



# NANOBUBBLE MACHINE

A PATENTED CERTIFIED TECHNOLOGY FROM JAPAN

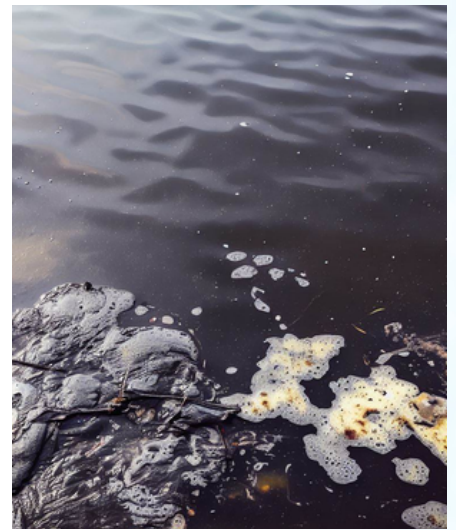




# SAFE DRINKING WATER IS CRITICAL FOR HEALTHY LIFE, YET MILLIONS OF PEOPLE DON'T HAVE ACCESS TO IT.



Just 3% of Earth's water is freshwater, with 2.5% being frozen, only 0.5% is available for consumption. Tragically, over 80% of this water available for consumption, is contaminated with pollutants like arsenic, fluoride, nitrate, cadmium, harmful bacteria, and toxic metals. This widespread contamination is responsible for many global health issues.



## CONSEQUENCES OF CONTAMINATED WATER

- WATERBORNE DISEASES
- SKIN CANCER
- ORAL DISEASES
- REDUCED CROP YIELDS
- MARINE ECOSYSTEM DISRUPTIONS
- AFFECTS AQUACULTURE & FISH FARMING



**A THREAT TO NATURE AND ALL LIVING ORGANISMS**



## PROBLEMS WITH TRADITIONAL WATER TREATMENT METHODS



Traditional water treatment methods remain inefficient, even after the addition of chemicals. These methods struggle to completely eliminate all contaminants present and face challenges in maintaining healthy pH levels.

## SOLUTION - NANOBUBBLE MACHINE

The **Nanobubble Machine** by SMI, invented by **Dr. Mitsuaki Sugie** is an exceptionally effective solution for addressing the issue of unsafe drinking water. This innovative machine helps purify water using nanobubbles, less than 30 nanometers in size, enabling significant water quality enhancement.

With its potential to create a sustainable future, this groundbreaking technology from Japan offers a promising path toward a healthier world for all.



**LET US WORK TOGETHER  
TO ENSURE OUR FUTURE  
GENERATIONS ENJOY  
SAFE DRINKING WATER  
AND A HEALTHY LIFE**



# WHAT ARE NANOBUBBLES AND HOW IT WORKS



## Nanobubble

Invisible to naked eye  
Size: <100 nm

## Microbubble

White cloudy water

## Fine Bubble

Rise to surface quickly

**Nanobubbles** are gas bubbles that are less than 100 nanometers in diameter. They are so small that they cannot be seen with the naked eye, and they have a number of unique properties that make them useful in a variety of applications.

**Increased Dissolved Oxygen:** Nanobubbles boast an outstanding 85% oxygen transfer rate. Normal DO is approx. 7 mg/l whereas in nanobubble water the DO is more than 30 mg/l.

**Contaminant Removal:** Nanobubbles attract and lift suspended particles, such as algae, sludge, etc. By promoting the growth of beneficial microorganisms, nanobubbles aid in the removal of excess phosphorus and nitrogen, preventing the dreaded eutrophication.

**Bacteria Control:** Nanobubbles, due to a highly oxygenated environment, keep harmful bacteria like E. coli in check and promote aerobic bacterial growth.

**Metal Removal:** Nanobubbles facilitate the effective removal of heavy metal contamination from water through precipitation and adsorption processes.

**Healthy pH Levels:** Nanobubbles play a pivotal role in water pH regulation by promoting the dissolution of gases, helping to stabilize and maintain optimal pH levels.

**Odor Elimination:** Nanobubble technology effectively removes smelly compounds such as hydrogen disulfide and ammonia, achieving odor elimination through targeted gas oxidation and dissolution.



# NANOBUBBLE MACHINE

- A Nanobubble machine generates millions of nanobubbles over a wide area inside the water body
- Permanent neodymium magnets are used to create a strong stable magnetic field
- A high-speed rotating impeller and magnetic rotors generate nanobubbles in the size range of less than 30nm spread over a wide area



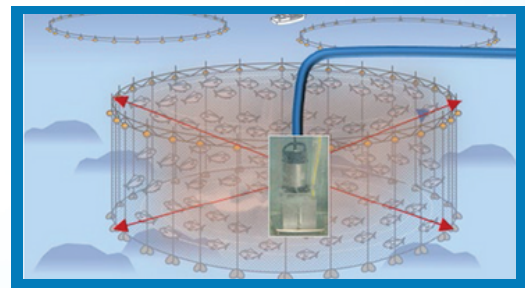
**NANOBUBBLE MACHINE**



**NEODYMIUM  
PERMANENT MAGNET**



**BUBBLE SHEAR IMPELLER**



**WIDE RANGE OF NANOBUBBLE  
GENERATION  
(less than 30nm)**

**The Nanobubble machine is ideal for improving the water quality of lakes, marshes and other water bodies, providing safe potable water for all living beings.**





## AQUACULTURE

In aquaculture, these bubbles maximize oxygen levels, elevating fish production and operational efficiency.

## AGRICULTURE

In agriculture, nanobubbles turbocharge crop growth, fortifying roots, and yielding bumper harvests.



## HEALTHCARE

Nanobubbles play a crucial role in healthcare, pioneering advanced patient care and infection control measures.

## MINING

In mining operations, nanobubbles revolutionize mineral extraction, accelerating recoveries and fundamentally reshaping the mining landscape.



## INDUSTRIAL APPLICATIONS

In factories, nanobubbles optimize various processes, from waste treatment to manufacturing, offering efficient solutions.



# PROGRESSIVE ROAD MAP OF NANOBUBBLE MACHINE OVER 20 YEARS OF EXPERIENCE



Initiated a joint venture with Denny Thomas to promote world peace, health, and prosperity through the sharing of advanced technologies, aiming to create a better world for future generations. This endeavour is in collaboration with other science and technology companies and the most senior scientists from Japan.

2022-23

Supporting the organizations in GCC by sharing Nanobubble technology.

2019

Improved water quality in general rivers, lakes, wells, etc. in Japan, China, South Korea, Thailand, Philippines and UAE.

2016

Supplied nanobubble machines to provide safe drinking water to Sri Lankan Government.

2012

2010

Promoted growth of Japanese eels and Japanese shellfish in Myanmar and a shrimp farm in Thailand.

2008

Achieved early shipment of tilapia culture in Mexico and South America by promoting growth of the fish.

Promoted growth by changing oxidizing water to neutral at a flower growing field in South America.

2006

2004

Successfully improved the deterioration of Hokkaido starch drainage ponds through joint research with Hokkaido University Graduate School of Agriculture.

2001

Successfully introduced painting booths for Toyota, Nissan, and Mazda automobiles, reducing maintenance costs by over 85% and improving water quality and odour outcomes.

INVENTION OF NANOBUBBLE MACHINE



**How is Nanobubble Technology cost-effective?**

Nanobubble technology offers remarkable cost-effectiveness, as its initial investment is significantly low compared to the widespread benefits it brings. By serving as a highly efficient and effective water purification method, it reduces the need for expensive filtration systems or alternative water sources. This not only ensures the production of clean and safe water but also prevents health issues among people, leading to substantial savings for the government in public healthcare expenditures.

**Can Nanobubble Technology be utilized in lakes, marshes, and similar environments?**

Yes! Nanobubble technology offers versatile applications and can be effectively used in various natural water bodies such as lakes, marshes, ponds, and more. Introducing nanobubbles into these environments can aid in enhancing water quality, promoting oxygenation, and mitigating issues caused by pollutants and contaminants.

**What about the installation of the Nanobubble machine?**

The installation will be assisted by SMI Inc. Japan.

**What about maintenance and spare parts available for the Nanobubble machine?**

Yes, maintenance and spares are available if needed from SMI Inc. Japan, ensuring the continued functionality of the nanobubble machine.

**What are the certifications for the Nanobubble machine?**

The nanobubble machine holds several certifications, including the Nanobubble Generation Patent, CE Export Certification, and TUV certification. These certifications validate the quality and compliance of the technology.

**What are the possible applications of Nanobubble Technology?**

Nanobubble technology offers a wide range of applications. It can be used for drinking water purification, enhancing agricultural practices, promoting fish farming, and improving aquatic life in various water bodies. It also offers supportive medical benefits.

**How does Nanobubble technology support fish farming?**

Nanobubble technology plays a significant role in fish farming by enhancing oxygen levels in the water, improving water quality, and creating a healthier environment for fish. This can lead to increased fish productivity and overall success in fish-farming operations.

**PRODUCT SPECIFICATIONS**

<b>NANOBUBBLE MACHINE</b>		
<b>Water Suction Rate</b>	<b>4200 L/hr</b>	
<b>Water Depth Required For Installation</b>	<b>1mtr to 10mts</b>	
<b>Power Required (KW)</b>	<b>0.4</b>	
<b>Voltage (V)</b>	<b>Single phase 100 V</b>	<b>Single phase 220 V</b>
<b>Frequency (Hz)</b>	<b>60</b>	<b>50</b>
<b>Approx. Weight (Kg)</b>	<b>25</b>	
<b>Approx. Dimensions (W x H x D) (mm)</b>	<b>170 x 220 x 500</b>	





**MAKING**  
**SAFE**   
**WATER**  
**ACCESSIBLE TO ALL**

<https://nanobtech.com/>

