

Salgenx Announces Revolutionary Heat Pump Turbine Technology to Slash RO Desalination Costs by 30 Percent

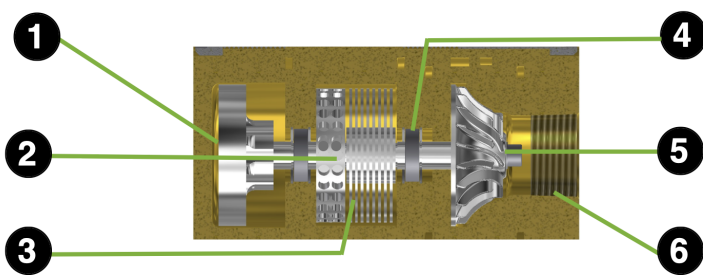
Salgenx Announces New Heat Pump Turbine Technology to Slash RO Desalination Costs by 30 Percent

MADISON, WISCONSIN, USA, January 2, 2024 /EINPresswire.com/ -- [Salgenx](https://www.salgenx.com), a trailblazer in sustainable energy and water solutions, is thrilled to unveil its latest innovation poised to transform the desalination industry - the Heat Pump Turbine. This groundbreaking technology incorporates a novel cavitation pump to drastically reduce the energy consumption of Reverse Osmosis (RO) desalination, making it 30 percent more cost-effective than conventional methods.

Traditional RO desalination relies on electrically powered pumps to create the necessary pressure for seawater to pass through membranes during desalination. This process consumes a significant amount of electrical energy, rendering desalination an expensive solution for freshwater production from seawater. Salgenx's Heat Pump Turbine introduces a paradigm shift in RO desalination.


The Heat Pump Turbine's innovation lies in its use of a new cavitation pumping method, resulting in a high Coefficient of Performance (COP). This remarkable COP

Cavgenx Heat Pump Turbine Hydraulic Power Unit Process Cooling



- 1. Front End Power Takeoff:** Starter/Generator and magnetic coupling gearbox. Our proven axial (pancake) type coupling. Common shaft direct to power takeoff devices including magnetic geared hydraulic pump.
- 2. Compressor:** Cavitation disc provides pre-heating and compression of liquid being pumped. Liquid CO2 phase change to supercritical. Other liquid refrigerants can also be used.
- 3. Combustion:** Superheat heat exchanger section for waste heat, magnetic induction, Zeolite, or other sources of heat for further pressurization of working fluid.
- 4. High Speed Bearings:** Ceramic or equivalent bearings that can last up to 100,000 hours. Larger units may use magnetic bearings.
- 5. Turbine (Expander):** We offer a host of expanders, including inflow radial, radial impulse, radial outflow, disc, Triboeffect, and our hybrid turbine.
- 6. Variable Exit Port:** The entire assembly is part of a modular block system. The exit port is variable, which can accommodate a variety of tunable flow rates.

Cavgenx Heat Pump Turbine



Salgenx S3000 Salt Water Battery Energy System

allows the Heat Pump Turbine to efficiently build pressure, eliminating the need for traditional electrically powered pumps to pressurize water through the membrane. Instead, the system harnesses the energy generated by the Heat Pump Turbine to drive the RO pumps, significantly curtailing the electrical power required for Reverse Osmosis.

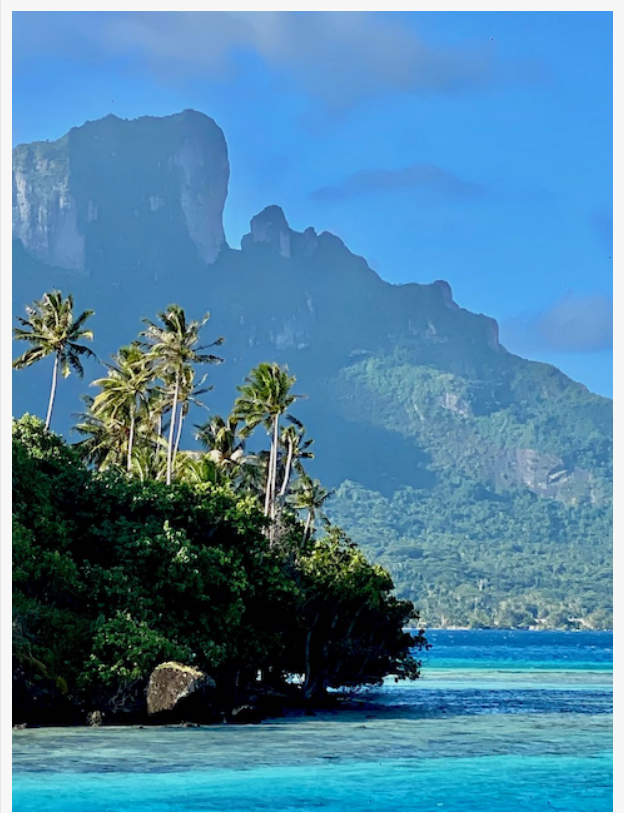
Salgenx's Heat Pump Turbine not only revolutionizes the economics of desalination but also offers an environmentally friendly solution. By making RO desalination more energy-efficient, it becomes the most cost-effective method for converting seawater into freshwater, delivering substantial savings in energy costs. This breakthrough technology holds the potential to make clean and fresh drinking water more accessible and affordable for communities worldwide, addressing the pressing global water scarcity challenge.

To further enhance the sustainability of desalination, Salgenx also has the Saltwater Battery. This state-of-the-art energy storage solution seamlessly integrates with the Heat Pump Turbine and solar photovoltaic (PV) systems. During daylight hours, the Salgenx Saltwater Battery efficiently stores surplus solar energy generated by PV panels. At night, this stored energy can be discharged, further diminishing energy expenses associated with desalination. The combination of the Heat Pump Turbine and the Salgenx Saltwater Battery elevates the overall energy efficiency and cost-effectiveness of the desalination process.

Salgenx remains steadfast in its commitment to advancing sustainable water solutions and mitigating the global water scarcity crisis. The development of the Heat Pump Turbine and the Salgenx Saltwater Battery represents a significant leap towards achieving this mission. By lowering the energy consumption and costs of RO desalination, Salgenx is making clean and fresh water more accessible to communities worldwide, while contributing to a greener and more sustainable future.

About Salgenx (a division of [Infinity Turbine](#) LLC):

Salgenx is a pioneering force in sustainable water solutions, dedicated to providing cost-effective and environmentally friendly solutions to combat global water scarcity challenges. With a resolute commitment to innovation and sustainability, Salgenx develops cutting-edge technologies that enhance the accessibility of clean and fresh water for communities worldwide.



Salgenx desalination is perfect for islands and remote oceanic villages

Contact: Greg Giese | CEO | Infinity Turbine LLC | greg@infinityturbine.com | greg@salgenx.com

Infinity Turbine Website: <https://www.infinityturbine.com>

Saltwater Battery Website: <https://salgenx.com>

[Cavgenx](#) Heat Pump Turbine: <https://cavgenx.com>

Gregory Giese

Infinity Turbine LLC

+1 6082386001

[email us here](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/678618412>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2024 Newsmatics Inc. All Right Reserved.