

Neo₂ Nanobubble Generator



TYPICAL APPLICATIONS

- Deep Water Culture
- Shallow Water Culture
- NFT
- Drip Irrigation
- Water Tank Oxygenation
- Reservoir Oxygenation
- Algae Control
- Biofilm Control*

The patented Moleaer Neo₂TM Nanobubble Generator is a highly efficient gas-to-liquid injection technology that produces high purity oxygen nanobubbles and supersaturates water with high levels of dissolved oxygen (DO). Negatively charged, neutrally buoyant nanobubbles remain suspended in water for long periods of time, acting like an oxygen battery that delivers oxygen to the entire body of water. As oxygen is consumed, the nanobubbles continue to diffuse more oxygen into solution to maintain optimal levels of DO. The nanobubbles produce a natural oxidant capable of reducing biofilm growth* and suppressing harmful pathogens, even in warm water. Moleaer's Neo² is an economical and highly effective tool that improves water quality, suppresses root disease and promotes the growth of healthy, resilient plants.

The Neo₂ comes with an integrated oxygen concentration system capable of producing oxygen with 93% purity for reliable and convenient on-site oxygen generation; an energy efficient industrial-grade Lowara pump with an open impeller; and a PLC controller that enables automation and control of the Neo₂ when not used in continuous operation. The system is quiet and corrosion-resistant with stainless steel components. The Neo₂ comes standard with an integrated low maintenance, optical DO sensor to allow real time monitoring. Available in 34 and 57 m³/hr flow rates, the Neo₂ is designed for durable operation and easy installation into any existing irrigation or water treatment system.

FEATURES & BENEFITS

- <200 nm-sized bubbles produced in excess of 1 billion nanobubbles / mL
- On-board oxygen generator for simple on-site oxygen generation (93% O₂)
- Improved water quality
- Oxygenation of any tank and any depth of water
- Enhanced nutrient absorption in plants
- Promotion of beneficial bacteria, suppression of pathogens
- Easy integration with fertigation systems and climate control systems
- Auto gas shut off if loss of prime feed
- Low feed gas pressure sensor and alarm
- Integrated real-time DO monitoring
- Corrosion resistant stainless steel frame and components

*Organic, bio-based nutrients may impact biofilm accumulation rates.

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MODELS
Neo 150 Oxygen Generation
Neo 250 Oxygen Generation
LIQUID FLOW CAPACITY

Flow Rate, GPM m ³ /hr	34	57
Indicated Gas Flow Range Recommended, L/min	0 - 4	0 - 7

OPERATING PARAMETERS

Temperature Tolerance, °C	5 - 60	5 - 60
Standard Oxygen Transfer Efficiency	> 90%	> 90%

PUMP

Pump Model	Lowara ESH 40	Lowara ESH 65
Wetted Parts Materials		
Pump Motor, KW	2.2	4
Voltage	400	400
FLA	4.61	8.41
Phase	3	3
Hz	50	50

SECONDARY RECOMPRESSOR

Models	Gast 86R Single Cylinder	Gast 86R Single Cylinder
Voltage	230v	230v
HZ	50	50
KW	0.09	0.09
Amps (230v)	0.9	0.9

OXYGEN GENERATOR

Models	Airsep Topaz Ultra	Airsep Topaz Ultra
Voltage	230	230
HZ	50	50
Amps (230v)	3	3
Total Amperage (230v)	8.51 (This version only runs at 230v)	12.31 (This version only runs at 230v)

CONTROLS

Power (Light)	On/Off DP	On/Off DP
Start Switch	On/Off (24V DC)	On/Off (24V DC)
Pressure Gauges (Water/AIR) Bar	4.1/11	4.1/11
Rotameter, L/min	0-9.4	0-14.1
Dissolved Oxygen (DO) Sensor	Optical, 0 - 50 ppm (+/- 1.5 ppm), 0-5 mV	Optical, 0 - 50 ppm (+/- 1.5 ppm), 0-5 mV

CONNECTIONS

Inlet, mm	75	90
Discharge, mm	90	90

DIMENSIONS AND WEIGHT

Height, cm	107	107
Width, cm	68	68
Length, cm	107	107
Weight, kg	100	102