NanoCloud

Air-Based Nanobubble Generator

NanoKriti
NANOBUBBLE TECHNOLOGY

NanoCloud is an air-based nanobubble generator designed to infuse atmospheric air into water as stable nanobubbles. It enhances dissolved oxygen levels naturally, promoting healthier water ecosystems while reducing dependence on external gas sources. With its plug-and-play design and robust SS304 construction, NanoCloud ensures seamless operation, energy efficiency, and long-lasting performance.



What are nanobubbles?

Nanobubbles are extremely small bubbles, less than 200 nanometers in diameter. Their extremely small size gives them unique properties such as high gas–liquid mass transfer, excellent stability, neutral buoyancy, surface charge, deep penetration, and strong carrying capacity. These characteristics make nanobubbles highly effective and applicable across diverse domains.

Distinct Features

- Air- Based nanobubble generator
- ~80 nm mean nanobubble diameter
- 75–80% Oxygen Transfer Efficiency (OTE)
- Nanobubble concentration of over 1 × 10^8 bubbles/ml
- Plug-and-play installation
- Easy operation & low maintenance
- Proven results across multiple sectors

Benefits

- Increases Dissolved Oxygen (DO) Efficiently
- Enhances Water Quality Naturally
- Reduces Sludge, Odor & Anoxic Zones
- Prevents Biofilm & Pipe Clogging
- Energy Efficient & Cost-Effective
- Easy operation & low maintenance
- Versatile Across Multiple Sectors

Applications

- Wastewater Treatment (STP/ETP)
- Lakes & pond rejuvenation
- Hydroponics, Aeroponics & Irrigation Water
- Agriculture & irrigation water
- Aquaculture & Fisheries
- Ornamental Ponds & Water Features

About us

Nanokriti is an IIT Ropar deep-tech company founded in 2022. Our team of professors, researchers, and engineers brings over 8 years of expertise in nanobubble technology, supported by 30+ research publications.

We design and manufacture advanced nanobubble generators using our patented, cost-efficient technology, delivering high-performance solutions across aquaculture, agriculture, water treatment, and environmental restoration.

Technical Specifications: N Series Nanobubble Generator

Parameter	NanoCloud N10	NanoCloud N30	NanoCloud N80
Water flow (m³/hr)	10–15	27–30	65-67
Power (kW)	1.4	2.5	3.8
Voltage / Phase / Frequency	415 V / 3+N / 50 Hz	415 V / 3+N / 50 Hz	415 V / 3+N / 50 Hz
Gas flow (LPM)	0–5	0–10	0–10/20
Gas pressure (bar)	2.5–4	2.5–4	2.5–4
Gas Source	Air Compressor/ Customizable Gas	Air Compressor/ Customizable Gas	Air Compressor/ Customizable Gas
Suction / Discharge (inch)	2 / 2	3 / 3	4 / 4
Dimensions (H × W × L, ft)	3 × 1.5 × 3	4 × 1.5 × 4	4 × 1.5 × 4

Technical Specifications: C Series Nanobubble Generator

Parameter	NanoCloud C10	NanoCloud C40
Water flow (m³/hr)	7-8	27–30
Power (kW)	2.1	3.9
Voltage / Phase / Frequency	415 V / 3+N / 50 Hz	415 V / 3+N / 50 Hz
Gas flow (LPM)	0-2.5	0–5
Gas pressure (bar)	2.5–4	2.5–4
Gas Source	External source at near atmospheric pressure	External source at near atmospheric pressure
Compatible Gases	Air, Oxygen, Ozone, Nitrogen, Carbon Dioxide (any cylindered gas)	Air, Oxygen, Ozone, Nitrogen, Carbon Dioxide (any cylindered gas)
Suction / Discharge (inch)	2 / 2	3 / 3
Dimensions (H × W × L, ft)	3 × 1.5 × 3	4 × 1.5 × 4

***Specifications may change due to constant improvements*
***System size and capacity are customizable based on project requirements and scale of operation.*

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