

HAKTIVA  
HYDROGEN WATER

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**MU**

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**User's manual**

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# MU

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**1. MAIN SPECIFICATIONS**

 <p><b>H2</b></p>	<p><b>Generación de hidrógeno.</b></p>
 <p><b>ORP</b></p>	<p><b>Reduce the redox potential (ORP).</b></p>
	<p><b>Easy maintenance.</b></p>
	<p><b>It does not treat tap water.</b></p>
	<p><b>Treats filtered/RO water.</b></p>

## 2. INTRODUCTION

Congratulations.

You have purchased an excellent equipment to treat water for human consumption, which increases the hydrogen concentration in water and reduces ORP.

What is Hydrogen?

Hydrogen is the chemical element with atomic number 1. It is the lightest of all elements and the most abundant in the universe, though not on the Earth. Hydrogen is quite common in nature in combination with other elements such as oxygen, carbon or nitrogen (it is a component of water, the human body, plant and animal organisms, etc.).

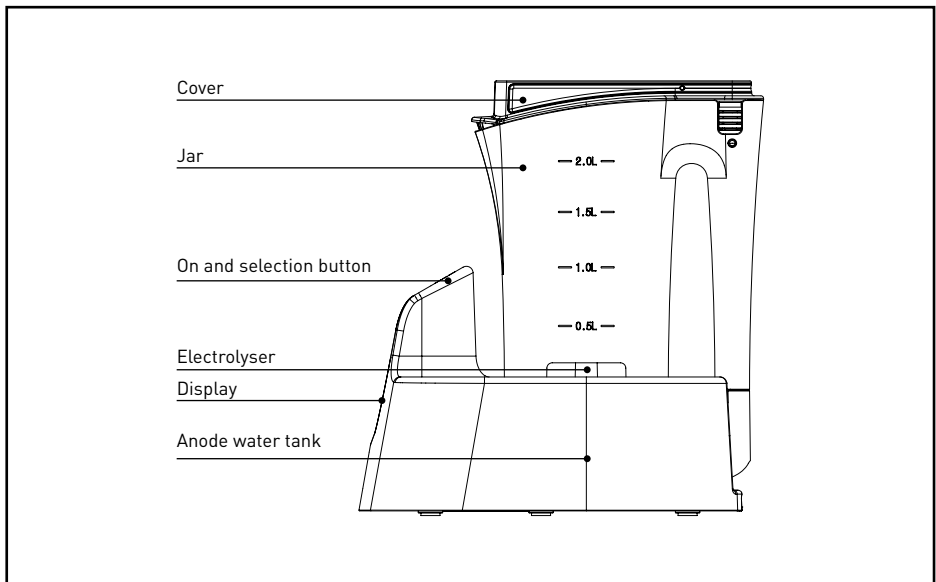
What is the Redox Potential (ORP) of water?

ORP measures the tendency of water and its components in solution to oxidise (positive potential) and/or reduce (negative potential).

What is the pH of water?

pH indicates the acidity of a substance. It is determined by the number of free hydrogen ions (H+) in a substance. The pH of water may vary within 0 and 14. When the pH of a substance is greater than 7, it is a basic substance. When the pH of a substance is lower than 7, it is an acidic substance. The greater the deviation of the pH above or below 7, more basic or acidic will the solution be.

## 3. TECHNICAL CHARACTERISTICS



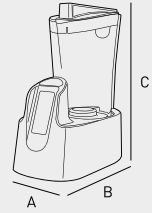
### Working conditions

<b>Dimensions (A x B x C):</b>	160mm x 290mm x 326mm
<b>Weight (en vacío):</b>	1,9Kg
<b>Power supply:</b>	AC (100-240)V ~ 50/60Hz: 0.6~0,8A DC 24V / 1.0~1,2A
<b>Working temperature (mín. – máx.):</b>	3°C ~ 40°C
<b>Hardness (máx.):</b>	15°HF
<b>TDS (mín. – máx.):</b>	10ppm ~ 300ppm

### Specifications of Treated Water

<b>ORP (mín. – máx.):</b>	-400mV ~ -700mV*
<b>Dissolved hydrogen concentration:</b>	800ppb ~ 1200ppb*
<b>Capacity of the jar:</b>	2 litres
<b>Working time:</b>	5 / 10 / 20 / 30 minutos
<b>Accessories:</b>	body, jar, adapter, ozone filter, release key of the tank.

\*In function of water characteristics.



### DISTRIBUTED BY:

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c/ Aiguafreda, 8  
Pol. Ind. L'Ametlla Park  
08480 L'Ametlla del Vallès  
Barcelona - SPAIN

## 4. UNPACKING AND VERIFICATION OF THE CONTENTS

Before installation and initial operation it is important to check the contents of the box and the condition of the equipment in order to check it has not been damaged during transport.

Claims due to damage in transit should be submitted along with the distributor delivery sheet or purchase invoice, including the name of the freight company within 24 hours after reception of the equipment.

Unpack the equipment and its accessories from its packaging and dispose of any protective packaging material. Recyclable materials have been used for the packaging and should be disposed of in the appropriate recycling bins or at the specific local waste product recycling centre.

This product cannot be disposed of with other domestic waste products. When you want to throw the machine away, it must be taken to the company or place where it was bought, or to a specific local centre for the collection of materials, stating that it has electric and electronic components.

The correct collection and treatment of products, which no longer are to be used, contributes to the preservation of natural resources and avoids any potential public health risks

**Warning:** Throw the plastic bags or small items away or keep them away from children, since they may cause them harm.

## 5. PRIOR WARNINGS

**Warning:** Read this manual carefully prior to installation and use of the equipment.

**Warning:** This equipment IS NOT A WATER PURIFIER. It must not be fed with water from an unknown source and/or not complying with the potability requirements stated by the European Directive 98/83 and/or RD 140/2003.

**Warning:** water treatment equipment needs periodic maintenance to guarantee the quality of the water produced and supplied.

### 5.1. APPLICATION AND PLACEMENT WARNINGS

In case of doubt about its consumption or your health, contact a specialist.

- It is recommended to use this equipment as a post-treatment in a reverse osmosis household water purification system.
- The equipment must be fed with water having a TDS within 10 and 300 ppm, and it must be dechlorinated and softened as well.

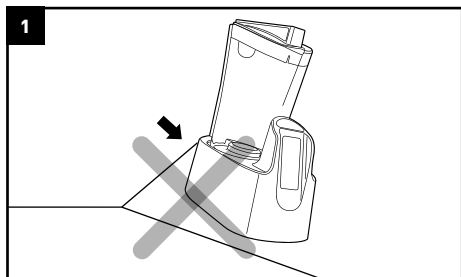
**Warning:** When feeding the equipment with hard water or non-softened water, the service life of certain components of the equipment may be substantially reduced, which could lead to an early malfunction.

- Do not use liquids with the equipment other than water.

Its temperature must not be higher than 40°C. Otherwise the equipment may not work properly.

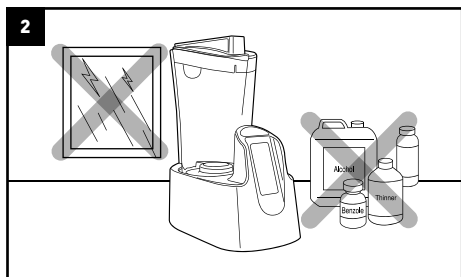
• This equipment requires an electric outlet distanced at least 1 metre. There can't be hot, abrasive or sharp-edged surfaces.

**! Warning: The equipment should not be installed horizontally or at an angle (1). Otherwise, it may fall or not work properly.**



• The use location should have sufficient space for the machine itself, its connections and room for servicing.

• Under no circumstances should the equipment be installed outdoors or exposed to direct sunlight. Do not place the equipment in humid places or close to flammable products (2).



• The equipment should not be installed next to a heat source or in the face of direct hot air (tumble dryer, dishwasher, refrigerator, heater, boiler, etc.).

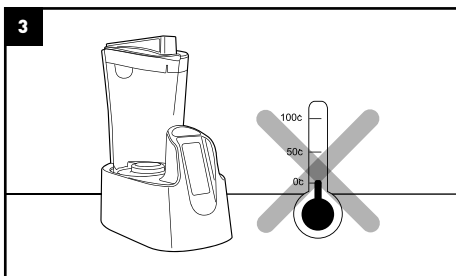
• The equipment must not be installed in front of a cooling or an air conditioning system.

• The equipment must not be installed next to a heater or boiler working by flame.

• The surroundings and the environment where the system is to be used must meet the appropriate hygienic and sanitary conditions.

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

• The equipment must not be used in places where room temperature may be lower than 5°C, since the water inside could freeze and damage the product (3).

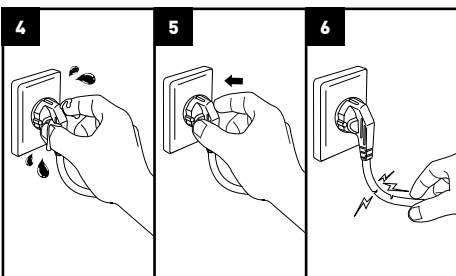


• Do not handle the electrical connectors of the equipment with wet hands. This could cause an electric shock hazard (4).

• Tightly connect the transformer. An inadequate connection may cause a fire (5).

• Do not pull the transformer cable to unplug it from the docking station, since it may cause a fire or an electrical shock (6).

• Do not leave the power cord in a way that it could hinder the passage of persons.



## 5.2. USE WARNINGS

• When using the equipment for the first time or, if it has not been used for more than a week, throw away the first jar of hydrogen water and rinse the equipment with tap water.

• To prevent water contamination, do not drink directly from the jar or lean it against other vessels.

• If unusual noise or bad odour is detected during use, stop using the equipment immediately and unplug the power cord, since it may cause electrical shocks or a fire. Contact the technical service.

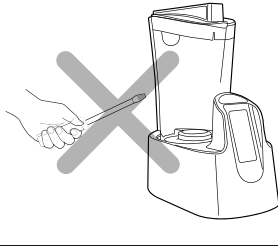
**! Warning: The pH must be within 6.5 and 9.5 according to RD 140/2003.**

• Do not use the jar without water, since it may seriously damage the equipment.

• Do not fill the jar with hot water.

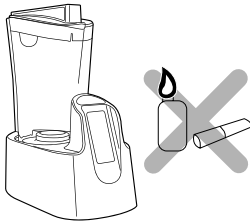
- Do not attempt to disassemble, repair or modify the equipment in an arbitrary manner after a failure. Repair must be carried out by trained staff (7).

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- Do not leave cigarettes or products with flame on the equipment, since they may cause a fire (8).

8



- Do not touch the electrodes with sharp or pointed objects.
- When using the equipment for the first time, bubbles from the electrodes may differ from their normal size. Size will go back to normal after 2 or 3 hours.
- Do not use the equipment continuously for more than 1 hour. This could overload the electrodes and damage them. It is recommended to have a rest period of at least 10 minutes for each hour of use.

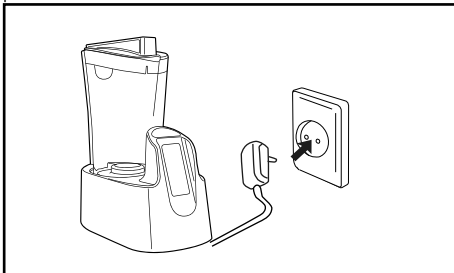
### 5.3. MAINTENANCE WARNINGS

- Unplug the equipment from the electrical grid to clean it. Clean the electronic base and the outer side of the jar with a dry cloth. Do not use water, alcohol, paint remover, benzene or any other chemical product.

To clean and sanitize the jar, see section **9. MAINTENANCE AND CLEANING** of this manual.

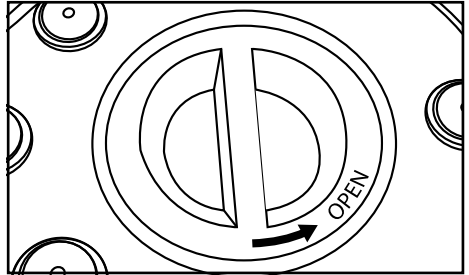
## 6. INSTALLATION AND START-UP

- Plug the transformer into the electric outlet and connect the other end to the power connection of the equipment located behind it.

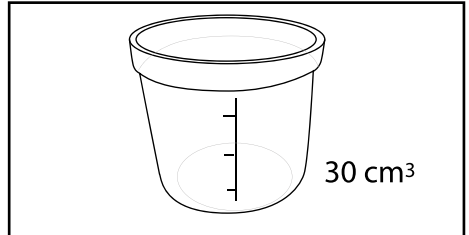








- Fill the water tank of the hydrogenator jar. On this purpose:

- Open the cap located in the base of the jar by turning it anti-clockwise. There may be water rests in the tank. This means it has been examined.

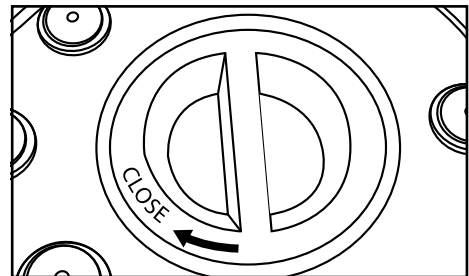
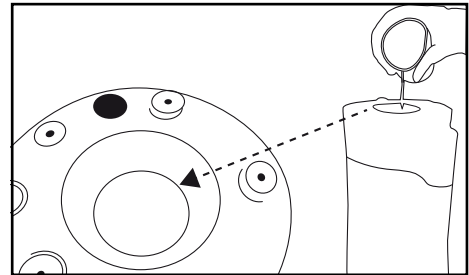


- Fill the tank.



- Fill the lower tank of the jar with filtered and dechlorinated or osmosis water. Add 60 cm<sup>3</sup> (  +  ) if the sponge inside the tank is already soaked or 120 cm<sup>3</sup> (  +  +  +  ) if it is dry.

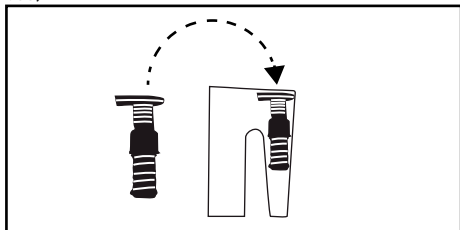
- Close the cap by turning it clockwise.



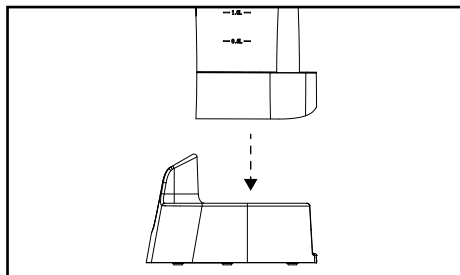


**!** **Note:** Regularly check that the tank is full of water. Otherwise, fill it. The panel will show the symbol 'Lo', which indicates a low water level. This tank allows for the proper operation of the equipment.

- Open the cap of the handle and insert the deozone filter (this filter must be replaced every 9-12 months of use).



- Place the jar in the centre of the base and fill it with the water that must be hydrogenated. Select the treatment time by using the push-button on the panel.



**!** **Note:** Do not use the equipment without water in the jar or in the tank. This could cause a breakdown.

## 7. NOTICE FOR OPERATION

The equipment hydrogenates the water in the jar. The hydrogen concentration depends on the characteristics of water and the time selected for treatment.

On this purpose, it uses an electrolytic cell separated by a semi-permeable membrane, so molecular hydrogen [H<sub>2</sub>] is produced in the cathode (-) and ozone [O<sub>3</sub>] and oxygen [O<sub>2</sub>] are produced in the anode (+).

Molecular hydrogen is produced inside the jar, and the oxygen and the ozone are disposed of outside the equipment as reaction by-products through the handle. Therefore, they are neutralised by the filter in the handle and do not enter into contact with water stored inside the jar.

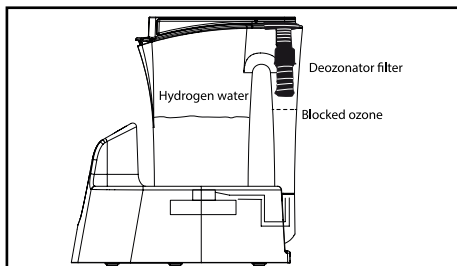
**!** **WARNING:** the lower water tank must always be full of purified water so the equipment can work properly and to prevent damages on certain components.

As a preventive system, the cap of the lower tank contains a small softening filter to retain the lime which may contain the water used to fill it. If the lower tank is empty, the display will show **Lo** and issue a BEEP sign. Fill the lower tank as instructed.

When the equipment detects this situation three times in a row, it will stop operation as a safety measure. In this case, unplug the equipment from the power supply, empty the jar

and fill the lower tank with purified water.

## 7.1. DESCRIPTION



## 8. USER INTERFACE

1. To use the control display, gently press the touch panel with your finger.

- **Start-up and shutdown:** press the panel for 1 second, the equipment will turn on and the control display will show '0'. You will also hear a BEEP sound. Press the panel for 2 seconds to turn the equipment off with another BEEP.



- **How to select the treatment time:** Each time you press the panel, the display will show an hydrogenation time and a blue LED will turn on. You can select between 5, 10, 20, 30 or 0 minutes (being the latter in stand-by mode).



- **Self-cleaning cycle:** If the equipment is turned on and the display is off, press and hold the panel for 3 seconds until hearing a BEEP sound. The red LED will turn on and the self-cleaning mode will be automatically activated during 10 minutes. The display will show 'CL'. Once the process has finished, the equipment will automatically turn off. Dispose of all the water in the jar.



2. To stop the hydrogenation process, press the touch panel until reaching '0'.



\*2 When the display shows **EP**, the equipment indicates that the jar is not placed on the base at the beginning of the treatment cycle or there is a poor connection in its base.

3. If the jar is removed from the unit to drink some water, the process will stop the timer the moment it is stopped. When the jar is returned to the base and the touch panel is pressed, the process resumes operation at the same moment by emitting a beep sound.

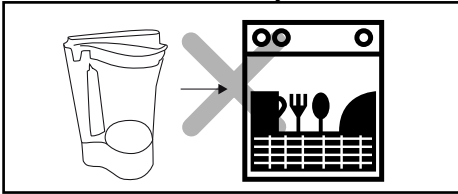
4. When the hydrogenation process has been completed, the equipment will emit a BEEP sound and the display will show '0'. Water will be ready to be served. Still, the equipment will keep a small residual flow for ten hours to delay the loss of hydrogen in water. It is recommended to drink treated water within 1 hour. Otherwise, keep hydrogen-rich water at room temperature or in the fridge, inside an airtight container, thus reducing the free space inside it in order to keep the concentration of hydrogen solved in water. When you want to use the equipment again, renew the water. Its colour and taste may vary if water is hydrogenated without renewing it for a long time.

## 9. MAINTENANCE AND CLEANING

- Clean the inside of the jar with tap water (do not use hot water) and soap with the appropriate frequency, as you would with a normal jar or dinnerware.



**WARNING: Do not wash the jar in the dishwasher.**



- If the jar is not going to be used for more than a week, empty it and unplug it from the power supply. If the jar has not been used for more than a week, empty it and rinse it with tap water before using it.

- If the jar has not been used for more than three weeks, empty it and wash it with cold tap water and soap.

- **Self-cleaning:** By activating the self-cleaning cycle (CL) after filling the jar, as described in the previous section, the polarity of the electrodes of the electrolytic cell is inverted to reduce possible build-up in them.



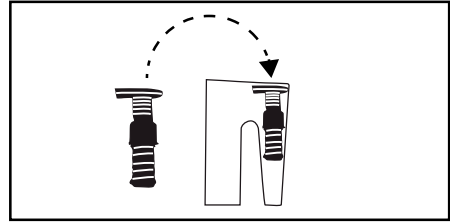
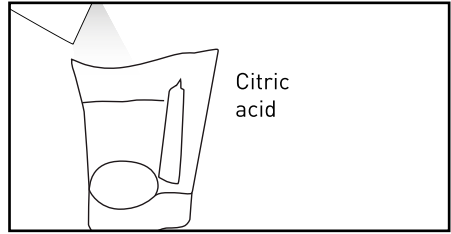
**WARNING: During this cycle, Ozone will be generated inside the jar and water must not be drunk during this period. Dispose of this water before activating a normal hydrogenation treatment cycle.**



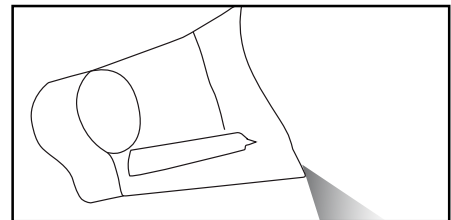
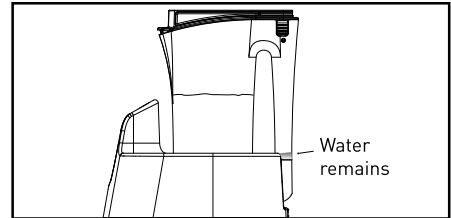
**WARNING: Water treatment with a hardness higher than 15°HF will reduce the service life of the essential components of the equipment. In such case, it is recommended to carry out at least 2 self-cleaning cycles per week.**

- **Anti-scaling:** Dissolve 5g of citric acid in 0.5l of water. Once it has been completely dissolved, pour this volume of water inside the jar and activate a self-cleaning cycle. Dispose of water and rinse the jar with plenty tap water after finishing the cycle.

- To **replace the deozonator filter**, open the plug from the handle and place the deozonator filter (the filter must be replaced every 9-12 months of use).



**WARNING: The average service life of certain components of the equipment may be reduced if water to be treated is not softened or chlorinated,**



**or has a TDS higher than 300 ppm.**

To remove the water residues from the ozone bleeder, take out the deozonator filter and tilt the jar to empty water.

### Recommended maintenance\*:

FREQUENCY	ACTION
1x WEEK	Self-cleaning cycle (hardness <15°HF)
2x WEEK	Self-cleaning cycle (hardness >15°HF)
HALF-YEARLY/YEARLY	Anti-scaling.
ANNUAL	Replace the deozonator filter.
HALF-YEARLY/YEARLY	Replace the softening filter.

\*In function of water characteristics.

## 10. HOW TO USE HYDROGEN-RICH WATER

- It is recommended to consume water within one hour after treatment.
- If using a container to keep it in the fridge, such container must have an airtight closure and be full of water, leaving no free space for air, in order to delay the loss of hydrogen in water. In this case, water can be consumed up to 24 hours after treatment, but the hydrogen concentration inside will have significantly declined.

## 11. GUIDE FOR THE IDENTIFICATION AND SOLUTION OF PROBLEMS

PROBLEM	CAUSE	SOLUTION
<b>Display shows 'Lo'.</b>	There is no water in the lower tank of the jar.	Fill the lower tank of the jar. See section 6 of this manual. If the system detects the alarm signal 'Lo' 3 times in row, the equipment will automatically turn off, as a precautionary measure.
	The equipment is not ready to start operation.	Check there is enough water in the lower tank of the jar. Place the jar on the base, push the button and select the time of the cycle.  If the error persists, unplug from the power supply and plug it again.  Please contact your Technical Assistance Service if the problem persists.
<b>Display shows 'Er'.</b>	The jar is not placed on the base or it is not correctly connected to its electrical connectors.	Place the jar on the base and/or readjust its position. Lift the jar from the base and replace it to connect it properly. Then, push the touch panel.
<b>The touch panel is not working.</b>	The power adapter is unplugged.	Check the power supply. Please contact the Technical Assistance Service if the problem comes from the transformer.
	Failure in power supply.	Refill the jar.
	The tank of the jar is empty.	Replace the jar on the base.
	The base and the jar are not connected.	Please contact the Technical Assistance Service.
<b>The jar is not lighted up</b>	Defective touch panel.	Please contact the Technical Assistance Service.
	The LED is not working.	Please contact the Technical Assistance Service.
<b>There are no bubbles.</b>	The electrodes are not working.	Please contact the Technical Assistance Service.
<b>There are soap residues somewhere outside the jar.</b>	The tank cap is not properly closed.	Check the water level of the tank and close it tightly.
	Leaks in tank or jar.	Please contact the Technical Assistance Service.
<b>The hydrogen concentration has drastically diminished</b>	Electrodes are exhausted.	Please contact the Technical Assistance Service to replace the electrodes.
<b>The colour, the taste or other values are outside the normal values.</b>	Water is in bad condition.	Renew water. If the problem persists, contact the technical service.

## 11. WARRANTY

### END USER WARRANTY:

The distributor guarantees this equipment for a period of two years against any fault found, and in accordance with the provisions of RD (Royal Decree) 1/2007 of the 16th of November (Amended text of the General Law for the Protection of Consumers and Users). This guarantee encompasses reparation and replacement of defective parts by personnel authorised by the distributor or by the Official Technical Assistance Service (SAT), either at the location of installation or at their respective workshops. Labour and shipping costs incurred by said repairs are included in the guarantee. WLГ won't be liable to honour the warranty in the event of parts, which are subject to general wear and tear, lack of due maintenance, damage or other incidents due to the consequence of misuse or inappropriate use in accordance with conditions, and functional limits of said equipment as indicated by the manufacturer. Furthermore, the warranty will be rendered invalid in the event of poor use or in the event of said equipment being modified or repaired by personnel not authorised by the distributor or by the official SAT. Replacement parts under warranty shall remain the property of WLГ.

WLГ shall be held responsible for any lack of conformity of equipment in relation to its origin, identity or appropriateness of the products, in accordance with equipment type and end use. Taking into account the equipment's characteristics, in order for the warranty to cover any lack of conformity, the adherence to the installation and working technical conditions which appear in this warranty is essential, as well as the submission of either a sales invoice or receipt. Failure to comply with said conditions may invalidate this warranty, taking into account the relevance of the equipment's aim and conditions and working limits.

The distributor guarantees that the installed equipment is appropriate for the improvement of the quality of the water to be treated, in accordance with the equipment's characteristics and current legislation. The installation personnel and/or distributor guarantees the correct installation and initial operation of the equipment in accordance with the manufacturer's instructions and any current legislation, and will be responsible for any lack of conformity which arises from any incorrect application, installation or initial operation of said equipment.

For any warranty claim the submission of the sales receipt is required. The 2-year period is calculated from the date the equipment is purchased from the distributor. If during the warranty period the equipment encounters any issues please contact your local distributor.

**In case that feed in water does not comply with the specifications shown in this manual Hidrosalud SL will not be responsible of any failure or malfunction and consequences caused by the characteristics of feed in water.**

\* WLГ = WATER LOGISTICS GROUP

### The equipment has been installed and is working in a satisfactory manner for the client and for the record:

\*Pre-treatment of the system:

\*Equipment entry hardness [°F]:

\*Equipment entry TDS [ppm]:

\*Equipment entry pressure [bar]:

### \*Installation and initial operation service result sheet

CORRECT.

OTHER INFORMATION:

The equipment's owners have been suitably and clearly informed of the use and maintenance required to ensure its correct working and of the quality of water to be produced. To these effects a maintenance contract is offered.

### \*Ref. Maintenance contract

Maintenance contract IS ACCEPTED.

Maintenance contract is NOT ACCEPTED.

In the event of needing further information, to report a breakdown or fault, please request either maintenance or technical assistance. Please read the sections relating to troubleshooting in this manual and contact the distributor or retailer.

### AUTHORISED COMPANY AND/OR INSTALLER: (date and signature)

### IDENTIFICATION OF THE SYSTEM:

Serial number



AUTHORISED COMPANY AND/OR TECHNICIAN:  
Information marked with an (\*) should be filled in by the installation technician.

### TECHNICAL ASSISTANCE LINE







**FT**