



**109881**

**ENGLISH**

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**Read this instruction manual before using and keep them available at all times!**

## 1. General instructions

- This instruction manual contains information about the installation, operation and maintenance of the device and should be consulted as an important source of information and reference guide.
- Awareness of the safety instructions and instructions for use in this manual will ensure the safe and correct use of the device.
- In addition to the information given here, you should comply with any local Health and safety Controls and generally applicable safety regulations.
- The instruction manual forms part of the product and should be kept near the device and easily accessible for anyone carrying out the installation, servicing, maintenance or cleaning. Please keep these instructions and give them to future owners of the device.
- All persons using the device must follow the recommendations and instructions in this instruction manual.
- Manufacturer **is not liable for** any damages or faults caused by:
  - violation of advice concerning operation and cleaning;
  - use other than designed;
  - alterations made by user;
  - use of inadequate spare parts.
- Do not use any accessory or spare parts that have not been recommended by the manufacturer. These can be dangerous for the user or lead to damages of the device or personal injury, and further, the warranty expires.
- To prevent hazards and to ensure optimum efficiency, no modifications or alterations to the device that are not explicitly approved by the manufacturer may be undertaken.
- Temperature at the site of installation cannot be lower than 10 °C.
- Protect the device against freezing temperature.
- The device's installation site must be protected against flooding with water (e.g. through the existing floor drain). The manufacturer is not responsible for any damages resulting from flooding the system with water.
- In case of any inquiries or ordering of spare parts please quote the code number and serial number of the device. This ensures quick and effective processing of inquiries and orders.

## 2. Safety instructions, standards, legal and regulatory provisions

- Water fed into the water filter system must be of drinking water quality.
- The water filter system is designed for cold water in the range from 5 °C to 30 °C.
- Components of the water filter system that come into contact with the filtered water must be made of the appropriate water-resistant materials.
- Make sure that there is a drainage at the site of installation of the water filter system.
- For certain groups of people (e.g. people with a weakened immune system, children) it is recommended, in general, to boil the water from the water supply network. This rule also applies to the filtered water.
- In case of longer interruptions in the operation of the system, it is recommended to rinse the water filter system with the water volumes specified below:

<b>2 – 3 days</b>	<b>4 litres</b>
<b>4 – 10 days</b>	<b>15 litres</b>
<b>14 days</b>	<b>Replace the filter</b>

- Do not disassemble the water filter system during its use.
- Do not open the water filter system, because this will void the warranty.

## 3. Intended use

Safety of the device's operation is guaranteed only when using it according to its intended purpose, in compliance with the data included in the operating instructions.

The **water filter system for coffee machines** is designed for reducing the carbonate hardness which causes formation of carbon deposits inside the connected end-user equipment.

The system is intended for use in the gastronomy in order to obtain the drinking water of high quality for coffeemakers, coffee machines and combi steamers.



### **CAUTION!**

**Any use going beyond the intended purpose and/or any different use of the device is forbidden and is not considered as conventional.**

**Any claims against the manufacturer or his authorized representative as a consequence of experiencing damages resulting from unconventional use are impossible.**

**The operator is liable for all damages resulting from inappropriate use.**

## 4. Transport, packaging and storage

### 4.1 Delivery check

Please check the delivery upon completeness and transport damage immediately after receipt. In case of visible damage do not accept or accept the delivery with reservation only.

Note the extent of damage on the carrier's bill of delivery. Trigger off the complaint.

Hidden damages should be reclaimed immediately after notice, as claims for damages can only be asserted within the effective period for complaints.

### 4.2 Packaging

Please do not throw away the covering carton of your device as it might be useful for storage purposes, when moving or, in case of damages, when the device must be sent back to a repair center. The outer and inner packing material should be removed completely from the device before installation.



**NOTE!**

**Drain water from the system before shipment to avoid damaging the packaging caused by water leakage.**



**NOTE!**

**If you liked to dispose the packing, consider the regulations applicable in your country. Supply re-usable packing materials to the recycling.**

Please inspect the device upon completeness. In case any part is missing please contact our customer service center immediately.

### 4.3 Storage

Keep the package closed until installation and under consideration of the outside indicated positioning- and storage markings.

Packages should be stored under consideration of the following:

- Do not store outdoors.
- Keep it dry and dust-free.
- Do not expose it to aggressive media.
- Do not expose it to direct sunlight.
- Avoid mechanical shocks and vibration.

- In case of longer storage (> 3 months) make sure you check the state of the packaging and the parts regularly. If required refresh or renew.



### **CAUTION!**

**Before the first use of the product in the recommended ambient temperature, after being stored or transported in the temperature below 0°C, leave the device for at least 24 hours in an open original packaging.**

## **5. Technical data**

<b>Name:</b>	<b>Water filter system for coffee machines</b>
Code-No.:	<b>109881</b>
Material:	Plastic
Capacity:	For 10°CH (carbonate hardness): 1600 litres
Max system pressure:	1.5- 6 bar
Water temperature:	5 °C – 30 °C
Connection thread:	1/2"
Dimensions:	W 200 x D 140 x H 320 mm
Weight:	2.2 kg

Subject to technical modifications!

## **6. Operation of the device**

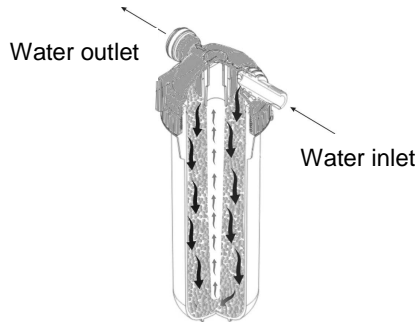
The water filter system was designed to reduce the carbonate hardness (CH) in the drinking water which produces scale deposits that may damage the device or deteriorate the quality of beverages.

Water purification process consists of the following stages:

- reduction of the carbonate hardness (CH)
- mechanical filtration
- mineralisation

The water filter system does not require a bypass mixing valve.

Special resin in the water filter system ensures preparation of the water and eliminates compounds producing scale deposits, while the filtered water is enriched with minerals. The drinking water with 5 - 7°C is ideal for preparation of coffee and tea, while ensuring great taste and aroma of beverages.



## 7. Installation

### 7.1 Information for the installer

- Unpack the device and remove the packaging material. **Never** remove the type plate and warning signs.
- Before the installation of the water filter system, the device working with the system should be descaled.
- Do not install the device near the sources of heat and open flame. Do not expose the device to the direct sunlight.
- Protect the water filter system against mechanical damages.
- Install the shut-off valve upstream of the water filter system. Install the drain valve on the drain hose, downstream of the water filter system.
- If the water pressure in the water supply installation exceeds 6 bar, install the pressure regulator upstream of the water filter system.
- Components of the water filter system, which come into contact with the filtered water must be made of the appropriate water-resistant material.
- All components must be installed according to the local guidelines regarding installations for drinking water.
- Installation and maintenance of the water filter system may be performed only by the qualified and authorised personnel.

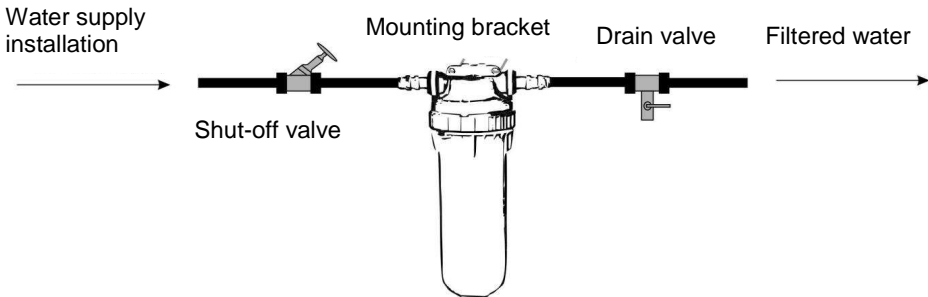
## 7.2 Installation of the water filter system



### CAUTION!

Before installation check the technical data and during the installation observe the safety and installation instructions included in these operating instructions.

### Installation drawing



1. **The shut-off valve** must be installed between the water supply installation and the water filter system. **The drain valve** must be mounted downstream of the water filter system on the drain hose to enable reduction of the pressure.
2. If the water pressure exceeds 6 bar, install the pressure regulator upstream of the water filter system.
3. The water filter system is equipped with the mounting bracket for wall mounting. It can be mounted horizontally or vertically.  
Install the mounting bracket in the desired place.  
The mounting bracket is a fixed component of the device and the water filter system is always replaced along with the mounting bracket.
4. Install the water filter system in compliance with the local standards for drinking water installation.
5. Perform the test in order to determine the carbonate hardness of water from the local water supply network.
6. Based on the results of the carbonate hardness test, the relevant volume of water may be determined (table page 22).
7. In order to precisely determine the quantity of water, it is recommended to install a water meter (e.g. **Water Meter Bartscher 109861**) upstream of the filter.



## Installation of the water filter system

1. Close the shut-off valve on the water supply line and disconnect the terminal unit from the power supply.
2. Install the water filter system using the wall mounting bracket in the desired place. During the installation observe the mounting dimensions and hose bending radius.  
**CAUTION!** Only hoses with flat gaskets may be used at the connection joints, because hoses with cone seat unions would damage the filter head connections, which will void the warranty.
3. Close the shut-off valve on the water supply hose (**IN**), in order to cut off the water supply. Connect the hose for flushing the water filter system to the water outlet (**OUT**).
  - a. The water from the hose connected to the water outlet (**OUT**) should be drained to the appropriate container (e.g. bucket).
  - b. Open the shut-off valve on the water supply line and flush the water filter system until the water starts flowing evenly without air bubbles.
  - c. Close the water supply with the shut-off valve.
4. Connect the hose which will connect the water outlet (**OUT**) with the terminal unit.
5. Open the water supply and connect the terminal unit to the power supply.
6. Check the system for leakages.

## Replacement of the water filter system

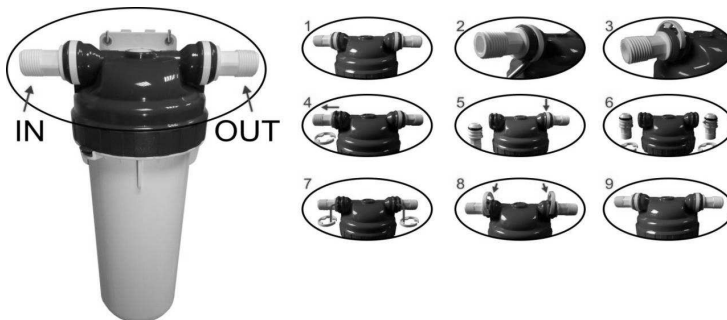
1. The water filter system needs to be replaced after reaching a specified volume (depending on the carbonate hardness) during the period defined by the manufacturer, but not later than within 6 months after its launch (whatever comes first).  
During the replacement of the water filter system, write down the date of the next expected replacement (a date in the date field on the filter).  
**CAUTION!** During the replacement of the filter inspect all the parts of the device! Replace damaged parts and clean the contaminated ones. Do not use abrasive agents, cleaning solutions or coarse cleaning materials.
2. Before the first use of the product in the recommended ambient temperature, after being stored or transported in the temperature below 0°C, leave the device for at least 24 hours in an open original packaging.
3. Close the water inlet and disconnect the power supply from the terminal unit.
4. Before the filter's replacement, open the drain valve in order to reduce the pressure in the system.

5. The filter may be changed by disconnecting the hoses on the water inlet (**IN**) and outlet (**OUT**) or quick-fit connectors.

**a) Replacement by disconnecting the hoses on the water inlet (IN) and outlet (OUT):**

- Disconnect the hoses on the water inlet (**IN**) and outlet (**OUT**).
- Replace the filter.
- Install a new mounting bracket to replace the old one. During the installation, observe the mounting dimensions and hose bending radius.
  - Close the shut-off valve on the water supply hose (**IN**), to prevent drainage of water.
  - The water from the hose connected to the water outlet (**OUT**) should be drained to the appropriate container (e.g. bucket).
  - Open the water supply to the filter and flush the system until the water starts flowing evenly without air bubbles.
  - Close the shut-off valve.
- Connect the hose to the water outlet (**OUT**), and connect the other end of the hose to the terminal unit.

**b) Replacement of the filter with quick-fit connectors (see illustrations below):**



- (1) filter ready for replacement;
- (2) prize the blockade open by means of the screwdriver;
- (3) remove the blockade;
- (4) remove the quick-fit connector from the filter;
- (5) repeat the operation on the other quick-fit connector;
- (6) inspect the connectors for damages and contaminations, clean or replace if necessary. Install a new filter.
- (7) Mount the blockades in the appropriate places;
- (8) Lock the quick-fit connector with the blockades;

- (9) Filter after replacement.
  - Close the shut-off valve on the water supply hose (**IN**), to prevent drainage of water.
    - The water from the hose connected to the water outlet (**OUT**) should be drained to the appropriate container (e.g. bucket).
    - Open the water supply to the filter and flush the system until the water starts flowing evenly without air bubbles.
    - Close the shut-off valve.
  - Connect the hose to the water outlet (**OUT**), and connect the other end of the hose to the terminal unit.
6. Install a new mounting bracket to replace the old one. During the installation, observe the mounting dimensions and hose bending radius.
  7. After the filter replacement, close the drain valve.
  8. Open the shut-off valve on the water inlet and connect the terminal unit to the power supply.
  9. Check the system for leakages.

#### Table of volumes

Carbonate hardness (°CH)/ quoted in °dH (German degrees)	Volume l / min	Carbonate hardness (°CH)/ quoted in °dH (German degrees)	Volume l / min
1	16000	21	762
2	8000	22	727
3	5333	23	696
4	4000	24	667
5	3200	25	640
6	2667	26	615
7	2286	27	593
8	2000	28	571
9	1778	29	552
10	1600	30	533
11	1455	31	516
12	1333	32	500
13	1231	33	485
14	1143	34	471
15	1067	35	457
16	1000	36	444
17	941	37	432
18	889	38	421
19	842	39	410
20	800	40	400

## Maintenance of the operational performance

- Regularly control the water filter system.
- Inspect the tightness of the water filter system. In case of any leakages through connection joints or sealing, seal or replace the elements.
- Check the hoses for bends, bended hoses should be replaced.
- Replace hoses periodically, at least every 5 years, or earlier if necessary.
- Do not use abrasive agents, cleaning solutions or coarse cleaning materials.

## Waste disposal

- Dispose of the decommissioned device according to the national regulations. For this purpose, contact a local waste management agency.

## 8. Possible malfunctions

Problem	Cause	Solution
No water flow	Closed water inlet	Open the shut-off valve on the water inlet
Pressure too low	Too low pressure in the installation	Check the pressure in the water supply network
	Clogged hoses or filter	Check the water filter system, water inlet and drain hoses, replace if necessary
	Air in the installation	Check the installation, bleed the air from the system
Leakage	Incorrectly installed pipe unions	- Check the entire fittings, gaskets for leakages, replace if necessary. - If the problem persists, replace the filter.
	Excessive pressure in the water installation	- Check the pressure in the water supply network. - Reduce the pressure upstream of the filter, replace the filter

Problem	Cause	Solution
Loss of resin	Filter is installed counter to the water flow	Replace the filter. Install the filter adjusted to the water flow (marked with arrows on the top of the filter).
	Excessive pressure in the water installation	<ul style="list-style-type: none"> <li>- Check the pressure in the system.</li> <li>- Reduce the pressure upstream of the filter, replace the filter.</li> </ul>
	Too hot water flows through the water filter system (over 30 °C)	Replace the filter, make sure the water temperature does not exceed 30 °C.
Water downstream of the filter has the carbonate hardness higher than 8°dH	Filter capacity exceeded	Replace the filter
	A different hardness than a carbonate hardness has been measured	Check the carbonate hardness
	Water from the water installation does not meet hygienic requirements: presence of iron, manganese or other compounds in the water supply network which contaminate or damage the resin	Check the quality of water in the water supply network, replace the filter
	Loss of resin	See the problem „ <b>Loss of resin</b> ”
	Incorrectly measured filter capacity, incorrectly measured water hardness or water hardness has changed	Measure the carbonate hardness and calculate the filter capacity again