

## Neo Nanobubble Generator with Oxygen Enriched Air



### 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 with oxygen enriched air is a highly efficient gas-to-liquid injection technology that converts enriched oxygen air at 40% purity 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 integrated oxygen enrichment system capable of producing oxygen with 40% purity; 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 to allow real time monitoring. Available in 34 and 57 m<sup>3</sup>/ hr flow rates, the Neo 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
- Improved water quality
- Onboard oxygen enrichment system (40% O<sub>2</sub>)
- 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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<b>MODELS</b>	<b>Neo 150 Enriched</b>	<b>Neo 250 Enriched</b>
<b>LIQUID FLOW CAPACITY</b>		
Flow Rate, m <sup>3</sup> /hr	34	57
Indicated Gas Flow Range Recommended, L/min	0-4	0-7
<b>OPERATING PARAMETERS</b>		
Temperature Tolerance, °C	5 - 60	5 - 60
Standard Oxygen Transfer Efficiency	> 90%	> 90%
<b>GAS FEED</b>		
Feed Gas Pressure Range Minimum, Bar Feed Gas	6.9	6.9
Pressure Range Maximum, Bar	9.7	9.7
<b>PUMP</b>		
Pump Model	Lowara ESH 40	Lowara ESH 65
Pump Motor, KW	2.2	4
Voltage	400	400
FLA	4.61	8.41
Phase	3	3
Hz	50	50
<b>PRIMARY COMPRESSOR</b>		
Models	Gast 86R Single Cylinder	Gast 86R Single Cylinder
Voltage	120v/230v	120v/230v
HZ	50	50
KW	0.19	0.19
Amps (120v/240v)	3.5/1.8	3.5/1.8
<b>SECONDARY RECOMPRESSOR</b>		
Models	Gast 86R Single Cylinder	Gast 86R Single Cylinder
Voltage	120v/230v	120v/230v
HZ	50	50
KW	0.09	0.09
Amps (120v/240v)	1.7/0.9	1.7/0.9
<b>Total Amperage (120v/230v)</b>	<b>9.81/7.31</b>	<b>13.61/11.11</b>
<b>NITROGEN SEPARATOR DETAILS</b>		
Max Pressure PSIG (BAR)	26.5	26.5
Max Temp °C	65.6	65.6
<b>CONTROLS</b>		
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
<b>CONNECTIONS</b>		
Inlet, mm	75	90
Discharge, mm	90	90
<b>DIMENSIONS AND WEIGHT</b>		
Height, cm	107	107
Width, cm	68	68
Length, cm	107	107
Weight, kg	75	78