

New Brunswick BioFlo 110 Fermentor

Manufacturer: New Brunswick

SKU#: 8261-30-1090



- Interchangeable control modules, impellers, motor drives and vessels
- Pre-programmed control ranges
- Control and view up to four separate vessels from a single screen
- Built-in “cascade” feature
- Adjustable P-I-D values for pH and DO

Product Description

New Brunswick's BioFlo 110 Modular Fermentor & Bioreactor is versatile enough to meet specific laboratory needs. This powerful model was designed to simplify procedures for hassle-free processing. As a result, demanding laboratories are able to increase biomass yields to keep up with dynamic research requirements. The BioFlo 110 fermentor automates procedures to ensure the accuracy and reliability of results. Operators can set points for both pH and dissolved oxygen (DO), which can be automatically maintained with this modular fermentor. Users can control pH through gas, acid or base addition with the cascade feature. Gas or addition agitations can be also used for DO manipulation. Users can also increase control flexibility by adjusting P-I-D values for both pH and DO. Equipment operators have an option to use a manual rotameter or a digital mass flow control for gas flow management. New Brunswick adapters also provide a wide range of options by adjusting probe immersion lengths. Magnetic drive and direct drive options are also available for cell culture applications. Fermentation processes make use of the direct drive as a standard. New Brunswick also enhanced control and the data logging efficiency of the BioFlo 110 modular fermentor & bioreactor with the NBS BioCommand® software and its Modbus compatibility. Call us today to learn more about the New Brunswick BioFlo 110 Modular Fermentor & Bioreactor!

New Brunswick BioFlo 110 Fermentor Specification

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Vessel	1.3 Liters	3.0 Liters	7.5 Liters	14.0 Liters
Total Volume	1.3 Liters	3.0 Liters	7.5 Liters	14.0 Liters
Working Volume	0.4 – 1.0 Liters	0.8 – 2.2 Liters	2.0 – 5.6 Liters	4.0 – 10.5 Liters
Design	Water-jacketed and heat-blanketed vessels available. All are autoclavable, dished-bottom, borosilicate glass.			
Agitation	Direct drive, 50 – 1,200 rpm, dual Rushton-style impellers			
Fermentation	30 – 300 rpm, direct or magnetic drive, pitched blade impeller			
Cell Culture				
Temperature Control	All vessels use P-I-D control for heating and cooling Heat-Blanketed Vessels: External heat mantle & high-capacity immersed cooling coil Water-Jacketed Vessels: Temperature-controlled water in glass jacket			
Maximum Temp.	70° C			
Controller Design	Primary Control Unit (PCU) plus optional, stackable loop-control modules. PCU supports 4 vessels — up to 32 loops, total			

Communications	Serial Port with BioCommand & Modbus protocols. 4-channel 0 - 2.5 V DC output for recorder
Primary Control Unit (PCU)	
Functions	Human Interface Control Center for up to 4 vessels
Display	Bright text & graphics on 3.4 x 4.5" (8.6 x 11.4 cm) 1/4 VGA screen
Multi-Vessel Support	Automatically senses attached loop controllers
Upgrades	Built-in floppy drive for easy firmware upgrades
Display Languages	English, German, French & Spanish
Control Modes	Manual and Automatic
Operating Modes	Fermentation and Cell Culture
Power Controller	Provides power for temperature control (heating and cooling), agitation and 5 optional pumps for liquid addition and removal
4-Pump Module	Module provides four peristaltic pumps for liquid addition and removal
Antifoam/ Levels Controller	Module supports three conduction probes for automating liquid additions and removals, and foam control
DO ₂ - pH Controller	
General Info	Optional controller with one pH and one dissolved oxygen (DO) probe connection
Dissolved Oxygen Control	Setpoint range: 0 – 100 %. Agitation or oxygen enrichment cascades. Sparge on demand. Four-gas algorithm for cell culture application
pH Control	Setpoint range: 2 – 12. Control - P-I-D with adjustable deadband. Acid/baseliquid additions (requires pumps). Four-gas mixing (requires Gas Mix Controller)
Gas Mix Controller	Four solenoid valves sequence additions of up to four gasses for pH and DO control in cell culture, or oxygen enrichment of sparge gasses
Utility Requirements	
Water (50µ filter)	5–10 PSIG (0.34– 0.68 kg/cm ²)
Air/O ₂ /CO ₂ /N ₂	3–10 PSIG (0.20– 0.68 kg/cm ²) medical grade
Electricity	(2) 100/120V, 50/60 Hz, 10 Amp or (2) 200/240V, 50/60 Hz, 6 Amp
Certifications	CE, cETL
Simplified Ordering	A variety of complete kits are offered
Autoclave Glass Vessels sizes (total volume)	1.3, 3.0, 7.5 and 14.0 (L)
Vessel choices (available in 1.3, 3.0, 7.5 and 14L options)	<ul style="list-style-type: none"> • single-wall vessel with heat blanket • double-walled vessel with water-jacket heater
Available Kits	<ul style="list-style-type: none"> • Basic fermentation • Advanced fermentation • Advanced cell culture
Controllers and components	Optional
Gas Mix Controller	Optional (Automatically mixes 2 to 4 gasses for optimized growth in microbial, insect and animal cell cultures)

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