

AQUAPHOR[®]

water filters

OPERATION MANUAL



AQUAPHOR RO-312S **PRO**

REVERSE OSMOSIS SYSTEM

High technology water purification



AQUALEN™

Unique ion exchange fiber. Completely removes heavy metals, irreversibly absorbs harmful impurities.



CFB (CarbFiber Block)

(CFB) – manufacturing technology of filter media with varying degrees of porosity for water with any level of contamination. CFB significantly extends the life of Aquaphor replacement cartridges without compromising cleaning quality. RF patent No. 2282494.



STC (Safe To Consume)

The materials used in Aquaphor water purifiers correspond to the world food safety grade, i.e. they are certified for contact with drinking water and products.



DWAY (DOUBLE WAY)

Unique technology for conditioning water and optimizing the balance of pH and trace elements.



AUTO LOCK

Instant cartridge replacement. Clean and safe service.



Aquaphor filters are manufactured using proprietary technologies.



The Quality Management System is certified according to ISO 9001.

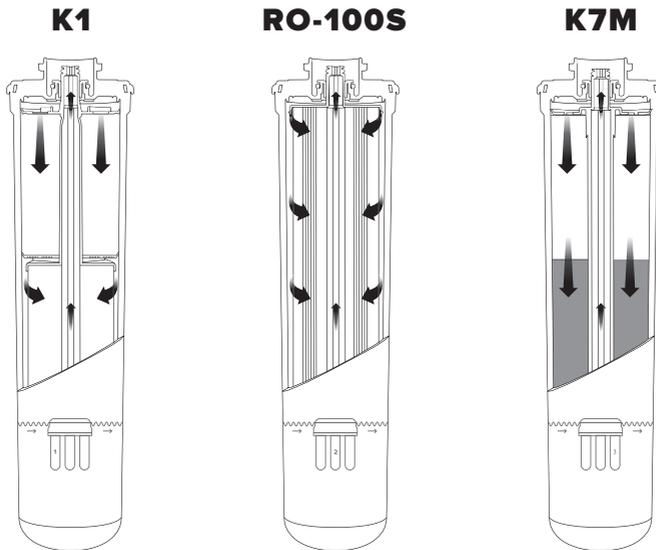
Read these instructions carefully and save them for future reference.

Reverse osmosis system Aquaphor RO-312S Pro (hereinafter referred to as RO-312S Pro) is manufactured by WestAqua Invest OÜ (Estonia).

RO-312S Pro is intended to purge of mechanical and colloidal particles, organic impurities and to remove foreign flavour, odour and colour when post-treating cold drinking water supplied via municipal and local water supply networks (water from artesian boreholes, wells, etc.) to meet the requirements, specified in this Manual.

RO-312S Pro is made of safe, non-toxic materials ensuring that no substances hazardous to human health and the environment are released into the water. RO-312S Pro meets EC hygiene requirements.

Cartridges



K1. PRE-FILTER 2 IN 1

Filters the sand, the iron.

Filters the water in two steps:

- mechanical filtration from 10 microns;
- sorption filtration from 3 microns.

K7M. WATER CONDITIONING AND MINERALIZATION

- Enriches water with useful minerals that improves taste and correct drinking water salt balance.

RO-100S. MEMBRANE CARTRIDGE

- Absolute softening of the water.
- Eliminates all harmful impurities.
- Eliminates bacteria and viruses.*
- Productivity: 380 liters (100 gallons) per day.**

* Tested on Escherichia Coli 1257, Enterobacter cloacae, Pseudomonas aeruginosa, bacteriophage MS2.

** For standard membrane tests.

Equipment

1.	Block of collectors with a tube for drainage water	1 pc.
2.	Replaceable cartridges: Replacement cartridge K1 Replaceable membrane RO-100S Replacement cartridge K7M	1 pc. 1 pc. 1 pc.
3.	Storage tank with lid, cutter and float	1 pc.
4.	Cutter	1 pc.
5.	Tip with a tube of	1 pc.
6.	Connecting tube of red color (1,3 meters)	1 pc.
7.	Connection node	1 set
8.	Stand with mount and stopper	1 set
9.	Drain clamp	1 set
10.	Flushing plug	1 pc.
11.	Plastic wrench	1 pc.
12.	Fasteners	1 set
13.	Operation manual (passport)	1 pc.

SPECIFICATIONS

Overall dimensions of the working block (length × height × width) Located under the sink	280 × 376 × 105 mm
Overall dimensions of storage capacity (length × height × width) Located on a countertop	224 × 269 × 160 mm
Overall dimensions of the cutter (length × height × width)	110 × 200 × 45 mm
Minimum working pressure	0,15 MPa
Water supply pressure, no more	0,63 MPa
Water temperature	+5 ...+38 °C
Accumulation tank set time (at a pressure of 0.3 MPa)	15-60 minutes (depending on salinity and water temperature)
The ratio of purified and drainage water (at a temperature of water at the inlet to RO-312S Pro not lower than +20 °C and at a pressure not less than 0.2 MPa)	(1:4–1:6)
Weight, no more	5 kg

The principle of operation of the RO-312S Pro

The **collector block** consists of a base on which there are three collectors for connecting replaceable filter cartridges, automatic valves and two grooves for attaching to the wall. The collector block is closed by a decorative protective cover. The collector block is equipped with a black tube designed to drain drainage water.

In the **water treatment unit**, preliminary purification and preparation of water for the membrane separation stage takes place. The block includes a replaceable cartridge K1 (installed first in the direction of the water flow). The preparation unit purifies water from mechanical suspensions, active chlorine, oil products, phenols, pesticides, chloroform and heavy metals, colloidal and dissolved iron.

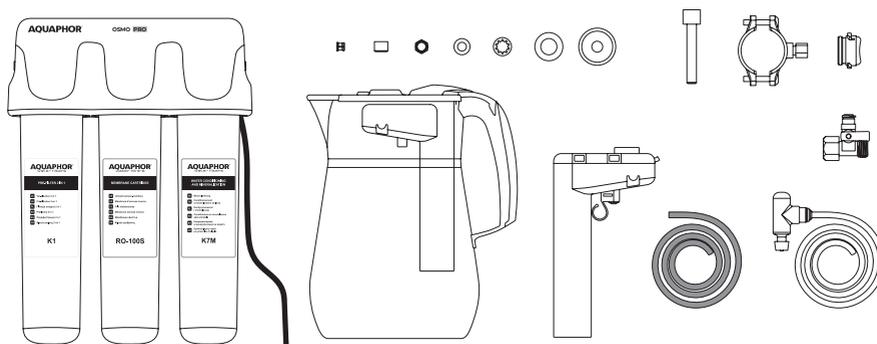
Membrane block. Here, the water is divided into two streams: absolutely pure water, ready for further processing, and drainage water, in which all undesirable impurities remain.

The **air conditioning unit** includes a K7M cartridge, which is designed to condition water (improve taste and smell) and optimize the balance of beneficial elements. Purified water interacts with a specially prepared mixture of natural minerals CALCIUM and MAGNESIUM. In this case, the pH of the water automatically rises to a physiologically ideal value of pH = 7. The concentration of calcium and magnesium ions in the resulting water is from 0.2 to 0.5 meq / l. Such water has a beneficial effect on the human body.

When you connect the tip for clean water to the **storage tank**, water begins to flow into the storage tank. After filling the tank and raising the float, the water supply automatically shuts off and the tip is disconnected. If you need to stop the collection of water in the tank ahead of schedule, just press the button located on the lid of the tank.

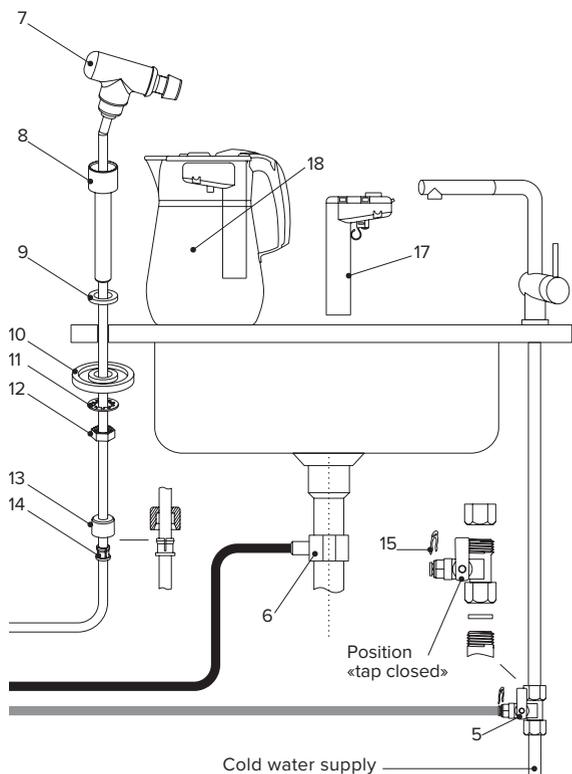
The **tip** serves to supply clean water to the storage tank. After filling the container, the tip is disconnected from the socket, the shut-off valve is activated, and the water supply is stopped.

The **cutter** is designed to automatically shut off the supply of clean water to open containers.



on diagram

- 12. Flare nut
- 13. Metal sleeve
- 14. Collet
- 15. Locking clips
- 16. Connecting tube (red)
- 17. Cutter
- 18. Storage capacity



Clean water nozzle installation with stand and stopper

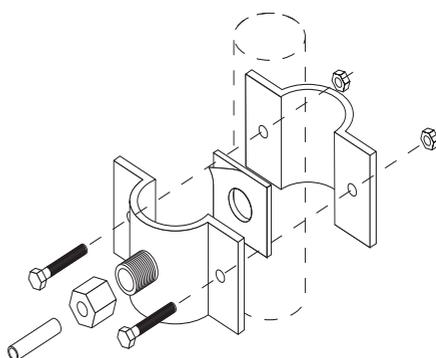
7. Drill a hole with a diameter of 12 mm in the sink (countertop).
8. Install the rubber gasket (9) from below into the stand (8). Insert the threaded shank of the stand into the hole on the countertop.
9. From the bottom of the tabletop, put plastic (10) and metal lock washers (11) on the threaded shank and tighten the nut (12).

10. Insert the free end of the tube extending from the clean water tip into the stand hole (8). Establish a stop: from the bottom of the tabletop put on the free end of the tube a sleeve (13) and then a collet (14). The recommended distance from the end of the threaded shank to the sleeve is about 600 mm.

Installing a drain clamp

It is recommended to install the clamp on the drain of the sink (sink) before the siphon (the drain clamp fits most drain pipes with a diameter of about 40 mm).

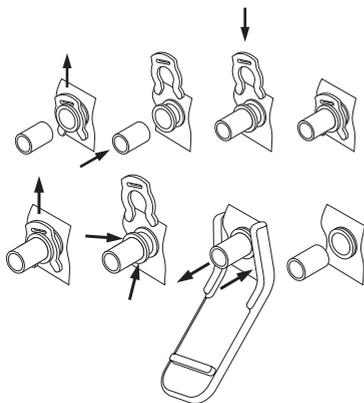
11. Remove the protective film from the gasket. Glue the gasket on the inside of the clamp so that the hole in the gasket matches the hole in the clamp fitting.
12. Install the clamp to the pipe and then tighten the bolts. Bolts should be tightened evenly so that the two parts of the clamp are parallel.
13. Drill a hole with a diameter of 7 mm through the clamp fitting. Put a plastic nut on the free end of the drainage tube (black) and, inserting the tube into the drainage clamp by 20-30 mm, screw the nut onto the fitting.
14. Assemble the water purifier by installing the cartridges in the collector (see the «Installing Cartridges» section). The procedure for installing cartridges is shown in the “Water purifier installation diagram”.



NOTE. There is no need to install a membrane cartridge at this point. To flush the filter, screw the flushing plug into the middle socket of the manifold.

Connecting tubes

Connect the pipes supplied with the water purifier in accordance with the "Water purifier installation diagram". Red tube – from the connection node to the input fitting of the collector block. Black tube – from the collector block to the drain clamp. White tube – from the tap for clean water to the output block of the collectors.



How to connect the tubes

Remove the locking clip from under the plastic sleeve, insert the end of the tube pre-wetted with water into the fitting sleeve until it stops at a depth of about 15 mm, and reinstall the clip.

How to disconnect the tubes

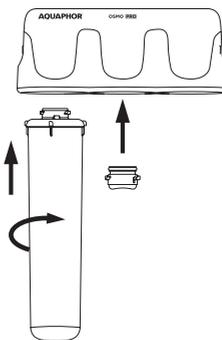
Remove the locking clip from under the plastic sleeve and, pressing the end of the plastic sleeve with a wrench (supplied with the water purifier), pull out the tube.

ATTENTION! Check the tightness of the tube fastening – with a force of 80–100 N the tube should not be pulled out.

Cartridge Installation

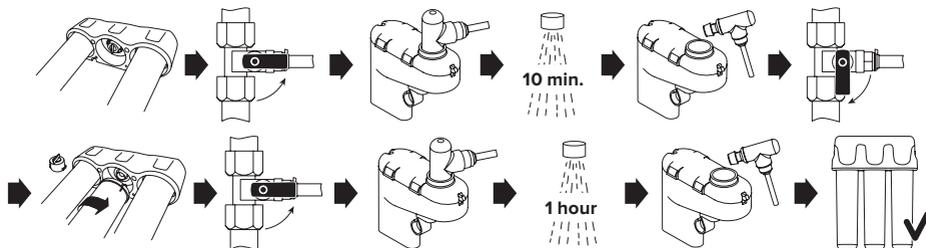
To install a filter cartridge:

- remove the protective film from the cartridge;
- make sure that the inner surfaces of the connecting flange of the cartridge are clean (there is no carbon dust, etc.); if necessary, flange the cartridge under running water;
- Insert the cartridge into the collector until it stops and, while slightly pressing, turn clockwise until it clicks.



NOTE. There is no need to install a membrane cartridge at this point. To flush the RO-312S Pro, screw the flushing plug into the middle slot of the manifold block.

ATTENTION! Unscrewing the cartridge to its final position may cause leaks on the RO-312S Pro connections! The cartridge must be screwed in until it clicks.



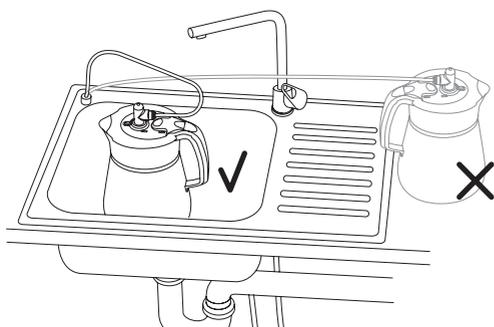
Flushing RO-312S Pro

At the last stage of the preparation of premium drinking water, the RO-312S Pro uses a natural mineral that enriches purified water with useful substances. However, since this mineral is quite fragile, some dust may be formed during transportation, which must be washed off when the water purifier is first started.

ATTENTION! Before flushing, make sure that the cartridges are correctly positioned. The positioning of the cartridges in the water purifier is indicated on the installation diagram of the water purifier.

- Open the inlet tap.
- Insert the tip (7) into the slot of the cutter (17), holding it above the sink.
- Holding the tip, place the cutter in the sink, then drain the water passing through the RO-312S Pro within 10 minutes.
- Disconnect the tip from the cutter by pressing the key located on the end of the cutter.
- Close the inlet tap.
- Instead of a flushing plug, install a membrane cartridge in the middle slot.
- Open the inlet tap.
- Insert the tip into the slot of the cutter, holding it above the sink.
- Holding the tip, put the cutter in the sink, then drain the water from the water purifier for 1 hour.
- Disconnect the tip from the cutter by pressing the key located on the end of the cutter.
- Ensure that the RO-312S Pro connections are tight.

ATTENTION! The water that was obtained as a result of washing is not intended for drinking.



Operation of RO-312S PRO

For the first week of operation, check the RO-312S Pro daily for leaks. In the first week of operation of the RO-312S Pro, when switching the automatic valve, noise may be observed associated with the release of air from the internal cavities of the water purifier. This is not a malfunction.

Storage Capacity Operation

When connecting the tip (7) for clean water to the storage tank (18), water begins to flow into it. After collecting water and raising the float, which is located inside the cutter (17), the tip is disconnected from the socket, the shut-off valve is activated, and the water supply is stopped. If you need to stop the collection of water in the tank ahead of schedule, just press the button located on the lid of the tank. At the end of the set of water in the storage tank (lasts no more than an hour), return the tip to the stand.

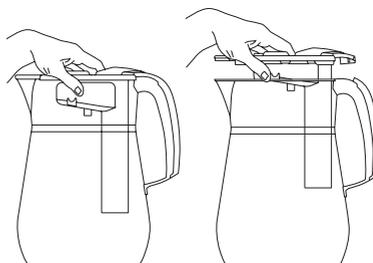
ATTENTION! Do not drop the storage tank.

ATTENTION! For proper operation of the RO-312S Pro, it is not allowed to create a tube tension during the collection of water in the storage tank.

ATTENTION! If the tube is improperly positioned, the tip may automatically turn off and water may spill.

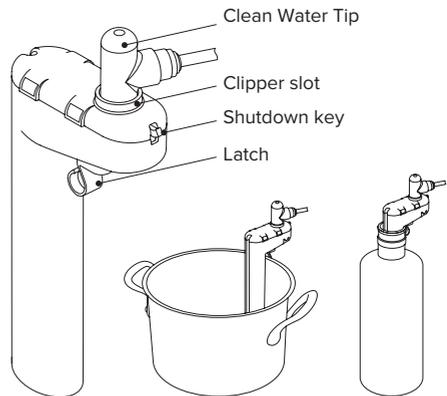
Removing the lid of the storage tank

Pull the cover up while holding the edge of the shoulder (do not grab the reclining nose). Remove the cover with the cutter.



Cutter Operation

- Install the cut-off device as far as it will go into the neck or on the wall of the container (for example, bottles or pans).
- Ensure that the cutter is securely secured with a latch.
- Insert the tip into the cutter hole.
- Wait for the container to fill with clean water, disconnect the tip from it, and turn off the water supply.
- Disconnect the isolator from the container.
- If it is necessary to stop the collection of water into the tank ahead of schedule, just press the button located on the end of the cutter.



Changing the replacement cartridge

The service life of the membrane cartridge (3) directly depends on the performance of the water treatment unit (2). Therefore, it is very important to timely replace the filter cartridges.

Replacing K1 and K7M Cartridges

- Close the inlet valve on the connection unit and connect the tip to the storage tank to relieve pressure.
- Turn the used cartridge counterclockwise and remove it.
- Remove the packing tape from the new cartridge.
- Insert the new cartridge into the manifold block until it stops and, while slightly pressing, turn the cartridge clockwise until it clicks.
- Install the flushing plug in the middle slot (instead of the membrane cartridge).
- Open the input tap on the connection node.
- Insert the tip into the slot of the cutter, holding it above the sink.
- Holding the tip, place the cutter in the sink, then drain the water passing through the RO-312S Pro within 10 minutes.
- Disconnect the tip from the cutter by pressing the key located on the end of the cutter.
- Close the inlet tap.

- Remove the flushing plug and install the membrane cartridge by turning the cartridge clockwise until it clicks.
- Open the inlet crane and make sure that the RO-312S Pro connections are tight.

Replacing a RO-100S Cartridge

- Close the inlet tap and connect the tip to the storage tank to relieve pressure.
- Turn the used membrane cartridge counterclockwise and remove it.
- Remove the packing tape from the new cartridge.
- Insert the new cartridge into the manifold block until it stops and, while slightly pressing, turn the cartridge clockwise until it clicks.
- Open the inlet tap.
- Insert the tip into the slot of the cutter, holding it above the sink.
- Holding the tip, put the cutter in the sink, then drain the water from the water purifier within 1 hour.*
- Disconnect the tip from the cutter by pressing the key located on the end of the cutter.
- Open the inlet crane and make sure that the RO-312S Pro connections are tight.

* Depending on the conditions of storage, transportation and operation, the time for complete washing of the membrane cartridge may vary, but takes no more than 24 hours.

Safety



At installation:

It is not recommended to carry out the work of connecting the RO-312S Pro to the water supply network yourself. To connect the RO-312S Pro, it is recommended to contact the service department of Aquaphor or regional dealers of Aquaphor. The manufacturer is not responsible for the inadequate quality of work on connecting the RO-312S Pro to the water supply network, as well as for the result of this work.

Responsibility for the shortcomings of this work, as well as for causing harm to the health or property of the consumer or other persons as a result of these shortcomings, lies with the performer of this work.



It is forbidden to replace the connection node included in the kit with a connection node of another model.



During operation:

RO-312S Pro is designed to post-treat and soften water from municipal water supply systems that meet sanitary standards.

It is recommended to analyse the source water for compliance with national standards for drinking water when installing RO-312S Pro outside municipal water supply systems. The service life of the pre-treatment unit and the reverse osmosis membrane may be reduced if the source water does not meet the requirements of national standards for drinking water.



It is recommended to install additional water treatment systems (iron removers, softeners, disinfectants, mechanical filters, etc.) if the source water significantly differs from the requirements of national standards for drinking water.

It is recommended to use RO-312S Pro as a post-treatment unit for microbiologically safe water, although this reverse osmosis system can trap out bacteria and viruses from the source water.

Further, the treated water should be tested regularly (once a year) to make sure your RO-312S Pro functions properly.

An additional test is recommended if the taste or smell of the water changes.

If the test results are unsatisfactory, it is not allowed to drink the water, and you should contact your service provider.



It is recommended to analyse the treated water for compliance with national standards for drinking water after your RO-312S Pro is installed.



Do not use the system to treat unknown water without additional disinfection.



Treated water is not subject to long-term storage.

It is recommended to use fresh filtered water.



It is disposed of in accordance with environmental, sanitary and other requirements set forth in national standards for environmental protection and ensuring the sanitary and epidemiological welfare of the population.

Terms of Service and Warranties

Aquaphor Water Filters products are backed by some of the most comprehensive warranties in the industry. Aquaphor warrants that the Aquaphor water filtration system shall be free from defects in material and workmanship under normal use and service.

Reverse osmosis system Aquaphor, Model RO-312S Pro – Two Year Warranty from the date of purchase. This does not apply, however, to consumable filters.

Exclusions and Limitations

1. Aquaphor warrants its products to be free from manufacturing defects under normal use and service. This warranty is extended only to the ORIGINAL PURCHASER.
2. Aquaphor obligations under this warranty are limited to repairs or replacement, at Aquaphor's option, of products or parts found to be defective, provided that such products were properly installed and used in accordance with instructions. Aquaphor reserves the right to make such inspections as may be necessary in order to determine the cause of the defect. Aquaphor will not charge for labor or parts in connection with warranty repairs for the first full year from date of purchase on all products except those that may be subject to commercial use limitations.
3. Aquaphor is not responsible for the cost of removal, return (shipping) and/or reinstallation of products.

This warranty does NOT apply to:

- Damage or loss which occurs during shipment.
- Damage or loss sustained through any natural or man-made causes beyond the control of Aquaphor, including but not limited to fire, earthquake, floods, etc.
- Damage or loss resulting from sediments or foreign matter contained in a water system.
- Damage or loss resulting from negligent or improper installation including installation of a unit in a harsh or hazardous environment.
- Damage or loss resulting from removal, improper repair, modification of the product,

or improper maintenance including damage caused by chlorine or chlorine related products.

- Damage or loss resulting from acts which are not the fault of Aquaphor or which the Product is not specified to tolerate.
4. This warranty gives you specific legal rights. You may have other rights which vary from state to state.

THIS WRITTEN WARRANTY IS THE ONLY WARRANTY MADE BY AQUAPHOR. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY SHALL BE THE EXCLUSIVE REMEDY AVAILABLE TO THE PURCHASER.

AQUAPHOR SHALL NOT BE RESPONSIBLE FOR LOSS OF USE OF THE PRODUCT OR FOR OTHER INCIDENTAL, SPECIAL, FOR CONSEQUENTIAL DAMAGES OR EXPENSES INCURRED BY THE PURCHASER OR FOR LABOR OR OTHER COSTS DUE TO INSTALLATION OR REMOVAL OR COSTS OF REPAIRS BY OTHERS, OR FOR ANY OTHER EXPENSE NOT SPECIFICALLY STATED ABOVE. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE.

LAW, ANY IMPLIED WARRANTIES, INCLUDING THAT OF MERCHANTABILITY, ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS, SO THE ABOVE LIMITATION AND EXCLUSION MAY NOT APPLY TO YOU.

Service life (operating time) of replaceable filtering cartridges:

Name	Service life (operating time)
K1 replaceable filter cartridge:	up to 6 months*
RO-100S replaceable membrane cartridge:	1.5–2 years**
K7M replaceable filter cartridge:	1 year
The data are based on the consumption of 10–12 litres of drinking water per day by a family of 3–4 people.	

* The service life (operating time) of the water pre-treatment cartridge may vary depending on the amount of impurities in the source water. The service life (operating time) of the cartridges is indicated for water that meets sanitary standards. K1 replaceable filter cartridge must be changed

** The service life of the RO-100S membranes cartridge directly depends on the performance of the pre-treatment cartridges. Please, replace exhausted filter cartridges in a timely manner. every 1–3 months if water entering your RO-312S Pro does not meet sanitary standards (with a high content of mechanical impurities).

The RO-312S Pro shelf life (with a set of replaceable filter cartridges) is 3 years before operation when stored at + 5 to + 40 °C, without breach of packaging.

If you have any issue with the operation of your RO-312S Pro, please, contact the seller or the manufacturer.

Fault table

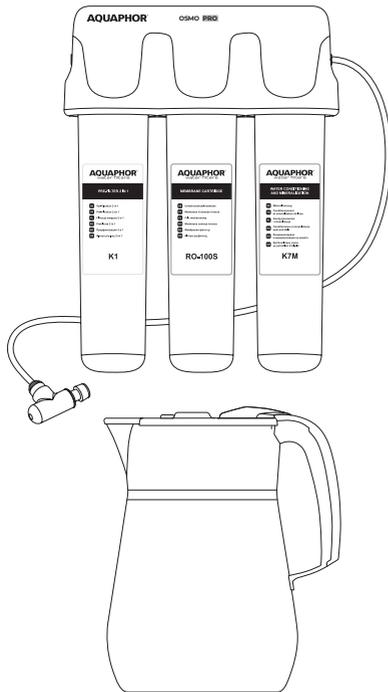
Fault	Cause	Remedy
Storage tank is filling slowly or not at all	Block cartridge is clogged pretreatment	Replacing the cartridge pre-treatment unit
	Clogged membrane cartridge	Replacing a Membrane Cartridge
	Defective diaphragm valve	Contact customer service
	Connection unit tap closed	Open the tap on the connection unit
	Low inlet pressure	Installation of a boost pump for the entire apartment or separately on the filter
	Foreign object in one of the supply tubes	Contact customer service
The storage tank is full, but water continues to flow into the drain	Auto valve defective	Contact customer service
	Cartridges of the pretreatment unit clogged	Replacing the cartridges of the pre-treatment unit
	Clogged membrane cartridge	Replacing a Membrane Cartridge
There is no water in the drain	Restrictor clogged (drainage restriction)	Contact customer service





AQUAPHOR RO-312S PRO

REVERSE OSMOSIS SYSTEM



The Quality Management System is certified according to ISO 9001.

Manufacturer:

Westaqua-Invest OÜ division of Aquaphor Corp., L. Tolstoi 2A, Sillamae, Estonia, 40231.

www.aquaphor.com

The manufacturer reserves the right to make improvements to the design of the Aquaphor RO-312S Pro without being mentioned in this Manual. The date of manufacture and quality control is indicated on the product serial number label.

The serial number of your water dispenser is indicated on the sticker below.

Reverse osmosis system
Aquaphor RO-312S Pro

AQUAPHOR®
water filters

Sale Date / Store Stamp

Product serial number.