Enhanced Aeration for Wastewater Treatment

Moleaer Nanobubble Generator

Applications
- Aeration Basins
- Activated Sludge Tanks
- Aerobic Digesters
- Stabilization Ponds
- Lagoons
- Lift Stations
- Recreational Lakes

Standard Features
- Best In Class Oxygen Transfer Efficiency
- No Moving Parts
- Passes Solids up to 12 mm
- Self-Cleaning
- Quiet Operation
- Adjustable Air-to-Water Ratios
- Low Energy Usage
- Models From 25 to 1000 gpm
- Pre-Packaged & Ready for Operation

Benefits
- Increase Treatment Capacity
- No Off-Gassing
- Reduced Sludge Volumes
- 20x Higher Oxygen Transfer per Foot of Water
- Reduced Odors
- Easy On/Off Operation
- Aerate any depth
- Simple Plumbing

The Moleaer XTB nanobubble generator is the ultimate supplemental aeration solution to enhance any aerobic treatment process. A highly efficient, proprietary 2-phase aeration process injects wastewater with dissolved oxygen and trillions of ~100nm-sized nanobubbles that help stabilize oxygen levels. Whether the goal is to boost treatment capacity or replace under-performing equipment, Moleaer delivers superior results.

Traditional aerators consume enormous amounts of energy and have very low oxygen transfer efficiencies.

The ultimate solution comes when Moleaer's nanobubble generators can be installed in-line utilizing existing pumps to inject nanobubbles and aerate the passing water with just a tiny energy penalty.

Nanobubbles exhibit unique characteristics; due to their minute size and negatively charged surfaces, they can remain stable in water for prolonged periods of time. They have neutral buoyancy and can disperse throughout a body of water due to the principals of Brownian motion (see Figure 1). The longevity of the nanobubbles in water, combined with a significantly larger interfacial area, increases their oxygen transfer capacity well beyond traditional aeration systems.

Figure 1

Aerobic Digestor
Brewery MBR
Moleaer’s XTB nanobubble generators can be installed quickly with minimal retrofitting or disruption to daily operations, making it the most cost effective supplemental aeration solutions on the market. Air or oxygen can be injected at any depth or location to provide immediate support to existing aeration equipment that is either underperforming or overwhelmed.

Integrating Moleaer’s XTB systems into a treatment process gives operators greater flexibility to respond to fluctuating loading rates and oxygen demands. Units are mounted on the outside of a tank or on the bank of a lagoon, giving operators easy access and control of the unit.

Moleaer’s systems are independently tested and verified to have the highest oxygen transfer rates per foot of water, lowest off-gassing and the highest alpha factor ever recorded. The XTB systems have a proven track record of superior reliability and are rated for 10+ years of continuous operations and require minimal maintenance. While in operation, the units are self-cleaning and do not foul or plug like traditional diffusers.

The ultimate solution comes when Moleaer’s nanobubble generators can be installed in-line utilizing existing pumps to inject nanobubbles and aerate the passing water with just a fraction of an energy penalty. In-line utilization, enhances oxygen delivery to increase the plants treatment capacity without additional energy consumption. Upgrade to Moleaer’s enhanced nanobubble aeration system today to boost treatment capacity without costly capital upgrades.