Cebilon platinum

REVERSE OSMOSIS SYSTEM
Cebilon Platinum with pump

Operating and maintenance instructions

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Before installing and using the system, please read these instructions carefully.

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We thank you for choosing our reverse osmosis system.
Our Cebilon Platinum reverse osmosis system is available in 2 versions.

- Cebilon Platinum reverse osmosis system
- Cebilon Platinum reverse osmosis system with pump

We recommend that you have the installation carried out by qualified personnel.

THE SYSTEM COMPONENTS

1 Regulator
2 Water leakage system
3 Low pressure switch*
4 5 -µm sediment filter
5 Pressure pump*
6 Activated carbon granulate filter
7 1-µm sediment filter
8 4-way shut -off valve
9 Membrane
10 Downstream activated carbon filter
11 High pressure switch*
12 Flow rate restrictor
13 Clean water tank valve
14 Clean water tank
15 Tap
16 Pressure pump adapter (24 VDC)*

* Available for the model with pressure pump

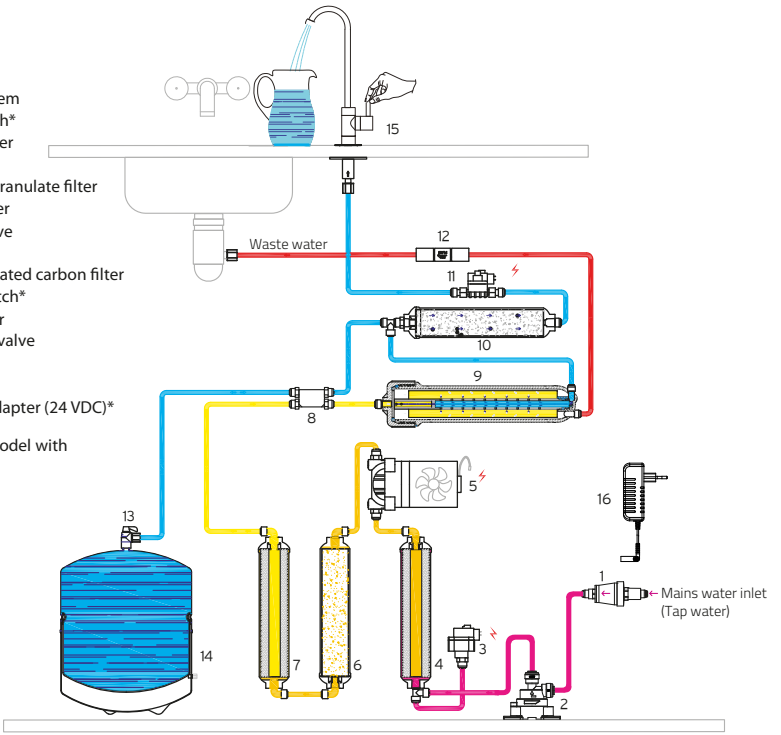


Fig. 2: Diagram of the reverse osmosis system

COMPONENT FUNCTIONS

The **5-**µm sediment filter removes the materials and particles floating in the water. The **activated carbon granulate filter (GAC)** filters out organic materials and unwanted odors. The **1-**µm sediment filter removes the rest of the particles to ensure the correct functioning of the membrane.

The **membrane** is where the phenomenon of reverse osmosis occurs. This component consists of a partially permeable material which is wound in a spiral around the clean water (permeate) collecting pipe. Water that cannot penetrate the partially permeable membrane is discharged through the waste water pipe.

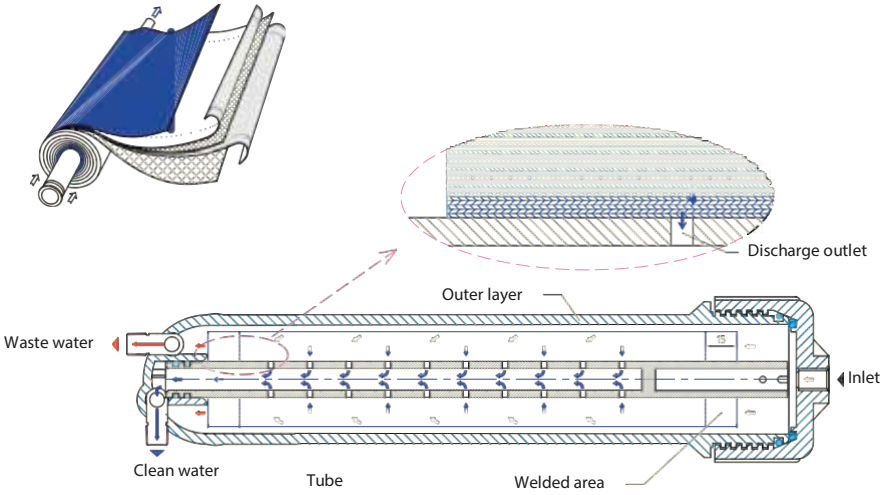


Fig. 3: Membrane structure

In order to generate a suitable outlet pressure for the clean water and to store it under ideal disinfection conditions, the **clean water tank** has an inner surface which is covered with a plastic material suitable for foodstuffs. With the **clean water tank valve** you can open and close the water inlet to the clean water tank.

The **downstream activated carbon filter** enriches the clean water by adding minerals. Thereby, the filter regulates pH value of the water before its consumption.

The **flow rate restrictor** generates the pressure on the membrane required for the operation of the system. It is located in the waste water tube.
The mineral-enriched clean water with a regulated pH value can be taken from the **tap**.
The l **ow pressure switch*** stops the pressure pump when the water supply is turned off or the pressure is less than 0.2 bar (3 psi).
The **pressure pump*** increases the pressure on the water flowing through the 5-µm sediment filter to the value required for reverse osmosis.
The **4-way shut-off valve** regulates the water flow. It interrupts the water flow as soon as the pressure in the clean water tank reaches the inlet pressure of the membrane.

The **high pressure switch*** stops the pressure pump as soon as the pressure in the clean water tank reaches 2.6 bar (38 psi).
The **pressure pump adapter*** provides the power supply for the pressure pump. Here the power supply voltage is converted to 24 VDC.

* Available for the model with pressure pump

APPLICATION

This system is used to obtain drinking and cooking water from tap water by subjecting water that has already passed through the municipal waste water treatment plant to the process of reverse osmosis.

This water must be microbiologically safe with regard to the required disinfection.

TECHNICAL SPECIFICATIONS

Clean water tank capacity	2.2 gallons (approx. 8 liters)
Clean water tank air pressure	0.40 - 0.48 bar (40 - 40 kPa, 6 - 7 psi)
Daily production	34.03 gpd (128.6 l/d)
Inlet of total dissolved solids (TDS)	Max. 1250 ppm
Waste water rate	85 - 98 %
Pressure pump flow rate*	0.8 - 1.2 l/m
Pump pressure	0.8 - 1.10 bar (551 - 758 kPa, 80 - 110 psi)
Pump power supply*	Input: 220 - 240 VAC / 50/60 Hz; output: 24 VDC / 0.8 (nom.) max. 1.2 A
System dimensions (mm)	270 x 400 x 385
Total weight	With pump: 12.5 kg / without pump: 9.5 kg

* Available for the model with pressure pump

Do not use water for this system that is microbiologically unsafe, that has not been sufficiently disinfected before or after operation or that is of unknown quality.

Cebilon Platinum reverse osmosis system contains components that need to be replaced regularly in order to efficiently filter the dissolved solids (TDS) from the water. To check the efficiency of the system, check the water in the system regularly.

Therefore, please also replace regularly the components that need to be replaced. To ensure continuous efficiency and performance of the system, only use components that meet the defined specifications for replacement.

OPERATING PRINCIPLE

The first filter in the system is the 5 µm sediment filter, in which solid particles are retained. The water then passes through the activated carbon granulate filter (GAC). This filter retains organic substances and especially free chlorine. Furthermore, odors are eliminated. The 1-µm sediment filter is the last filter before the membrane. This also protects the membrane, which increases its service life.

The water filtered through the three pre-filters then flows through the membrane, which forms the basis of the water treatment in the reverse osmosis system. A large number of small particles are retained here, which are then discharged through the waste water tube.

The water that has been able to penetrate the membrane first passes through the downstream activated carbon filter, which has the function of a pH regulator, and then to the clean water tank.

To ensure reliable functioning and a long service life of the membrane, the amount of waste water must always be bigger than the amount of clean water. The treated clean water in the tank increases the water supply. The storage capacity of your system is 2.2 gallons, which is approximately 8 liters.

INSTALLATION

The system is very easy to use and the water pipe system can be easily installed anywhere. The installation should only be carried out by a qualified technician.

Cebilon Platinum reverse osmosis system contains components that need to be replaced regularly to efficiently filter the dissolved solids (TDS) from the water.

Free chlorine can negatively affect the polymer structure of the membrane within the system.
Please read the operating instructions and pay particular attention to the chapters about installation, operation, maintenance and warranty conditions.
The operating sequence of the system is shown in Figure 4.

WARNING!

1- Make sure that the installation is protected against possible freezing.
2- Do not intervene in the waste water system.
3- However, if muddy water (clay etc.) comes out of the pipe, close the water inlet valve of the system.
4- If you wish to use a water supply system other than the local water supply system, it must be subjected to a drinking water analysis by the responsible institutions.
5- If the water used is not tap water, make sure that the water is properly disinfected.

The filters are considered accessories and are not covered by the warranty.

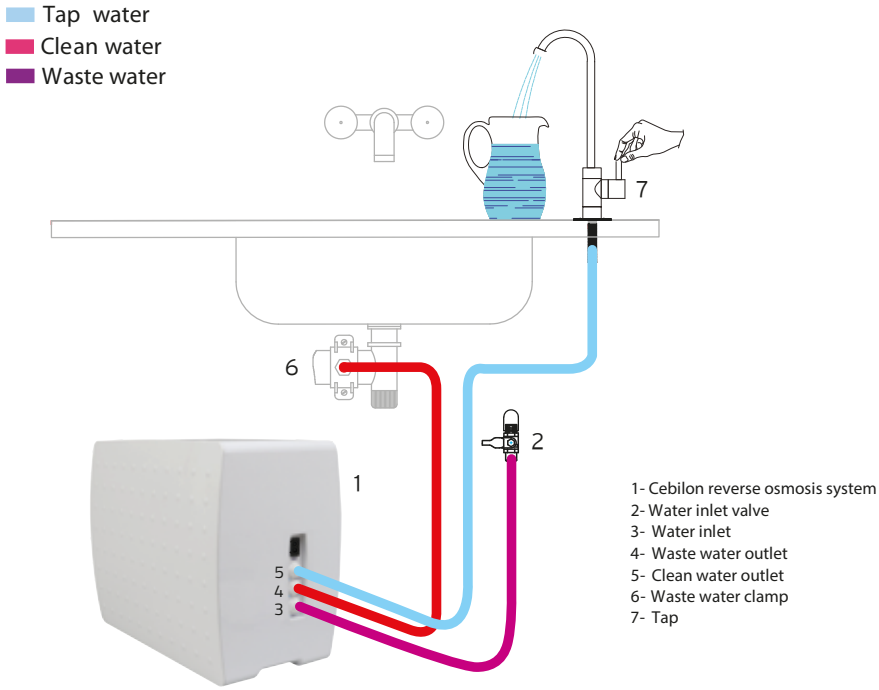


Fig. 4: Installation of the reverse osmosis system

WATER CONNECTION

Close the water inlet valve.

After the remaining water in the tubes has been drained at the appropriate points, connect the 3-way adapter to the water inlet. Make sure that there are no leaks.

First, install the 1/4 " ball valve on the adapter by wrapping it with Teflon tape in a position that allows easy opening and closing of the ball valve (Fig. 5 a).

Then, connect the water supply hose to the ball valve (Fig. 5 b).

Make sure that the ball valve is closed (Fig. 5 c).

Open the water inlet valve and check the installation for possible leaks (Fig. 5 d).

Place the system in a suitable place under the sink in an upright position.

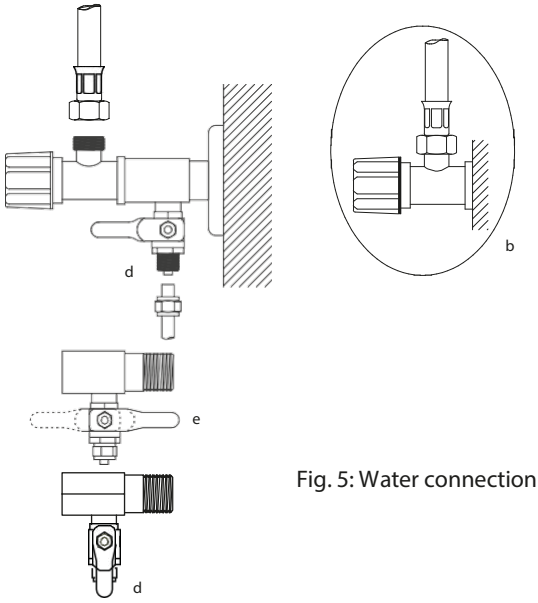


Fig. 5: Water connection fittings

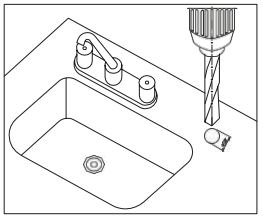
INSTALLATION OF THE TAP

Install the tap with regard to use and aesthetics.

When drilling through the kitchen worktop or sink, before drilling, make sure that the dimensions are suitable for installing the washers, nuts and joints under the kitchen worktop or sink (Fig. 6). Otherwise, there is a risk that you will carry out the drilling incorrectly.

The tube should be carefully installed between the tap and the clean water outlet of the system.

Water connection fittings



1 Tap tube
2 Upper tap body
3 Tap handle (open/close)
4 Hub cover
5 Tap body
6 Housing sleeve
7 O-ring of the housing sleeve
8 Mounting piece
9 Plastic mounting piece
10 Plastic mounting washer
11 Washer
12 Compression nut
13 Thread bar
14 1/4" hose

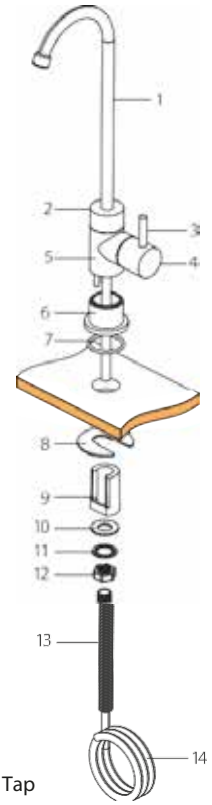


Fig. 6: Tap

CONNECTION OF THE WASTE WATER

To install the waste water outlet, drill into the 8 mm diameter hole of the clamp in the same tube (Fig. 7 b). Connect one end of the 3/8-inch tap to this clamp and the other end to the 3/8-inch outlet.

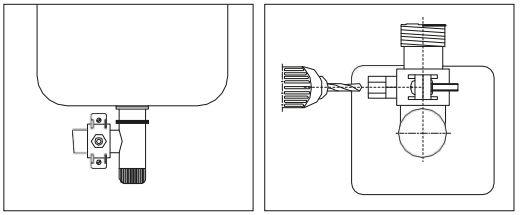


Fig. 7: Waste water connection

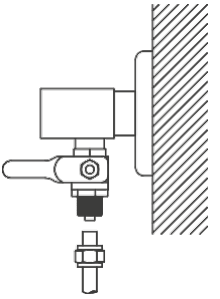


Fig. 8: Water inlet valve

CHECKS BEFORE THE START -UP

- Insert the plug of the pressure pump adapter into the 24 VDC power supply input of the system. Then, connect the adapter to the power supply.*
- Open the tap for the clean water.
- Close the clean water tank valve.
- By opening the 1/4" ball valve, the tap water is supplied to the system (Fig. 8). The pump starts working.
- When the water flows, close the tap.
- As soon as pump operation has stopped, check each individual connection for possible leaks and open the clean water tank valve.
- Since the tank is being filled for the first time, drain the clean water at least once.

*** Available for the model with pressure pump**

IMPORTANT NOTES

This system has been developed for private use in households. Components such as the clean water tank, the waste water tube and the water tap are not intended for outdoor installation.

Before using the system, carry out the necessary measures to disinfect microbiologically unsafe water.

Install the system with its own power supply unit.*

If there is no one in the house, we recommend that you close the water inlet valve for safety reasons (Fig. 8).

Repairs have to be carried out by qualified personnel.

MAINTENANCE

The maintenance of your system should only be carried out by an authorized technician.

The service life of the filters used in Cebilon Platinum reverse osmosis systems changes with the amount of water treated, depending on several factors. These main factors are: the quality of the incoming water, the amount of chlorine, the amount of dry residue, etc. The filters are considered accessories and are not covered by the warranty.

RECOMMENDED INTERVALS FOR FILTER REPLACEMENT

To use your system efficiently and for a long time, carry out the maintenance regularly and on time. The following replacement intervals apply to filters that are used under normal conditions in the water system.

The operating conditions of the filters can change depending on the quality of the inflowing water and the amount of chlorine and sediments.

Only authorized technicians should perform the periodic maintenance required to keep your system operating efficiently every six months.

Filter name	Replacement interval	Notes
5-µm sediment filter	6 months	Sediments are filtered by retaining the coarse particles in the water. Thus , the water is filtered down to the micrometer level. Its service life depends on the quality of the inflowing water.
Activated carbon granulate filter (GAC)	6-12 months	This filter removes the chlorine from the water. Excess chlorine reduces the service life of the upstream activated carbon granulate filter (GAC). Timely replacement protects against chlorine damage and extends the service life of the membrane.
1-µm sediment filter	6-12 months	This 1 -µm sediment filter retains carbon dust to prevent membrane clogging.
Activated carbon filter	6-12 months	This filter regulates the pH value by adding minerals to the water.
Membrane	2 - 5 years	The membrane is where the phenomenon of reverse osmosis occurs. The service life of the membrane changes depending on the ion concentration in the tap water, the amount of clean water produced and sufficient maintenance.

For spare parts, please contact your local distributor.

TECHNICAL DATA SHEET

The Cebilon Platinum reverse osmosis system meets the NSF/ANSI Standard 58 (US standard for point of use (POU) reverse osmosis systems (RO)) for performance standards verified with confirmed test data.

Do not use water for this system that is microbiologically unsafe, that has not been sufficiently disinfected before or after operation or that is of unknown quality.

Cebilon Platinum reverse osmosis system contains components that need to be replaced regularly to efficiently filter the dissolved solids (TDS) from the water. To check the efficiency of the system, check the water in the system regularly.

Please also replace the filters according to the specified replacement intervals.

SPECIFICATIONS FOR USE

- Water inlet pressure for systems without pressure pump (min/max): 3 - 5 bar
- Water inlet pressure for systems with pressure pump (min/max): 1 - 3 bar
- Clean water production of the reverse osmosis membrane: 75 gpd (283,4 l/d)
- Clean water tank capacity: 2.2 gallons (approx. 8 liters)
- Inlet of total dissolved solids (TDS): max. 1250 ppm
- Average salt filtration: 97 - 98 %
- Water inlet temperature (min/max): 5 - 45 °C
- Power supply (system with pressure pump): Input: 220 - 240 VAC / 50/60Hz; Output: 24 VDC / 0.8 (nom) max. 1.2 A

TROUBLESHOOTING AND SOLUTIONS

Errors	Possible causes	Recommended solution
There are air bubbles in the water or the water is colored white.	There is air in the system.	Air in the system shortly after the first installation is normal. Sometimes, there may be air from the water supply. After a certain operating time, however, this will decrease. The use of this water is not harmful.
The system produces little clean water.	The pressure pump is not working and there is no suitable pressure available*.	Check if the pressure pump adapter is plugged in. If the adapter is plugged in, please contact a technician.
	The pre -filters are clogged.	Please contact a technician.
	The membrane does not work.	Please contact a technician.
	The temperature of the incoming water has dropped.	This is not a malfunction. It is normal that the amount of fresh water in winter decreases by a certain amount.
	The check valve is defective.	Please contact a technician.
Although the clean water tank is full, no water runs out of the tap.	The air pressure in the tank is insufficient.	There is not enough air left in the tank. Please contact a technician.
The system generates excessive noise.	A water flow noise can be generated in the waste water tube.	Correctly align the clamp attached to the siphon and to the outlet pipe.
	This may be due to an obstruction or a bent tube.	Remove the obstruction in the waste water tube or align the bent tube.
The pump works constantly.*	The pressure switch is defective.	Close the water inlet valve and contact a technician.
	The low pressure switch is defective.	Close the water inlet valve and contact a technician.
	The check valve is defective.	Please contact our technical support.
	The shut -off valve is defective.	Please contact our technical support.
	The pump is defective.	Please contact our technical support.

* Available for the model with pressure pump

The warranty period of our workshops is 2 years.
The warranty does not cover consumables such as filters and the reverse osmosis membrane. In order to apply for the guarantee, it is essential to present the purchase invoice.
The warranty is void if the system has been modified or if the user has not followed the instructions in the manual.
If the system is not working properly, close the water inlet valve. Disconnect the system from the power supply and contact our technical support.
Any use not specified in this manual will invalidate the warranty.

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