

Ubuntu Planet Technologies

A Revolutionary Breakthrough in
Desalination and Water Treatment

Ubuntu Planet Technologies

**An affordable, sustainable desalination technology
is urgently needed worldwide.**



Conventional desalination is not only expensive, it also produces 50% - 60% waste discharge.

This causes pollution and requires complex environmental engineering to return high salinity discharge back into the surrounding ecosystem.

The revolutionary AWT system is at least ten times more energy efficient and ten times lower cost than any other desalination technology.

This means that for the first time, desalination is even lower cost than conventional water purification systems.



Reliability is unmatched since no filters are used in the primary system.

The AWT system also produces less than 2% waste discharge, recovering up to 100% of the water.

The waste can then be separated and mined for valuable commercial products such as elemental recovery, fertilizers and building materials.

*The result is **zero discharge** and no pollution.*

The AWT system can also retrofit any existing desalination, municipal water and sewage treatment facilities, improving efficiency, performance, water quality and safety.





“Over the last 20 years, the Western Municipal Water District in California has tested numerous treatment technologies exploring ways to reduce cost and improve water quality. The AWT Reactor which was tested at the Arlington Desalter facility is extraordinary both in its efficacy and performance.”

Ray Marshall, Chief Plant Operator

Overview of AWT Process

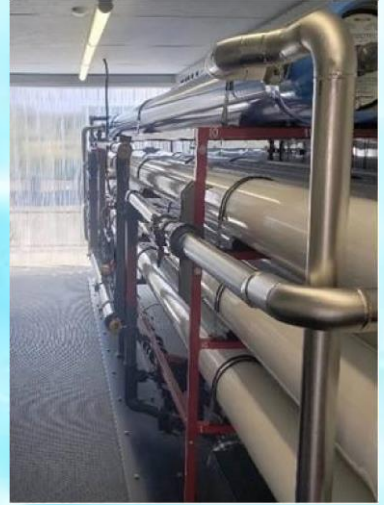
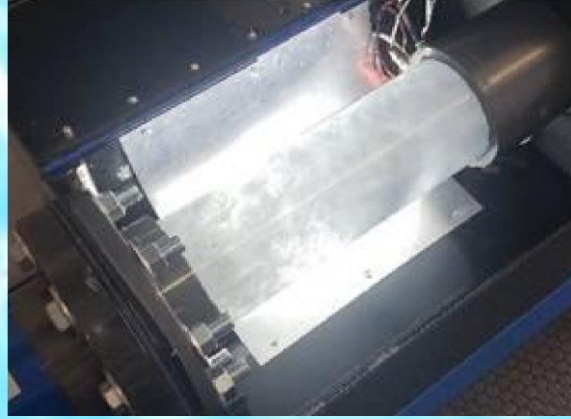
Each single reactor can processes 500,000 gallons per day

Hookup

Process

Main Reactor

Post Processing
optional



Overview of AWT Process

Step 1. Water is pumped through a bank of sensors to adjust reaction parameters and then through the AWS reactor. The extreme temperature and pressure changes in the reactor alters structural and charge characteristics, destroys all biologicals and removes organic and inorganic contaminants.

Step 2. The water then passes through a hydraulic separator which removes precipitated contaminants through a separate discharge pipe. The purified water then travels through a cartridge filter that removes any remaining particulates.

Step 3. Discharge from the hydraulic separator passes through a secondary water separator and then recycled back through step 1. **This creates a zero liquid discharge desalination system.** Remaining solids can then be separated and mined for a variety of commercial applications.

The AWT process can also retrofit existing water purification and sewage treatment facilities to significantly reduce environmental pollution and achieve zero water discharge.

Overview of Hydrodynamic Cavitation

Cavitation involves the formation and collapse of vapor cavities in a liquid. The collapse or implosion of these cavities can create localized zones of extreme temperature and pressure variations. Controlling these forces enables a broad range of capabilities including highly efficient purification of any level of contamination to any level of purification and bioabsorption.

Physical Processes

Pathogen cell disruption

Mineral and salt transformations

Emulsification

Atomization

Coagulation of dissolved solids

Chemical Processes

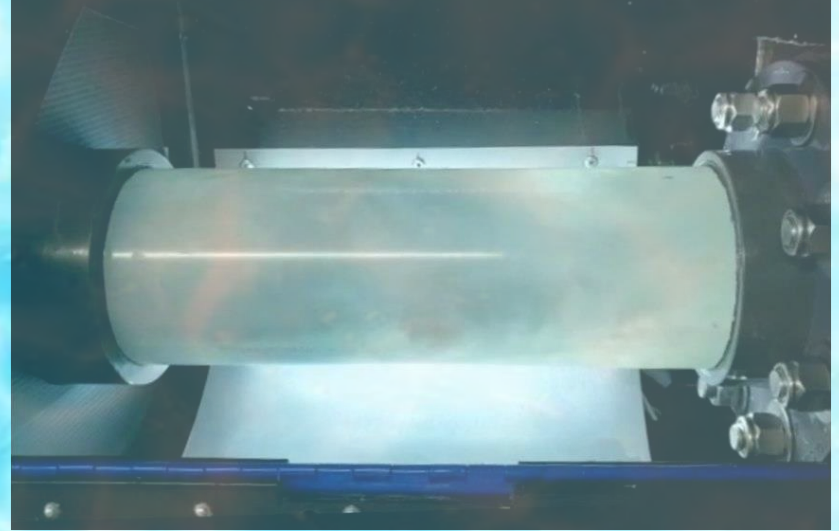
Increased transport coefficients

Increased interfacial area

Oxidation

Crystallization

Zeta potential modifications



Applications and Markets

Desalination

Water treatment

Sewage treatment Mine discharge

Superfund sites.

Removal of toxic elements such as lead, mercury, arsenic.

Medical grade water

Bio absorption enhancement and hydration

Agricultural enhancement, plant nutrition, growth rate and health

Significant reduction in fertilizer and pesticide requirements

Refining, increased mine and oil recovery pollution reduction and waste recovery.

Any number of reactors can be used in parallel to meet flow rate requirements. Multiple AWT reactors can also be staged in series to achieve breakthroughs in advanced industrial or chemical material processing.



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*Revolutionizing
Global Water Access and Quality*



Michael Waters & (Alpha Water
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