



Nano Bubble Technology in Water Treatment



www.ozoneengineers.com

About Ozone Engineers

Ozone Engineers is one of the leading manufacturer of Water Treatment Products - Ozone Generators, Oxygen Concentrator, Oxygen Plant, Nanobubble Generator, Algae Control System and allied product based in Tamilnadu, India, established in 2012. We exports our products and their services to more than 35+ countries.

"we unite to make the world better" is the underlining moral for Ozone Engineers to continuous improvement of engineering research, customer satisfaction, top quality products, clean manufacturing practices and best after sales and services.

As a owner-managed company, we strive for a sustainable and growth oriented development. The customer is our focus. Ozone engineers are characterized by quality thinking, innovative strength, efficient process and responsibility. The pursuit of excellence in all areas is our driving force. The close partnership with our customers is the foundation of our success. We are convinced that with these strong values we will achieve our goal.

We manufacture the lowest cost, highest quality ozone products by utilizing diverse application expertise to serve multiple markets while maintaining the optimum balance of innovation, quality, cost, safety and ozone efficiency.

WHAT ARE NANOBUBBLES?

Nanobubbles are tiny gas-filled bubbles with unique properties and numerous applications. Revolutionising multiple sectors, nanobubbles enhance efficiency and sustainability.

Macrobubbles
>1mm Normal size



Microbubbles
1mm – 1um
Small but visible



Nanobubbles
<900nm
Invisible to the naked eye



Our Technology:

Our advanced technology efficiently infuses gas at saturation levels, storing more gas as nanobubbles in water or other fluids. This innovation maintains ideal dissolved oxygen levels in a tank for an entire day, even in high temperatures exceeding 30 degrees Celsius.

The Proven Benefits of Nanobubbles

Nanobubbles are 70-120 nanometers in size, 2500 times smaller than a single grain of salt. They can be formed using any gas and injected into any liquid. Due to their size, nanobubbles exhibit unique properties that improve numerous physical, chemical, and biological processes.

Aeration, Oxygenation, & Gas Transfer

Conventional aeration technologies achieve less than 3% oxygen transfer efficiency at standard conditions (SOTE) per foot of water. Third-party testing confirms that nanobubble technology achieves >85% SOTE in just 2 feet of water, enabling dissolved oxygen (DO) levels to increase while using far less oxygen than any other aeration technology.

Nanobubbles are superior to all other scalable gas transfer methods because they:

Remain suspended and disperse to deliver gas throughout the liquid volume remain stable in liquid until they interact with surfaces or contaminants Continue to transfer gas to liquid until they collapse.



NanoCavity: OzoCav & OxyCav nanobubble technology increases productivity across a wide range of industrial and commercial processes.

Application :

Waster Water Treatment

Lakes and Rivers

Poultry Farm

Horticulture & Hydroponics

Aquaculture

Reservoirs and more

Key Benefits:

Efficient Oxygenation/Aeration: Enhances oxygen levels, essential for organic breakdown and digestion.

Liquifying Soft Solids: The intense cavitation produced inside this virtually unblock able device, dramatically reduces particulate size and accelerates breakdown accordingly.

Extend Infrastructure Life span: Aids in reducing bio accumulation throughout existing infrastructure.

Improved Water Quality: Restoring balance to damaged ecosystems allow for regeneration and restoration.

Nutrient Management: Enables natural biological processes to manage nutrient levels and prevent eutrophication.

Soil Remediation: Oxygen rich water eliminates the need for tilling, reduces erosion potential, assists in providing favourable conditions for biodiversity and increasing crop yield.

Energy Efficiency: Green renewable energy supplies are capable of providing off grid independence.

Enhanced Oxygenation: Boosts dissolved oxygen levels critical for aquatic life and biodiversity.

Algae and Pathogen Control: Inhibits harmful algae and pathogen growth.

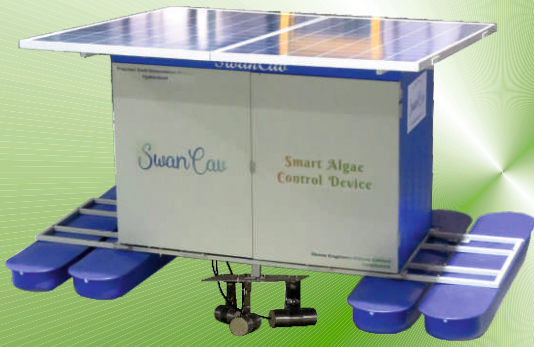
Efficiently infuse into water at nano scale

Increased gas absorption rate by organisms

Decreased organism stress

Exceptional gas retention in liquid

Improved water quality & oxygen retention time



Algae Control System

How It Works:

Solar-Powered: The SwanCav Algae control system runs on solar energy with sufficient battery backup

Ultrasound Technology: The system uses low powered ultrasound to disrupt algae cells, preventing their growth while remaining non-invasive and harmless to aquatic life.

Key Features:

Low Maintenance: It requires minimal upkeep, offering a cost-effective, long term solution for water bodies of all sizes.

Easy Installation: Quick and simple to install all lakes, ponds, and mid-size water bodies, providing immediate algae control.

Where It Can Be Used:

Lakes: Maintain the natural beauty and health of large water bodies.

Small and Mid-Sized Water Bodies: Keep ponds, reservoirs and small water sources algae-free.

Reservoirs and Agricultural Ponds: Help farmers and agricultural facilities maintain clean water for irrigation and livestock.

Benefits of the SwanCav System:

Eco-Friendly: No harmful chemicals means you are supporting a cleaner, greener planet with green technology.

Improved Water Quality: Keeps water bodies clean, clear and safe for aquatic life and human use.

Long-Term Solution: Provides consistent algae control, ensuring long-lasting water health.

Coverage up to 6.5 acres with a single device

Significant reduction in algae growth & bloom formation

Increases dissolved oxygen level in water & improves water quality

Replaces the use of chemical algicides

Reduces foul odor

Manufacturer & Marketed by

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