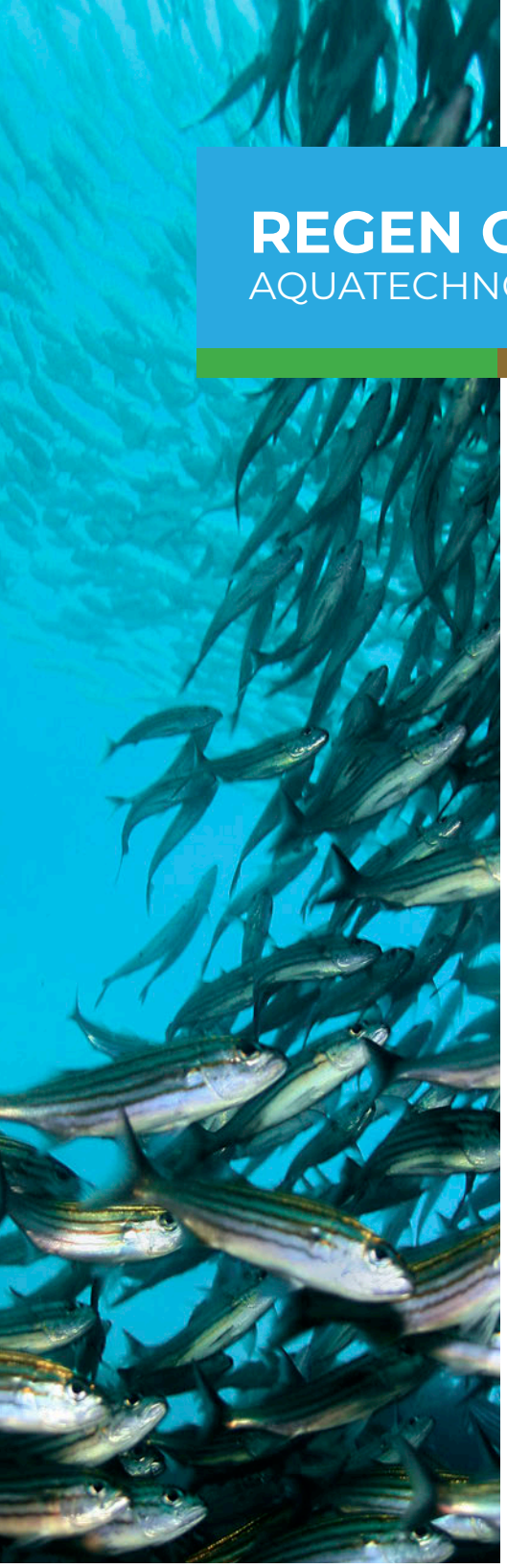
ReGen Global

UNLEASHING THE POWER OF ULTRAFINE NANOBUBBLE TECHNOLOGY



REGEN GLOBAL
AQUATECHNOLOGY

Who We Are

ReGen Global is a UAE-based company at the forefront of advancing water, agriculture and regenerative aquaculture solutions.

We specialize in cleaning large bodies of water without the need for harmful chemicals – enhancing water quality for agriculture and aquaculture use. Our organic water treatment innovation is unmatched in the MENA markets.

We own the technology or are in joint ventures or exclusive regional partnerships with our technology owners, confident that the innovation we have brought to the region is cutting edge and world-beating. We combine sustainable environmental impact with scalability and profitability.

Our Value

We supply, install and maintain organic, proprietary technology solutions for cutting-edge water management: water filtering and cleanup, runoff and storm water storage and reuse, water filtration solutions and organic cleaning products.

Our Differentiation

Our cutting-edge, technology driven solutions are environmentally world-beating, harmonious with nature and the environments and ecologies within which we operate. We are pioneering the integrated use of our technology systems and products to deliver a unique, one-stop solution for scalable water remediation and treatment.

Our mission

To revolutionize scalable water treatment, water capture and storage, and water conservation across critical national industries.

REGEN GLOBAL
AQUATECHNOLOGY

Our Technologies, Products and Services

Nanobubble Cavitation
We deliver ultra-fine nanobubble technologies that enhance water quality, remove pathogens and pollutants, and alter water characteristics to deliver tangible impact on the health of crops, plants, animals, and large bodies of water.

StormCrates
We deliver unique scalable storm water collection crate systems to filter, clean, store and reuse storm and runoff water across multiple developments and industries.

Water Filtration
We filter, separate and collect water from extractive industry processes, applying proprietary cleaning systems for safe water reuse, whilst preventing the environmental risks and costs of pumping it at pressure back into the ground.

Enabling Engineering
We conduct dredging and excavation engineering, including the removal of toxic sludge and sediment, to facilitate the delivery of our water treatment solutions.

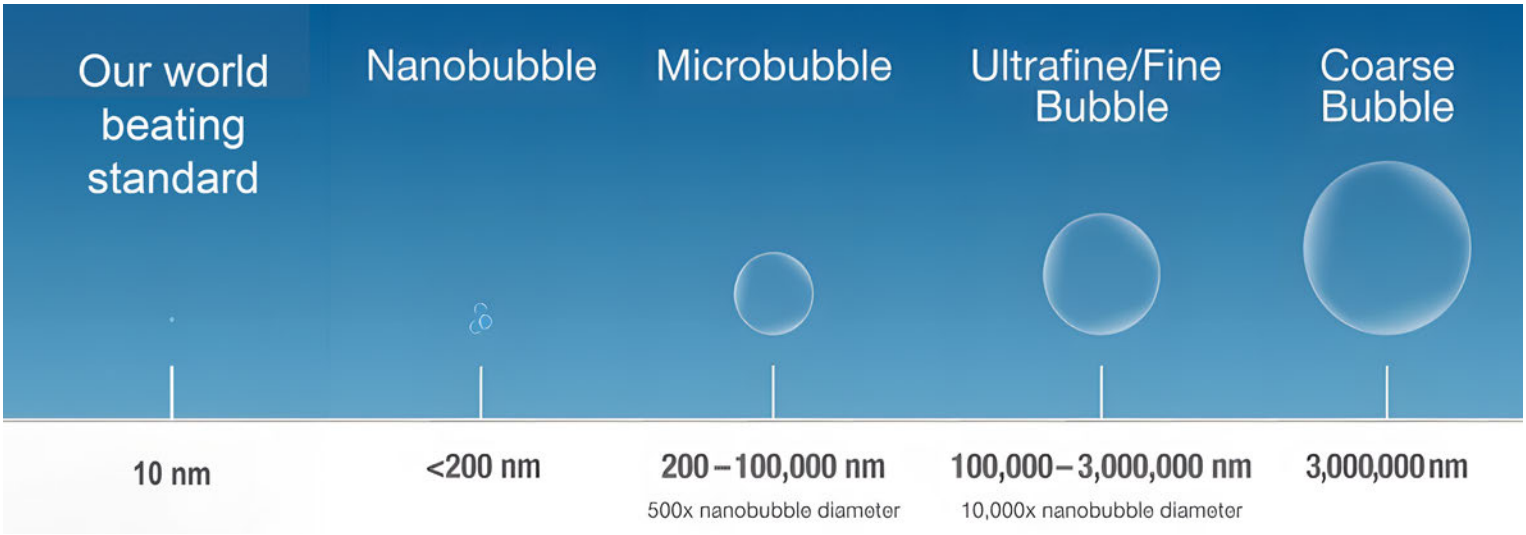
This brochure focuses on our nanobubble cavitation equipment and services.

Please contact us to hear more about our other ReGen AquaTech services.

THE GAME CHANGING BENEFITS OF ULTRAFINE BUBBLES TECHNOLOGY

The Nanobubble Revolution

Nanobubbles are nano sized bubbles <200nm, 2500× smaller than a grain of salt, that improve water quality and industrial processes through aeration and oxidation.



ReGen Global Revolution

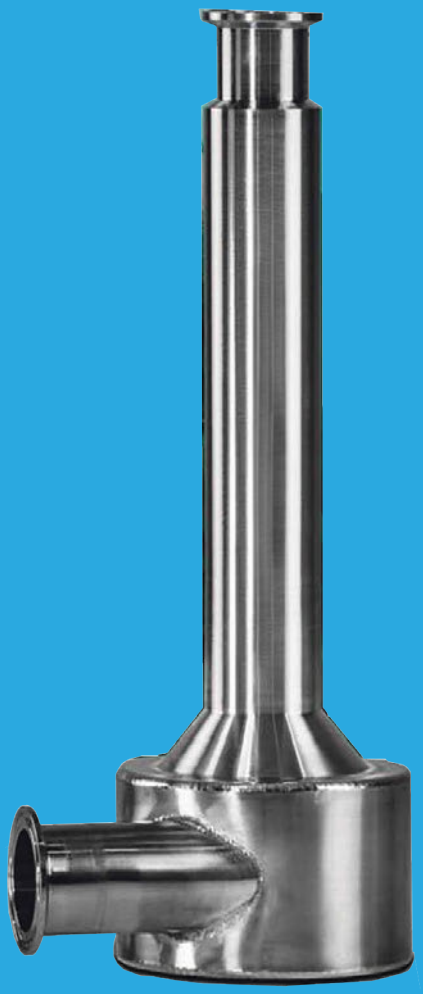
A single oxygen molecule is 0.25 nano. We recently recorded bubbles as low as 7 nano, with a concentration as high as 612 trillion bubbles per ml. This is by far, the most impressive result of any Ultrafine Bubble device anywhere in the world. It is globally significant and many changes will come from our technology.

Properties and Characteristics

- Oxidative
- Excellent Stability (more than months)
- Electrochemically active
- Cost effective use of oxygen & air
- Large surface to volume ratio
- Hard particle
- Nanosized particle <200nm
- Charged Surface (Negatively charged at drinking water pH)
- High internal pressure ~28 bar
- High gas transfer efficiency
- Neutral buoyancy - Brownian motion
- Surfactant attracted to the bubble surface

OUR TECHNOLOGY RANGE

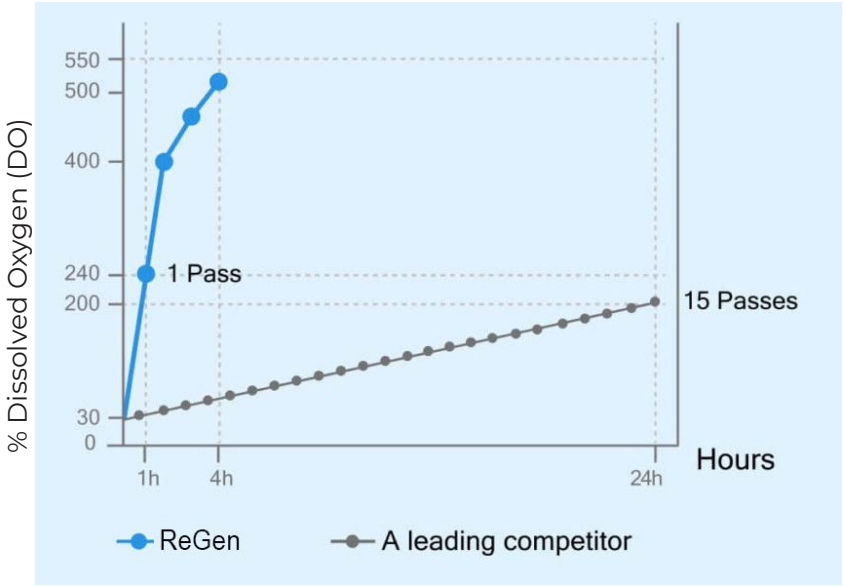
OUR SCALABLE CAVITATION TECHNOLOGY



At ReGen Global, we specialise in engineering solutions that utilise the extraordinary potential of controlled hydrodynamic cavitation. We are proud to offer our revolutionary multichamber hydrodynamic cavitation device equipment range.

This unit has the capability to improve and accelerate the process of gas infusion and reduce costs associated with energy consumption, aeration and gas infusion. By utilising hydrodynamic cavitation, the unit is able to produce ultrafine bubbles that allow for higher gas transfer rates and retention time in liquid.

Boasting 11.2 Times Energy Efficiency



Test conditions:

Test volume: 4 m^3 of tap water at Atm pressure and ambient temperature (30 degrees celcius)

Flow rate of a leading competitor: 40 L/min with a consumption of 1.12 kW achieving 200% DO= 26.88 kWh

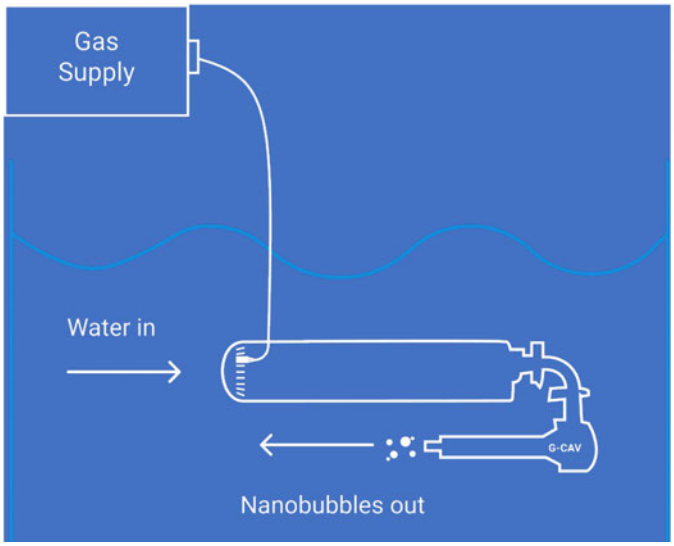
Flow rate: 66 L/min with a consumption of 2.4 KW achieving 240% DO=2.4kWh

OUR SUBMERSIBLE UFB CAVITATION TECHNOLOGY

Our submersible range is very simple to use and set up, giving the required gas saturation within water/liquid.

A submersible pump is fitted with a gas connector at the water intake point, gas is injected and carried along with the liquid, through the pump and through the cavitation device.

The result is gas infused nanobubbles in the liquid body!

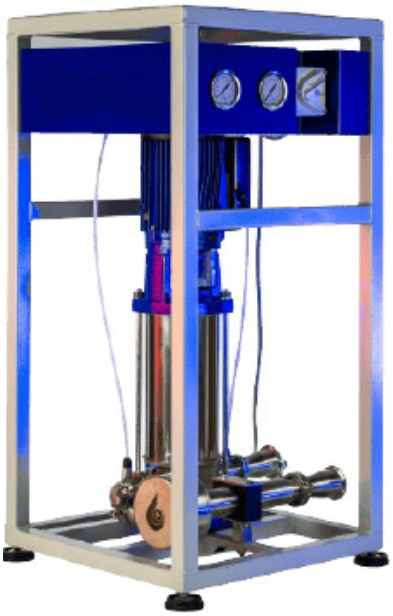


Flexible, Direct Infusion for Various Sized Water Bodies

OUR COMBINED PUMP & CAVITATION TECHNOLOGY

Our pump and cavitation combination provides the ability to instantly infuse gas into water at scale. Water from a source is sent through the hydrodynamic cavitation device via a pump. A gas (like Oxygen, Hydrogen, etc.) is then added.

As the mixture of water and gas passes through the cavitation device, nanobubbles are created and instantly infused, ready to be distributed as required.



We would be delighted to assess which of our equipment is most suited to your business needs and to design a solution that optimizes the beneficial impact of our unmatched nanobubble production on your operations.

Please contact us to learn more.

APPLICATION EXAMPLES

OUR SYSTEM USED IN THE AQUACULTURE INDUSTRY

Adding our infusion system to your aquaculture operation allows for greater absorption of infused gases by fish, which translates to lower mortality rates and higher growth potential when beneficial gases such as oxygen are used.

With a patented flow-through design and no moving parts, our ultrafine bubble infuser is a scalable solution that is easy to install and retrofit into existing systems.

FEATURES

- 100% gas infusion in a single pass at 0.5% of gas to water flow
- Infuse virtually any gas into virtually any liquid
- Infusion Capabilities well below 100 nano sized bubbles
- 10 nano produces beyond 1 trillion nanobubbles per ml
- Component integration into existing systems and solutions
- Exceptional product lifespan
- No moving parts
- Flow-through design limiting the potential for blockage

BENEFITS

- Exceptional gas retention time in fluid
- Supersaturation of gases in a single pass
- Higher dissolution rate
- Increased gas absorption rate by organisms
- Reduced mortality rate*
- Increased growth*
- Reduced overhead costs
- Filters water

*Based on hydrogen and oxygen nanobubble gas infusion figures

REGEN SYSTEMS USED IN THE AGRICULTURE INDUSTRY

Adding our system to your operation allows for greater absorption of infused gases by the soil, which increases soil health and encourages development of complex biofilms when beneficial gases such as oxygen are used. With a patented flow-through design and no moving parts, our technology is a scalable solution that is easy to install and retrofit into existing systems.

BENEFITS

- Exceptional gas retention time in fluid
- Supersaturation of gases in a single pass
- Higher dissolution rate
- Increased gas absorption rate by organisms
- Promotes soil health*
- Increased disease resistance of crops*
- Increased growth & yield*
- Improved crop quality*
- Reduced overhead costs

*Based on hydrogen and oxygen nanobubble gas infusion figures

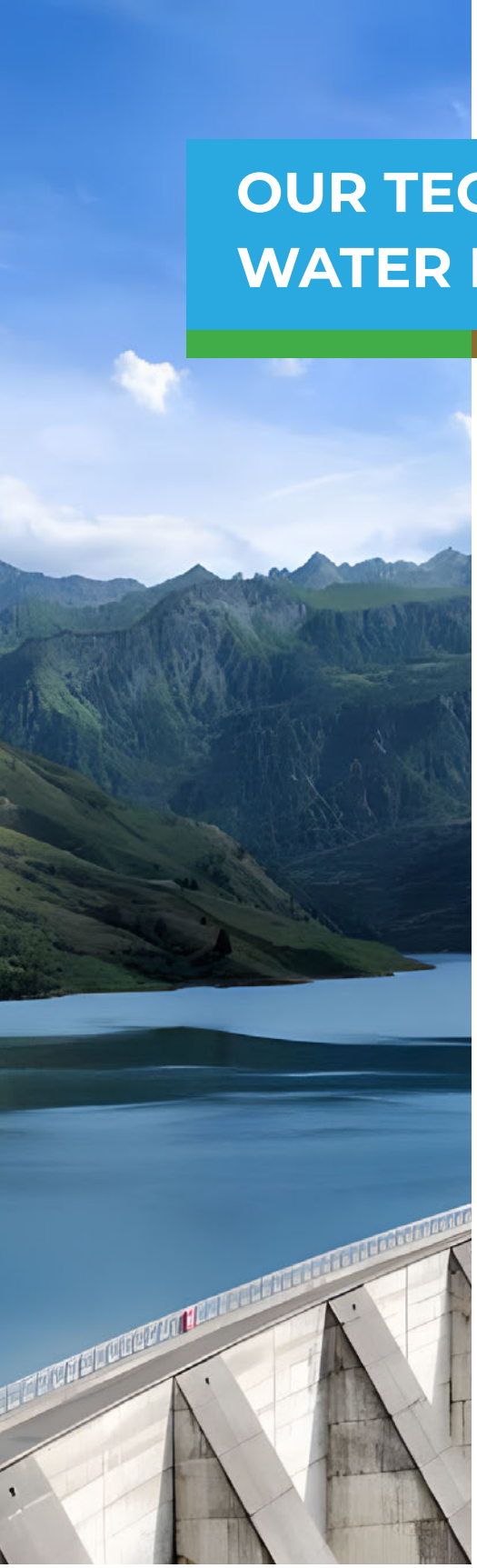
REGEN TECHNOLOGY USED IN THE FIELD OF ANIMAL HEALTH

Adding ReGen technology to your operation allows for greater absorption of infused gases by animals, which increases disease resistance, health, and production potential when beneficial gases such as oxygen are used.

BENEFITS

- Exceptional gas retention time in fluid
- Supersaturation of gases in a single pass
- Higher dissolution rate
- Increased gas absorption rate by organisms
- Promotes animal health*
- Increased disease resistance*
- Increased production potential*
- Reduced overhead costs

*Based on hydrogen and oxygen nanobubble gas infusion figures

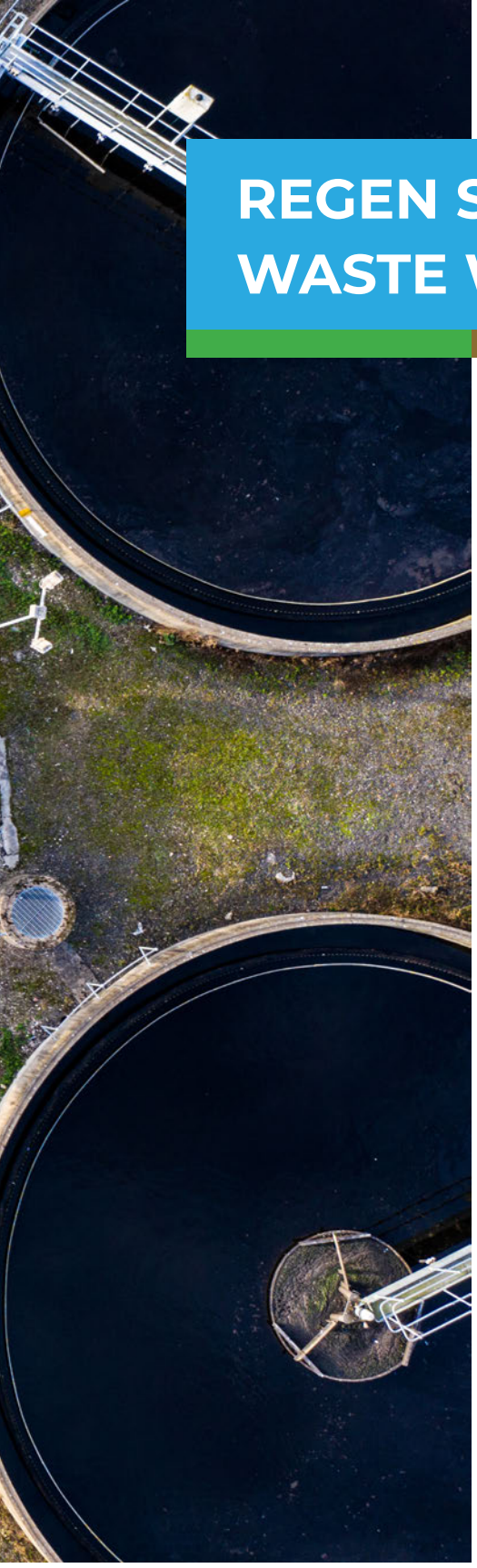


OUR TECHNOLOGY USED IN THE WATER REMEDIATION INDUSTRY

The health of our rivers, lakes, and reservoirs is of paramount importance to the well-being of our environment and, ultimately, our own health. These water bodies often face a multitude of challenges, from pollution to dwindling oxygen levels, which can have dire consequences for aquatic life. Our product range and ultrafine bubbles offer a solution.

BENEFITS

- **Enhanced Oxygenation**
  Boosts dissolved oxygen levels critical for aquatic life.
- **Improved Water Quality**
  Assists in purifying water by floating up contaminants.
- **Algae and Pathogen Control**
  Inhibits harmful algae and pathogen growth.
- **Nutrient Management**
  Helps manage nutrient levels to prevent eutrophication.
- **Soil Remediation**
  Mobilises contaminants for easier sediment clean-up.
- **Energy Efficiency**
  Reduces the environmental footprint of water treatment.



REGEN SOLUTIONS USED IN THE WASTE WATER INDUSTRY

Ultrafine bubble technology significantly improves the oxidation and removal of pollutants in wastewater treatment. By introducing nanoscale gas bubbles through cavitation, our process targets organic compounds more effectively, accelerating the degradation of industrial waste and microorganisms. This advanced method supports wastewater facilities to achieve higher purification standards and comply with environmental regulations.

BENEFITS

- **Efficient Oxygenation:**
  Enhances oxygen levels, essential for pollutant breakdown.
- **Better Aeration**
  Improves microbe activity for organic matter degradation.
- **Quick Contaminant Removal**
  Speeds up the removal of pollutants and waste.
- **Energy Savings**
  Cuts down energy needs for aeration, reducing costs.
- **Solid Removal**
  Aids in separating solids from water more effectively.
- **Less Chemicals**
  Minimizes chemical use in treatment processes.
- **Nutrient Control**
  Better management of nitrogen and phosphorus.
- **Flexible Use**
  Applicable across various treatment systems.

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