VIRAT

Small scale, Custom gas nanobubble generator

NanoKriti
NANOBUBBLE TECHNOLOGY

Nanokriti's Virat Nanobubble Generator is a robust, high-capacity nanobubble system tailored for large-scale industrial, environmental, and agricultural deployments. Designed to operate with oxygen or air, it delivers consistent nanobubble saturation for efficient oxygenation, enhanced water quality, and advanced gas–liquid processes, without the need for chemical additives.





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

- Built for high-capacity deployments
- ~80 nm mean nanobubble diameter
- 75–80% Transfer Efficiency
- >1×10^8 Nanobubbles / ml
- Plug-and-play installation
- Easy operation & low maintenance
- Proven results across multiple sectors

Benefits

- High-efficiency gas transfer for improved oxygenation and process performance
- Chemical-free operation with reduced operating costs
- Reliable performance for large-scale, high-capacity applications
- Low-maintenance design with easy installation and operation

Applications

- Wastewater Treatment (STP/ETP)
- Industrial Water Treatment
- Agriculture & Irrigation Networks
- River & Canal Restoration Projects
- Water Parks, Resorts & Recreational Lakes
- Food & Beverage Processing

About us

Nanokriti is an IIT Ropar–incubated 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.

About us

Technical Specifications: N Series Nanobubble Generator

Parameter	Virat- N100	Virat- N500	Virat- N1000
Flow Rate (m3/hr)	80 - 100	300 - 500	700 - 1000
Head	10 - 20	10 - 15	10 - 15
Voltage / Phase / Frequency	415 V / 3+N / 50 Hz	415 V / 3+N / 50 Hz	415 V / 3+N / 50 Hz
Pump Motor (hp)	5 - 10	30 - 40	100 - 120
Current Per Phase (Amps)	17.4 (Max.)	69.5 (Max.)	208 (Max.)
Capacity, (LPM)	40 - 100	100 - 200	250 - 300
Gas pressure (bar)	2 - 4	4 - 5	4 - 8
Weight, kg	100 - 130	600 - 800	800 - 1000
Suction / Discharge (inch)	4 / 4	10 / 8	12 / 12
Dimensions (H × W × L, ft)	4 × 1.5 × 4	5.5 × 2.5 × 4.5	5.5 × 2.5 × 4.5

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

CONTACT US

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