

MonoMatik 3



Operating Instructions for the Winterhalter MonoMatik 3 Softener

1 Safety notes



For safe operation of the MonoMatik 3 softener, please read the safety notes listed here carefully.

1.1 Explanation of symbols used

The following symbols are used in this manual:

	Warns of potential defects or destruction of the product when the provided safety measures are not heeded.
Caution	
IMPORTANT	An important tip is given here.
INFO	A useful tip is given here.
	These arrows indicate procedural instructions
	This symbol designates the results of your actions.
–	This symbol denotes lists

1.2 Intended use

- The MonoMatik 3 softener is a device for water softening of fresh water for use in commercial warewashers and may only be used for this purpose. The MonoMatik 3 softener is installed between the fresh water supply pipe and the warewasher. The fresh water must be of drinking water quality from a microbiological point of view.
- The MonoMatik 3 softener is a technical work equipment for commercial use and is not intended for private use.
- Any alterations to the design or to use of the device performed without the written approval of Winterhalter Gastronom GmbH will lead to the guarantee and product liability becoming void.
- Winterhalter Gastronom GmbH will not accept liability for any damage caused by failure to use the MonoMatik3 softener in accordance with its intended use.

1.3 Safety notes for maintenance and repairs

- Maintenance and repairs may only be performed by authorised Winterhalter service technicians. Unprofessional maintenance or repairs may lead to considerable dangers for the user for which Winterhalter cannot be held liable.
- Only original spare parts by Winterhalter may be used for maintenance or repairs. Use of spare parts that are not original spare parts invalidates the warranty.

1.4 General safety notes

- Read the safety and operational notes included in these operating instructions carefully. Keep these operating instructions in a safe place for later reference. Failure to observe the safety notes and operating instructions voids all liability and warranty claims against Winterhalter Gastronom GmbH.
- Only work with the MonoMatik 3 softener after reading and understanding the operating instructions. Winterhalter Customer Services will be glad to provide you with information on how to operate the device and how it functions. The MonoMatik 3 softener may only be operated as described in these operating instructions.

2 Product description

The MonoMatik 3 consists of a mobile plastic container with a removable cover. The regeneration salt is placed in the container. Within this container is a cartridge that is filled with spare resin.

Water softening is based on the principle of ion exchange. The spare resin in the cartridge binds with the hardening ions from the raw water flowing through the device and releases other non-hardening ions into the water. The softened water has a total hardness of 0 °dH.

The capacity of the spare resin is limited. This depends on the total hardness of the raw water. This resin cartridge must be regenerated when it has been exhausted. The control button on the cartridge controls regeneration depending on the water hardness set. If water is required during regeneration, raw water is provided via a bypass.

3 Installation and connection

3.1 Installation site requirements

- The room must be frost-free.
- A waste water drain must be located near the softener. The waste water drain must not be situated higher than the side overflow on the MonoMatik 3.
- Ideally the room has a floor drain.
- The installation location must be horizontal and even. Slight inclinations such as are usual in kitchens do not impair functioning, however the softener should be secured against rolling.
- The MonoMatik 3 should preferably be erected on the floor. If the MonoMatik 3 is placed on a base, the castors should be removed.
- It must be possible to remove the cover for topping up regeneration salt.
- For water supply and drainage connections, see the connection diagram on page 10.

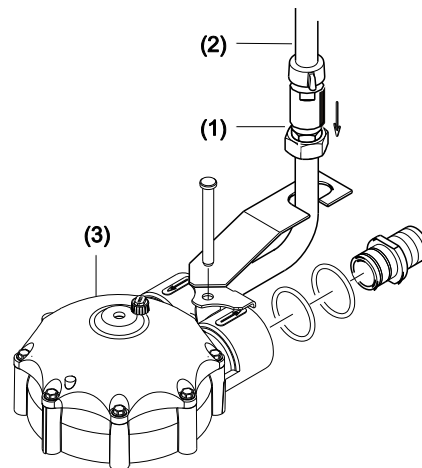
3.2 Connecting



Caution

Connection of the MonoMatik 3 to the drinking water network and to waste water must be performed according to the country-specific, local conditions by an approved water fitter. National installation and operating regulations as well as details on the connection diagram on page 10 must be observed.

3.3 Connecting the water safety device



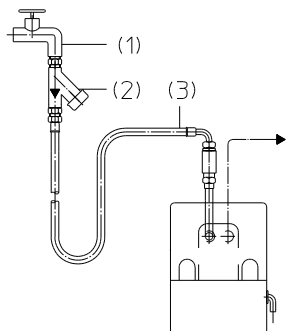
A water safety device (1) must be used in order for the MonoMatik 3 to be operated in accordance with DIN requirements. A kit is available from Winterhalter for this purpose.

The kit contains a backflow preventer type HD in accordance with DIN EN 1717.

Installation of the water safety device is shown in the drawing.

Should national guidelines not require a check valve or anti-vacuum device, the water supply hose (2) is connected directly at the control head (3).

3.4 Installing the dirt trap

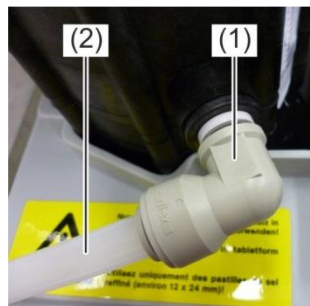


- After the water stop cock (1), install a dirt trap (2) with a mesh width of 150 µm.

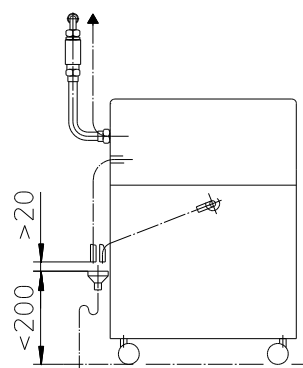
INFO The dirt trap enclosed with Winterhalter ware-washers is suitable for this purpose.

- Connect supply hose (3).

3.5 Connecting the waste water hose and overflow hose



- Insert the accompanying connector (1) into the control head.
- Insert waste water hose (2) into the connector. Insert the hose at least 19 mm.



- Guide the waste water hose to the on-site water drain.
- Attach a hose to the side safety overflow and guide this to the on-site water drain.
- Attach both hoses to the water leaving a gap of 20 mm (see drawing).

4 Commissioning

After the machine has been correctly connected to the water supply and waste water supply, contact your Winterhalter branch or your dealer in order to request them to perform commissioning. You can use this opportunity for yourself and your operating personnel to learn how to operate the MonoMatik 3.

5 Operation

The MonoMatik 3 works automatically following commissioning. Only the regeneration salt must be refilled from time to time.



Caution

Possibility of damage due to incorrect salt.

Only use high-purity evaporated salt (approx. 15 mm granularity or in tablet form) marked as regeneration salt for softeners. Do not use any other types of salt e.g. table salt, rock salt or de-icing salt. These may contain components that are not soluble in water.



- Refill regeneration salt as soon as the water in the container is above the level of the salt.

6 Maintenance



Caution

Possibility of damage due to chemicals.

Do not clean the inside of the container with detergents or other chemicals. Only ever clean the container with water.

- Clean the outside of the MonoMatik 3 using conventional plastic kitchen hygiene products.

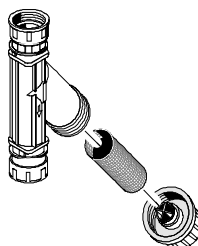
7 Maintenance by service technicians

Have the MonoMatik 3 examined at least once per year by an authorised Winterhalter service technician. The inside of the container should then be cleaned.

7.1 Cleaning the inside of the container

- Turn off the water supply.
- Drain the container completely (scoop out water and salt).
- Remove any sludge or dirt particles using a cloth or brush.
- Open the water supply.
- Add the new regeneration salt (approx. 10 kg).

7.2 Cleaning the dirt trap

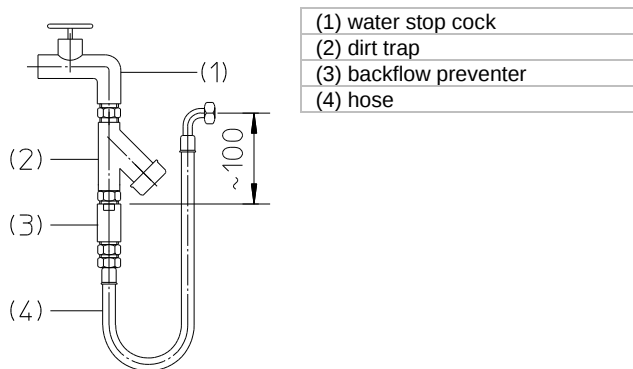


- Turn off the water supply
- Remove the dirt filter, clean it and reinstall it
- Open the water supply

7.3 Check backflow preventer type HD

- Is the backflow preventer installed according to the connection diagram (page 10)?
- Is the backflow preventer clean?
- No visible leakage, corrosion or other damage?

7.4 Check backflow preventer type HD



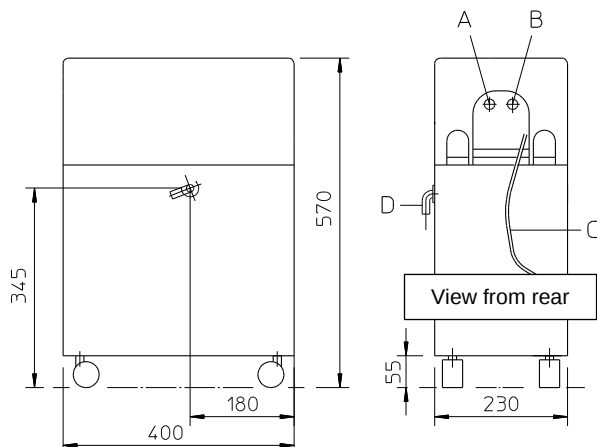
- Close the water stop cock (1).
- Install the backflow preventer (3) according to the drawing.
- Keep the hose (4) above the level of the backflow preventer (3).
- Slightly open the water stop cock (1) and close it again as soon as water flows out of the hose (4).
- Point the hose (4) down into a bucket.
- Check the following points:
 - Does water flow out of the hose (4)?
 - Does the backflow preventer (3) audibly suck in air while water is flowing out of the hose (4)?
- Replace the backflow preventer (3) if it does not pass the test.
- Reinstall the backflow preventer (3) according to the connection diagram (page 10) and test according to section 0.

8 Technical data

Water inlet temperature	max. 50 °C
Minimum flow pressure	150 kPa (1.5 bar)
Maximum inlet pressure	600 kPa (6.0 bar)
Pressure loss	80 kPa (0.8 bar)
Max. total hardness of raw water	29 °dH (36 °e / 52 °TH / 5.2 mmol/l)
Flow rate (at 1.5 bar inlet pressure)	max. 20 l/min.
Regeneration time	8 to 10 min
Salt consumption per regeneration process	approx. 0.27 kg
Water consumption per regeneration process	25 l
Weight (empty)	10 kg

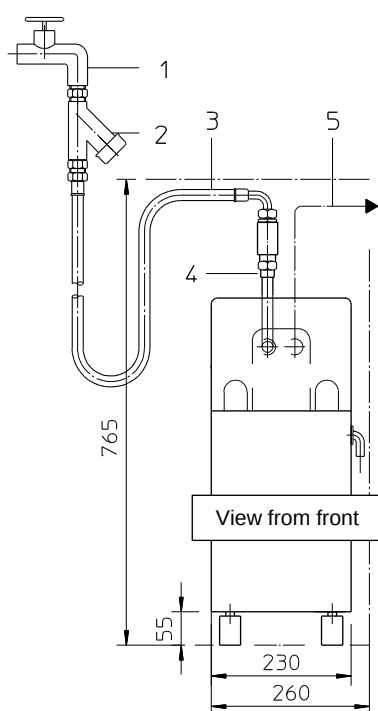
Connection Diagram

Position of the connections



- | | |
|----------|--|
| A | Water drain
(softened water);
G 3/4" external thread |
| B | Water supply (raw water)
G 3/4" exterior thread;
min. 1.5 bar; max. 6 bar;
max. 50 °C;
max. 29°dH total hardness |
| C | Regeneration water
1/2" hose; 2000 mm long |
| D | Safety overflow
1/2" connection |

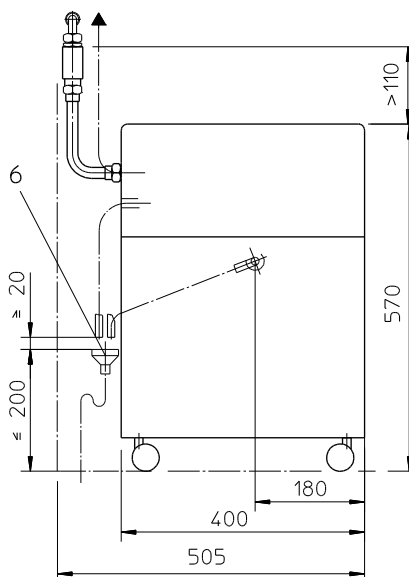
Connection Diagram



If space is limited, the water safety device (pos. 4) can also be installed on to the incoming water supply.

Note:

- Top edge of the combination connector must be at least 110 mm above the top edge of the MonoMatik 3
- Vertical installation position
- Install in direction of flow



INFO Items at Pos. 1 to 4 and Pos. 6 are not part of the MonoMatik 3 installation kit

A water safety device (4) must be used in order for the MonoMatik 3 to be operated in accordance with DIN requirements.

A kit is available from Winterhalter for this purpose.

The kit contains a backflow preventer type HD in accordance with DIN EN 1717.

National installation and operating regulations must also be complied with!

The system can also be installed in reverse.

Provide on-site connections next to the device

6	Waste water funnel with trap
5	Hose to warewasher
4	Water safety device
3	Supply hose; 2 x G 3/4" union nut
2	Dirt trap; 1 x G 3/4" union nut; 1 x G 3/4" external thread
1	Water stop cock on-site, G 3/4" external thread

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Connection diagram
MonoMatik 3 softener

winterhalter®

Commissioning Instructions for the Winterhalter MonoMatik 3 Softener

These instructions are intended for correct commissioning of the MonoMatik 3 softener by an authorised Winterhalter service technician.

1 Testing installation

- Test the following points:
 - Is it installed according to the operating instructions and the connection diagram?
 - Is the water inlet temperature in accordance with the connection diagram?
 - Are the water pressures in accordance with the connection diagram?

2 Converting total hardness

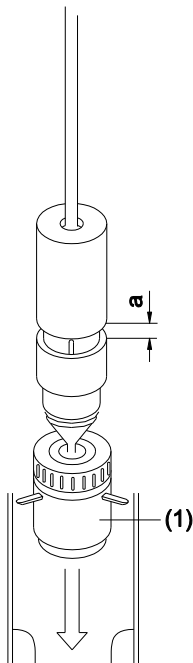
Water hardness is specified in the German degree of hardness (°dH) in these instructions. Other units of measurement are used in other countries.

- Measure the total hardness and convert into the German degree of hardness (°dH) using the following table:

		°dH	°e	°TH	mmol/l
German hardness	1°dH=		1.253	1.78	0.179
English hardness	1°e=	0.798		1.43	0.142
French hardness	1°TH=	0.560	0.702		0.1
mmol/l	1mmol/l=	5.6	7.02	10.00	

3 Adjusting and installing the brine valve

- Remove the brine valve.
- Check whether the distance (a) is 17 mm. Adjust as necessary.
- Install the brine valve.
- Ensure that the valve base (1) is sitting in the recess of the container base and that it is possible to move the float cup vertically approx. 6 mm.



- Insert the connector (2) into the control head.

4 Adding regeneration salt

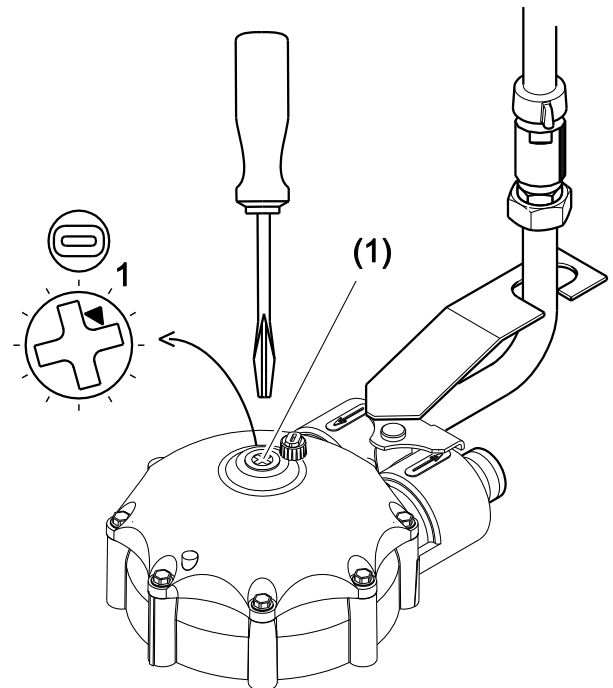


Possibility of damage due to incorrect salt.
Only use high-purity evaporated salt (approx. 15 mm granularity or in tablet form) marked as regeneration salt for softeners. Do not use any other types of salt e.g. table salt, rock salt or de-icing salt. These may contain components that are not soluble in water.



- Fill 5 litres of water into the container.
- Pour approx. 10 kg of regeneration salt into the container.

5 Venting / manually triggering regeneration



- Switch off the warewasher connected to the MonoMatik 3.
- Open the water supply to the MonoMatik 3 slowly.
- Remove the sticker on the screw (1).
- Using a Phillips screwdriver, push the screw (1) down so that the control disc rotates.
- Turn the screw (1) slowly in a clockwise direction until the regeneration begins (approx. 1 o'clock position).
 - ⇒ Air and water must be emitted from the hose with regeneration waste water.
 - ⇒ After approx. 10 minutes no more water may be emitted from the hose.
- Do not force the regeneration manually. The unit must run the regeneration to the finish by itself.

6 Adjusting the total hardness

IMPORTANT Before adjusting the total hardness, the manually triggered venting must have been carried out (► chapter 5). During the setting the device must not be in regeneration mode.

- Determine the total hardness of the raw water.
- See the table for the relevant setting value.

Up to serial no. 102846

Total hardness in °dH	6	7	8	9	11	13	14
Setting value	100	125	150	160	200	230	250
Softened water between 2 regenerations in litres	1358	1083	905	820	689	575	531

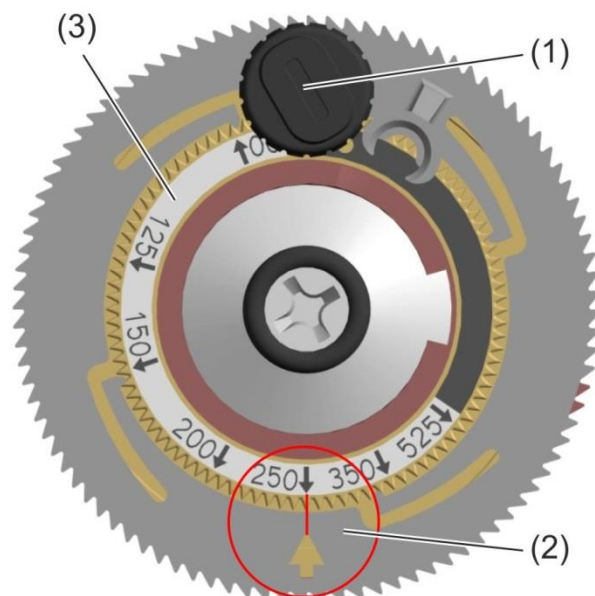
Total hardness in °dH	15	17	19	20	21	25	29
Setting value	270	300	340	350	375	450	525
Softened water between 2 regenerations in litres	500	453	413	394	379	317	254

From serial no. 102847

Total hardness in °dH	6	7	8	9	11	13	14
Setting value	100	125	150	170	200	240	250
Softened water between 2 regenerations in litres	1083	866	728	650	531	453	433

Total hardness in °dH	15	17	19	20	21	25	29
Setting value	280	300	330	350	395	485	525
Softened water between 2 regenerations in litres	394	354	315	295	276	236	197

INFO The setpoints in the dark colored columns are directly affixed to the setting disk (3). The other values are approximate values.



- Press down the setting button (1).
- Turn the setting button (1) until the arrow is exactly opposite the arrow on the setting disc in the viewing window (2).

INFO Each tooth deviation relates to approx. 20 litres of soft water more or less up until the next regeneration.

- Start up the warewasher connected to the MonoMatik 3.
- Fill up the warewasher.
- Check that the hose connections do not leak.

7 Check setting

- Flush out 10 litres.
- Measure the total hardness.
- If necessary vent again (► chapter 5) and adjust the total hardness (► chapter 6).

8 Instructing personnel

- Instruct personnel in the following points:
 - ☐ Salt refilling
 - ☐ Maintenance and care

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