

BLOOM Nanobubble Generator



APPLICATIONS

- Deep-Water Culture
- NFT
- Drip Irrigation
- Water Tank Aeration
- Reservoir Aeration
- 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 an integrated DO sensor to allow real-time monitoring, system control and automation. Available in 6, 11 and 34 m³/h 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
- Dissolved oxygen monitoring

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

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Bloom EU Series			
Models	Bloom 25	Bloom 50	Bloom 150
Liquid Flow Capacity (Water)			
Flow Rate, m ³ /h	5.7	11.4	34
Maximum Liquid Pressure, Bar		1.5	
Operating Parameters			
Temperature Tolerance, °C		5 - 60	
Gas Feed¹			
Maximum Gas Pressure, Bar		8.5	
Indicated Gas Flow Range, L/min	0 - 1.2	0 - 2.4	0 - 4.8
Electrical Power			
Voltage	230	230	230
Phase		1	
Hz		50	
Total kW	0.75	1.00	3.2
Total Amp Draw	17.5	17.5	17.5
Pump			
Pump Type		TEFC	
Wetted Parts Materials		Polypropylene/316 SS/Buna	
Controls			
Control Modes	Manual (Continuous Oxygen Injection)/Auto (Max/Min DO Control)		
Controller	DO Display, Max and Min DO Settings		
Indicator Lights	Low Gas Pressure (Red)/Oxygen Injection Status (Green)		
Power (Light)	On/Off DP		
Motor Starter	Enclosed NEMA 4X Motor Starter w/ OL protection		
Dissolved Oxygen (DO) Sensor	Optical, 0 - 40 ppm (+/- 1.5 ppm), 30 Second Response Time		
Connections			
Customer Pipe Connection	63	63	90
Unit Inlet (FNPT), mm	63	63	90
Unit Discharge (FNPT), mm	63	63	90
Air Fitting for Offboard Oxygen Tank		1/4" BSPTF	
Dimensions and Weight			
Height, cm		86	
Width, cm		51	
Length, cm		91	
Weight, kg	45	48	54

Note 1: When using oxygen, Moleaer recommends CGA inlet 540, outlet 9/16" - 18RH pressure regulator with delivery range of 5-120 PSI (0.34-8.27 bar).

Note 2: Intake screen is necessary to prevent clogging.