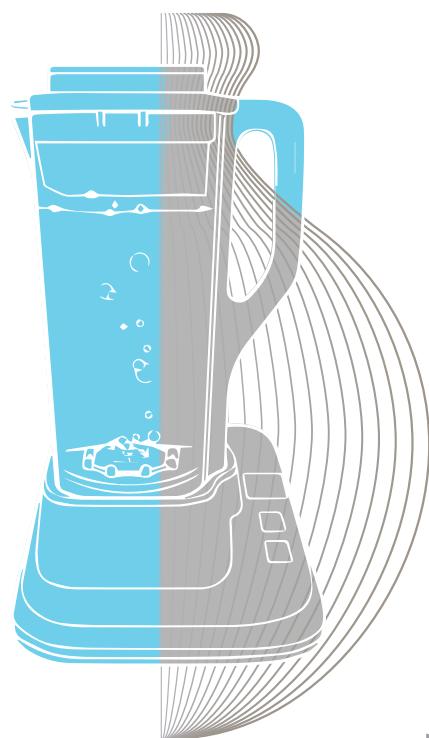


HAKTIVAPLUS

HYDROGEN WATER

USER MANUAL



USER MANUAL

INDEX

1. MAIN CHARACTERISTICS	4
2. INTRODUCTION	5
3. TECHNICAL CHARACTERISTICS	5
4. UNPACKING AND VERIFICATION OF CONTENTS	6
5. PRIOR WARNINGS	6
6. INSTALLATION AND START-UP	8
7. OPERATION	8
8. USER INTERFACE	8
9. MAINTENANCE AND CLEANING	9
10. USE OF HYDROGENATED WATER	10
11. IDENTIFICATION AND PROBLEM RESOLUTION GUIDE	eleven
12. WARRANTY	12

1. MAIN CHARACTERISTICS

	Hydrogen generation.
	Reduction of the oxide reduction potential (ORP).
	Easy maintenance.
	It does not treat mains water.
	Treat filtered / RO water.

2. INTRODUCTION

Congratulations.

You have acquired an excellent equipment for treating drinking water that increases the concentration of dissolved hydrogen in the water and reduces the ORP.

What is Hydrogen?

Hydrogen is the chemical element with atomic number

1. It is the lightest of the elements and the most abundant in the Universe, although not on Earth. Hydrogen is quite common in nature in combination with others such as oxygen, carbon or nitrogen (it forms part of water, the human body, animal and plant organisms, etc.).

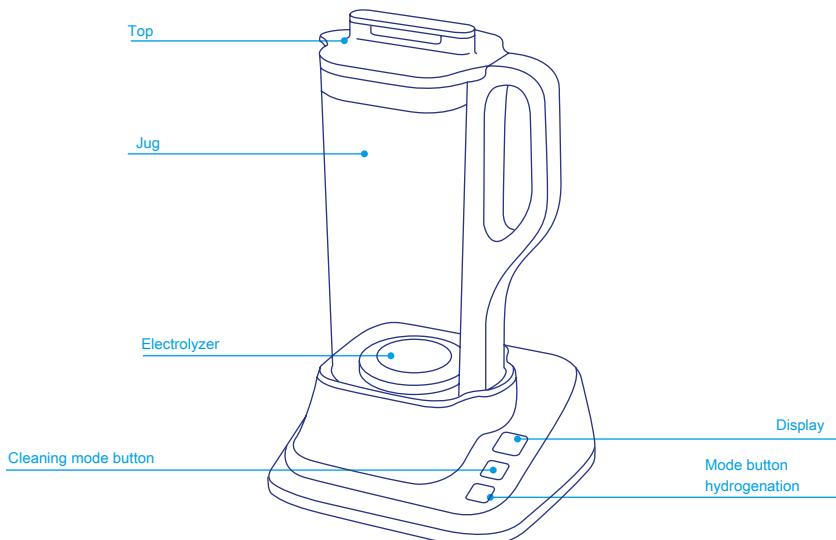
What is the Oxide Reduction Potential (ORP) of water?

The ORP measures the tendency of water and its compounds in solution, to produce oxidation (positive potential) and / or produce a reduction (negative potential).

What is the pH of the water?

pH is an indicator of the acidity of a substance. It is determined by the number of free hydrogen ions (H^+) in a substance. The pH of water can vary between 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 below 7, it is an acidic substance. The further the pH is above or below 7, the more basic or acidic the solution will be.

3. TECHNICAL CHARACTERISTICS



Working conditions	
Dimensions (A x B x C):	220mm x 205mm x 380mm
Weight (empty):	1.5Kg
Electrical power supply:	AC (100-240) V ~ 50 / 60Hz: 0.6 ~ 0.8A DC 12V / 2A
Working temperature (min - max):	3°C ~ 40°C
Hardness (max):	15 °HF
TDS (min - max):	10ppm ~ 300ppm
Characteristics of the treated water	
ORP (min - max):	- 200mV ~ -600mV *
Dissolved hydrogen concentration: Jug capacity:	700ppb ~ 1200ppb *
Working time:	2 liters
Accessories:	10/20/30 minutes Body, Jug, Electrical adapter, Ozone filter
* Depending on the water to be treated.	



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4. UNPACKING AND VERIFICATION OF CONTENTS

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

Claims for damage during transport must be submitted together with the delivery note or purchase invoice to your distributor, attaching the name of the carrier, within a maximum period of 24 hours after receiving the equipment.

Extract the equipment and its accessories from their packaging, removing the corresponding protections.

The materials used in the packaging are recyclable and must be disposed of in the appropriate separate collection containers or in the specific local center for the recovery of waste material.

This product cannot be disposed of together with normal urban waste. When you wish to dispose of the equipment, it must be delivered to the company or center where it was purchased or to the specific local center for the recovery of materials, indicating that it has electrical and electronic components.

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

Caution: remove or keep out of reach of children plastic bags and small items, which could be a danger to them.

5. PRIOR WARNINGS

! Attention: read this manual carefully before installing and using your equipment.

! Attention: these equipments ARE NOT POTABLE WATER. They should not be fed with water of unknown origin and / or that does not comply with Potability requirements demanded by the European directive 98/83 and / or RD 140/2003.

! Attention: the water treatment equipment requires periodic maintenance, in order to guarantee the quality of the water produced and supplied.

5.1. APPLICATION WARNINGS, LOCATION

In case of doubt about its consumption and your health in particular, consult a specialist.

- Its application is recommended as a post-treatment of a domestic water purification system through reverse osmosis.

- The equipment must be fed with water between 10 and 300 ppm of TDS, dechlorinated and decalcified.

! If the equipment is fed with hard or non-softened water, it may lead to a substantial reduction in the useful life of certain equipment components, which may cause premature malfunction.

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

Its temperature should not be higher than 40°C. Otherwise it may cause a malfunction.

- The equipment needs an outlet within 1 meter away and there must be no hot, abrasive or sharp surfaces.

! Attention: The equipment cannot be used either lying down (1). Doing so could cause it to malfunction or fall.



- The place planned for its use must have enough space for the appliance itself, its connection and its comfortable handling.

- Under no circumstances should the equipment be located outdoors or in places where they receive direct sunlight. Do not place the equipment in humid places or near flammable products (2).



- The equipment should not be placed next to a heat source or directly receiving a flow of hot air over it (dryer, dishwasher, refrigerator, heater, boiler, etc.).

- The equipment should not be installed in front of a refrigeration or air conditioning system.

- The equipment should not be installed near a heater or boiler that works with a flame.

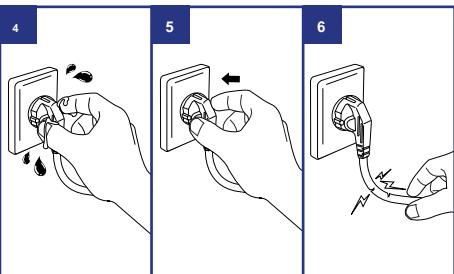
- The environment and environment where the equipment is used must meet adequate hygienic-sanitary conditions.

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

- The equipment must not be used in places where the ambient temperature can drop below 5°C, as the water contained could freeze and cause damage to the product (3).



- Do not handle the electrical connectors of the equipment with wet hands. There could be a risk of electric shock (4).
- Connect the transformer firmly. An improper connection could cause a fire (5).
- Do not pull the transformer cable to disconnect it from the connection base, as this could cause a fire or an electric shock (6).
- Do not leave the power cord in such a way that it may obstruct the passage of people.



5.2. USE WARNINGS

- When you use the equipment for the first time or have not used it for more than a week, discard the first jug of hydrogenated water and rinse the equipment with tap water.

- Do not drink directly from the jug or put it on other containers to avoid contaminating the water.

- If you detect abnormalities such as noise or bad odor during use, immediately stop use and disconnect the power cord, as it may cause electric shock or fire. Contact the technical service.

! Attention: the pH must be between 6.5 and 9.5 according to RD 140/2003.

! Do not use the jug without water, it may cause a serious damage to the equipment.

- The carafe should not be filled with hot water.

- Do not arbitrarily attempt to disassemble, repair or modify equipment after equipment failure. The repair must be carried out by personnel trained for it (7).

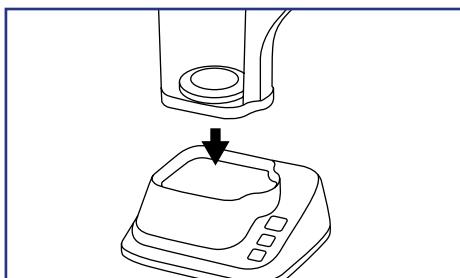


- Do not leave cigarettes or flaming products on the equipment, as they could cause a fire (8).



- Do not touch the electrodes with pointed or sharp objects.
- When using the equipment for the first time or when the carafe has been dry for a long time, bubbles may come out of the electrodes in a different size than normal. After 2 or 3 hours the size will normalize.

- Place the jug in the center of the base and fill it with the water you want to hydrogenate.



Select the treatment time using the button on the panel.

! Note: Do not use the equipment without water in the jug. This could lead to equipment failure.

7. OPERATION

The equipment hydrogenates the water in the jug, the concentration of hydrogen being a function of its characteristics and the selected treatment time.

To do this, it uses an electrolytic cell separated by a semi-permeable membrane, in such a way that molecular Hydrogen [H₂] is produced at the cathode (-) and Ozone [O₃] and Oxygen [O₂] are produced at the anode (+).

Molecular hydrogen is generated inside the jar and the Oxygen and Ozone are discarded to the exterior as by-products of the reaction through the bottom of the jar, being neutralized by the filter that is in it., not coming into contact with the water stored inside the jug at any time.

5.3. MAINTENANCE WARNINGS

- Disconnect the equipment from the network when you want to clean it. Clean the electronic base and exterior of the carafe with a dry cloth. Do not use water, alcohol, paint stripper, benzene, or any other chemical.

To clean and sanitize the jug, consult the section

9. MAINTENANCE AND CLEANING

6. INSTALLATION AND START-UP

- Connect the transformer to the electrical outlet and the other end to the equipment power connection located on the back of the equipment.

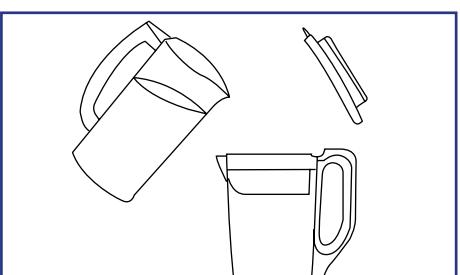


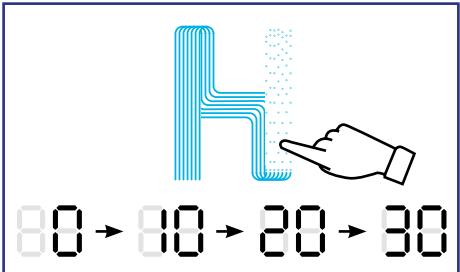
8. USER INTERFACE

To use the control panel, gently press your finger on the touch buttons.

HYDROGENATION CYCLE

Fill the jug with the water to be hydrogenated (maximum 2 liters). Press the "H" button located at the bottom of the control panel. With each touch, a hydrogenation time will appear on the screen and a blue LED will also light up. You can select between 10, 20, 30 and 0 minutes, the latter being a sleep state.





Ed

When the hydrogenation process is complete, the message "Ed" (END) will be displayed on the screen and a short beep will sound. Then, and automatically, the maintenance mode will be activated

of hydrogen along with a pulsing blue light effect to indicate this.

The hydrogen maintenance mode lasts for 10 hours, during which the system is activated 3 minutes every hour.

! If you want to consume all of the water before the hydrogen hold time expires, press the "H" button to put the carafe to rest.

! Avoid using the jug without water (empty).

OP

If the user lifts the jug from its base during the work cycle or hydrogen maintenance, it will pause and the message "OP" will be displayed on the screen. To resume the cycle, just place the jug on its base again.

jug on its base again.

To cancel the duty cycle before completion, press the "H" button. The message "00" will appear on the screen.

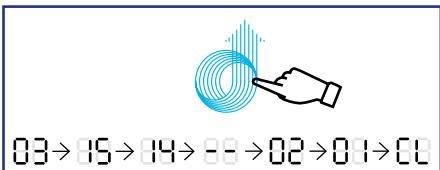


SELF-CLEANING CYCLE

It is recommended to do a cleaning cycle once a week to keep the equipment in optimal working conditions and to extend the useful life of the electrolysis cell.

To run the cleaning cycle, first fill the jug with 0.5 liters of water. Place the carafe on the base and press the "O" button for 2 seconds.

The display will show the message "O3" for 4 seconds accompanied by a short beep, to indicate that the cleaning mode has been activated. This process takes 15 minutes and you can see the remaining time on the screen.



00

After the self-cleaning cycle is complete, the message "CL" will appear on the display.

OP

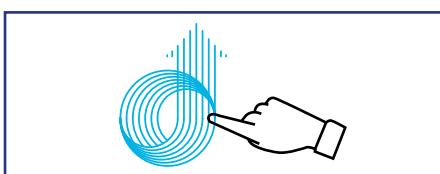
During the cleaning process, the indicator light is red and ozone is generated in the water.

! DO NOT drink this water, discard it after finishing the cleaning cycle.

OP

If during the work cycle the user lifts the jug from its base, it will pause and the message "OP" will be shown on the screen. To resume the cycle, you just need to place the jug on its base again.

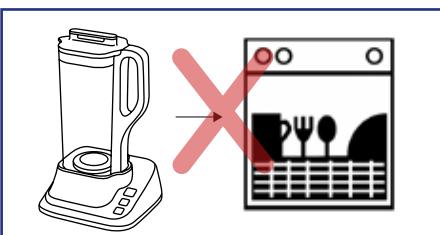
To cancel the cleaning cycle before it is finished, press the "O" button. The message "00" will appear on the screen.



9. MAINTENANCE AND CLEANING

• Clean the inside of the jug with tap water (do not use hot water) and soap with the appropriate frequency and similar to what you would use with a normal jug or your dishes.

! WARNING: Do not put the jug in the dishwasher.



- If you are not going to use the carafe for more than a week, empty it and disconnect it from the power supply.

After more than a week without using the jug, you will need to empty it and rinse it with tap water before using it.

After more than three weeks without using the jug, you will need to empty it and clean it with cold tap water and soap.

- **Self-cleaning:** By activating a self-cleaning cycle (CL) after filling the jug, described in the previous section, the polarity of the electrodes of the electrolytic cell is reversed in order to reduce the fouling that could occur in them.

Recommended maintenance *:	
FREQUENCY	ACTION
1 x WEEK	Self-cleaning cycle (if hardness <15 °HF).
2 x WEEK	Self-cleaning cycle (if hardness > 15 °HF).
ANNUAL*	Deionizer filter replacement.

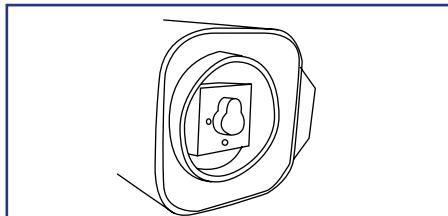
* Depending on the characteristics and the amount of water consumed.

! ATTENTION: during this cycle, ozone will be generated inside the jug, not consuming the water in it, and it must be discarded before activating a normal hydrogenation treatment cycle.

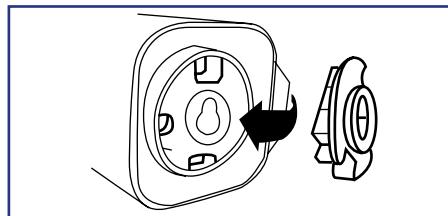
! ATTENTION: treating water with hardnesses greater than 14°HF will reduce the life of the critical components of the equipment. In this case, it is recommended to carry out at least 2 self-cleaning cycles per week.

! ATTENTION: The half-life of certain equipment components may be reduced in the case of treating non-softened or chlorinated water or with a TDS greater than 300 ppm

REPLACING THE CARBON FILTER



Remove the spent charcoal filter as shown in the figure



Insert the new filter by snapping it into position.

11. IDENTIFICATION AND PROBLEM RESOLUTION GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
The touch panel does not work.	Power adapter disconnected. Failure in the power supply.	Check the feeding. Contact the SAT if it is a transformer problem.
	The base and the jar are not connected.	Replace the jug on the base. Contact the SAT.
	Defective touch panel	
The carafe does not light up. No bubbles come out.	The LED does not work. Electrodes not working. Tank lid closed.	Contact the SAT.
There are traces of water somewhere outside the inside of the jug.	Tank or jug leaks.	Contact the SAT.
Concentration of hydrogen has decreased drastically knotted	The electrodes have reached the end of their useful life.	Contact the SAT to replace the electrodes.
Color, taste or other values are outside of normal values	Bad water	Renew the water. If the problem persists, contact the SAT
	You have selected the "cleaning" mode in Be sure to select the hydrogen generation mode. instead of the "hydrogenation" mode. Do not drink this water.	You have selected the "cleaning" mode in Be sure to select the hydrogen generation mode. instead of the "hydrogenation" mode. Do not drink this water.

11.1. MESSAGES ON THE DISPLAY

	If the carafe is lifted during the hydrogenation or cleaning process, the cycle will be paused, the message "OP (Open)" will be displayed on the screen, and will resume as soon as the user returns the carafe to its position.
	After starting the cleaning mode, the message "O3" will be displayed for 4 seconds, to indicate that it has been activated successfully. After this time, a counter will appear showing the minutes remaining until the end of the cleaning cycle.
	After completion of the hydrogenation cycle, the message "Ed (End)" will be displayed indicating that the jug is in hydrogen conservation mode for the next 10 hours. If you extract water, be careful not to empty the jug completely as it is not advisable for the equipment to run dry.
	1. After finishing a cleaning cycle (15'), the message "CL" is displayed on the screen. 2. Notice of preventive maintenance of the cell. After 400 minutes of operation in hydrogenation mode (including the hydrogen holding time) the "CL" message will blink for 10 seconds. Press the "O" button to cancel the warning.
	Cell maintenance notice. Contact technical service for proper maintenance.

GARANTÍA DEL EQUIPO DIRIGIDA AL USUARIO FINAL:

El distribuidor garantiza los equipos durante el período de dos años ante cualquier falta de conformidad que se detecte en los mismos tal y como dispone el RD 1/2007 de 16 de noviembre (Texto refundido de la Ley General de Defensa de los Consumidores y usuarios)

La garantía comprende la reparación y sustitución de las piezas defectuosas por el personal autorizado por el Distribuidor o el Servicio de Asistencia Técnica Oficial (SAT), en el lugar de la instalación o en sus talleres. Se incluye en la garantía la mano de obra y los gastos de envío que se puedan generar.

El distribuidor queda exonerado de prestar garantía en los casos de piezas sometidas al desgaste natural, falta de mantenimiento, golpes u otras faltas de conformidad que sean consecuencia de un uso indebido del equipo o inadecuado según las condiciones y límites de funcionamiento indicadas por el fabricante del mismo. Asimismo la garantía pierde eficacia en supuestos de mala manipulación y uso de los equipos, o en aquellos casos en los que han sido modificados o reparados por personal ajeno a la empresa distribuidora o SAT oficial. Las piezas sustituidas en garantía quedarán en propiedad del distribuidor.

El distribuidor responde por la falta de conformidad del equipo cuando ésta se refiera al origen, identidad o idoneidad de los productos, de acuerdo con su naturaleza y finalidad. Teniendo en cuenta las características de los equipos es imprescindible para que la garantía cubra la falta de conformidad, la cumplimentación de las condiciones técnicas de instalación y funcionamiento de la presente hoja de garantía; así como la factura o ticket de compra. La falta de cumplimentación de dichas condiciones puede comportar la ausencia de garantía, teniendo en cuenta la relevancia del destino del equipo y las condiciones y límites de funcionamiento en las que debe operar el mismo.

El distribuidor garantiza que el equipo instalado es adecuado para la mejora de la calidad del agua a tratar en particular, según características del equipo y normativa vigente.

El instalador y/o distribuidor garantiza la correcta instalación y puesta en marcha del equipo, según lo indicado por el fabricante y normativa vigente y además responderá por la falta de conformidad derivada de una incorrecta aplicación, instalación o puesta en marcha del equipo. Para cualquier reclamación en garantía es preciso presentar la factura de compra. El plazo de 2 años se computa desde la compra del equipo al distribuidor.

Si durante el período de garantía su equipo presenta algún problema contacte con su distribuidor.

**En caso de que el agua a tratar no cumpla con las especificaciones
indicadas en el presente manual, el distribuidor no se hará responsable
de las averías, mal funcionamiento y consecuencias de los mismos,
provocados por las características del agua.**

EMPRESA Y/O INSTALADOR AUTORIZADO: (fecha y firma)



NOTA PARA LA EMPRESA Y/O TÉCNICO/INSTALADOR AUTORIZADO:
Los datos marcados con (*) debe cumplimentarlos el técnico instalador

IDENTIFICACIÓN DEL EQUIPO:

NÚMERO DE SERIE:

TELÉFONO DE ASISTENCIA TÉCNICA:

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