Operating instructions

Water Treatment Device CF-M

63920, 63921





Illustration similar, may vary depending on model

Read and follow the operating instructions and safety information prior to initial operation.

Technical changes reserved!

Illustrations, functional steps, and technical data may deviate insignificantly due to continuous further developments.

Updating the documentation

If you have suggestions for improvement or have found any irregularities, please contact us.





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Introduction

Thank you for choosing to purchase this quality product. To minimise the risk of injury, we ask you to always take some basic safety precautions when using this product. Please read this operating manual carefully and make sure that you understand it.

Keep these operation instructions in a safe place.

Use and warning notices

Prohibition symbol	Any use described with this symbol is prohibited, as otherwise the product could be damaged, the safety of users could be jeopardised, or material damage could be caused.
Warning symbol	Any use described with this symbol must be carried out in strict compliance with the regulations, otherwise the product could be damaged or the safety of the user could be jeopardised.
Instruction symbol	All instructions marked with this symbol must be observed by the user, otherwise the product may be damaged or other damage may occur due to improper operation.

- Installation, commissioning, or maintenance of this water treatment device must be carried out by qualified personnel.
- Liability for consequences caused by improper installation is excluded.

Safety instructions

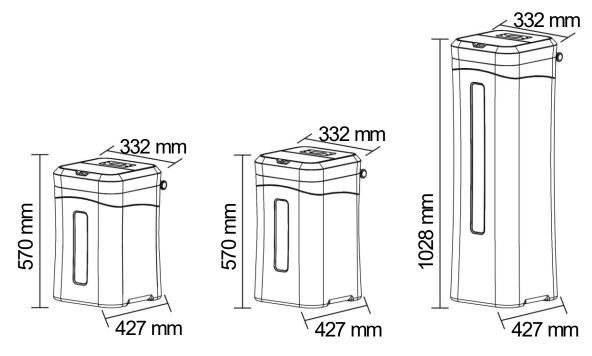
- The water treatment device can only be supplied with 12 V and 1500 mA. Observe all safety precautions in connection with the operation of electrical appliances during operation and maintenance.
- If the mains cable of the water treatment device is damaged, it must be repaired by a qualified electrician.
- The water treatment device is only suitable for filtering pre-treated tap water. It cannot be used to filter water with an unknown level of contamination or an unknown proportion of harmful or-
- The water treatment liquid cannot be drunk directly. Do not drink it directly.
- Do not block the overflow pipe and the drain pipe of the water treatment device.
- Do not place any objects on the water treatment device.
- Do not immerse the water treatment device in water.
- Do not use the water treatment device outdoors or in direct sunlight.
- The temperature of the water entering the treatment device must not exceed 38°C.
- After the water treatment device has been shut off for more than a week, the water must be drained during 5 min before water coming from the device can be used for food purposes.
- The power supply must not be interrupted while the water treatment device is in use in order to avoid timing errors, which would affect the originally set backwash start time.
- As hot water can severely damage the internal treatment system, it should be ensured that there is a connecting pipe of at least 3 m in length between the outlet of the treatment device and the inlet of the hot water boiler. If the 3-m connection line cannot be assured, it is recommended to install a non-return valve between the water treatment device and the hot water boiler.





- The permissible ambient temperature of the system is 5-40°C. If in doubt, take suitable frost protection measures so that the resin is not affected.
- During operation of the water treatment device, shocks to the water must be avoided, e.g., by quickly opening or closing the valve and switching off the water pump in emergencies.
- Do not apply force to the machine and avoid direct sunlight and exposure to heat from other

Technical specifications

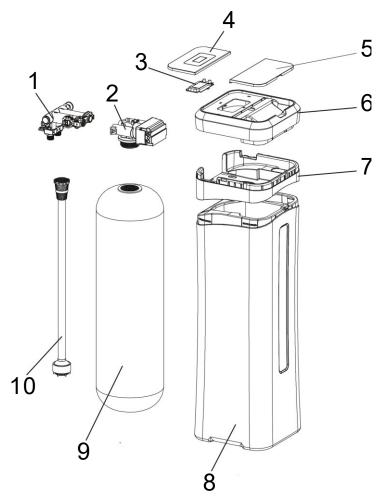


Model name	CF-M1-C	CF-M1	CF-M2			
Power supply	230 V/50 Hz					
Power consumption (W)		18	18			
Water pressure (bar)	1.5-4.5					
Flow rate (1/h)	1500	1500	3000			
Tank volume (ℓ)						
Max. flow rate (%)						
Max. temperature (°C)	40					
Min. temperature (°C)		5				





Overview

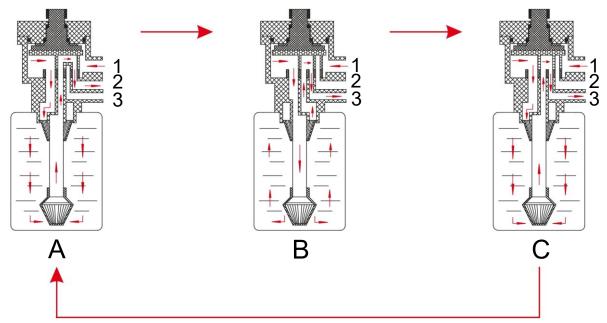


Nº	Name	Nº	Name
1	Inlet/outlet	6	Cover
2	Relief valve	7	Belt
3	Display	8	Housing
4	Control panel	9	FRP tank
5	Cover plate	10	Central pipe





Functionality



Nº	Name	Letter	Name
1	Intake	Α	Operation
2	Outlet	В	Backwashing
3	Process	С	Fast rinse

Functions and features

Automatic operation

The built-in time control has a 24-hour time control with which the running days and the backwash time can be set (the factory-set time is 2 a.m.).

Programme cycle functions

- Operation: After the raw water has flowed through the water purifier at a certain pressure and flow rate, the impurities and colloids suspended in the water are captured; at the same time, the coconut shell activated carbon filters chlorine, organic substances, turbidity, odours, etc. out of
- Backwashing: Backwashing with tap water from bottom to top through the water at the bottom of the machine, which causes the filter material to move and collide, serves to remove colloids from the surface of the activated carbon, and prevents subsequent contamination by bacteria settling on the carbon. The absorption capacity of the activated carbon is restored and the carbon is loosened. This does not affect the water pressure.
- Fast rinse: The filter material is quickly rinsed through, the activated carbon layer is compressed, and the filter material regains its best filter properties.





Installation and maintenance

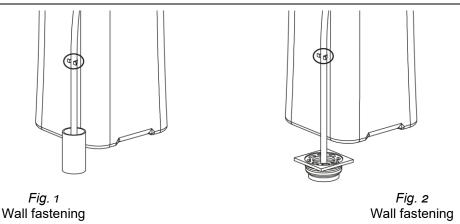
Installation notes

To avoid installation errors, please read the following instructions carefully.

- As the control components are controlled by electronic circuits, a three-day power failure (72 hours) or an intermittent power supply may cause the time shown on the control valve display panel to result in an incorrect backwashing time for the water treatment device (check the time shown on the control valve panel and the actual time after continuous operation of approximately 3 months). After restoring the power supply, check whether the time displayed on the control panel is correct. If this is not the case, refer to the instructions to find out how to set the water treatment device clock.
- If the water pressure of the water treatment device is lower than the specified operating pressure, install a booster pump, which should be installed at the front of the water inlet of the water treatment device. At the same time, the outlet pressure of the booster pump must not exceed 4.5 bar, otherwise a pressure-reducing valve must be installed between the booster pump and the water treatment device. WilTec GmbH is not responsible for detrimental effects and damage caused by an excessively high outlet pressure of the booster pump on the water treatment device.
- If the main water supply is interrupted, the main valve of the supply line should be closed immediately or the bypass valve of the water treatment device should be switched to the bypass state to prevent the water treatment device from being damaged by the negative pressure in the pipework caused by the municipal water supply.
- When the main water supply is restored, a large number of pollutants in the water pipe contaminate the treatment device. Therefore, first switch the bypass valve of the treatment device to the bypass station, open the tap in the house, and drain the water from the dirty water supply station.
- The water treatment device must not be tilted or laid on its side during transport, installation or
- The floor on which the water treatment device is installed should be level and have a loadbearing capacity of more than 300 kg/m. In addition, an AC power supply, a water inlet and outlet interface, a waste-water pipe, and a floor drain should be available.
- Installation area:
 - CF-M1-C: 380 × 440 × 595 mm (L×W×H)
 - CF-M1: 380 × 440 × 640 mm (L×W×H)
 - CF-M2: 380 × 440 × 1140 mm (L×W×H)
- Do not install the treatment device near acidic and alkaline substances or near gases to avoid corrosion on the treatment device.
- The water treatment device must be installed indoors. Measures must be taken to insulate the housing and pipework, in particular to protect against frost and solar radiation and for sealing.
- It is forbidden to install the treatment device on a water pipe with a water pressure of more than 4.5 bar. If the water inlet pressure exceeds 4.5 bar, a pressure-reducing valve must be installed (to be purchased separately), otherwise the company accepts no responsibility for consequences such as impairment or damage to the water treatment device due to excessive water inlet pressure and any resulting damage.
- The water treatment device should be installed and used in a room with a floor drain and smooth drainage. If the drain pipe or floor drain is blocked and the drain pump cannot drain normally due to a power failure or other malfunction, please close the building's main water inlet valve immediately. At the installation site, it must be ensured that objects in the neighbouring area or in the part of the building below are not damaged or flooded if water escapes from the water treatment device or the connection pipe. WilTec GmbH is not responsible for detrimental effects and damage caused by a fault of the drain or a wrong installation.
- As shown in the illustration below, the drain pipe and the overflow pipe must be secured with ring clamps to prevent leakage during water drainage.







- Before connecting the water supply pipe, remove any dirt and dust remaining in the pipe. Then close the main valve before connecting the system.
- The overflow and drain pipe must be provided with a free pipe guide. The length of the pipe may not be increased, and the pipe diameter may not be reduced without authorisation.
- For the pipe connection, the pipe should be as close to the wall as possible, the pipe should run straight, and the angles should be free. After installation, the pipe should be fixed to the wall with a ring clamp. Pay attention to the height and placement angle of the pipe when it is connected. There should be no obvious stresses after connecting the pipe to avoid water pipe bursts and water leakage from the treatment device or pipework due to stresses in the pipework during long-term use.
- It is forbidden to combine the overflow and drain pipes in one pipe and insert it into the wastewater outlet.
- If the waste-water pipe or floor drain is blocked, the water treatment device must not be used.
- After installation, check whether water is leaking from the connection nozzles, the connection between the control valve and GRP tank (glass fibre plastic) and the bypass connection.
- Seals are usually installed when connecting threaded parts. It is therefore not advisable to apply too much force, as this can easily lead to the thread slipping and cracking.
- The waste-water pipe must be level and there must be an air gap between the waste-water pipe (overflow pipe) and the waste-water outlet.
- The waste-water pipe (overflow pipe) must not be connected to the sewage system in a sealed manner, as otherwise the machine can no longer work normally or the waste water can no longer flow back to the machine due to the negative pressure.

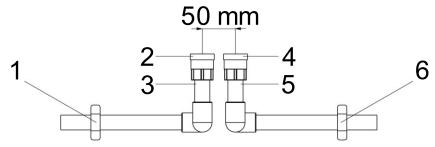




Installation

The water treatment device must be installed, tested, and put into operation for the first time by a specialist. The following installation steps are only intended as a guide (using a PPR pipe as an example).

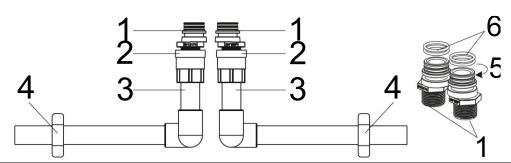
Install the water-inlet and -outlet pipes on the wall according to the actual height of the product above the floor (sold separately).



Nº	Name	Nº	Name
1	Clamp (fixed water pipe)	4	Intake
2	Outlet	5	Inlet pipe
3	Outlet pipe	6	Clamp (fixed water pipe)

Note! Please note the actual height and installation environment of the selected product.

2. Connect the bypass pipe connection to the water inlet and outlet.



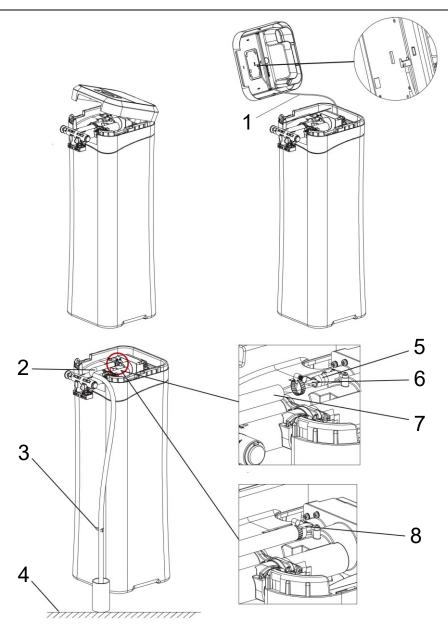
Nº	Name	Nº	Name
1	Connection point	3	Outlet pipe
2	Outlet	4	Clamp (fixed water pipe)
5	2 points	6	O-ring

Note! Make sure that the O-ring has been fitted.

3. Open the top cover, pull out a section of the connection to the display panel as shown, if necessary, cut off a drain pipe, and lay it accordingly (secure the hose with a clamp), arrange the drain pipe, and connect it to the drain.







Nº	Name	Nº	Name
1	Display connection	5	Drain
2	Drain pipe	6	Clamp (loosen, install, re-tighten)
3	Clamp	7	Drain pipe
4	Ground	8	Clamp (loosen, install, re-tighten)

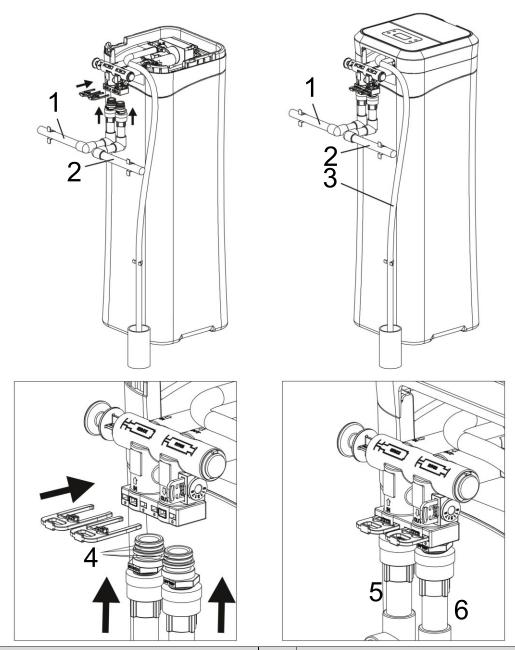
Note! Secure the waste pipe and the overflow pipe to the wall with a ring clamp to prevent the hose from jumping out of the waste pipe.

4. Return to step 2. Place the product in the corresponding position of the installed connection. Connect the water inlet and outlet of the bypass valve to the connection in the corresponding water inlet and outlet direction. Then insert the large insert from the accessory kit into the slot of the bypass valve and the water pipe connection. Then connect the display connection cable of the control panel and cover the top cover assembly.





Installation diagram of the inlet and outlet opening



Ì	Nº	Name	Nº	Name
	1	Inlet pipe	4	O-ring
	2	Outlet pipe	5	Intake
Ī	3	Drain pipe	6	Outlet

Note! Please check whether the large insert on the bypass valve is inserted all the way to the bottom. Check that the sealing rings on the two bypass pipe connections are correctly installed.

5. After completing the installation steps in step 4, check whether the bypass is in operating mode "water supply" (Fig. 1). If the bypass is not in "water supply" mode (Fig. 2), pull the push rod into this operating position (Fig. 1).





Diagram of the "water supply" and "bypass" operating modes

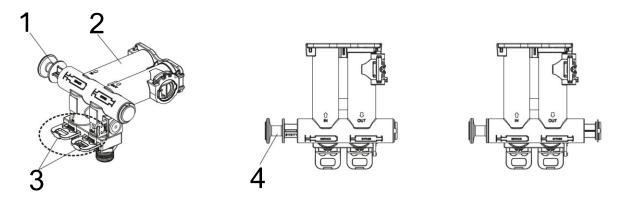


Figure 1 – operation (water supply)

Figure 2 - Bypass

Nº	Name/description	Nº	Name
1	Bar	3	Clamp
2	Bypass	4	Push rod, adjust to "service"

- 6. <u>Treatment of bypass valves in special cases:</u> In the event of a failure of the device or other special circumstances, the bypass valve of the machine can be set to the bypass state (push the pull rod to the operating position as shown in Fig. 2). You can temporarily use the municipal water supply directly. Once the fault or problem has been rectified, set the bypass valve to the operating position (push the pull rod to the position shown in Fig. 1) to restore the clean-water supply.
- 7. The general installation scheme is divided into two installation methods (as shown in the figures below).

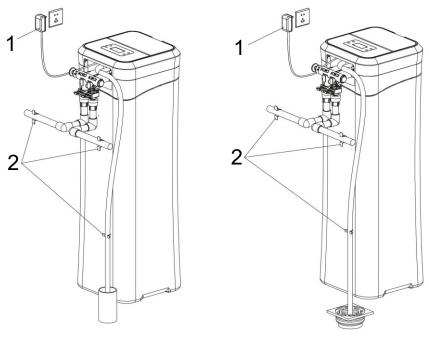


Figure 3 Figure 4

	Nº	Name	Nº	Name
Ī	1	Adaptor	2	Clamp





If an operating room is available, it is recommended to use the installation method shown in Figure 3. Otherwise, the drain pipe can only be inserted into the floor drain. As shown in Figure 4, make sure that the two pipes are fixed to the wall to prevent the pipe from being flushed out of the floor drain when emptying. This can have detrimental effects and lead to damage.

Install connections

- The connection and laying of the pipe system is carried out in accordance with the provisions of the construction standards for water supply and drainage pipes. The inlet and outlet interfaces of the water treatment device and the water pipe interfaces are connected by a 3/4" PPR inner pipe or a corrugated pipe and must be installed on the same axis (see installation plan). The inlet and outlet points must not be installed in reverse.
- Connect the water inlet and outlet pipes, the drain pipes, and the overflow pipes in sequence to ensure that all connections are tight and that there are no leaks. It is recommended to use flexible pipes to connect the water treatment device inlets and outlets, the drain, and the overflow (note: 304 stainless steel, alloy forged steel, high-strength engineering plastics, and other materials are to be used for the connection of pipe fittings and valves; valves and pipe fittings made of iron are strictly prohibited).

Installing the drain and overflow pipes

- First loosen the clamp and insert it into the pre-fixed pipe, then insert the pipe into the drain connection to the floor, and finally turn the clamp onto the connection of the pipe and drain connection and tighten it firmly. The drain pipe must be secured with a clamp. (Note! This procedure is intended to ensure that the hose is not pushed away or pushed out of the sewer if the flat is connected to the sewer or the water pressure of the floor drain is high).
- The position of the control valve must be higher than the floor drain and the length of the drain pipe must not exceed 2 m. The installation of shut-off devices in the drain pipe is strictly prohibited. The sealing of the pipe fittings may only be made of PTFE.

Instructions for first use

- Initial settings of the operating system When the treatment device is switched on for the first time, the system indicates that water is being added. Press the button 🖣 to access the operating system and set the current time and rinse time.
- 2. First water supply for water purifiers Before the first water supply, close the water inlet valve of the building and switch the valve to the "water supply" operating mode. Unlock the system, press the button to start backwashing; "system is backwashing" appears on the display panel. Open the water inlet valve slowly to $\frac{1}{4}$ (opening it quickly can damage the appliance and lead to loss of activated carbon). At the beginning, the sound of slowly escaping air should be heard in the drain pipe. After the air in the GFK tank has escaped (i.e., when the water in the drain pipe flows out evenly), the water inlet valve should be fully opened.

Attention! If the water inlet valve is fully opened directly, the water will flow into the purifier too quickly, causing the activated carbon in the tank to be stirred up, which will easily cause damages. It is therefore necessary to open the water inlet valve slowly 1/4 to allow the water to flow slowly into the tank, release the air in the tank and fill the tank with tap water. During backwashing, the water flowing out of the outlet pipe must be checked several times until it is really clean. The backwash time should not be less than 5 min.





Maintenance

- Regularly check the water treatment device to control if there is a water leak in the water treatment pipe or if water is seeping through - if this is the case, contact a specialist.
- The recommended service life of the activated carbon is 1-2 years. It should be replaced reqularly according to the local water quality and actual water consumption.
- As the product is updated regularly, the actual product may differ from the instructions.

Note! As the pressure in the water pipe fluctuates (the water pressure is generally higher at night than during the day), it is advisable to check the individual connections for leaks two days before installing and commissioning the appliance.

Function and meaning of the control panel

The functions and parameters of the water treatment device are set both in the foreground and in the background. The foreground mode is intended for users. Only the current time, the regeneration time, the raw water hardness, and other parameters can be set. The background mode is set by the manufacturer at the factory, e.g., backwash, brine and slow rinse, refill, quick rinse, wash time, etc.



Nº	Name	Nº	Name
1	Menu/confirm	3	Up button
2	Manual/cancel	4	Down button

Lock

- If the symbol is visible, this means that the control panel is locked. At this point, pressing any button will not work. If no button is pressed for one minute, the control panel is always locked and the symbol displayed.
- Unlocking: Press and hold the up and down buttons simultaneously for about 5 s.

Button 💂

- In the "water supply" mode, press \blacksquare to call up the main menu for the user settings; you can query or set the parameter values there.
- Call up the settings menus one after the other. After setting, press , and you will hear a buzzing sound. The setting is successful and you return to the menu interface.

Button 🟪

In the service mode, press to control the rotation of the valve to end the current operating status prematurely and move on to the next operating position. If you want to end a certain step prematurely during a regeneration or rinse, press the button button to initiate the next step.





- Press in the user or system settings menu to return to the water supply status.
- Press in a parameter setting menu to return to the main menu; the value set at this point is invalid and will not be saved by the system.

Buttons **⊗** and **⊗**

- In the user or system settings menu, display the individual menu lines by pressing and holding.
- In the parameter settings menu, press and hold to change the individual parameter values.
- Press ⊗ and ⊗ simultaneously for 5 s to cancel the key lock.

Description of the parameters

Parameter	Model	Factory setting (time)	Parameter setting range (values)	Explanations	
Current time	All		00:00-23:59	_	
Rinsing time	All	2:00	00:00-23:59	_	
Operation days	All	30	0–99	If the set days have elapsed, the backwash is started as soon as the system time matches the set backwash time.	
	CF-M1-C	2	0–99		
Backwash time	CF-M1	2		Minutes	
	CF-M2	3			
	CF-M1-C	3			
Quick-rinse time	CF-M1	3	0–99	Minutes	
	CF-M2	4			





Sequence of displayed screens

12:00:00

Water System In-Service

Water

Left: 30 Days

12:00:00

Water System In-Service

Water

Trig Time: 02:00

12:00:00

Water System

Back Washing... Left: 2Min

Fig. A

12:00:00

Water System

Fast Rinsing...

Left: 3Min

Fig. B

12:00:00

Motor Running......

Fig. E

Fig. C

System Error!

12:00:00

-E1position lost

Fig. F

Fig. D

AF2-H

Fig. G

Set Clock 12:12

Fig. H

Explanation

- During operation mode, the menus are displayed continuously as shown in Figg. A and B.
- In the "backwash" operating mode, the menu is displayed as shown in Fig. C.
- In the "quick rinse" operating mode, the menu is displayed as shown in Fig. D.
- When the valve rotates from one operating position to another, the menu is displayed as shown in Fig. E.
- If there is an error in the system, the display appears as shown in Fig. F. There are four types of system errors: E1, E2, E3, and E4. Contact an electrician.
- When the device is switched on, the menu is displayed as shown in Fig. G.
- If a possible power failure lasts more than 3 days, the menu shown in Fig. H is displayed. It serves as a reminder to adjust the time.
- Operating procedure: Operation → Backwash → Quick rinse → Operation





Setting the parameters

Description of the setting buttons

- 🖫: confirming the current change made on the screen to access the next changeable parameter - after confirming the last change, returning to the higher-level menu
- : cancelling the current change and returning to the higher-level menu
- ①: scrolling up in the menu or increasing a displayed number by 1
- S: scrolling down in the menu or decreasing a displayed number by 1

Menu list of the user settings

In the operating mode, press \blacksquare to call up the menu for querying and setting the user parameters. The menu displayed refers to the operating mode of the control valve. This means that different operating modes have different setting menus. The description of the setting lines of the unlabelled operating modes is displayed in all operating modes.

> Set Clock Set Washing Time

Set Clock 12:00

Set Washing Time 02:00

Operation and troubleshooting

Adjustable parame-ters	Parameter setting method	Display
Time	If "12:12" flashes continuously, the current time must be reset. 1. In the position "water supply," press the button	Set Clock Set Washing Time Fig. A1 Set Clock 12:12 Fig. A2
	change the current time. Press 🔛 to return to the initial display.	





Troubleshooting table

If the water treatment device does not work, please check if there is a problem with the water supply or the power supply (see table). — If the water treatment device is leaking, please close the tap water valve connected to the water inlet of the water treatment device.

Problem	Possible cause	Proposed solution
Device interrupts operation	Transformer not plugged in	1. Plug in transformer.
	2. Defective mains cable	2. Repair or replace socket.
	3. Power cut off	3. Re-establish power.
	4. Defective transformer	4. Replace transformer.
	5. Defective control valve	5. Replace control valve.
Backwash time incorrect	Power failure, loose contact of the mains plug	Set the time according to the instructions for the control valve.
Leakage	Loose connection	Tighten or reattach connection.
Noises	Air in system	Backwash system for venting.
Bubbles in water	Air in system	Turn on tap to release air.
Device dispenses raw water	1. Bypass valve open or leaking	1. Close or repair.
	2. O-ring in riser pipe leaking	2. Check if riser pipe has cracked. Control o-ring for damage.
	3. Leakage in the inner valve	3. Check body of valve, replace if necessary.
Loss of pressure or rust in pipe	1. Iron in water-supply line	1. Clean pipe.
p.p0	2. Iron in filter	2. Clean valve, add filtering material, increase backwashing frequency.
Loss of filter materila trough drain pipe	Air inside the water system	1. Ensure that there is sufficient air release control in the system.
	2. Strainer torn	2. Replace upper and lower protection.
	3. Too strong a water flow when backwashing	3. Check for correct water-flow strength.





Permanent drain of waste water	1. Leakage in the inner valve	3. Check body of valve, replace if necessary.
	2. Power failure during backwash or quick rinse	2. Set valve to "service" operating mode or switch off bypass valve and restart as soon as power supply is restored.

Note! The above solutions are for reference only. If the machine breaks down, please call in professional technicians to solve the problem.





Regulations for waste disposal

The Waste Electrical and Electronic Equipment Directive (WEEE Directive, 2012/19/EU) of the EU was implemented in the German law related to electrical and electronic equipment and appliances.

All WilTec electric devices that fall under the WEEE directive are labelled with the symbol of a crossedout wheeled rubbish bin. This symbol indicates that this electric device must not be disposed of with the domestic waste.

WilTec Technik GmbH is registered with the German registration authority EAR (Stiftung Elektro-Altgeräte Register) under the WEEE-registration number DE45283704.

Disposal of used electrical and electronic devices (intended for use in the countries of the European Union and other European countries with a separate waste collection system for these devices).

The symbol on the packaging or the product itself indicates that this product must not be treated as normal domestic waste but must be disposed of at a recycling collection station for electrical and electronic waste.

By disposing of this product correctly, you contribute to the protection of the environment and the health of your fellow people. Inappropriate disposal threatens the environment and health.



Material recycling helps to reduce the consumption of raw materials.

Additional information about the recycling of this product can be provided by your local commune, the municipal waste disposal facilities, or the store where you purchased the product.

Address: WilTec Wildanger Technik GmbH Königsbenden 12 / 28 52249 Eschweiler Germany

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