

A photograph of a tall, white, square tower with a blue band around its middle. The word 'AquaSOL' is written in white on the blue band. At the top of the tower is a large, rectangular solar panel array. The background is a blue sky with white clouds.

SOLAR UNITS

Our solar-powered water treatment unit is installed on two-meter foundations on top of a well that we have drilled. It comprises a metal profile bearing structure, a booster pump, a treatment system, a fiberglass tank and is topped by six solar panels.

Put together by international or local suppliers, the equipment is certified ISO 9000 and assembled to facilitate regular maintenance to meet the strictest hygiene requirements. The whole structure is completely recyclable and its aesthetic features are fully compatible with earthquake resistance standards. Depending on water quality and the treatment system used, a single unit can produce between 2,500 gallons (9,463 liters) and 9,000 gallons (34,068 liters) per day with the same solar power source.

AquaSOL-OSMOSE

A solar-powered water treatment system by Reverse Osmosis (membrane ultrafine 0.001 μ ultrafine membrane) for 9 liters/minute to 20 liters/minute.

AquaSOL-NANO

A solar-powered water treatment system by Nano filtration (semi-permeable membranes with pore diameter ranging from 0.001 to 0.01 micrometers) for 10 liters/minute to 30 liters/minute.

AquaSOL-MICRO

A solar-powered water treatment system by Microfiltration (membrane filters with pore diameter ranging from 0.1 to 10 micrometers) producing mineral water of 10 liters/minute to 50 liters/minute.



Quality

Water is treated by reverse osmosis. Before storing water in the tank, we inject colloidal silver, a substance known since Antiquity for its germicidal and bactericidal properties. If a consumer arrives with a contaminated bottle, the water will be lastingly disinfected in several minutes when it comes into contact with the silver. We also provide re-mineralized water using a filter containing mineral salts. In accordance with World Health Organization guidelines for drinking water quality, a licensed/independent laboratory carries out monthly tests and the results posted at each water treatment unit.

Continuous economic supply

Solar power means that there is no interruption to the water supply. This source of energy meets ecological requirements, reduces production costs and is more reliable than a grid prone to outages. It should be stressed that energy costs can act as a bottleneck in developing countries.

Mobility

The unit can be fully dismantled and re-assembled. Its energy self-sufficiency means that it can be used to supply water in areas with no existing infrastructure. Our solution can be set up anywhere: in built-up neighborhoods or remote villages and can be moved to meet needs wherever they may be.

Living space

After membrane filtration, 50% of the water is still unfit for use as drinking water. Rather than waste it, this water is distributed free to the local population for household use. And in the area close to the prototype, surplus water can be used to irrigate smallholdings. We firmly believe that the relationship with local communities should not be solely commercial, if only to ensure that our projects can succeed in underprivileged areas. Thus each unit also provides other free services such as mobile phone charging points and rooftop nightlights to allow small shops to grow, young people to study after dark etc. We are also looking into setting up Wi-Fi antenna for Internet access.

Jobs

The units are manufactured in the countries and provide jobs for local people. Water distribution also helps to boost employment. Our Aquality subsidiary works with a team of skilled technicians with over ten years' experience in installing drinking water treatment systems under the supervision of the VP Technical Operations.