

Immediate Distributed Infrastructure Serving the World: Using Reverse Osmosis to Deliver Potable Water

The lack of clean, potable water is a growing problem worldwide. Only 3% of the water available on Earth is freshwater. Advancements in reverse osmosis (RO) mitigate problems caused by increasing demand for clean water and decreasing supply. RO can increase the freshwater supply by desalinating saltwater.

While large RO plants are being built worldwide, these plants and their distribution networks are costly, and they are impractical in areas without reliable grids and cheap energy. **WorldWater & Solar Technologies, Inc.'s (WWST)** approach is different. Using solar power and providing distributed, village-sized infrastructure solutions, WWST has developed the Mobile MaxPure®.

Mobile MaxPure® (MMP) solves power availability problems by using solar energy and storing electricity in an embedded battery bank. Each MMP can desalinate up to 15.1 m³ (4,000 gallons) of water each day, rain or shine (freshwater purification up to 113.5 m³/day [30,000 gallons] is also available). As a village-sized solution, the MMP meets the needs of remote villages more effectively and economically than do most large-scale RO plants.

MMP is immediate, distributed infrastructure that solves the problem of power availability and enables a range of compelling applications to be operated. In addition to water purification and RO, the MMP can power satellite communications, lights, tools, and appliances.



Leaders of remote villages in Iraq obtain clean water and power from the Mobile MaxPure®

WWST has shipped and deployed systems around the world, including areas in Iraq, Afghanistan, and Haiti. Clean water – and power – is now available for human consumption (increasing health and productivity), land reclamation, agriculture, and industry thanks to the self-contained, self-powered RO systems and water purification provided by the MMPs.

Economically efficient, even for poverty-stricken areas, the MMP creates potable water for fractions of a penny per gallon, making it the world's lowest cost water delivery system. Eliminating the need for external fuel or power, the MMP is a viable and sustainable solution worldwide. ■

Membrana Launches New Website for Industrial Filtration Businesses

Membrana, a leading membrane and membrane device manufacturer has launched a new website, to highlight the product portfolios of its industrial business segment. Membrana GmbH houses two primary business segments: Healthcare and Industrial Filtration. Within the Industrial Filtration focus of Membrana there are three primary product lines which include Liqui-Cel® Membrane Degassing Contactors, Liqui-Flux® ultrafiltration and microfiltration modules, and OEM membranes that are sold to other companies manufacturing primarily flat sheet membrane-based filter devices.

The new website is segmented to clearly organize the information for each product line with sections for product information, application information, technical information, documentation, support services, and company information. Additionally, the new website incorporates animated Flash segments to highlight various features inside of the membrane devices.

The updated website provides more information and product documentation that may not have been available in the past. End users can find background information and links to technical content including data sheets and technical papers specific to various industries and applications. Additionally, a reference section incorporating the filtration spectrum, a glossary and benefits of certain membranes



for specific applications has been set up to help further educate the user.

Liqui-Cel®, MicroModule®, MiniModule®, and SuperPhobic® Membrane Contactors are used around the world for removing oxygen (O₂), carbon dioxide (CO₂), and nitrogen (N₂) from different liquids in digital printing, analytical/biotechnology, semiconductor, power, pharmaceutical, photographic, food and beverage, and many other industries where gasses negatively impact processes. These devices can also be used to add gasses to liquids for ultrasonic applications, and for carbonation and nitrogenation.

Membrana's Filtration Group also manufactures a portfolio of Liqui-Flux® ultrafiltration and microfiltration devices that are specifically suited for water and beverage filtration. These modules have been used around the world for drinking water treatment, wastewater polishing, pre-treatment to reverse osmosis, process water filtration, as well as for wine clarification and vinegar purification. ■