

EQUIPO

UNE 149101

CERTIFICADO

COMMERCIAL

— DF RO —

# INSTRUCTION MANUAL

REVERSE OSMOSIS  
EQUIPMENT



COMMERCIAL

DF RO

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# USER MANUAL

## FOR REVERSE OSMOSIS EQUIPMENT

### 0. MAIN CHARACTERISTICS

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**FILTER CONTROL**  
AUTOMATIC NOTICE  
OF MAINTENANCE



**SOLENOID  
VALVE**  
IMMEDIATE CONTROL



**AQUASTOP**  
AUTOMATIC LEAK  
DETECTION SYSTEM



**DIRECT  
FLOW**  
DIRECT PRODUCTION  
OF OSMOTIC WATER



**LED  
STATUS**  
INDICATIONS  
OF STATE



**HIGH PERFORMANCE  
ENGINE**  
HIGH PERFORMANCE  
ENGINE



**DOT  
SYSTEM**  
12 PROGRAMS  
OF OPERATION



**ELECTRONICS  
ADAPTER**  
GREATER SECURITY  
AND EFFICIENCY



**DOUBLE  
FLOW**  
HIGHER FLOW  
OF WATER DISPENSED



**DIRECT  
ACCESS**  
EASE OF ACCESS  
AND MAINTENANCE



**QUALITY  
CONTROL**  
CONTROL OF  
CONDUCTIVITY



**SOUND  
WARNINGS**  
SOUND  
WARNINGS



**HIGH  
EFFICIENCY**  
HIGH  
CONVERSION



**CAPSULED  
MEMBRANE**  
ENCAPSULATED  
MEMBRANE



*Keep this manual, which includes the service book and warranty sections, in order to provide you with better after-sales service.*

## 1. INTRODUCTION

Congratulations. You have acquired an excellent equipment for water treatment for commercial HORECA use.

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

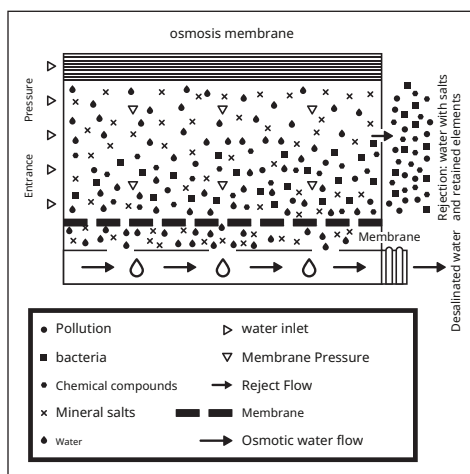
## 2. WHAT IS OSMOSIS?

Natural or direct osmosis is the most common in nature, since semi-permeable membranes are part of the vast majority of organisms (for example plant roots, organs of our own body, cell membranes, etc...)

When two solutions of different concentrations of salts are separated by a semi-permeable membrane, a natural flow of water occurs from the solution of lower concentration to the one of higher concentration. This flow continues until the concentrations on both sides of the membrane equalize.

When it comes to reversing this process and achieving a flow of water with a lower concentration of salts from one with a higher concentration, sufficient pressure must be applied from the part with the highest concentration on the membrane, to overcome the tendency and natural flow. of the system. This process is what we call reverse osmosis. Currently, reverse osmosis is one of the best methods to improve the characteristics of water, through a physical-chemical system (without the use of added chemical products).

The water to be treated puts pressure on the semi-permeable membrane, so that part of it will get through the pores of the membrane (osmotic water), while the rest of the water (rejected and with a higher concentration of salts) will be diverted to the drain ( Fig. 1).



## 3. PREVIOUS WARNINGS

**! ATTENTION:** *Carefully read the warnings described in the corresponding section of the Technical Manual.*

**! ATTENTION:** *These equipments ARE NOT WATER PURIFICATORS. In the event that the water to be treated comes from a public supply (and therefore complies with current legislation), this equipment will substantially improve the quality of the water.*

In the event that the water to be treated does not come from a public supply network or is of unknown origin, it will be necessary to carry out a physical-chemical and bacteriological analysis of the water to ensure its correct purification by applying the appropriate techniques and equipment for each need. , PRIOR TO THE INSTALLATION of the equipment. Get in touch with your distributor in order to be advised on the most appropriate treatment for your case.

The water treatment equipment needs periodic maintenance carried out by qualified technical personnel, in order to guarantee the quality of the water produced and supplied.

### 3.1. EQUIPMENT USE

- When you are going to be away for more than a week, close the water inlet tap to the equipment, empty it and disconnect it from the power supply. When you return, open the entrance key and the faucet, connect the electrical supply to the faucet and let the water run for at least 5 minutes before consuming water.

**! ATTENTION:** *After a prolonged period (more than a month) in which the equipment has not been working or producing water, contact your distributor in order to carry out proper sanitation and maintenance.*

**! ATTENTION:** *In the event that a water dispenser tap is incorporated, special attention must be paid to its cleaning and hygiene, on a regular basis and especially when carrying out periodic maintenance and sanitization. To do this, use the sanitizing spray and single-use disposable kitchen paper. In no case should the cloth be used to dry the hands or the multipurpose cloth used for cleaning the kitchen.*

- Remove full jars or bottles and avoid occasional removal of glasses to improve equipment performance.

- This appliance can be used by children aged 8 years and over and by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the safe use of the appliance and understand the hazards involved. Children must not play with the appliance. Children should not perform cleaning and user maintenance without supervision.

### 3.2. RECOMMENDATIONS FOR THE CORRECT USE OF OSMOTIC WATER

• If you want to feed any other point of consumption with osmotic water (such as refrigerators, coffee makers, ice machines, water dispensers, another tap, etc...), the piping must only be made with a plastic tube that complies with the laws established for human consumption. In case of using other materials, you could give bad flavors to the water and generate oxidation.

**! ATTENTION: The water provided by domestic osmosis equipment is LOW MINERALIZATION. The mineral salts that the human body needs are provided mainly by food, especially by dairy products and to a lesser extent by drinking water.**

• It is recommended not to use aluminum utensils to cook with osmosis water.

## 4. BASIC OPERATION

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The mains water to be treated enters the equipment through the sediment and carbon filter. In this filtration stage, suspended particles, chlorine, its derivatives and other organic substances are retained.

The passage of water into the equipment is controlled by means of a shut-off solenoid valve.

The water, after being treated in the filtration stage, is driven towards the reverse osmosis membrane. The equipment incorporates a pump to increase the pressure, since the pressure of the water on the membrane makes the reverse osmosis process possible.

The osmotic water leaves the equipment outside for consumption. The reject water is directed to the drain for disposal.

When you stop requesting osmotic water, the equipment stops its operation by means of a maximum pressure switch.

This equipment does not incorporate a minimum pressure switch, and therefore, at the moment of lack of pressure in the inlet water, the machine will be in operation (in the event that osmotic water has been requested), for a maximum of 33 minutes.

## 5. INTERFACE WITH THE USER

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**! ATTENTION: This equipment incorporates an electronic controller that will efficiently manage the functionality and status indications in which it is located, as well as the different security systems.**

The equipment's technical data sheet describes the states in which the system can be found and the information provided by it (pages 20-23 of this manual).

## 6. MAINTENANCE

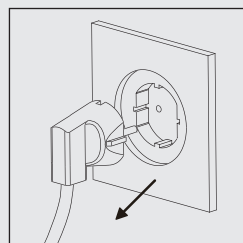
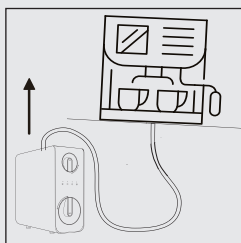
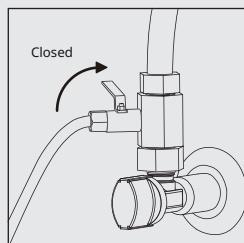
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In order to guarantee the quality of the water supplied by your equipment, periodic maintenance must be carried out.

Read the corresponding section of the Technical Manual to see the recommended maintenance frequency (page 11 of this manual).

## 7. IDENTIFICATION AND RESOLUTION OF PROBLEMS

PROBLEM	POSSIBLE CAUSE	SOLUTION
1. Leakage to the outside of the equipment.	<ul style="list-style-type: none"> <li>• Breakage of some internal part of the equipment.</li> <li>• Bad connection of the installation.</li> <li>• Deterioration of any plastic tube.</li> <li>• Poor connection of the filter or membrane.</li> <li>• The equipment has not been properly depressurized before changing the membrane or filter.</li> </ul>	<ul style="list-style-type: none"> <li>• Check all the connections of the installation.</li> <li>• Let the machine depressurize correctly, and reinstall the filter or membrane.</li> <li>• In case you have to disassemble the equipment, call the technical service first.</li> </ul>
2. Zero production.	<ul style="list-style-type: none"> <li>• There is no water supply.</li> <li>• There is no electricity supply.</li> <li>• Leak sensor activated.</li> <li>• Membrane blocked.</li> <li>• Transformer voltage less than 36 VDC.</li> <li>• Inlet filter saturated.</li> <li>• Low temperature of the water supply to the equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Wait for the water supply to return.</li> <li>• Check the electrical supply of the house.</li> <li>• Leak sensor activated.</li> <li>• Check the voltage of the transformer (the equipment will have to be disassembled).</li> <li>• Check the membrane and the inlet filter.</li> <li>• If the temperature is lower than 3°C, the equipment will be locked automatically.</li> </ul>
3. Low production.	<ul style="list-style-type: none"> <li>• Inlet valve partially closed.</li> <li>• Filters / membrane in poor condition or exhausted.</li> <li>• Rejection valve blocked, flow rate less than 1 liter per minute</li> <li>• Pump blocked or with bubbles inside (cavitations)</li> </ul>	<ul style="list-style-type: none"> <li>• Open it fully.</li> <li>• Replace the filter or membrane.</li> <li>• Change rejection valve.</li> <li>• Change pump in case of blockage.</li> <li>• Unplug and plug the equipment back in to perform a flushing and eliminate the bubbles contained in the pump.</li> </ul>
4. Excessive production.	<ul style="list-style-type: none"> <li>• Entry of excessive chlorine into the membrane.</li> <li>• Rejection valve blocked, flow less than 1 liter per minute.</li> <li>• Excessively high supply water temperature &gt;38°C.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace membrane.</li> <li>• Change of rejection valve.</li> <li>• The water temperature must be reduced below the limits.</li> <li>• Review the general installation of the enclosure, to eliminate sources of heat.</li> </ul>
5. Unpleasant taste and odor.	<ul style="list-style-type: none"> <li>• Membrane in poor condition.</li> <li>• The equipment has been stopped for a long time.</li> <li>• Sanitization has not been carried out.</li> <li>• The sanitizing product has not been properly purged.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace membrane.</li> <li>• Carry out disinfection.</li> <li>• Properly purge the equipment.</li> </ul>
6. Off-white water color.	<ul style="list-style-type: none"> <li>• Air in the system. Air microbubbles that disappear after a few seconds.</li> </ul>	<ul style="list-style-type: none"> <li>• It is not a problem. The appearance will gradually disappear as the air inside the equipment is eliminated.</li> </ul>
7. Continuous dripping noise in drain.	<ul style="list-style-type: none"> <li>• Depressurization of the equipment after production. Inlet valve dirty, or in poor condition.</li> <li>• Membrane non-return valve (production) dirty, blocked or in poor condition.</li> </ul>	<ul style="list-style-type: none"> <li>• Wait a few minutes, and check if the dripping ends. Cleaning or changing the inlet valve. Check membrane non-return valve.</li> </ul>
8. The equipment does not start up.	<ul style="list-style-type: none"> <li>• There is no water supply. There is no electricity supply. Inlet filter blocked.</li> <li>• Machine blocked by alarm.</li> <li>• Defective high pressure switch.</li> <li>• External programmer cable shorted. Leak sensor activated.</li> </ul>	<ul style="list-style-type: none"> <li>• Check the status of the general key and the equipment inlet.</li> <li>• Check the general power supply.</li> <li>• Change the inlet filter.</li> <li>• If there is power, but the lights do not come on, contact the technical service.</li> <li>• If the leak is not detected, dry the bottom of the equipment together with the leak sensor. If it repeats, call the technical service.</li> <li>• Change the high pressure switch.</li> <li>• Check the cable of the external programmer and change programmer in the case of detecting deterioration.</li> </ul>
9. The equipment stops and starts constantly.	<ul style="list-style-type: none"> <li>• Leak at production outlet.</li> <li>• Closures in electrical valves of external devices (such as glass-washers, dishwashers, coffee makers, ice machines, etc...), do not cut correctly and have internal leaks.</li> <li>• Membrane production check valve does not close properly.</li> </ul>	<ul style="list-style-type: none"> <li>• Check the osmotic water installation, in case there are leaks and repair.</li> <li>• Review the closing mechanisms of the devices connected to the equipment, and ensure a correct closing.</li> <li>• In the case of installing dispensing taps, check for abnormal dripping and repair.</li> <li>• Check membrane check valve</li> </ul>
10. The equipment never stops rejecting water to the drain.	<ol style="list-style-type: none"> <li>1. Deteriorated inlet solenoid valve.</li> <li>2. Deteriorated production check valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and replace.</li> </ol>



Read the INTERFACE section of the *Data sheet*. In the event of an anomaly, contact the SAT and proceed as indicated: Close the entrance key. Open the faucet to depressurize the system and disconnect the plug.

# TECHNICAL MANUAL

## FOR REVERSE OSMOSIS EQUIPMENT

### 1. MAIN FEATURES

#### APPLICATION

##### Water treatment

Reverse osmosis for HORECA commercial use.

##### Use

Improvement of the characteristics of drinking water (that complies with the requirements of the European Directive on water for human consumption 98/83 or its national transpositions in the different member states of the European Community).

##### Modifications due to reduction or contribution

- Water treatment by reverse osmosis is capable of reducing concentrations of salts and other substances in high percentages.
- Minimal reduction\* of certain compounds and parameters:

Sodium: 85%.  
Calcium: 90%.  
Sulfate: 90%.  
Chloride: 90%.  
Total hardness: 90%.  
Conductivity: 90%.

*\* Depending on the characteristics of the water to be treated (at the outlet of the membrane). These values may vary depending on the type of post-filter that the equipment incorporates and/or regulation of the mixing valve (if it is included).*

#### OPERATING LIMITS

Pressure (max./min.):	4 bar - 1 bar (400kPa-100kPa) .
TDS (max):	1500ppm.
Temperature (max./min.):	38°C - 5°C.
Hardness (max.):	15°HF. **

**!** **ATTENTION:** *If you have any questions about the installation, use or maintenance of this equipment, contact the technical assistance service (SAT) of your distributor.*

### 2. OPERATING CONDITIONS

#### 2.1 CONDITIONS FOR THE CORRECT OPERATION OF THE EQUIPMENT

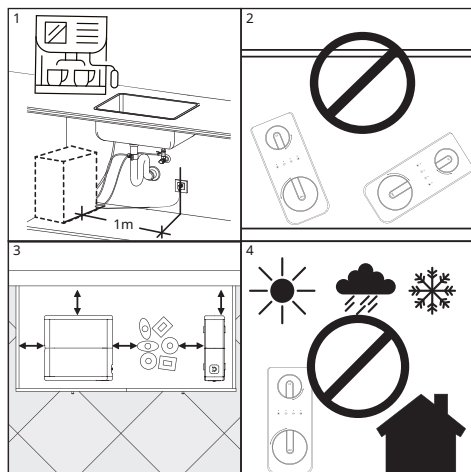
- The equipment must not be supplied with water with a temperature higher than 38°C, nor lower than 5°C..
- The ambient temperature must be between 4° and 45°C.
- For water with salinity higher than 1500 ppm, consult your distributor.

In the event that the water to be treated contains:

1. Hardness greater than 15°F.
2. Free chlorine concentrations > 1.2 mg/l.
3. High iron or manganese concentrations (greater than 1 mg/l. measured in rejection of the equipment).
4. Turbidity greater than 3 NTU.
5. Nitrate concentrations > 100 mg/l.
6. Sulfate concentrations > 250 mg/l.



It is recommended to contact your distributor, to recommend the most appropriate pre-treatment in your case, to ensure proper operation of the equipment, and thus avoid damage to components and guarantee the quality of the water supplied.



### 3. EQUIPMENT INSTALLATION

• In case of having to condition the installation of the house to be able to install the equipment in the foreseen place, it must be carried out following the national regulations for interior installations of water and electrical supplies.

• These devices need an electrical outlet less than 1 meter away (1).

• This equipment should not be installed lying down or tilted (2), because the leak sensor would be disabled.

The equipment filled with water weighs more, the distribution of weights in an unexpected position could cause some connection element to be forced, which could cause a malfunction, damage to equipment components or loss of water.

• The place planned for its installation must have enough space for the device itself, its accessories, connections and for carrying out convenient maintenance (3).

• Under no circumstances will the equipment be installed outdoors (4).

• The surroundings and environment where the equipment is installed and its subsequent connections must maintain adequate hygienic-sanitary conditions.

• The device must only be powered at a voltage between 100 and 240 VAC 50/60Hz.

• Avoid external drips on the equipment, coming from pipes, drains, etc.

**! ATTENTION: The equipment must not be installed next to a heat source or receive a flow of hot air directly on it.**

• New tubing sets supplied with the unit should be used and old tubing sets should be conveniently removed.

#### 3.1. START-UP AND MAINTENANCE

**! ATTENTION: The water treatment equipment needs periodic maintenance carried out by qualified technical personnel, in order to guarantee the quality of the water produced and supplied.**

• The consumable elements must be replaced with the frequency indicated by the manufacturer.

• The equipment must be sanitized periodically and prior to its commissioning.

• During the first 30 minutes, after starting up, changing the filter and/or membrane, the quality of the water may vary up to its optimum performance.

• Maintenance must be carried out by qualified technical personnel, with adequate attitude and hygienic conditions, in order to reduce the risk of internal contamination of the appliance and its hydraulic system. (For more information contact the technical service of your distributor).

### 4. UNPACKING

It is important that before installation and start-up, check the box and condition of the equipment, in order to guarantee that it has not been damaged during transport.

**! ATTENTION: Claims for damages during transport must be submitted together with the delivery note or invoice to your distributor, attaching the name of the carrier within a maximum period of 24 hours after receipt of the merchandise.**

Remove the equipment and accessories from their cardboard packaging, removing the corresponding protections.

**! ATTENTION: Dispose of plastic bags properly and keep out of the reach of children, as they can be a danger to them.**

Inside you will find: Water treatment equipment, installation accessories and documentation. The materials used in the packaging are recyclable and must be discarded in the appropriate selective collection containers

or in the specific local center for the recovery of waste materials.



This product cannot be disposed of with normal urban waste. When the useful life of the equipment has ended, it must be delivered to the company or center where you purchased the device, or to a specific local recycling point or center for the recovery of materials, indicating that it has electrical and electronic components. The correct collection and treatment of useless equipment helps to preserve natural resources and also to avoid potential risks to public health.

## 5. INSTALLATION

The installation of your osmosis equipment must be carried out by personnel who are sufficiently qualified for it. Read this manual beforehand and consult the dealer in case of doubt.

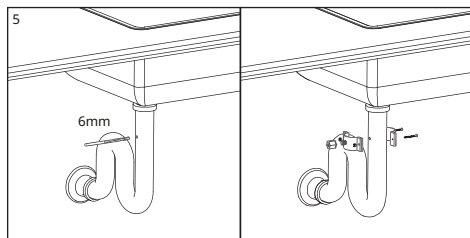
**! ATTENTION:** *Since the device to be installed improves the quality of the water that is going to be consumed, all the tools that are going to be used for assembly and installation must be clean and in no case may they be contaminated or impregnated with grease, oils or oxides. Use exclusive use tools for tube cutting, membrane manipulation, etc. Keep them clean and disinfect them regularly.*

**! ATTENTION:** *The work must be carried out with an attitude and adequate hygienic conditions, taking extreme precautions in everything related to materials and components that are going to be in contact with the water to be treated or consumed.*

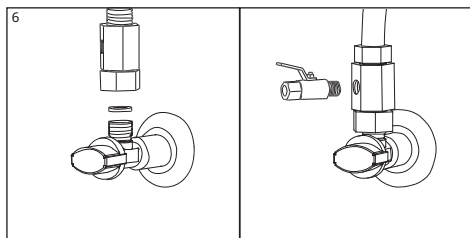
(For more information contact your dealer).

**! ATTENTION:** *Avoid the risks of external contamination of the equipment due to improper handling, using gloves, hand sanitizing gel or washing your hands as many times as necessary throughout the installation, start-up and maintenance of the equipment.*

The most frequent place for the installation of the equipment is usually under the kitchen counter or in an adjoining piece of furniture. install outlet production, the equipment drain collar and adapter of the inlet and connect them to the respective connectors of the equipment (5 and 6).



- ◆ 40 mm drain clamp.
- ◆ Adapter and inlet valve for 3/8" connections.



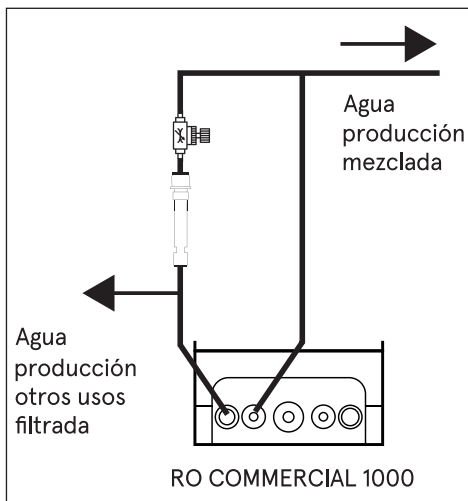
See hydraulic diagram on page 13.

Technical manual

**! ATTENTION:** *Some of the installation accessories may vary depending on the model and the region in which the equipment is distributed.*

### 5.1. MIXING KIT

- In case you want to increase the pH, and/or the conductivity and/or the chlorine concentration at the outlet, you must carry out the installation according to the following scheme and using the corresponding components included in the mixing kit (consult your distributor ).
- After start-up, open a production outlet and with the corresponding meter of the parameter of interest, measure the water dispensed by the tap and slowly and progressively open the mixing valve until the desired parameter is obtained.
- The dispensed water must comply with the potability requirements established by European Directive 98/83 or the corresponding national legislation that transposes it.

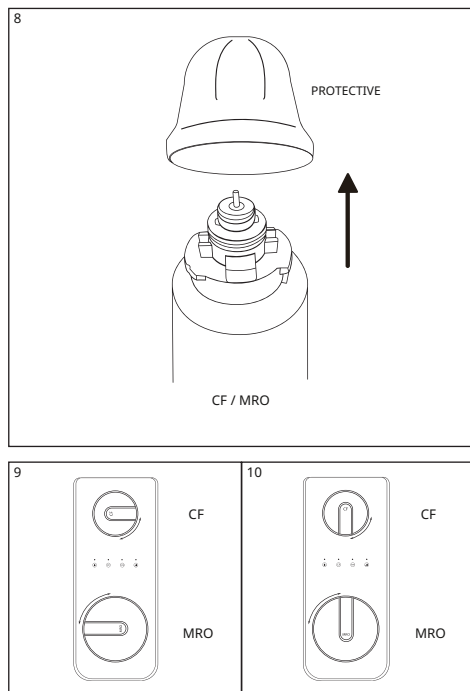


#### NECESSARY ACCESSORIES:

- 2 x T 1/4" - 1/4" - 1/4". Code: 952914
- 1 x Check valve. Code: 951300
- 1 x Flow regulation valve. Code: 952400

## 5.2. FILTERS INSTALLATION

- Remove the plastic wrap and remove the protector before installing the filters (as shown in figure 8).
- Install the CF filter in the first stage of the COMMERCIAL 1000 machine (upper position), the RO membrane in the second stage of the machine (lower position).
- To install the filters, present each filter in its respective housing with the handle in a horizontal position, as shown in figure 9.
- Insert firmly all the way and turn the handle 90 degrees clockwise. After installation, the two filters should be as shown in figure 10.



## 6. START-UP

### 6.1. FILLING AND PURGE OF THE EQUIPMENT

- Once the filters are installed, one of the outlets connected to the production connection must be opened. Next we will open the tap of the water intake to the equipment and finally, we will connect the power outlet to the plug. The equipment will begin to carry out an internal washing of filters and membrane, with the purpose of eliminating air bubbles, membrane protection products and cleaning the filters of possible residues. During this time, the production flow will be reduced by the filter washing flow. In the event that it is seen that the rejection flow to the drain takes a few minutes to come out, it is advisable to repeat the start-up steps, because the pump could have an air bubble, causing it to cavitate, without being able to give flow of water to the rest of the components.

Keep in mind that the programmed time for this flushing is 5 minutes.

### 6.2. EQUIPMENT SANITIZATION

- Perform a sanitization of the equipment, according to the model and procedure indicated by the manufacturer (see the *Sanitization procedure*). If in doubt, consult your dealer.

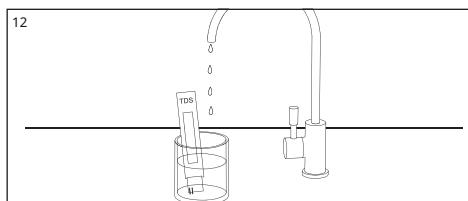
### 6.3. SYSTEM SEALING, STOP AND START

Once the equipment has been filled, purged and washed, make sure that the devices and accessories connected to the production of the equipment are closed. Check and make sure that the equipment and its external connections are leak-free and correctly connected. During this checking time, the equipment must not start automatically under any circumstances.

Open a point of use connected to the equipment, at which point the equipment should start up. Close the point of use again, and the equipment should be stopped. If, in the production connection of the equipment, a pressurized tank (expansion vessel) is installed, or some element where there is an accumulation of water, the equipment will keep running until it is full.

### 6.4. RINSE AND CLEAN

- Open the tap on the equipment and measure the quality of the water being produced. With a conductivity or TDS meter, check that the salt reduction obtained is adequate with respect to the water to be treated (12).



**! ATTENTION: if you detect that the water dispensed does not comply with current national legislation, perform the measurement again. If the deviation persists, close the equipment input key, empty it through the tap, disconnect it electrically and contact your technical service.**

- In the event that, at the time of installation and start-up, the leak sensor has gotten wet, at the time of the electrical connection, said warning will be activated, blocking the equipment. In order for the equipment to go into service status, the equipment must be tilted backwards so that the water accumulated in the sensor exits through the rear part of the casing. Once the sensor is dry, the equipment will automatically activate.

## 7. MAINTENANCE

**! ATTENTION: Some components of your equipment, such as the pre-filter and the membrane, are consumables that have a limited life.**

The duration will depend on the quality of the local water, consumption, type of use and specific aspects of the water to be treated such as extreme turbidity, high chlorination, excess iron, etc.

**!** **ATTENTION: In order to guarantee the quality of the water supplied by your equipment, periodic maintenance must be carried out.**

**!** **ATTENTION: Use gloves or suitable personal protection measures, if you use chemical products during sanitization.**

#### RECOMMENDED MAINTENANCE

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CF pre-filter: minimum 6 months or 8000 liters of inlet water\*

RO osmosis membrane: Approximately every 3 years (for soft water to be treated (hardness <15 °HF) or 20,000 liters of osmosis water.

Sanitization: At start-up. At least every 12 months based on usage. Every time components in contact with water are accessed from the equipment or water has not been consumed for more than a month.

*\* Depending on the selected program.*

Maintenance must be carried out by trained personnel, who must handle the equipment properly, as well as use original spare parts to maintain the characteristics, warranty, certifications and benefits of the equipment and thus preserve the quality of the water dispensed.

**!** **ATTENTION: The use of non-original spare parts, installation outside the operating limits and improper start-up, maintenance or use, may lead to the loss of the guarantee, as well as the invalidation of the certifications to which the equipment has been submitted.**

An excess in any compound (total chlorine, turbidity, hardness, etc...) can cause a reduction in the life of filters and certain components. These maintenances are indicative.

Your distributor will anticipate the duration of the consumables depending on the characteristics of the water to be treated and the expected consumption in each case.

**!** **ATTENTION: All consumables are supplied with individual packaging specially designed to guarantee hygienic storage and transport conditions. Take extreme hygienic precautions after removing the consumables from their packaging and when handling the various connectors and components.**

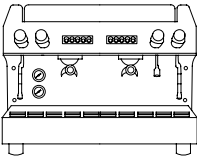
**!** **ATTENTION: Before disassembling the equipment, provide all the material you will need to carry out the maintenance operations (read section 5 Installation) and the necessary space for it. Work in a properly lit place, in suitable hygienic conditions and with enough space to carry out operations comfortably.**

- Change the filter and/or membrane properly. Ensure the tightness of the joints and the original hydraulic configuration of the system as recommended by the manufacturer.

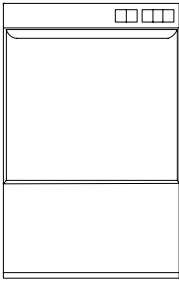
- Sanitize the equipment following the indications described in the Sanitization Procedure.

- For more information, see the *data sheet* of the equipment. If you have any further questions, consult your dealer.

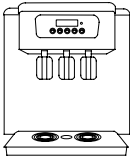
INSTALLATION SUGGESTIONS:



Coffee maker



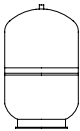
glass washer



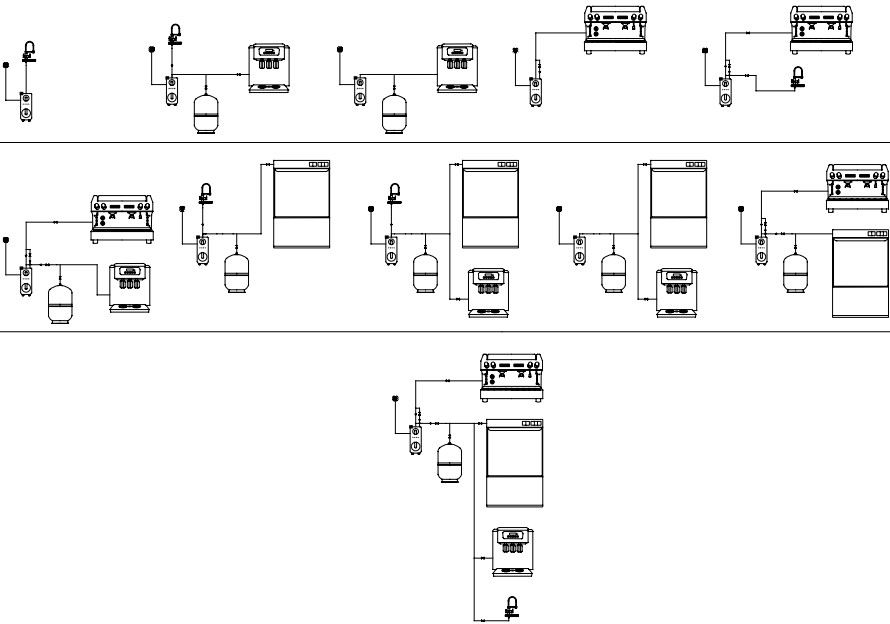
Dispenser



Tap



Accumulator



# SANITIZATION PROCEDURE

## 1. SANITIZATION

Necessary material:

- Manual valve.
- Dosing cartridge and connectors.
- Hydrogen peroxide 3% (0.5 l).
- Brush.
- Single-use vinyl gloves.
- Easy-rinse soap or detergent.
- Food lubricant.
- Hydrogen peroxide detector strips.
- Sanitizing spray.
- Paper napkin.

Perform a sanitization of the equipment during start-up, when appropriate (every time there is a risk of contamination of the equipment by handling components in contact with water) or with the indicated periodicity. To do this, follow the steps below:

In the event that sanitization is carried out at start-up, you must go directly to point 2.

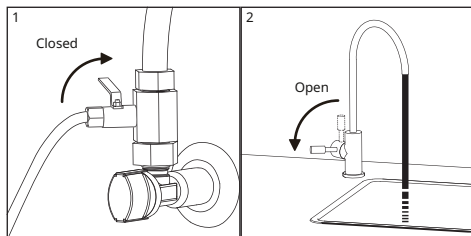
If the sanitization is carried out after the change of filter or membrane, before, the reset of the changed component must be carried out.

**! ATTENTION: The water used during sanitization must be potable water (from a public distribution network, complying with the corresponding potability requirements of RD 140 / 2003, European Directive 98 / 83 or current local legislation).**

• Open a point of consumption and allow water to recirculate in order to renew the water inside the equipment.

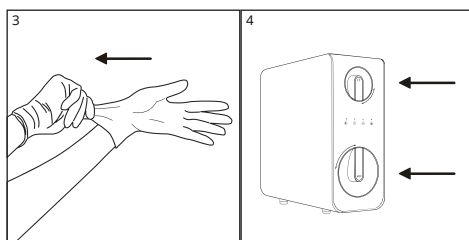
- Close the inlet valve (1) and keep the point of consumption open, to reduce the pressure in the equipment.
- Change the filter and/or membrane as indicated in the corresponding section of the technical manual.

• Sanitization must be carried out with the cartridges installed in their housings.



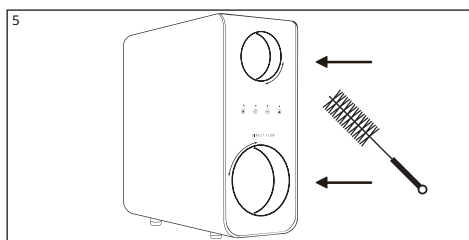
- Use single (3) use vinyl gloves to handle sanitizing products.

**! ATTENTION: Take extreme hygienic measures when handling the filters, the membrane and the equipment components in contact with water. Use disposable gloves or wash your hands as many times as necessary to avoid risks of equipment contamination.**



- In the case of replacement of any of the cartridges for disposal, clean and dry the interior of the housings.

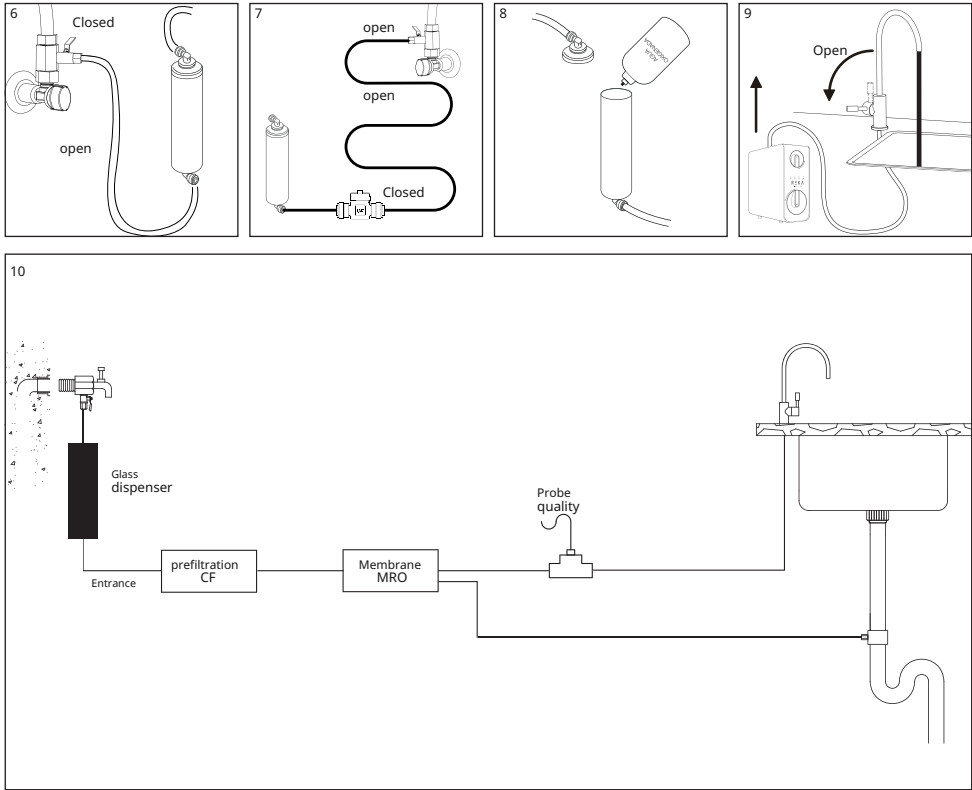
- Disinfect the cartridge connections with a brush (which must be kept clean and disinfected) and a suitable disinfectant product.



## 2. TREATMENT OF THE PRE-FILTER, THE MEMBRANE

- Disconnect the appliance electrically. Disconnect the inlet tube to the equipment marked as "IN" (3/8"), and insert the dosing cartridge between the inlet valve and the water inlet of the equipment (6). For greater comfort and ease of access during sanitization and the opening and closing operations of the inlet valve, you can insert a manual valve in the closed position together with the sanitizing dosing cartridge, which will perform the same functions as the

- manual shut-off valve inlet to the equipment.
- Once the assembly is installed, keep the new manual inlet valve closed and open the attached inlet valve on the wall adapter (7). The dosing cartridge must be empty.
  - Pour 0.25 liters of Hydrogen Peroxide into the dosing cartridge inserted in the equipment inlet (8). Screw the glass correctly to its head.
  - The manual inlet valve and the tap must be closed.
  - Open the water inlet tap to the equipment and a point of consumption, connect the device to the mains plug and allow it to start working and letting it suck the Oxygenated Water into it. Fill a 1L jug with the water from the point of consumption. Before closing the consumption point intake, close the inlet tap again to lower the pressure. Fill the dispenser again with 0.25l of hydrogen peroxide and empty 1 more liter of water. Close the point of consumption. At this time the entire circuit contains sanitizing liquid.
  - After 10 min. Open the dispenser tap (9) and let the mains water circulate for 5 minutes.
  - Empty the dosing cartridge. Before opening it, have a container within reach where you can empty it, as it may be full of water.



- Pay special attention to sanitizing drinking water intakes (dispensers, taps, etc...). Use the sanitizing spray (or failing that, hydrogen peroxide, dosing it in such a way that it penetrates the tap spout) and single-use kitchen paper. Spray the spray on the faucet nozzle, wipe the spout and faucet nozzle with the disposable paper and do not touch it directly with your hands.

### 3. RINSE

---

- Once the sanitization has been carried out, you must:
- If the machine has just been installed, rinsing will take place during the time set for the 5-minute automatic flushing.
- If the filter or membrane has been changed, the cartridge must be reset to perform the automatic 5-minute flushing.
- Rinse with plenty of water that complies with local applicable regulations regarding water potability parameters.
- At the end, take a blotting paper, dry all the parts that could have gotten wet and especially the Aquastop leak detection probe (if the equipment incorporates it).

### 4. RESET FILTERS

---

When the pre-filter or the membrane shows the filter change warning (red light in CF or MRO), the Reset must be carried out. To do this, the filter or membrane button must be held down for a time greater than > 5 seconds.

After this time, the device will emit a beep and the color of the button will change from red to blue.

Once the Reset has been carried out, the device will begin to do a 5-minute internal flushing. This washing must be finished until water can be supplied to production.





# DATA SHEET

## FOR REVERSE OSMOSIS EQUIPMENT

### 1. TECHNICAL CHARACTERISTICS

#### APPLICATION

##### Water treatment

Inverse osmosis

##### Use

Improvement of the characteristics of drinking water (that complies with the requirements of the European Directive on water for human consumption 98/83 or its national transpositions in the different member states of the European Community).

##### Modifications due to reduction or contribution

- Water treatment by reverse osmosis is capable of reducing concentrations of salts and other substances in high percentages.
- Minimal reduction\* of certain compounds and parameters:
  - Sodium: 90%.
  - Calcium: 90%.
  - Sulfate: 90%.
  - Chloride: 90%.
  - Total hardness: 90%.
  - Conductivity: 90%.

*\* Depending on the characteristics of the water to be treated (at the outlet of the membrane). These values may vary depending on the type of post-filter that the equipment incorporates and/or regulation of the mixing valve (if it is included).*

#### OPERATING LIMITS

	EQUIPMENT WITH PUMP
Pressure (max./min.):	4 bar - 1 bar (400kPa-100kPa).
TDS (max):	1500ppm.
Temperature (max./min.):	38°C - 5°C.
Hardness (max.):	15°HF. **

Control type: Maximum pressure switch.  
Inlet solenoid valve.  
Flushing solenoid valve

Security system: Electronic leak sensor.  
Water quality control.  
Maintenance notice.

Dimensions (A x B x C in mm): 456 x 155 x 401mm.

Weight (in kg, including all accessories): 12.

Inlet connection: 3/8".

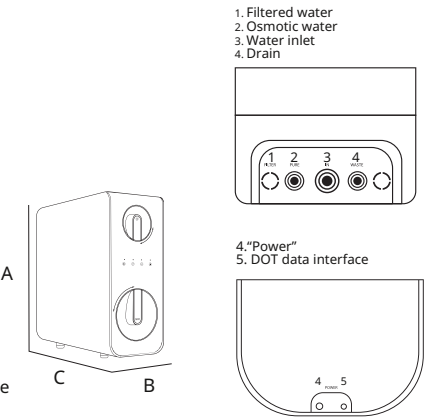
Drain connection: 1/4".

Osmotic water connection: 1/4".

Filtered water connection: 1/4".

Wall adapter: 3/8" MF. \*\*\*\*\*

Drain collar: Clamp for 40 mm drain pipe



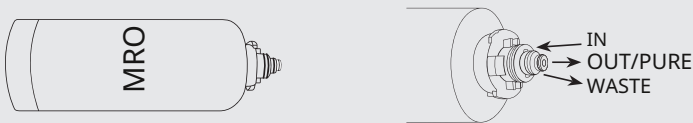
CF Pre-Filter

1 x combined sediment / carbon.



RO membrane  
(RO+CB)

1 x 1000 GPD membrane.

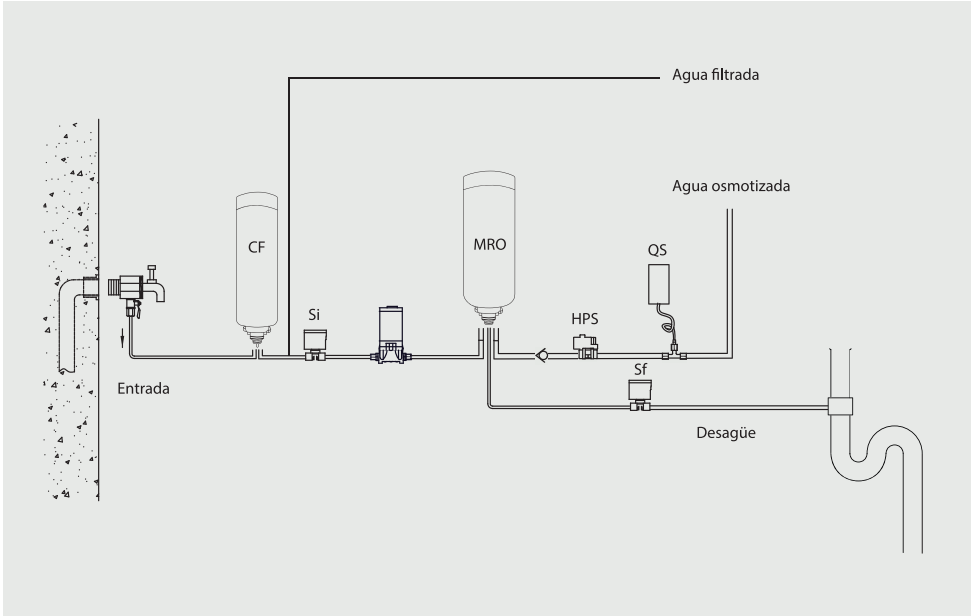


Electric adapter:  
Production:

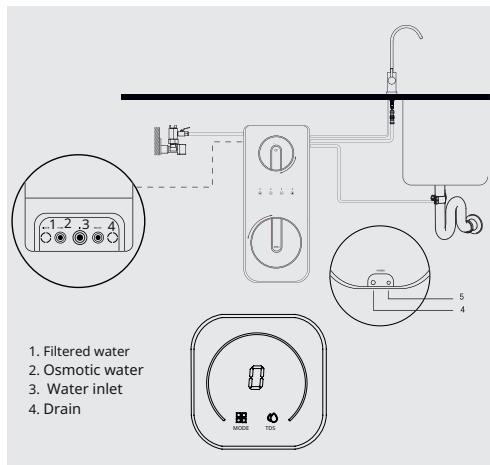
230 Vac 50 / 60 Hz: 36 VDC 5A  
2.5lpm (inlet water conditions:  
450 µS, 15 °HF, 17 °C and 3 bar)  
Automatic washing (see section 3.3)

Membrane cleaning system:

HYDRAULIC DIAGRAM



## HYDRAULIC CONNECTION DIAGRAM



- \* For salinities higher than 1500ppm consult your distributor.
- \*\* Higher hardness may reduce the life and operation of certain components.
- \*\*\* Maximum accumulation depending on the inlet pressure.
- \*\*\*\* The flow rates can vary by 20% depending on the temperature, pressure and specific composition of the water to be treated.
- \*\*\*\*\* It may vary depending on the model.

### DISTRIBUTED BY:

ION FILTER  
Aiguafreda, 8  
Pol. Ind. L'Ametlla Park  
08480, L'Ametlla del Vallès  
Barcelona - Spain  
T. 902 305 310 F. +34 936 934 329

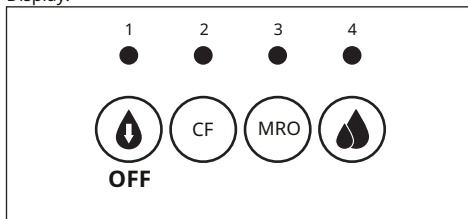
## 2. EQUIPMENT OPERATION

- The mains water to be treated enters the equipment through the prefiltration stage that incorporates a GAC (CF) turbidity and carbon filter. In this filtration stage, suspended particles, chlorine, its derivatives and other organic substances are retained.
- The passage of water into the equipment is controlled by means of a shut-off solenoid valve (Si).
- The water, after being treated in the filtration stage, is driven towards the reverse osmosis (MRO) membrane. The equipment incorporates a pump (P) to increase the pressure. The pressure of the water on the membrane makes the reverse osmosis process possible.
- Before leaving the point of consumption, the water passes through the carbon filter (incorporated in the MRO membrane).
- The rejected water or with excess salts and other dissolved substances is directed towards the drain for its elimination.
- Direct flow equipment controls start and stop using a pressure switch (HPS)
- The equipment incorporates different functional and/or safety systems, managed by a state-of-the-art electronic module:
- Electronic leak detection system (L). When the system detects this situation, it locks the equipment emitting an acoustic and light signal informing about it. The equipment will remain locked until the detection probe is dry.
- Probe for estimating the conductivity of the water produced to evaluate the state of the membrane and components (Q). When dispensing water from the tap, the system will measure the conductivity of the produced water.

- Automatic notification of filter change, in order to inform the user that adequate maintenance must be carried out to guarantee the quality of the water dispensed.

## 3. INTERFACE. STATE IN WHICH THE SYSTEM IS IN

Display:



1. Operation indicator
2. CF filter button/life indicator
3. Life indicator / membrane push button
4. Water quality indicator or failure

### 3.1 COLORS OF THE WATER QUALITY INDICATOR

- The set point values of the warning colors will depend on the chosen program code and the pretreatment installed before the device.

### 3.2 OPERATION INDICATOR

It will remain illuminated in blue while the equipment is dispensing water.

3.3. FUNCTIONALITIES

FUNCTION	ACTIONS	LIGHT STATUS
1. Functional washing for the first use or reset carried out.	The machine will flush the RO membrane for 5 minutes. Next, the tap should be opened for 30 minutes.	During washing, the water quality light is shown blinking at 1Hz.
2. Washing at electric ignition of the appliance	Whenever the system starts up it will flush the RO membrane for 20 seconds. If there is consumption of osmosis water, the machine will stop washing and go back to normal mode.	When washing is in progress, the water quality light shows the previous power on state.
3. Washing when accumulating operating time.	Every time the accumulated working time reaches 2 hours, the system will flush the membrane for 20 seconds. If there is consumption of osmosis water, the machine will stop washing and go back to normal mode.	When washing is in progress, the water quality light shows the previous washing status.
4. Daily washing.	When the machine has not been working for 24 hours, the system will flush the membrane for 20 seconds. If there is consumption of osmosis water, the machine will stop washing and go back to normal mode.	When washing is in progress, the water quality light shows the previous washing status.
5. Washing after filter change.	CF: By changing the CF pre-filter and resetting its usage counter, the system will start a CF filter and RO membrane backwash for 5 minutes.  RO: By changing the RO membrane and resetting its usage counter, the system will start a 5 min flush. In both cases, the flow of water for consumption will be low until this flushing has finished.	When the CF pre-filter or RO membrane is being flushed, the water quality light shows red and will flash at 1Hz.
6. Openness to consumption.	The system starts up as normal.	During the first 30 seconds, the water quality light shows the last quality status and is always on.  During the next 30 seconds, the water quality light shows the real-time data of the quality and is always on.
7. There is no water consumption.	The system stops producing water and goes on standby.	The water quality light turns off.
8. Ignition of the system.	The system starts.	After connecting the power supply, a beep sounds and all the lights turn on and flash at the same time, changing from blue to purple to red. Each color is displayed for 1 second.

3.4. IDENTIFICATION AND RESOLUTION OF FAULTS

TYPE	INDICATOR		SOLUTION
	DISPLAY	ACOUSTIC	
<b>1. Leak inside the machine.</b>	Water quality indicator, CF and MRO flashing red	Beeps for 3 minutes.	When the leak is eliminated, the alarm is deactivated and returns to the normal state.
<b>2. Pump time protection.</b>	CF and MRO indicator flashing red	4 beeps.	The pump has been working between 30 and 33 minutes. There is an option to disable this feature, to do so, contact your dealer****.
<b>3. Pump start/stop protection.</b>	CF and MRO indicators flashing purple	5 beeps.	Disconnect and reconnect the electrical connection.
<b>4. Low temperature protection.</b>	Water quality indicator and CF flashing red	5 beeps.	Disconnect and reconnect the electrical connection.

\*\*\*\* In the event of annulment of the pump protection system (Point no. 3), the guarantee of the appliance will be annulled.

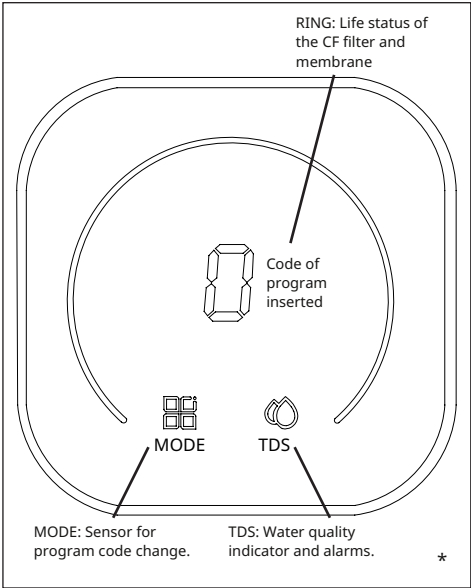
When you detect that the equipment is in any of the states described, contact the maintenance service to make an appointment to carry out the required maintenance.	if the equipment did not stop production (up to filling the tank without having produced water extraction).	if, after opening the tap, the equipment is at rest without dispensing water through the tap or displaying any type of alarm.
See the corresponding section in the <i>Technical manual</i> .	Contact your technical service if the equipment is repeatedly blocked due to lack of mains water pressure at its inlet and there is pressure in the rest of the home.	Contact your technical service to reset the counters after changing the filters.
Contact your technical service	Contact your technical service	

3.5. DISPLAY OF THE LIFE TIME OF THE FILTERS

PERIOD OF LIFE	REMAINING LIFE TIME (DAYS)	LITERS OF CAPACITY REMAINING	INDICATOR	
			DISPLAY	ACOUSTIC
Normal.	> 15	> 150	Permanent blue.	No alarm.
Notice.	0 < X ≤ 15	0 < Y ≤ 1 50	Permanent lilac.	Double beep when there is little life time of the filters.
Exhausted.	≤ 0	≤ 0	Permanent red.	Beeps when water is dispensed.

3.6 INTERFACE INDICATORS (DOT)

The interface replicates on its outer ring the status of the cartridges seen on the equipment display (CF, MRO). The symbol of the drops replicates the status of the water quality indicator LED.



CODE CHANGE IN INTERFACE:

To change the program of the appliance, proceed as follows:

1. Keep the device without production or active washing.
2. Press and hold the “MODE” for 5 seconds, until the core code flashes, then release.
3. Press the same key until the desired code is displayed.
3. Release the “MODE” key and let the interface reset automatically.

\* Take into account that the sensor on the “MODE” key is a touch system, and there may be situations in which this sensor is not highly sensitive, so you may have to position your finger correctly in front of it.

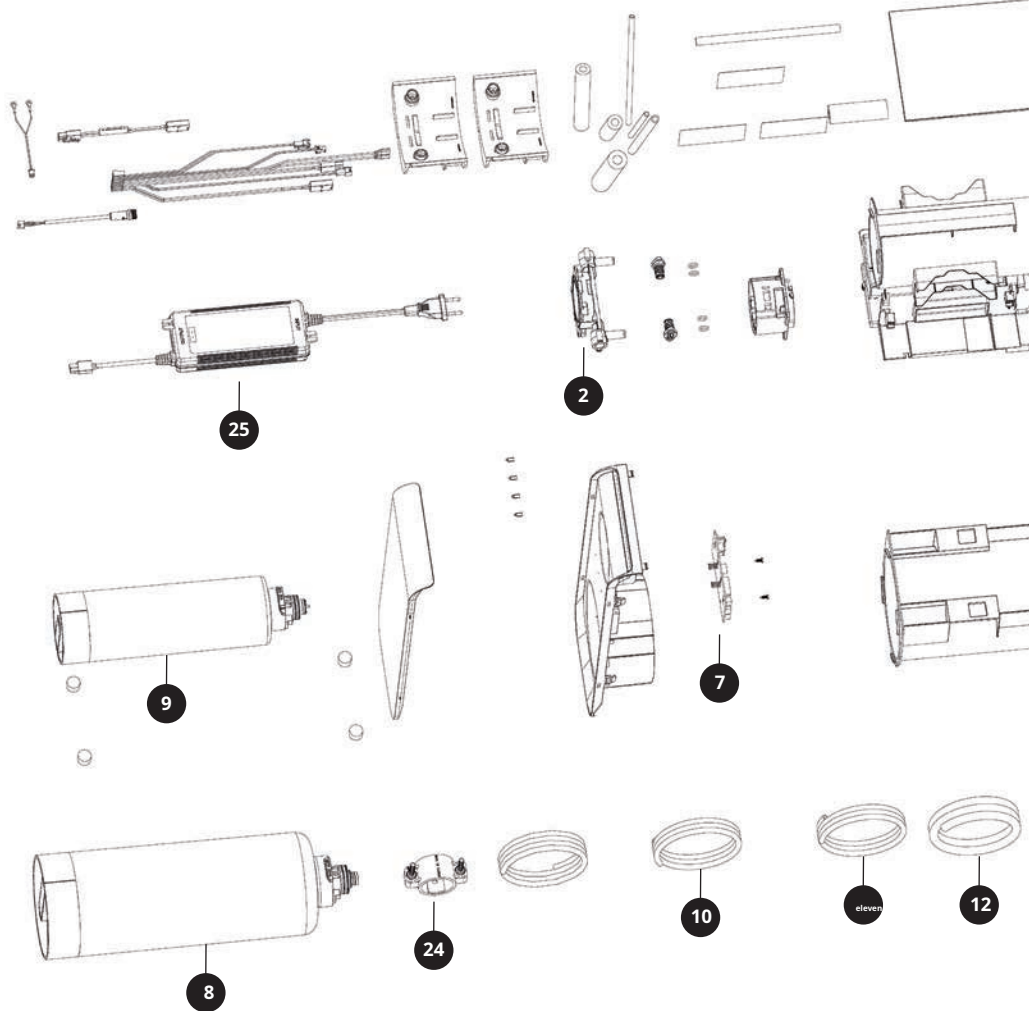
QUALITY OF DISPENSED WATER		BLUE: Adequate conductivity dispensed. LILAC: moderately high conductivity dispensed RED: High conductivity dispensed.
FLUSHING		indicator flashes while the device is performing <i>aFlushing</i> self-cleaning
STATUS OF THE FILTER CLOSEST TO THE END OF ITS USEFUL LIFE		BLUE: good condition. LILAC: maintenance required shortly. RED: end of useful life of a filter.

### 3.7 CONFIGURABLE CODES TABLE

PROGRAM NUMBER	PRETREATMENT DESCRIPTION	QUALITY LED INDICATOR	LIFE OF FILTERS
0	No pre-treatment with TDS inlet water from 0-750ppm	Blue: TDS ≤200ppm Purple: 200ppm < TDS ≤300ppm Red: TDS > 300ppm	CF prefilter: 6 months or 8000lts RO membrane: 36 months or 20000lts
1	Without Pre-treatment with TDS inlet water of 750-1000ppm	Blue: TDS ≤266ppm Purple: 266ppm < TDS ≤399ppm Red: TDS > 399ppm	CF prefilter: 6 months or 8000lts RO membrane: 36 months or 20000lts
2	Without Pre-treatment with TDS inlet water 1000-1250ppm	Blue: TDS ≤332ppm Purple: 332ppm < TDS ≤498ppm Red: TDS > 498ppm	CF prefilter: 6 months or 8000lts RO membrane: 36 months or 20000lts
3	Without Pre-treatment with TDS inlet water > 1250ppm	Blue: TDS ≤400ppm Purple: 400ppm < TDS ≤600ppm Red: TDS > 600ppm	CF prefilter: 6 months or 8000lts RO membrane: 36 months or 20000lts
4	With Carbon Pre-filter with TDS inlet water from 0-750ppm	Blue: TDS ≤200ppm Purple: 200ppm < TDS ≤300ppm Red: TDS > 300ppm	CF prefilter: 9 months or 12,000lts RO membrane: 36 months or 20,000lts
5	With water softener + Carbon pre-filter with TDS inlet water from 0-750ppm	Blue: TDS ≤200ppm Purple: 200ppm < TDS ≤300ppm Red: TDS > 300ppm	CF prefilter: 12 months or 16,000lts RO membrane: 36 months or 20,000lts
6	With Carbon Pre-filter with inlet water TDS of 750-1000ppm	Blue: TDS ≤266ppm Purple: 266ppm < TDS ≤399ppm Red: TDS > 399ppm	CF prefilter: 9 months or 12,000lts RO membrane: 36 months or 20,000lts
7	With water softener + Carbon pre-filter with inlet water TDS of 750-1000ppm	Blue: TDS ≤266ppm Purple: 266ppm < TDS ≤399ppm Red: TDS > 399ppm	CF prefilter: 12 months or 16,000lts RO membrane: 36 months or 20,000lts
8	With Carbon Pre-filter with TDS inlet water 1000-1250ppm	Blue: TDS ≤332ppm Purple: 332ppm < TDS ≤498ppm Red: TDS > 498ppm	CF prefilter: 9 months or 12,000lts RO membrane: 36 months or 20,000lts
9	With water softener + Carbon pre-filter with TDS inlet water 1000- 1250ppm	Blue: TDS ≤332ppm Purple: 332ppm < TDS ≤498ppm Red: TDS > 498ppm	CF prefilter: 12 months or 16,000lts RO membrane: 36 months or 20,000lts
10	With Carbon Pre-filter with TDS inlet water > 1250ppm	Blue: TDS ≤400ppm Purple: 400ppm < TDS ≤600ppm Red: TDS > 600ppm	CF prefilter: 9 months or 12,000lts RO membrane: 36 months or 20,000lts
11	With water softener + Carbon pre-filter with inlet water TDS > 1250ppm	Blue: TDS ≤400ppm Purple: 400ppm < TDS ≤600ppm Red: TDS > 600ppm	CF prefilter: 12 months or 16,000lts RO membrane: 36 months or 20,000lts

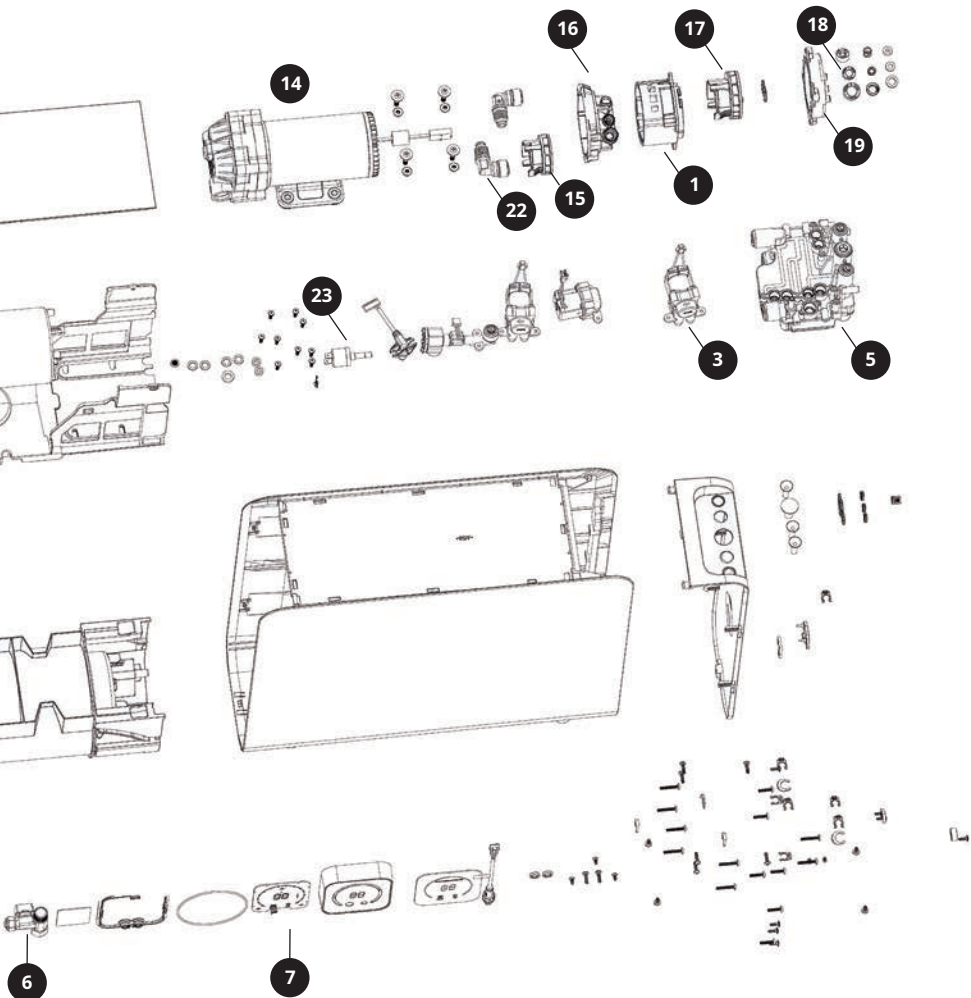






1. 910876. Positioning pad.
2. 910877. Cartridge seat.
3. 910878. Inlet solenoid valve..
4. 910879. Hydraulic assembly.
5. 910880. Electronic card.
6. 910881. "T" adapter.
7. 910882. Smart display.
8. 910706. Membrane.
9. 910465. Combi cartridge (Block carbon, combi sediments).
10. 952507. 1/4" red polyethylene tube Starfit.
11. 952500. 1/4" white polyethylene tube Starfit.
12. 952501. 3/8" white polyethylene tube Starfit.

13. 910865. Upper cover.
14. 910866. Booster Pump.
15. 910867. Rotation valve.
16. 910868. Cartridge support adapter.
17. 910869. Rotary membrane valve.
18. 910870. Quick connector head connector.
19. 910871. Membrane seat.
20. 910872. Domestic RO joint.
21. 910873. Membrane positioning pad.
22. 910874. Elbow.
23. 910875. High pressure switch.
24. 953169. Drain collar.
25. 910844. Transformer.



## 4. WARRANTY

The distributor guarantees the equipment for a period of three years in the event of any lack of conformity that is detected in them, as provided in RD 1/2007 of November 16 (consolidated text of the General Law for the defense of consumers and users).

- The guarantee includes the repair and replacement of defective parts by personnel authorized by the distributor or by the official technical assistance service (SAT) at the place of installation or in their workshops. Labor and shipping costs that may be generated are included in the guarantee.
- The distributor is exempt from providing a guarantee in cases of parts subjected to natural wear, lack of maintenance, blows or other lack of conformity that are the consequence of improper use of the equipment or inadequate according to the operating conditions and limits indicated by the manufacturer. of the same. Likewise, the guarantee loses effectiveness in cases of improper handling and use of the equipment or in those cases in which they have been modified or repaired by personnel outside the distribution company or official SAT.
- The parts replaced under warranty will remain the property of the distributor.
- The distributor is responsible for the lack of conformity of the equipment when it refers to the origin, identity or suitability of the products, according to their nature and purpose. Taking into account the characteristics of the equipment, it is essential for the guarantee to cover the lack of conformity, the completion of the technical conditions of installation and operation. Failure to comply with these conditions may entail the absence of warranty, taking into account the relevance of the destination of the equipment and the operating conditions and limits in which it must operate.
- The distributor must guarantee that the installed equipment is suitable for improving the quality of the water to be treated in particular, according to the characteristics of the equipment and current regulations.
- The distributor must guarantee the correct installation and start-up of the equipment as indicated by the manufacturer and current regulations and will also be responsible for the lack of conformity derived from an incorrect application, installation or start-up of the equipment.
- For any warranty claim it is necessary to present the purchase invoice. The term of two years is computed from the purchase of the equipment from the distributor.
- If during the warranty period your equipment presents any problem, contact your distributor.

### The equipment is installed and working satisfactorily for the client and for the record:

\* Pre-equipment treatment:

\* Equipment input hardness (°F):

\* TDS input to the equipment (ppm):

\* TDS produced water (ppm):

\* Equipment inlet pressure (bar):

### \* Result of the installation and commissioning sheet:

Correct:

Others:

*The owner of the equipment has been adequately and clearly informed of the use, handling and maintenance that the equipment requires to guarantee its proper functioning and the quality of the water produced. For this purpose, a maintenance contract is offered.*

### \* Ref. Maintenance contract:

ACCEPT the maintenance contract ☐

DOES NOT ACCEPT the maintenance contract ☐

*If you need information, report a breakdown or malfunction, request maintenance or intervene by a technician, read the sections on operation, troubleshooting and troubleshooting in this manual beforehand and contact the distributor or company that sold you your equipment.*

**COMPANY AND/OR AUTHORIZED INSTALLER, DATE AND SIGNATURE:**

**SERIAL NUMBER:**



**NOTE TO THE COMPANY AND/OR AUTHORIZED TECHNICIAN/INSTALLER:** the data marked with the symbol \* must be filled in by the installation technician and transcribed by himself from the INSTALLATION RECORD sheet.



## 5. INSTALLATION RECORD SHEET



**NOTES FOR THE TECHNICIAN/INSTALLER:** read this manual carefully. If you have any questions, contact the Technical Assistance Service (SAT) of your distributor. The data marked with the symbol \* must be filled in by the technician/installer and transcribed by himself on the WARRANTY sheet. This sheet must be kept by the installer and may be required by the distributor in order to improve the after-sales and customer service.

**The technician who performs the installation and commissioning of the equipment must have adequate technical training.**

### DATA ON THE APPLICATION OF THE EQUIPMENT:

Origin of the water to be treated:

☐

PUBLIC SUPPLY NETWORK

☐

OTHERS

\* Pre-equipment treatment:

\* Equipment input hardness (°F):

\* TDS input to the equipment (ppm):

\* TDS produced water (ppm):

\* Equipment inlet pressure (bar):

\* Chlorine concentration input equipment (ppm):

### CONTROL OF THE INSTALLATION STEPS:

Sanitization according to the protocol  
described Maximum pressure switch setting  
Inspection and fittings  
Pressurized system tightness

TDS produced water (countertop tap) (ppm)  
Clearly inform about the use, handling and  
maintenance that the equipment requires to  
guarantee its proper functioning and the quality of  
the water produced.

### COMMENTS

\* Result of installation and commissioning:

☐

CORRECT (equipment installed and working correctly. Water produced suitable for the application).

☐

OTHERS:

### IDENTIFICATION OF THE AUTHORIZED TECHNICIAN/INSTALLER:

COMPANY AND/OR AUTHORIZED INSTALLER, DATE AND SIGNATURE:

### CONFORMITY OF THE EQUIPMENT OWNER:

I have been clearly informed of the use, handling and  
maintenance required by the installed equipment, having been  
offered a maintenance contract and informed of how to contact a  
Customer Service in case of requesting information,  
communication of failure or malfunction, maintenance request or  
intervention of a technician.

Comments:

\* Ref. Maintenance contract:

ACCEPT the maintenance contract

☐

DOES NOT ACCEPT the maintenance contract

☐

Model/Ref.:

Owner:

Street:

Phone:

Population:

Province:

PC:

### SERIAL NUMBER:

### EQUIPMENT WARRANTY DIRECTED TO THE DEALER:

The distributor will only be responsible for the replacement of  
parts in case of non-conformity. The repair of the equipment and  
the expenses that it entails (labor, shipping costs, displacements,  
etc.) will be assumed by the distributor, in accordance with what  
was agreed in the general contracting and sale conditions, for  
which reason it will not be able to be subsequently passed on to  
the manufacturer.

6. MAINTENANCE SERVICE

DATE	TYPE OF SERVICE	NAME, SIGNATURE AND SEAL OF THE AUTHORIZED TECHNICIAN	
<div></div>	<div>START UP</div>		
<div></div>	<div>COMPLETE MAINTENANCE</div>	TECHNICAL <div></div>	<div>ORDINARY</div> <div>EXTRAORDINARY</div> <div>WARRANTY</div>
<div></div>	<div>PREPARATION</div>	SEAL <div></div>	
<div></div>	<div>SANITIZATION</div>		
<div></div>	<div>OTHERS</div>		
<div></div>	<div>COMPLETE MAINTENANCE</div>	TECHNICAL <div></div>	<div>ORDINARY</div> <div>EXTRAORDINARY</div> <div>WARRANTY</div>
<div></div>	<div>PREPARATION</div>	SEAL <div></div>	
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<div></div>	<div>PREPARATION</div>	SEAL <div></div>	
<div></div>	<div>SANITIZATION</div>		
<div></div>	<div>OTHERS</div>		

6. MAINTENANCE SERVICE

DATE	TYPE OF SERVICE	NAME, SIGNATURE AND SEAL OF THE AUTHORIZED TECHNICIAN	
<div></div>	<div><div></div>START UP</div>		
<div></div>	<div><div></div>COMPLETE MAINTENANCE</div>	TECHNICAL <div></div>	<div><div></div>ORDINARY</div> <div><div></div>EXTRAORDINARY</div> <div><div></div>WARRANTY</div>
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## NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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