AQUAPHOR®
water filters

AQUAPHOR RO-31

DRINKING WATER MACHINE

Owner's manual

RO – A new category of household appliance that allows you to obtain premium drinking water.
AQUAPHOR RO – A combination of the world's best achievements in water treatment and AQUAPHOR technologies.

Unique ion fiber
Effectively and irreversibly removes heavy metals. Carbon block with AQUALEN™ completely removes chlorine, organic substances and carcinogens.

Absorbs free radicals
DWAY (DOUBLE WAY) is a unique technology of water conditioning and optimization, pH and microelements balance.

STC (Safe To Consume)
Materials are certified for contact with drinking water and food.

Click & Turn
Easy cartridge replacement. Clear and safe maintenance.

1. PRODUCT ASSEMBLY

№	Name	Quantity
1.	Storage tank with cover and float	1 pc.
2.	Web-clipper	1 pc.
3.	Water conditioning cartridge	1 pc.
4.	Collector block assembly	1 pc.
5.	Replacement cartridges	
	5.1. Replacement purifying cartridge K5	1 pc.
	5.2. Replacement purifying cartridge K2	1 pc.
	5.3. Replacement membrane cartridge Aquaphor RO-100S	1 pc.
6.	Connecting tubes.	
	- blue color (1,2 meters)	2 pc.
	- red color – drain (1,3 meters) with built-in floe restrictor	1 pc.
7.	Tip with a tube	1 pc.
8.	Connection node	1 pc.
9.	Decorative stand with fixing and restrictor	1 set.
10.	Drain saddle	1 set.
11.	Flushing plug	1 pc.
12.	Plastic key	1 pc.
13.	Fixer	1 set.
14.	Water conditioning cartridge mounting kit	1 pc.
15.	Owner's manual	1 pc.

2. TECHNICAL CHARACTERISTICS

Operational parameters (length × height ×width) Located under the sink	265×365×100 mm (10,4×14,4×39,4 inches)
Operational parameters of the storage tank (length × height ×width) Located on the countertop	280×265×110 mm (11,0×10,4×4,3 inches)
Operational parameters of the web clipper (length × height ×width)	110×200×45 mm (4,3×7,9×1,8 inches)
Operational parameters of the water conditioning cartridge (length × height ×width)	60 × 60 × 270 mm (2,4×2,4×10,6 inches)
Minimal operating pressure	0,15 MPa (1,5 bar or 22 psi)
Water supply system pressure, maximum allowable	0,63 MPa (6,3 bar or 91,4 psi)
Water temperature	from +5 to +38 °C (41F to 100F)
Storage tank time filling (if pressure is 0,3 Mpa or 3,0 bar or 44 psi) (depends on water mineralization and temperature)	from 15 to 60 minutes
The ratio of purified and drainage water (if the outlet water temperature in DMW is not lower than +20 °C (68F) and water pressure not lower than 0,2 Mpa (2,0 bar or 29 psi)	(1:4–1:6)
The weight, no more than	5 kg (11 pounds)

3. INTRODUCTION

Aquaphor RO-31 (further referred to as “RO”) manufactured by Aquaphor Corporation.

RO is designed for drinking water post-treatment from mechanical and colloidal particles, organic impurities, bacteria, hard water components and other objectionable water impurities. RO eliminates unwanted odors, flavors and discoloration of water, supplied by municipal and local water networks (water from artesian water sources, wells, etc.), when meeting the requirements of this manual. RO materials are safe, non-toxic and do not exude substances dangerous to human health and the environment.

4. DMW MAIN BLOCKS AND OPERATION PRINCIPLES

Collector blocks consist of housing, with three collectors fixed onto it, to replace the replacement cartridges. Automatic valves have holes for wall mounting (fig. 1).

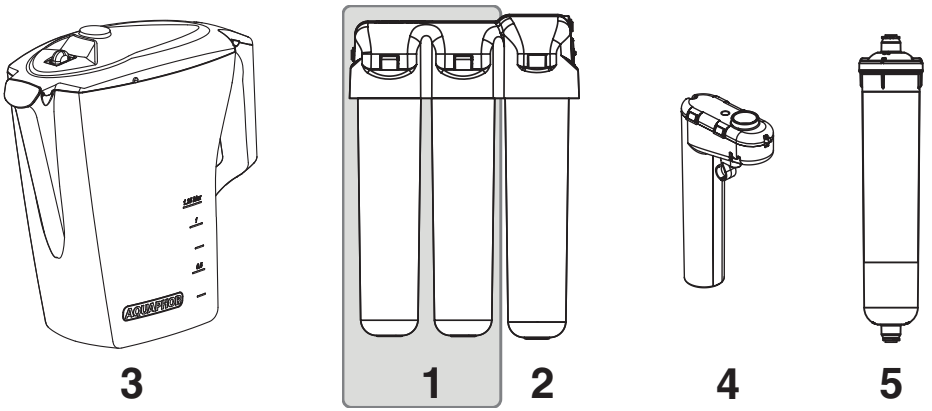

Figure 1

The water treatment block (1) pre-purifies and prepares the water for the membrane separation stage. This block includes the replacement cartridge K5 (installed in the first position according to the water flow path) and replacement cartridge K2 (installed in the second position). The preliminary water treatment block purifies water from mechanical impurities, active chlorine, oil by-products, phenols, pesticides, chloroform and heavy metals.

Membrane cartridge (2). Here, water divides into two streams: purified water, ready for further treatment and drain water, which includes unwanted impurities.

Clean water storage tank (3). When connecting the tip to the storage tank water will begin filling the tank. After filling the tank, the float will rise and the water supply is automatically switched off and the tip disconnects. If it is necessary to stop water filling earlier, just push the button located on the top of the upper lid.

Web clipper (4). Designed for automatic water supplying disconnecting.

Water conditioning cartridge (5). Water conditioning cartridge (further referred to as “conditioning cartridge”) Aquaphor is designed for the correction of acidity (pH) and to enrich the water minerals to improve the flavor and adjustments of the salt balance of drinking water.

5. RO* INSTALLATION

ATTENTION! To install, we recommend contacting our customer service department or an available regional Aquaphor dealer.

ATTENTION! Before installation it is necessary to measure the incoming water pressure to your home. If it exceeds 0,63 MPa (6,3 bar or 91.4 psi), install a pressure regulator with the waste-free operation

* Depending on the amount of impurities in the water, the service life (resource) of the water treatment cartridges may vary (may be shorter or longer than the standard service life).

function (a pressure regulator is not included in the delivery set and would need to be purchased separately).

Locate the appropriate installation place for the clean water tip, working block, water conditioning cartridge and a place for the connection node and drain saddle installation. Take care to ensure that the delivery tubes are pulled freely, without excessive bending. Be mindful that the tubes should be placed where they cannot be pulled out or damaged from foreign objects.

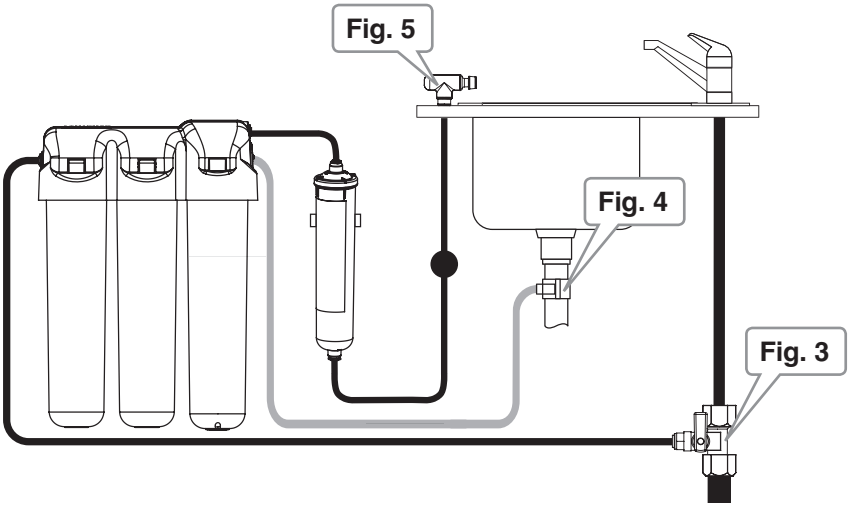

Figure 2

RO must be located away from heat sources (such as cooking stoves, boilers, kitchen ovens, hot water pipes, washing machines, dishwashers and etc.).

Install the storage tank in a safe place, where transfusion water over the edges may not lead to undesirable consequences. It is typically recommended to place the storage tank in the sink when filling.

Connection node assembly (fig. 3)

- Turn the water off at the cold water main.
- Open the kitchen faucet to relieve the pressure in the water supply.
- Connect the connection node to the plumbing.

Connect the JG 1/4" tube. To do this, pull the locking clip off the plastic sleeve, install the plastic tube previously wetted with water into connection node sleeve. Push it approximately 20 mm up to the stop and put the clip back in its place.

Make sure that the tube (3) is tightened correctly: the tube should not be pulled out by a force gr eater than 8–10 kgf (78–98 N).

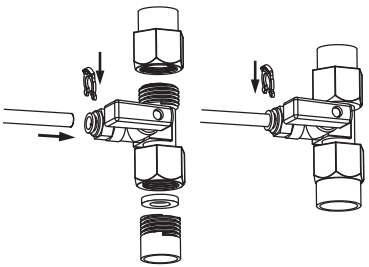

Figure 3

Drain saddle installation (fig. 4)

- Install the drain saddle into the drain line behind the siphon (drain saddle fits to the majority of the drain lines with a diameter of approx. 40 mm). Please be sure to adhere to all local plumbing codes.
- Remove the protective film off the gasket. Attach the gasket inside the saddle, so that the hole in the gasket fits the saddle fitting.
- Install the saddle on the drain line and then tighten the bolts. Bolts should be tightened evenly , so that the two parts of the saddle are placed parallel to each other.
- Drill a 7 mm hole through the saddle fitting.
- Put the nut on the free end of the JG drain tube (red color) then, when inserting the tube to the drain saddle on 20–30 mm, put the nut on the fitting.

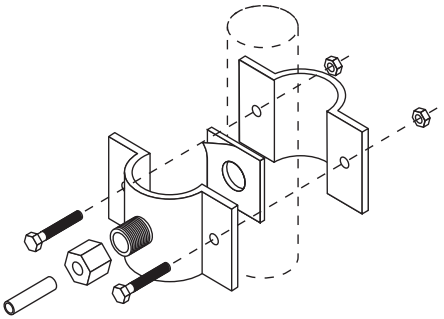

Figure 4

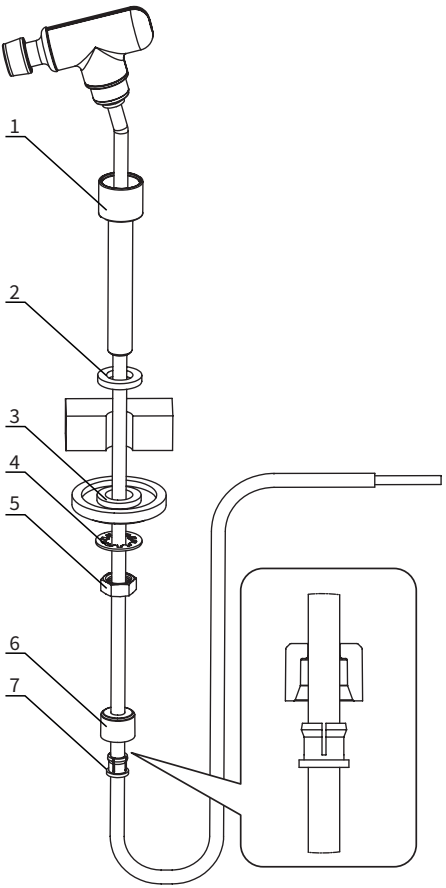

Figure 5

Clean water tip installation with the stand and the restrictor (fig. 5)

- Drill a 12 mm hole in the sink (counter top).
- Install the rubber gasket (2) on the bottom of the stand (1).
- Insert the threaded tail of the stand into the countertop hole.
- Under the countertop, attach the threaded tail of the plastic and metal lock washer (3, 4) and screw on the nut (5).
- Insert the free end of the tube into the stand hole (1) which is going from the clean water tip.
- Under the countertop, put the free end of the plastic tube into the sleeve (6), and then the collet. (7) The distance between the end of the threaded tail (1) to the sleeve (6) should be approx. 600 mm.

Collector block installation

Fix the block to make the distance under the water purifier with no less than 50 mm of free place. It is necessary to make a convenient location for the purifying cartridges and drain tube replacement. Take care to ensure that the delivery tubes are pulled freely, without excessive bending.

Conditioning cartridge installation (fig. 6)

- Locate an appropriate place for the conditioning cartridge.
- Install the bracket at the selected location using the supplied hardware (fig. 6a)
- Remove the transport plugs from the conditioning cartridge, located in the JG sockets (fig. 6b).
- Install the conditioning cartridge to the bracket by pressing on it (fig. 6c).

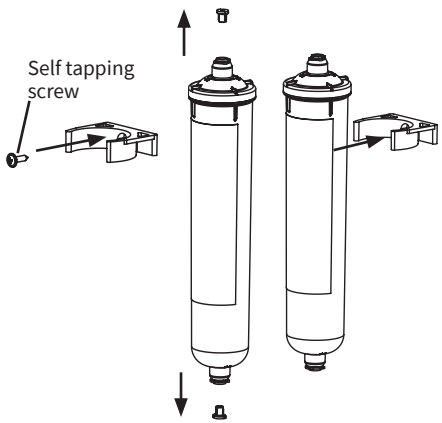

Figure 6a **Figure 6b** **Figure 6c**

6. STARTING THE RO

To start the RO, it is necessary to connect the supply tubes and carry out the washing procedure of the cartridges

Step 1 – Connect the delivery tubes according to fig. 2.

Blue tube – from the connection node to the inlet collector block fitting.

Blue tube – from the inlet fitting of the conditioning block to the inlet conditioning cartridge fitting (if necessary, shorten the tube).

Red tube – from the saddle to the drain fitting of the collector block.

White tube – from the end of the clean water tip to the outlet fitting of the conditioning cartridge.

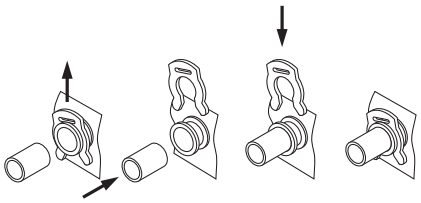

Figure 7a

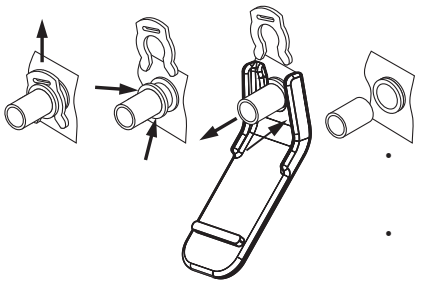

Figure 7b

How to connect the tubes (fig. 7a)

Remove the locking clip from the plastic sleeve. Insert the pre-wetted end of the tube into the nozzle sleeve until it stops at a depth of approximately 15 mm (0,6 inches) and put the locking clip back .

Check the strength of fixing the tube: with a force of 8–10 kgf (78,4–98 N) the tube should not be pulled out.

How to disconnect the tubes (fig. 7b)

To disconnect the tubes pull the locking clip out from the plastic sleeve by pushing the butt of the plastic sleeve, then pull the tube.

Step 2 – Install the filter cartridges.

Remove thermostatic tape and transporting plugs from the cartridges.

Make sure, that the inside surfaces of the subunit flange cartridges are clean (no coal dust, debris, etc.). If there is any dust, flush it under water.

According to the (fig. 9) “the position of the cartridges In the RO”, install the cartridges in the position “for flushing”. For this insert the cartridge up to the stop to the appropriate collector and turn it in a clockwise direction until you hear a click (fig. 8a).

- For cartridge connection press the button and turn the cartridge counterclockwise (fig. 8b).

Step 3 – Flush the RO.

- Open the inlet valve;
- Insert the tip into the socket of the web clipper (fig. 14a), holding it above the sink;
- Holding the tip with your hand , put the web clipper in the sink, drain the water out from the water purifier for 10 minutes;
- Disconnect the tip from the web clipper by pressing the button located on the slam end (fig. 14b);
- Close the inlet tap;
- Place the modules in the “For operation” position (see fig. 9);
- Open the inlet tap;
- Insert the hand piece into the slot of the storage container lid;
- Wait for the water to enter the storage tank and drain the water;
- Repeat this procedure 2 times.

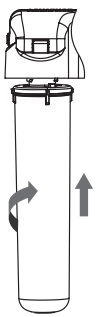

Figure 8a

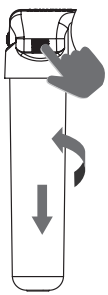

Figure 8b

For the last stage of preparation for premium-class drinking water, the RO uses a natural mineral that allows one to achieve a beneficial dosing of useful substances into the purified water. However, since this mineral is rather fragile, during transportation some dust may be generated that must be washed off when the water purifier is first started.

ATTENTION! Do not drink the water that was obtained during the flushing procedure.

During the first week of operation, check the RO daily for leaks.

In the first week of operation of the water purifier, when the automatic valve is actuated, noise may be observed associated with the air outlet from the internal cavities of the water purifier. After a while, this process will stop. This is not a malfunction.

The position of the cartridges In the RO

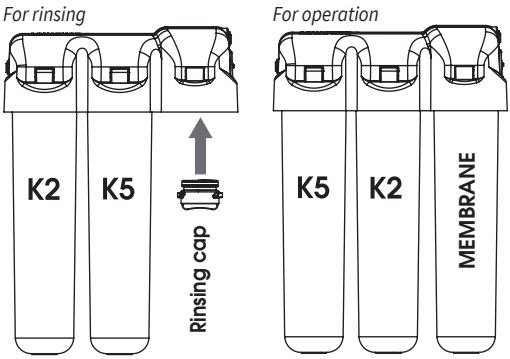

Figure 9

7. OPERATION OF THE RO

When connecting the tip to the collection bowl, water starts flowing.

After the water is filled and the float is risen up, the tip is automatically disconnected.

If you want to stop the filling of water into the bowl ahead of schedule, just press the button located on the top of the bowl cover.

Return the nose into the cradle not later than 1 hour after the start of filling the collection bowl with water.

ATTENTION! For proper operation of the RO, it is not allowed to create tension of the tube while filling the collection bowl with water. Fig. 10a and 10b show the correct and incorrect placement of the tube and the collection bowl during filling with water.

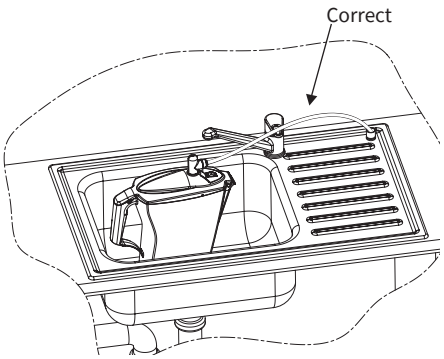

Figure 10a

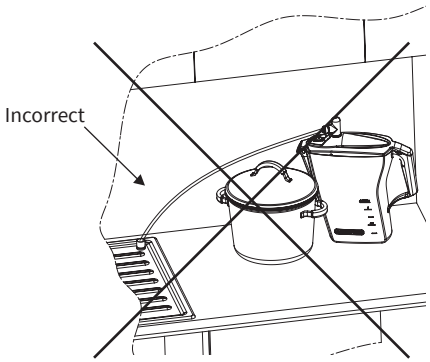

Figure 10b

At the wrong positioning of the tube, the tip's automatic shut-off system may not work correctly, resulting in possible spillage or overflowing.

Removing the cover of the collection bowl (fig. 11a, 11b)

- Pull the front of the cover (in the nozzle) upward to form the small gap between the cover and the machine as shown in (fig. 11a).
- Press down your thumb on the back of the cover until it moves forward, as shown in (fig. 11b).

ATTENTION! Do not drop the bowl.
Shutoff device operation

- Put the shutoff all the way into the neck of the bowl (e.g. bottle, fig. 12a), or a vessel wall (e.g. pot, fig. 12b).
- Make sure that the shutoff is securely latched (fig. 13a, 13b).
- Insert the tip into the hole of the shutoff (fig. 14a).
- Wait for the bowl to fill with clean water before the automatic shutting off of the water supply and disconnecting the tip.

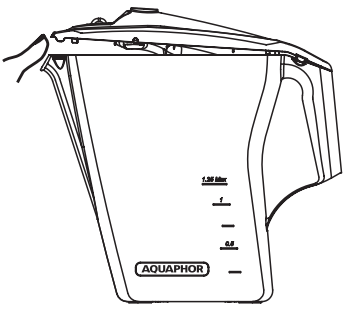

Figure 11a

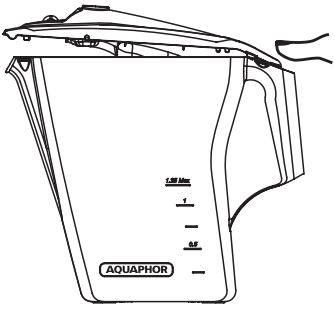

Figure 11b

- Disconnect the shutoff from the bowl.
- If you want to stop filling the bowl ahead the schedule, click on the button at the end of the shutoff (fig. 14b).

8. SYSTEM MAINTENANCE

The service life of the membrane module is directly dependent on the performance of the water treatment unit. Therefore, it is very important to replace the filter modules on time.

To replace the K5 plug-in module:

- Close the inlet tap and connect the nozzle to the storage tank to relieve the pressure.
- Pressing the lock button fully in this position, turn the used filter module clockwise and remove it.
- Remove the packaging film from the new module;
- Insert the new module into the collector block until it stops and, lightly pressing, turn the module clockwise until it clicks.
- Open the inlet tap and make sure the RO is tight.
- Insert the assembled module into the collector block until it stops and, while slightly pressing, turn the module clockwise until it clicks.
- Open the inlet tap and make sure the RO is tight.

To replace the K2 plug-in module:

- Close the inlet tap and connect the nozzle to the storage tank to relieve the pressure.
- Pressing the lock button fully in this position, turn the used filter module clockwise and remove it.
- Remove the packaging film from the new module.
- Insert the new module into the collector block until it stops and, while lightly pressing, turn the module clockwise until it clicks.
- Open the inlet tap and make sure the RO is tight.
- Insert the assembled module into the collector block until it stops and, while slightly pressing, turn the module clockwise until it clicks.
- Open the inlet tap and make sure the RO is tight.

To replace the K2 plug-in module:

- Close the inlet tap and connect the nozzle to the storage tank to relieve the pressure.
- Pressing the lock button fully in this position, turn the used filter module clockwise and remove it.
- Remove the packaging film from the new module.
- Place the modules in the “flush” position (see fig. 9 “The position of the modules in the RO”).
- Open the inlet tap.

- Insert the tip into the hole of the shutoff (fig. 14a), holding it over the sink.
- Holding the tip with your hand, put the shutoff into the sink, then drain the water from the water purifier for 20–30 minutes.
- Disconnect the tip from the shutoff by pressing the button located on the shutoff end (fig. 14b).
- Close the inlet tap.
- Place the modules in the “for operation” position (see pig. 9 “Position of the modules in the RO”).
- Open the inlet tap and make sure the RO is tight.

To replace the K0-100S replacement module:

- Close the inlet tap and connect the nozzle to the storage tank to relieve the pressure.
- Pressing the lock button fully in this position, turn the used filter module clockwise and remove it.
- Remove the packaging film from the new module.
- Insert the assembled module into the collector block until it stops and, while slightly pressing, turn the module clockwise until it clicks.
- Open the inlet tap.
- Insert the tip into the hole of the shutoff (fig. 14a), holding it over the sink
- While holding the tip with your hand, put the shutoff into the sink, then drain the water from the water purifier for 1 hour.
- Disconnect the tip from the shutoff by pressing the button located on the shutoff end (fig. 14b).
- Make sure the RO is sealed.

Conditioning cartridge replacement:

- Close the inlet tap and connect the storage tank tip to relieve the pressure.
- Disconnect the JG tube from the outlet nipple. To do this, remove the retaining clip from under the plastic bushing, press down on the end of the plastic bushing and pull out the tube.
- Disconnect the blue JG tube from the inlet fitting. To do this, remove the retaining clip from under the plastic bushing, press down on the end of the plastic bushing and pull out the tube.
- Remove the conditioning cartridge from the bracket. To do this, grab the module and pull it towards you.
- To install a new conditioning cartridge, follow the same steps in reverse order. Before installing the module, do not forget to remove the transport plugs (see paragraph “Installing the conditioning cartridge”).
- Open the inlet tap and make sure the RO connections are tight.
- Fill and drain the storage tank once.

After replacing the conditioning cartridge:

Fill and drain the storage tank once.

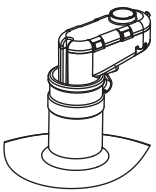

Figure 12a

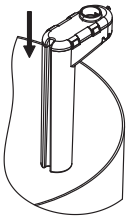

Figure 12b

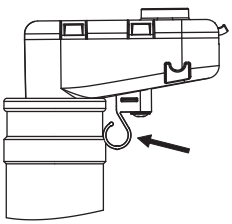

Figure 13a

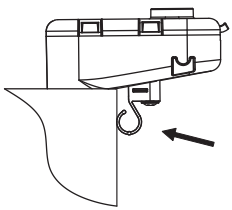

Figure 13b

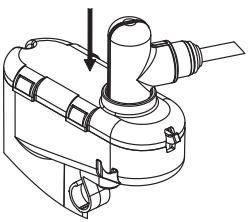

Figure 14a

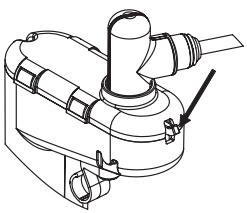

Figure 14b

9. STORAGE AND TRANSPORTATION RULES

The membrane cartridge is supplied in sealed packaging. Having opened the package, store the membrane cartridge for no longer than 3 days. Do not expose the membrane cartridge to high and low temperatures or direct sunlight. It is prohibited to turn the RO upside down, hit it or expose to mechanical influences/impacts.

The RO is transported by all kinds of covered vehicles. Dispose in accordance with environmental, sanitary and other requirements established by national standards of environmental protection and sanitary-epidemiological well-being of the population.

10. WARRANTY

Installation, operational, storage and transportation rules described in this manual should be maintained. The manufacturer is not responsible for operation of the Aquaphor RO and possible consequences, in case if:

- RO or components have visible mechanical, thermal or chemical damages;
- requirements for installation and operation of the RO described in the manual were not carried out.

The lifetime of the RO components is:

- RO case – 5 years** starting from the manufacturing date;
- Connecting pipes – 3 years* starting from the manufacturing date;
- Purified water faucet – 3 years* starting from the manufacturing date.
- The lifetime (capacity) of the replacement filter cartridges is:

Name of the replacement filter cartridge	Lifetime (capacity) of the replacement filter cartridge
K5	3 months*
K2	3 months*
Membrane cartridge Aquaphor RO-100S	1,5 years**
Conditioning cartridge	1 year

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 material defects and workmanship under normal use and service.

Aquaphor RO-31 – One Year Warranty.

100% coverage of all parts and labor for the entire product for the first year from original 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, when applicable.

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 sediment 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.

* Depending on the amount of impurities in the water, the service life (resource) of the water treatment cartridges may vary (may be shorter or longer than the standard service life).

** Service life of membrane element is directly dependent on the operation of pre-treatment cartridges. Please replace filter cartridges timely.

- 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 LIMITATIONAND EXCLUSION MAY NOT APPLY TO YOU.

How to Obtain Service

To obtain repair service under this warranty, you must contact an authorized Aquaphor Service Center to obtain an RMA (Return Merchandise Authorization) number. Proof of purchase in the form of a copy of the original receipt must accompany the returned unit for the warranty to be valid. Take or ship the unit pre-paid to the closest Aquaphor authorized service center along with the RMA number and proof of purchase.

Warranty coupon Aquapor RO-31

Serial #	
Date of Sell	
Seller's stamp	
Seller's signature	

Please visit our website and register your RO at aquaphor.com/register for manufacturer's warranty.

Installation information

Installation is carried out: Name of the company which carried out installation:	
Name of the service engineer:	
Service engineer's signature:	
Client's signature:	
For installation, operational and technical maintenance, please, contact:	

Manufacturer:

EE Westaqua-Invest OÜ division of Aquaphor Corp., L. Tolstoi 2A, Sillamäe, Estonia, 40231. www.aquaphor.com

The manufacturer reserves the right to make improvements to the design of the Aquaphor RO without being mentioned in this Manual.

AQUAPHOR RO-31
(Drinking water machine Aquaphor DWM-312S)
Serial#, production facility location, date of manufacturing and quality control: