



Solaris Aquae

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# THE FUTURE OF WATER

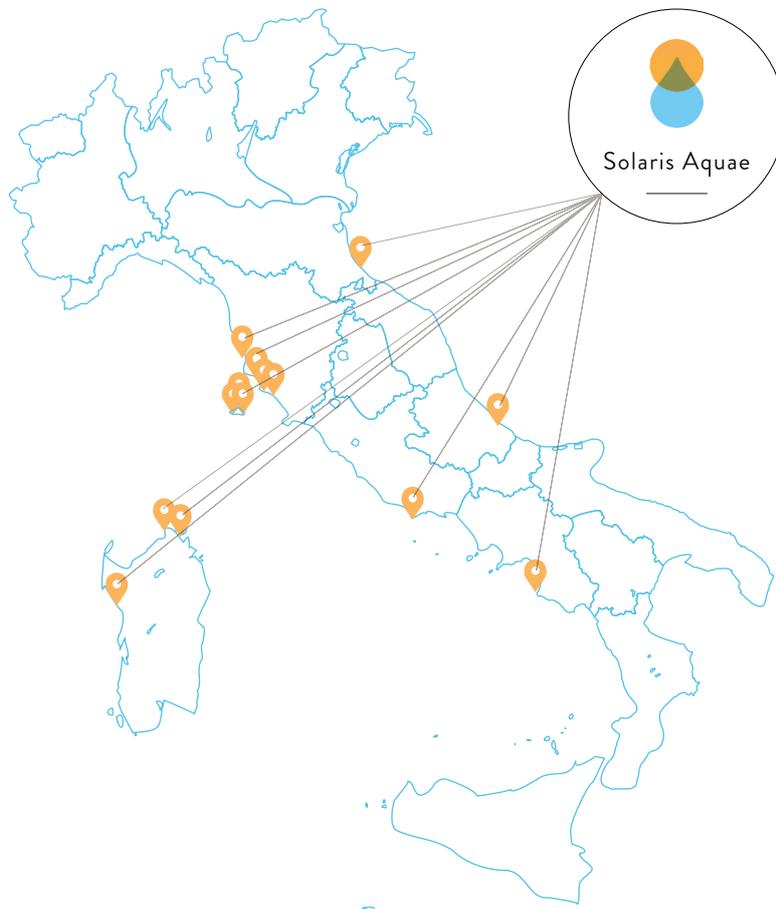
## ABOUT US

Solaris Aquae, an Italian company based in Padua, with its strong engineering knowledge, has created a **“DA” antibacterial desalinator capable of producing bacteriological pure drinking water**, desalinating sea- or well-water offering economic benefits when compared to public water network tariffs.

The Solaris Aquae desalination plants, based on reverse osmosis and an integrated antibacterial disinfection system, allow to produce in every geographical location in total autonomy drinking water, solving in this way the problems related to water scarcity. “DA”, can also be integrated with a series of additional systems providing additional benefits in economic and environmental terms.

## WHO HAS CHOSEN THE “DA” ANTI-BACTERIAL DESALINATOR

Marinas, hotels, resorts, camping and golf clubs.



# OUR PRODUCTS

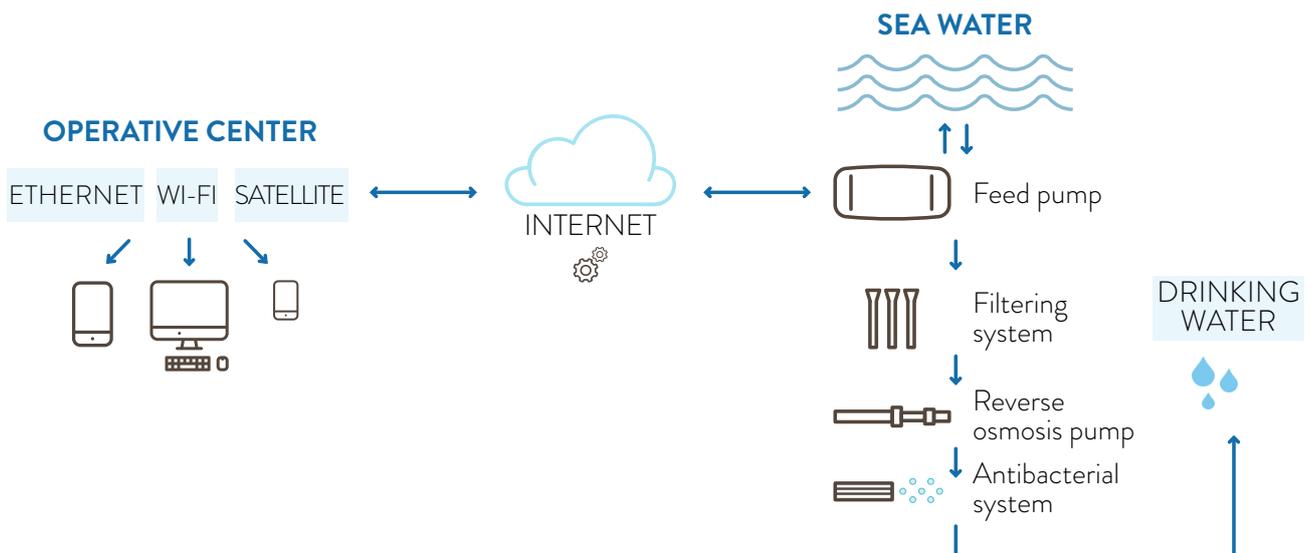
## ANTIBACTERIAL DESALINATOR - "DA"

Thanks to an advanced reverse osmosis filtering system integrated with an antibacterial device, Solaris Aquae systems guarantee optimal desalination of brackish or sea-water, giving back to the user fresh and bacteriologically pure water.

The cost of water produced with "DA" is economically advantageous when compared to the public water network rates. The "DA", depending on customer needs and the daily production, is supplied on skids or in 20/40 foot containers, allowing in this way a quick installation and commissioning phase.



## Operating scheme



## Why choose “DA”

### BILLING COST REDUCTION



The drinking water produced by the antibacterial “DA” desalinator is of **excellent quality and bacteriologically pure**, as long as economically advantageous compared to public distribution network one.

### CUSTOMIZED SYSTEMS



The daily flow rate of each system is defined **according to the customer's real needs** starting from a minimum level of 40 m<sup>3</sup>/day. All our systems are supplied preassembled and integrated into existing technical rooms or into 20/40 foot containers, enabling in this way a rapid installation and commissioning phase.

### ENERGY SAVING



“DA” allows an integrated energy recovery **for a reduced energy consumption**, always below 3.5 kWh for every m<sup>3</sup> of desalinated water. Furthermore, the absence of chemicals substances, makes the technology highly eco-compatible and environmentally sustainable.

### ANTI-LEGIONELLA PROTECTION

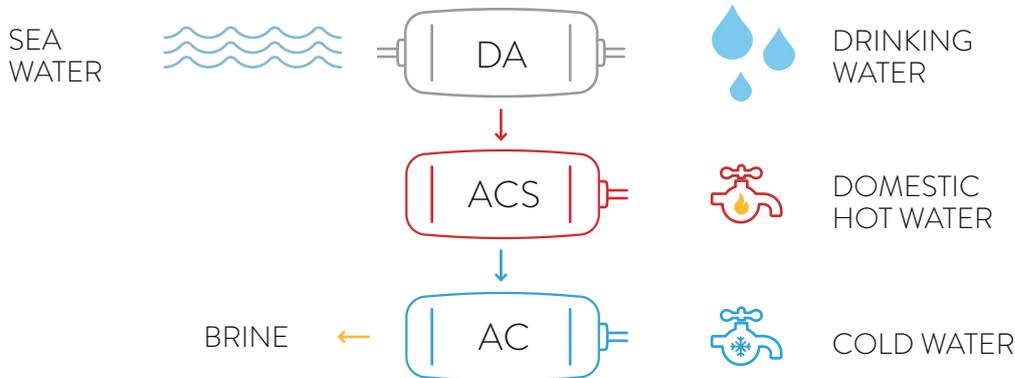


“DA” integrates an antibacterial system which guarantees disinfection along the water network distribution, **effectively eliminating any bacterial form present in it**, without using chemical substances. This innovative disinfection system makes possible to eliminate all serious diseases contraction due to **Legionella** contamination. In addition, the system eliminates all forms of biofilm, practically allowing a hot and cold water network renewal.



## MARINOTHERMAL TRIGENERATION - TMT

Coming out of the reverse osmosis desalination process, the sea-water acquires a greater thermal energy which can be used for the production of **domestic hot water (ACS)** and **cold water for air conditioning (AC)** by exploiting a special exchanger system - heat pump.



Thanks to the “TMT” system, it’s possible to supply drinking water and almost unlimited quantities of 50 °C (ACS) domestic hot water and 5 °C cold water for air conditioning purposes (AC).

Marine thermal energy is nowadays primary for the coastal economy development, and at the meantime responds concretely to the problems related to the frequent water scarcity increment.

## PURIFICATION - MBR (Membrane Bio Reactor)

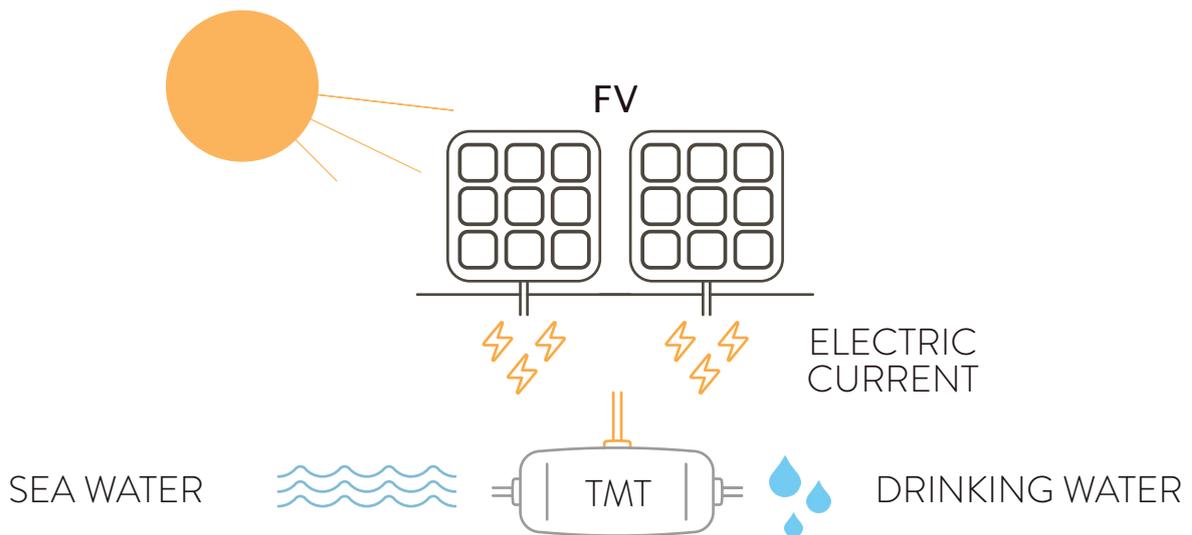
“MBR” is a biological wastewater purification system that combines the traditional activated sludge purification process with a separation process based on membranes.



This purification system with submerged membranes, designed and built by Solaris Aquae, is particularly suitable for the **capacity increase of sludge treatment plants**, which can be existing or result obsolete and undersized after the increase of input load.

## PHOTOVOLTAIC SYSTEM - FV

Solaris Aquae is also able to supply photovoltaic systems of different sizes, able to produce the required electricity for the operation of the desalination plant, of the “TMT” system for the production of hot and cold water, and the MBR for wastewater purification. With the support of a storage system, “DA”, “TMT” and “MBR” can become completely autonomous in terms of energy.

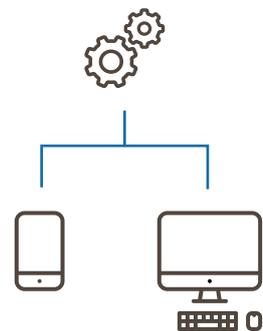


In case of excess of solar energy production, it is possible to proceed with the accumulation of drinking water produced by the desalinator. This allows the maximization of the amount of electrical self-consumption of the “DA”, recovering up to 100% of the electricity tariff.

## CONNECTION AND ASSISTANCE 24/7

All Solaris Aquae devices **are connected remotely to the “SA” operations center, active 24/7**. The connection is made by the new IoT radio-frequency protocols and available in any geographical location.

The control center also deals with the implementation of the maintenance and assistance service.



# **PURCHASE or RENTAL**

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## **DIRECT SALES**

The purchase of Solaris Aquae systems guarantees access to the tax benefits pursuant to Italian Legislative Decree "Industry 4.0". Moreover, thanks to the substantial savings on public water consumption expenditure, the Solaris Aquae system allows internal rates of return on investment that can exceed 50%.

## **OPERATIONAL RENTAL - BOO (Build Own Operate)**

Alternately to the purchase, it is possible to accede a BOO operational rental formula, which allows you to get the economic benefits given by the plants without the burden of the initial investment.

It is required to the customer to pay a monthly fee, based on the consumption of drinking water or based to the quantity of heat/cooling used. The cost of the rental fee is always advantageous compared to the national rates.





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