

BLOOM Nanobubble Generator



APPLICATIONS

- Deep Water Culture
- NFT
- Drip Irrigation
- Water Tank Oxygenation
- Reservoir Oxygenation
- Algae Control
- Biofilm Control*

The patented Moleaer Bloom™ is a highly efficient gas-injection technology that converts bulk oxygen into nanobubbles and supersaturates irrigation water with high levels of dissolved oxygen (DO). Negatively charged, neutrally buoyant nanobubbles can 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 Bloom is an economical and highly effective tool to improve water quality, increase plant growth, suppress root disease, and reduce environmental stress.

The Bloom comes with a self-priming, enclosed impeller pump for maximum flow and energy efficiency. The system is quiet and corrosion-resistant. The Bloom can be upgraded with a smart controller and integrated DO sensor to allow real time monitoring, system control and automation. Available in 25, 50 and 150 GPM flow rates, the Bloom was designed for durable operation, easy installation, low maintenance and simple control.

FEATURES & BENEFITS

- 90% standard oxygen transfer efficiency
- Supersaturated irrigation water
- Improved water quality
- 100 nm-sized bubbles produced in excess of one billion nanobubbles / ml
- Oxygenation of any tank and any depth of water
- Increased nutrient uptake efficiency
- 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
- Optional: DO monitoring

*Organic, bio-based nutrients may impact biofilm accumulation rates.

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Bloom US Series			
Models	Bloom 25	Bloom 50	Bloom 150
Liquid Flow Capacity (water)			
Flow Rate, GPM	25	50	150
Maximum Liquid Pressure, PSIG		22	
Operating Parameters			
Temperature Tolerance, °F		40 - 140	
Gas Feed¹			
Maximum Gas Pressure, PSIG		120	
Indicated Gas Flow Range, CFH	0 - 2.5	0 - 5	0 - 10
Electrical Power			
Voltage	115/230	115/230	230
Phase		1	
Hz		60	
Total HP	0.5	0.75	3
Total Amp Draw	3.3/1.6	4.9/2.4	9.8
Pump			
Pump Type		TEFC	
Wetted Parts Materials		Polypropylene/316 SS/Buna	
Controls			
Grow Smart Controller		Timed Start/Stop	
Voltage		24V DC	
Power (Light)		On/Off DP	
Motor Starter	Enclosed Nema4x Motor Starter w/ 1 Auxiliary Contact w/ OL Protection		
Start Switch		Latching (24V DC)	
Gas Pressure Alarm with Light		On/Off (24V DC)	
Dissolved Oxygen (DO) Sensor (Only Available on Bloom IQ Option)	Optical, 0 - 50 ppm (+/- 1.5 ppm), 30 Second Response Time		
Connections			
Customer Pipe Connection	2	2	2
Unit Inlet (FNPT), inches	2	2	2
Unit Discharge (FNPT), inches	1	1.5	2.5
Air Fitting for Offboard Oxygen Tank		CGA 022 fitting 1/4" MNPT (BSPTF)	
Dimensions and Weight			
Height, inches		34	
Width, inches		20	
Length, inches		36	
Weight, lb.	100	110	120

Note 1: When using oxygen, Moleaer recommends CGA inlet 540, outlet 9/16" - 18RH pressure regulator with delivery range of 5-150 PSI

Note 2: Intake screen is necessary to prevent clogging

