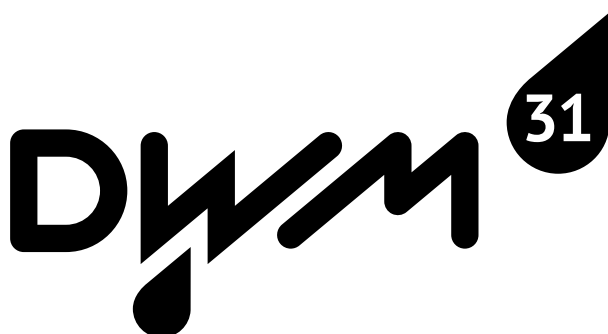


AQUAPHOR®

WATER FILTERS

RO-31(DWM-31)






DRINKING WATER MACHINE



Instruction manual

DWM is a new category of professional home appliances that allows obtaining physiologically relevant drinking water of PREMIUM CLASS regardless of quality of the source water.

Aquaphor DWM is a combination of the world's best achievements in water treatment and Aquaphor's technologies.

	Aqualen™ Patent No. 20704036 (RF). Unique ion-exchange fiber. Effectively and permanently removes heavy metals.
	CFB (CarbFiber Block) RF Patent No. 2282494. Carbonblock with Aqualen™ completely removes chlorine, organic substances, and carcinogens. Absorbs free radicals.
	DWAY (DOUBLE WAY) . The unique technology of water conditioning and optimizing of the pH balance and trace elements.
	STC (Safe To Consume) (Absolute Safety) Materials are certified for contact with drinking water and food.
	Click & Turn (Easy to use) . RF Patent No. 2333779. Easy replacement of cartridges. Clean and safe service.

1. LIST OF PARTS

No.	Name	Qty
1.	Collection bowl with cover and float	1 pc.
2.	Shutoff	1 pc.
3.	Mineralizer	1 pc.
4.	Manifold unit assembly	1 pc.
5.	Replacement cartridges	
5.1	Replacement filter cartridge K5 (or collapsible replacement filter cartridge KP5)	1 pc.
5.2	Replacement filter cartridge K2	1 pc.
5.3	Membrane cartridge	1 pc.
6.	Water connections	
-	blue - supply (1.2 m)	1 pc.
-	red - drainage (1.3 meters) with built-in flow restrictor	1 pc.
7.	Tube tip	1 pc.
8.	Connection assembly	1 pc.
9.	Stand with clip and stopper	1 set
10.	Drain clamp	1 set
11.	Rinsing cap	1 pc.
12.	Fittings	1 set
13.	Instruction manual	1 pc.

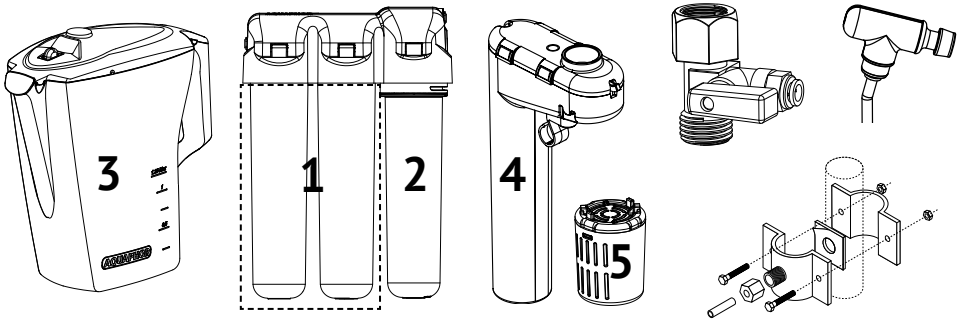


Figure 1

2. INTRODUCTION

Drinking Water Machine Aquaphor RO-31 (DWM-31) (hereinafter DWM) is made by "Aquaphor" (Russia, Saint Petersburg).

The DWM is intended for drinking water purification from mechanical and colloidal particles, organic impurities, bacteria, hardness salts, as well as for mineralization. DWM eliminates extraneous taste, odor and color of the water in terms of municipal and local water supply systems by fulfilling the requirements set forth in this manual.

The DWM materials are safe, non-toxic and do not release into the water substances harmful to human health and the environment. The DWM meets the hygiene requirements and the requirements of TR 3697-002-50056997-2001.

3. MAIN UNITS AND OPERATING PRINCIPLES OF DWM (Fig. 1):

Manifold assembly consists of a body with three fixed manifolds for connecting replacement filter cartridges and automation valves, and has holes for wall mounting.

Water treatment unit (1) provides pre-cleaning and preparation of water for the membrane separation stage. The unit comprises a replacement cartridge K5 (collapsible replacement cartridge KP5) (installed first downstream of water) and replacement cartridge K2 (installed second). Preparation unit purifies the water from coarse dispersion, active chlorine, oil products, phenols, pesticides, heavy metals and chloroform.

Membrane cartridge (2)

In this cartridge, water is divided into two streams: one of them is absolutely clean and ready for further processing, and another one is drainage water, which contains all the unwanted impurities.

Collection bowl for pure water (3)

When connecting the tip to the Collection bowl, the water begins to flow into the bowl. After the bowl is filled and the float is risen up, the water supply and the tip are automatically disconnected. If you want to stop filling the bowl ahead of schedule, just click on the button located on the top of the cover.

Shutoff (4)

The shutoff is designed to automatically shut off the clear water supply into open containers.

Mineralizer (5)

The mineralizer shall be set in the clean water collection bowl or on the shutoff device. It is designed for water conditioning and optimizing the balance of mineral elements. The purified water interacts with specially prepared subcrystalline "pearl dolomite", which is a mixture of natural minerals of calcium and magnesium. In addition, the pH level of the water is automatically risen to a physiologically ideal value of pH = 7.

The concentration of calcium and magnesium ions in the produced water is from 0.2 to 0.5 meq/L. This water has beneficial effects on our body and provides autoregulation of physiological processes in the human body.

4. TECHNICAL FEATURES

Dimensions of the working unit (height × length × width) Located under sink	265 × 365 × 100 mm
Dimensions of the collection bowl (length × width × height) Located on tabletop	280 × 265 × 110 mm
Dimensions of the shutoff device (length × width × height)	110 × 200 × 45 mm
Dimensions of the mineralizer (length × width × height)	40 × 40 × 51 mm
Minimum operating pressure	0.15 MPa (1.5 atm)
Pressure of water supply system is not higher than	0.63 MPa (6.5 atm)
Water temperature	+5 to +38° C
Filling time of the collection bowl (at the pressure of 0.3 MPa)	15-60 minutes (depending on the water temperature and salinity)
Purified water and drainage water ratio (with water temperature at the DWM inlet at least +20°C and pressure not less than 0.2 MPa)	(1:4–1:6)
Unit weight does not exceed	5 kg

5. DWM INSTALLATION GUIDE*

ATTENTION! The DWM installation must be carried out by experts with permission to do plumbing works.

ATTENTION! Before installation, measure the waterline pressure and, if it exceeds 0.63 MPa (6.5 atm), put the pressure regulator with non-flow working mode (not supplied in the standard equipment).

Determine the convenient location for the clean water tip, working unit, installation location for the connection assembly to the water supply and drain clamp.

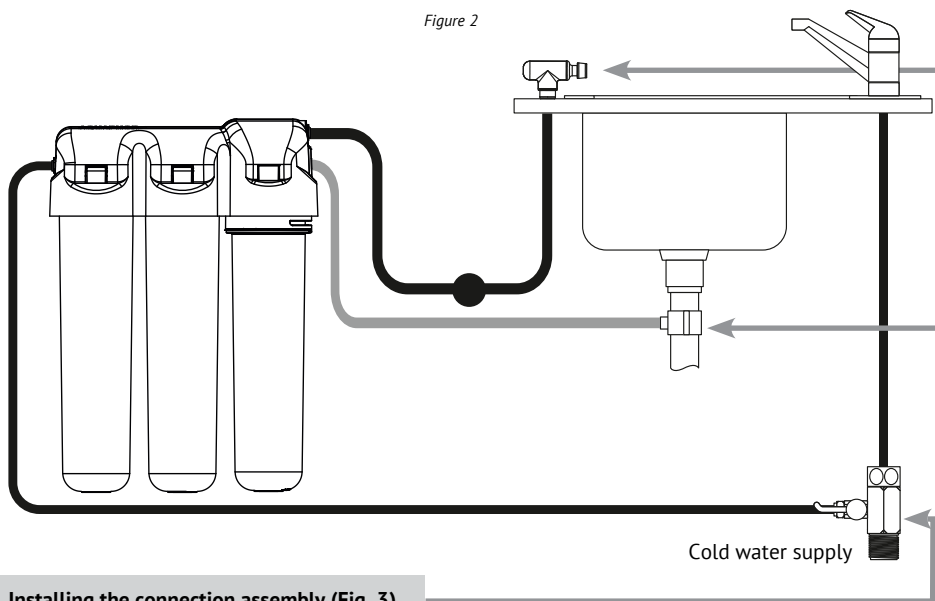
Note that the water connections come through freely, without bending.

Free connection parts must be fixed in such way so that they cannot be damaged or pulled out of the sockets by foreign bodies.

The DWM must be distanced or isolated from heat sources (such as dishwashers and washing machines, cookers, boilers, hot water pipes, etc.).

Install the collection bowl in the place, where the water pouring over the edges cannot lead to undesirable consequences (for electrical appliances, not water-resistant surfaces, etc.).

Figure 2



Installing the connection assembly (Fig. 3)

- Turn off the water.
- Open the kitchen mixer to relieve the pressure in the waterline.
- Connect the connection assembly to the waterline.

If necessary, use a FUM tape to seal the male thread of the connection assembly.

- Connect the tube JG 1/4". In order to do this, remove the clip under the plastic bushing; insert a pre-dampened end of the tube into the bushing fitting all the way to the depth of about 20 mm and install the clip into place.
- Check the holding strength of the tube fixing: the tube should not be removable by a force of 8-10 kgf applied.

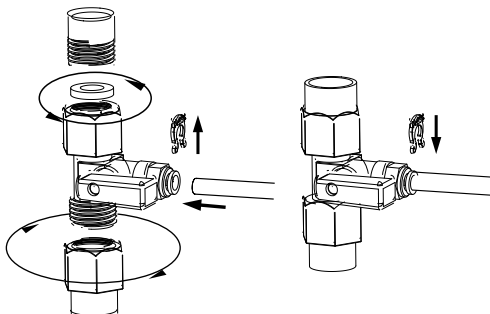


Figure 3

* Manufacturer reserves the right to use the components of similar design

Installation of clean water tip with a stand and a stopper (Fig. 4)

- Drill a hole in the sink (tabletop) with diameter of 12 mm.
- Place the rubber gasket (2) in the bottom of the stand (1)
- Insert the threaded shank of the stand into the hole in the tabletop.
- At the bottom of the tabletop, put a plastic (3) and metal lock (4) washers on the threaded shank and screw the nut (5).
- Insert the free end of the tube extending from the clean water tip into the stand hole (1).
- At the bottom of the tabletop, put the bushing (6), and then the collet (7) on the free end of the plastic tube. The recommended distance from the end of the threaded shank (1) to the bushing (6) is about 600 mm.

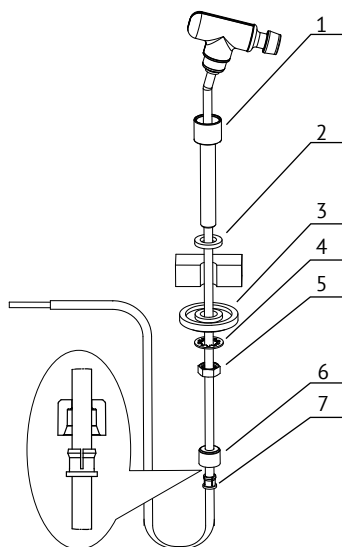


Figure 4

Installation of the drain clamp (Fig. 5)

- It is recommended to install the clamp on the drainage line in front of the siphon (the drain clamp fits to most drainage lines with diameters of about 40 mm).
- Remove the protective film from the gasket (1).
Glue the gasket (1) on the inside of the clamp, so that the gasket hole aligns with the hole in the yoke socket.
- Install the clamp on the drain line and tighten the bolts (2).
The bolts should be tightened evenly so the two clamps are parallel.
- Drill a hole with a diameter of 7 mm through the clamp fitting.
- Put the plastic nut on the free end of the drain tube JG (red) and insert the tube into the drain hose clamp for 20-30 mm, then screw the nut on the fitting.

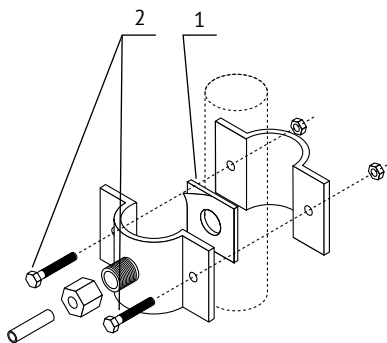


Figure 5

Install the manifold assembly

Fix the manifolds so that after installing of the cartridges, there is a gap of at least 50 mm between the lowest point of the cartridges and the floor.

This is necessary for the convenience of changing the filter cartridges and installing the drainage tube.

Pay attention to the supply tubes coming through freely and without bending.

6. Starting of the DWM

To start the DWM, one must **connect the supply tubes** and carry out the **rinsing of cartridges**.

Step 1 - Connect the supply tubes as shown in Figure 2.

the blue tube - from the connection assembly to the inlet manifold assembly;

the red tube - from the drain clamp to the drain fitting of the manifold assembly;

the white double tube - from the clean water tap to the outlet fitting of the manifold assembly.

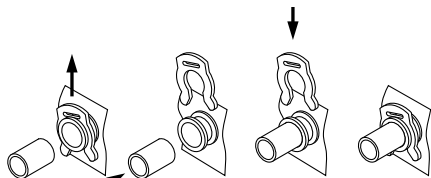


Figure 6a

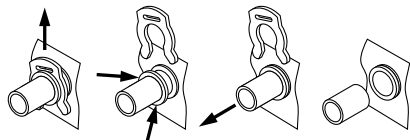


Figure 6b

How to connect the tubes (Fig. 6a)

Pull out the locking clip from under the plastic bushing, insert a pre-dampened end of the tube into the fitting bushing until it stops at a depth of about 15 mm, and install the clip into the place.

Check the holding strength of the tube fixing: the tube should not be removable by a force of 8-10 kgf applied.

Disconnecting the tubes (Fig. 6b)

To disconnect the tube, pull out the locking clip from under the plastic bushing, and then pull the tube by clicking on the end of the plastic bushing.

Step 2 - Install the filter cartridges

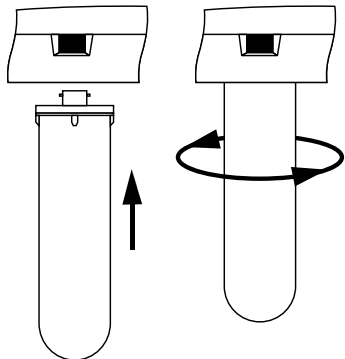


Figure 7

- Remove the shrink film and transport seals (if any) from the cartridges.
- Make sure that the inner surfaces of the connecting flanges of the cartridges are clean (no coal dust, etc.).
In case of dust, rinse the flange under running water.
- In accordance with (Fig. 8) "Position of the cartridges in the DWM", install the cartridges in the "rinsing" position (the rinsing cap shall be located under the lid of the water purifier - see. Fig 1). In order to do this, insert the cartridge into the corresponding manifold and turn it clockwise until it clicks (Fig. 7).
- To disconnect the cartridge, press the lock button and rotate the cartridge counterclockwise.

Position of the cartridges in the DWM

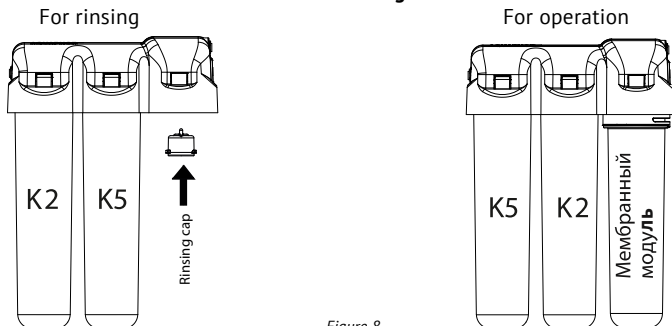


Figure 8

Step 3 - Installation of the mineralizer

Mineralizer can be optionally installed into the clean water collection bowl or on the shutoff device.

Installation of the mineralizer in the collection bowl

- Remove the cover of the collection bowl.
- Insert the mineralizer in the bracket of the collection bowl aligning the tabs on the mineralizer with the slots in the bracket, and turn it all the way counterclockwise, as shown in Fig. 9.
- Put the cover of the collection bowl with the mineralizer set back to the place.

Installing the mineralizer on the shutoff device

- Insert the mineralizer in the bottom of the shutoff device aligning tabs on mineralizer with the slots on the bottom and turn it all the way counterclockwise, as shown in Fig. 10.

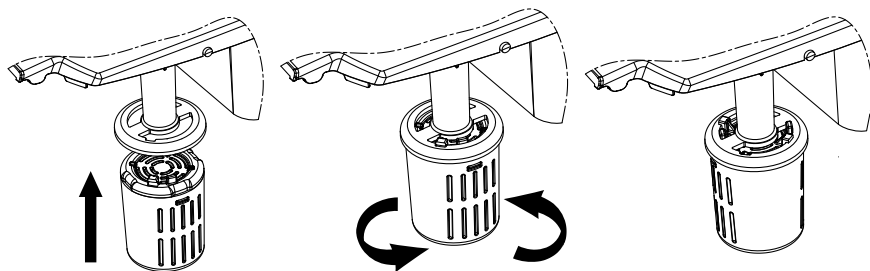


Figure 9

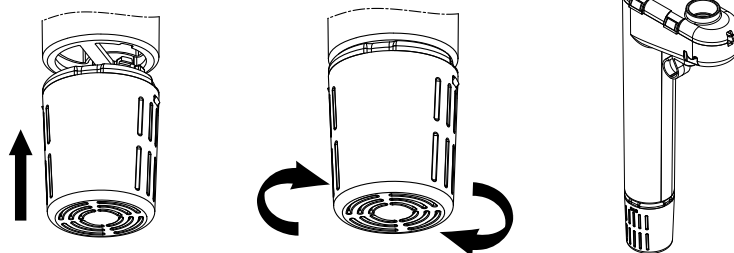


Figure 10

Step 4 - Rinse the DWM

- Open the inlet valve;
- Insert the tip into the shutoff slot (Fig. 12 a) holding it over the sink;
- Holding the tip in one hand, put the shutoff device into the sink and leave the water draining out from the water purifier for 60 minutes;
- Disconnect the tip from the shutoff device by clicking on the button at the end face of the shutoff device (Fig. 12b);
- Close the inlet valve;
- Install the cartridges in the "operation" position;
- Open the inlet valve;
- Insert the tip into the cover slot of the collection bowl;
- Wait for the water to fill the collection bowl and flush it;
- Repeat the last procedure 2 times.

At the last stage of preparing drinking water of the premium class, a natural mineral is used in RO-31 (DWM-31) allowing to achieve the necessary strict dosing of nutrients in the purified water. However, since the mineral is quite fragile, a certain amount of dust can be formed during transportation, which must be washed off at the first start of the water purifier.

ATTENTION! Do not drink the water, which was obtained in the result of rinsing.

During the first week of operation, check the DWM for leaks every day. In the first week of the water purifier operation, there may be a noise associated with the release of air from the interior of the water purifier when switching automatic valve. After some time, this process will stop. This is not a malfunction.

7. Operation of the DWM

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 DWM, it is not allowed to create tension of the tube while filling the collection bowl with water.

Fig. 11 and 11b show the correct and incorrect placement of the tube and the collection bowl during filling with water.

At the wrong positioning of the tube, the tip's automatic shut-off system may be denied, in the result of which spillage is possible.

Removing the cover of the collection bowl (Fig. 12a, 12b)

- 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. 12a).
- Press down your thumb on the back of the cover until it moves forward, as shown in (Fig. 12b).

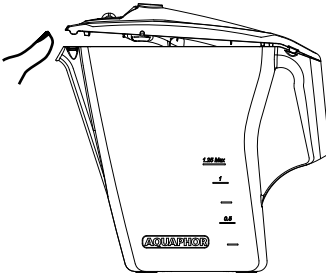


Figure 11a

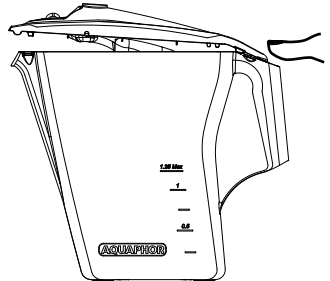


Figure 11b

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. 13a), or a vessel wall (e.g. pot, Fig. 13b).
- Make sure that the shutoff is securely latched (Fig. 14a, 14b).
- Insert the tip into the hole of the shutoff (Fig. 14a).
- Wait for filling the bowl with clean water before the automatic shutting off of the water supply and disconnecting the tip.
- 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).

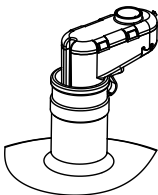


Figure 12a

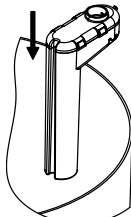


Figure 12b

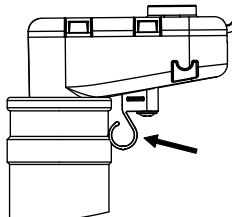


Figure 13a

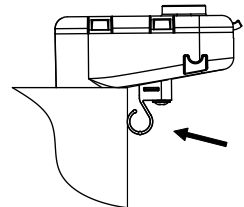


Figure 13b

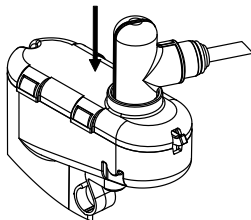


Figure 14a

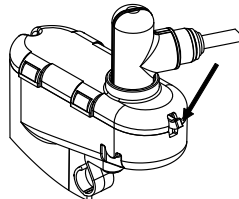


Figure 14b

8. SYSTEM MAINTENANCE

The service life of the membrane cartridge depends on the efficiency of water preparation unit. Therefore, it is very important to replace the filter cartridges timely.

To replace the replacement cartridges:

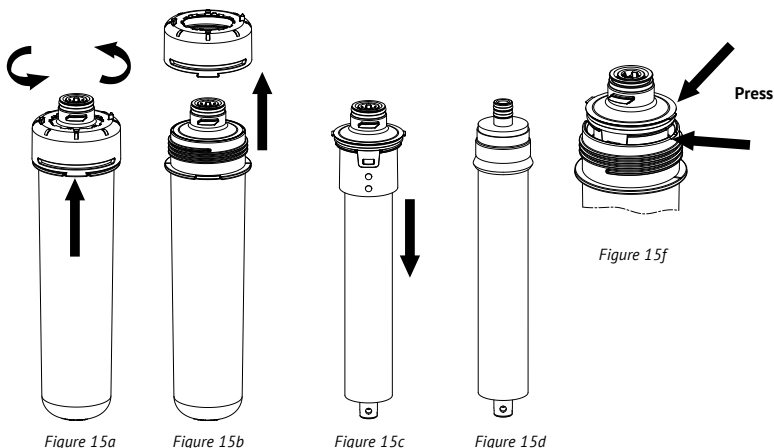
- Close the inlet valve and connect the tip to the collection bowl in order to relieve pressure.
- Press to stop and hold the lock button, turn the used filter cartridge counterclockwise and remove it.
- Remove the new cartridge shrink film;
- Insert a new cartridge into the manifold assembly until it stops and turn the cartridge clockwise gently pressing on it until it clicks.
- Open the inlet valve and make sure that the DWM is leak-tight.

To replace the removable element PP5 (55/265 for cold water) in the cartridge KP5 (new design from 2014):

- Click on the lock of the filter cartridge all the way and unscrew the nut counterclockwise holding it in this position (it is unnecessary to keep the lock pressed after turning the nut at the angle of more than 5°) (Fig. 15a).
- Pull the cover and remove the used filter element from the machine (Fig. 15b).
- Remove the cover by pulling down the used filter element (Fig. 15c).
- Remove the heat shrinkable tape from the new filter element.
- Having pre-washed the cartridge under running water assembly, assemble the filter cartridge in the reverse order aligning the protrusion on the cover with the slot in the cartridge (Fig. 15d).

For replacement of the membrane element:

- Close the inlet valve and connect the tip to the collection bowl to relieve the pressure.
- Press to stop and turn the membrane cartridge counterclockwise holding the lock button, then remove it.
- Click on the stopper of the membrane cartridge to stop and unscrew the nut counterclockwise holding it in this position (it is unnecessary to keep the lock pressed after turning the nut at the angle of more than 5°) (Fig. 15a).
- Pull the cover and remove the membrane element from the machine (Fig. 15b).
- Remove the cover by pulling down the membrane element (Fig. 15b, 15c).
- Remove the heat shrinkable tape from the new membrane element.
- Having pre-washed the cartridge under running water, assemble the membrane cartridge in the reverse order aligning the protrusion on the cover with the slot in the cartridge Fig. 15f.
- Insert the cartridge into the manifold assembly until it stops and turn the cartridge clockwise gently pressing on it until it clicks.
- Open the inlet valve and make sure that the DWM is leak-tight.



ATTENTION! If the DWM is not sealed, immediately shut off the water in front of it and check the installation of cartridges.

- Rinse the new cartridges according to Step 4, Chapter 6 of this manual.

In case of replacement of:

- filter cartridge K5 (or collapsible cartridge KP5) and cartridge K2 – rinsing is unnecessary.
- membrane cartridge – perform a complete rinsing procedure (step 4).
- mineralizer – fill and empty the collection bowl for one time.

9. STORAGE AND TRANSPORTATION

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, direct sunlight. It is prohibited to turn the DWM over, hit it and expose to mechanical influences.

The DWM 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. SAFETY

Pay attention!

During installation:

- It is not recommended to carry out the connection of the DWM to the water mains by yourself.
- This work should be performed by a specialist authorized to conduct this type of work.
- The manufacturer is not liable for the improper DWM connection to the water supply, as well as for the result of this work.
- The user is responsible for the shortcomings of this work, as well as for damage to health or property of the user or other persons in the result of shortcomings of his work.
- Do not replace the supplied connection assembly with a connection assembly of any other model.

Operating:

- The DWM is designed for purification and softening corresponding to SanPin 2.1.4.1074-2001 Drinking water.
- When installing the DWM out of central drinking water supply, it is recommended to analyse the raw water in order to meet the requirements SanPin 2.1.4.1074-2001.
- If the source water does not meet the requirements of SanPin 2.1.4.1074-2001, service life of the pre-filtration cartridge and membrane cartridge shall be significantly reduced.
- If the source water does not comply with the requirements of SanPin 2.1.4.1074-2001, it is recommended to install an additional water treatment system (iron filter, softener, dechlorinators, disinfection systems, mechanical cleaning, etc.).
- After DWM installation, check the purified water.
In the future, to ensure the proper operation of the DWM, the purified water should be checked about once a year.
- In case of unsatisfactory results of the analysis, do not drink the water, but contact your service provider.
- Although DWM capable of retaining bacteria and viruses that may be present in the source water, it is recommended to use the system with the water microbiologically safe.
- Do not use the water of unknown quality, without additional disinfection.
- Use the DWM only for treating water from a cold water supply system.
- If the ambient temperature during operation of the DWM reaches 38°C and higher, the DWM must be disconnected from the cold water line until the temperature drops.
- If you know that the DWM will not be used within the day or longer (for example, when leaving for summer cottage), it must be disconnected from the cold water mains (connection assembly shall be turned off).
- If you do not use the DWM more than for two weeks, collect and flush the water from the collection bowl and allow it to be filled again.
- Avoid freezing of the DWM, as well as direct sunlight, contact with hot objects, including hot water piping and heating.
- Avoid bumps and falls.
- Purified water is not subject to long-term storage.
- We recommend using fresh filtered water.

11. MANUFACTURER'S WARRANTY

The manufacturer guarantees that the DWM complies with the TS requirements 3697-002-50056997-2001 provided that the user observes installation, operation, transportation and storage conditions provided in this data sheet.

No complaints are accepted by the DWM when having an external mechanical, thermal or chemical damage.

Service life of the DWM manifold assembly and membrane cartridge is 5 years from the date of sale.

The service life of lead pipes is 3 years from the date of sale.

The service life of the collapsible cartridge KP5 is 5 years from the date of sale.

The service life of the filter cartridges and elements:

Name	Service life
K5 replaceable element PP5 (55/265 for cold water)	3-4 months *
K2	3-4 months *
membrane element	1.5-2 years. **
mineralizer	6 months.

The data are given at the rate of consumption of 10-12 litres of water per day by a family of 3-4 people.

Attention:

* 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).

The service life (resource) of the modules is specified for usage of the water that corresponds to SanPin requirements.

If the water supplied into the purifier water does not meet the SanPin requirements and has a high content of solids, the replacement cartridge K5 (collapsible replacement cartridge KP5) and replacement cartridge K2 shall be changed every 1-2 months.

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

Warranty period of the DWM (except for filter cartridges and the membrane element) is 1 year from the date of sale.

Shelf life of the DWM before operation is 1.5 years at temperatures between +5°C to +38°C without breaking the packaging.

If there are claims about the DWM operation, please contact the dealer or to the manufacturer.

The manufacturer is not responsible for the quality of the DWM installation.

Claims related to the DWM installation should be addressed to specialists who carried out the installation. The manufacturer is not liable for the DWM failure caused by the untimely replacement of the filter cartridges.

The manufacturer is not responsible for the DWM operation and the possible consequences if:

- the DWM or its components are damaged externally;
- the instruction of the manual were not conformed to when connecting and operating.

Malfunction Table

Malfunction	Reason	Elimination method
Collection bowl fills too slowly or does not fill at all	Water preparation unit cartridges have clogged	Water preparation unit cartridge replacement
	Membrane element in the membrane cartridge has clogged	Replacement of the membrane element
	Faulty membrane valve	Contact the customer service
	Connection assembly valve is closed	Open the connection assembly valve
	Low inlet pressure	Installation of boost pump for the whole apartment or separately for the filter
	A foreign object in one of the lead tubes	Contact the customer service
Collection bowl is full, but the water continues to flow into the drainage	Faulty automatic valve	Contact the customer service
	Water preparation unit cartridges have clogged	Water preparation unit cartridge replacement
	Membrane element of the membrane cartridge has clogged	Replacement of the membrane element
No water drainage	Restrictor (drainage flow restrictor) has clogged	Contact the customer service

Warranty repair voucher for Aquaphor RO-31 (DWM-31)

Serial number

Date of sale

Shop stamp on sale

Seller's signature

The warranty period is

1 year from the date of sale

Installation certificate

Installation of Aquaphor RO-31 (DWM-31) carried out:
Name of the organization carried out the installation

Surname

Name of the installer

Installer's signature

Customer's signature

Firms involved in installation, warranty and service

Manufacturer: LLC "Aquaphor" (ООО «Аквафор»), Russia, Saint Petersburg (Россия, 197110, Санкт-Петербург, Пионерская ул., 27 лит. А).
www.aquaphor.ru

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

Date of manufacture/QCD Stamp

RO-31 (DWM-31) (K5, K2, membrane cartridge)

RO-31 (DWM-31) (WP5, K2, membrane cartridge)

AQUAPHOR®

AQUAPHOR

Westaqua-Distribution OÜ

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