

ATMOSPHERIC WATER GENERATOR

Model EN-500

Capacity: 500 liters

User Manual and Technical Specifications

Please read this manual carefully before using this product.

ENGLISH

WELCOME

Welcome to our company dedicated to transforming the future of water through our leading **AQUA3** machine, whose single purpose is to produce drinking water directly from the air—sustainably, safely, accessibly, and using as little energy as possible. Our atmospheric water generators capture ambient humidity and convert it into pure, ready-to-drink water. This technology represents not only an innovation milestone, but also a commitment to the planet and to communities that need access to clean, high-quality water. We invite you to get to know us, explore how our technology works, and discover how we can make a real difference together. Thank you for choosing **AQUA3** and joining us on the path to a more hydrated, greener, and responsible future!

II. THE ENVIRONMENT AND AQUA3













AQUA3 is a fully eco-friendly machine; it does not produce any toxic/harmful by-products. It uses the moisture present in the air, which nature wisely replenishes to keep balance in the hydrologic cycle—an **inexhaustible source of water**—without harming the environment as deep-well drilling, river dams, or desalination plants might. **AQUA3** also helps ensure the air expelled by the unit is clean and low in humidity, making it an excellent dehumidifier and air purifier

III. AQUA3 USES IN THE MARKET














- **Homes and rural communities:** Areas with limited or poor access to drinking water can decentralize and gain autonomy in potable water distribution; low energy consumption and easy maintenance.
- **Businesses and offices:** Corporate buildings, institutions, hotels, etc., can replace water jugs or traditional systems, projecting an eco-friendly image and achieving long-term savings.
- **Urban areas with water issues:** Cities facing scarcity or contamination need a safe, reliable source of potable water; AQUA3 offers high efficiency and integration with renewable energy.
- **Natural disasters and humanitarian aid:** For NGOs, governments, and emergency agencies—immediate drinking water in crisis situations with quick installation.
- **Industrial and agricultural sectors:** Industries where pure water is essential (pharmaceutical, food, etc.) to avoid unnecessary risks—high-reliability water free of impurities.




IV. SAFETY RECOMMENDATIONS

Read these safety instructions and follow the warnings before using the machine:

| | |
|---|---|
|  | Do not alter the power-cord length or share the outlet with other appliances. |
|  | The outlet must be protected with a proper ground connection. |
|  | Do not share the outlet with other high-power devices. |
|  | Unplug the unit if it emits unusual sounds, odors, or smoke. |
|  | Do not use the machine near flammable gases such as gasoline, benzene, solvents, etc. |
|  | Do not turn the unit on/off by plugging/unplugging it. |
|  | Do not plug or unplug the unit with wet hands. |
|  | Never attempt to disassemble or repair the unit yourself. |
|  | Do not damage the power cord or use an unsuitable cord. |
|  | Before installing, cleaning, or using, turn off the power and unplug the unit. |
|  | When moving the machine, drain the water and disconnect the power cord. Do not tilt more than 20° while moving. |
|  | Do not remove the water tank while the machine is operating. |

V. PRECAUTIONS

| | |
|---|---|
|  | Install the machine at least 30 cm from the wall for ventilation and optimal operation. |
|  | Place the unit on a level, sturdy floor. |
|  | Do not cover air inlets or outlets with cloths/towels. |
|  | Never insert fingers into grilles/openings. Take special care to warn children. |
|  | Do not place heavy objects on the power cord; avoid compressing it. |
|  | This unit is not intended for outdoor use. |
|  | Avoid prolonged direct sun exposure. |
|  | Do not stand or sit on the unit. |
|  | When changing filters, do not touch metal parts. |
|  | Do not puncture or burn the unit. |
|  | Keep the unit upright when operating. |
|  | Operating voltage must not be more than 10% below the standard supply. If voltage is too low, the unit may be noisy and overheat—turn it off until voltage returns to normal. |
|  | Avoid prolonged exposure to direct UV light; it can damage the eyes. |

| | |
|---|--|
|  | Do not use the machine where water is frequently sprayed. Do not spray water on the machine while cleaning. |
|  | To prevent damage from freezing, drain all water and stop using the machine when ambient temperature drops below 0 °C. |
|  | Service should only be performed per the manufacturer's recommendations. Maintenance/repairs requiring qualified personnel must be carried out under supervision of the competent person designated by the manufacturer. |

VI. TECHNICAL SPECIFICATIONS

- **Daily capacity:** 500 L/day (depends on RH and temperature)
- **Optimal working conditions:** 20–40 °C, 60–95% RH
- **Size (L × W × H):** 78 cm × 122 cm × 170 cm
- **Weight:** 350 kg (without water)
- **Power consumption:** 4,7 Kw
- **Energy-use range:** 0.01–0.04 kWh/L
- **Power supply:** 220V/380V - 50Hz/60Hz
- **Refrigerant:** R-290
- **Purification system:** IO + UV + Ag

RELATIVE PRODUCTION

| HUMIDITY | TEMPERATURE °C | | | | | | | |
|----------|----------------|-----|-----|-----|-----|-----|-----|-----|
| | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 |
| 100 | 693 | 671 | 638 | 616 | 495 | 396 | 264 | 119 |
| 90 | 638 | 605 | 594 | 594 | 484 | 374 | 253 | 176 |
| 80 | 605 | 583 | 561 | 550 | 473 | 352 | 220 | 154 |
| 70 | 583 | 583 | 561 | 506 | 407 | 275 | 198 | 88 |
| 60 | 539 | 550 | 528 | 451 | 308 | 242 | 154 | |
| 50 | 484 | 484 | 396 | 308 | 253 | 176 | 88 | |
| 40 | 330 | 308 | 286 | 231 | 165 | 88 | | |
| 30 | 209 | 198 | 176 | 132 | 77 | | | |
| 20 | 165 | 154 | 121 | 110 | | | | |

Liters/day

VII COMPONENTS

- **Microprocessor:** Ensures proper operation of internal machine parts.
- **Electronic sensors:** Located near the UV light, heating mechanism, and storage tanks. They confirm correct operation and alert if faults or irregularities are detected.
- **Energy-saving features:** Tank-level sensors stop water production when tanks are full. In case of unexpected water leakage, the machine can stop operation and alert with a sound and screen blinking (for some models).

- **Condensation coils:** Special condenser coating prevents metal contamination and improves water-production efficiency.



Multi-stage FILTRATION system: Designed to deliver top-quality water with excellent taste—purifies water, removes odors, makes it lighter, and provides the body's optimal mineral level. Includes:

- **Antistatic air filter:** Before air condenses into water droplets, it passes through an antibacterial air filter to remove dust and prevent dust from entering the machine.

- **Sediment filter:** Removes microparticles to protect the reverse osmosis (RO) membrane.
- **Multi-stage filtration:** Produces light water with pH 7.5–8.5 and guarantees pure water with the best taste and essential minerals.
- **Pre-carbon filter:** Removes organic components, odors, chlorine, heavy metals, etc.
- **Reverse osmosis membrane:** Removes micro-impurities, colloids, heavy metals, dissolved solids, bacteria, and other harmful substances.
- **Mineral Filter:** Adds essential elements/minerals and raises water to alkaline pH for better taste.
- **Carbon Filter + Silver (Ag) dosing/filtering:** Powerful antibacterial—allows long-term storage of produced water while keeping it absolutely pure, light, and pleasant-tasting.



- **Ultraviolet sterilization system:** UV lamp sterilizes water to ensure all bacteria and microorganisms are eliminated. The microprocessor controls this process automatically.
- **UV in upper tank:** Prevents bacterial growth in the tank and reduces bacterial levels in the water.
- **UV in lower tank:** Prevents bacterial growth in the tank and reduces bacterial levels in the water.
- **Water recirculation (some models):** Our exclusive design reprocesses stored water so it always remains fresh and clean.
- **Overheat protector:** Provides additional safety

VIII. OPERATING INSTRUCTIONS

Following these simple guidelines and maintenance procedures, your AQUA3 should operate for years without issues, always providing pure, high-quality water that's not only drinkable but beneficial to your health. Read this manual carefully before operating AQUA3; doing so will help you get familiar with your new atmospheric water generator, understand its benefits, and ensure it always operates optimally.

INSTALLATION

- Place the unit on a solid, level surface in a well-ventilated location. Keep at least 30 cm from the wall. The machine comes with wheel position locks—use them to keep wheels steady (for some models).
- Let the machine rest before plugging in. **DO NOT CONNECT POWER FOR THE FIRST 6 HOURS** to allow the machine to stabilize and the refrigerant to return to the compressor. Plugging in immediately **CAN DAMAGE THE COMPRESSOR.**

OPERATION

- To turn on the machine, use the power on/off button (located on the rear).
- The first time you turn on the machine, the display will light up. The compressor will start operating after 3 minutes.
- If you need to turn it off or restart it, you must do so using the same power button.

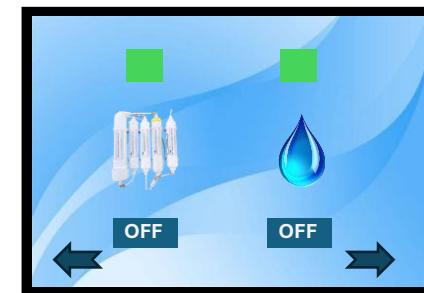
CONTROL PANEL

The first screen shows ambient conditions: **Relative Humidity (RH%)** and **Temperature (°C)**. Press the arrow at the bottom to move to the next screen.



1

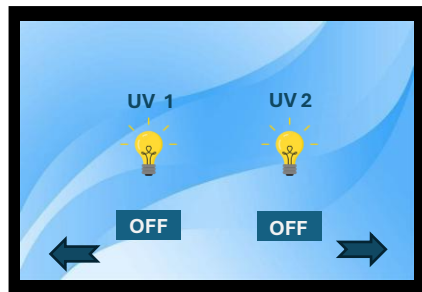
Press the arrow at the bottom to move to the next screen.



2

If the top boxes are green, the devices (Filters and Condenser) are active; if an **X** appears, they are off. Both the **filters** and the **condenser (drop icon)** must be green to start condensation and filtration. The condenser shows **ON** when water generation begins; once the sensor detects enough water in the tank, after ~5 minutes the **filters** switch to **ON** to start automatic filtration.

Screen 3 displays the UV lights for each tank, indicating when they are active.

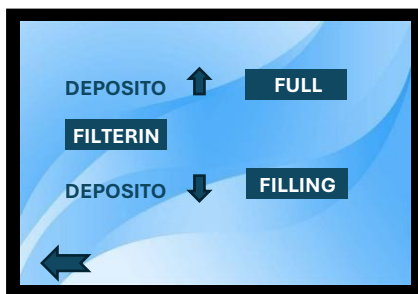


3

Screen 4 shows the water tanks: the lower tank (where air-generated water falls via the compressor) and the upper tank (where RO-treated and multi-filtered water is stored). Each shows a status word:

- **FULL** = tank is full
- **FILLING** = filtration/transfer in progress

When both lower and upper tanks are **FULL**, the machine stops (remains on and quiet) and resumes automatic operation only after water is drawn from the upper tank.



4

During the first hours of operation, an adequate amount of water won't be available until a certain level is reached. Under normal circumstances it takes a full day (12–24 hours) to fill the tanks, depending on local temperature and humidity.

Once there's enough water, open the faucet and draw at least 1 liter.

For some models with cooling: cold temperature is maintained at preset levels (typically **4–10 °C**).

To save energy, level sensors stop production when tanks are full.

Manual stops: On screen 4, you can tap the **filters** image to stop filtration (shows an **X**). To stop the **compressor** manually, tap the **drop** image until an **X** appears. Tap again to clear the **X** and resume automatic operation.

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IX. MAINTENANCE AND CLEANING

It's important to dispense/remove water every day. If you haven't removed water for **over 2 days**, discard **1 liter** before use.

If for **over 7 days**, discard **all** water, let the machine filter more, then use it.

If unused for several months, preventive maintenance is required (contact our representative).

If the machine is unused for more than 7 days **or** runs continuously for more than 4 months, perform the maintenance procedure described above.

Care and cleaning: Wipe the surface with a clean cloth, water, and neutral detergent. Do **not** use bleach or abrasives. Air inlet/outlet grilles get dirty easily—use a vacuum or brush to clean.

STEPS FOR TANK CLEANING

Step 1:

Before beginning any maintenance on the machine, the first thing we must do is disconnect the machine from the back.



Step 2:

LOWER TANK

Disconnect the cables that run from the electrical panel to the sensors and the UV light. They are identified with colors (yellow, green, and blue) for easy location and reconnection.



Step 3:

Disconnect the white hose that goes from the pump to the tank.



Remove the blue safety clip.



Step 4:

Remove the hose from the flow controller that goes from the Reverse Osmosis system to the tank.



Step 5:

Remove the tank for cleaning. DO NOT USE CHEMICAL PRODUCTS OR DETERGENTS—wash only with water and wipe with a clean cloth.



Step 6:

Place the tank back in the correct position and proceed to reconnect everything previously identified.

UPPER TANK

This tank is fixed to the wall of the machine; you only need to unscrew it, and it can be removed easily.



Recommended filter-replacement intervals (based on 20 L/day consumption):

- Sediment filter: 6–12 months
- Activated carbon filter 1: 6–12 months
- RO membrane: 15–24 months
- Activated carbon + Ag filter: 6–12 months
- Remineralizing filter: 9–12 months
- UV lamp: 6–18 months

Note: These are reference values only. Contact our technical service at suportetecnico@aquas3quantum.pt for questions and replacements.

STEPS TO CHANGE THE FILTERS

Filter positions:

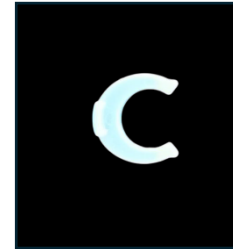
- 1.Reverse Osmosis Membrane
- 2.Activated Carbon Filter 1
- 3.Sediment Filter
- 4.Activated Carbon + Ag Filter
- 5.Remineralizing Filter



1 2 3 4 5

The filters are connected to gray connectors and have a blue safety clip.

To replace the filter, remove the safety clip and then disconnect the hose from the connector by pulling back the darker ring on the connector to release the hose.



CLIP



CONNECTOR

Remove the filters from the clamps where they are secured in order to install the new filters, always maintaining their correct position.

X. FREQUENTLY ASKED QUESTIONS

The filters are labeled with an arrow indicating flow direction. This direction must be respected. Arrow orientation description:

1.Reverse Osmosis Membrane

2.Activated Carbon Filter 1



3.Sediment Filter



4.Activated Carbon + Ag Filter



5.Remineralizing Filter



To connect, insert the hose firmly into the connector and always reinstall the safety clip.

What is AQUA3?

AQUA3 generates water from the atmosphere. It requires no plumbing to obtain the drinking water it produces. It extracts water from humidity in the air and then runs it through filtration—including reverse osmosis and ultraviolet (UV) sterilization—resulting in excellent-quality drinking water.

How much water does AQUA3 produce?

Depending on the model, it can produce 20, 50, 150, 500 or more liters over 24 hours. Actual output depends on the ambient relative humidity and temperature where the machine is located.

Can the produced water contain bacteria or germs?

Thanks to reverse osmosis, UV light, and silver treatment, water produced by AQUA3 is 100% safe and guaranteed free from germs and bacteria.

What maintenance does AQUA3 require, and how often?

Some models include a computerized system that alerts when to change filters. Because the produced water is highly purified, maintenance is infrequent and inexpensive. Filters can last **6 months to 2 years**, depending on use.

Is installation complicated? What should I do?

AQUA3 is a smart machine that, once connected to mains or a generator, will wait up to **12 hours (or less)** before producing water, and the entire system will be automatic, notifying you of any needs on its screen. You only need to plug it in—no other connections required.

What power does it require, and how much does it consume?

AQUA3 works with any power generator as well as standard electrical systems, solar panels, wind energy, power plants and/or gas, etc. Energy required depends on the model (see Technical Specifications).

Can I place AQUA3 anywhere in my home or office?

Place AQUA3 in a ventilated area, preferably near a window, to improve water-production efficiency. Keep it at least **30 cm** from the wall.

Contacts:

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