

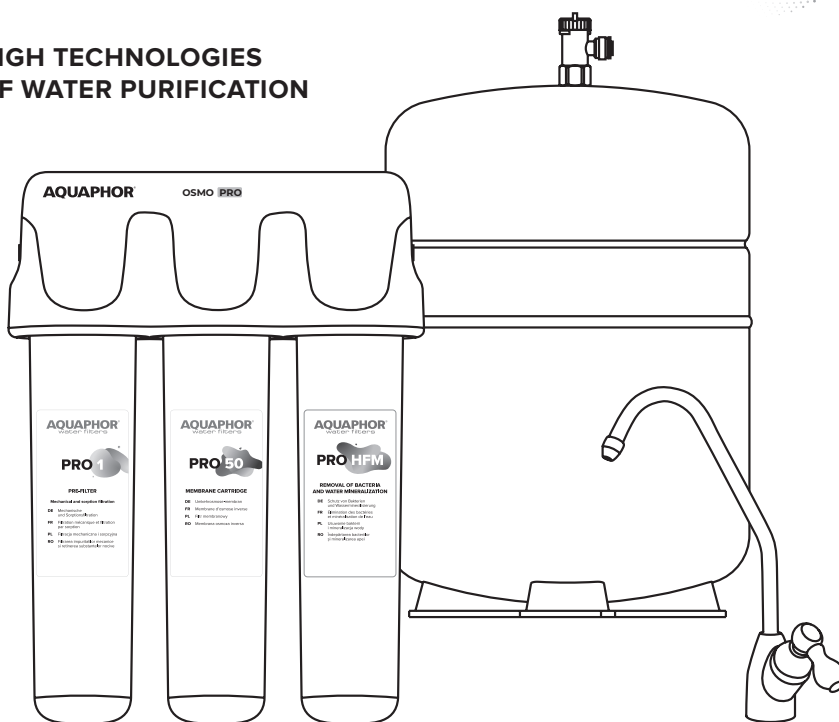
AQUAPHOR®

water filters

MANUAL

NEW

HIGH TECHNOLOGIES
OF WATER PURIFICATION



OSMO PRO 50	PRO 1 PRO 50 PRO M
OSMO PRO 50 EU	PRO 1 PRO 50 PRO HFM

OSMO PRO 100	PRO 1 PRO 100 PRO M
OSMO PRO 100 EU	PRO 1 PRO 100 PRO HFM

High technologies of water purification



AQUALEN™

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



STC (Safe To Consume)

The materials used in the Aquaphor OSMO Pro water purifiers comply with the world food grade safety class, i.e. they are certified for contact with drinking water and food.



CFB (CarbFiber Block)

“Carbon Block with Fiber” (CFB) is a technology of manufacturing filtering media with different porosity for water with any level of contamination. CFB significantly extends the service life of the Aquaphor replaceable cartridges without compromising the purification quality.



DWAY (DOUBLE WAY)

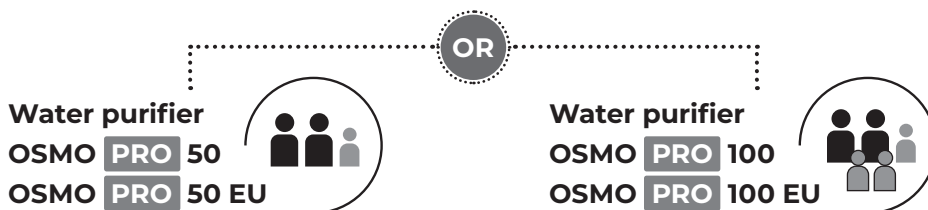
Unique technology for conditioning water and optimizing the balance of pH and trace elements.



AUTO LOCK

Instant replacement of cartridges. Clean and safe service.

CHOOSE YOUR FILTER



Please read these instructions carefully and keep them for future reference.

The water purifier AQUAPHOR OSMO Pro (hereinafter referred to as OSMO Pro) was manufactured by Manufacturer: Aquaphor International OÜ, L. Tolstoi 2A, Sillamäe, Estonia, 40231. www.aquaphor.com

OSMO Pro is designed for deep purification of drinking water from mechanical and colloidal particles, organic impurities, viruses, bacteria and protozoa*. OSMO Pro eliminates bad taste, odor and colour of water in the conditions of municipal and local water supply networks while meeting the requirements established by this manual.

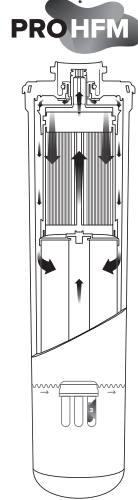
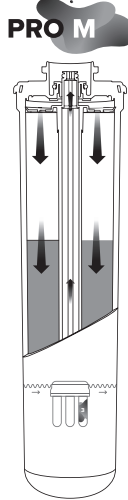
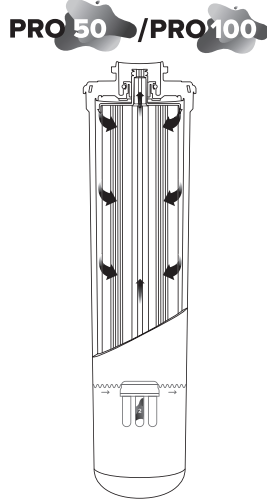
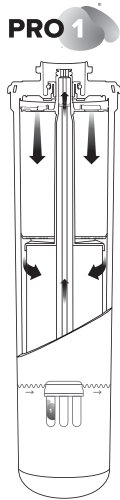
The OSMO Pro action is based on the transfer of a solvent (water) through a semipermeable membrane by applying a pressure exceeding the osmotic pressure from the solution side (water with dissolved impurities in it).

OSMO Pro materials are safe, non-toxic and do not release substances hazardous to human health and the environment into the water. OSMO Pro is hygienic.

ATTENTION! The performance of the reverse osmosis system directly depends on the pressure in the water supply. If the pressure in your water supply is less than 0.34 MPa (3 bar), then we recommend installing a reverse osmosis system with a pressure boosting kit.

* Tested on Escherichia Coli 1257, Enterobacter cloacae, Pseudomonas aeruginosa, Lamblia intestinalis, Bacteriophage MS2.

Pro Cartridges



Pro 1. Mechanical and sorption filtration

- Combines mechanical and sorption filtration in one cartridge.
- Increased AQUALEN™ fiber content combined with gradient porosity up to 3 microns provide exceptionally long filter life.
- Unique ion-exchange fiber AQUALEN™ quickly and irreversibly retains harmful substances, eliminates chlorine, rust and heavy metals.
- Increased AQUALEN™ fiber content allows for better dirt retention and iron removal (Fe^{2+} , Fe^{3+}).

Membrane Pro 50 / Membrane Pro 100. Absolute water softening

- Reverse osmosis membrane for deep purification and softening of water.
- Complete protection against bacteria and viruses.
- Limescale protection.
- Perfect taste of tea and coffee.

- Pro 50 capacity: 190 liters (50 gallons) per day.*
- Pro 100 capacity: 380 liters (100 gallons) per day.*

* Based on standard membrane testing.

Pro M. Water conditioning and mineralization

- Enriches water with useful minerals.
- Improves the taste of drinking water.
- Creates optimal salt balance.
- Contains natural minerals.

Pro HFM. Removal of bacteria and water mineralization

- Natural minerals enrich the water with magnesium.
- Improves the taste of drinking water.
- Creates optimal salt balance.
- Provides water conditioning.
- Complete antibacterial protection thanks to the hollow fiber membrane.
- Filtering of particles over 0.1 microns.

Delivery Set

1.	Housing with black and blue tubes assembled	1 pc.
2.	Replacement cartridges: Replacement filter cartridge Pro 1 Replaceable membrane cartridge Pro 50 or Pro 100 Replacement cartridge Pro M or Pro HFM	1 pc. 1 pc. 1 pc.
3.	Storage tank (with tap and stand)	1 set
4.	Clean water tap	1 set
5.	Blue connecting tube with a pressed brass bushing for connection to a tap for clean water	1 pc.
6.	Red connecting tube 1.3 m	1 pc.
7.	Fasteners for housing	1 set
8.	Connection node	1 set
9.	Drain clamp	1 set
10.	Tube wrench	1 pc.
11.	Flush plug	1 pc.
12.	Operation manual (passport)	1 pc.

Specifications

Overall dimensions of the working unit (length × height × width)	280 × 376 × 105 mm	
Overall dimensions of the storage tank (height × diameter)	360 × 270 mm	
Gross storage tank volume	12 L (3.2 gallons)	
Accumulated clean water volume	8–10 l	
Minimum working pressure of the water supply network	0.34 MPa (3 bar)	
Maximum working pressure of the water supply network	0.63 MPa (6 bar)	
Water temperature	+5...+38 °C	
Maximum productivity (at a water temperature of +25 °C and a pressure of 0.39 MPa)	OSMO Pro 50/ OSMO Pro 50 EU	OSMO Pro 100/ OSMO Pro 100 EU
	7.8 l / h	15,6 l / h
Clean water collection time in the storage tank (depending on the mineralization and temperature of the source water)*	60–120 minutes	
Weight, no more	10 kg	

* The rate of filling the tank and the volume of drainage water depend on the performance of the membrane cartridge and the quality of the water being purified – the lower the temperature of the source water and the higher its mineralization, the slower the filtration and the more water is discharged into the drain.

How OSMO Pro works

Housing consists of a body in which three collectors are fixed for connecting replacement filter cartridges and automatic valves.

Water treatment unit, including the Pro 1 cartridge, purifies water from mechanical suspensions, active chlorine, oil products, phenols, pesticides, chloroform and heavy metals, colloidal and dissolved iron.

Reverse osmosis unit. Here the water is divided into two streams – absolutely clean, ready for further treatment water and drainage water, where all the unwanted impurities remain.

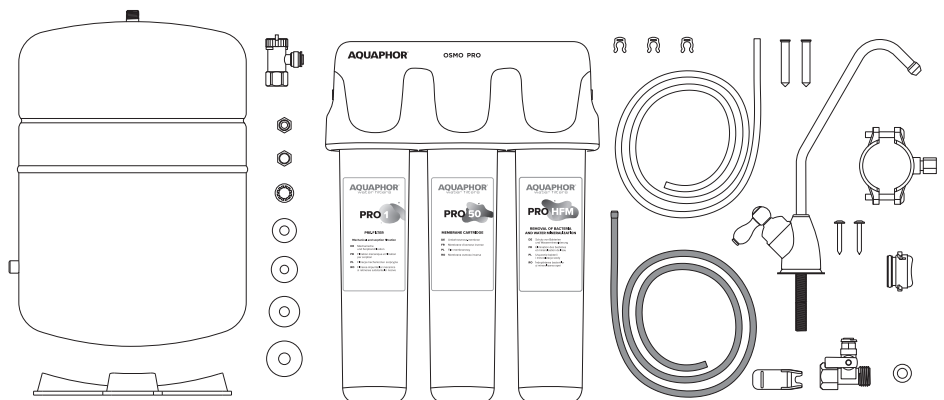
Storage tank for clean water. The performance of a reverse osmosis membrane is low – from 46 to 170 ml per minute (depending on the type of membrane, water temperature and pressure in the water supply system). In order for you to be able to use clean water at any time and in the required quantities, the water, after passing through the membrane, goes into the storage tank.

Water conditioning unit consists of a replaceable filter cartridge Pro HFM, which is designed to optimize the balance of useful 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 the physiologically ideal pH = 7. The concentration of calcium and magnesium ions in this water is from 0.2 to 0.5 meq / l.

From the cold water supply network, water enters the OSMO Pro inlet and passes through the preliminary water treatment unit. Then, through an automatic valve, water enters the reverse osmosis membrane. The housing in which the membrane is located has two outlets – an outlet for clean water and an outlet for drainage water. Through the flow restrictor (restrictor), the drainage water goes into the sewer.

The water purified in the first two blocks enters the storage tank. The storage tank has a built-in membrane with air on one side and water on the other. As the tank is filled with purified water, the air in the tank is compressed. As soon as the storage tank is full, an automatic valve in the reverse osmosis unit will shut off the water flow to the reverse osmosis membrane.

When you open the tap for clean water, the water squeezed out by compressed air flows from the storage tank to the conditioning unit, where the final purification and mineralization of the water takes place. In the reverse osmosis unit, an automatic valve is activated, which opens the water supply to the reverse osmosis membrane.



Installation Guide

ATTENTION! Before installing OSMO Pro, it is necessary to measure the pressure in the water supply system and, if it exceeds 0.63 MPa (6.5 bar), use a pressure regulator with the function of operating in a flow-free mode (the pressure regulator is not included in the delivery set, purchase separately).

ATTENTION! To connect OSMO Pro, it is recommended to contact the service department of Aquaphor or regional dealers of Aquaphor.

Installing OSMO PRO*

1. For installation you will need: a drill, drill bits 7 mm and 12 mm, an adjustable wrench, a screwdriver, a tubular wrench 14 mm.
2. Determine convenient locations for the clean water tap, operating unit, storage tank, installation site for the water supply connection and drain clamp.

Fix the working unit so that the distance between the bottom point of the cartridges and the floor is at least 5 cm. This is necessary for the convenience of replacing the filter cartridges.

Make sure that the connecting pipes are loose and not bent. Free pipe sections should be secured so that they cannot be damaged or pulled out of the connections by other objects.

OSMO Pro must be away from or isolated from heat sources (dishwashers, washing machines, stoves, boilers, hot water pipes, etc.).

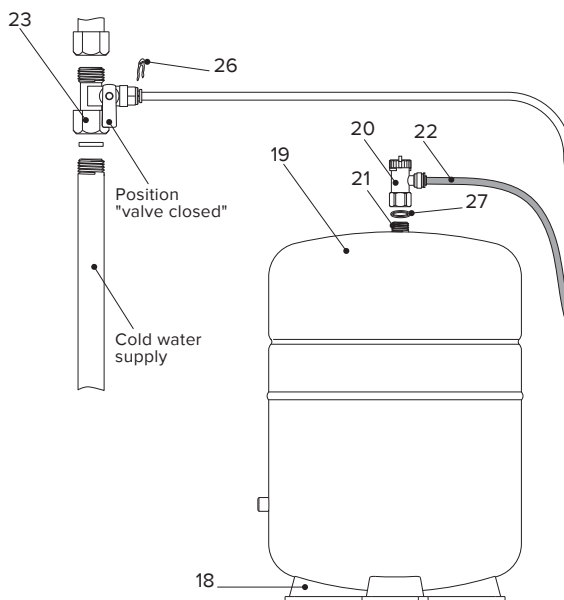
Installation of a tap for clean water

3. Shut off the cold water line and release the pressure by opening the mixer.
4. Make sure there is a gasket in the union nut (15) of the connection unit (23).
5. Drill a 12 mm hole in the sink (countertop).
6. Place the decorative stand (9), a large rubber gasket (10) on the threaded shank (8) of the tap and insert the tap into the hole of the sink.

* The manufacturer reserves the right to use components of a similar design.

Water purifier installation diagram

- | | |
|---|---|
| 1. Housing | 1 |
| 2. Water treatment unit | 1 |
| 3. Reverse osmosis unit | 1 |
| 4. Water conditioning unit | 1 |
| 5. Outlet fitting | 1 |
| 6. Connecting tube (blue) with tapered sleeve | 1 |
| 7. Clean water tap | 2 |
| 8. Threaded shank | 2 |
| 9. Decorative stand | 2 |
| 10. Rubber gasket, large | 2 |
| 11. Small rubber gasket | 2 |
| 12. Plastic lock washer | 2 |



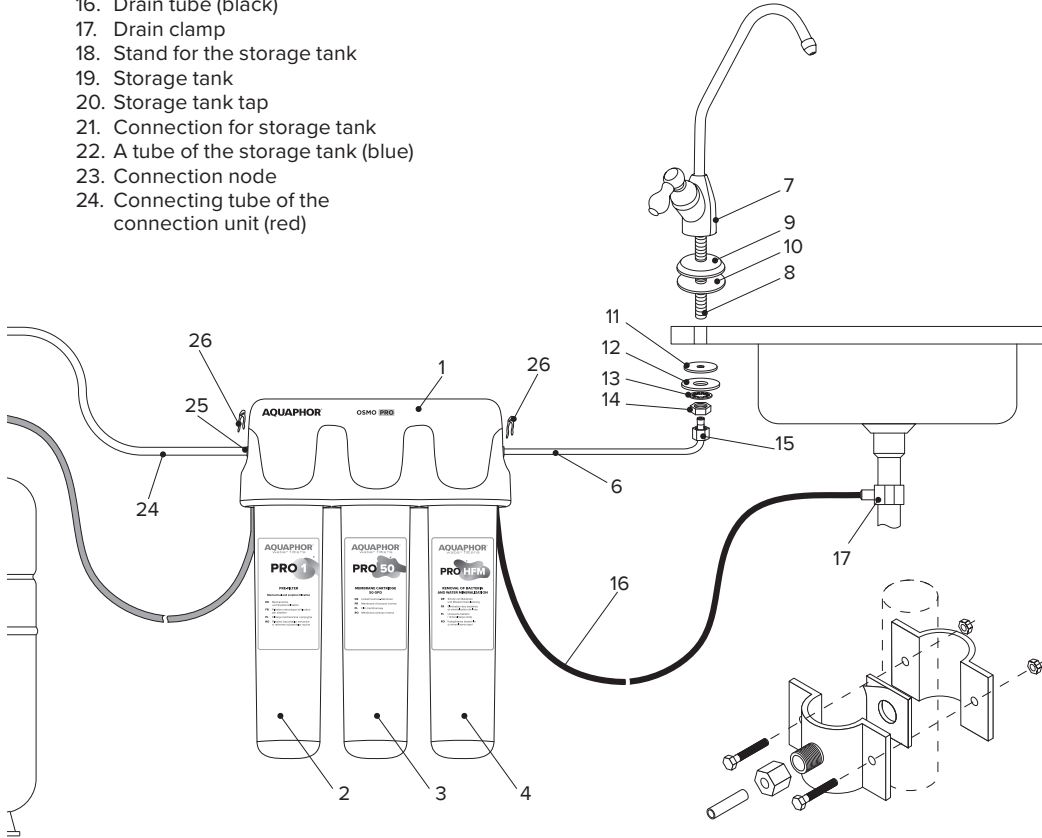
7. From the bottom of the tabletop, slide a small rubber gasket (11), plastic (12) and metal (13) lock washers onto the threaded shank and secure the valve with a nut (14).
8. Slide the union nut (15) onto the clean water pipe (6); insert the tube with the end with a metal bushing into the threaded bushing of the valve and screw the union nut until it stops. Check the tightness of the tube for clean water – with a force of 8–10 kgf, the tube should not be pulled out.

Installing the drain clamp

It is recommended to install the clamp (17) on the drain of the sink (sink) in front of the siphon (the

on diagram

- 13. Metal lock washer
- 14. Fixing nut
- 15. Union nut
- 16. Drain tube (black)
- 17. Drain clamp
- 18. Stand for the storage tank
- 19. Storage tank
- 20. Storage tank tap
- 21. Connection for storage tank
- 22. A tube of the storage tank (blue)
- 23. Connection node
- 24. Connecting tube of the connection unit (red)
- 25. Inlet connection
- 26. Retaining clips
- 27. Sealing gasket



drain clamp fits most drain pipes with a diameter of about 40 mm).

9. Remove the protective film from the gasket. Bond the gasket to the inside of the clamp so that the hole in the gasket matches the hole in the clamp fitting.
10. Place the clamp on the pipe and then tighten the bolts. The bolts should be tightened evenly so that the two pieces of the clamp are parallel.
11. Drill a 7 mm hole through the clamp connection. Put a plastic nut on the free end of the drain tube (16) and, inserting the tube into the drain clamp by 20–30 mm, screw the nut onto the fitting.

Installing the storage tank

12. Take the tank (19) out of the packaging and place it on the support (18).

ATTENTION! Find a position where the tank is stable.

13. Screw the tap (20) onto the fitting (21) located in the upper part of the tank. If necessary, seal the connection using seal tape.

ATTENTION! Do not drop the tank.

Installing the connection node

ATTENTION! The end of the pipeline to which the connection unit is connected must be flat. Do not use significant force when tightening the union nut. Failure to do so will damage the gasket.

14. Install the connection unit (23) between the cold water supply and the connecting pipe (24) as shown in the Water purifier installation diagram. If necessary, use the seal tape to seal the external thread of the connection unit.
15. Connect inlet tube (24). See section "Connecting tubes".
16. Close the connection unit (position "Tap closed") and, turning on the water, make sure that the connections are tight (no leaks).
17. Assemble the water purifier by installing the cartridges in the housing (see the section "Installing Cartridges"). The order of installation of the cartridges is shown in the "Water purifier installation diagram".

Connecting tubes

Connect the supplied OSMO Pro pipes according to the "Water purifier installation diagram".

Red tube (24) – from the connection unit (23) to the inlet (25) of the housing (1).

Black tube (16) – from the housing (1) to drain clamp (17).

A blue tube with a pressed brass bushing (6) – from the outlet fitting (5) of the air conditioning unit (4) to the fresh water tap (7).

The blue tube of the storage tank (22) – from the housing (1) to the storage tank tap (20).

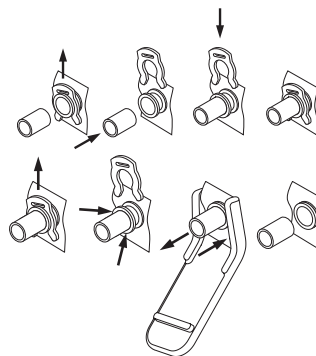
How to connect tubes

Pull the retaining clip out from under the plastic sleeve, insert the end of the tube, pre-moistened with water, into the fitting sleeve until it stops to a depth of about 15 mm and replace the clip.

ATTENTION! Check the tightness of the tube fastening – with a force of 8–10 kgf, the tube should not be pulled out.

How to disconnect tubes

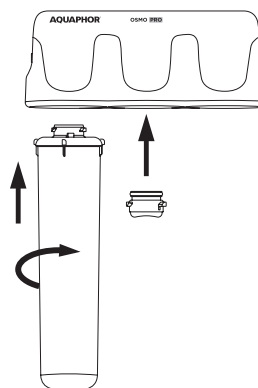
Pull the retaining clip out from under the plastic sleeve and, by pressing the end of the plastic sleeve with a wrench (included in the water purifier kit), pull out the tube.



Installing cartridges

To install the filter cartridge:

- remove the protective film from the cartridge;
- make sure that the inner surfaces of the cartridge connection flange are clean (no coal dust, etc.); rinse the flange under running water if necessary;
- insert the cartridge into the housing as far as it will go and, pressing slightly, turn it clockwise until it clicks.



NOTE. There is no need to install the membrane cartridge at this stage. To flush the filter, screw the flush plug into the middle slot of the housing.

Preparation for work

Flushing OSMO PRO

At the last stage of the preparation of premium drinking water in OSMO Pro, a natural mineral is used, which enriches the purified water with useful substances. Since this mineral is quite fragile, dust may form during transportation, which must be washed off the first time you start the water purifier.

NOTE: It will take about 5 hours to fully flush the water purifier (cartridges and tank). The duration of the flush depends on the pressure, water temperature and membrane performance.

ATTENTION! Make sure the cartridges are positioned correctly before flushing. The positioning of the cartridges in the water purifier is indicated on the Water purifier installation diagram. Make sure the flush plug is installed in the middle slot.

- Close the tap (20) on the storage tank (the tap flag must be turned perpendicular to the outlet tube).
- Open the inlet tap on the connection unit (23) and clean water tap (7).
- Drain the water passing through the OSMO Pro within 10 minutes.
- Close the inlet and clean water tap.
- Install a membrane cartridge in the middle slot of the housing instead of the flush plug.
- Open the inlet tap on the connection unit, the storage tank tap and the clean water tap.
- Drain the OSMO Pro for 1 hour.
- Close the clean water tap.
- Make sure the OSMO Pro connections are tight.

- Close the tap (20) on the storage tank (the tap flag must be turned perpendicular to the outgoing tube) and open the inlet tap on the connection unit (23).
- Open the clean water tap (7). After the water starts dripping from the tap of clean water, close it and open the tap of the storage tank – the tank will begin to fill.
- Make sure there are no leaks; tighten the connections if necessary.
- After filling the storage tank (when water stops flowing from the drain tube (16), open the clean water tap and wait until all the water flows out of the storage tank (water will start to flow out of the tap very slowly; this is not a malfunction of the water purifier).
- Re-fill and drain the water storage tank.
- Make sure the OSMO Pro connections are tight.
- After filling the tank for the third time, the OSMO Pro is ready for use.

ATTENTION! The water that was obtained from the first and second filling of the tank is not drinkable.

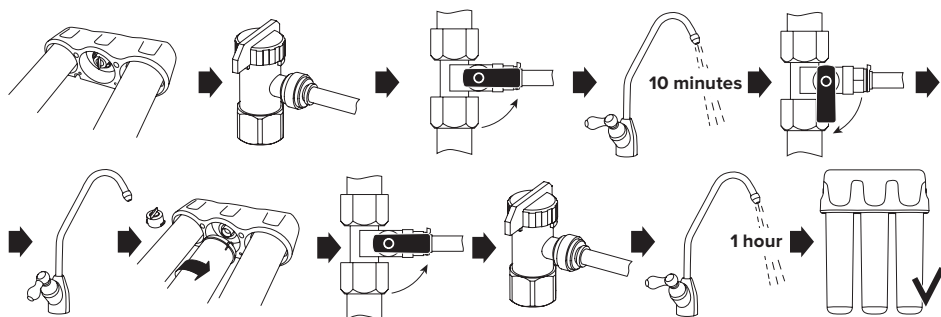
ATTENTION! Check the OSMO Pro daily for leaks during the first week of use.

NOTES. During the first week of OSMO Pro operation, when switching the automatic valve, there may be noise associated with the release of air from the internal cavities of the water purifier. This is not a malfunction.

Flushing the storage tank

The procedure for filling the tank twice will take no longer than 3 hours.

During initial operation of OSMO Pro, the color of the water can be milky due to small air bubbles being forced out of the system.



Changing the replacement cartridges

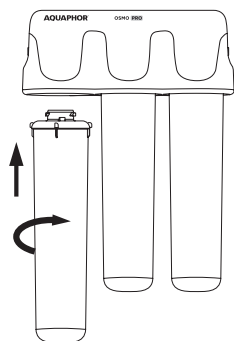
The service life of the membrane cartridge (3) depends on the performance of the water treatment unit (2), therefore it is very important to replace the Pro 1 cartridge in a timely manner.

Replacing Pro M / Pro HFM Cartridges

- Close the tap on the storage tank.
- Close the inlet tap on the connection unit and open the clean water tap 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 housing as far as it will go and, using slight pressure, turn the cartridge clockwise until it clicks.
- Install the flush plug in the middle slot (instead of the membrane cartridge).
- Open the inlet tap on the connection unit (23) and the clean water tap (7).
- Drain the water passing through the OSMO Pro for 10 minutes.
- Close the inlet and clean water tap.
- Remove the flush plug and install the membrane cartridge by turning the cartridge clockwise until it clicks.
- Open the inlet tap and check that the OSMO Pro connections are tight.

Replacing the membrane cartridge

- Close the tap on the storage tank.
- Close the inlet tap on the connection unit and open the clean water tap 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 housing as far as it will go and, using slight pressure, turn the cartridge clockwise until it clicks.
- Open the inlet tap on the connection unit, the storage tank tap and the clean water tap.
- Drain the OSMO Pro for 1 hour.
- Close the clean water tap.
- Make sure the OSMO Pro connections are tight.



Safety

Installation:



It is not recommended to do the work on connecting OSMO Pro to the water supply network yourself. To connect OSMO Pro, it is recommended to contact the service department of Aquaphor or regional dealers of Aquaphor. The manufacturer is not responsible for the improper quality of work on connecting with the OSMO Pro to the water supply network, as well as for the result of this work. The 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, by the party performing the installation.



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



During operation:

OSMO Pro is designed for post-treatment and softening of cold drinking water from centralized water supply systems. When installing OSMO Pro outside of central drinking water supply systems, it is to do source water analysis for compliance with sanitary standards. If the source water does not meet sanitary standards, the service life of the prefiltration unit and membrane unit is sharply reduced.



If the source water differs significantly from the requirements of sanitary standards, it is recommended to install additional water treatment systems (iron remover, softener, dechlorinator, disinfection systems, mechanical cleaning, etc.). After installing OSMO Pro, you need to check the purified water. In the future, to ensure that the OSMO Pro is working properly, the treated water should be checked approximately once a year. If the results of the analysis are unsatisfactory, the

water should not be drunk, you should contact the service centre.



Although OSMO Pro is capable of trapping bacteria that may be contained in the source water, it is recommended to use the water purifier only with microbiologically safe water. Do not use the system with water of unknown quality that has not undergone additional disinfection.



Use OSMO Pro only for water purification from a cold water supply system. If the ambient temperature during operation of OSMO Pro reaches +38 °C, OSMO Pro must be disconnected from the cold water main until the temperature drops.



Purified water is not subject to long-term storage. We recommend using fresh filtered water.



If you have not used the water purifier for more than 8 hours, drain the first 250 ml of water.



If it is known that OSMO Pro will not be used for a day or more (for example, when leaving the country), it must be disconnected from the cold water main (the connection point is closed).



If you have not used OSMO Pro for more than two weeks, fill and drain the water storage tank and let it refill.



Protect OSMO Pro from freezing, direct sunlight, contact with hot objects, including hot water pipes and heating systems.



Protect OSMO Pro from bumps and drops.

Manufacturer warranty

The service life of OSMO Pro (excluding replaceable filter cartridges) is 5 years* from the date of production**. At the end of its service life, the water purifier must be replaced.***

Service life (resource) of replaceable filter cartridges is shown in the corresponding table. The service life (resource) of replaceable filter cartridges is calculated from the date of sale of OSMO Pro to the consumer through the retail network. The date of sale of the OSMO Pro (with replaceable filter cartridges) is determined by the store stamp in this manual or by the sales receipt. If the OSMO Pro sale date cannot be determined, the service life of the replaceable cartridges is calculated from the date of their manufacture, which is indicated on the stamp on the sticker of each cartridge.

The shelf life of OSMO Pro (with a set of replaceable filter cartridges) before the start of operation is no more than 3 years at temperatures from +5 to +40 °C, without breaking the packaging.

The membrane cartridge is supplied in a sealed package. After opening the package, it is allowed to store the membrane cartridge for no more than 3 days. Do not expose the membrane cartridge to high and low temperatures, direct sunlight.

It is forbidden to turn the OSMO Pro over, subject it to shocks or other mechanical influences.

The warranty period for OSMO Pro (except for replaceable filter cartridges) is 1 year from the date of sale. The manufacturer is released from warranty obligations if this manual has been lost with the dates of production and / or sale and there are no other ways to establish the life of the product.

The manufacturer is released from liability in the following cases:

- consumer violation of the installation rules (installation) of the product, described in this manual;
- if the replaceable filter cartridges are not replaced after their service life has expired;
- operating the OSMO Pro in excess of the limits established by the product operating specifications (see this manual).

If you have any complaints about the OSMO Pro, you should contact the seller or the manufacturer. Claims for products that have external mechanical, thermal or chemical damage are not accepted.

Disposal in accordance with environmental, sanitary and other requirements established by national standards in the field of environmental protection and ensuring the sanitary and epidemiological well-being of the population.

Service life (resource) of replaceable filter cartridges

Name	Service life (resource)
Cartridge Pro 1	up to 6 months ¹
Cartridge Pro HFM	1 year
Membrane cartridge Pro 50 / Pro 100	1.5–2 years ²
The data are based on the consumption of 10–12 liters of water per day by a family of 3–4 people.	
¹ Depending on the amount of impurities in the water, the service life (resource) of the preliminary water treatment cartridges may vary. The service life (resource) of the replaceable cartridge is set for filtering cold drinking water from centralized water supply systems. If the OSMO Pro inlet receives water that does not comply with sanitary standards, with a high content of mechanical impurities, the Pro 1 replaceable filter cartridge must be replaced once every 2–3 months.	
² The service life of the membrane cartridge directly depends on the performance of the water treatment unit. Please make timely replacement of filter cartridges that have exhausted their resource.	

* Regardless of the start-up period of the product.

** Date of production – the date of the type DD MM YYYY, which is indicated by the manufacturer on the label placed on the housing and / or in this manual.

*** Use of the water purifier beyond its service life may result in harm to health or property of the consumer or others and should be discontinued.

Fault table

Malfunction	Cause	Elimination method
There is no clean water or there is not enough of it. The storage tank fills slowly or does not fill at all	The cartridge of the preliminary water treatment unit is clogged	Replace the pre-treatment cartridge
	Membrane cartridge is clogged	Replace membrane cartridge
	The water conditioning unit cartridge is clogged	Replace the water conditioning cartridge
	Membrane valve defective	Call for service
	The storage tank valve is closed	Open the storage tank tap
	Connection valve is closed	Open the tap of the connection unit
	Low inlet pressure	Install a pressure boosting pump for the whole apartment or separately for the water purifier
The tank is full, but the water from the clean water tap is slow	The water conditioning unit cartridge is clogged	Replace the water conditioning cartridge
	The air pressure in the storage tank has dropped	Call for service
The tank is full, but water goes into the drain	Automatic valve defective	Call for service
Water does not go into drainage	The cartridge of the preliminary water treatment unit is clogged	Replace the pre-treatment cartridge
	Membrane clogged	Replace membrane cartridge
	Clogged restrictor (drain flow restrictor)	Call for service

Customer Service and Support

European Union: +372 39 24 116, + 48 22 870 24 32
 USA: +1 855 855 22 99





Manufacturer:

Aquaphor International OÜ, L. Tolstoi 2A,
Sillamäe, Estonia, 40231.

www.aquaphor.com

Aquaphor water filter model:

1

OSMO Pro 50

3

OSMO Pro 50 EU

2

OSMO Pro 100

4

OSMO Pro 100 EU

The model number and the date of manufacture and quality control are indicated on the product's serial number label on this page.

The manufacturer reserves the right to make improvements to the design of the water purifier without reflecting them in the passport.

Sale Date / Store Stamp

Dealer:

Product serial number

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