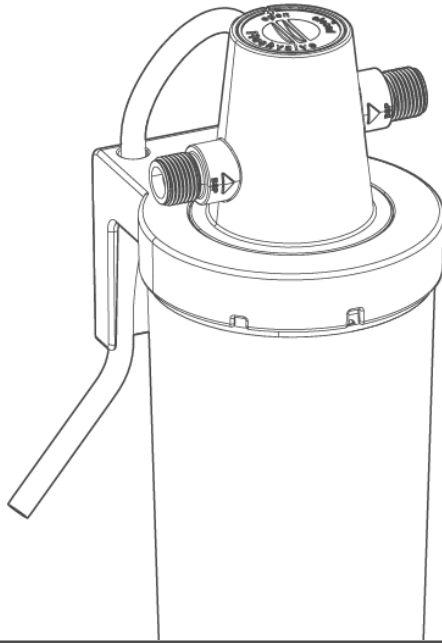


We understand water.




Hygiene filter | clearliQ safe+
Filter module | clearliQ safe

Operation manual


grünbeck

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Availability

Monday to Thursday
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Friday
7:00 am - 4:00 pm

We reserve the right to technical modifications.
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Original operation manual

Edition: February 2024

Order no.: 100130620000_en_035

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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.
- ▶ Obey all safety and handling instructions.
- ▶ Keep this manual and all other applicable documents, so that they are available when needed.

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

1.1 Validity of the manual

This manual applies to the products below:

- Hygiene filter clearliQ safe+
- Filter module clearliQ safe

1.2 Other applicable documents

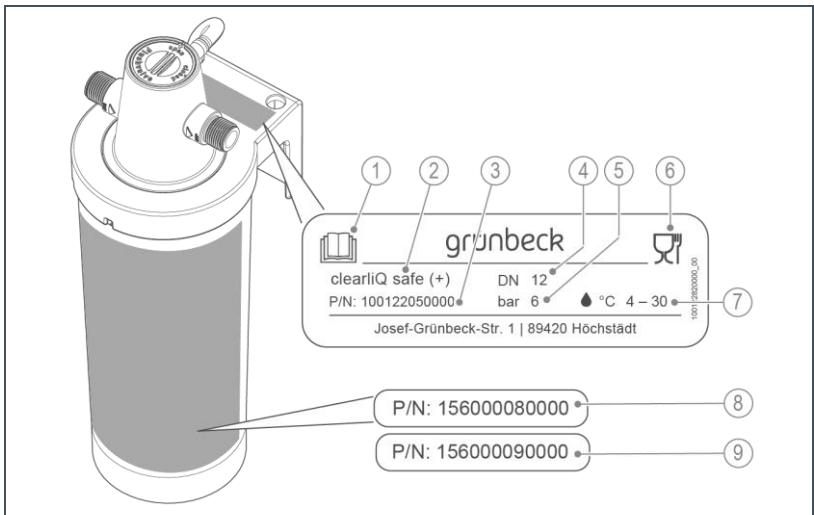
- Quick reference manual, order no. 100122990000

1.3 Product identification

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

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

The type plate is located on the mounting bracket at the filter head.











Designation

- Obey the operation manual
- Product designation
- Product no. of filter head
- Nominal connection diameter
- Max. operating pressure
- Food safe marking

Designation

- Water temperature
- Product no. of replacement cartridge for hygiene filter clearliQ safe+
- Product no. of replacement cartridge for filter module clearliQ safe

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

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

1.6 Demands on personnel

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

1.6.1 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 the required 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

Personnel	Requirements
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 describes 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/Commissioning		X	X	X
Operation and handling	X	X	X	X
Cleaning	X	X	X	X
Inspection	X	X	X	X
Maintenance		X	X	X
Troubleshooting		X	X	X
Repair		X	X	X
Decommissioning and restart/recommissioning		X	X	X
Dismantling and disposal		X	X	X

1.6.3 Personal protective equipment

You do not need any personal protective equipment.

2 Safety

2.1 Safety measures

- Only operate your product if all components are installed properly.
- Obey the local regulations on drinking water protection, accident prevention and occupational safety.
- Do not make any changes or alterations on your product.
- Only use genuine spare parts for maintenance or repair.
- Comply with the maintenance intervals (refer to chapter 8.2). Failure to comply can result in the microbiological contamination of your drinking water system.

2.1.1 Mechanical hazards

- Make sure that the product is set up in a way that it cannot tip over and that stability is guaranteed at all times.

2.1.2 Pressure-related hazards

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

2.1.3 Groups of persons requiring protection

- Children must not play with the product.
- 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.
- Cleaning and maintenance must not be carried out by children.

2.2 Product-specific safety instructions

- The filter cartridge must not be opened or damaged.



WARNING

Contaminated drinking water due to stagnation

- Infectious diseases due to bacterial growth in the drinking water
 - ▶ Flush the water filter after longer periods of standstill or after maintenance work.

2.3 Conduct in emergencies

2.3.1 In case of water leaks

1. Close the angle valve.
2. Locate the leak.
3. Eliminate the cause of the water leak.

3 Product description

3.1 Intended use

- The water filters clearliQ safe(+) are designed for the filtration of cold drinking water.
- The water filters are used directly on an angle valve at the withdrawal point (point-of-use) for e.g. drinking water dispensers.

Hygiene filter clearliQ safe+

- The hygiene filter clearliQ safe+ generates hygienic fresh water.

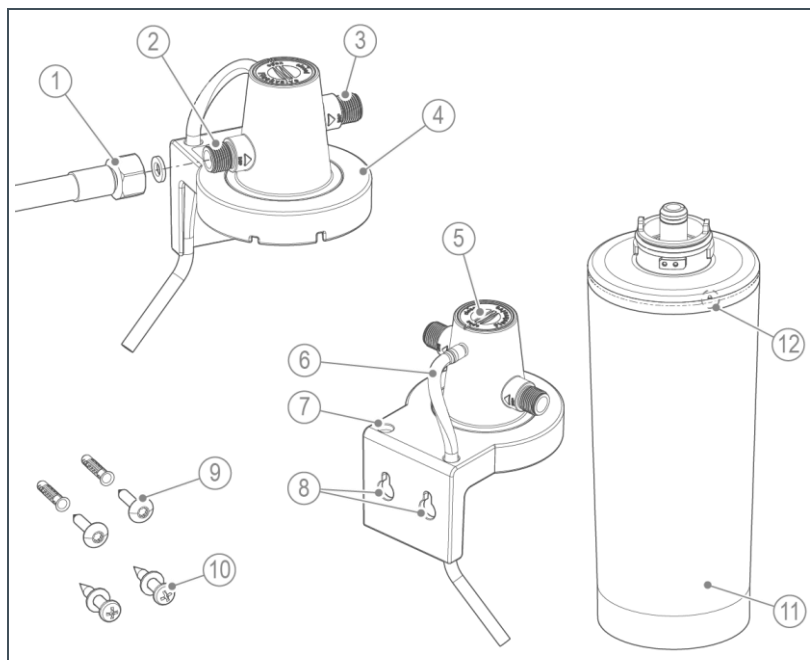
Filter module clearliQ safe

- The filter module clearliQ safe is a multi-layer filter and generates pure water.
- Under no circumstances may microbiologically contaminated water upstream or downstream of the filter module clearliQ safe be used as drinking water.

3.1.1 Foreseeable misuse

- The water filters clearliQ safe(+) are not suitable for generating drinking water from well water, waste water, river water or rain water.
- The water filters clearliQ safe(+) are not suitable for use in hot water.
- The water filters clearliQ safe(+) are not suitable for use in mobile applications in vehicles.

3.2 Product components



Designation

- | | |
|---|-----------------------------------|
| 1 | Connection hose (3/8") with seals |
| 2 | Water inlet (3/8") |
| 3 | Water outlet (3/8") |
| 4 | Filter head with mounting bracket |
| 5 | Flushing/pressure relief valve |
| 6 | Flushing hose |

Designation

- | | |
|----|-----------------------------|
| 7 | Hole for flushing hose |
| 8 | Fastening holes |
| 9 | Fastening material for wall |
| 10 | Fastening material for wood |
| 11 | Filter cartridge |
| 12 | End position marking |

3.3 Functional description

The water flows through the filter cartridge of the water filter and removes chlorine, discolourations, unpleasant odours, micro-organisms and residues of pharmaceuticals located in the water.

In addition for hygiene filter clearliQ safe+

Bacteria such as *Legionella pneumophila*, *Escherichia coli* and *Pseudomonas aeruginosa* are fixed on the hygiene element by means of electrostatic adsorption.

3.4 Accessories

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

Illustration	Product	Order no.
—	Individual adapters for other connections	Please inquire

4 Transport and storage

4.1 Transport

- ▶ Transport the product in its original packaging only.

4.2 Storage

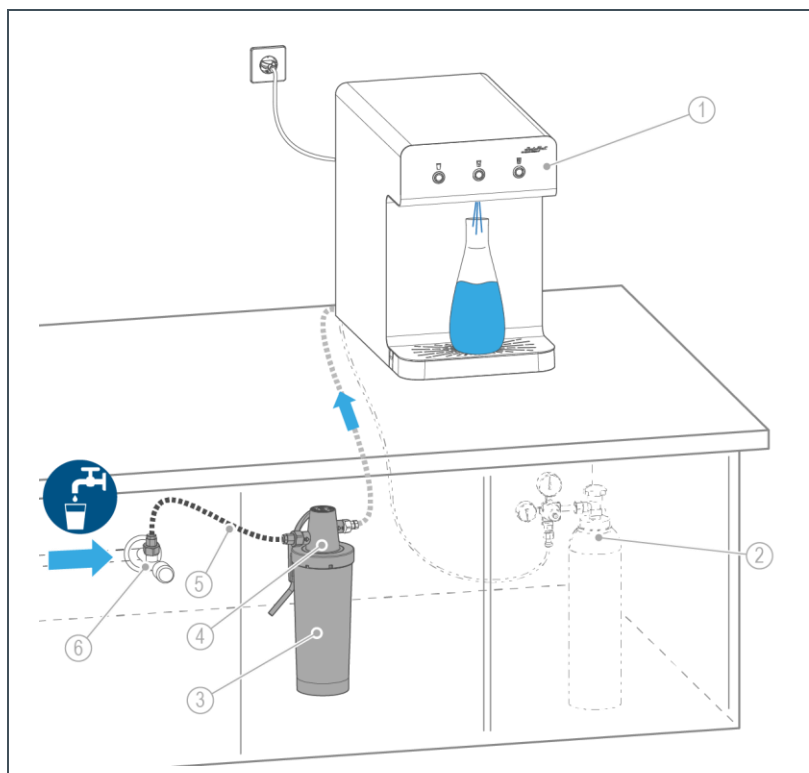
- ▶ Protect the product from the impacts below when storing it:
 - Dampness, moisture
 - Environmental impacts such as wind, rain, snow, etc.
 - Frost, direct sunlight, severe heat exposure
 - Chemicals, dyes, solvents and their vapours

5 Installation



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

Installation example



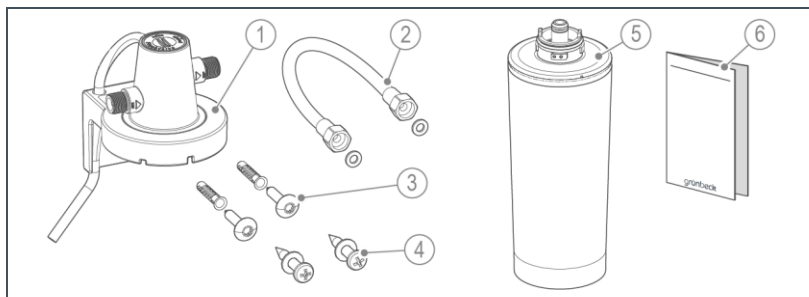
Designation	
1	Drinking water dispenser SODA JET Office
2	CO ₂ cylinder
3	Filter cartridge

Designation	
4	Filter head
5	Connection hose 3/8", DN 8, 0.8 m in length
6	Angle valve (cold water pipe)

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 site must be easily accessible for maintenance work (replacement of filter cartridge).
- The installation site should at least have the following dimensions: Width = 150, Height = 400, Depth = 200 mm
- The water filter must not be installed near a source of heat (e.g. boiler, heating).

5.2 Checking the scope of supply



Designation	Designation
1 Filter head with mounting bracket and flushing hose	4 2 Fastening screws with washer (for mounting on wood)
2 Connection hose with 2 seals	5 Filter cartridge
3 2 Fastening screws with dowel (for wall mounting)	6 Quick reference manual

- Check the scope of supply for completeness and damage.

5.3 Installing the product



The filter head features an integrated shut-off valve. No additional shut-off valves need to be installed in the inlet and outlet. The filter cartridge must always be installed.



Impurities can cause leaks.

- Pay attention to cleanliness and hygiene when installing the product.

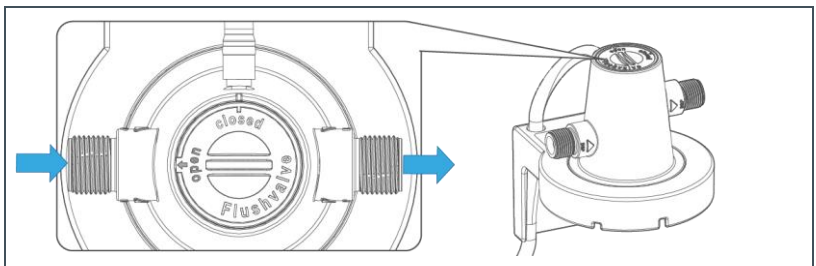
5.3.1 Fastening the water filter



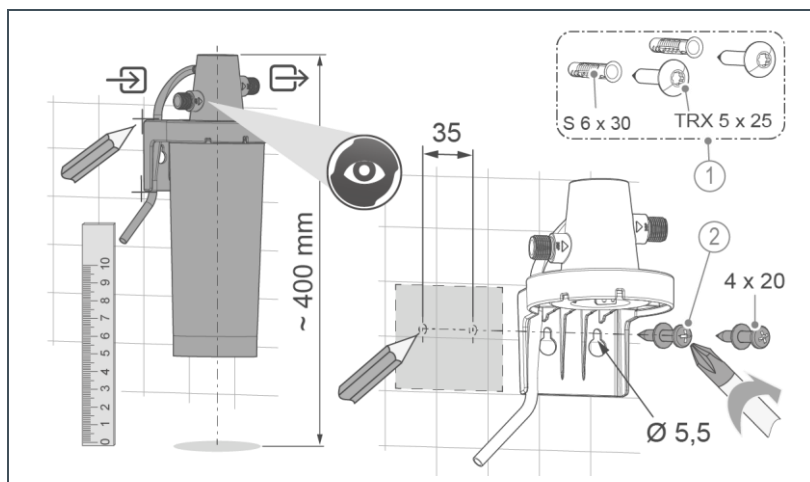
The type of fastening for the filter head must be determined according to the situation on site. The client is responsible for providing a solid fastening.

Requirement in case of little space

If the flushing/pressure relief valve (flush valve) will not be accessible after installation, the flush valve must be set as follows prior to installation:



5.3.1.1 Fastening the filter head



Designation

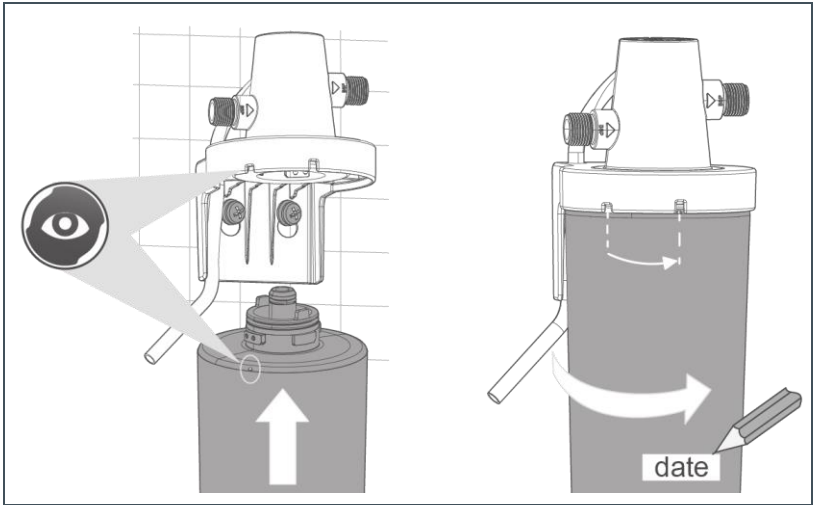
- 1 Fastening material for wall mounting.

Designation

- 2 Fastening material for mounting on wood.

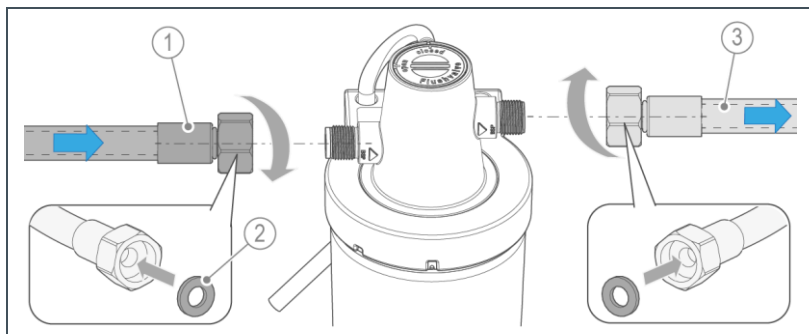
1. Determine the position of the filter head according to the installation conditions.
2. Comply with the flow direction – marking on the filter head.
3. Mark this position.
4. Select the suitable fastening material for fastening the filter head on the wall or on a wooden plate.
5. Fix the filter head.
 - » The filter head is solidly fixed and accessible for connection and maintenance work.

5.3.1.2 Inserting the filter cartridge



6. Plug in the filter cartridge – comply with the markings.
7. Screw in the filter cartridge clockwise as far as it will go.
 - » The marking can be seen on the front side.
8. Record the date on the filter cartridge

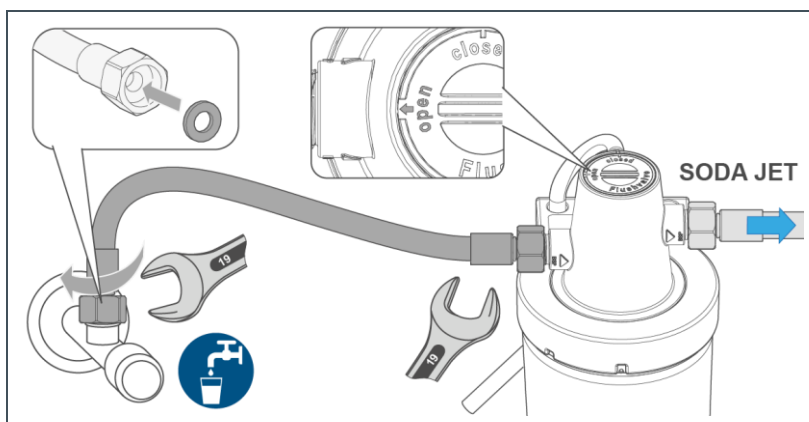
5.3.1.3 Connecting the water lines



Designation	Designation
1 Connection hose to the angle valve (water inlet)	3 Connection hose from the drinking water dispenser
2 Seal	

9. Screw the connection hose with inserted seal to the water inlet of the filter head.

10. Screw the connection hose of the drinking water dispenser to the water outlet of the filter head.



11. Screw the connection hose to the angle valve

» The connections must be tight.

6 Start-up/Commissioning



The owner/operating company of the drinking water dispenser may carry out the start-up of the water filter.

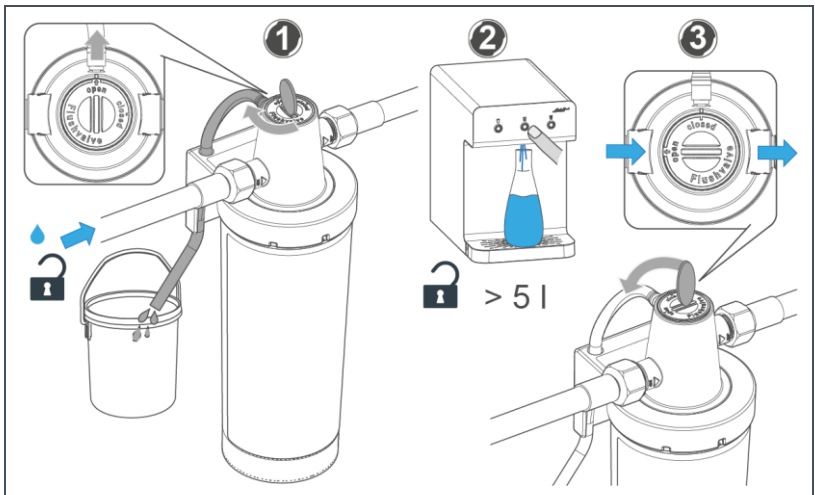
6.1 Starting up the product

6.1.1 Venting the system



When inserting and replacing the filter cartridge, a small amount of water may escape from the filter head once.

- Have a cloth handy and wipe up escaping water immediately.
- Open the angle valve for the drinking water supply.



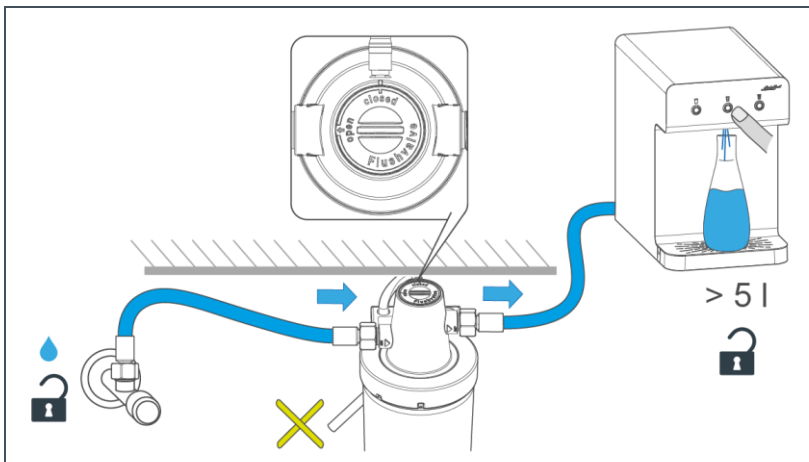
1. Open the flushing/pressure relief valve (flush valve) on the filter head – Position **open**.
 - a Route the flushing hose into a container.
2. Draw water from the drinking water dispenser.
 - a Let about 5 litres of water flow through.
 - b Check the connections and the filter cartridge for leaks.

» The filter cartridge has been flushed and the system vented.
3. Close the flushing/pressure relief valve – Position **closed**.

6.1.2 Alternative venting



In case of confined spaces where the flush valve is not accessible, the venting process can alternatively be carried out as follows:

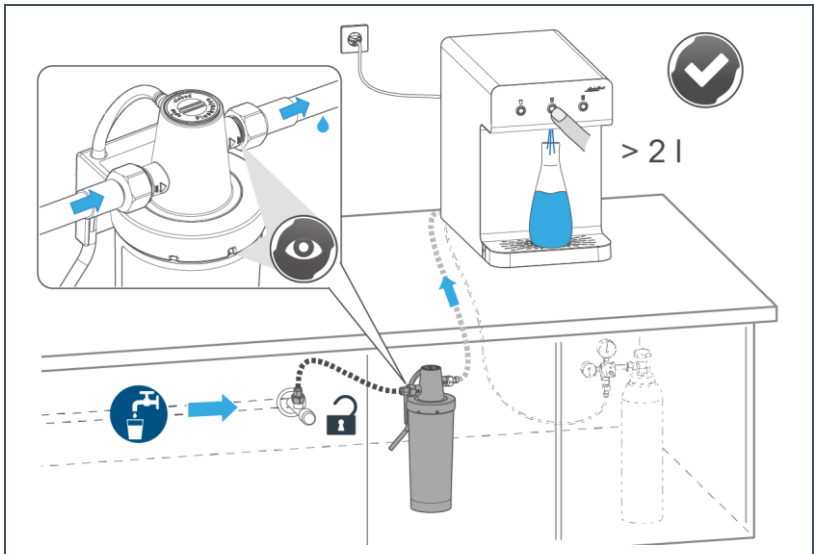


- » The flushing/pressure relief valve (flush valve) is in the **closed** position – the filter cartridge can be flushed.

1. Draw water from the drinking water dispenser.

- a** Let about 5 litres of water flow through.
- b** Check the connections and the filter cartridge for leaks.
 - » The filter cartridge and the filter head are flushed via the drinking water dispenser and the system is vented.

6.1.3 Flushing the system



- 1.** Flush the system with at least two litres of water.
 - » The water filter and the water pipes are flushed.
- 2.** Check the entire system for leaks.
- 3.** Record the initial start-up (refer to chapter 13).

6.2 Handing over the product to the owner/operating company

- ▶ Explain to the owner/operating company/end user how the product works.
- ▶ Use the manual to brief the owner/operating company/end user and answer any questions.
- ▶ Inform the owner/operating company/end user about the need for inspections and maintenance.
- ▶ Hand over all documents to the owner/operating company/end user for keeping.

6.2.1 Disposal of packaging

- ▶ Dispose of packaging material as soon as it is no longer needed (refer to chapter 11.2).

7 Operation/Handling

The water filter is operated automatically and does not require any manual operation.



Without the filter cartridge being installed, no water can flow through the filter head.

- ▶ Inspect the water filter for function and leaks at regular intervals (refer to chapter 8.3).
- ▶ Replace the filter cartridge at regular intervals (refer to chapter 8.4.1).

7.1 Temporary shutdown

NOTE

Longer downtime when not in use

- Risk of bacterial growth due to stagnation.
- ▶ Flush the water filter with the corresponding flushing volume.

Downtime	Flushing volume
≤ 7 days	> 2 litres
8 – 30 days	> 10 litres

- ▶ In case of longer downtimes, take the water filter out of operation

8 Maintenance and repair

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



WARNING

Contaminated drinking water if the work is not carried out properly.

- Infectious diseases due to bacterial growth
- ▶ Pay attention to hygiene when working on the product.

Regular maintenance ensures trouble-free and hygienic operation.

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

8.1 Cleaning

NOTE

Do not clean the system with cleaning agents containing alcohol/solvents.

- These substances damage the plastic components.
- ▶ Use a mild, pH-neutral soap solution.
- ▶ Only clean the outside of the product.
- ▶ Do not use any strong or abrasive cleaning agents.
- ▶ Wipe the housing with a damp cloth.

8.2 Intervals



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

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

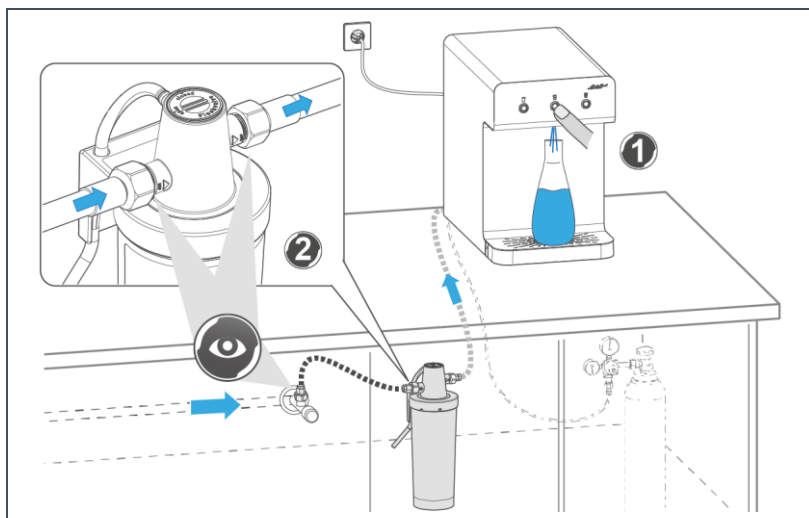
The interval table below shows the minimum intervals for the activities to be carried out.

Task	Interval	Activities
Inspection	2 months	<ul style="list-style-type: none"> • Visually check for leaks
Maintenance	6 month or according to consumption: 5000 l for clearliQ safe+ 2500 l for clearliQ safe <hr/> as needed – in case of impurities	<ul style="list-style-type: none"> • Check the condition of the entire system and check for leaks • Replace the filter cartridge (from the time of start-up of the filter cartridge)
Repair	5 years	<ul style="list-style-type: none"> • Recommendation: Replace seals

8.3 Inspection

You as operator/user can carry out the regular inspections yourself.

- Carry out an inspection at least every 2 months:



1. Draw water from the drinking water dispenser.
 2. Check the installation for leaks.
 3. Check that the water pressure is not reduced.
 - a In case the water pressure visibly drops, the filter cartridge may be exhausted.
 - b Replace the filter cartridge, if necessary.
- » The filter cartridge and the connections must not show any leaks.

8.4 Maintenance

Some regular work is necessary to ensure the proper functioning of the product in the long term.

► In addition to the inspection work, carry out the tasks below:

1. Check the connections of the water hoses for a tight fit.
2. Check the filter head for a tight fit.
3. Check all system components for damage.

8.4.1 Replacing the filter cartridge



Replace the filter cartridge after 6 months or 5000 litres (for clearliQ safe+) or 2500 litres (for clearliQ safe) of treated water from the time of start-up, whichever comes first.

Replacing the filter cartridge can take place at any time (as needed).

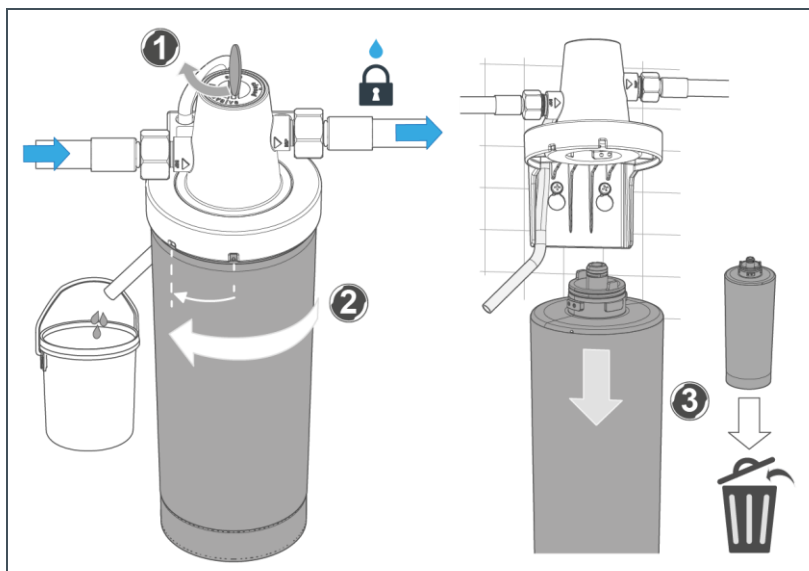
When replacing the filter cartridge, small amounts of water may escape from the filter head.

► Have a cloth handy and wipe up escaping water immediately.

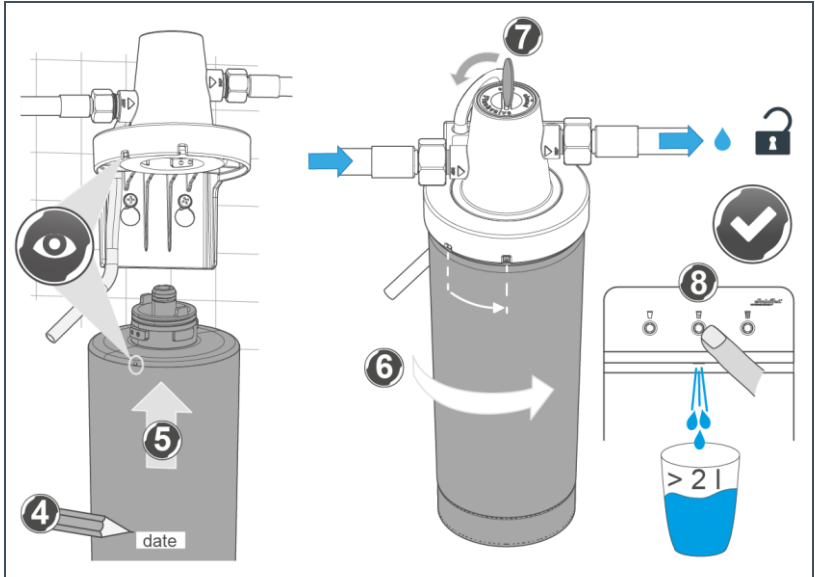


In case of confined spaces where the flush valve is not accessible, you can replace the filter cartridge without venting the filter head (refer to chapter 6.1.2).

- Make sure that no water is drawn at the drinking water dispenser.



1. Release water pressure – set the flush valve to **open** and, using the flushing hose, catch the water (max. 100 ml) in a container.
2. Turn the filter cartridge anti-clockwise and pull it out downwards.
3. The exhausted filter cartridge can be disposed of with the household waste.
4. Take the new filter cartridge.
 - a Record the date on the filter cartridge.



5. Plug the new filter cartridge into the filter head – comply with the markings.
6. Screw in the filter cartridge clockwise as far as it will go.
 - » The filter cartridge has snapped into place.
7. Vent the filter cartridge (refer to chapter 6.1.1).
8. Flush the system with at least two litres of water.
9. Check the entire system for leaks.
 - » The water filter is ready for use again.

8.5 Consumables

Product	Quantity	Order no.
Replacement cartridge for hygiene filter clearliQ safe+	1 piece	156000080000
Replacement cartridge for filter module clearliQ safe	1 piece	156000090000

8.6 Spare parts

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

8.7 Wearing parts



Wearing parts must be replaced by qualified specialists only.

Wearing parts are listed below:

- Seals

9 Troubleshooting



WARNING

Contaminated drinking water due to stagnation

- Infectious diseases due to bacterial growth
- ▶ Have malfunctions eliminated immediately.

Observation	Explanation	Remedy
Water pressure at the withdrawal point too low (pressure loss too high)	The filter cartridge is dirty	▶ Replace filter cartridge
Taste of treated water negatively affected	Inappropriately long period of non-use (downtime)	▶ Draw water for several minutes ▶ Replace filter cartridge ▶ Clean and disinfect the pipe system
Solids contained in the filtered water	Inappropriately high flow through the filter cartridge	▶ Check filter cartridge for damage or leaks
	Filter cartridge damaged or not installed correctly	▶ Replace filter cartridge
Water loss in the system	Defective connections	▶ Check O-rings and seals for deformations or wear and tear ▶ Check filter cartridge for damage ▶ Replace filter cartridge

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

- ▶ Contact technical service.



10 Decommissioning

It is not necessary to put your product out of operation.

► Proceed as follows if you nevertheless want to temporarily shut down the water filter:

1. Close the water supply.
2. Remove the filter cartridge.

Restart/recommissioning

1. Insert a new filter cartridge
2. Put the system into operation (refer to chapter 6.1).

10.1 Shutdown



In case of longer periods of absence, e.g. holidays, precautionary hygiene measures according to VDI 3810-2 and VDI 6023-2 must be taken in order to maintain the drinking water hygiene after downtimes.

After a downtime of ≤ 4 weeks

- Draw water from the drinking water dispenser and flush the water filter (refer to chapter 7.1).

After a downtime of ≤ 4 weeks

- Insert a new filter cartridge
- Draw water from the drinking water dispenser and flush the water filter.

11 Dismantling and disposal

11.1 Dismantling

1. Drain the entire system.
2. Remove the filter cartridge.
3. Loosen the connections and remove the water lines.
4. Loosen the screw connections of the filter head.
5. Remove the filter head.

11.2 Disposal

- ▶ Obey the applicable national regulations.

Packaging

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

Filter cartridge

- ▶ Dispose of the used filter cartridge with your household waste.

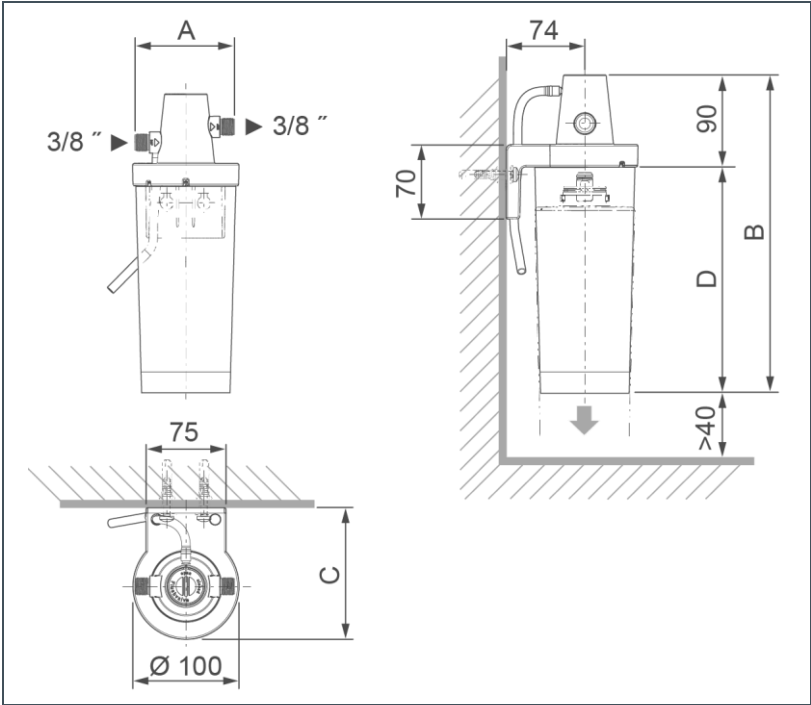
Product

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



For information on collection points for your product, contact your municipality, the public waste disposal authority or your waste collection service.

12 Technical specifications



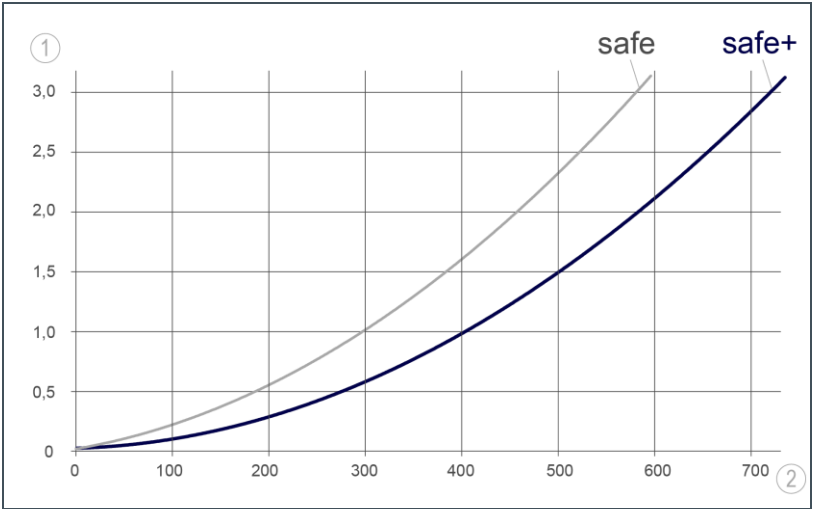
Dimensions and weights			clearliQ safe+	clearliQ safe
A	Width	mm	95	
B	Height	mm	300	365
C	Depth	mm	125	
D	Height of filter cartridge	mm	213	275
Operating weight (incl. water)		kg	~ 1.8	~ 2.6
Shipping weight		kg	~ 0.8	~ 1.3
Connection data			clearliQ safe+	clearliQ safe
Connection thread			3/8"	
Nominal connection diameter			DN 10	

Performance data		clearliQ safe+	clearliQ safe
Nominal flow	l/h	400	300
Operating pressure	bar	≤ 6.0	
Pressure loss	bar	Refer to pressure loss curves	
Replacement interval of filter cartridge (recommended)			
after max.	months	6	6
up to	l	5000	2500

General data		clearliQ safe+	clearliQ safe
Water temperature	°C	4 – 30	
Ambient temperature	°C	4 – 40	

Order no. (complete kit)	156000060000	156000070000
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Pressure loss curves of
 filter module clearliQ safe and hygiene filter clearliQ safe



Designation	Designation
1 Differential pressure in bar	2 Flow in l/h

13 Operation log



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

- ☐ Hygiene filter | clearliQ safe+
- ☐ Filter module | clearliQ safe

Serial no.: _____

13.1 Start-up/Commissioning log

Customer	
Name	
Address	
Installation/Accessories	
Installation site of the water filter	
Material of water supply line	
Operating values	
Water pressure at the water inlet	bar
Water meter reading	m ³
Remarks	
Start-up/Commissioning	
Installer/Owner/Operating company:	
Company	
Work time certificate (no.)	
Date/signature	

13.2 Maintenance

[illegible]

Grünbeck Wasseraufbereitung GmbH
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