

columbia[®]
aqua

FC-525-ROP
FC-525-F
FC-525-UF

**TECHNICAL/USER MANUAL
AND SERVICE BOOK**

TECHNICAL MANUAL

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TECHNICAL MANUAL

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TECHNICAL DATASHEET FC-525

0. MAIN CHARACTERISTICS



DIRECT **//****
ACCESS
EASE OF ACCESS AND
MAINTENANCE



COLUMBIA FILTERS **//****
EXCLUSIVE FILTERS,
MAXIMUM HYGIENE AND
SECURITY.



**COLUMBIA*
MEMBRANE**
PRE-INSTALLED MEMBRANE
FOR MAXIMUM HYGIENE



CLICK **//****
RAPID AND HIGHLY SECURE
CONNECTIONS



**PRESSURE
PUMP** *
BETTER PRODUCTION AND
PERFORMANCE



SOLENOID VALVE *
IMMEDIATE SAFETY
CONTROL INCLUDED.



REVERSE OSMOSIS *
EQUIPMENT WITH REVERSE
OSMOSIS SYSTEM AND PUMP



FILTER ** EQUIPMENT WITH
FILTRATION SYSTEM



ULTRAFILTRATION ***
EQUIPMENT WITH
ULTRA-FILTRATION
SYSTEM



COLD **//**** COLD WATER
PRODUCTION



HOT **//****
HOT WATER PRODUCTION



AMBIENT **//**** AMBIENT
WATER PRODUCTION



LED **//**** INFORMATION
MULTIFUNCTION SYSTEM
USING LED



SAFE **//****
SECURITY SYSTEM FOR HOT
WATER

* FC-525 ROP

** FC-525 F

*** FC-525 UF



Please keep this manual since it includes the maintenance service book and the warranty which will allow us to offer a better after-sales services.

SECURITY INSTRUCTIONS

The following are safety warnings and instructions to avoid injury to the user and to prevent property damage in the environment.

However, it is important to take the necessary precautions and proceed with care when installing, maintaining, cleaning and operating the appliance.

Children / Adults / Pets

Children and others who are not aware of the risks involved in using the appliance could be injured or put their lives in danger. Therefore, take into account:

- The device may not be used by children under 8 years of age or by people with reduced physical, sensory or mental capacity, as well as by people without experience or knowledge unless they are supervised or receive instructions on how to use the device.

Children must not play with this unit. Do not allow children to clean or maintain the appliance without supervision.

Warning. Risk of suffocation!

Do not allow children to play with the packaging / plastic or with parts of the packaging, as they could become entangled or suffocate.

Mounting. Warning

Danger of electric shock / fire / material damage / damage to the appliance!

If the appliance is not installed correctly, it can lead to dangerous circumstances.

Make sure the following conditions are met:

- The mains plug and the socket protection must match and the earthing system must be correctly installed.

- The installation must have a suitable cable thickness.

The mains plug must be accessible at all times. If this is not possible, to comply with the relevant safety regulations, a switch (bipolar switch) must be integrated permanently in the installation, according to the regulations on electrical installations.

If the mains cable of the appliance is modified or damaged, it could cause an electric shock, a short circuit, a fire or excessive heating.

The mains cable must not be bent, crushed or modified, nor must it come into contact with sources of heat.

The use of extension cords or power connection blocks could cause a fire due to overheating or a short circuit. Connect the appliance directly to a properly installed grounded outlet. Do not use extension cords, or multiple connectors.

Warning. Danger of injury!

- The appliance is very heavy. Lifting it could cause injury. Always lift the appliance with help.

- If the tubes and mains cables are not properly routed, there is a risk of disconnection, which could result in injury.

- Route the tubes and cables in such a way that there is no risk of disconnection.

• Attention!. Danger of material damage /damage to the device

- If the water pressure is too high or too low, the appliance may not work properly. In addition, it could cause property damage or damage to the appliance.

Make sure that the water pressure in the water supply installation is at least 100 kPa (1 bar) and

- If the water pipes are modified or damaged, t

they can cause damage to property or damage to the appliance. The water pipes must not be bent, crushed modified or cut.

- The use of tubes distributed by other brands to connect the water supply could cause material damage or damage to the appliance. Use only the tubes supplied with the appliance or original replacement tubes

Cleaning / maintenance.

Warning. Death risk!

The appliance works with electricity. There is a shock hazard if components connected to the current are touched. Therefore, take in account:

- Turn off the appliance. Disconnect the appliance from the mains (pull out the plug).

- Never grasp the mains plug with wet hands.

- When disconnecting the plug from the power socket, always grasp the plug itself and never the mains cable, as it could be damaged.

- Do not make modifications techniques on the device or its components. Any repair or other type of work that the appliance requires must be carried out by one of our technical service or by an electrician. The same applies to the replacement of the mains cable (if necessary).

- Replacement mains cables can be ordered by contacting our technical service.

1. UNPACKING

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

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

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

Caution: Properly dispose of and keep plastic bags out of reach of children, as they can be a danger to them.

Inside you will find (depending on the model): Water treatment equipment, installation accessories and documentation.

The materials used in the packaging are recyclable and must be disposed of in the appropriate selective collection containers



This product cannot be disposed of together with normal municipal waste. When the useful life of the equipment has ended, it must be delivered to the company or centre where the device was purchased, or to a Recycling Point or specific local center for the recovery of materials, indicating that it has electrical, electronic and gas rechargeable components.

The correct collection and treatment of redundant devices contributes to preserving natural resources and also to avoiding potential risks to public health.

2. INTRODUCTION

This manual describes the characteristics of the F, UF and RO versions. Some models do not have all 3 versions, in case of doubt consult with your dealer.

The F systems include sediment filtration and activated carbon filtration. UF systems include sediment filtration, activated carbon filtration, and ultrafiltration membrane. RO systems include sediment filtration, carbon filtration, reverse osmosis membrane, and pH correction cartridge (remineralizer).

Congratulations. You have purchased one of the best water treatment equipment on the market for office use. This equipment will help you to improve the characteristics of the water, putting at your fingertips a water of the highest quality and low mineralization.

Your unit will provide you with different benefits and advantages:

- It is a physical system that does not use or add chemicals to the water.
- Provides high water quality.
- It has a low maintenance cost.
- Ensures high production.

3. TYPES OF TREATMENTS WITH COLUMBIA WATER FOUNTAINS

Columbia fountains are available, depending on the model, with different types of water treatment: filtration, ultrafiltration and reverse osmosis.

3.1 What is filtration?

Sediment filter.

Filtration is the process of separating suspended solids in water through a porous medium, also called a filter. The water passes through the pores of the filter, but the particles with a size greater than the pores of the filter are retained in it, thus giving rise to clearer water.

Columbia Fountains incorporate 5µm filters.

Active carbon filter.

Activated carbon is used to remove chlorine from water, as well as to improve taste and odor and to remove some organic components thanks to its great adsorbent capacity. The Columbia Dispensers incorporate granulated carbon.

3.2 What is ultrafiltration?

Ultrafiltration is the system used to completely remove viruses and bacteria from water. Ultrafiltration membranes have a porosity between 0.1 and 0.001 µm, which is why they are effective.

This apparatus is intended for use in household and similar applications.

- Personal canteen areas in stores, offices and other work environments.
- Rural accommodation and by clients in hotels, motels and other residential-type environments.
- Bed and breakfast type environments.
- Restaurant services and similar non-retail applications.

More technical information at:
www.wtreatmentresources.com/KGTY86259.html



3.3 What is osmosis?

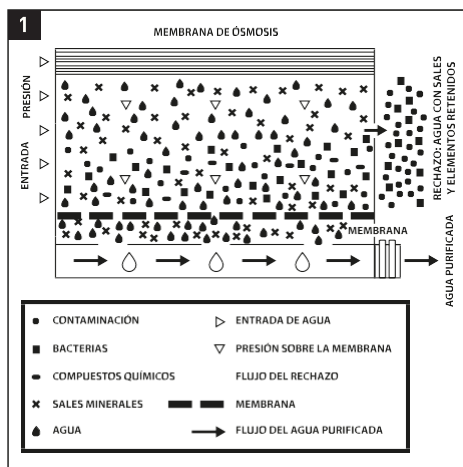
Natural or direct osmosis is the most common in nature, since semi-permeable membranes are part of the vast majority of organisms (for example, plant roots, organs of our own body, cell membranes, etc.)

When two solutions of different salt concentrations are separated by a semi-permeable membrane, in a natural way, there is a flow of water from the lower concentration solution to the higher concentration one. This flow continues until the concentrations on both sides of the membrane equalizes.

When it comes to reversing this process and achieving a flow of water with a lower concentration of salts from a higher concentration, a sufficient pressure must be applied to the water with a higher concentration on the membrane to overcome the tendency and natural flow of the system.

This process is what we call reverse osmosis. At present, reverse osmosis is one of the best methods to improve the characteristics of the water, through a physical system (without the use of chemical products).

The water to be purified exerts pressure on the semi-permeable membrane, so that part of it will pass through the pores of the membrane (osmosis water), while the rest of the water (rejected or with a high concentration of salts) will be diverted towards the drain (Fig. 1).



4. PRIOR WARNINGS

Attention:



- These appliances are supplied with refrigerant gas, ISOBUTANE (R-600a), which is a natural gas with no harmful effects on the environment, but is flammable.

- The device must be transported and moved with the utmost care so that it is not damaged, or shaken excessively. Failure to do so could result in the unit being put out of service.

- Keep the ventilation openings of the appliance or the built-in structure free of obstructions.

- Do not damage the refrigerant circuit. Damage to the cooling circuit, with possible re-cooling gas leakage, could create a risk of explosion caused by sparks or external flames.

- Under no circumstances operate your appliance if it appears to be damaged.

- In the event of a fault, contact your Service Center, ventilate the room where the appliance is located and avoid open flames or work on the appliance.

- For recycling, contact your local waste disposal service or the provider. The appliance must be transported without damaging the cooling circuit.

- This appliance is intended for use in domestic and similar applications such as staff canteen areas in stores, offices and other work environments; rural and customer accommodation in hotels, motels and other residential type environments; bed and breakfast type environments; catering and similar non-retail applications.



Attention: Carefully read and safeguard this manual before installing and starting up the equipment. If you have any doubts regarding the installation, use or maintenance of this equipment, get in touch with the technical assistance service (T.A.S) of your distributor.



Attention: This equipment does not PRODUCE POTABLE water. If the water to be treated comes from a public source (and therefore conforms to all applicable laws), this equipment will substantially improve the quality of the water. Otherwise, it will be necessary to carry out a physical, chemical and bacteriological analysis of the water to ensure its proper purification by using the appropriate techniques and equipment as needed. This needs to be done BEFORE THE INSTALLATION of the equipment. Get in touch with your distributor so that it can advise you with regards to the appropriate treatment for your situation.

The water treatment equipment requires regular maintenance that needs to be carried out by qualified technical personnel in order to guarantee the quality of water produced and provided.

4.1 CONDITIONS FOR THE CORRECT OPERATION OF THE EQUIPMENT

- The equipment should not be fed with hot water ($T > 40^{\circ}\text{C}$).

- The temperature of the room must be between 4° and 45°C .

- For waters with a salinity level higher than 500 ppm, get in touch with your distributor so that they can advise you for the most appropriate treatment for your case and thus ensure the proper operation of your equipment, avoid damaging the components and guarantee the quality of the water provided.

- If the water to be treated contains:

- High iron and manganese concentrations (greater than 1ppm measured in the machine rejection).
- Prolonged hyperchlorination over time.
- Sludge or turbidity higher than 3 NTU.
- A nitrate concentration greater than 100 ppm.
- Sulfate concentration greater than 250 ppm.
- Contact your distributor to recommend the most appropriate pre-treatment for your case, to ensure the correct operation of the equipment, avoid damage to components and guarantee the quality of the water supplied.

4.2 PRE-INSTALLATION WARNINGS

- If you need to adapt the facilities of your residence or business in order to be able to install the equipment in the designated space, any adaptation should be done following all applicable national regulations concerning the internal installation of water and power supplies.

- COLUMBIA equipment requires that a power outlet be placed at least one metre away.

- COLUMBIA equipment should not be installed laying down or at an angle. They should be placed over a flat surface in order to operate correctly and securely.

- The spot designated for its installation must be large enough to host the device, its accessories, connections and to allow for maintenance to be carried out comfortably.

- Maintain a minimum separation of 10 cm from the sides and back wall to ensure the proper ventilation of the equipment.

- The equipment should never be installed outdoors.

ATTENTION: After its installation, the equipment should be connected immediately to a power source. It should rest for 2 hours once it has been installed in the desired spot. This is very important in order to guarantee the proper operation of the system, since otherwise the compressor may end up damaged. The manufacturer will not be responsible for any of the damages suffered by the equipment in this case.

4.3. WARNINGS REGARDING THE USE OF THE EQUIPMENT

- If you are going to be absent for more than one week, close the equipment's water inlet valve, empty it and disconnect it from the power supply. When you come back, connect the power supply to the equipment, open the inlet valve and empty the storage tank twice before consuming the water.



Attention: If the equipment has not worked or has not produced water for a prolonged period of time (more than one month), get in touch with the distributor in order to set up its appropriate sanitization and maintenance.



Caution: Special attention should be paid to the cleanliness and hygiene of the front dispensers on a regular basis and especially at the time of use.

Attention: The water provided by osmosis equipment is **LOW MINERALIZED**. The mineral salts needed by the human body are mainly provided by food, and to a lesser extent by drinking water.

5. OPERATION OF THE EQUIPMENT

5.1 How to draw water from your dispenser

See chapter 3 of the Technical Manual to identify the dispensers and how to draw water.

5.2 Using the management and control components

See chapter 4 of the Technical Manual to identify and understand how the management and control components work.

5.3 Basic system operation

In the "Filtration" models, the water to be treated enters the unit through the sediment filter and carbon filter. In this filtration stage, suspended particles, chlorine, its derivatives and other organic substances are retained.

In the "Ultrafiltration" models, the water then passes through the UF membrane where the smallest particles and even viruses and bacteria are retained. In the "Reverse Osmosis" models, the passage of water into the equipment is controlled by a solenoid valve. The water, after the filtration stage, is then pushed towards the reverse osmosis membrane. Depending on the model, the equipment may incorporate a pump to increase the pressure. The pressure of the water on the membrane makes the reverse osmosis process possible.

Subsequently, the water passes through a post-filter whose purpose is to eliminate possible odors and smells, as well as to adjust the pH of the water before it is accumulated.

Rejection water or water with excess salts and other dissolved substances is directed to the drain for disposal.

When water is demanded by pressing the front dispensers of the equipment, the water accumulated in the cold, hot and reserve water tanks (depending on the model) flows towards the outlet nozzles.



Caution: There are slight variations in operation, depending on the model. Please read the corresponding section of the Technical Manual.

6. INSTALLATION

The installation of your Columbia Dispenser should be carried out by sufficiently qualified personnel. Consult your dealer in case of doubt.

Caution: Since the device to be installed improves the quality of the water to be consumed, all tools used for assembly and installation must be clean and must not be contaminated or impregnated with grease, oil or oxides. Use tools for exclusive use for pipe cutting, membrane handling, etc.

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

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

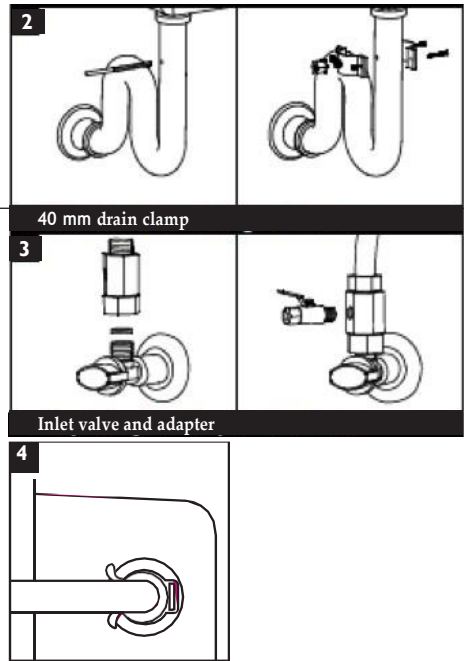
Install the drain collar, only in the RO version (picture 2) and inlet adaptor (picture 3) and connect them to the respective IN (inlet) and OUT / DRAIN (drain) connectors of the unit only in the RO version (picture 4).

The drain tube can be directed upwards vertically a maximum of 2.5 meters and another 5 meters horizontally.

Some models include a connection for emptying the drip tray (see Technical Manual), in this case this tube must be directed to a drain at a lower height than the drip tray as it will be emptied by gravity.

Caution: Some of the installation accessories may vary depending on the model and region where the equipment is distributed.

Use appropriate tools and sealants to ensure the tightness of the connections.



7. RINSING OF CARBON FILTERS

See chapter 6 of the Technical Manual for how to access the filters.

It is necessary to remove the granulated carbon dust from the filters that is generated during transport and handling of the equipment and the corresponding cartridges. This dust must be removed as it could completely or partially clog the reverse osmosis membrane and cause the equipment to malfunction.

To do this, disconnect the tube that connects the outlet of the last carbon pre-filter (there may be 1 or 2 depending on the model) and the inlet to the membrane holder (See indication A, in the flow diagram of the Technical Manual). Feed the equipment hydraulically (by opening the inlet valve) and electrically and direct this tube into an external container or sink until the water runs clear and the carbon dust has been completely removed.

Caution: Do not wash the carbon pre-filters through the front dispensers, as the carbon dust to be removed will enter the equipment's tanks and may cause them to malfunction and become dirty and/or reduce the useful life of certain components.

In the RO models, rinse the post-filter by connecting the outlet of the last carbon pre-filter (there may be 1 or 2 depending on the model) to the inlet of the post carbon (See indication B in the diagram of

flow in the Technical Manual). Disconnect the post carbon outlet tube (See indication C, in the flow diagram of the Technical Manual). Feed the equipment hydraulically (by opening the inlet valve) and electrically and direct this tube into an external container or sink until the water runs clear and the carbon dust from the post-filter has been completely flushed.

After flushing the filters, reconnect all tubes and components in their original position and connections.

8. SYSTEM WATERTIGHTNESS TEST, STOP AND START (RO)

Keep the inlet valve open and keep the equipment electrically powered by performing an ocular check of the system to ensure that there are no leaks (for about 1 minute).

9. CLEANING AND MAINTENANCE

9.1 Equipment cleaning

- Always unplug the unit from the power supply before cleaning the unit.
- Clean the exterior surfaces of the unit with a cloth dampened with water and a neutral soap.
- Never use detergents or chemicals.
- Do not spray water directly on the surface of the equipment.
- If the condenser accumulates dust or other unknown substances, clean it with a cloth dampened with water and neutral soap.
- After cleaning, dry the unit completely before plugging it into the power supply.
- Empty the drip tray daily.

9.2 Water treatment maintenance

! **Attention: Some components of your equipment, such as pre-filters, membrane and post-filters (depending on model), are consumables that have a limited life span. The duration will depend on the local water quality, consumption, type of use and specific aspects of the water to be treated such as extreme turbidity, high chlorination, excess iron.**

! **Attention: In order to guarantee the quality of the water supplied by your equipment, it must be regularly maintained.**

Recommended maintenance
· Pre-filter sediment: At least every 12 months*.
· Carbon pre-filter: At least every 12 months*.
· Osmosis membrane: Every 3 years approx. (for soft water to be treated (hardness >15°HF))
· Remineralizer filter: At least every 12 months*.
· Sanitization: At start-up. At least every 12 months depending on use. Every time components in contact with water of the equipment are accessed or where water hasn't been consuming in more than a month

* Depending on the intended use and the characteristics of the water to be treated.

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

! **Caution:** The use of non-original spare parts, installation outside the operating and start-up limits, improper maintenance or use, may result in the loss of the warranty, as well as the invalidation of the certifications to which the equipment has been subjected.

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

! **Caution: All consumables are supplied in individual packaging specially designed to ensure hygienic storage and transport conditions. Extreme hygienic precautions should be taken after removing the consumables from their packaging and when handling the various connectors and components.**

! **on:** Before disassembling the equipment, make sure you have all the material you will need to carry out the maintenance operations and the necessary space to do so.

Work in a well-lit place, in adequate hygienic conditions and with enough space to carry out the operations properly.

Change filters properly, according to the equipment model and type of filter. Ensure the tightness of the joints and the original hydraulic configuration of the system. See the Technical Manual for the filters required according to your equipment model and how to access the filters.

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

! **Attention: In case of detecting that the water dispensed does not comply with the current national legislation, close the inlet tap of the equipment, empty it through the tap, disconnect it electrically and contact your technical service.**

10. SANITIZATION PROCEDURE

Necessary materials:

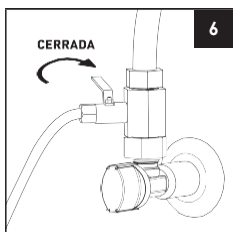
- Manual valve.
- Dosing container with connectors.
- Oxygenated water (0.5 l) (sanitizing product).
- Single-use latex gloves.
- Hydrogen peroxide detector strips.
- Sanitizing spray (hydrogen peroxide).
- Paper towel.

Sanitize the equipment during start-up and during the first few days after start-up.

when necessary (whenever there is a risk of contamination of the equipment by handling components in contact with water) or with the indicated frequency.

To do so, follow the steps indicated below:

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



- Keep the inlet valve closed (6) and empty the accumulation tank through the front dispensers (see chapter "how to extract water").

- Sanitization should be performed with new pre-filters and post-filters installed and properly flushed beforehand, with carbon dust properly removed from the pre-filters and post-filters.

- Use single-use vinyl gloves to handle sanitizing products.

10.1 Sanitizing the prefilters and membrane

Intercalate the dosing container in the inlet pipe to the unit. For this purpose:

- Disconnect the inlet pipe to the unit marked "IN", and insert the dosing container between the inlet valve and the water inlet of the unit (8).

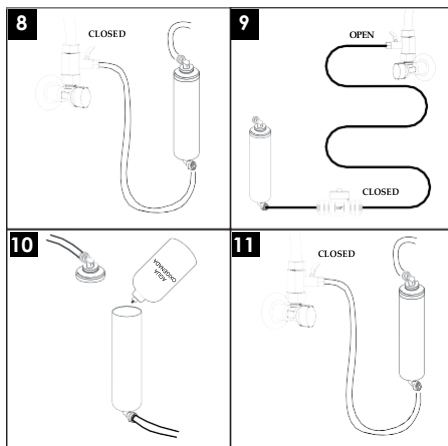
For convenience and ease of access during sanitizing and opening and closing operations of the inlet valve, a manual valve in a closed position can be inserted together with the sanitizing dosing container, which will perform the same functions as the equipment's inlet valve.

- Once the assembly is installed, keep the new inlet valve closed and open the original inlet valve (9). The dosing container should initially be empty.

- Pour 100 ml of sanitizing product into the dosing container inserted at the inlet of the unit (10). Screw the container correctly to its lid.

- On RO models. Connect the equipment to the power supply.

- Open the water inlet valve to the equipment, allowing it to start up and letting the sanitizing product to flow into it. Keep the inlet valve in this position and let the equipment run for 10 minutes for the



models with reverse osmosis and 3 minutes for Filtration and Ultrafiltration models.

- Close the inlet valve (11) and unplug the unit from the power supply, wait until the unit stops pouring water from the rejection outlet to the drain (reverse osmosis models only).

- Let the filters soaked with the Product stand for 20 minutes. In the meantime, proceed to sanitize the tanks.

10.2 Sanitization of tanks and front-end dispenser

- sanitize the nozzles of the front dispensers using cotton swabs and a sanitizing spray.

- Completely empty the reservoirs through the front dispensers and purge outlet (12). Refill the reservoirs and empty them to rinse out any remaining sanitizing product.

- Remove the complementary elements used for sanitizing and reconnect the feeding tube to the inlet (IN) of the equipment.

- Open the inlet valve and power the equipment to start it up.

- Use the sanitizing product detector strips (318701) to verify that the equipment is properly flushed, make the necessary flushing should the sanitizing product remain.

11. USER INTERFACE

! **Attention:** Depending on the model, the equipment may incorporate an electronic controller that will efficiently manage the functionality and show indications on its present state, as well as the different safety systems.

In case it is incorporated, see points 3 and 4 of the Technical Manual of the unit where the states in which each system can be found and the information provided by it are described.

12. PROBLEM SOLVING

TANK DOES NOT FILL UP AT ALL		
Problem	Reason	Solution
1. No water enters the dispenser	Inlet valve is closed	Open the inlet valve
	Equipment is unplugged	Plug in the equipment
	Switch is OFF	Position the switch on its ON position
	No water supply	Problem unrelated to the unit.
	Obstruction in the feed pipe to the unit	Replace the inlet tube.
2. Water enters the dispenser but does not reach the membrane.	Solenoid valve doesn't open	See point 3.
	A filter is blocked	Disconnect the outlet of each filter one at a time to locate the clogged filter and replace it.
3. Solenoid valve does not open	No power to the solenoid valve	The tank is full and there is no water demand.
	The solenoid valve is damaged, since it receives current and does not open (Check with a voltmeter).	Replace the solenoid valve.
4. Solenoid and pump don't work	Level switch does not work.	See point 6.
5. Solenoid valve opens up, but pump does not work.	Wire disconnected	Check that there are no loose wires.
	Pump damaged	Change the pump
6. Level Switch does not work	It is damaged and does not respond when the float valve is raised and lowered	Change the level switch
	Electronical board is damaged	Change the electronical board.
PRODUCTION IS LOW		
7. Production is low	Partial blockage of the sediment filter, comparing the inlet flow rate with the outlet flow rate of the sediment cartridge.	Change the sediment filter
	Partial blockage of the solenoid valve, comparing the inlet flow rate with the outlet flow rate of the solenoid valve.	Change the solenoid valve
	The membrane is clogged	See point 8
8. Membrane is clogged	Equipment does not send water to drain	Replace the flow restrictor and membrane
	Membrane is more than 3 years old.	Change the membrane
	TDS of inlet water is above 1500 ppm	Contact technical service.

WATER KEEPS COMING OUT OF THE DRAIN		
9. The dispenser never stops sending water to the drain.	Level switch does not respond to a full tank command (Check with a voltmeter).	Change the level switch
	The inlet solenoid valve is stuck because it does not close when the power is turned off.	The inlet solenoid valve must be replaced.
WATER QUALITY NOT GOOD		
10. Water quality is not correct.	The rejection flow rate is much less than 0.5 liters per minute.	Replace the waste flow restrictor.
	The membrane has reached the end of its useful life and no longer removes 90% of the salts from the inlet water.	Change the membrane
11. Water does not taste good	Taste is bitter, like metallic	Replace the post-filter with a remineralizing cartridge.
	The dispenser is contaminated.	Perform a complete sanitization of the unit.
FOUNTAIN DOES NOT COOL OR TOO LITTLE COLD WATER COMES OUT		
12. Water does not come out cold	The rear switch (COLD) is in the OFF position.	Press the switch to ON.
	The customer takes out large quantities of cold water and empties the cold water tank.	The fountains are designed to dispense water one glass at a time.
	The cooling system is damaged or the refrigerant gas has been lost.	Remove the unit for workshop repair.
THE DISPENSER DOES NOT HEAT OR LITTLE HOT WATER COMES OUT		
13. Water does not come out hot.	The rear switch (HOT) is in the OFF position.	Press the switch to ON.
	The thermostat of the hot water tank is damaged.	Replace the hot reservoir thermostat.
	The element is damaged.	Change the element.

1. TECHNICAL CHARACTERISTICS

APPLICATION

ROP Model (Reverse Osmosis)

F Models (Filtration)

UF Models (Ultrafiltration)

Use

Improvement of drinking water characteristics (complying with the requirements of the European Drinking Water Directive 98/83 or its national transpositions in the different member states of the European Community).

Modifications by reduction or addition:

Model FC-525 ROP

- Reverse osmosis water treatment is capable of reducing the concentration of salts and other substances by 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 membrane outlet). These values may vary depending on the type of post-filter incorporated in the equipment.

Model FC-525 F

- Water treatment by filtration retains suspended particles larger than 5 microns in diameter. The carbon filter reduces* the taste and odor of the water, as well as organic components.

(* Depending on the characteristics of the water to be treated.

Model FC-525 UF

- These equipments consist of a first filtration stage.
- Ultrafiltration water treatment is capable of retaining suspended particles with a diameter between 0.1 and 0.001 microns.
- (*) Depending on the characteristics of the water to be treated.

WORKING LIMITS	ROP	UF	F
Pressure (max. / min.)	2,5 bar (250 kPa) 1 bar (100 kPa)	5 bar (500 kPa) 1 bar (100 kPa)	5 bar (500 kPa) 1 bar (100 kPa)
TDS (max.)	2000 ppm	-	-
Temperature (max. / min.)	40°C - 2°C	40°C - 2°C	40°C - 2°C
Hardness (max.)	15°HF**	-	-

TECHNICAL DATA	ROP	F	UF
Control type	Level switch. Inlet solenoid valve. Cold water thermostat. Hot water thermostat.	Cold water thermostat. Hot water thermostat.	Cold water thermostat. Hot water thermostat.
Security system:	Safety thermal protector for hot water.	Safety thermal protector for hot water.	Safety thermal protector for hot water.
Inlet connection:	1/4"	1/4"	1/4"
Drain connection:	1/4"	-	-
Wall adapter:	1/2"	1/2"	1/2"
Drain saddle:	Clamp for 40 mm drain pipe	-	-

TECHNICAL DATA

ROP

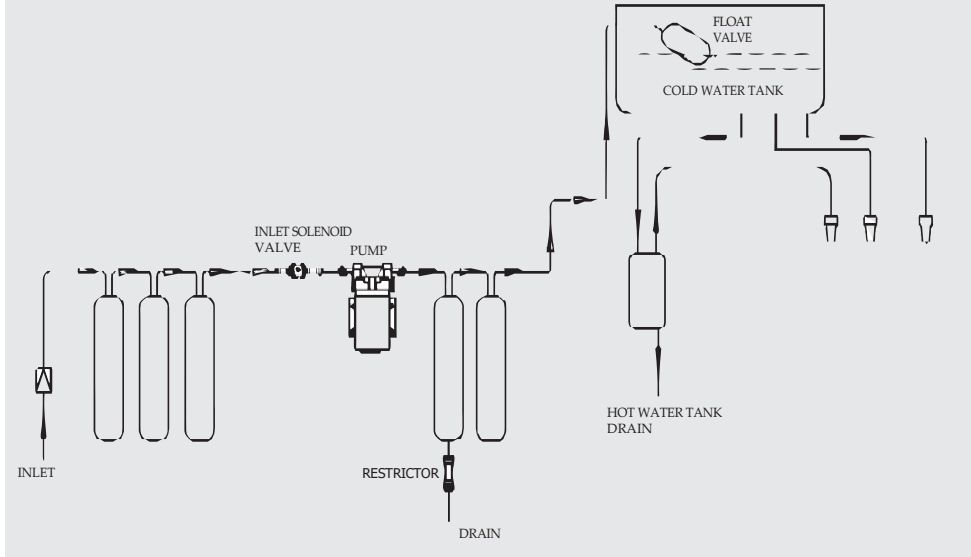
F

UF

Treatment	ROP	F	UF
	1 Prefilter sediment	1 Prefilter sediment	1 Sediment pre-filter
	2 GAC pre-filters	1 GAC pre-filter	1 Carbon pre-filter
	1 BLOCK pre-filter		1 Ultrafiltration pre-filter
	1 Membrane RO 50 GPD 1		1 Carbon Postfilter
	Carbon Postfilter		

Dimensions:

(A x B x C) 1115 x 300 x 390 mm



PRESSUREREDUCER

SEDIMENTFILTER

FCARBONFILTER

CARBONFILTER

RO MEMBRANE

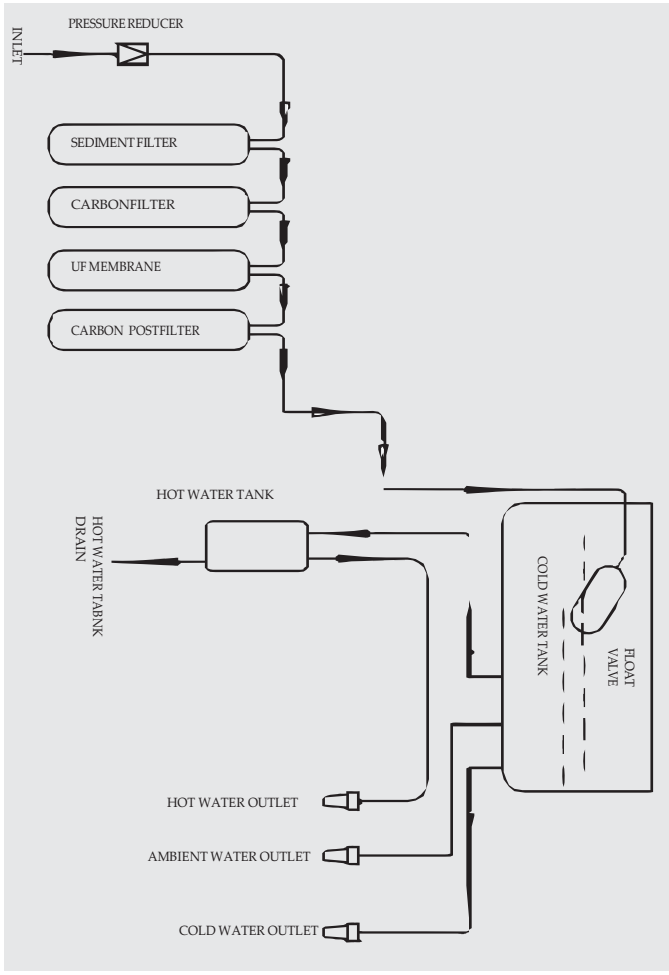
CARBON POSTFILTER

HOT WATER OUTLET

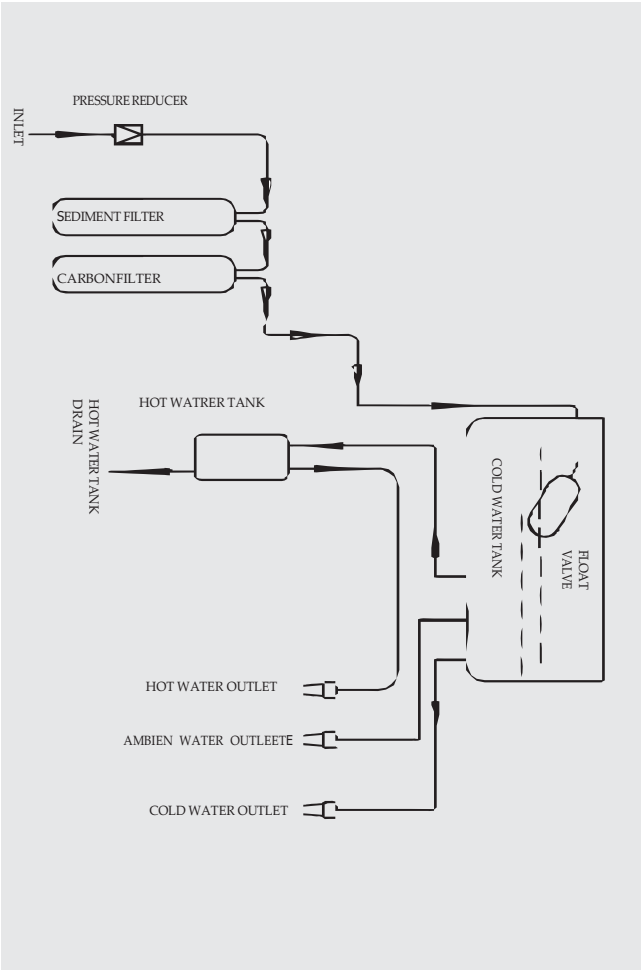
AMBIENT WATER OUTLET

COLD WATER OUTLET

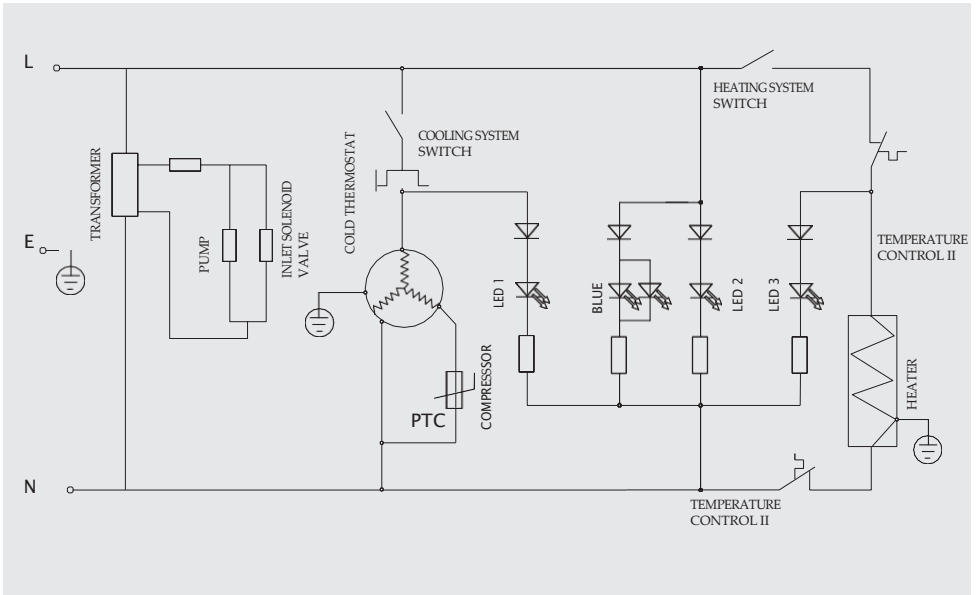
HYDRAULIC DIAGRAM UF MODEL



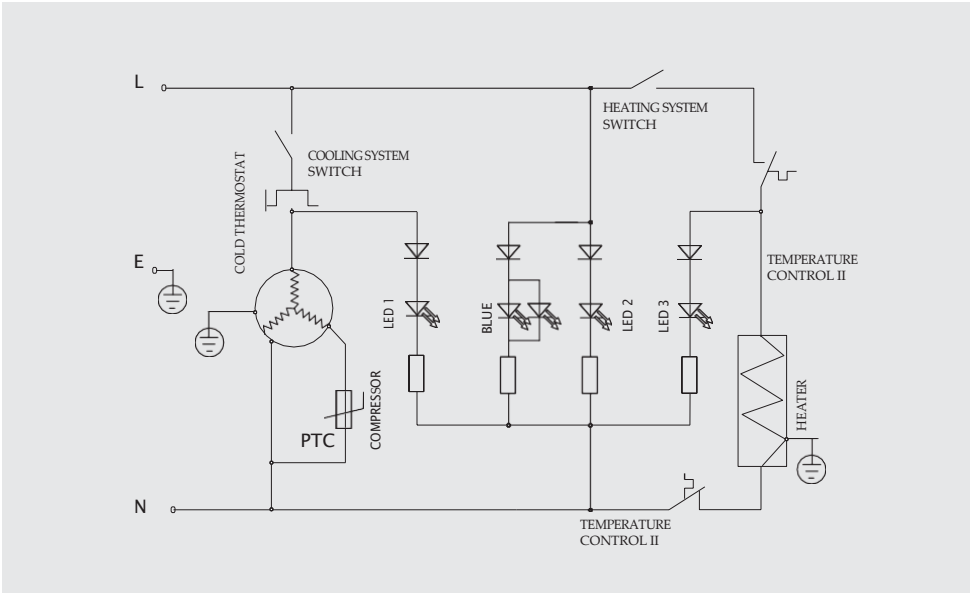
HYDRAULIC DIAGRAM MODEL F



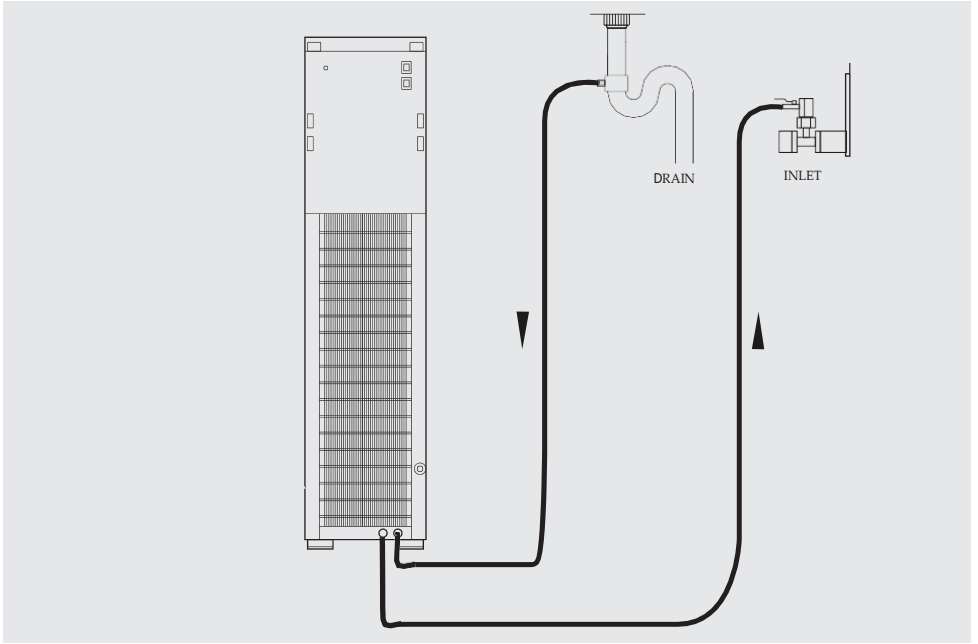
ELECTRICAL DIAGRAM ROP MODEL



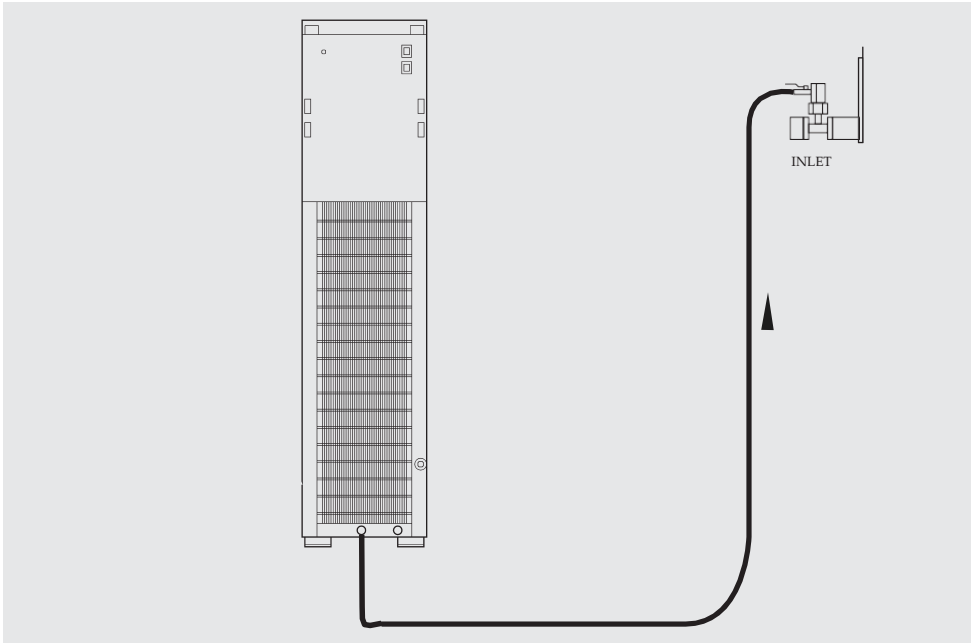
ELECTRICAL DIAGRAM F/UF MODEL



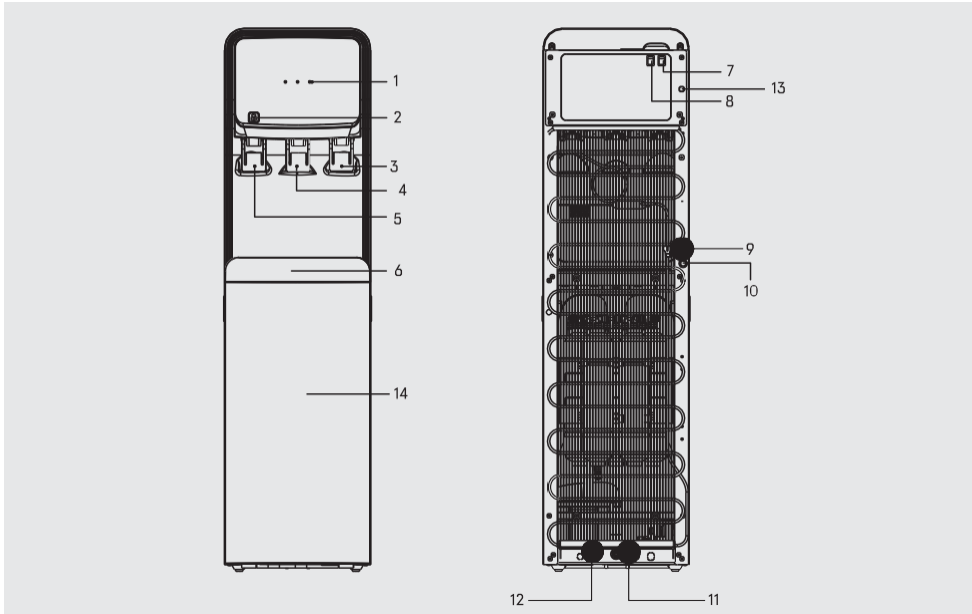
HYDRAULIC CONNECTION DIAGRAM ROP MODEL



HYDRAULIC CONNECTION DIAGRAM F/UF MODEL



2. IDENTIFICATION OF MANAGEMENT AND CONTROL COMPONENTS



1. Status indicators.

Red light on the left indicates that the water heating system is heating.

Yellow light in the center indicates that the equipment is electrically powered.

Blue light on the right indicates that the cooling system is cooling.

2. Safety lock.

Press this button before operating the lever to draw off hot water.

3. Cold water tap.

Press this lever with a glass or bottle to draw cold water.

Ambient water tap.

Press this lever with a glass or bottle to draw ambient water.

5. Hot water tap.

Press the lock button and then press this lever to draw hot water.

6. Drip tray.

Empty this tray daily to prevent it from overflowing.

7. Hot system switch.

Activate the switch if you want hot water to be available in the dispenser. If you keep it in the OFF position, you can draw ambient water from the hot tap.

8. Cold system switch.

Activate the switch if you want cold water to be available in the dispenser. If you keep it in the OFF position, you can draw ambient water from the cold tap.

9. Power cable.

Remove the plug to empty the hot water tank in case of breakdown, maintenance or any other need. Take the necessary precautions to avoid burns as the water could be very hot.

11. RO rejection outlet.

12. Mains water inlet.

13. Adjustable cold thermostat.

Turn clockwise for colder water. Turn counterclockwise for less cold water.

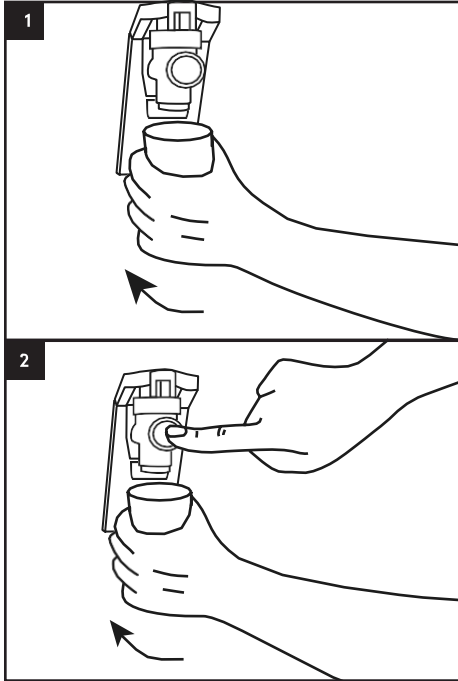
14. Filter housing.

3. HOW TO DRAW WATER FROM THE DISPENSER

To draw cold water: Press the lever on the right side of the dispenser with the glass to let the cold water flow (1).

To draw ambient water (if your dispenser model is equipped with it): Press the lever at the centre of the dispenser with the glass to let the ambient water flow (1).

Draw hot water: Press and hold down the release button on the left-hand faucet and then press the lever at the center of the dispenser with the tumbler to make the hot water flow (1). and then press the lever on the left-hand side with the tumbler to let the hot water flow (2).



4. USER INTERFACE



The hot light, lit in red, indicates that the system is active and is heating the water.



The power light indicates that the equipment is correctly plugged in.



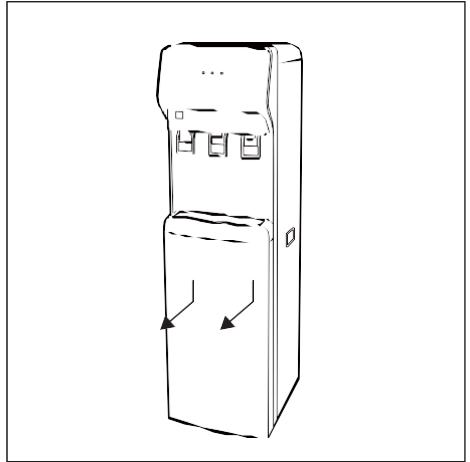
The cool light, lit in blue, indicates that the cooling system is active and is cooling the water.

5. HOW TO ACCESS THE FILTERS

Grasp the lower front cover with both hands and pull it away from the unit while pulling it slightly downward.

6. USER MAINTENANCE

Empty the dispenser drip tray daily if it is not connected to a drain. To remove it, hold it by the sides and pull it upwards. Periodically spray the water outlet nozzles of the faucets with hydrogen peroxide spray, let it stand for a few minutes and draw a few glasses of water for rinsing.



7. WARRANTY

This equipment has a warranty period as established in the legislation in force.

- The warranty includes the repair and replacement of defective parts by personnel authorized by the distributor or by the official technical assistance service (T.A.S.) at the place of installation or at its workshops. Labor and shipping costs that may be incurred are included in the warranty.
- The distributor is exonerated from providing warranty in cases of parts subject to natural wear and tear, lack of maintenance, knocks or other non-conformities resulting from improper or inadequate use of the equipment according to the operating conditions and limits indicated by the equipment manufacturer. Likewise, the warranty 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 S.A.T..
- 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 this 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 warranty to cover the lack of conformity, the fulfillment of the technical conditions of installation and operation. Failure to comply with these conditions may result in the absence of warranty, taking into account the relevance of the purpose of the equipment and the operating conditions and limits under which it must operate.
- The distributor must guarantee that the equipment installed is suitable for the improvement of the quality of the water to be treated in particular, according to the characteristics of the equipment and the regulations in force.
- The distributor must guarantee the correct installation and commissioning 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 commissioning of the equipment.
- For any warranty claim it is necessary to present the purchase invoice. The period is calculated from the purchase of the equipment from the distributor.
- If during the warranty period your equipment presents any problem, please contact your distributor.

The equipment is installed and operating to the customer's satisfaction and for the record:

- * Equipment pretreatment:
- * Equipment inlet hardness (°F):
- * TDS inlet to the equipment (ppm):
- * TDS produced water (ppm):
- * Equipment inlet pressure (bar):
- * Result of the installation and commissioning sheet:

Correct:

Other:

The owner of the equipment has been adequately and clearly informed of the use, handling and maintenance that the equipment requires to guarantee its correct operation and the quality of the water produced. To this effect, a maintenance contract is offered.

*Ref. Maintenance contract:

ACCEPT the maintenance contract.

DO NOT ACCEPT the maintenance contract

In case you need information, report a breakdown or malfunction, request maintenance or the intervention of a technician, please read the operation, troubleshooting sections of 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 installer and transcribed by him from the INSTALLATION LOG sheet.

8. INSTALLATION LOG SHEET



NOTES TO THE TECHNICIAN/INSTALLER: read this manual carefully. In case of any doubt, please contact the Technical Assistance Service (T.A.S.) of your distributor. The data marked with the symbol * must be re-filled in by the technician/installer and transcribed by him on the WARRANTY sheet. This sheet must be kept by the installer and may be requested by the distributor in order to improve after-sales service and support to the customer.

The technician performing the installation and commissioning of the equipment must have the appropriate technical training.

DATA ON THE APPLICATION OF THE EQUIPMENT:

ORIGIN OF THE WATER TO BE TREATED:

PUBLIC SUPPLY NETWORK

OTHER _____

Equipment pretreatment: _____

Equipment inlet hardness (°F): _____

Equipment inlet TDS (ppm): _____

TDS produced water (ppm): _____

Equipment inlet pressure (bar): _____

CONTROL OF THE INSTALLATION STEPS:

Pre-filter installation: _____

Installation of overflow: _____

Start-up according to protocol: _____

Inspection of fittings: _____

Measurement of inlet hardness: _____

Measurement of outlet hardness: _____

Installation of isolation by-pass: _____

Correct drain installation: _____

Brine suction/tank filling check: _____

Tightness of pressurized system: _____

Equipment programming: _____

Adjustment of residual hardness: _____

commentary

* Result of installation and commissioning:

CORRECT (equipment installed and working properly. Produced water adequate for the application).

OTHER: _____

IDENTIFICATION OF THE AUTHORIZED TECHNICIAN

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 breakdown or malfunction, request for maintenance or intervention of a technician.

Comments: _____

*Maintenance Contract Ref: _____

ACCEPT maintenance contract.

DO NOT ACCEPT the maintenance contract

Model/Ref: _____

Owner: _____

Street: _____

Phone: _____

City: _____

Province _____

P.C: _____

SERIAL NUMBER

WARRANTY OF THE EQUIPMENT ADDRESSED TO THE DISTRIBUTOR:

The distributor shall only be responsible for the replacement of parts in the event of non-conformity. The repair of the equipment and the costs involved (labor, shipping costs, travel, etc.) will be borne by the distributor, in accordance with the terms and conditions of the general conditions of contract and sale, so it can not be passed on to the manufacturer at a later date.

9. SERVICIO DE MANTENIMIENTO

FECHA	TIPO DE SERVICIO	NOMBRE, FIRMA Y SELLO DEL TÉCNICO AUTORIZADO	
<input type="text"/>	<input type="radio"/> PUESTA EN MARCHA		
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> MANTENIMIENTO COMPLETO <input type="radio"/> PREPARACIÓN <input type="radio"/> HIGIENIZACIÓN <input type="radio"/> OTROS	TÉCNICO <input type="text"/> SELLO <input type="text"/>	<input type="radio"/> ORDINARIA <input type="radio"/> EXTRAORDINARIA <input type="radio"/> GARANTÍA
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