4.5 Supporting the dosing system

The dosing system must be supported against tilting movements.
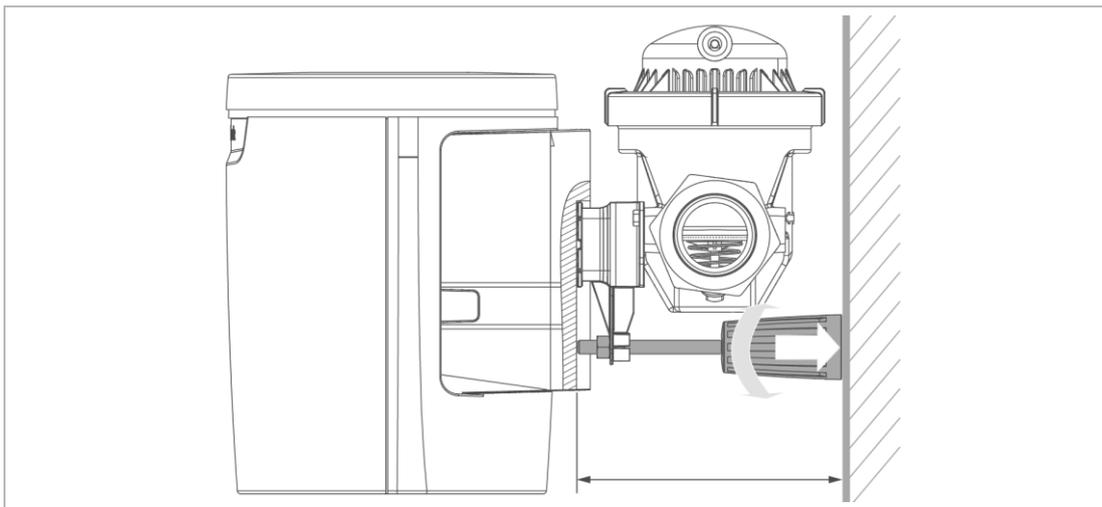
► If necessary, readjust the spacer.

» The dosing system is supported against tilting movements by the spacer.

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5.4.6   Removing the dosing system

3. Check that no lines (electricity, dosing, pulse) can be torn off, if necessary disconnect them beforehand.
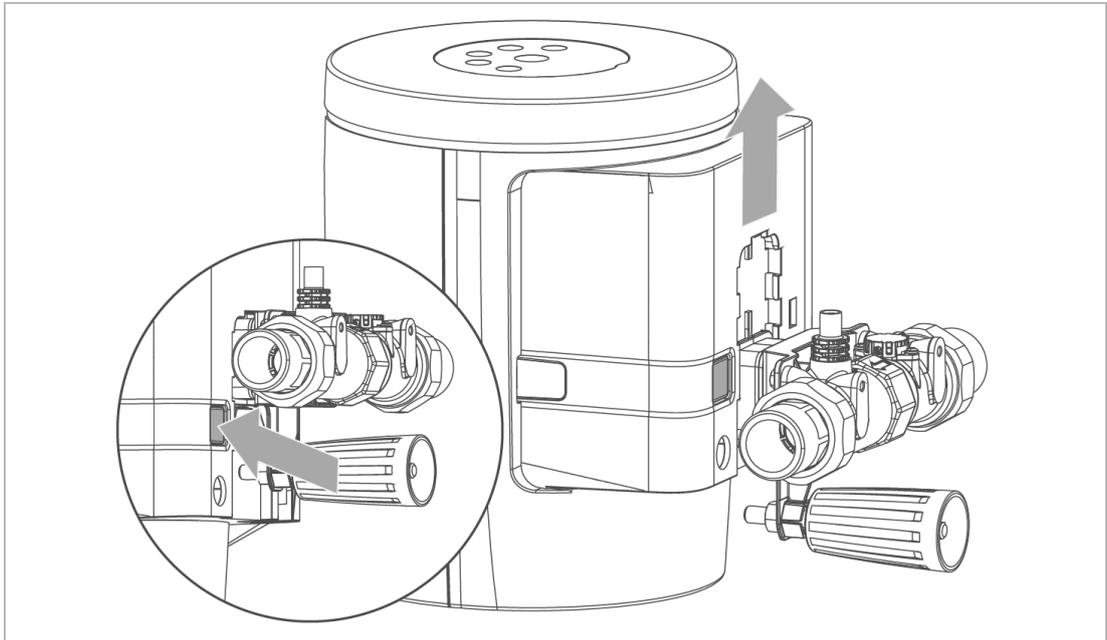
4. Press and hold the release button.

⚠ **CAUTION**   Sharp-edged components, short distance to the water meter.

- Crushing/abrasion of fingers
- ► Disconnect the dosing system slowly – not with a sudden movement.

5. Pull the dosing system out upwards.

6   Start-up

The initial start-up/commissioning of the product must be done by technical service personnel only.

6.1   Preparations

6.1.1   Opening the door
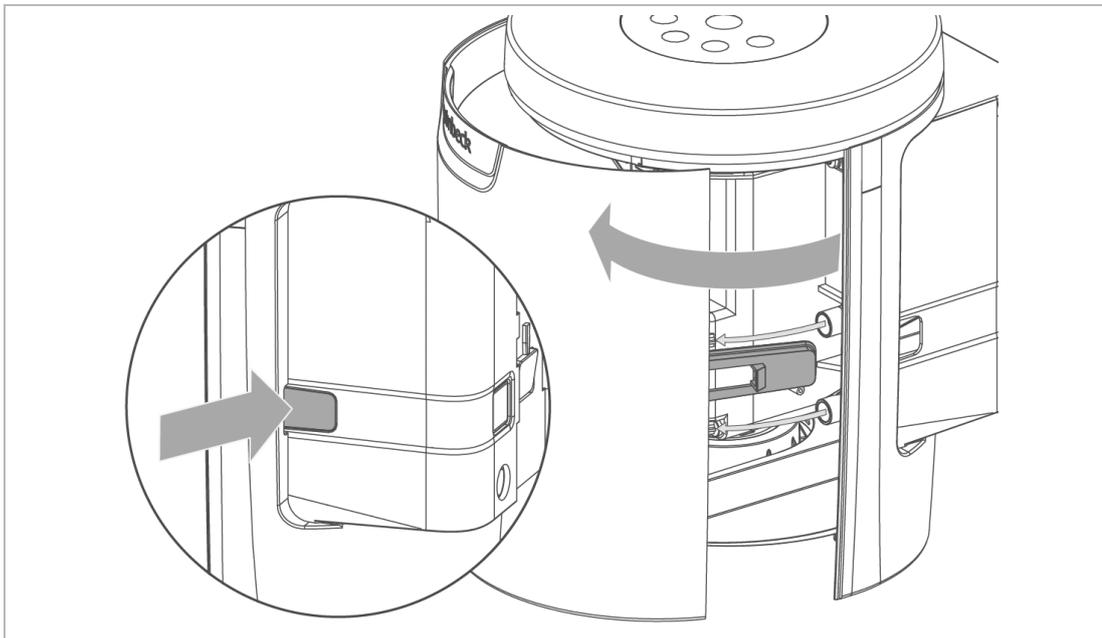
1. Press the release button firmly until the door pops open.

2. Swivel the door open.

6.1.2   Connect dosing line

You may use a tool (188 881e) for tightening the union nut (refer to chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**).

| NOTE | Incorrect installation of the dosing line over hot/sharp-edged surfaces. |

- Functional failure or dosing capacity is reduced.
- ► Guide the dosing line to the dosing valve without tension or kinking.
- ► Leave a reserve length when shortening the dosing line.
- ► Lay the dosing line protected from hot and sharp-edged surfaces.

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The dosing line is connected to the pump and is guided out of the housing without tension.

1. Determine the required length of the dosing line – depending on the installation situation.

2. Push the union nut, collet and O-ring on the dosing line.

3. Shorten the dosing line.
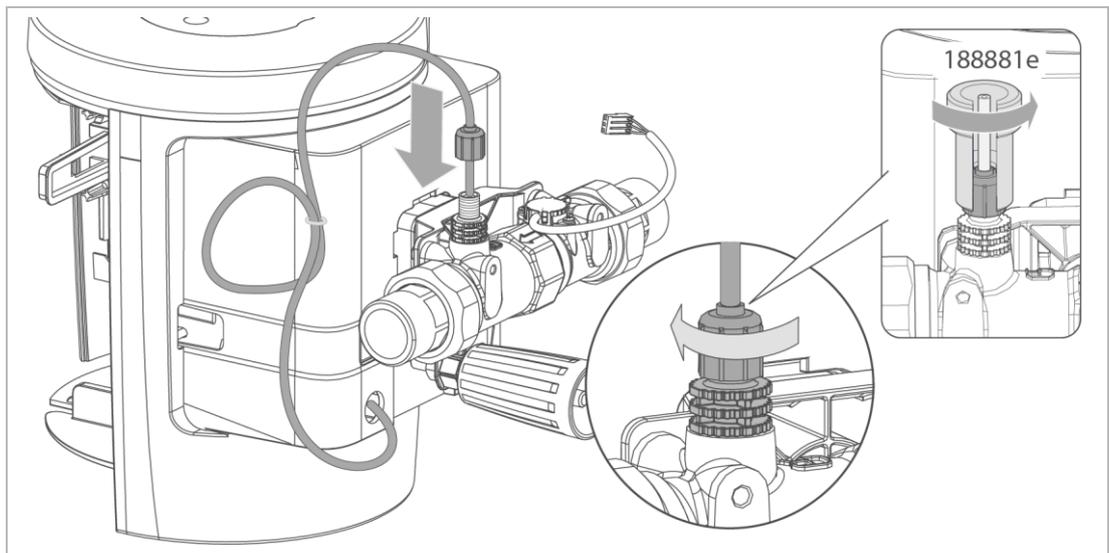
188881e

4. Insert the end of the line into the dosing valve as far as it will go.

5. Screw the dosing line finger tight with the union nut.

» The dosing line is connected.

You may use a tool (188 881e) for tightening the union nut (refer to chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**).
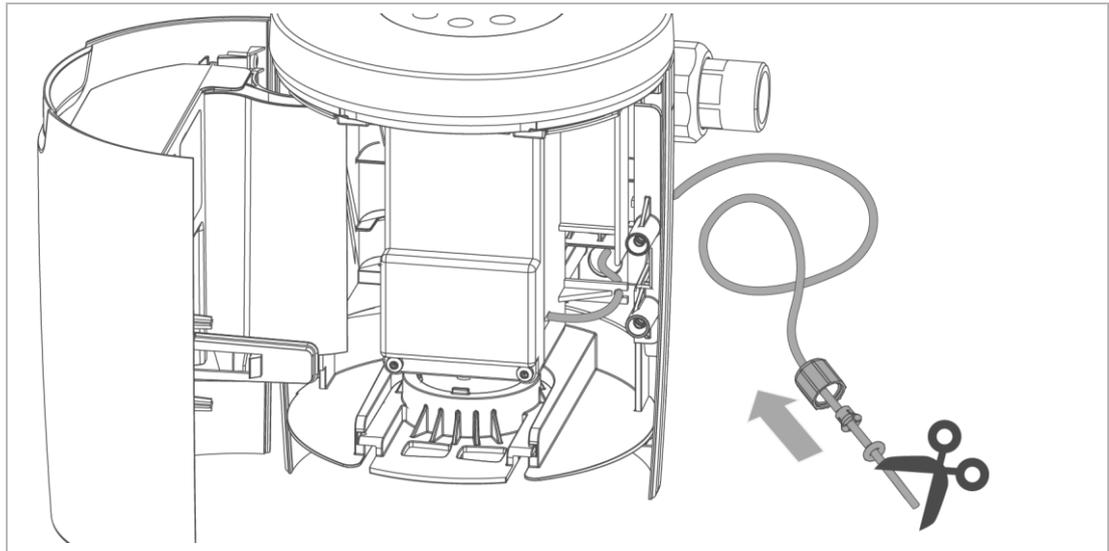
6.1.3   Connect pulse cable (stand-alone dosing system)
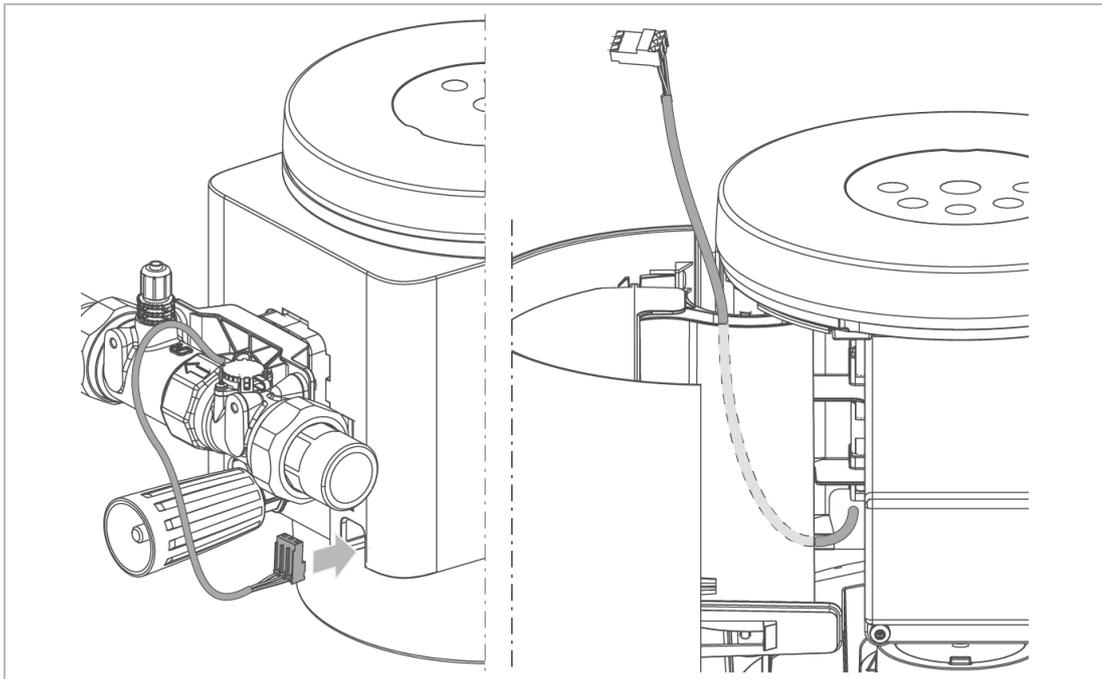
1. Feed the pulse cable of the water meter through the opening in the housing without pulling or kinking it.

2. Thread the pulse cable with the plug through the slot of the door.
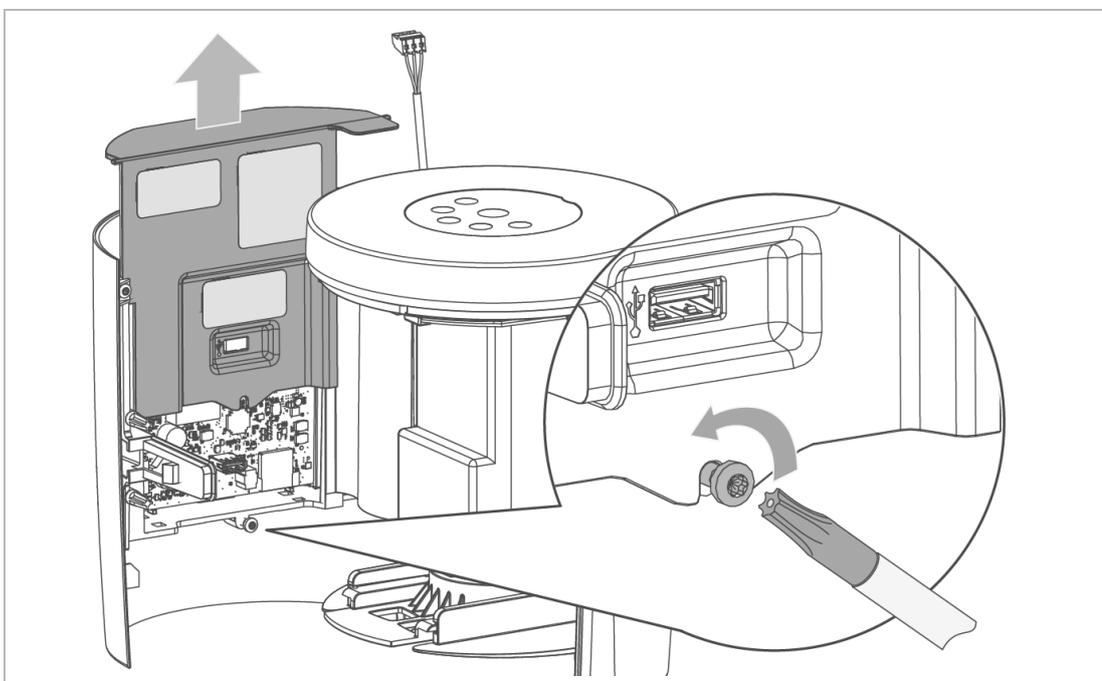
3. Loosen the Torx screw (T 20) – do not unscrew it.

4. Pull out the cover of the circuit board upwards.

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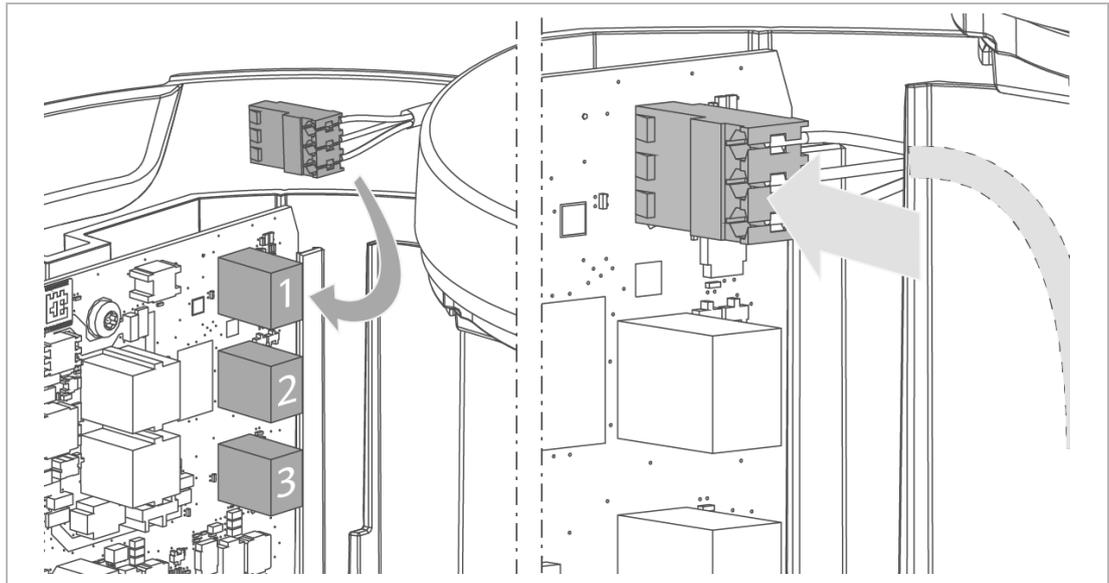
5. Insert the plug into one of the 3 slots.

Closing cover
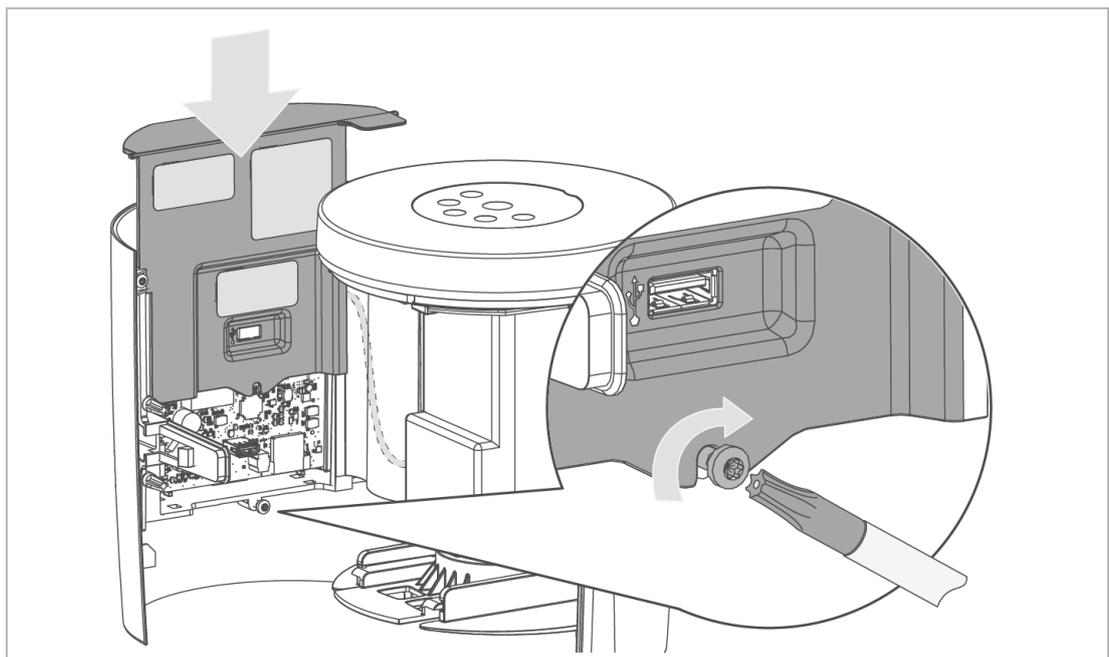
1. Slide the circuit board cover in from above.

2. Make sure that the cables are not squashed.

3. Secure the cover using the Torx screw – do not tighten too tightly.

» The pulse cable of the water meter is connected.

6.1.4 Connect iQ-Comfort connecting cable
(Dosing system exaliQ:KC6-e/exaliQ:SC6-e in combination with a water softener softliQ:SD from SD21 & softliQ:MD)
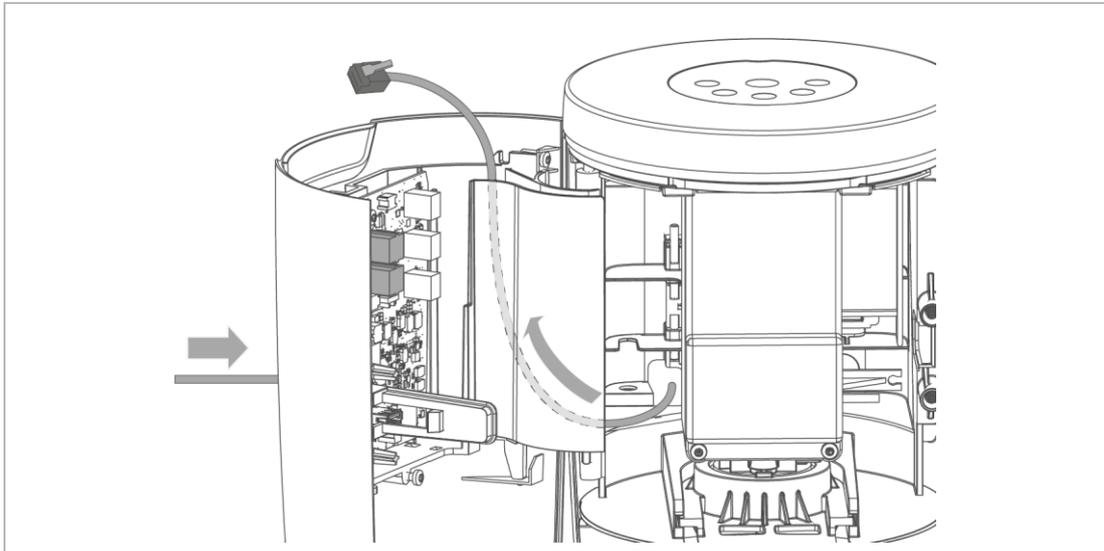
1. Feed the iQ-Comfort connecting cable through the opening in the housing without pulling or kinking it.

2. Thread the iQ-Comfort connecting cable with the plug into the slot of the door.

3. Remove the circuit board cover (see chapter 6.1.3).
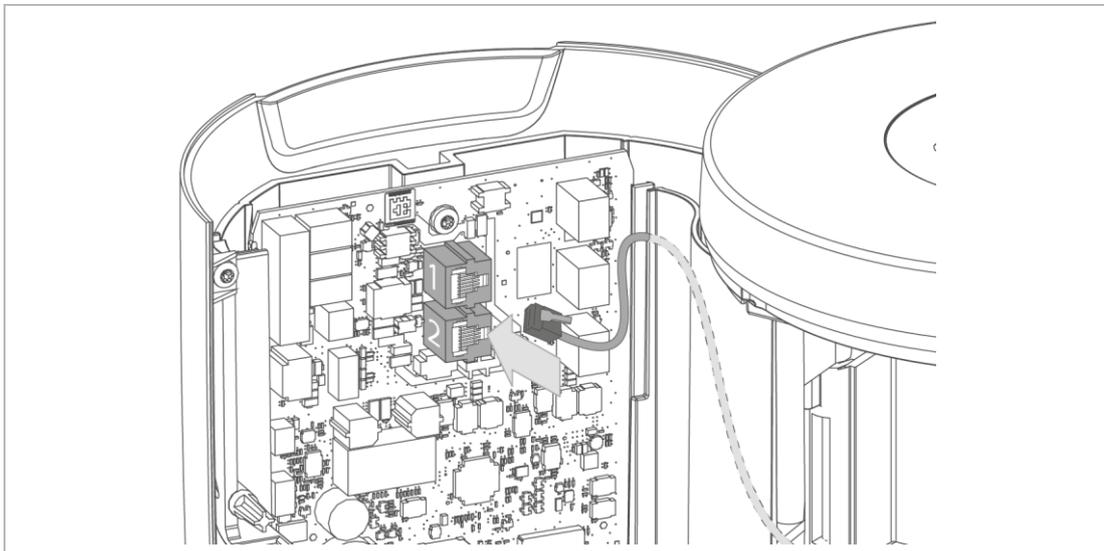
4. Insert the plug into one of the 2 slots.

5. Close and fix the circuit board cover.
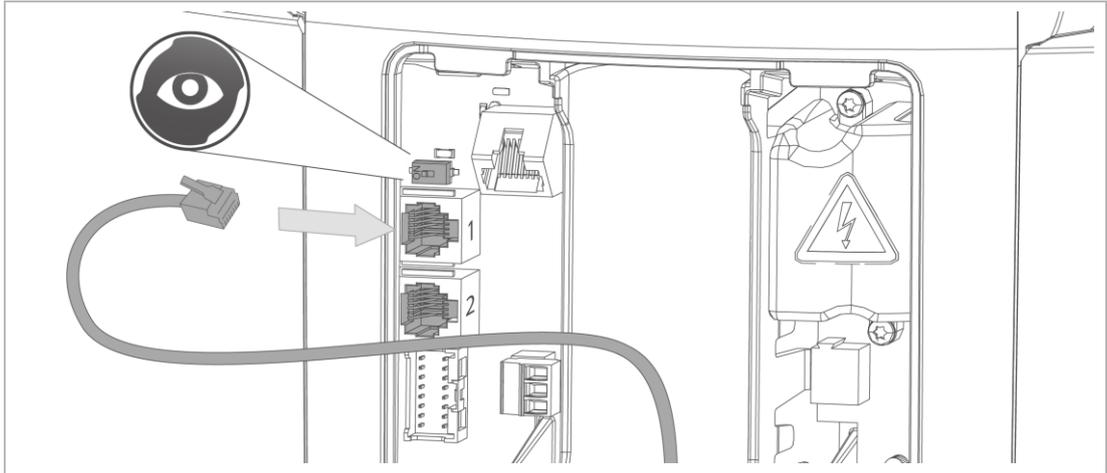
6. Connect the iQ-Comfort connecting cable to the softliQ:SD/MD water softener (see operation manual softliQ:SD or softliQ:MD).

7. Make sure that the DIP switch is switched to "on" (left position).

» The iQ-Comfort connection between dosing system and water softener is established.

» The dosing signals are transmitted from the water softener to the dosing system.

6.1.5 Closing door
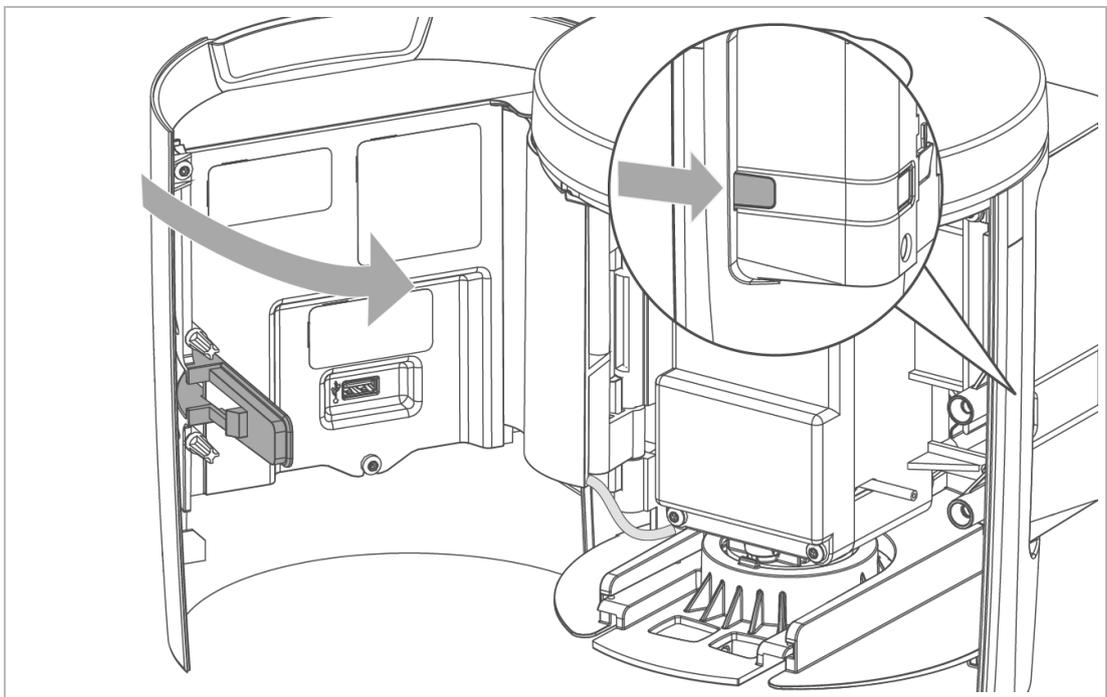
► Swivel the door closed until the release button engages.

6.2   Connecting container

⚠️ **WARNING**   Skin and eye contact with mineral solutions.

- Depending on the type of mineral solution, it may burn the eyes and irritate the skin and respiratory tract.
- ► For sodium hydroxide solution (exaliQ neutra), use eye protection goggles, sturdy clothing and protective gloves.
- ► Observe the safety data sheets and follow the instructions.

► Before opening a container, pay attention to the following:

- Type of mineral solution (designation, article number and colour)
- Filling date & shelf life
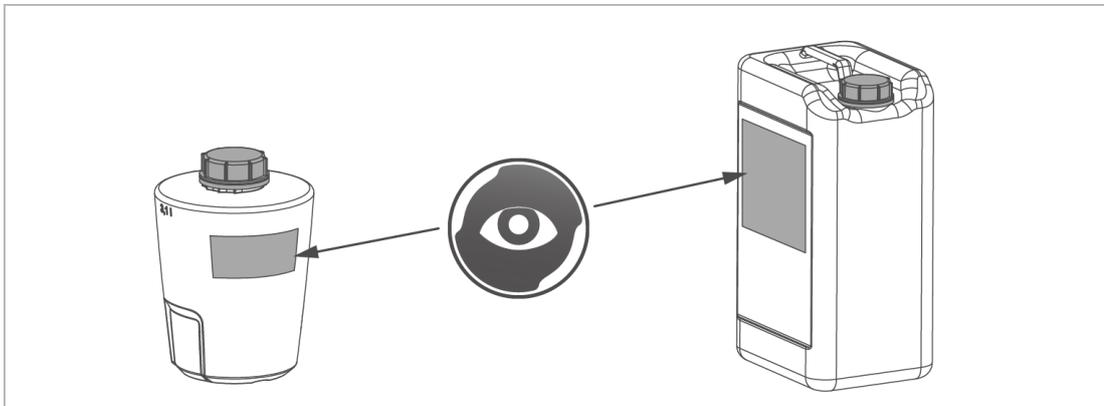
ℹ️ ► Only use original Grünbeck mineral substances. Grünbeck Wasseraufbereitung GmbH cannot accept any liability for the use of third-party products.

6.2.1   Insert 3-litre bottle

ℹ️ You may use a universal drum wrench (170 670e) for loosening the screwed cover (refer to chapter 3.6).

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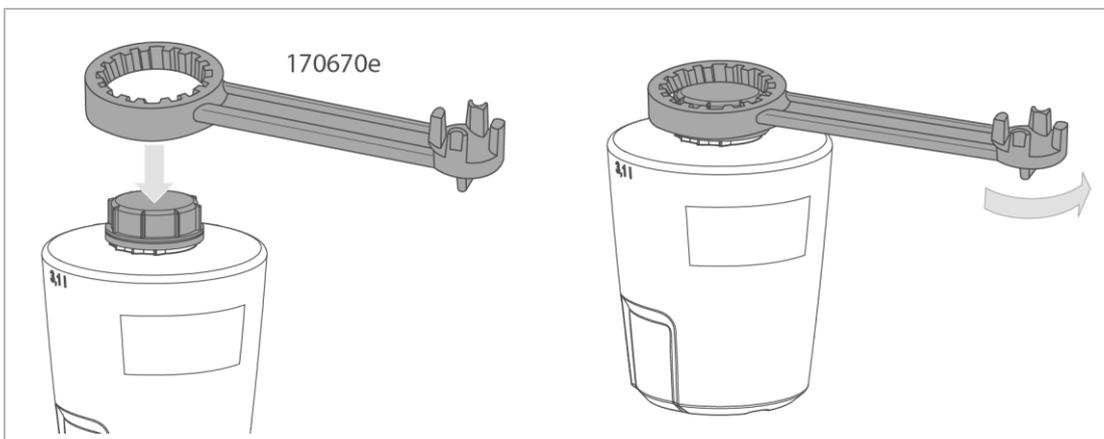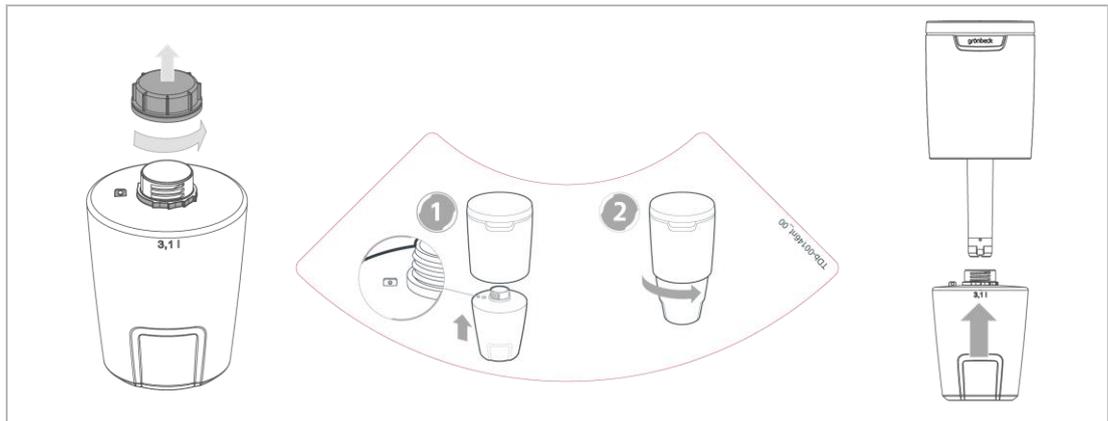
1. Loosen the screw cap.

2. Keep the screw cap to close the bottle after use.

3. Carefully insert the bottle from below onto the suction lance until it stops.

   a See the mounting sticker on the 3-litre bottle.

   b Make sure that the stop is positioned correctly (left side).
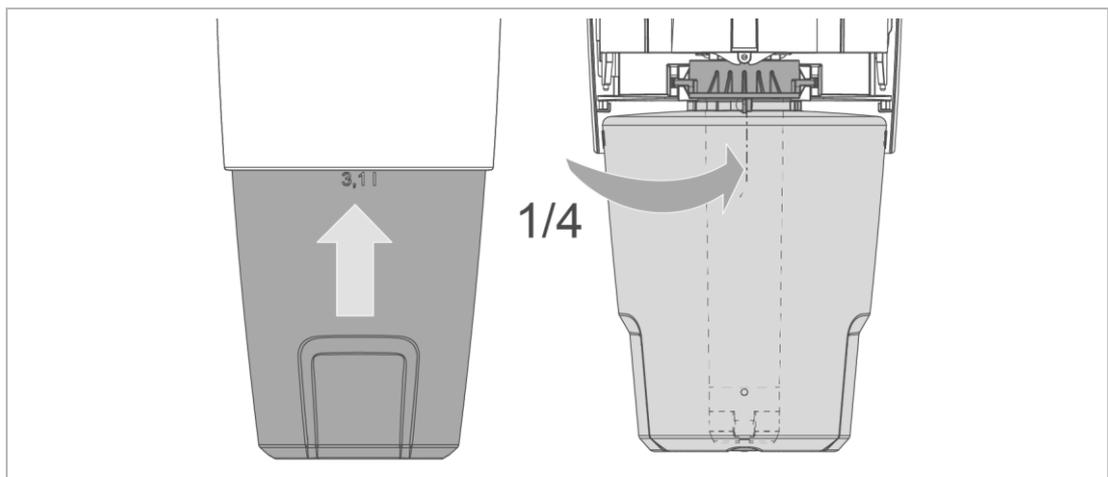
4. Turn the bottle by a ¼ turn anticlockwise until it stops.

5. Check that the bottle is screwed in and cannot fall down.
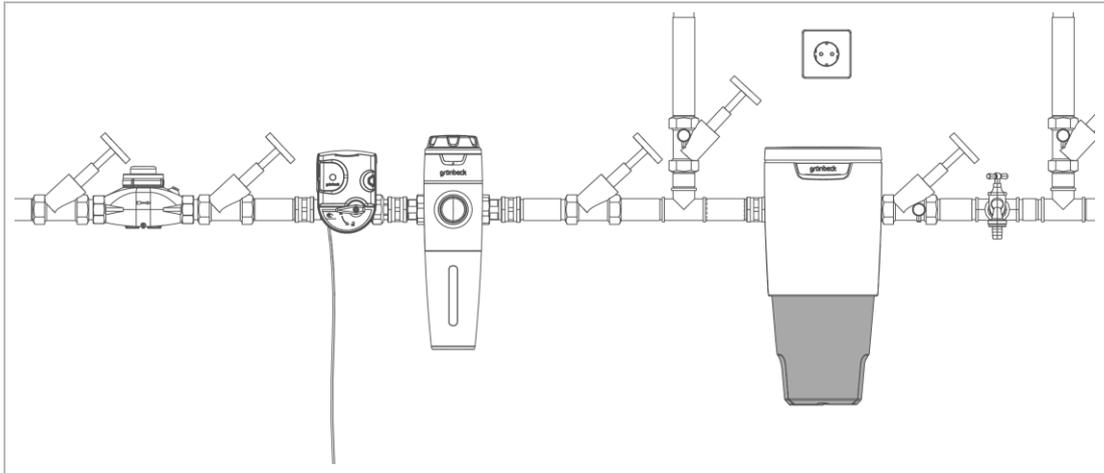
» The bottle is connected.

6.2.2 Connect canister to suction lance
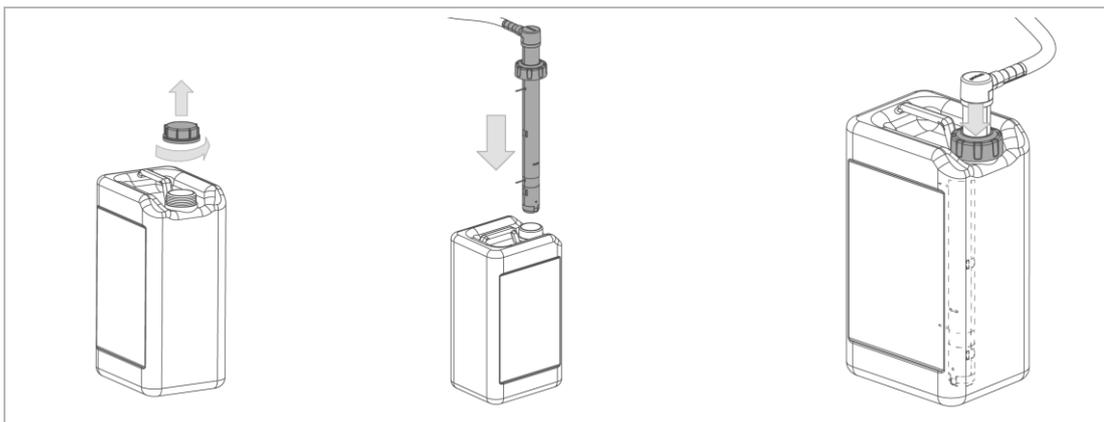
1. Loosen the screw cap.

2. Keep the screw cap to close the canister after use.

3. Insert the suction lance into the canister from above without kinks.

4. Fix the suction lance with the sliding cover.

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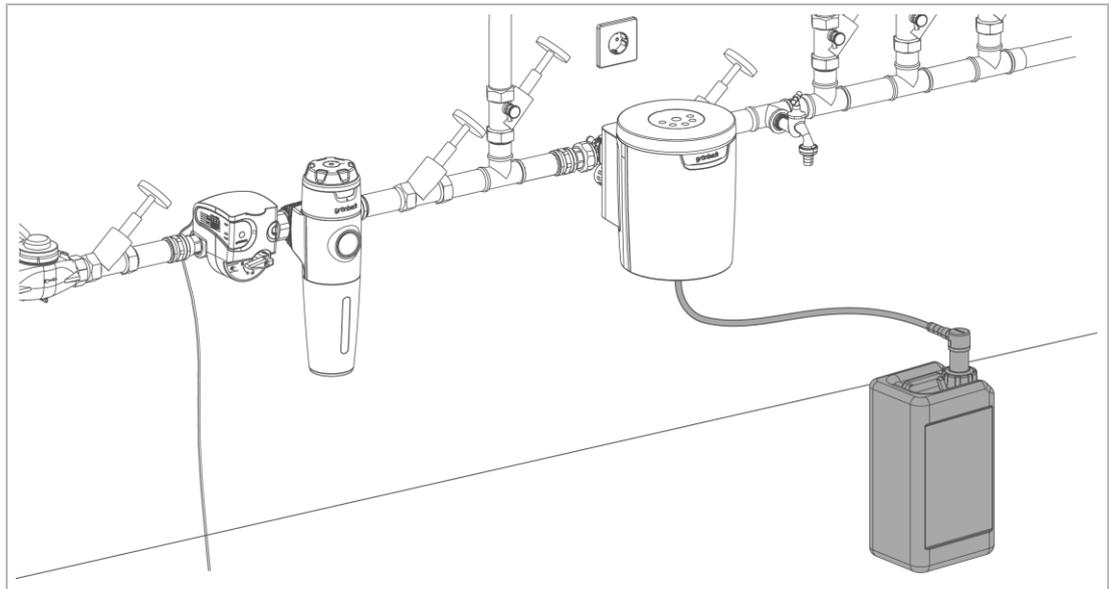
» The suction lance of the dosing system is connected to the full canister.

► Make sure that the canister is stable and cannot tip over.

6.3 How to start up the product

The dosing system must be acclimatised before electrical connection.
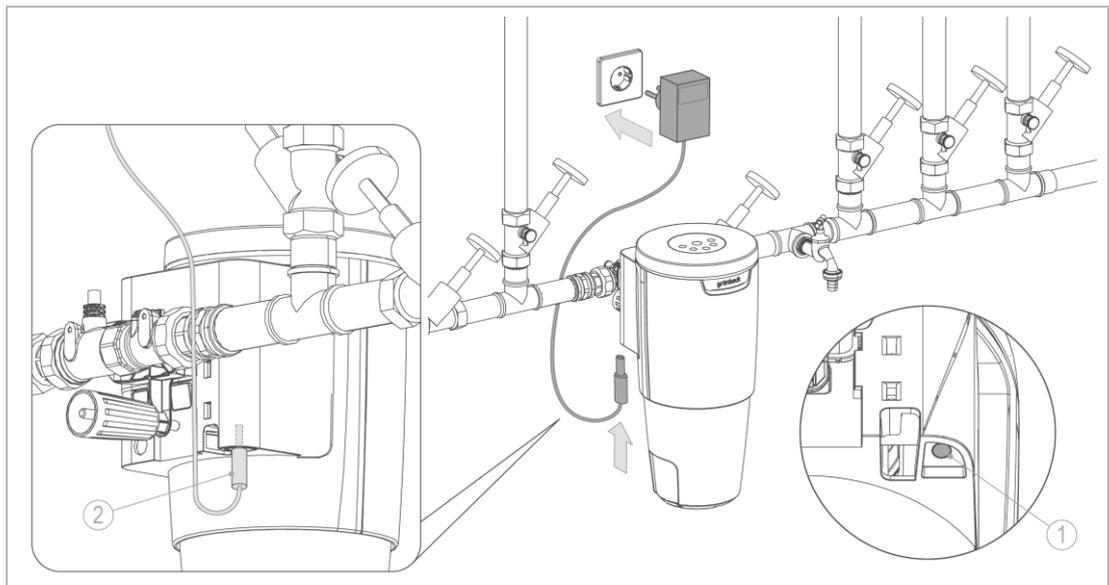
	Designation			Designation
1	Socket 24 V		2	Plug

1. Connect the plug-in power supply to the 230 V socket.

2. Plug the mains plug into the 24 V socket at the bottom of the dosing system.

» The dosing system is now ready for use.

» The LED lights up continuously.

3. Check that the dosing system is dosing correctly when water is removed.

» The illuminated LED ring lights up and pump noises can be heard.

6.4   Handing over the product to the owner/user

● Explain to the owner/user how the dosing system, the display and operating foil work.

● Use the manual to brief the owner/user, and answer any questions.

● Inform the owner/user about the need for inspections and maintenance.

● Hand over all documents to the owner/user for keeping.

● Enter the initial start-up in the operation log (refer to chapter 13.1).

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7 Operation

7.1 Operating elements and display
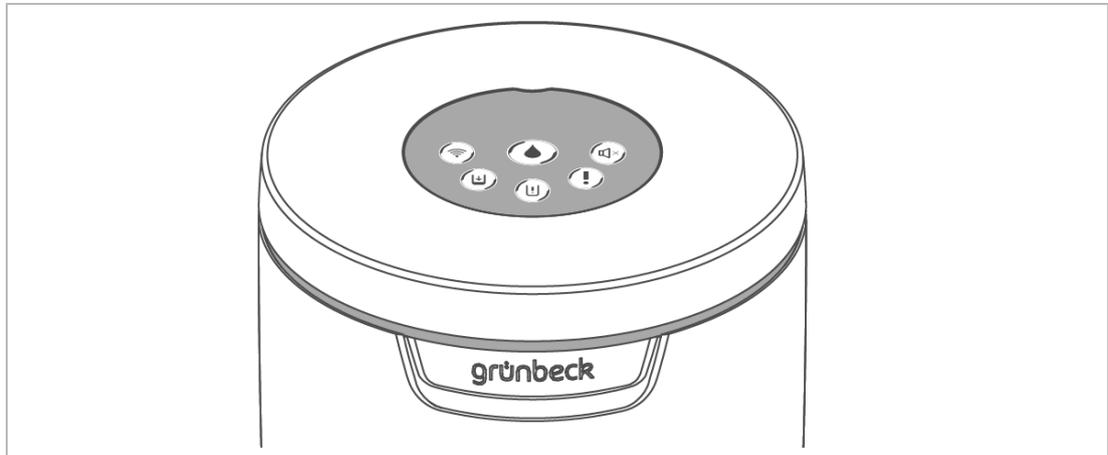
7.1.1 Illuminated LED ring

In the standard setting, the illuminated LED ring behaves as follows:

- Lights up for:
    - Water treatment
    - Dosing volume test
- Intermittent flashing for:
    - Pre-empty signal (at approx. 0.6 l residual quantity)
    - Empty signal
    - Malfunction

7.1.2 Buttons
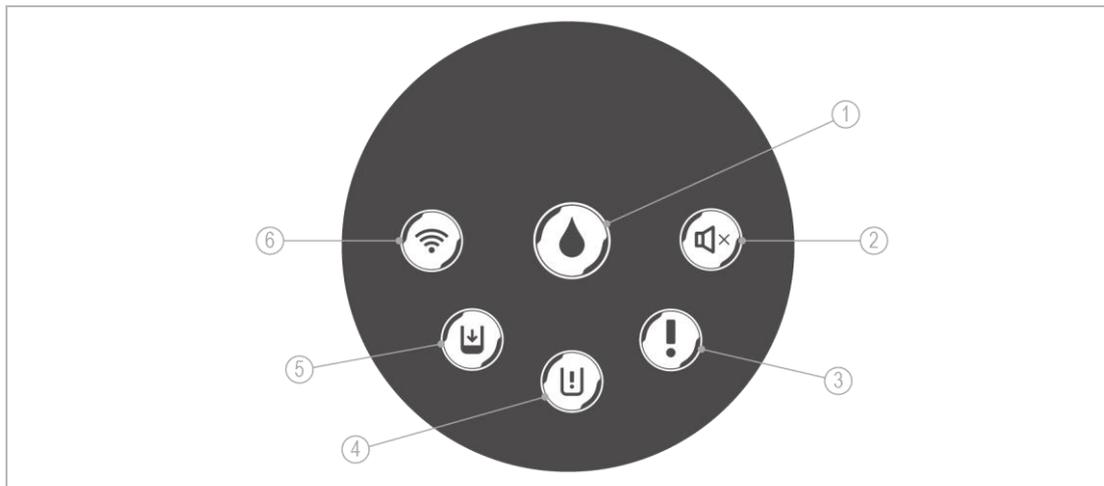
	Designation			Designation
1	Ready for operation (illuminated)		**4**	Empty signal (dosing agent used up)
2	Deactivation of acoustic signal		**5**	Pre-alarm empty signal (dosing agent level low)
3	Fault signal		**6**	Wi-Fi access point (Grünbeck mySettings app)

The buttons inform the user optically and acoustically about the operating status of the dosing system.

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Figure	Explanation
	LED (white): Lights up when system is connected to mains voltage (ready for operation). Button: No function
	LED (white): Lights up when buzzer is deactivated. Button: Activating/deactivating the buzzer Buzzer: sounds between 08:00 am and 22:00 pm in case of fault, empty signal or low filling level The function is muted from 10:00 pm to 08:00 am.
	LED (red): Lights up when an alarm signal or motor short-circuit has occurred. Button: Acknowledgement -> Device is set to the basic mode
	LED (red): Lights up permanently when electrodes detect "Container empty" or flashes if dosing agent consumption has been detected to be too low. Button during empty signal: Switching off the acoustic signal for container empty – for 24 h
	LED (white): Lights up when electrodes detect low filling level. Button during pre-empty signal: Permanent deactivation of the acoustic signal for low container level
	LED (white): Lights up when access point is active. Button: Activate/deactivate access point Deactivation after 2 h automatically.

7.2 Establishing a connection to Grünbeck mySettings app

The connection to Grünbeck mySettings app (connection limited to 2 hours) can only be established directly at the dosing system via the access point.

The connection is **not** required for operation of the dosing system. This is mainly intended for the qualified specialist installer to carry out maintenance.

The connection to Grünbeck mySettings app may only be carried out by a service technician (refer to the technical service manual, order no TD4-CK000).

7.2.1 App functions

General functions:

- Installer registration in the app
- Product registration

Functions for exaliQ:

- Display of product information (freely accessible):

    • Device status

    • Level

    • Current water flow rate

    • Flow history

- Installer functionalities (protected area):

    • Display status history

    • Dosing volume test

    • Setting date and time

    • Firmware update

    • Display of current dosing pulse ratio

See technical service manual for the qualified specialist, order no. TD4-CK000

7.2.2 Activate access point
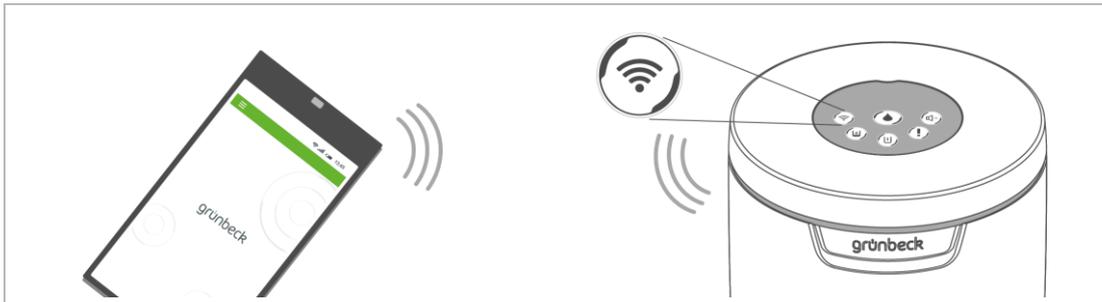
► Press the button .

» The access point is activated.

» Setting up the connection takes about 3 seconds.

» Once the connection has been established, the LED lights up white. (Connection limited to 2 hours.)

► Establish the connection to your Wi-Fi-enabled device.

7.3 Connection to Grünbeck Cloud

It is possible to retrieve informations on your dosing system exaliQ:KC6-e/SC6-e via a mobile device worldwide.

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► To do this, the Grünbeck myProduct-app must be installed on your mobile device.(see chapter7.3.1).

The connection between your dosing system exaliQ and the mobile device does not work directly, but via the Grünbeck Cloud. To do so the dosing system exaliQ must be connected with the softliQ water softener (starting from SD21) via the IQ-Comfort interface.

The connection between the Grünbeck myProduct-app and the control unit of the dosing system exaliQ is made in the following way:
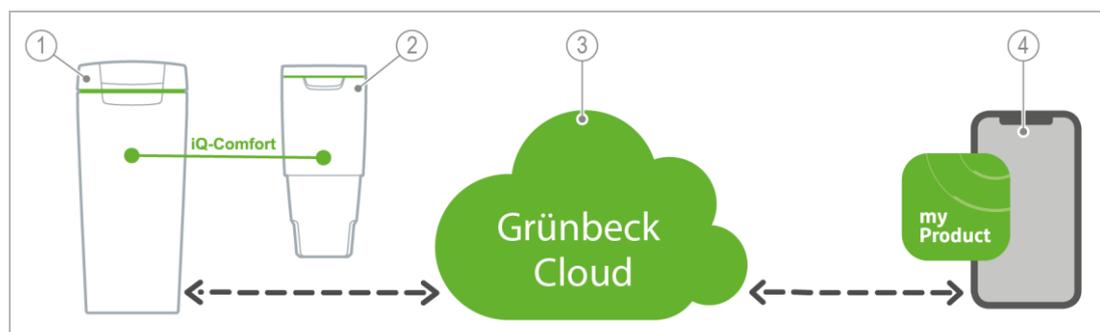
	Designation			Designation
1	Water softener softliQ (starting from SD21)		**3**	Grünbeck Cloud
2	Dosing system exaliQ:KC6-e/SC6-e		**4**	Mobile device

As soon as the dosing system exaliQ is connected to the softliQ water softener via iQ-Comfort interface, the systems can communicate. The softliQ water softener transmits the dosing data to the cloud.

For information on the connection of the softliQ water softener to the Grünbeck Cloud please refer to the operation manual of the softliQ.

7.3.1 Installing Grünbeck myProduct app

Via the Grünbeck myProduct app you have worldwide access to your Grünbeck product

► Download the Grünbeck myProduct-app and install it on your mobile device.

► Create your personal user account.

► Add your dosing system exaliQ to your user account with + in the Grünbeck myProduct app.

► Follow the instructions in the Grünbeck myProduct app.

Product registration

You can register your product conveniently using the Grünbeck myProduct app.

► Call up Registration and Product registration in the device overview of the
Grünbeck myProduct-app .

► Enter your personal data.

» Product registration extends your warranty by 1 year.

7.4   Reading out/saving dosing data

The control unit of the dosing system exaliQ continuously records the dosing data over a
period of one year.

If required, the following dosing data can be read out via USB interface and stored on a USB
stick.

● Dosing agent list (used dosing agent and container size to mark with a cross)

● Input field for serial number and device type (to fill in)

● Water volume that has flowed through (per calendar week)

● Correct operation and

● Empty signals
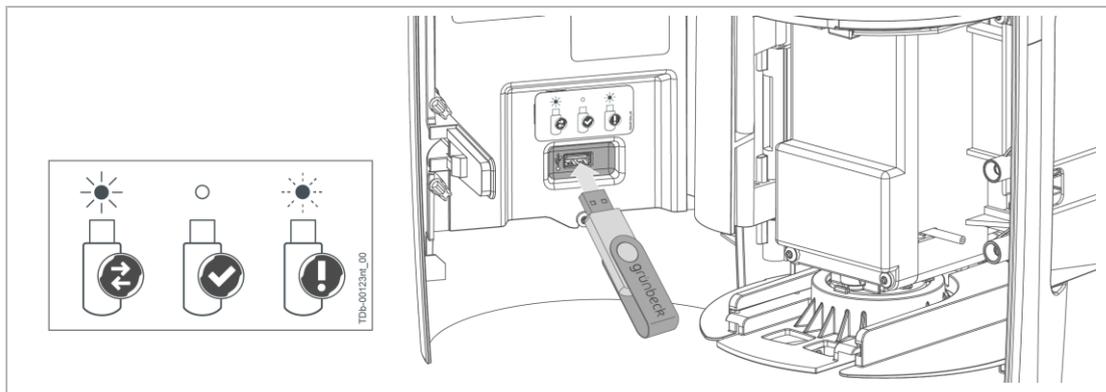
1. Open the door (see chapter 6.1.1).

2. Insert the USB stick.

» The stored data is read out and transferred to the USB stick.

» The LED shows the current status of the data transfer.

The LED is located behind the cover to the right of the USB port (not visible).

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LED display function

Data transfer	Incorrect data transfer	No transfer
Illuminated red	Flashing	Not illuminated
with little data shorter than one second	The data transfer has not been carried out/completed correctly	Data was transferred successfully or no data transfer takes place

The data stored on the USB stick can be printed out in tabular form.

The function of the USB interface is tested and guaranteed for the following USB sticks:

- SanDisk Cruzer® Ultra™ USB-Stick 64 GB
  (Schwarz SDCZ48-064G-U46 USB 3.0)

- Intenso Speed Line USB-Stick 32 GB
  (Schwarz 3533480 USB 3.0)

- Transcend JetFlash® 700 USB-Stick 16 GB
  (Schwarz TS16GJF700 USB 3.0)

- Verbatim Pin Stripe USB-Stick 16 GB
  (Schwarz 49063 USB 2.0)

7.4.2 Example of dosing data

This document is for information purposes to consumers on the processing materials used, in accordance with § 16 paragraph 4 of the German Drinking Water Ordinance (TrinkwV).

Furthermore, the document serves as proof of the weekly recording obligation of the processing materials according to § 11 paragraph 1 sentence 1 of the German Drinking Water Ordinance (TrinkwV).

Alternatively, you can print out the relevant information sheets at www.gruenbeck.de.

Dosing agent table exaliQ (exemplary)

Mineral solutions

► Enter the dosing agent and the container used – mark with a cross.

Dosing agent	Added mineral substances, mg/l	Bottle 3 l	15 l canister	60 l canister
☐ exaliQ control	Silicate (SiO_2) 13,0	☐	☐	☐
☐ exaliQ safe	Phosphate (P/ PO4) 1.5/4.5	☐	☐	☐
☒ exaliQ safe+	Phosphate (P/ PO4) 1.5/4.5	☐	☒	☐
☐ exaliQ pure	Phosphate (P/ PO4) 1.5/4.5	☐	☐	☐
☐ exaliQ neutra	Sodium (Na) 4.9	☐	☐	☐

Dosing history exaliQ dosing systems

► Enter the serial number and type of the dosing system.

Serial no.: 123456

Dosing system exaliQ:SC6

WK	Year	Water quantity in m³]	Proper operation	Empty signal
16	2019	49,171	No	No
15	2019	0,000	Yes	No
13	2019	0,017	Yes	Yes
11	2019	0,000	Yes	No
10	2019	0,000	Yes	No
9	2019	0,000	Yes	Yes
7	2019	0,000	Yes	No

7.5 Changing container

| *NOTE* | Do not fill empty containers with mineral solution. |

● Contamination of the dosing solution by transferring from one container to another is possible.

● Non-compliance with hygiene requirements when filling empty containers.

● Mixing of residual amounts of the mineral solution with fresh mineral solution.

► Replace an empty container with a factory-filled container.

| *NOTE* | Do not mix mineral solutions. |

● Malfunction of the dosing system possible.

► Before using the mineral solution, check whether it is the required mineral solution.

7.5.1 Requirement of replacing the container

The container must be changed when:

● Expired shelf life of the mineral solution.

● After the container is opened, it is recommended that the content should be used up within 6 months – and within 12 months at most.

● After a pre-alarm empty signal "Dosing agent level low" and complete consumption of the mineral solution with empty signal "Dosing agent level empty".

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An electronic level monitor switches the pump off when the container is empty. This provides dry-run protection for the pump.

Signals	Meaning
	● Pre-alarm empty signal "Dosing agent level low" lights up 　• Green illuminated LED ring is flashing 　• Acoustic signal sounds (from 08:00 am to 10:00 pm)
	● Empty signal "Dosing agent level empty" lights up 　• Green illuminated LED ring is flashing 　• Acoustic signal sounds (from 08:00 am to 10:00 pm)
	● Pre-alarm empty signal lights up and empty signal flashes 　• After the pre-empty signal, significantly less dosing agent was consumed than expected. ► Contact customer service.

General procedure for changing the container:

► Make sure that no water is removed while the container is being changed.

► Replace the empty container with a full container of the same mineral solution.

If no container with mineral solution is available:

► Order a new mineral solution from your dealer (see chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**).

7.5.2　Replace 3 l bottle

You may use a universal drum wrench (170 670e) for loosening the screwed cover (refer to chapter 3.6).
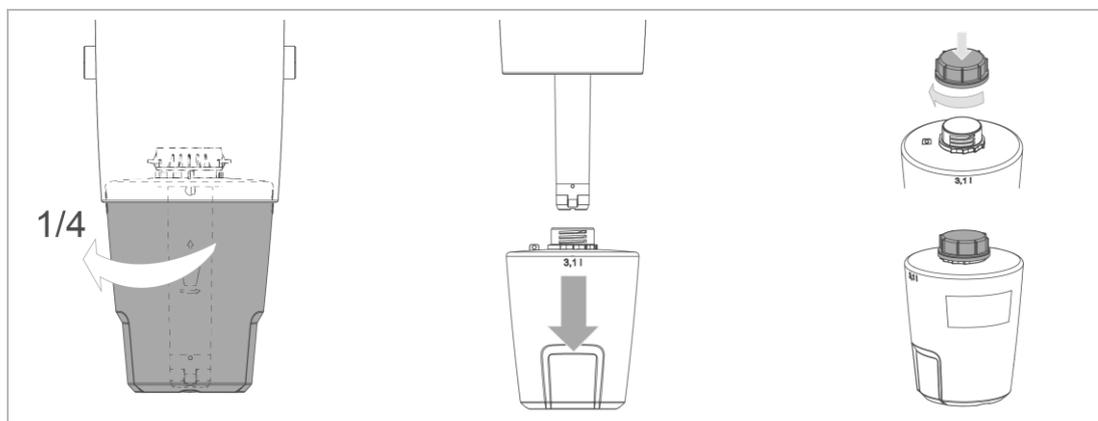
1. Turn the bottle by a ¼ turn clockwise.

2. Pull the bottle off downwards.

3. Close the empty bottle with the screw cap.

> ℹ An empty bottle can be disposed of in an environmentally friendly manner.

4. Insert a full bottle (see chapter 6.2.1).

» The dosing system is now ready for use.

7.5.3 Replace 15 l canister
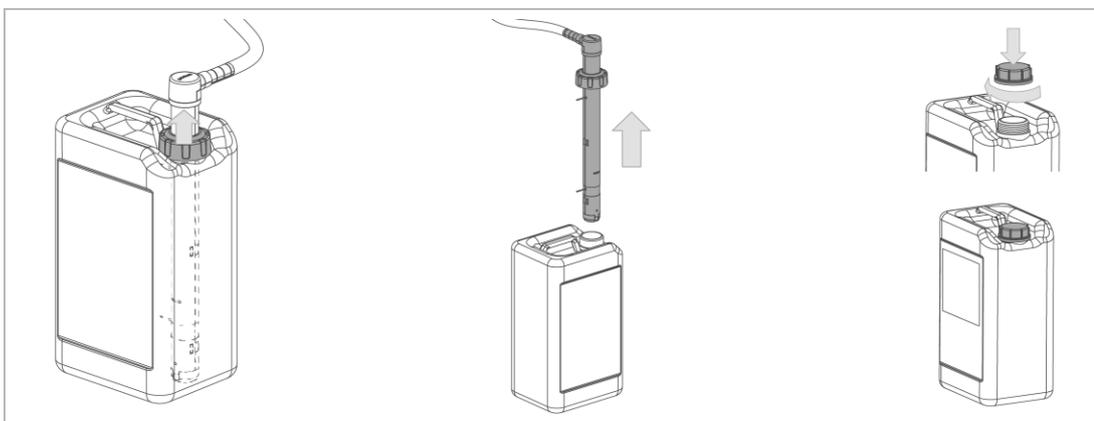
1. Release the sliding cover – pull upwards.

2. Pull the suction lance out upwards.

3. Pay attention to hygiene – do not touch the suction lance with your hands.

4. Close the empty container with the screw cap.

> ℹ An empty canister can be disposed of in an environmentally friendly manner.

5. Insert a full canister (see chapter 6.2.2).

» The dosing system is now ready for use.

8 Maintenance and repair

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

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

By concluding a maintenance contract you ensure that all maintenance work will be performed in due time.

► Only use genuine spare and wearing parts from Grünbeck.

8.1 Cleaning

Have cleaning work only done by persons that have been briefed on the risks and dangers the system might pose.

WARNING Cleaning of live components

- Risk of electric shock
- Sparking possible due to short circuit
- Switch off the voltage supply as well as any external voltage prior to starting the cleaning work.
► Do not use any high-pressure equipment for cleaning and do not blast electrical/electronic devices with water.

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

- Plastic components will be damaged.
- Surfaces will be damaged.
► Use a mild/pH-neutral soap solution.

► Use personal protective equipment.

► Only clean the outside of the product.

► Do not use any strong or abrasive cleaning agents.

► Wipe the surfaces with a damp cloth.

► Dry the surfaces with a cloth.

8.1.1 Cleaning with leaked/clogged mineral solution

⚠️ **WARNING** Skin and eye contact with sodium hydroxide solution 5% – exaliQ-neutra.

- ● Chemical burns to the eyes and irritation of the skin, respiratory tract possible.
- ► Use eye protection goggles, protective gloves and sturdy clothing.
- ► Observe the safety data sheets and strictly follow the instructions.

   ► Wipe up leaked mineral solution with suitable means - use binding agents if required.

► Clean the areas until they are completely dry.

8.2 Intervals

ℹ️ Faults can be detected in time by regular inspection and maintenance, and system failures can be avoided.

   ► (As owner/operating company) Determine which components have to be inspected and maintained at which intervals (load-dependent). These intervals are subject to the actual conditions: water condition, degree of impurities, environmental influences, consumption, etc.

The following interval table shows the minimum intervals for the activities to be performed.

Task	Interval	Activity
Inspection	2 months	Visual/functional check Looking for leakage
Maintenance	6 months	Visual/functional check Check mineral solution and assess consumption
	Annually	Half-yearly maintenance and in addition Check dosing volume Evaluate dosing data Wear check of safety-relevant components Replace dosing valve
Repair	5 years	Recommendation: Replace wearing parts Change battery (CR2032 3 V) of the circuit board

8.3 Inspection

You as owner/operating company may perform the regular inspections yourself. Initially, we recommend inspecting the product at shorter intervals and later on as required.

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► Conduct an inspection at least every 2 months.

1. Check whether the dosing system is in operating mode and does not report any faults.
2. Check the dosing line for leaks and possible leakage of the mineral solution.
3. Check there is sufficient mineral solution in the container.
4. Check whether the dosing system is dosing correctly

   » Illuminated LED ring is green, and the sound of the pump can be heard.

8.4 Maintenance

Some regular work is necessary in order to ensure the proper functioning of the product in the long term. For this purpose, DIN EN 806-5 recommends a semi-annual and an annual maintenance.

8.4.1 Semi-annual maintenance

In order to carry out the semi-annual maintenance, proceed as follows:

1. Check the dosing system and the connections for leaks.
2. Check there is sufficient mineral solution in the container.
3. Evaluate the consumption subject to the amount of drinking water consumed.
4. Check the shelf life of the mineral solution.
5. Check the function of the dosing system by removal of water at the water withdrawal point.

8.4.2 Annual maintenance

Carrying out annual maintenance work requires specialist knowledge. This maintenance work may only be performed by a technical service specialist .

The Grünbeck mySettings app, which is freely available in the App Store for iOS and Android, is required for maintenance.

In addition to the semi-annual maintenance, the following work needs to be done:

6. Change the dosing valve.
7. Perform a dosing volume test.
8. Evaluate the dosing data.
9. Carry out a wear test on safety-relevant components.

8.5   Consumables

Product	Order no.
Mineral solution in 3 l bottle (2x)	
exaliQ control	**114 031**
exaliQ safe	**114 032**
exaliQ safe+	**114 033**
exaliQ pure	**114 034**
exaliQ neutra *(only suitable for stand-alone dosing systems)*	**114 035**
Mineral solution in 15 l canister (1x)	
exaliQ control	**114 071**
exaliQ safe	**114 072**
exaliQ safe+	**114 073**
exaliQ pure	**114 074**
exaliQ neutra *(only suitable for stand-alone dosing systems)*	**114 075**
Mineral solution in 60 l canister (1x)	
exaliQ control	**114 081**
exaliQ safe	**114 082**
exaliQ safe+	**114 083**
exaliQ pure	**114 084**
exaliQ neutra *(only suitable for stand-alone dosing systems)*	**114 085**

8.6   Changing mineral solution

Have a change of the mineral solution carried out only by authorised experts.

If a change of the mineral substance is necessary due to a change in water quality or after rehabilitation, the dosing system must be flushed with drinking water that complies with the German Drinking Water Ordinance (TrinkwV).

NOTE   Change the mineral solution only after first flushing the dosing system.

- Mixing different mineral solutions can lead to the failure of the dosing system.
- Function failure/damage to the dosing system possible.
- ► Flush the dosing system according to the flushing instructions.

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8.6.1 Flushing instructions

1. Connect a container with drinking water that complies with the drinking water regulations.

2. Flush until the water consumption of approx. 1 day has flowed through.

» This corresponds to a consumption of flush solution of approx. 0.05 – 0.1 l (500 – 1000 l water consumption).

3. If necessary, flush the pump with suction lance by hand.

» The dosing system is flushed.

► Insert a container with a new mineral solution.

8.6.2 Replacing components

Replacing the pump, dosing line and dosing valve guarantees that no residues of the old mineral solution remain in the dosing system.

Replacement of the components is necessary in the following exceptional cases:

● Crystallisation/chemical reactions

● Pump unit defective/sucking air

► In exceptional cases, replace the dosing line with dosing valve and the pump unit.

8.7 Spare parts

For spare parts and consumables please contact your local Grünbeck representative. You can find these on the Internet at www.gruenbeck.de/Service/Ersatzteilkatalog.

8.8 Wearing parts

Wearing parts are only allowed to be carried out by a qualified specialist (see technical service manual TD4-CK000 of the exaliQ dosing system).

NOTE If the pump unit is worn out, underdosing may occur.

● Corresponding pipe protection is not guaranteed.

► Carry out the dosing volume check at least once a year.

Wearing parts are listed below:
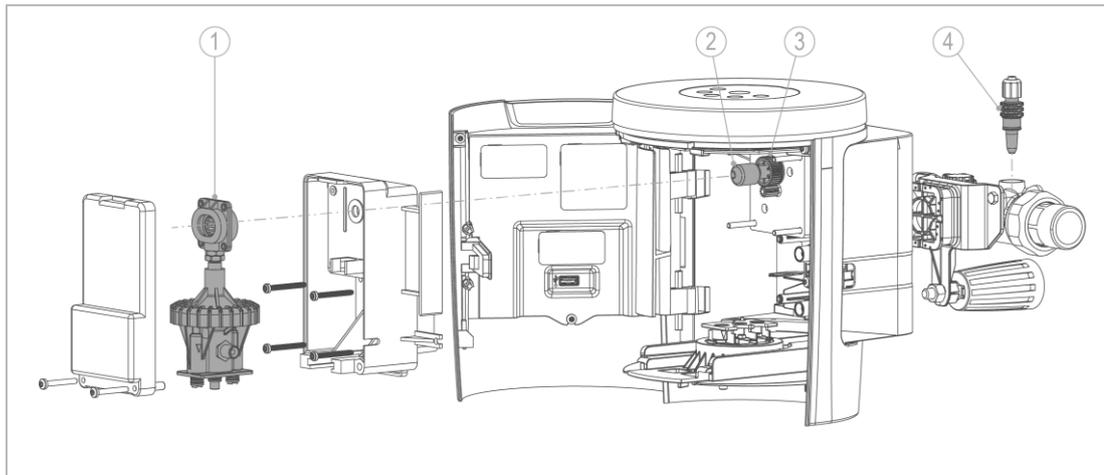
	Designation			Designation
1	Pump		**3**	Driven gear
2	Eccentric		**4**	Dosing valve

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9   Malfunction

9.1   Acknowledge fault

The dosing system exaliQ indicates faults in the operating panel.
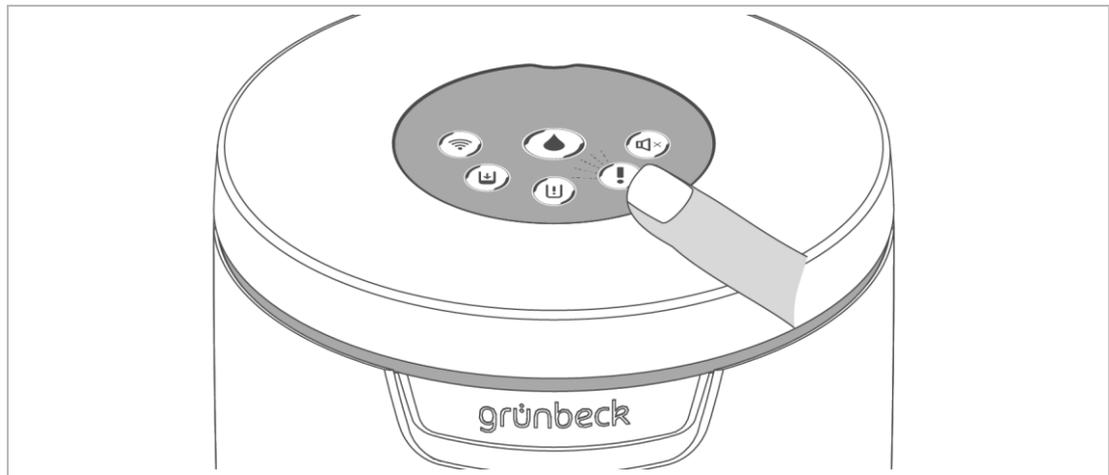
As soon as a fault appears: LED ⓘ lights up red, proceed as follows:

► Press ⓘ to acknowledge the fault .

» If the fault signal goes out, the dosing system can continue to be operated.

ⓘ ► Contact the customer service or installer if the fault LED does not go out after

pressing the button ⓘ.

► Keep your equipment data ready (see chapter 1.3).

9.2   Troubleshooting

The "Fault that cannot be acknowledged" is only allowed to be rectified by a qualified specialist .

CAUTION   Hot surfaces when working on internal parts, e.g. motor, circuit board.

● Surface temperatures can reach up to 75 °C – risk of burns.
► Allow the components to cool down before carrying out any work on interior components.

ℹ   The possible faults in the table (leakage, etc.) are not detected by the fault indication LED.

1. Disconnect the dosing system from the power supply.

2. Eliminate the fault using the fault table.

Malfunction	Explanation	Remedy
Leak on the hose connections	Hose expanded too far	► Loosen the hose at the relevant hose connection and cut off approx. 2 cm from the hose. ► Replace the hose and reattach the hose.
Dosing rate declines	Crystalline deposits and contamination of parts that come into contact with media.	► Flush the dosing system thoroughly. ► Change the valves or the complete pump. ► Change the dosing valve. ► Clean the hoses or replace them.
Dosing pump does not suck despite full stroke movement.	Suction head exceeded (max. 1.2 m).	► Reduce the suction head.
	Liquid has fallen below the required level (empty signal).	► Replace the container with a new one.
	Valve dry	► Lift up the suction line briefly. ► Flush the pump thoroughly by hand.
	Suction line is kinked or dirty.	► Clean the suction line or replace it.
⚠ lights up continuously after acknowledgement.	Electronics/pump damaged.	► Read out the fault/error type using the Grünbeck mySettings app. ► Replace the defective components.

3. Re-establish the power supply.

4. Check the function of the dosing system.

If the fault cannot be rectified, further measures can be taken by the technical service.

► Notify the technical service (for contact details refer to inside of the cover page)

10 Shut-down

ℹ️ It is not necessary to put your product out of operation. Should you do so nevertheless, please take the information given in the present chapter into consideration.

10.1 Temporary shut-down

Should you wish to temporarily shut down your water supply due to a longer period of absence, proceed as follows:

1. Close the shut-off valve downstream of the dosing system.
2. Leave the raw water shut-off valve open.
3. Keep the dosing system connected to power.

10.2 Restart

In order to put your product back into operation again, proceed as follows:

1. Open the shut-off valve downstream of the dosing system.
2. Open a water draw-off point for approx. 5 minutes.
  » The product is ready for operation.

10.3 Final shut-down

The final shutdown of the product represents an intervention into your drinking water system.

► Check whether shutting down the product has an impact on the functional integrity of your drinking water system.

► Have a specialist dismantle the product (refer to chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**).

11 Dismantling and disposal

11.1 Dismantling

The work described herein represents an intervention into your drinking water system.

► Have this work performed by qualified specialists only.

1. Close the raw water shut-off valve.

2. Open a water withdrawal point – wait a few seconds.

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

3. Close the water withdrawal point.

4. Disconnect the product from the power supply.

5. Remove the container, the dosing system and the water meter.

6. Close the gap in your drinking water pipe, e.g. by using a fitting piece (alternatively put a dummy plug in the water meter fitting).

11.2 Disposal

► Comply with the applicable national regulations.

Packaging

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.

Dosing solution and container

► Observe the safety data sheet of the mineral solution.

► Rinse the empty container with a large amount of water.

► Dispose of the rest of the dosing solution according to the instructions in the safety data sheet.

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Product

If this symbol (crossed-out wheelie bin) is on the product, it means that 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 batteries or accumulators are used in your product, dispose them separated from your product.

For additional information, please refer to www.gruenbeck.com.

12 Technical specifications

12.1 Dosing system exaliQ:KC6/KC6-e
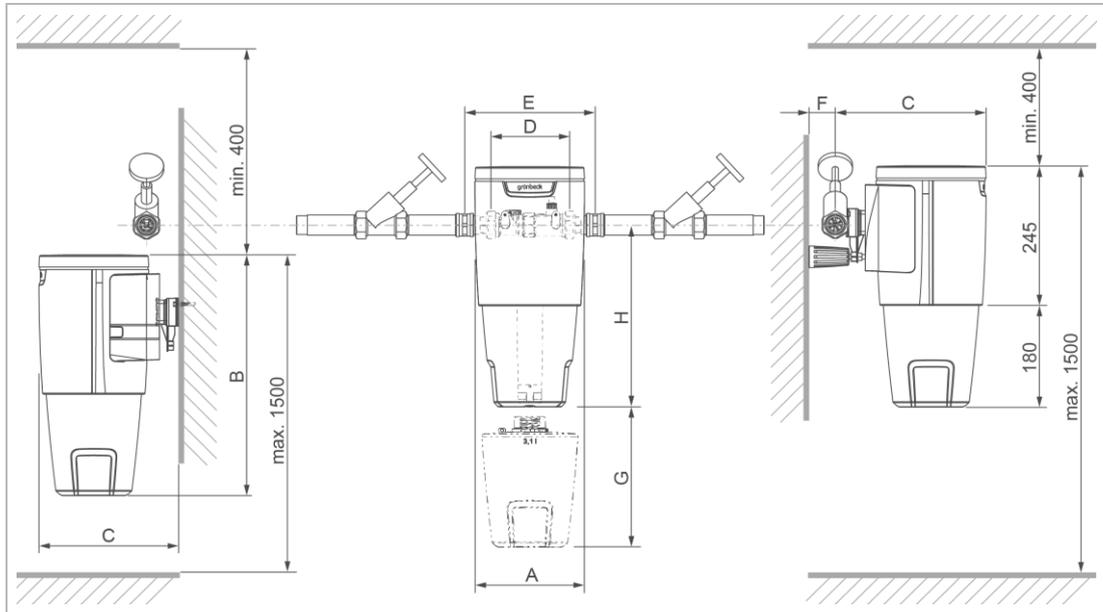
Dimensions and weights		exaliQ:KC6	exaliQ:KC6-e
A System width	mm	195	
B System height	mm	425	
C System depth (water meter mounting)	mm	265	—
C System depth (wall mounting)	mm	245	
D Installation length without screw connection	mm	140	Wall mounting
E Installation length with screw connection	mm	222	Wall mounting
F Distance from wall to centre of pipe	mm	≥ 55	—
G Required length for replacement approx.	mm	200	
H Overall height up to centre of connection approx.	mm	315	
Operating weight/shipping weight approx.	kg	8,9/5,7	7,8/4,6

Connection data		exaliQ:KC6	exaliQ:KC6-e
Nominal connection diameter		DN 25 (1")	
Type of contact/dosing signal		Hall impulse	iQ-Comfort
Protection/protection class		IP 43/▢	
Rated voltage range	V	100 – 240	
Rated frequency	Hz	50 – 60	
Power input (standby)	W	3	
Power input (operation = max)	W	14	
Plant operation (safety extra-low voltage)	V	24	

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Performance data		exaliQ:KC6	exaliQ:KC6-e
Operating range	m³/h	0,04 – 6*	see softliQ:SD/MD
Nominal pressure		PN 10	
Rated pressure	MPa/bar	1,0/10	
Pressure loss at max. flow	bar	0.4	see softliQ:SD/MD
Tank volume	l	3	
Dosing sequence	l/pulse	0.33	
Noise emission	dB(A)	≤ 70	

* For brief peak flows. In case of long-lasting flows as well as continuous flows we recommend the dosing system GENODOS-DME

Consumption data		exaliQ:KC6	exaliQ:KC6-e
exaliQ mineral substances (exaliQ must not be dosed with exaliQ:KC6-e)	ml/m³	100	

General data		exaliQ:KC6	exaliQ:KC6-e
Drinking water temperature	°C	≤ 25	
Water/ambient temperature	°C	5 – 30/5 – 40	
Humidity of air (non-condensing)	%	≤ 90	
DVGW registration number		NW-9101DL0115	
ÜA registration number *Amt der Wiener Landesregierung – Stadt Wien*		R-15.2.3-21-17496	
Order no.		**117 400**	**117 460**

12.2   Dosing system exaliQ:SC6/SC6-e
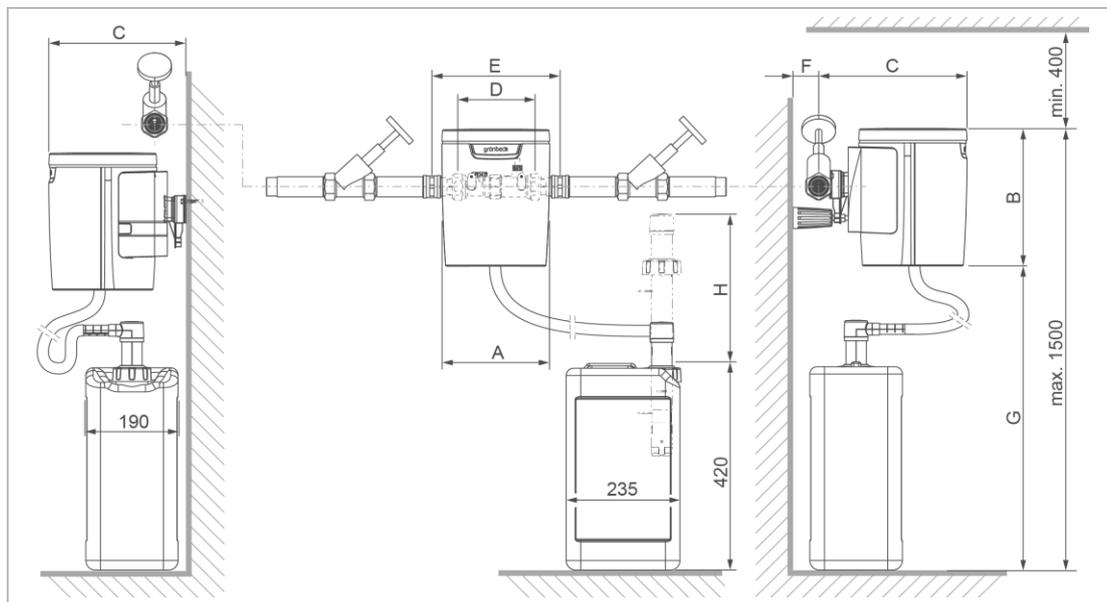
Dimensions and weights		exaliQ:SC6	exaliQ:SC6-e
A System width	mm	195	
B System height	mm	425	
C System depth (water meter mounting)	mm	265	—
C System depth (wall mounting)	mm	245	
D Installation length without screw connection	mm	140	Wall mounting
E Installation length with screw connection	mm	222	Wall mounting
F Distance from wall to centre of pipe	mm	≥ 55	—
G Suction height	mm	≤ 1200	
H Required height for replacement approx.	mm	410	
Operating weight/shipping weight approx.	kg	23,2/6.2	22,1/5.1

Connection data		exaliQ:SC6	exaliQ:SC6-e
Nominal connection diameter		DN 25 (1")	
Type of contact/dosing signal		Hall impulse	iQ-Comfort
Protection/protection class		IP 43/▣	
Rated voltage range	V	100 – 240	
Rated frequency	Hz	50 – 60	
Power input (standby)	W	3	
Power input (operation = max)	W	14	
Plant operation (safety extra-low voltage)	V	24	

Performance data		exaliQ:SC6	exaliQ:SC6-e
Operating range	m³/h	0,04 – 6*	see softliQ:SD/MD
Nominal pressure		PN 10	
Rated pressure	MPa/bar	1,0/10	
Pressure loss at max. flow	bar	0.4	see softliQ:SD/MD
Tank volume	l	15	
Dosing sequence	l/pulse	0.33	
Noise emission	dB(A)	≤ 70	

* For brief peak flows. In case of long-lasting flows as well as continuos flows we recommend the dosing system GENODOS-DME

Consumption data		exaliQ:SC6	exaliQ:SC6-e
exaliQ mineral substances (exaliQ neutra must not be dosed with exaliQ:SC6-e)	ml/m³	100	

General data		exaliQ:SC6	exaliQ:SC6-e
Drinking water temperature	°C	≤ 25	
Water/ambient temperature	°C	5 – 30/5 – 40	
Humidity of air (non-condensing)	%	≤ 90	
DVGW registration number		NW-9101DL0115	
ÜA registration number *Amt der Wiener Landesregierung – Stadt Wien*		R-15.2.3-21-17496	
Order no.		**117 405**	**117 465**

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12.3   Dosing system: exaliQ:SC10/SC20/SC30

Dosing system exaliQ:SC10
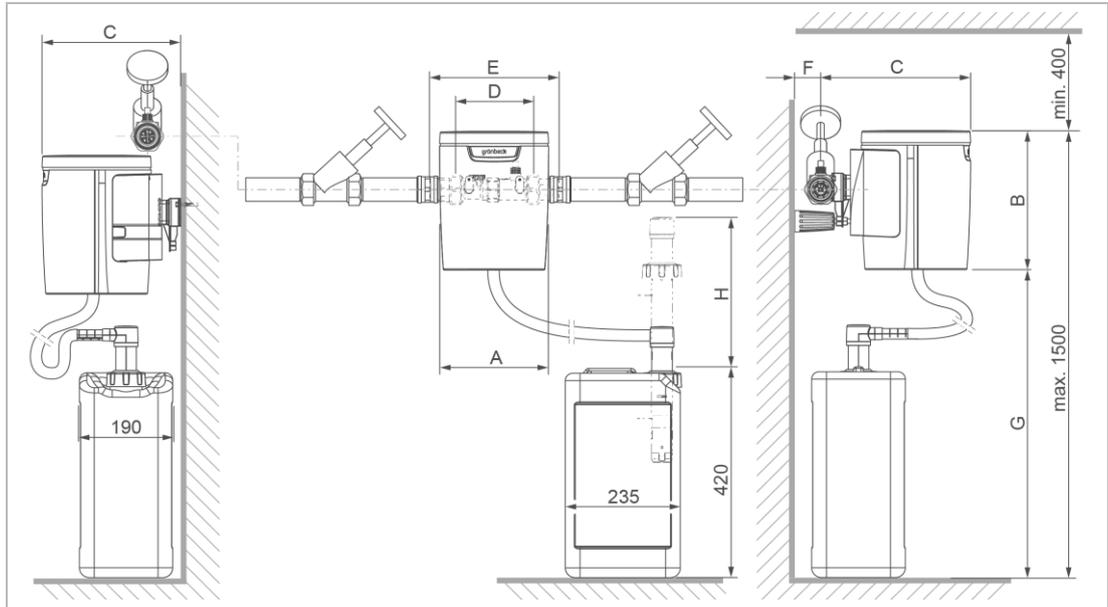
Dosing system exaliQ:SC20
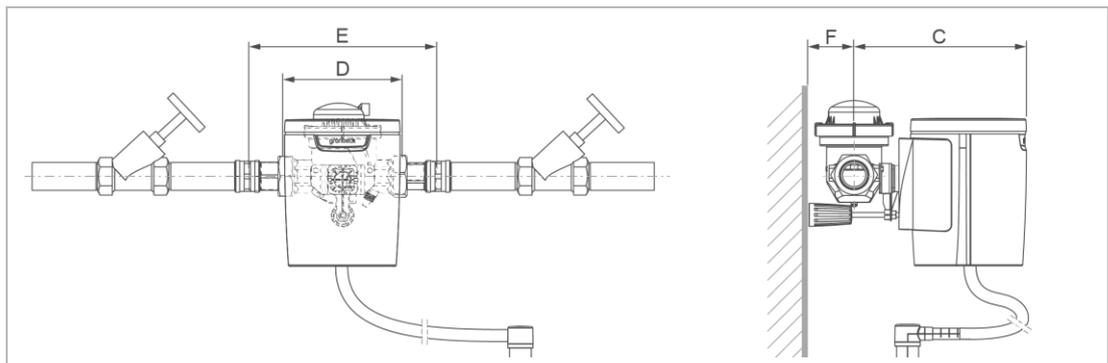
Dosing system exaliQ:SC30

Dimensions and weights		exaliQ: SC10	exaliQ: SC20	exaliQ: SC30
A System width	mm		195	
B System height	mm		425	
C System depth (water meter mounting)	mm	265	285	300
C System depth (wall mounting)	mm		245	
D Installation length without screw connection	mm	140	190	240
E Installation length with screw connection	mm	231	312	356
F Distance from wall to centre of pipe	mm	≥ 55	≥ 65	≥ 90
G Suction height	mm		≤ 1200	
H Required height for replacement approx.	mm		410	
Operating weight/shipping weight approx.	kg	23,4/6.4	23,4/6.4	23,4/6.4

Connection data		exaliQ: SC10	exaliQ: SC20	exaliQ: SC30
Nominal connection diameter		DN 32 (1¼")	DN 40 (1½")	DN 50 (2")
Type of contact/dosing signal			Hall impulse	
Protection/protection class			IP 43/回	
Rated voltage range	V		100 – 240	
Rated frequency	Hz		50 – 60	
Power input (standby)	W		3	
Power input (operation = max)	W		14	
Plant operation (safety extra-low voltage)	V		24	

| Performance data		exaliQ: SC10	exaliQ: SC20	exaliQ: SC30
Operating range	m³/h	0.04 – 10	0.06 – 20	0.06 – 30
Nominal pressure			PN 10	
Rated pressure	MPa/bar		1,0/10	
Pressure loss at max. flow	bar	0.55	0.8	0.8
Tank volume	l		15	
Dosing sequence	l/pulse	0.5	0.93	1.33
Noise emission	dB(A)		≤ 70	

* For brief peak flows. In case of long-lasting flows as well as continuos flows we recommend the dosing system GENODOS-DME

Consumption data		exaliQ: SC10	exaliQ: SC20	exaliQ: SC30
exaliQ mineral substances	ml/m³		100	

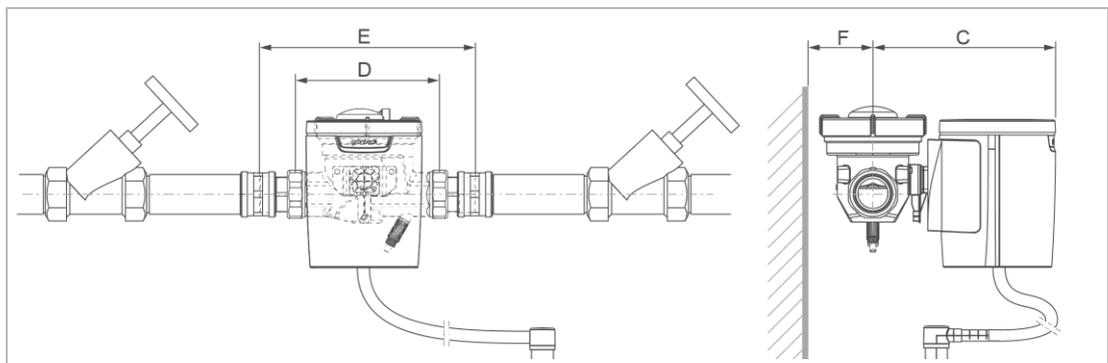| General data		exaliQ: SC10	exaliQ: SC20	exaliQ: SC30
Drinking water temperature	°C		≤ 25	
Water/ambient temperature	°C		5 – 30/5 – 40	
Humidity of air (non-condensing)	%		≤ 90	
DVGW registration number			NW-9101DL0115	
ÜA registration number			R-15.2.3-21-17496	
Amt der Wiener Landesregierung – Stadt Wien				
Order no.		**117 410**	**117 415**	**117 420**

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12.4   Open-source licenses

The information text for the open-source licenses used can be found at:

for exaliQ:KC: www.gruenbeck.de/de/produkte-branchen/produkte/spuelung-sanierung-dosiertechnik-desinfektion/dosiertechnik/dosieranlagen-exaliq/exaliqkc

for exaliQ:SC: www.gruenbeck.de/de/produkte-branchen/produkte/spuelung-sanierung-dosiertechnik-desinfektion/dosiertechnik/dosieranlagen-exaliq/exaliqsc/

or the document directly at:
www.gruenbeck.de/fileadmin/user_upload/produkte/dosierung-spuelung/exaliQ/190604_Hinweistext_Open-Source-Lizenzen_exaliQ.pdf

13   Operation log

► Document the initial start-up and all maintenance activities.

► Copy the maintenance report

Dosing system exaliQ: _____

Serial no.: _____

13.1   Start-up log

Customer				
Name:				
Address:				
Installation/Accessories				
Drinking water filter (make/type):				
Drain connection acc. to DIN EN 1717	☐ yes		☐ no	
Floor drain available	☐ yes		☐ no	
Safety device	☐ yes		☐ no	
Dosing active ingredient	exaliQ:			
Operating values				
Water pressure, flow pressure	bar		bar	
Residential water meter reading with/without garden pipe	m³			
Hardness unit	°dH	°f	mol/m³	°e	°ppm
Raw water hardness (measured)	☐	☐	☐	☐	☐
Remarks				
Start-up				
Company:				
Service technician:				
Work time certificate (no.):				
Date/signature:				

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Maintenance no.: ___

Operating values				
Dosing volume test carried out by Grünbeck mySettings app (result:		☐ yes		☐ no
Dosing history read-out/documented (USB interface)		☐ yes		☐ no
Mineral solution replacement container available		☐ yes		☐ no
Mineral solution shelf life		Date to:		
Water pressure, flow pressure			bar	bar
Residential water meter reading with/without garden pipe				m³

Read out error memory			
	Error	**Date**	**Time**
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Maintenance work	OK
Hose connections checked for leaks and damage	☐
Whole of dosing system checked for leaks and damage	☐
Power supply unit/power cables checked for damage and firm seating	☐
Water meter checked for pulse output	☐
Dosing valve checked for leaks and damage	☐
Wearing parts: Pump, eccentric, driven gear, dosing valve checked for wear (see technical service manual for exaliQ dosing system)	☐
	☐
	☐
	☐

Remarks

Performed by	
Company:	
Service technician:	
	Date Signature

Maintenance no.: ___

Operating values		
Dosing volume test carried out by Grünbeck mySettings app (result)	☐ yes	☐ no
Dosing history read-out/documented (USB interface)	☐ yes	☐ no
Mineral solution replacement container available	☐ yes	☐ no
Mineral solution shelf life	Date to:	
Water pressure, flow pressure	bar	bar
Residential water meter reading with/without garden pipe		m³

Read out error memory			
	Error	Date	Time
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Maintenance work	OK
Hose connections checked for leaks and damage	☐
Whole of dosing system checked for leaks and damage	☐
Power supply unit/power cables checked for damage and firm seating	☐
Water meter checked for pulse output	☐
Dosing valve checked for leaks and damage	☐
Wearing parts: Pump, eccentric, driven gear, dosing valve checked for wear (see technical service manual for exaliQ dosing system)	☐
	☐
	☐
	☐

Remarks

Performed by		
Company:		
Service technician:		
	Date	Signature

EC Declaration of Conformity

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

$C\,E$

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

If the system is modified in a way not approved by us, this certificate is void.

Dosing system | exaliQ:KC6(-e), SC6(-e), SC10/20/30

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/EC)

The following harmonised standards have been applied:

- EN 50491-5-1:2010
- EN 60335-1:2012 + AC:2014 + A11:2014
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- ETSI EN 300 328 V 2.1.1 (2016-11)

- EN 50491-5-3:2010
- EN 623112008:2012 (partly)
- EN 61000-6-2:2005 + AC:2005
- EN 61000-6-3:2007 + A1:2011

The following additional standards and regulations have been applied:

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

Responsible for documentation:

Manufacturer

Grünbeck Wasseraufbereitung GmbH
Josef-Grünbeck-Straße 1
89420 Hoechstaedt/Germany

Hoechstaedt/Germany, 20/02/2020

For more information go to
www.gruenbeck.com