

## 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 Gould 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 150 and 250 GPM 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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MODELS	Neo 150 Enriched	Neo 250 Enriched
<b>LIQUID FLOW CAPACITY</b>		
Flow Rate, GPM	150	250
Indicated Gas Flow Range Recommended, L/min	0-4	0-7
<b>OPERATING PARAMETERS</b>		
Temperature Tolerance, °F	41-100	41-100
Standard Oxygen Transfer Efficiency	>90%	>90%
<b>GAS FEED</b>		
Feed Gas Pressure Range Minimum,PSIG Feed Gas	100	100
Pressure Range Maximum,PSIG	140	140
<b>PUMP</b>		
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	460v	460v
Amps (460v)	6.7	9.4
Phase	3	3
Hz	60	60
<b>PRIMARY COMPRESSOR</b>		
Models	Gast 86R Single Cylinder	Gast 86R Single Cylinder
Voltage	120	120
Hz	60	60
HP	0.25 HP	0.25 HP
Amps (120v/240v)	2.8/1.4	2.8/1.4
<b>SECONDARY RECOMPRESSOR</b>		
Models	Gast 86R Single Cylinder	Gast 86R Single Cylinder
Voltage	120	120
Hz	60	60
HP	.125 HP	.125HP
Amps (120v/240v)	1.4/0.8	1.4/0.8
<b>Total Amperage Pull (120v/240v) at 460v</b>	<b>10.9/8.9</b>	<b>13.6/11.6</b>
<b>NITROGEN SEPARATOR DETAILS (ENRICHED OPTION ONLY)</b>		
Max Pressure PSIG	385	385
Max Temp °F	150	150
<b>CONTROLS</b>		
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 - 9.4	0 - 14.1
Dissolved Oxygen (DO) Sensor	Optical, 0-50ppm (+/- 1.5ppm) 0-5mv	Optical, 0-50ppm (+/- 1.5ppm) 0-5mv
<b>CONNECTIONS</b>		
Inlet, in	2.5	3
Discharge, in	3	3
<b>DIMENSIONS AND WEIGHT</b>		
Height, in	42	42
Width, in	27	27
Length, in	42	42
Weight, lbs	176	195