

SBIO-420

BIO FERMENTER

SAKS
EQUIPMENTS Pvt. Ltd
EXPERIMENT THE FUTURE !



**Advanced Benchtop Magnetic Stirring Glass
Bioreactor**

Full System Overview



The SBIO-420 is a modern, compact, and fully automated benchtop bioreactor designed for microbial, enzymatic, and cell culture applications. Its modular architecture, smart user interface, and high precision control make it ideal for R&D labs, universities, biotechnology institutes, and small-scale production environments. It is a premium, versatile benchtop fermentation system designed for modern laboratories. Engineered for both research and small-batch production, this system combines high-grade borosilicate glass durability with an advanced magnetic coupling drive to ensure an ultra-clean environment for your microbial or cell cultures. With its modular capacity and precision automation, it is the ideal solution for optimizing bioprocess workflows.



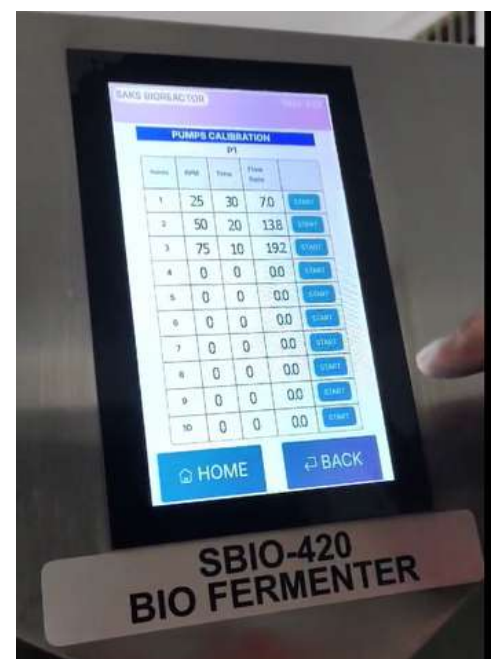
Key Features

- **Contamination-Free Agitation:** The magnetic coupling stirrer eliminates the need for mechanical seals, drastically reducing the risk of microbial ingress and ensuring the highest levels of sterility.
- **Precision Thermal Management:** A high-efficiency heating jacket provides stable temperature control up to 80°C, essential for sensitive thermophilic applications.
- **Automated Fluid Logistics:** Equipped with three integrated peristaltic pumps for autonomous pH regulation (acid/base) and media management, plus a fourth dedicated pump for precise sampling and nutrient feeding.
- **Intuitive Interface:** A vibrant 7-inch touchscreen provides a "at-a-glance" dashboard for real-time monitoring and one-touch calibration of all critical parameters.
- **Industrial-Grade Filtration:** Dual-stage filtration with micron filters for air intake and CO₂ exhaust ensures a sterile gas exchange environment.



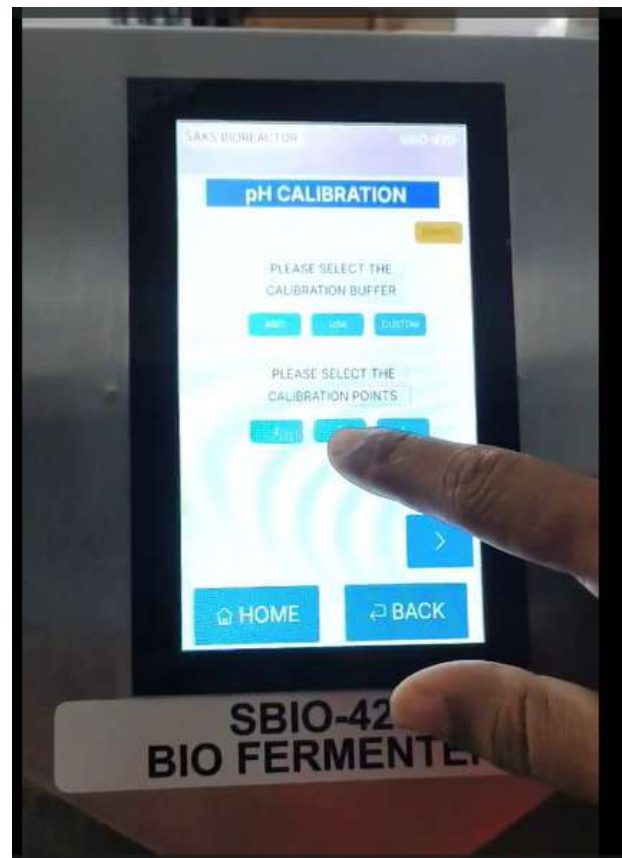
Engineering & Design

SBIO-420 features a high-grade stainless steel headplate with multiple configurable ports for sensors, sampling, feed lines, sparger, condenser, and exhaust. The heating jacket ensures uniform thermal distribution for consistent fermentation performance.



Applications

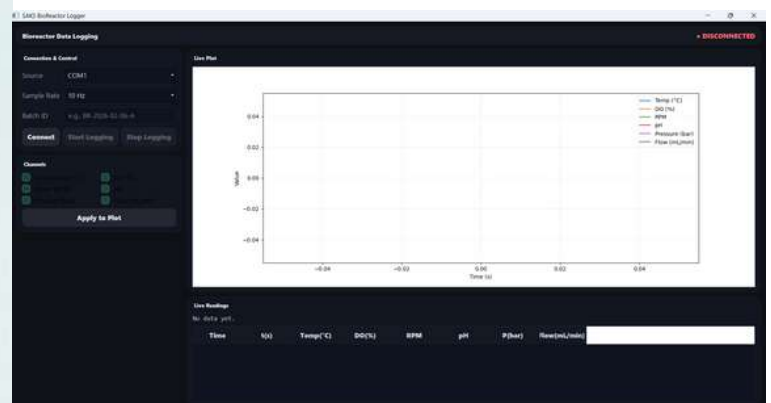
- Microbial Fermentation (Bacteria, Yeast, Actinomycetes)
 - Enzyme Production
 - Cell Culture (Optional DO probe)
- Bioprocess Research & Optimization
 - Education & Training Laboratories
 - Scale-Up Feasibility Studies



Optional Mass flow controller for automatic gas controls



21CFR compliant datalogging software available on request



Technical Specifications	
Parameter	Specification
Vessel Material	High-Grade Borosilicate Glass
Working Volume	0.5L to 10L (Interchangeable vessels)
Stirrer Drive	Magnetic Coupling (bottom-driven)
Speed Range	50 – 300 RPM (Digital control)
Temperature Control	Heating Jacket up to 80°C
pH Monitoring	Autocleavable Pharma-grade Electrode (150 mm)
Pumps	3x Peristaltic (Acid, Base, Media/ Sampling)
Gas Control	Rotameter & Pressure Regulator for Air; Micron Filters for CO ₂
Control System	7-inch Touchscreen PLC



Why Choose SBIO-420?

THE SBIO-420 ADVANTAGE: BEYOND THE BASICS



Reliability You Can Count On: Designed to exceed industry standards, the SBIO-420 delivers accurate, repeatable results every time.



Affordable Excellence: Competitive pricing without compromising on advanced features and performance. **Future-Ready:** Easily upgradable with options for Dissolved Oxygen or other optional controls



Future-Proof Modularity (0.5L – 10L)

The SBIO-420 is designed to grow with your research. Our "Plug & Play" architecture allows a single control tower to interface seamlessly with multiple vessel sizes. Transition from small-scale feasibility studies to 10L pilot production without the capital expense of a new system.



Whisper-Quiet BLDC Technology

Powered by a high-torque Brushless DC (BLDC) motor, the SBIO-420 offers superior speed stability and maintenance-free operation. Enjoy a quieter laboratory environment and increased motor longevity compared to traditional brushed alternatives.



Advanced Data Integrity & Logging

Stay compliant and informed. The SBIO-420 features integrated data logging software that captures real-time process parameters. Export your batch data via USB or connect to a PC for comprehensive analysis, ensuring your process remains transparent and reproducible.



Pharma-Grade Sterilization Cycle

Minimize downtime between batches. Both the high-durability borosilicate vessel and the 150mm pH electrode are fully autocleavable. This streamlined sterilization path ensures the SBIO-420 is ready for its next run with zero compromise on sterility.



Designed for the Modern Workspace

We understand that bench space is a premium. The SBIO-420 boasts a compact, vertical footprint that packs industrial power into a sleek design, fitting perfectly into modern, high-efficiency laboratory environments.

Ordering Information

Model	Description	Included Accessories
SBIO-420-X	Benchtop Bioreactor System	Controller, Vessel, Stirrer, Air inlet system, Acid/Base/Media pumps, Temperature Sensors
SBIO-420-T-X	Benchtop Bioreactor System with temperature control	Controller, Vessel, Stirrer, Air inlet system, Acid/Base/Media pumps, Temperature Sensor and heated jacket for temperature control
SBIO-420-DO-X	Benchtop Bioreactor System with temperature and Dissolved Oxygen control	Controller, Vessel, Stirrer, Air inlet system, Acid/Base/Media pumps, Temperature Sensor and heated jacket for temperature control and DO probe for dissolved oxygen measure and control module for correction

* XX IS THE CAPACITY EX. BIO-420-5 IS 5L CAPACITY

Contact Us:

For more information or to request a demo, contact SAKS Equipments Pvt. Ltd. at:
Phone: +91 8891680266 Email: sales@saks.net.in Website: www.saks.net.in

ADDRESS

TMC 4/54, Irimpanam Eroor Road, Irimpanam P.O, Cochin, Kerala, India - 682301