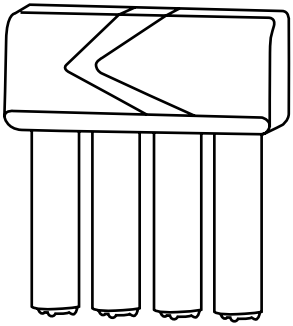

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IU

Instructions for use

Reverse osmosis equipments

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UM

User's Manual

Reverse osmosis equipments

USER'S MANUAL

FOR REVERSE OSMOSIS EQUIPMENTS

1. INTRODUCTION

Congratulations. You have purchased an excellent household water treatment equipment.

This equipment will help you improve the quality of the water.

Your equipment provides you with different benefits and advantages:

2. WHAT IS OSMOSIS?

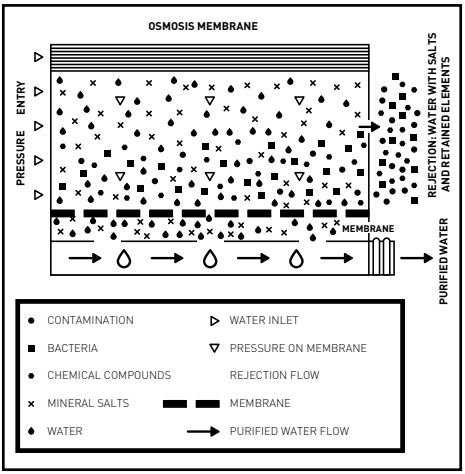
Natural or direct osmosis is the most common in nature, since most of the organisms contain semi-permeable membranes (for instance, plant roots, organs in our body, cellular membranes, etc).

When two solutions with different salt concentrations are separated by a semi-permeable membrane, water flows naturally from the solution with a lower concentration to that with a higher concentration. This flow continues until concentrations on both sides of the membrane are equal.

When it comes to reversing this process in order to obtain water with a low salt concentration using a highly concentrated one, it would be necessary to add pressure on the highly concentrated side, in order to stop this tendency and reverse the natural flow of the system. This process is called reverse osmosis. These days, reverse osmosis is the best method for producing pure water via a physical system (without using chemical products).

Inlet water presses against the semi-permeable membrane, so that part of it will get trough the pores of the membrane (pure water), while the remaining water (rejected or with high concentrations of salts) is diverted to the drainpipe (Fig. 1).

Figura 1



3. PRIOR WARNINGS

Warning: Carefully read all warnings included in the corresponding section of the Technical Manual.

Warning: This equipment IS NOT FIT TO BE USED WITH WATER UNSUITABLE FOR HUMAN CONSUMPTION. If the water to be treated comes from a public water supply (and therefore meeting current legislation requirements), this equipment will substantially improve the water quality.

Water treatment equipment need to undergo regular maintenance, which must be carried out by qualified technical personnel, in order to guarantee the quality of produced and supplied water.

3.1. USE OF THE EQUIPMENT

• Should you be away from home for more than a week, close the water inlet, empty the system and unplug it from the power supply (PUMP model). On your return, connect the power supply, open the inlet valve and empty the tank twice before drinking water.

Warning: After a prolonged period (more than a month) during which the system has not been in operation or produced water, contact your distributor in order to carry out proper sanitization and maintenance.

• In order to improve the performance of the equipment, we recommend filling bottles rather than filling glasses each time.

Warning: Special attention must be paid to the regular cleaning and hygiene of the osmosis tap, especially during periodic maintenance and hygiene. For this purpose, use the sanitising spray and disposable kitchen paper towels. Under no circumstances must a hand towel

or a multi-use cloth for the kitchen be used.

3.2. RECOMMENDATIONS ON HOW TO PROPERLY USE REVERSE OSMOSIS WATER

If you wish to feed any other consumption point with osmosis water (such as a fridge with an ice-cube dispenser, another tap, etc.), the piping should not be done with a metal tube, as this would give water a bad taste. Always use a plastic tube.

Warning: Water supplied by household osmosis equipment has a LOW MINERAL CONTENT. The mineral salts required by the human body are provided by food, especially by dairy products and to a lesser degree, by the water we drink.

4. BASIC OPERATION

Tap water to be treated enters the system going through the sediment filter and the carbon filters. During this filtering stage, chlorine, its derivatives and other organic substance particles are retained.

The flow of water towards the equipment is controlled by an electrovalve, or a 4-way shut-off valve (in function of the model).

After the water passes through the filtering stage, it is fed to the reverse osmosis membrane. In function of each model, the equipment may incorporate a pump to increase pressure. It is the effect of the water pressure upon the membrane, which makes the reverse osmosis possible.

Treated water is held in the water tank for its subsequent use. Water that is rejected or has excessive salt or other dissolved substances is fed towards the drain outlet to be disposed of.

When the storage tank is full, a high pressure switch or a 4-way shut-off valve (in function of the model) stops the equipment.

Models with a built-in pressure pump also have a low pressure switch as a safety system, which protects the pump against pressure drops by stopping the equipment and preventing a vacuum operation.

When the equipment's tap is turned on, the water stored in the tank passes through a post-filtering stage whose aim is the elimination of possible odours and taste, as well as pH adjustment, which water may retain before being dispensed.

Warning: In function of the model, there may be small performance differences. Please read the corresponding section in the Technical Manual.

5. USER INTERFACE

This equipment does not include an electronic interface.

6. MAINTENANCE

With the aim of guaranteeing the quality of the water supplied by your equipment, it should undergo regular maintenance.

Read the corresponding section of the Technical Manual to check the recommended maintenance frequency.

7. TROUBLESHOOTING

SYMPTOM	CAUSE	SOLUTION
1. Leak outside the system	Multiple causes	Call the Technical Service
2. No production.	There is no water supply	Wait until water supply is re-established
	There is no power supply	Check the power supply of the house. If the problem persists, please call the Technical Service.
3. Low production	Inlet valve is partially closed	Open it
	Tank valve is closed	Open it. If the problem persists, please call the Technical Service
4. Excessive production	Multiple causes	Call the Technical Service
5. Unpleasant taste and odour.	Multiple causes	Call the Technical Service
6. Water has a white colour.	Air bubbles inside the system. These micro-bubbles will disappear after a few seconds	This is not a problem. This appearance of the water will slowly disappear as the air inside the system is removed.
7. Rejection does not stop.	Multiple causes	Call the Technical Service
8. The equipment does not start	There is no water supply	Check the state of the main inlet valve of the house and the appliance
	There is no power supply *	Check the general power supply. If the problem persists, please call the Technical Service.
9. System turns constantly on and off	Multiple causes	Call the Technical Service
10. The equipment is always rejecting water to the drain	Inlet electrovalve or shut-off valve are broken down *	Check and replace
	Production check-valve is damaged	Check and replace
11. The equipment supplies a low water volume	The pressure tank has lost pressure	Check it. Pressurize the air balloon with 0.5 bar when the tank is empty

8. NOTES

DS

Data Sheet
Service Book

Reverse osmosis
equipments

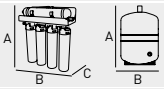
1. MAIN SPECIFICATIONS

	SO / EQUIPMENT WITHOUT PUMP	PUMP/ EQUIPMENT WITH PUMP
 **ENCAPSULATED MEMBRANE** Maximum hygiene and easy installation	●	●
 **EXCLUSIVE FILTERS** Exclusive filters	●	●
 **QUICK CONNECTOR** Easy maintenance	●	●
 **DIRECT ACCESS** Easy maintenance	●	●
 **HIGH PERFORMANCE PUMP** Higher performance and production		●
 **SOLENOID VALVE** Immeadiate control. Built-in safety filter		●
 **PRESSURE CONTROL** Protection against pressure drops in the supply network		●
 **ELECTRONIC ADAPTER** Higher safety and efficiency		●
 **SHUT OFF VALVE** Basic hydraulic control	●	

THE EQUIPMENT FEATURES THE OPTION MARKED WITH ●

1. TECHNICAL CHARACTERISTICS

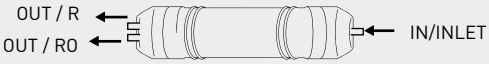
Application		
Water treatment	• Reverse osmosis	
Use	• Improves the drinking water's characteristics (meeting all European Directive on Water for Human Consumption 98/83 requirements and its national transpositions in the various EU member states).	
Modifications due to reduction or contribution	• Water treatment via reverse osmosis is able to greatly reduce salt and other concentrations. Minimum reduction* of specific compounds and parameters: Sodium Calcium Sulphates Chloride Total Hardness Conductivity In function of the characteristics of the water to be treated (in the membrane outlet). These values may vary in function of the type of post-filter used by the equipment and/or setting of the mixing valve (where applicable).	
Working limits		
	S0	**PUMP**
Pressure (max. / min.)	6 bar (600 kPa) 2.5 bar (250 kPa)	6 bar (600 kPa) 0.5 bar (50 kPa)
TDS (max.)	2,000 ppm*	2,000 ppm
Temperature (max. / min.)	40ºC – 2ºC	40ºC – 2ºC
Hardness (max.)	15ºHF**	15ºHF**
Technical Information		
	S0	**PUMP**
Control type	4-way mechanical valve	High pressure switch. Entry control by-pass electrovalve.
Safety system	-	Low pressure switch. Input pressure limiter.
Dimensions (mm) (A x B x C)	410 x 340 x 140	410 x 340 x 140
Weight (kg)	7	8
Storage tank (A x B in mm)	380 x 240	380 x 240
Total tank volume	16 l ***	16 l
Tank connection	**1/4"**	**1/4"**
Inlet connection	1/4"	1/4"
Drain connection	1/4"	1/4"
Tap connection	1/4"	1/4"
Wall adapter	1/2" M-F *****	1/2" M-F *****
Drain clamp	40mm drain tube clamp	40mm drain tube clamp



Pre-filters	1 x Sediments 2 x BLOCK	1 x Sediments 2 x BLOCK

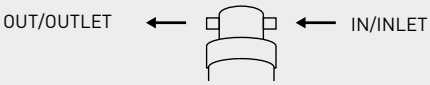
Technical Information

	SO	**PUMP**
Membrane	1812 x 50 GPD ENCAPSULATED	1812 x 50 GPD ENCAPSULATED



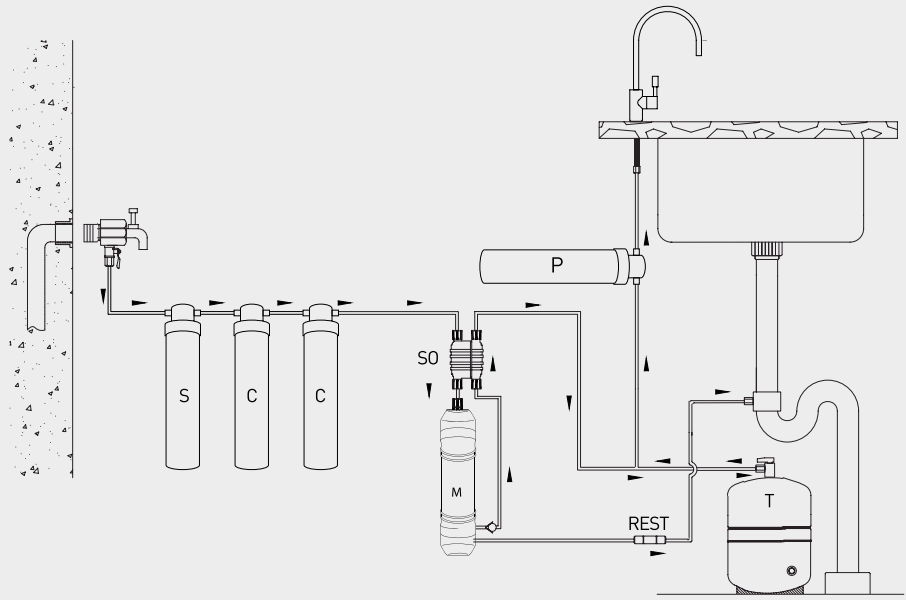
IN: STEM 3/8"
OUT/R: STEM 1/4"
OUT/RO: STEM 1/4"

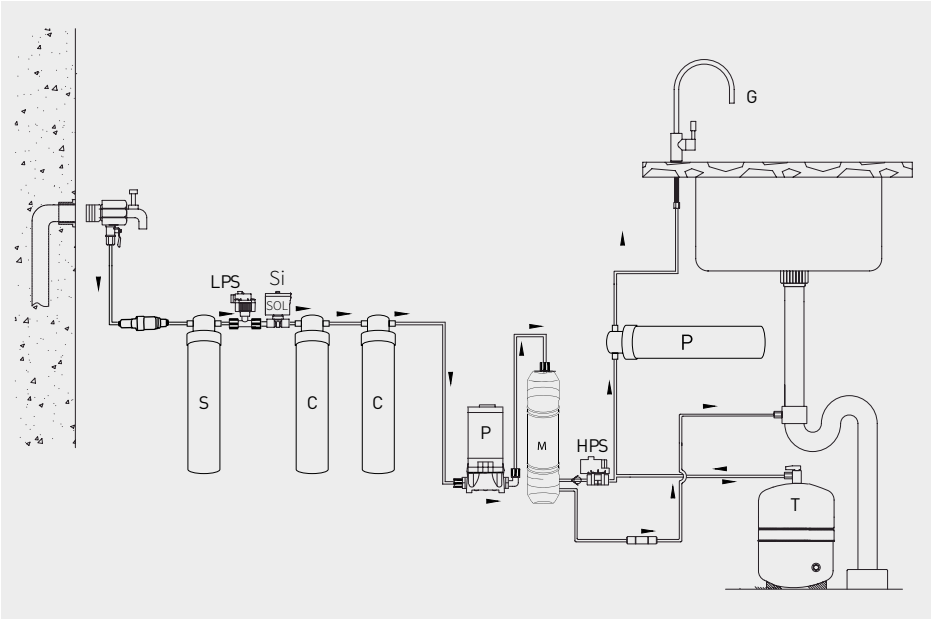
Post-filter	1 x GAC	1 x GAC

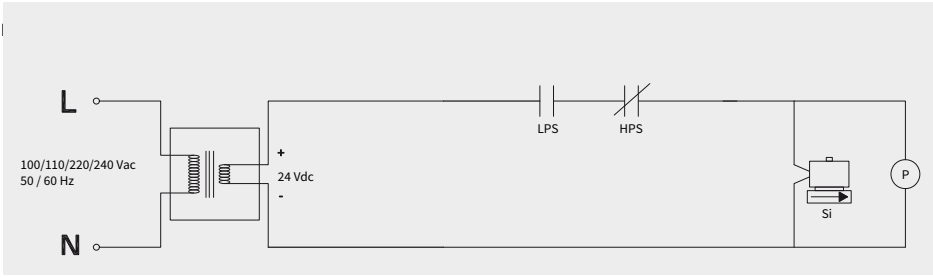


Power supply	-	24 Vdc 1.1 A
Power adapter	-	100-240 Vac 50/60 Hz: 24 Vdc
Type of tap	Ceramic valve *****	Ceramic valve *****
Production	0.15 lpm. Without counter pressure. Water to be treated 15 ºHF. 200 ppm, 20 ºC, 5 bar****	0.17 lpm. Without counter pressure. Water to be treated 15 ºHF. 200 ppm, 20 ºC, 2 bar****
Control and management electronic system	-	-
Membrane cleaning system	-	-

Hydraulic diagram **SO**

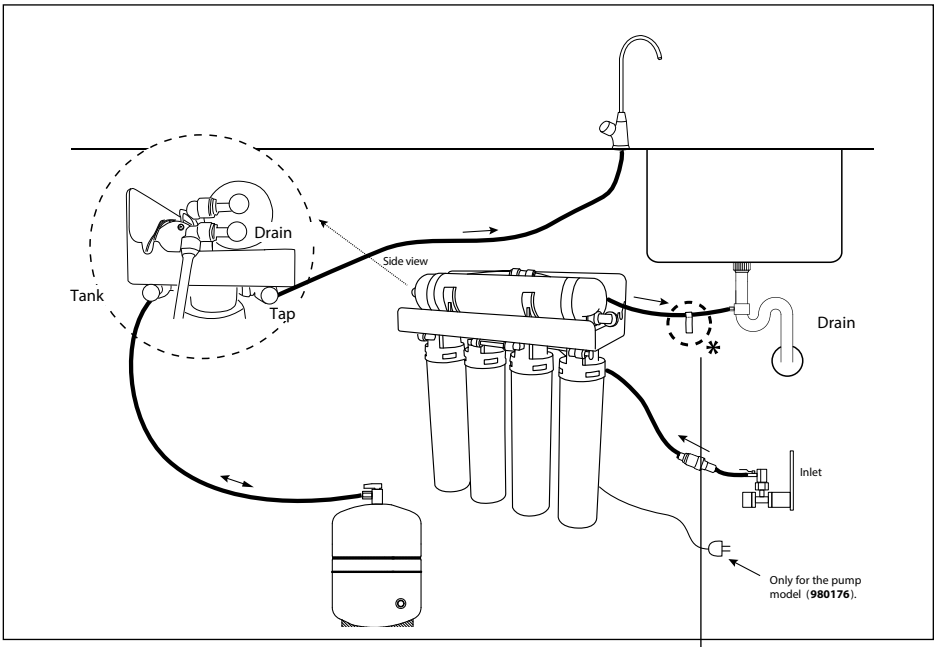






* For salinity levels above 2000 ppm, please check with your distributor. Warning: a high salinity rate and/or low entry pressure may cause the machine to operate outside of its working limits thus substantially limiting or preventing the reverse osmosis process.
** Higher levels of hardness can reduce the service life and correct function of certain components.
***Maximum accumulation in function of entry pressure.
**** Flows can vary by up to 20% in function of the temperature, pressure and specific composition of the water to be treated.
***** Possible variations in function of model chosen.

Hydraulic connections diagram



2. HOW THE EQUIPMENT WORKS

• Tap water to be treated enters the system going through the pre-filtering stage that incorporates a turbidity and a carbon filter. During this filtering stage, chlorine, its derivatives and other organic substance particles are retained.

• Water flow to the inside section of the equipment is controlled via a 4-way electrical shut-off solenoid valve (in function of specific model).

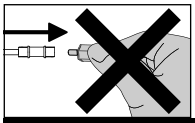
• After the water passes through the filtering stage, it is fed to the reverse osmosis membrane. In function of each model, the equipment may incorporate a pump to increase pressure. It is the effect of the water pressure upon the membrane, which makes the reverse osmosis possible.

The treated water is held in the water tank for its subsequent use. Water that is rejected or has excessive salt or other dissolved substances is fed to the drain outlet to be disposed of.

• When the equipment's tap (G) is turned on, the water stored in the tank passes through a post-filtering stage (R) whose aim is the elimination of possible odours and taste, as well as pH level adjustment (in function of each specific model), which the water may retain before being dispensed.

3. INTERFACE. SYSTEM STATUS.

It does not incorporate an electronic interface.



PAY ATTENTION TO THIS STICKER:
Do not unplug this side of the pipe. The flow restrictor inside is required for a proper working of the unit.

6. EQUIPMENT INSTALLATION AND INITIAL OPERATION REGISTRATION SHEET. TECHNICIAN

DATE	TYPE OF SERVICE	NAME, SIGNATURE AND STAMP OF AUTHORISED TECHNICIAN	
/ /	☐ INITIAL OPERATION	TECHNICIAN	☐ ORDINARY
/ /	☐ MAINTENANCE COMPLETE	STAMP	☐ EXTRAORDINARY
/ /	☐ REPAIR		☐ WARRANTY
/ /	☐ SANITATION		
/ /	☐ OTHERS		
/ /	☐ MAINTENANCE COMPLETE	TECHNICIAN	☐ ORDINARY
/ /	☐ REPAIR	STAMP	☐ EXTRAORDINARY
/ /	☐ SANITATION		☐ WARRANTY
/ /	☐ OTHERS		
/ /	☐ MAINTENANCE COMPLETE	TECHNICIAN	☐ ORDINARY
/ /	☐ REPAIR	STAMP	☐ EXTRAORDINARY
/ /	☐ SANITATION		☐ WARRANTY
/ /	☐ OTHERS		
/ /	☐ MAINTENANCE COMPLETE	TECHNICIAN	☐ ORDINARY
/ /	☐ REPAIR	STAMP	☐ EXTRAORDINARY
/ /	☐ SANITATION		☐ WARRANTY
/ /	☐ OTHERS		
/ /	☐ MAINTENANCE COMPLETE	TECHNICIAN	☐ ORDINARY
/ /	☐ REPAIR	STAMP	☐ EXTRAORDINARY
/ /	☐ SANITATION		☐ WARRANTY
/ /	☐ OTHERS		
/ /	☐ MAINTENANCE COMPLETE	TECHNICIAN	☐ ORDINARY
/ /	☐ REPAIR	STAMP	☐ EXTRAORDINARY
/ /	☐ SANITATION		☐ WARRANTY
/ /	☐ OTHERS		

7. SERVICE BOOK. USER

DATE	TYPE OF SERVICE	NAME, SIGNATURE AND STAMP OF AUTHORISED TECHNICIAN	
/ /	☐ INITIAL OPERATION	TECHNICIAN	
/ /	☐ MAINTENANCE COMPLETE	STAMP	☐ ORDINARY
/ /	☐ REPAIR		☐ EXTRAORDINARY
/ /	☐ SANITATION		
/ /	☐ OTHERS		☐ WARRANTY
/ /	☐ MAINTENANCE COMPLETE	TECHNICIAN	☐ ORDINARY
/ /	☐ REPAIR	STAMP	☐ EXTRAORDINARY
/ /	☐ SANITATION		
/ /	☐ OTHERS		☐ WARRANTY
/ /	☐ MAINTENANCE COMPLETE	TECHNICIAN	☐ ORDINARY
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/ /	☐ REPAIR	STAMP	☐ EXTRAORDINARY
/ /	☐ SANITATION		
/ /	☐ OTHERS		☐ WARRANTY

Warning: the recommended maintenance intervals are defined in the corresponding section of the **Technical Manual.**

TM

Technical manual

Reverse osmosis equipments

1. TECHNICAL CHARACTERISTICS

(*) For salinity levels above 2000 ppm, please check with your distributor. Warning: A high salinity rate and/or low inlet pressure may cause the unit to operate outside of its working limits thus substantially limiting or preventing the reverse osmosis process.

(**) For maximum performance and longevity of components.

In the event of any queries in relation to installation, use or maintenance of this equipment, please contact your distributor's technical assistance service (S.A.T).

2. PRIOR WARNINGS

Warning: This equipment IS NOT A WATER PURIFIER. In the event of the water to be treated coming from a public water supply (and therefore meeting current legislation requirements), this equipment will substantially improve the water quality.

Warning: In the event of the water to be treated not coming from a public water supply or from an unknown source, a physico-chemical and bacteria analysis of the water. Should be completed in order to ensure the correct purification process and by applying the appropriate techniques and equipment as necessary PRIOR TO THE INSTALLATION of the equipment. Please contact your distributor in order to receive advice on appropriate treatment.

2.1 CONDITIONS FOR THE CORRECT WORKING OF EQUIPMENT

• The system should not be used with hot water (T>40ºC).

• The ambient temperature must be between 4º and 45ºC.

• Units of the PUMP series come with a pump. In the event of the water supply pressure being in excess of 2.5 bar, a pressure regulator should be incorporated prior to the appliance, set to a maximum pressure of 2.5 bar (if the unit does not come with one).

• Equipments of the SO series do not come with a pump. We recommend its installation when inlet pressure is above 2.5 bar.

• For water with salinity concentration above 2000 ppm please consult with your dealer.

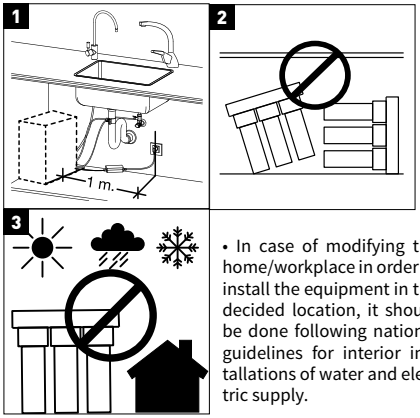
• We recommend that the water to be treated should be softened or with a maximum hardness level of 15 ºHF in order for your equipment to achieve maximum performance.

• In the event of the water to be treated having a hardness level in excess of 15 ºHF, the equipment's membrane life and equipment performance may be affected.

• In the event of the water to be treated containing:
- High concentrations of iron and manganese (In excess of 1ppm measured in the appliance's rejected water).
- Prolonged hyper-chlorination.
- Mud or turbidity in excess of 3 NTUs.
- A nitrate concentration in excess of 100 ppm.
- A sulphate concentration in excess of 250 ppm.

• Please consult your dealer for an appropriate pre-treatment recommendation, as well as ensuring the correct working of your equipment, avoiding any damage to components and to ensure the quality of the water supplied.

3. EQUIPMENT INSTALLATION



• In case of modifying the home/workplace in order to install the equipment in the decided location, it should be done following national guidelines for interior installations of water and electric supply.

• Appliances of the PUMP series require an electric connection less than 1 meter away (1).

• The compact units of the PUMP series should not be installed horizontally more tilted (2), which would render the leak sensor useless.

The system, when filled with water, weighs more. Unexpected weight distribution may cause a connection element to become strained thus causing incorrect working of the machine, which could damage components or cause a leaking.

• The installation location should have sufficient space for the unit itself, its accessories, connections and room for servicing and repair.

• Under no circumstances should the unit be installed outdoors (3).

• The environment where the equipment and tap is to be installed should adhere to any appropriate hygiene and sanitation conditions .

• Avoid any external dripping liquids from pipes or drains etc onto the equipment.

Warning: The unit should not be installed next to a heat source or in facing direct hot air (tumble dryer, refrigerator, etc).

3.1. INITIAL OPERATION AND MAINTENANCE

Warning: Water treatment equipment needs periodical maintenance carried out by qualified technicians in order to ensure the quality of the water produced.

• Consumable parts should be replaced as advised by the manufacturer.

• The equipment should be sanitised periodically and prior to its initial operation.

• After initial operation, the first two full tanks of water should not be consumed.

• Maintenance should be carried out by qualified technicians who work under the appropriate hygienic conditions in order to reduce the risk of internal contamination of the equipment and its hydraulic system. (For further information please contact your distributor's technical service department).

• In the event of the equipment incorporating a mixing system, the valve should always be closed during installation and initial operation. The mix should be set to the required characteristics and in accordance with the corresponding national legislation (measuring with an independent device/TDS/pH measure, on the tap dispenser section), while the equipment is filtering and during the filling process.

• In the event of the equipment incorporating an ultraviolet light germicide system, the following warnings should be noted:

Warning: Lamps and ballasts, as well as the equipment's other components, are not interchangeable between machines with different characteristics, references or manufacturers. In the event of replacing a lamp or ballast, they should be the exact models recommended by the manufacturer in order to avoid damage to any components and to ensure the minimum working parameters (service life of the lamp and minimum power of the UV-C rays emitted).

• Continual and repeated connection and disconnection from the electricity supply may damage or shorten the service life of some of the units components.

•Avoid any external dripping liquids upon the lamp cover as this may cause an electrical outage.

at a local recycling centre, indicating that said equipment contains electric and electronic components (PUMP model). The correct collection and treatment of products, which no longer are to be used, contributes to the preservation of natural resources and avoids any potential public health risks.

5. INSTALLATION

The installation of your osmosis equipment should be carried out by a suitably qualified technician. Please read carefully the user manual before use and consult with your distributor in case of doubt.

Warning: Since the equipment to be installed will improve the quality of your drinking water, all tools to be used in the installation process should be clean, rust and grease free. Only use tools, which are specifically designed for membrane pipe cutting. Please keep tools clean and disinfect them periodically.

Warning: The installation process should be carried out under appropriate hygienic conditions, taking all necessary precautions in relation to materials and components that will come into contact with water to be treated or consumed.

(For further information, please contact your distributor).

Warning: Avoid external contamination of the equipment through improper handling, using gloves, sanitising gel and washing hands as often as is necessary during the installation process, initial operation and equipment maintenance.

The most common installation location tends to be under the kitchen sink unit or in an annexed fitting.

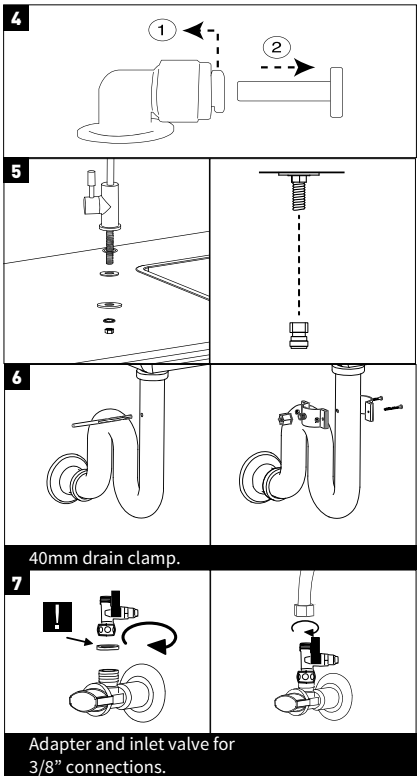
Install the tap, the waste water clamp and entry inlet adapter and connect the equipment's respective connectors (5, 6 and 7). Insert the filter cartridges into their respective heads after removing them from the packaging, should they be supplied separately. Check the corresponding section of the Technical Sheet.

Should the system comes with a separate tank, hydraulically connect it to the filtering equipment via the valve and appropriate connectors.

Warning: Some of the installation accessories may vary in function of the model and distribution region.

Use the appropriate tools and sealants to ensure that connections do not leak.

Removal of safety plugs (4).



6. INITIAL OPERATION

6.1. MEMBRANE ASSEMBLY

This equipment includes a pre-installed encapsulated membrane, thus it does not require any other additional handling.

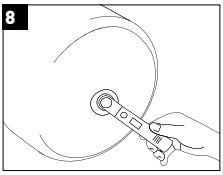
6.2. SANITIZE THE EQUIPMENT

Sanitize the equipment according to the model and procedure indicated by ***Sanitizing Procedure.***

In the event of any queries please consult with your distributor.

6.3. TANK PRESSURE CHECK

With the water inlet stop cock closed and the tank empty; check the tank pressure, which should be around 0.5 bar (8).

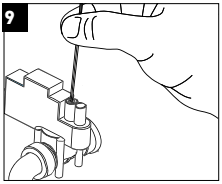


6.4. SYSTEM STOP, START AND WATERTIGHT CHECK

Turn off the equipment's tap on the work surface with the hydraulic and electric power on (according to model), and carry out a visual inspection of the equipment ensuring no leakages occur (during approx. 1 minute).

To ensure the correct working of all the equipment's components, close the tank valve, thus completing a rapid system pressurisation. In the event of the pump failing to stop (PUMP model), adjust the maximum pressure gauge setting with a 2mm Allen key until the pump stops (9).

9



In the case of the SO model, after turning the tap off and closing the tank valve, check that, after a few minutes, the water flow to the drain stops completely.
Keep the equipment pressurised for a few minutes, carrying out a visual inspection to find possible leakages or drips. Once complete, open the pressurised tank valve again.

6.5. RINSING AND CLEANING

Turn on the equipment's tap and check the quality of the water being dispensed with a conductivity tester or TDS; check the reduction of salt obtained is sufficient in relation to the water to be treated (10).

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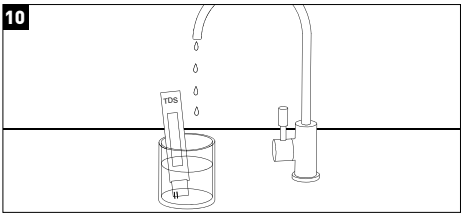

Warning: In the event of discovering that the water dispensed does not adhere to current national legislation, close the inlet valve, empty the equipment with the tap, disconnect it from the electric mains (PUMP model), and contact your technical service facility.

Warning: Wait one hour for the tank to fill with the equipment on standby. Empty the equipment via the tap. Repeat this process twice before consuming treated water.

7. MAINTENANCE

Warning: Some of your equipment's components, such as the membrane pre and post filters are consumable items which have limited lifetime.

Their duration will depend on the quality of the local water, consumption, type of use and specific water conditions such as extreme turbidity, high chlorine levels, excessive iron content etc.

Warning: With the aim of guaranteeing the quality of the water supplied by your equipment, it should undergo regular maintenance.

Recommended maintenance
• **Sediment pre-filter:** At least once a year *
• **Carbon pre-filter:** At least once a year *
• **Osmosis membrane:** Every 3 years approx. (for soft water - hardness >15ºHF)
• **Post-filter:** At least once a year. *
• **Sanitization:** During initial operation. At least once a year in function of the use. Each time components in contact with water are accessed or water has not been consumed for more than a month.

* *In function of the characteristics of the water and its use.*

All maintenance should be carried out by qualified technicians who should handle the equipment properly, as well as using original replacement parts in order to maintain the equipment's characteristics, warranty, equipment features as well as preserving the quality of the water dispensed.

Warning: The use of non-original replacement parts, non-regulatory installation or initial operation, maintenance or improper use may invalidate the warranty, as well as rendering invalid the equipment's certifications.

An excess of any compound (total chlorine, turbidity, hardness etc.) may reduce the equipment's useful life and certain components. This maintenance advice is only a guide.

Warning: All replacement parts come in specially designed individual packaging to ensure hygienic storage and transit. Take special hygiene measures when removing said parts from their packaging as well as during handling of the various components and connectors.

Warning: Before dismantling the equipment, make a note of all material necessary for the required maintenance (read section 6 installation) as well as the necessary space for work. Work should be carried out in a correctly lit place, in appropriate hygienic conditions and with sufficient space to work comfortably.

Change the filters properly, according to the model and type of filter. Ensure unions are watertight and the original hydraulic settings as recommended by the manufacturer.

Sanitize the equipment following the instructions in the ***Sanitizing Procedure.***

For further information consult the equipment's ***Technical Sheet.*** In the event of any doubt please contact your distributor.

In the event of replacing the membrane, follow the manufacturer's instructions in relation to handling and sanitizing as appear in the ***Sanitizing Procedure.***

Warning: Use gloves or appropriate personal protection measures when using chemical products during the sanitizing procedure.

Warning: In case of detecting that the water dispensed fails to adhere to current national legislation, close the equipment's inlet stopcock, empty via the tap, disconnect from the electricity mains (according to model) and contact your technical service facility.

8. NOTES

SP

Sanitising procedure

Reverse osmosis equipments

SANITIZING PROCEDURE

PRE-FILTER, STORAGE TANK, POST-FILTER AND TAP TREATMENT

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1. SANITIZING

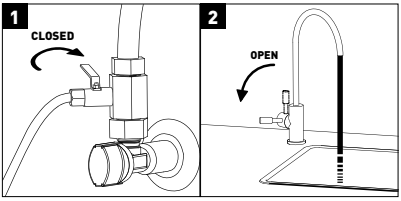
Necessary materials:

- Manual valve.
- Measuring cup and connectors.
- Hydrogen peroxide (0.5 l).
- Brush.
- Disposable vinyl gloves.
- Easy-to-rinse soap or detergent.
- Strips to detect hydrogen peroxide.
- Sanitizing spray.
- Paper napkin.

The appliance must be sanitized when necessary during initial operation, (whenever there is a risk of contaminating the appliance due to the manipulation of components in contact with water) or within the indicated frequency. To do so, follow the instructions below:

! Warning: Water used during the sanitizing process must be drinking water from the public network and comply with the corresponding drinking quality requirements from RD 140/2003, EU Directive 98/83 or the local regulations in force.

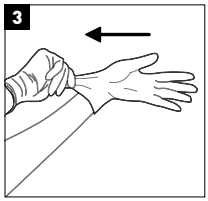
• Keep the inlet valve (1) closed and empty the storage tank through the water supply tap (2). Close the tap after making sure that no more water is running out of it.



• Change and wash the filters and the post-filter, as outlined in the corresponding section of the ***Technical Manual***. The sanitizing procedure must be carried out with new pre-filters and post-filters. Rinse the filters before starting the procedure (to properly remove carbon dust).

• Use disposable vinyl gloves (3) to handle sanitizing products.

! Warning: Maintain a high standard of hygiene when handling the membrane and the components of the appliance in contact with water. Use disposable gloves or wash your hands as often as necessary to avoid risk of contamination in the appliance.



• To sanitize the appliance, the membrane must be inside the membrane housing.

If you must replace an exhausted membrane for a new one: remove the
exhausted membrane and throw it away, by paying attention to the connections and maintaining a high standard of hygiene.

2. PRE-FILTER TREATMENT

Place the dosage housing in between the equipment's inlet tube. On this purpose:

• Disconnect the inlet tube of the system marked as “feed-entrada” and place the dosage housing between the water inlet and the inlet of the appliance (4). For an easier and more comfortable access during the sanitizing process and the opening and closing of the inlet valve, a manual valve in the closed position can be placed along with the sanitizing dosage housing. This valve will work as the manual inlet valve of the system.

• Once the set has been installed, keep the new manual inlet valve closed and open the inlet valve that is connected to the wall adaptor (5). The dosage housing must be empty.

• Pour 0.25 litres of hydrogen peroxide in the dosage housing placed at the appliance's inlet (6). Screw the housing properly in its head.

• The inlet manual valve and the tap must be closed. Plug the appliance to the power supply (if the model requires a power supply).

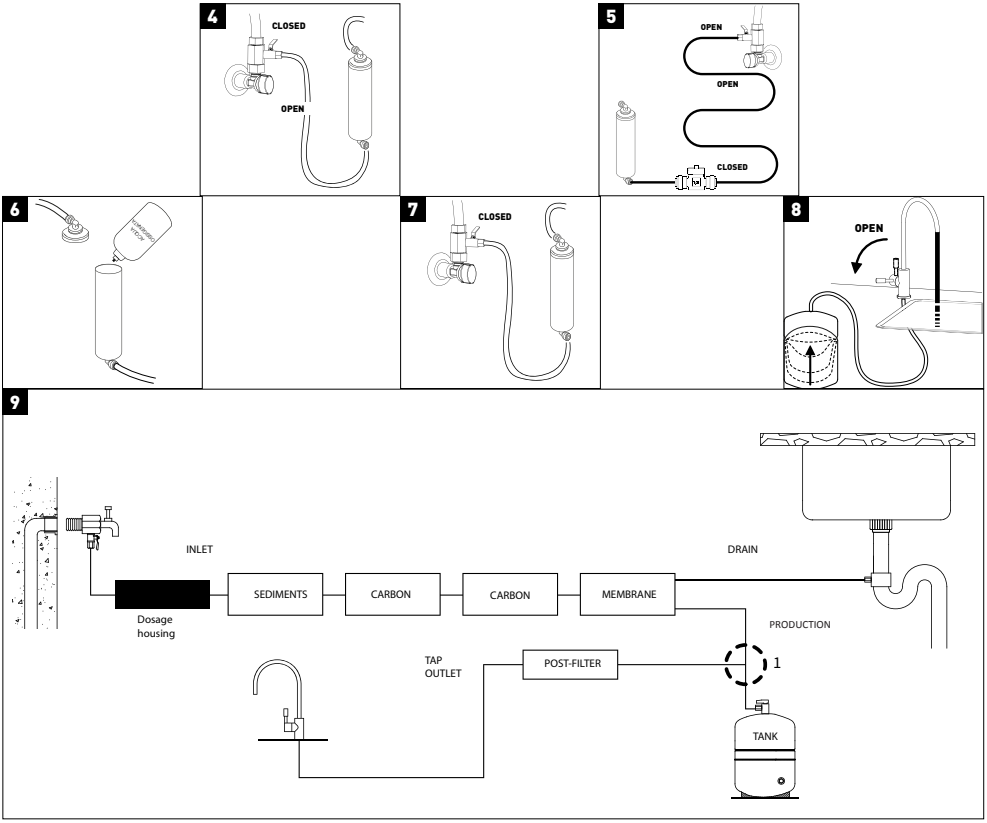
• Open the inlet valve and let the appliance start working so it will absorb the hydrogen peroxide. Keep the inlet valve in this position and let the appliance work for 10 minutes.

• Close the inlet valve (7), open the water supply tap and let the tank empty (8). Wait until the appliance stops due to the lack of water and no more water is rejected into the drain.

• Empty the dosage housing. Before opening this housing, make sure you have a receptacle in place where you can empty it since it might be full of water.

3. TANK, POST-FILTER AND TAP TREATMENT

• Find the osmosis water production outlet of the membrane housing and follow the tube which comes out of it, which is connected to a T-connector (see 1 in sketch 9). Unplug this tube from the T-connector (see image 10 in next page).



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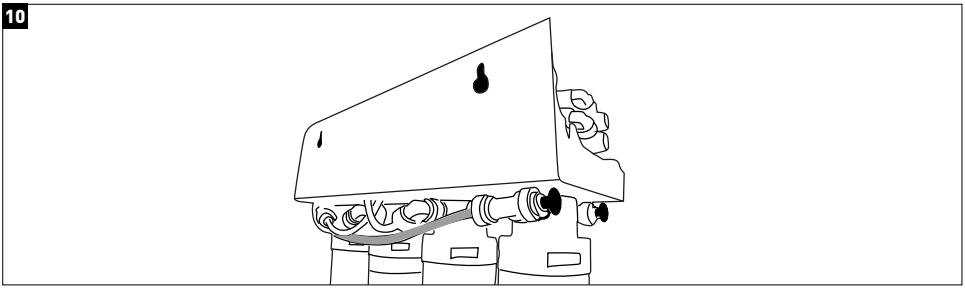

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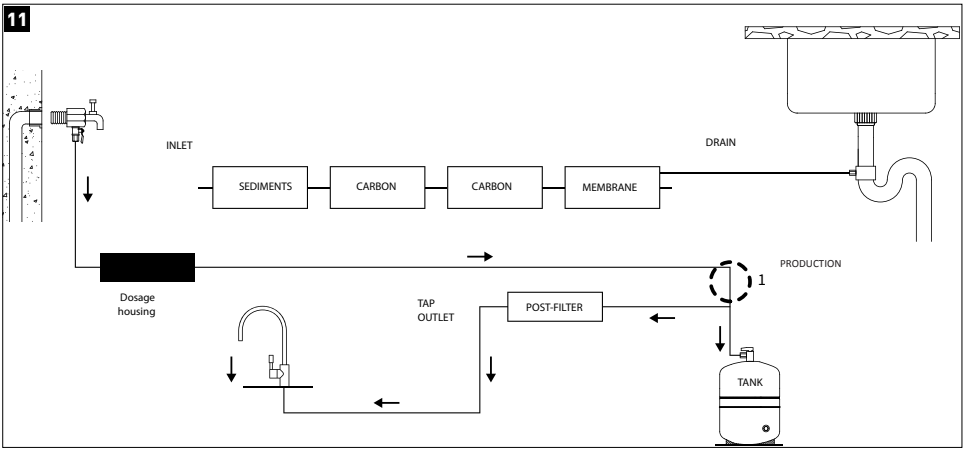

• Unplug the inlet tube from the appliance marked as "feed-entrada" ( ), connect it to the free connection of the T-connector mentioned above (see 1 in sketch 11) and place the dosage housing in between.

• Pour 0.25 litres of hydrogen peroxide into the dosage housing. Screw the housing properly in its head. The inlet valve and the tap must be closed.

• Open the inlet valve and let the tap water and the hydrogen peroxide from the dosage housing fill the storage tank of the appliance for 2 minutes. Then close the inlet valve.

• Open the water supply tap for 5 SECONDS to let the hydrogen peroxide reach the tap. Do not keep it open for more than 5 seconds, otherwise the hydrogen peroxide will flow out of the tap. Close the water supply tap and keep it closed (12).

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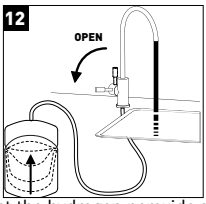


• Let the hydrogen peroxide sit inside the appliance for 15 minutes.

4. RINSING

Rinse the tank with tap water proceeding as follows:

• Open the water supply tap and empty the tank. Close the tap and open the inlet valve for 1 minute so the tank gets full of tap water. Close the inlet valve, open the water supply tap and empty the tank. Repeat this procedure until no hydrogen peroxide is left inside. Repeat this procedure for at least 5 times. On this purpose, use strips to detect the presence of hydrogen peroxide.

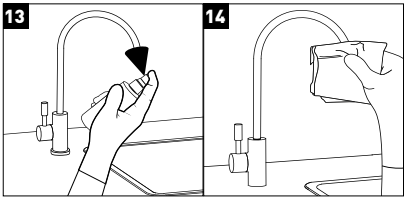
• Keep the inlet valve closed and the tank empty, then unplug the inlet tube from the T-connector and plug it properly into the inlet of the appliance. Plug the osmosis water production tube of the membrane into the T-connector, where it was initially connected.

• Remove the dosage housing and all accessories that have been used to sanitize the system. Remove the sanitizing dosage housing and the manual inlet valve.

• Dry all the parts that may have got wet using a disposable paper towel.

• Pay special attention to the disinfection of the tap spout.

tap. Use a sanitizing spray (or hydrogen peroxide, by applying it in such a way that it goes inside the faucet) and disposable kitchen paper towel. Apply the sanitizing spray on the tap nozzle (13), rub the spout and the nozzle with disposable paper towel and do not touch it with bare hands (14).



• Since sanitizing and rinsing do not either guarantee the complete removal of carbon dust found in new filters or sanitizing residues, the tank must be emptied twice before consuming produced water.

8. NOTES

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