

## Neo 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™ Nanobubble Generator is a highly efficient gas-to-liquid injection technology that converts bulk oxygen into 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 Neo is an economical and highly effective tool that improves water quality, suppresses root disease and promotes the growth of healthy, resilient plants.

The Neo comes with an energy efficient industrial-grade Lowara pump with an open impeller and a PLC controller that enables automation and control of the Neo when not used in continuous operation. The system is quiet and corrosion-resistant with stainless steel components. The Neo comes standard with an integrated low maintenance, optical DO sensor for real time monitoring. Available in 11, 34 and 57 m<sup>3</sup>/hr flow rates, the Neo is designed for durable operation and easy installation into existing irrigation or water treatment system.

### FEATURES & BENEFITS

- <200 nm-sized bubbles produced in excess of 1 billion nanobubbles / mL
- Improved water quality
- Oxygenation of any tank and any depth of water
- Enhanced or optimized nutrient absorption in plants
- Promotion of beneficial bacteria, suppression of pathogens
- Easy integration with fertigation 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 50 Standard	Neo 150 Standard	Neo 250 Standard
<b>LIQUID FLOW CAPACITY</b>			
Flow Rate, m <sup>3</sup> /hr	11.3	34	57
Indicated Gas Flow Range Recommended, L/min	0 - 1	0 - 4	0 - 7
<b>OPERATING PARAMETERS</b>			
Temperature Tolerance, °C	5 - 60	5 - 60	5 - 60
Standard Oxygen Transfer Efficiency	> 90%	> 90%	> 90%
<b>GAS FEED</b>			
Feed Gas Pressure Range Minimum, Bar	6.9	6.9	6.9
Feed Gas Pressure Range Maximum, Bar	9.7	9.7	9.7
<b>PUMP</b>			
Pump Model	Lowara ESH 32	Lowara ESH 40	Lowara ESH 65
Pump Motor, KW	1	2.2	4
Voltage	230	400	400
FLA	4.2	7.97	8.41
Phase	3	3	3
Hz	50	50	50
<b>Total Amperage</b>	4.2	7.97	8.41
<b>CONTROLS</b>			
Power (Light)	On/Off DP	On/Off DP	On/Off DP
Start Switch	On/Off (24V DC)	On/Off (24V DC)	On/Off (24V DC)
Pressure Gauges (Water/AIR) Bar	4.1/11	4.1/11	4.1/11
Rotameter, L/min	0 - 4.7	0 - 9.4	0 - 14.1
Dissolved Oxygen (DO) Sensor <sup>2</sup>	Optical, 0 - 50 ppm (+/- 1.5 ppm), 0-5 mV	Optical, 0 - 50 ppm (+/- 1.5 ppm), 0-5 mV	Optical, 0 - 50 ppm (+/- 1.5 ppm), 0-5 mV
<b>CONNECTIONS</b>			
Inlet, mm	50	75	90
Discharge, mm	63	90	90
Gas Fitting for External O <sub>2</sub>	1/4" BSPTF	1/4" BSPTF	1/4" BSPTF
<b>DIMENSIONS AND WEIGHT</b>			
Height, cm	107	107	107
Width, cm	68	68	68
Length, cm	107	107	107
Weight, kg	50	68	73