MOLEAER

ADVANCING NANOBUBBLE TECHNOLOGY

Neo_2 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 Neo_2 ™ 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 sustaining saturated levels of DO and providing a natural oxidant capable of reducing biofilm growth* and suppressing harmful pathogens, even in warm water. Moleaer's Neo_2 is an economical and highly effective tool that improves water quality, suppresses root disease and promotes the growth of healthy, resilient plants.

The Neo_2 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 Gould pump with an open impeller; and a PLC controller that enables automation and control of the Neo_2 when not used in continuous operation. The system is quiet and corrosion-resistant with stainless steel components. The Neo_2 comes standard with an integrated low maintenance, optical DO sensor to allow real time monitoring. Available in 150 and 250 GPM flow rates, the Neo_2 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% O_2)
- 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	150	250
Indicated Gas Flow Range Recommended, L\min	0-4	0-7
OPERATING PARAMETERS		
Temperature Tolerance, °F	41-100	41-100
Standard Oxygen Transfer Efficiency	>90%	>90%
PUMP		
Pump Model	Gould ESH #02SH08A03E2A4	Gould ESH #2SH08D7HT4F2
Wetted Parts Materials	Buna-N/316 SS	Buna-N/316 SS
Pump Motor, hp	5	7.5
Voltage	460	460
Amps (460v)	6.7	9.4
Phase	3	3
Hz	60	60
SECONDARY RECOMPRESSOR		
Models	Gast 86R Single Cylinder	Gast 86R Single Cylinder
Voltage	120	120
Hz	60	60
HP	.125 HP	.125HP
Amps (120v)	1.4	1.4
OXYGEN GENERATOR		
Models	Airsep Topaz Ultra	Airsep Topaz Ultra
Voltage	120	120
Hz	60	60
Amps (120v)	6	6
Total Amperage Pull (460v)	14.1	16.8
CONTROLS		
Voltage	460V	460V
Power (Light)	On/Off DP	On/Off DP
Start Switch	On/Off (24V DC)	On/Off (24V DC)
Pressure Gauges (Water/Air)	Wika 2.5" (60/160)	Wika 2.5" (60/160)
Rotameter, L/min	0 - 9.1	0 - 14.1
Dissolved Oxygen (DO) Sensor	Optical, 0-50ppm (+/- 1.5ppm) 0-5mv	Optical, 0-50ppm (+/- 1.5ppm) 0-5mv
CONNECTIONS		
Inlet, in	2.5	3
Discharge, in	3	3
DIMENSIONS AND WEIGHT		
Height, in	42	42
Width, in	27	27
Length, in	42	42
Weight, lbs	220	224

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