INDEX

1. INTRODUCTION

This manual explains the installation and operation of equipment made by HIDRO-WATER, S.L. for water treatment by ultrafiltration for household use. The equipment has been designed to be connected to the housing facility.

It is easy installation and operation as it has already been semi-assembled. It requires very little assembly as it is only necessary to connect the hydraulics and install the faucet as indicated in point 4 of this manual.

In the absence of installation and maintenance as described in this manual by technically qualified personnel to ensure the quality of water produced and proper installation, the warranty is void.

2. PRECAUTIONS AND WARNINGS 

Please read this manual carefully following the warnings listed below before going ahead with the installation and use of the NELVA ultrafiltration system. If you have any doubts, please contact an official HIDRO-WATER S.L distributer.

- For the correct operation of osmosis systems with a pump, the pressure should be between 2.5 and 4 bars.
- The temperature of the water to be treated should not be below 4ºC nor above 40ºC to avoid damaging the system.
- The ultrafiltration system is designed to treat tap water with a maximum salinity of 1500 ppm. Do not use in places where the water is not microbiologically safe or has an unknown quality. For water with a greater salinity level, please contact an official HIDRO-WATER S.L distributer.
- It is advisable that the water to be treated has been softened or with a maximum hardness of 15ºHF for optimum performance.
- If the water has a high concentration of iron or magnesium, nitrate concentration greater than 100 ppm, sulphate concentrations greater than 250 ppm, more than 3 NTU turbidity and/or prolonged use of high chlorine levels, please contact an official HIDRO-WATER S.L distributer to suggest an appropriate pretreatment system to ensure the correct operation of the system.
- If the osmosis system is not going to be used for a long period of time, close the water passage.
- Install the system on a flat surface.
- Do not expose the system to direct sunlight or install it outdoors.
- The installation should be done by professionally qualified personnel and should not be installed close to a heat source.
- Do not repair or take the system apart on your own. If the system is not working correctly, please contact an official HIDRO-WATER S.L distributer. Any tamper-

ing of the equipment by unauthorized personnel will result in the warranty being void.

- Make sure the water passage is closed when a repair or maintenance is being carried out.
- Do not bend the tubes to prevent flow and pressure blockages.
- Use original spare parts to assure the correct performance of the system.
- For installation, maintenance and cartridge change, please follow this manual; otherwise the warranty will be void.

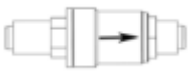
3. CHECKING THE CONTENTS

Open the packaging and make sure that all of the components are inside, ready for the installation.

Figure	Description
1	NELVA ultrafiltration system main unit
2	Faucet
3	⅜” PE Tube
4	Feed adapter
5	¼” M x ¼” T Brass ball valve
6	⅜” plastic insert
7	⅜” faucet tube adapter
8	⅜” WATER STOP Antileak System
9	⅜” Security clip
10	⅜” Pressure reducer 40 psi
11	Instruction manual

X 1	X 1	X 1	X 1
			
Figure 1	**Figure 2**	**Figure 3**	**Figure 4**

X 1	X 2	X 1	X 1
			
Figure 5	**Figure 6**	**Figure 7**	**Figure 8**

X 2	X 1	X 1
		
Figure 9	**Figure 10**	**Figure 11**

4. INSTALLATION

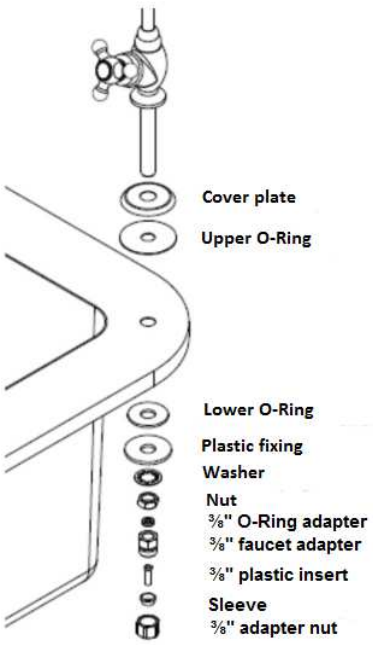
The system can be installed anywhere in the residence where there is a water input, a drain for water waste and sufficient space to be located. The most common place is under the kitchen sink. The installation should be carried out by qualified personnel.

4.1. Faucet installation (Figure 2)

a. Choose the location on the counter where you want to install the faucet.

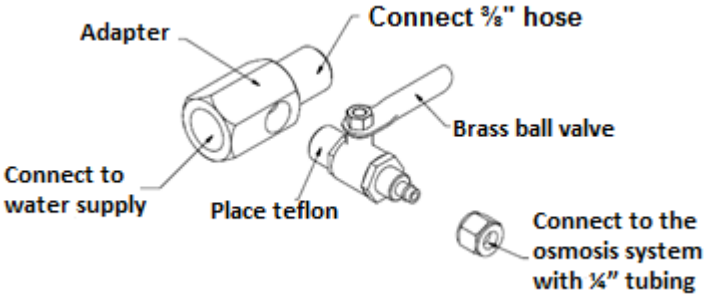
b. Use a drill with a 12mm bit to make a necessary sized hole to put the faucet.

c. Fit the tap in the hole as indicated in the figure using a spanner (our reference: OI-0207-128 not supplied with system) to adjust it tightening the nut.



4.2. Water inlet installation (Figure 13 & Figure 14)

a. The water supply input consists of two parts; a brass ball valve (Figure 5) and an adaptor (Figure 4). The brass ball valve must be screwed to the adaptor using sufficient Teflon on its thread, as shown in the figure below.



b. Turn off the water supply at the point where you are installing the ultrafiltration system.

c. The water supply input is designed to be used with hoses with a ⅜" connection. Insert the water feed adapter with the brass ball valve between the cold water supply and the hose. (Never install a hot water connection as the ultrafiltration system will be damaged). Make sure that the brass ball valve is closed.

4.3. Ultrafiltration system installation

The hydraulic connections should follow the contour of the surface chosen for installation so that the tubes do not get mixed up or tangled. Leave a sufficient length of tube to ease moving the system during future maintenance. Here are the steps to follow to make the hydraulic connection:

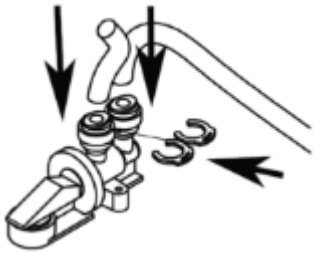
a. Connect the ⅜" tube (Figure 3) to the water supply inlet (Figure 5).

b. The other end of the ⅜" tube should be connected to the pressure reducer inlet (figure 10); to do so, you must remove the blue security clip which is on the inlet of the pressure reducer and insert the tube fully. Once you have introduced the ⅜" tube, replace the ⅜" plastic clip. (The pressure reducer has a sticker with an arrow that indicates the way the water should flow, then the pressure reducer inlet will be the way the arrow is pointing)

c. Connect the ⅜” tube (Figure 3) to the pressure reducer outlet (Figure 10); to do so, you must remove the blue security clip which is on the outlet of the pressure reducer and insert the tube fully. Once you have introduced the ⅜” tube, replace the ⅜” plastic clip.

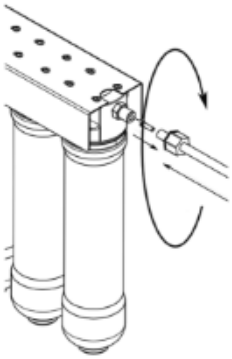
d. You must connect the other end of the ⅜” tube to the inlet of the WATER STOP Antileak system (Figure 8) where it’s marked “IN”, inserting it fully. Once inserted, place the ⅜” security clip on it (figure 9).

e. The WATER STOP Antileak system (Figure 8) must be fixed to the base of the place where you’ve decided to put the ultrafiltration system. To do so, you must use the double-sided tape that is supplied inside the WATER STOP Antileak system box.

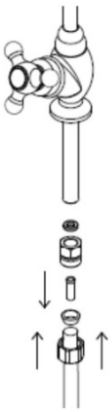


f. Once the WATER STOP Antileak system have been fixed to the chosen place, you must connect the ⅜” tube to the WATER STOP Antileak outlet (Figure 8) where it’s marked “OUT” fully. Once inserted, place the ⅜” security clip on it (figure 9).

g. You must connect the other end of the ⅜” tube to the ultrafiltration system (Figure 1) where it’s marked “ENTRADA” (Inlet). To do so, you must unscrew the straight nut on the system’s inlet. Then insert the ⅜” tube through the nut and place a plastic insert (Figure 6) in it. Screw the nut back on the straight on the ultrafiltration system’s inlet.

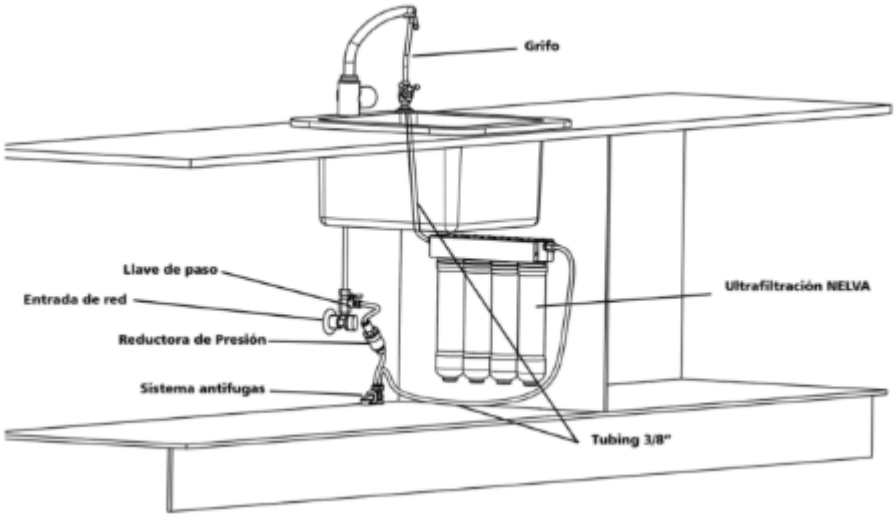


h. Screw the faucet adapter (figure 7) to the faucet placing the supplied O-Ring between the adapter and the stud. Insert ⅜” tube through this adapter’s nut and ⅜” sleeve then insert a ⅜” plastic insert (Figure 6) in that end on the tube. Then you must insert that end in the faucet’s adapter and tighten the nut with the help of a wrench (Our reference: OI-0207-128, not supplied with the system) or a spanner.



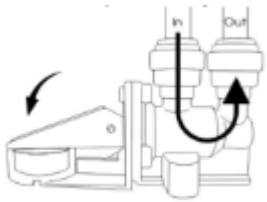
i. The other end of the ⅜” tube must be connected to the ultrafiltration system’s outlet, which is marked “GRIFO” (Faucet). To do so, you must unscrew the straight nut on the system’s outlet. Then insert the ⅜” tube through the nut and place a plastic insert (Figure 6) in it. Screw the nut back on the straight on the ultrafiltration system’s outlet.

Here is a diagram of how the ultrafiltration system should be installed.



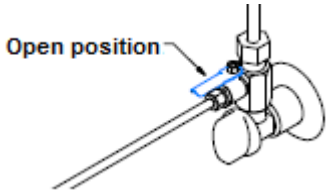
5. ULTRAFILTRATION SYSTEM START-UP

a. Make sure that all the connections are connected properly and tightened.



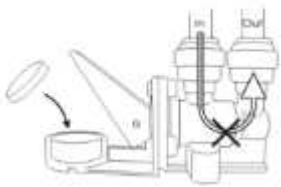
b. Make sure that the arm of the WATER STOP Antileak system is down like shown in the figure so that the water can enter the ultrafiltration system.

c. Open the water supply and then the ball valve (figure 5) as shown. Make sure there is no water leak. If there is, close the valve and fix it.



d. Open the faucet (Figure 2) and let all of the air out from inside the ultrafiltration system. Once a continual water flow comes out of the faucet, let it run for 30 seconds and then close the faucet. If in the beginning, the water runs black, don’t worry, this is normal, it’s caused by the residue that the granulated carbon filter lets off. Drain this water. The water will run clear not long after this.

e. Raise the arm on the WATER STOP Antileak system and place one of the pieces of the absorbent material supplied with the WATER STOP Antileak system. Keep the other one safe as a spare part. Lower the arm of the system so that water can enter the ultrafiltration system.



6. INSTALLATION & MAINTENANCE

The installer should inform the family members of the following points of the ultrafiltration System:

a. Location of the water inlet, pressure reducer, faucet and the WATER STOP Antileak system.
b. Maintaining the osmosis system. The recommended maintenance of the ultrafiltration system is in the table below. **By not following the maintenance as described in this manual, using original HIDRO-WATER S.L cartridges and by authorized personnel that guarantees the quality of the water produced and the correct operation of the osmosis system, the warranty will be void.**

Cartridge type	**Antibacterial Sediments cartridge**	**Carbon CTO cartridge**	**Ultrafiltration membrane**	**Nanosilver Carbon cartridge**
Stage	1st	2nd	3rd	4th
Reference	CA-1218-03	CA-0218-05	CA-0218-04	ME-0218-06
Appearance				
Replace*	6 - 9 month	6 - 9 months	1 – 2 years	6 – 9 months
Sanitation	Every time you change a cartridge, the membrane or a component in contact with water or if you haven't consumed water in over a month, you must sanitise the system using the **Sanitising kit (OI-0207-131).** Not supplied with the system.			

*The life of the filters and membranes will vary depending on the quality of the water supply, the usage and the amount of impurities it has.

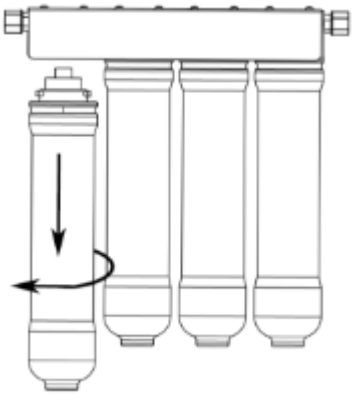
Replace the cartridges in the given period to ensure the life of the membrane and the quality of the water obtained.

6.1. PROCEDURE FOR REPLACING CARTRIDGES AND THE MEMBRANE

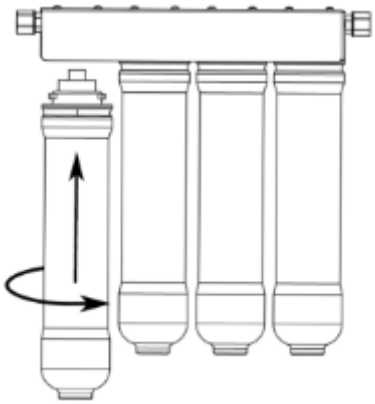
a. Close the water supply brass ball valve (figure 5).

b. Open the faucet (figure 2) to relieve the pressure from inside the osmosis system.

c. To change any of the cartridges and/or membrane they must be turned clockwise and pulled downwards to remove it from its cap as indicated in the following figure. This process must be carried out for each of the cartridges that you want to replace.



d. Remove the cartridges/membrane from their original packaging. Each cartridge and/or membrane must be placed in the corresponding position maintaining the correct order. To do so, you must insert each cartridge in its cap and turn it anti-clockwise. This process must be carried out for each of the cartridges that you want to replace.



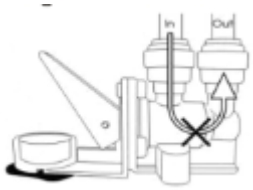
e. Once you have replaced one of the cartridges/membrane – with the faucet (Figure 2) open – open the brass ball valve (Figure 5) at the water supply. Let all of the air out from inside the ultrafiltration system. Once a continual water flow comes out of the faucet, let it run for 30 seconds and then close the faucet. If in the beginning, the water runs black, don't worry, this is normal, it's caused by the residue that the granulated carbon filter lets off. Drain this water. The water will run clear not long after this. Check for leaks, if there are any, close the valves and fix them.

Precaution 1: If there is any water leak in any area of the tube connections, remove it and cut off 0.5cm. Then reconnect it. If the leak s produced on any thread, unscrew the piece, apply more Teflon and screw it back on.

6.2. PROCEDURE FOR REPLACING THE WATERSTOP ANTILEAK ABSORBENT MATERIAL

In the case of having to change the WATER STOP Antileak absorbent material; you must do as follows:

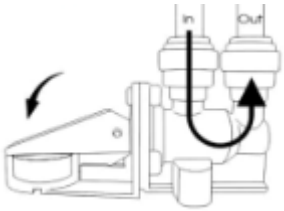
a. Raise the arm on the WATER STOP Antileak system, to cut off the water supply (if there is a leak the arm will already be raised).



b. Throw away the current absorbent material.

c. Replace it with a new absorbent material.

d. Lower the arm on the WATER STOP Antileak system and it's ready for use.

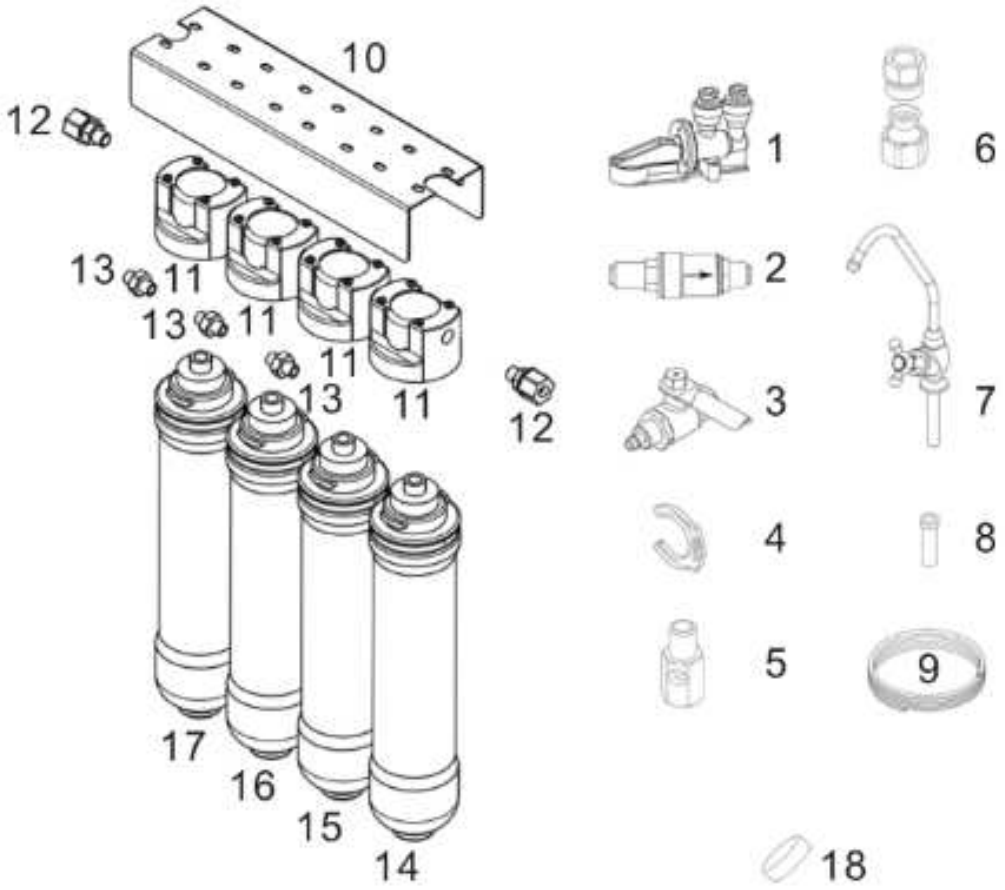


7. FAULTS, PROBABLE CAUSES AND POSSIBLE SOLUTIONS

SYMPTOM	PROBABLE CAUSE	SOLUTION
1. Zero/low production	a. No water supply. b. Brass ball valve at entrance fully/partially closed. c. Cartridges obstructed. d. Membrane saturated. e. Antileak system activated.	a. Wait until the water supply has been restored. b. Open the inlet valve fully. c. Replace cartridges. d. Replace membrane. e. Check if the Antileak system has been activated. If so, find the leak and fix it, change the absorbent material and lower the arm on the Antileak system.
2. Plastic or synthetic taste.	a. Worn Nanosilver Carbon cartridge.	a. Replace cartridge.
5. Chlorine taste and smell	a. Worn cartridges.	a. Change the cartridges.
5. Unpleasant taste and smell	b. Contamination.	b. Change the filters, membrane, post filter and sanitise.
6. White particles in the water	a. Air in the system b. Excessive inlet pressure.	a. Wait for the air to pass as there's no urgent problem. b. Check the pressure regulator.

8. SPARE PARTS

No.	CODE	DESCRIPTION	QNT
1	OI-0207-139	⅜” WATER STOP Antileak system.	1
2	OI-0207-141	⅜” Pressure reducer 40psi	1
3	OI-0210-03	¼” M x ⅜” T Brass ball valve	1
4	OI-0207-132	⅜” Security clip	4
5	OI-0230-09	⅜” M x ¼” F x ⅜” F Feed adapter.	1
6	OI-0208-24	⅜” tube faucet adapter	1
7	OI-0230-24	Faucet	1
8	OI-0207-54	⅜” plastic insert	2
9	TU-0602-01	⅜” Tube	1
10	OI-0234-44	NELVA ultrafiltration support bracket.	1
11	OI-0235-02	QC3 cartridge cups.	4
12	OI-0208-16	¼” M x ⅜” T Straight	2
13	OI-0208-04	¼” M x ¼” M Double Male connector	3
14	CA-0218-03	QC3 Antibacterial sediments cartridge	1
15	CA-0218-05	QC3 Carbon Block CTO cartridge	1
16	ME-0218-04.	Ultrafiltration membrane	1
17	CA-0218-06	QC3 NANOSILVER Antibacterial cartridge	1
18	OI-0207-133	Absorbent material	2



9. MONITORING AND MAINTENANCE CONTROL

DATE: / /			
SERVICE MADE		**NEXT SERVICE**	**OBSERVATIONS**
Sediments, GAC y CTO cart. change	☐	/ /	
Membrane change .	☐	/ /	
Post filter change	☐	/ /	
Sanitization	☐	/ /	
Reparation	☐	/ /	
Name and signature of the authorised technician or distributor:			

DATE: / /			
SERVICE MADE		**NEXT SERVICE**	**OBSERVATIONS**
Sediments, GAC y CTO cart. change	☐	/ /	
Membrane change .	☐	/ /	
Post filter change	☐	/ /	
Sanitization	☐	/ /	
Reparation	☐	/ /	
Name and signature of the authorised technician or distributor:			

DATE: / /			
SERVICE MADE		**NEXT SERVICE**	**OBSERVATIONS**
Sediments, GAC y CTO cart. change	☐	/ /	
Membrane change .	☐	/ /	
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