

## **User's manual**

Reverse  
osmosis system



**USER'S MANUAL**

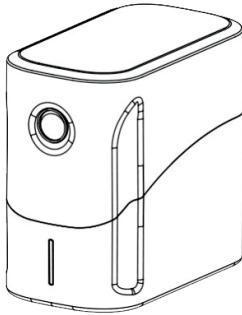
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## **REVERSE OSMOSIS SYSTEM**

### **1. PRESENTATION AND INTRODUCTION**

We welcome you. Thank you for trusting our product. Complying with the advanced reverse osmosis technology, this model is a 5-stage design thought for a long duration in all families. This system is hidden under the sink.

No chemicals or electricity are needed to produce quality water. The equipment is able to eliminate over 95% of total dissolved solids, +99% of all organic remains, +99% of all bacteria and reduces up to 99% chlorine, improving the taste and quality of water. This equipment also eliminates harmful materials such as lead, copper, barium, chromium, mercury, sodium, radmium, fluoride, nitrite or selenium, which may be present in your water, providing pure and healthy water.

**IMPORTANT: KEEP THIS MANUAL.**

### **2. WHAT IS REVERSE OSMOSIS?**

Reverse osmosis was originally designed to make seawater drinkable for the Navy. It is ideal for anyone with a low sodium diet. A reverse osmosis membrane has a much smaller pore size than a bacterium or parasite. When working properly, it will remove all microorganisms from tap water producing sterile water.

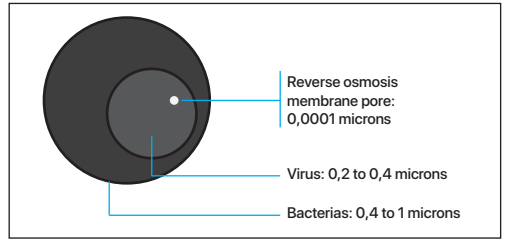


Figure 1

Reverse osmosis is the reversal of the natural flow of the osmosis. In the water purification system, the objective is to dilute the salt solution, but separating the pure water from the salt and other contaminants.

When the natural flow is reversed, the water in the salt solution is forced to pass through the membrane in the opposite direction by applying pressure (the term reverse osmosis). Through this process, we are able to produce pure water by removing salts and other contaminants.

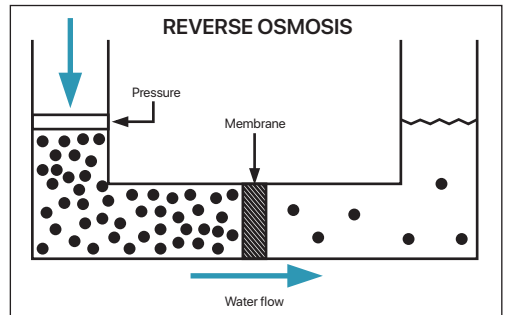


Figure 2

### **3. WATER QUALITY**

In the drinking water, you will notice an improvement in taste, just as it will be better for your coffee maker, for making ice cubes or for making juices. When cooking with purified water you will be able to taste the flavor of the food better. It will be a healthier water for your children and good for your plants.

This water treatment is recommended for those who suffer from hypertension, as it is a water of low mineralization. It is ideal for steam irons. Osmotized water will help prolong the life of your appliances.

#### 4. WATER POLLUTION

Environmental water is increasingly polluted by domestic, agricultural and industrial waste.

Domestic wastes (human wastes, washing wastes or chemical cleaning products), which have increased considerably due to the increase in population centers close to traditional channels, in many cases end up in natural aquifers.

Residues of agricultural origin, such as slurry and excrement, chemical fertilizers, nitrates, herbicides and pesticides, as well as industrial residues, appear more and more in natural aquifers.

The water supply companies filter the water and add chemicals (e.g. chlorine) to disinfect it and thus prevent infectious diseases such as typhus, diphtheria, etc...

For this reason, the water we receive in our homes could carry traces of chemicals and residues of chlorination, such as trihalomethanes, very harmful to health, in addition to sodium, calcium and other minerals in excessive amounts.

#### 5. MAIN COMPONENTS

- 1st stage: inline 5-micron PP filter:  
Can effectively remove filter rust, sand, other larger particles and solid impurities in water.
- 2nd stage: inline GAC filter:  
Can effectively adsorb chlorine, humus, disinfection, by products, odors, colors, and other materials.
- 3rd stage: inline CTO filter:  
Can further effectively remove filter rust, sand, other larger particles and solid impurities in water.  
Can effectively adsorb chlorine, humus, disinfection, by products, odors, colors, and other materials.
- 4th stage: RO membrane:  
Aperture is 0.0001 micron (0,1 nm), can effectively remove bacteria, viruses, heavy metals, pesticide residues, and other harmful substances from the water.
- 5th stage: T33 post carbon filter:  
Regulates water taste, keep water fresh.

Optional 6th stage post filter: Alkaline filter, infrared mineralization activated carbon filter, alkaline sterilization filter, sterilizing filter.

#### 6. OTHER ACCESSORIES AND FUNCTIONS

- Boost pump: Boost pressure to create a stable environment for the RO membrane.
- Low pressure switch: to prevent pump idling. When the inlet water pressure is less than 0.03 MPa or when the inlet water stops, the low voltage switch automatically shuts off the power source so the machine stops.
- High pressure switch: prevents pump from fully turning. When the pressure tank is full or has reached the set pressure, power supply is automatically cut off to stop the machine.
- Check valve: controls to the Flow direction.
- Flow restrictor: control the ratio of pure and waste water.

#### 7. TECHNICAL PARAMETERS

- Suitable water pressure: 0,05 MPa – 0,35 MPa
- Operating pressure: < 0,85 MPa
- Inlet temperature: 5-38°C
- Maximum inlet Water TDS Value: <1000ppm
- Maximum daily water production volume: 75 gallons, approximately 284 liters.
- Electric shock protection type: Type II
- Suitable water quality: Municipal tap water meeting the GB5749-2006 standards

**8. SYSTEM'S OPERATION**

Explanation of the water process when installing your equipment.

We must open the passage of water, turning the knob of the connection valve **(0)** until it is in parallel with the tubing.

The water will pass through the low-pressure switch **(1)**, which will allow the ignition of the pressure system. The water continues through the previous filters, first through the sediment filter **(2)**, then through the granulated carbon filter **(3)** and finally through the active carbon filter **(4)**.

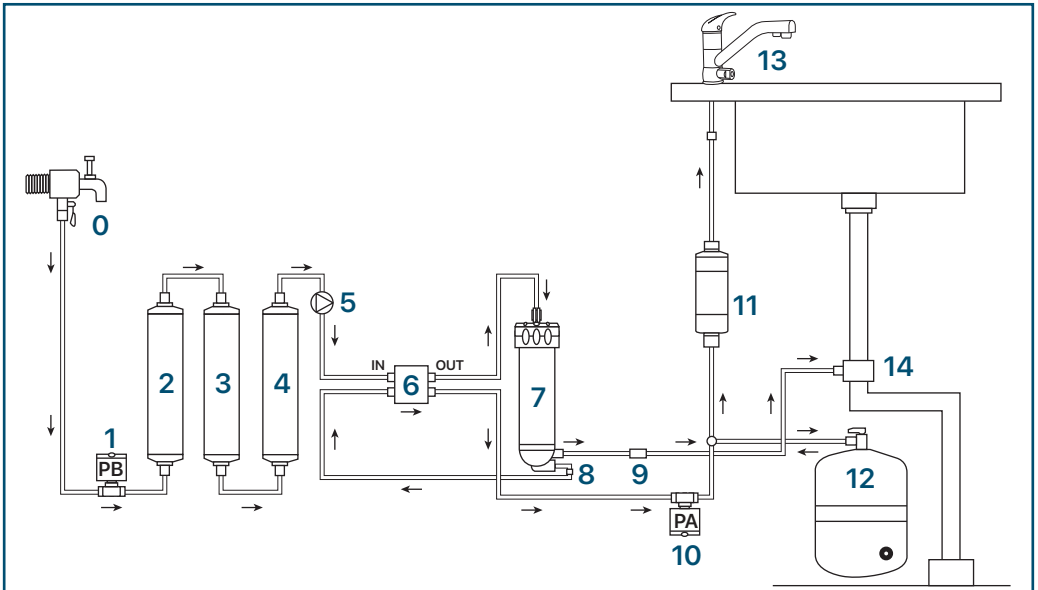
Then it continues until it reaches the pressure pump **(5)** (in the case of the equipment with pump, otherwise it will pass to the next step), followed by the 4-way valve **(6)**, entering through the IN position and exiting through OUT, which connects with the membrane holder **(7)** through the screw cap.

At the central outlet of the diaphragm holder there is a non-return valve **(8)**, which is connected again to the 4-way valve **(6)** in the IN position and at the OUT outlet it is connected to the high pressure switch **(10)** and to the TE connection of the post filter **(11)**. This in turn is connected via the tubing to the pressurized accumulation tank **(12)** at the outlet of the post filter **(11)**.

The pure water is connected to the tubing up to the reverse osmosis dispenser tap **(13)**. The remaining output of the membrane cap **(7)** is connected to the flow restriction valve **(9)** and continues to the drain connection clamp **(14)**, which is located in the water discharge pipe to the sewer.

**PARTS OF THE DIAGRAM**

- 0.** Connection valve
- 1.** Low pressure switch
- 2.** Sediment filter
- 3.** Active carbon filter
- 4.** Carbon block filter
- 5.** Pressure pump
- 6.** 4-way valve
- 7.** Membrane holder
- 8.** Non-return valve
- 9.** Flow Restriction Valve
- 10.** High pressure switch
- 11.** Post filter
- 12.** Accumulation tank
- 13.** Reverse osmosis tap
- 14.** Drain connection



## 9. INSTALLATION

This company recommends that professionals install the machine for you, because you must use drills and other power tools in the installation process. If you're installing it yourself, please refer to the following steps and diagrams:

### 1. Pre-installation preparations:

1. Confirm the location the water purifier will be installed (when installing, it should depend on the actual circumstances).
2. Confirm the various tools required for installation:
  - Adjustable spanner: 1
  - Drill: 1
  - 6.2mm drill bit – 1 (waste water hole)
  - Hole saw, Ø14mm: 1 (high-speed Steel or marble hole saw).
  - Philips and falthread screwdrivers: 1 of each
  - Scissors: 1 pair
  - 18-21mm wrench: 1
  - 16-21mm wrench: 1
  - Needle nose pliers: 1
3. Confirm that you've all the connectivity accessories required for installation.
4. Prior to installation turn off the water and electricity.

### 2. Instructions for proper installation

1. Inlet water metal hose and 3-way inlet water joint installation method (if the metal hose diameter is 3/8" the 3-way inlet water joint must be purchased separately).

First closet he inlet water valve. Unscrew from the metal hose. Remove the 3-way inlet water joint from the water purifier accessories box, thread one end of the inlet water 3-way joint into the inlet water valve outlet, one end of the newly unscrewed metal hose should be screwed into the 3-way inlet water joint screw nut (see diagram 1).

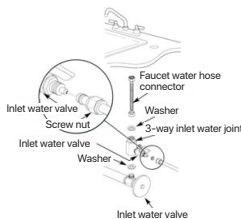


Diagram 1

2. 3-way inlet water joint and inlet water ball valve installation method.

Take out the inlet water ball valve from the water purifier accessories box, wrap one end of the ball valve external threads will the appropriate Teflon sape (see diagram 2), if you have silica gel, spread a Little on and then screw the ball valve into the corresponding hole of the 3-way inlet water joint (see diagram 3). Take out the Ø 9mm water pipe from the accessories box, using scissors cut a suitable length of pipe, connect one end of the pipe with the inlet water ball valve (see diagram 4), finally screw the nut in place.

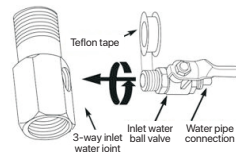


Diagram 2

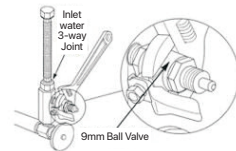


Diagram 3

3. Gooseneck faucet installation.

In the counter where the faucet is to be installed drill a Ø14mm hole in an appropriate position, then take out the faucet from the water purifier accessory box. Start faucet installation: first put the stainless tank neck on the faucet main body (see diagram 4), then lower the main part of the faucet into the already drilled hole, and then put the spacer on the lower part of the faucet. Screw the fixed nut into the bottom end of the faucet to fix the faucet to the counter, finally put the appropriate length of Ø6mm pipe into the water inlet connection, put on the nut and hollow ball, screw to the bottom of the faucet (see diagram 4), If you want to fix the faucet to the wall, please use the faucet hanging piece. (When installing be sure to tighten the joints to prevent leakage).

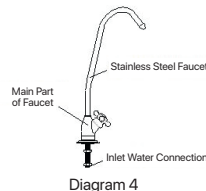


Diagram 4

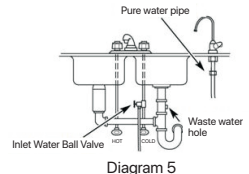


Diagram 5

4. Waste water pipe installation.

Using a Ø6mm drill punch a small hole into the sink drain pipe, take a suitable length of the 6mm water pipe, lay one end just inside the hole (see diagram 5), put some silica gel where the 6mm pipe and the drain pipe connect to prevent leakage, use a cable tie to fix the waste water pipe to the drain pipe. (for large Flow water purifiers you need waste water clip inserted into the already drilled drain pipe hole).

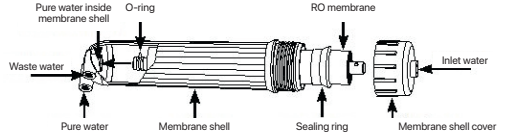


Diagram 6

5. RO Membrane installation.

First take the water purifier out from the packaging, open the water purifier outer cover, unscrew the membrane Shell cover inlet water connection end, take out the inlet water pipe, then use the membrane Shell wrench to unscrew the membrane Shell cover. Take the RO membrane from its packaging, put the end of the membrane with the O-ring into the reverse osmosis membrane Shell (see diagram 6) and push it in, finally screw the membrane Shell cover back on, and use the membrane Shell wrench to tighten the membrane Shell cover, put the inlet water pipe into the membrane Shell inlet water connector and screw in the nut, then put the membrane Shell card into the large single clip and put the water purifier cover back on.

**Warning:**

- When installing the RO membrane, you should pay attention to the direction of the membrane
- When installing the RO membrane, you should first make sure that one end of the membrane has two O-rings.
- When installing, be sure to put the end with the O-ring into the end of the membrane Shell with the pure water connection, when installing correctly you only need a Little force to put the reverse osmosis membrane into the membrane Shell. If you encounter too much resistance, please do not force the reverse osmosis membrane into the membrane Shell, doing so may cause permanent damage to the membrane Shell or membrane components (the membrane manufacturer does not assume responsibility for returned components due to damage during installation).
- Damage to the membrane Shell and reverse osmosis membrane element caused as a result of the above reasons is not covered under the water purifier warranty.

3. Installation notes

1. When installing the water pipes, cannot install a drain stopper, in addition, for the water pipe bottom connector, the screw nut should have no wire teeth exposed.
2. If the inlet water pipe is 9 mm, should ensure that the inlet water tube and connector have 30-40 cm of straight piping to avoid burst pipe accidents caused by bending in the pipe.
3. If the power cord wiring needs to be longer, then according to the wiring requirements use a Ø8mm pinched tube to wrap around the connection, then on the outside wrap around insulating electrical tape, do not place it on the floor, it should be suspended in the air or in another place away from the ground.
4. When installing, if you need to make a hole in the wall, you should first make sure that there are no electricity or water lines in the location you plan to drill.
5. This machine must be connected to the safety socket that has the earth wire. Otherwise the manufacturer should not be responsible for any accident.
6. This machine is installed with the adaptor, it must not touch in much water when installing, otherwise it would cause the electrical accident.

**10. ADJUSTMENT METHODS**

After confirming that the water route connections are correct, confirm that you have a power supply and/or water supply. Then follow these steps to troubleshoot the machine:

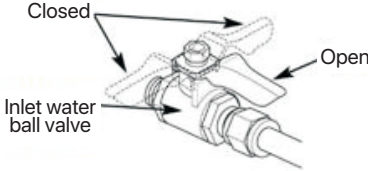


Diagram 7

1. Open the tap water inlet valve as well as the water purifier inlet water ball valve, plug in the power source (see diagram 7), close the storage tank ball valve, then automatically start a 120 second sluffing process, water will start to drain through the discharge outlet.
2. Wait for the water purifier to operate stably (about 5-10 seconds), check each connection to make sure it is secure, see if there is any leakage from the membrane Shell, filters, etc.
3. Close the pure water gooseneck faucet and storage tank ball valve, wait approximately 30 seconds, check whether or not the water purifier waste water has stopped.
4. Open the gooseneck faucet, observe whether pure water is flowing through the faucet, if no pure water is flowing, check whether the tap water pressure is too low or whether the high pressure switch cannot be reset.
5. Wait until the machine is operating, close the inlet water ball valve, after a short time observe whether it has stopped operating, if it has stopped operating, check whether the low-voltage switch can be reset.
6. Wait some time to make sure everything is correct, then the water purifier can be used safely.

2. In order to prevent microbial contamination of membrane components during storage and transportation the reverse osmosis membrane element package contains a small amount of protective solution while the post-activated carbon filter will emit activated carbon powder the first time it is used. So for the first hour the water purifier is operated, do not open the water storage tank. It is recommended that the water produced is thrown out, otherwise the pure water taste may be unusual.

3. When you start operating the water purifier the pure water TDS value may be a little high, after running for some time the TDS value for pure water will gradually decrease until it is stable.

4. When you are using the water purifier, the inlet water ball valve should be opened and the pure water faucet needs to be turned on. When you are not using water turn off the water faucet, the high pressure switch will automatically cut off the water supply.

**11. USAGE METHODS**

1. The major components of this product are plastic, then when using the product always observe the integrity of the water purifier to ensure safe use.

<b>PROBLEM</b>	<b>POSITION</b>	<b>SOLUTION</b>
<b>WATER LEAKS</b>	<b>Filter housing</b>	The o-ring is dirty, misplaced or pinched.
	<b>Connection fitting tubes; Part of the thread:</b>	Teflon missing.
	<b>Connection fitting tubes; Part of the tube:</b>	Badly installed bicono.
		Badly threaded tube fittings.
		Badly cut or pinched tube.
	<b>Dispensing tap:</b>	Regular handle height.
Remove the nozzle and the button.		
In case of wear of the tap replace it.		
<b>SCANT PRODUCTION</b>  When the tap is opened, the supply immediately ceases, leaving a slight continuous drip.	<b>The collector tank is full:</b>	Lack of air in the collector tank. Restock (between 0.3 kg and 0.5 kg).
		The tank tap is closed.
		Punctured collector tank membrane. Water comes out of the air inlet valve.
		Change collector tank.
	<b>The collector tank is empty:</b>	You must wait between 3 and 5 hours for the collector tank to be full.
		The collector tank inlet valve is closed.
Excessive amount of air in the collector tank. Check the pressure (between 0.3 kg and 0.5 kg).		
<b>SCANT PRODUCTION</b>  The equipment is continuously rejecting water in the drain.	<b>The collector tank does not fill up:</b>	Dirty filters. Replace.
		The inlet pressure is less than 3 kg/cm <sup>2</sup> . Install a pump.
		Membrane in poor condition. Replace.
		The flushing valve is open.
	<b>The collector tank is overflowing:</b>	SHUTT OFF valve is dirty, has a torn membrane or does not work. Replace.
		The non return elbow located in the membrane container does not work. Replace.
Possible water leakage.		
<b>THE EQUIPMENT DOESN'T PRODUCE</b>	<b>The collector tank is empty:</b>	Clogged filters.
		Clogged, broken or closed inlet tap of the equipment.
		Blocked membrane.
<b>WATER FLAVOUR CHANGES</b>	<b>The collector tank is empty:</b>	Change of mineralization in water due to saturation or clogging of filters or membrane (replace the membrane).
<b>WRONG WATER ASPECT</b>	<b>The water has a milky appearance on the surface</b>	Accumulated airbags in the general network of the accumulation or in the osmosis equipment.

**CLIENT DATA:**

Mr/Mrs: \_\_\_\_\_  
Address: \_\_\_\_\_  
PC and City: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Email: \_\_\_\_\_

**VENDOR INFORMATION:**

Date of sale of the equipment: \_\_\_\_\_  
Registered name: \_\_\_\_\_  
Address: \_\_\_\_\_  
PC and City: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
FAX: \_\_\_\_\_  
Email: \_\_\_\_\_

**EQUIPMENT WARRANTY ADDRESSED TO THE END USER:**

All our products have a two-year warranty as established by law starting with the purchase thereof. In case any repairs are made it will have a 3-month warranty, independent of the general warranty. For the coverage of said warranty the end user must provide the acquisition date of the product.

The company is committed to warrant faulty parts, as long as they are not sent for examination in our facilities on behalf part needs to be accompanied by this warranty (duly filled in and sealed by the vendor). The warranty will always be handed in our stores.

In all cases, we take responsibility exclusively for the replacement or repairing of faulty materials. We do not pay compensations or other expenses.

No return or material claims will be accepted after 15 days of receipt. In case of agreement within this period, the material must be sent to us perfectly packed and **ADDRESSED TO OUR STORES WITH PREPAID SHIPPING.**

**THE WARRANTY DOES NOT COVER:**

**1.** Replacement, repair of parts or organs caused by wear, due to the regular use of the equipment, such as resins, polyphosphates, sediment cartridges, etc... as

- indicated in the user manual.
- 2.** Damages caused by the misuse of the equipment and those caused by transport.
- 3.** Tampering, modifications or repairs made by third parties.
- 4.** Faults or malfunctions that are the result of improper installation, outside technical service, or if the assembly instructions have not been followed correctly.
- 5.** Inappropriate use of the equipment or not following the working conditions indicated by the manufacturer.
- 6.** The use of non-original spare parts.

**"CE" DECLARATION OF CONFORMITY:**

We declare under our sole responsibility that the water purification system for water filtration for human consumption is adapted to standards or normative documents:

**"EN-12100-1, EN12100-2,  
EN-55014-1:2000/A1:2001,  
EN-61000-3-2:2000/2001,  
EN61000-3-3:1995/A1:2001, EN1558-2-6".**

and conforms to the essential requirements of the Directives: 98/37/CE, 73/23/CEE, 89/336/CEE.

**AUTHORIZED VENDOR'S SEAL**

ORDER  
NUMBER

PRODUCT  
CODE

SERIAL  
NUMBER

**NOTICE:** Read this manual carefully. If you have any questions, please contact the technical support service (S.A.T.) of your distributor. The data marked with (\*) must be stamped by the installer and transcribed to the company.

<input type="text"/>	ORDER NUMBER
<input type="text"/>	PRODUCT CODE
<input type="text"/>	SERIAL NUMBER

**DATA PRIOR TO THE INSTALLATION OF THE EQUIPMENT:**

Origin of water to be treated:

Public supply network.

Other: \_\_\_\_\_

\_\_\_\_\_

Is the inlet water treated? \_\_\_\_\_

Hardness of the inlet water: \_\_\_\_\_ °F

TDS level of the inlet water: \_\_\_\_\_ ppm

Inlet pressure of the equipment: \_\_\_\_\_ Bar

Inlet chlorine concentration: \_\_\_\_\_ ppm

**CONTROL OF INSTALLATION STEPS:**

Wash carbon prefilters.

Wash carbon postfilters.

Membrane assembly.

Hygienization according to the described protocol.

Tap chlorine concentration after rinsing.

\_\_\_\_\_

Flow restrictor check.

High pressure switch tare.

Revision and couplings.

Watertight integrity of the pressurized system.

\*TDS of the produced water (countertop tap): \_\_\_\_\_ ppm

Clearly inform about the use, handling and maintenance the equipment requires to warranty its proper functioning and the quality of the produced water.

Given the importance of proper maintenance of the equipment that has to warrant the quality of the produced water, the owner must be offered a maintenance contract made by qualified technicians.

**EQUIPMENT WARRANTY ADDRESSED TO DISTRIBUTOR:**

The company will be in charge only and exclusively of the replacement of the parts in case of lack of conformity. The repair of the equipment and the expenses that it entails (labor, shipping cost, travel, etc) will not be paid by the selling company, since the manufacturer's and/or distributor's warranty are given in its facilities.

**COMMENTS:**

\*Result of the installation and start up:

Correct (equipment is installed and works correctly. Adequate produced water).

Other: \_\_\_\_\_

\_\_\_\_\_

**AUTHORIZED INSTALLER:**

**CONFORMITY OF THE EQUIPMENT OWNER**

The owner has been informed of the equipment maintenance and about the way to contact technical assistance service.

Comments: \_\_\_\_\_

\_\_\_\_\_

REASON	DATE	TECHNICIAN'S INFO
<input type="checkbox"/> Installation <input type="checkbox"/> Maintenance <input type="checkbox"/> Warranty <input type="checkbox"/> Revision <input type="checkbox"/> Repair	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Name: _____ Signature or seal:
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OBSERVATIONS: \_\_\_\_\_

<b>REASON</b>	<b>DATE</b>	<b>TECHNICIAN'S INFO</b>
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# **User's manual**