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BioVita G[®]

**Highly Flexible Bioreactor for
Research and Development**

Optimizing Progress with Flexibility



Specifications subject to change without notice.

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Company Overview

BioMatrix is a leading provider of innovative fermentation solutions, with a focus on efficiency, precision, and flexibility. With years of expertise in biotechnology and a commitment to sustainable production, we deliver cutting-edge systems that adapt to the diverse needs of industries such as pharmaceuticals, food & beverage, and environmental engineering.

Technical Expertise

Our state-of-the-art fermentation tanks are engineered for optimal performance, offering advanced features like precise temperature control, real-time monitoring, and energy-efficient operation. We prioritize flexibility in design, allowing for tailored solutions that meet unique production requirements. Our team of skilled engineers and scientists is dedicated to delivering customized solutions that drive production success.

Industry Experience

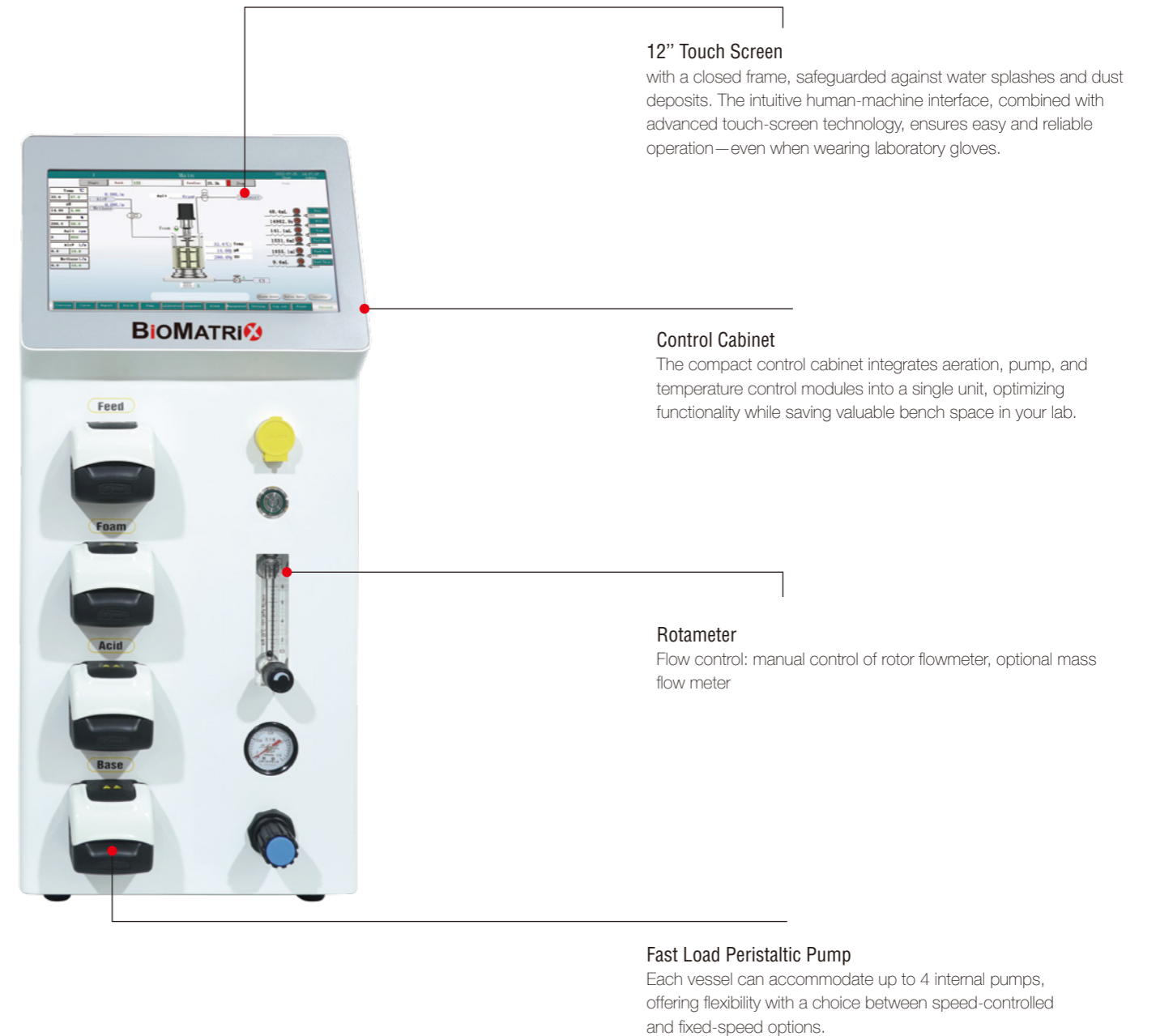
With over a decade of experience in the biotech sector, we have successfully partnered with clients globally, helping them streamline their processes and achieve superior fermentation results. Our solutions are trusted by top-tier companies for their reliability, scalability, and flexible approach to meeting diverse production needs.



BioVita G: The Ultimate Universal Controller Offers Full Flexibility

Flexible Configurations

"BioVita G" controllers are advanced systems designed to monitor and precisely control critical fermentation parameters, including: Temperature Control/ pH Regulation/Dissolved Oxygen Management/ Agitation Control/Automated Feeding Systems"



12" Touch Screen

with a closed frame, safeguarded against water splashes and dust deposits. The intuitive human-machine interface, combined with advanced touch-screen technology, ensures easy and reliable operation—even when wearing laboratory gloves.

Control Cabinet

The compact control cabinet integrates aeration, pump, and temperature control modules into a single unit, optimizing functionality while saving valuable bench space in your lab.

Rotameter

Flow control: manual control of rotor flowmeter, optional mass flow meter

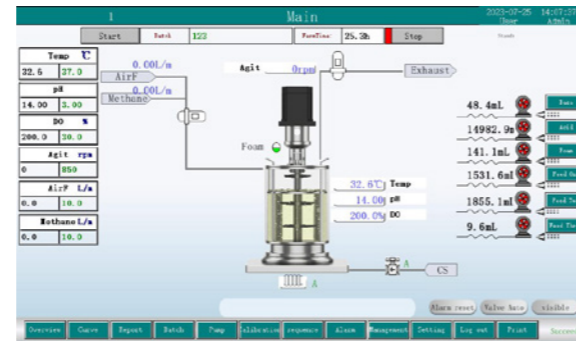
Fast Load Peristaltic Pump

Each vessel can accommodate up to 4 internal pumps, offering flexibility with a choice between speed-controlled and fixed-speed options.

BioVita G- Control System

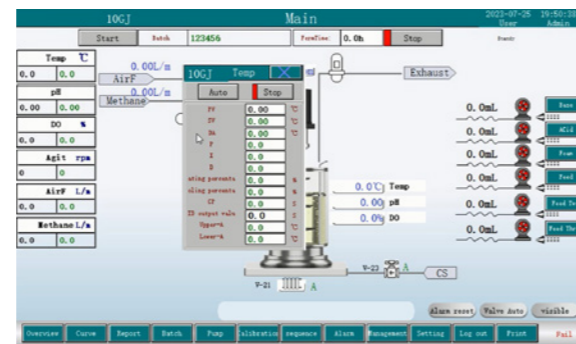
With independent design and proprietary intellectual property rights, our system delivers precise theoretical foundations to advance fermentation research.

Control parameters: temperature, Stirring, PH, DO, feed, defoaming and other parameters for detection, recording, control setting; pH and DO sensors can be easily calibrated through software.



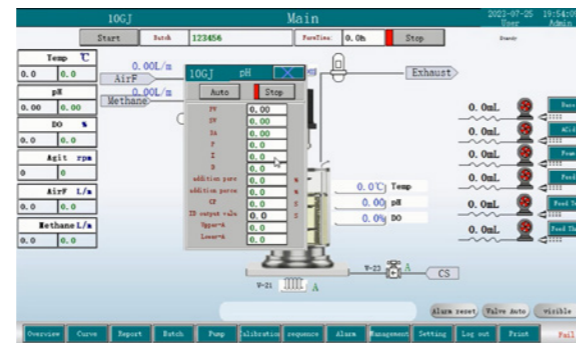
Automatic Feeding Control

The system automatically adjusts the feed amount based on real-time conditions in the fermenter (such as oxygen levels, pH, and nutrient needs), ensuring that microorganisms are always in their optimal growth state. This not only saves time and labor but also prevents overfeeding or underfeeding, making the fermentation process more efficient and stable.

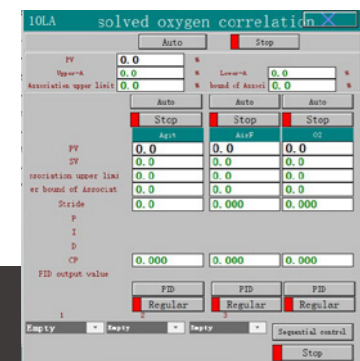


Automatic pH Control

Maintain precise pH levels throughout the fermentation process with our automatic pH control system. By continuously monitoring and adjusting the pH, the system ensures optimal conditions for microbial growth and product formation. This automated process reduces the need for manual intervention, enhances process stability, and improves overall yield.



Automatic DO Control



Maintain optimal dissolved oxygen (DO) levels throughout the fermentation process with our automatic DO control system. By continuously monitoring oxygen levels and adjusting airflow or oxygen supply as needed, the system ensures ideal conditions for microbial or cell growth.

This automated control minimizes manual adjustments, enhances process stability, and improves overall productivity by providing a consistent and controlled environment.

BioVessel G

Our BioVessel is the ideal benchtop bioreactor for your lab.

The multi-talented control cabinet opens up a new world of flexibility for your changing requirements. It can be used in single, twin, or multiple configurations, making it suitable for a wide range of applications.

Choose from our selection of conventional stirred-tank glass vessels, with a maximum working volume range from 1L to 10L. This flexibility ensures you have the perfect setup for your cultivation needs, whether for microbial or cell culture experiments.

Our reliable autoclavable borosilicate glass culture vessels are available in multi versatile volumes ranging from 1L to 10L, catering to a wide variety of cell culture and microbial applications.



How your benefit

The classic stirred-tank design ensures ease and reliability for seamless scale-up and scale-down studies.

Optimize your resources with the special designed vessels, ideal for use in general lab autoclaves, reducing the need for additional investment.

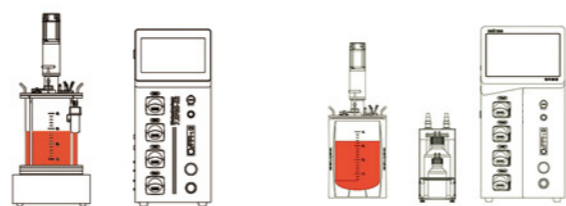


Flexible Configurations

BioVita G controllers are advanced systems designed to monitor and precisely control critical fermentation parameters, including: Temperature Control/ pH Regulation/Dissolved Oxygen Management/ Agitation Control/Automated Feeding Systems



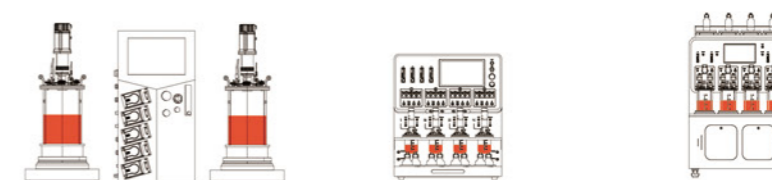
Technical Specifications



Multi-style		Microbial bioreactor	Double-wall bioreactor	
Glass type vessel	Total volume (L)	1-10	1-10	
	Working volume (L)	30%-70%	30%-70%	
	Vessel quantity	1	1	
	Sterilization	Off-site sterilization (in Autoclave)		
Heating method	Stainless steel bottom jacket heating	●	-	
	Double-wall glass jacketed heating	-	●	
	Electric blanket heating	-	-	
Gas supply system	Gassing	Standard	Air	
		Optional (O2/N2/CO2/CH4)	◎	
	Gas flow control	Roto flowmeter (manual control)	●	●
		Mass flowmeter (automatic control)	◎	◎
Air intake way	Bottom O-Ring Sparger			
Stirring system	Mechanical stirring	Standard for bacterial culture		
	Speed (RPM)	0-1000 rpm ±1rpm		
	Magnetic stirring	Standard for cell culture		
	Speed (RPM)	0-300 rpm ±1rpm		
Feed supplement system	Peristaltic pumps	Standard with 4 high-precision peristaltic pumps Optional: 6 or 8 pcs		
Detection electrode	Sensor	Temperature	●	
		pH	●	
		DO	●	
		Antifoam	●	
		CO2	◎	
		OD	◎	
		Other	◎	
Touchscreen controller	Kunlun	●	●	
	Siemens	◎	◎	
Remote control system		◎	◎	

● Standard ◎ Optional

Technical Specifications



Multi-style		Benchtop duplex bioreactor	Multi-Channel mini parallel bioreactor	Multiple bioreactor	
Glass type vessel	Total volume (L)	1-10	0.1-2.5	1-10	
	Working volume (L)	30%-70%	30%-70%	30%-70%	
	Vessel quantity	2	2xn	2/4/6/8	
	Sterilization	Off-site sterilization (in Autoclave)			
Heating method	Stainless steel bottom jacket heating	●	●	●	
	Double-wall glass jacketed heating	-	-	-	
	Electric blanket heating	●	-	◎	
Gas supply system	Gassing	Standard	Air*2	Air*4	
		Optional (O2/N2/CO2/CH4)	◎	◎	
	Gas flow control	Roto flowmeter (manual control)	●	●	●
		Mass flowmeter (automatic control)	◎	◎	◎
Air intake way	Bottom O-Ring Sparger				
Stirring system	Mechanical stirring	Standard for bacterial culture			
	Speed (RPM)	0-1000 rpm ±1rpm			
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Feed supplement system	Peristaltic pumps	Standard with 4 high-precision peristaltic pumps Optional: 6 or 8 pcs			
Detection electrode	Sensor	Temperature	●	●	
		pH	●	●	
		DO	●	●	
		Antifoam	●	●	
		CO2	◎	◎	
		OD	◎	◎	
		Other	◎	◎	
Touchscreen controller	Kunlun	●	●	●	
	Siemens	◎	◎	◎	
Remote control system		◎	◎	◎	

● Standard ◎ Optional