

## 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 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 for real time monitoring. Available in 50, 150 and 250 GPM 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 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 50 Standard</b>	<b>Neo 150 Standard</b>	<b>Neo 250 Standard</b>
<b>LIQUID FLOW CAPACITY</b>			
Flow Rate, GPM	50	150	250
Indicated Gas Flow Range Recommended, L/min	0-1	0-4	0-7
<b>OPERATING PARAMETERS</b>			
Temperature Tolerance, °F	41-100	41-100	41-100
Standard Oxygen Transfer Efficiency	>90%	>90%	>90%
<b>GAS FEED</b>			
Feed Gas Pressure Range Minimum,PSIG	100	100	100
Feed Gas Pressure Range Maximum,PSIG	140	140	140
<b>PUMP</b>			
Pump Model	Gould ESH #15SH08B02T4F2	Gould ESH #02SH08A03E2A4	Gould ESH #2SH08D7HT4F2
Wetted Parts Materials	Buna-N/316 SS	Buna-N/316 SS	Buna-N/316 SS
Pump Motor, hp	2	5	7.5
Voltage	460	460	460
FLA	2.9	6.7	9.4
Phase	3	3	3
Hz	60	60	60
<b>Total Amperage Pull (460v)</b>	2.9	6.7	9.4
<b>CONTROLS</b>			
Voltage	460	460	460
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)	Wika 2.5" (60/160)	Wika 2.5" (60/160)	Wika 2.5" (60/160)
Rotameter, L/min	0-4.7	0-9.4	0 - 14.1
Dissolved Oxygen (DO) Sensor	Optical, 0-50ppm (+/- 1.5ppm) 0-5mv	Optical, 0-50ppm (+/- 1.5ppm) 0-5mv	Optical, 0-50ppm (+/- 1.5ppm) 0-5mv
<b>CONNECTIONS</b>			
Inlet, in	2.5	2.5	3
Discharge, in	2	3	3
Gas Fitting for External O <sub>2</sub>	1/4" Industrial	1/4" Industrial	1/4" Industrial
<b>DIMENSIONS AND WEIGHT</b>			
Height, in	42	42	42
Width, in	27	27	27
Length, in	42	42	42
Weight, lbs	100	150	160