

GHPHSBIO Pharma Technologies Pvt. Ltd.

Engineering Excellence, Evolving Biotech

Innovation is at the heart of every breakthrough we create.

At GHPHSBIO Pharma Technologies Pvt. Ltd., we merge knowledge, innovation, and precision to engineer perfection. With a relentless focus on quality and technology, we continue to evolve the future of fermenters, bioreactors, and filtration systems.

In Place Sterilizable (SIP) & Cleaning In Place (CIP) Fermenter System



GHPHSBIO Pharma Technologies Pvt. Ltd.

- 📍 Address: Plot No. F171, Phase-8B, Industrial Area, SAS Nagar, Mohali, Punjab - 160055, India
- 📞 Phone: +91-[98988-25202, 98776-31206]
- ✉️ Email: ghpsbio@gmail.com/ghpsbiosales@gmail.com
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About Us

With over 20 years of hands-on experience in Bioreactor and Fermentation technology, GHPBio Pharma Technologies Pvt. Ltd. provides expert consultation, plant setup, and automation solutions.

We specialize in microbial, fungal, and cell culture processes, sterile operations, and downstream processing.

We designs, manufactures, and delivers high-performance, customized bioprocess equipment for green, red, and white biotechnology, as well as pharmaceutical, food, and renewable energy applications.

We serve cutting-edge fields including cell culture, stem cells, synthetic meat, algae, biopolymers, and biofuels, advancing both R&D and Production.

Based in Mohali, our systems are engineered to meet global GLP, GMP, and FDA standards, with fully traceable QA/QC processes.

Built to meet rigorous quality standards, all products undergo QA/QC, pass audits, and are validation-ready to ensure consistency and compliance.

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Global Certification & Compliance

GHPBio Pharma Technologies Pvt. Ltd. adheres to stringent international standards to ensure the highest quality and safety across all products and services.

Our systems are designed, manufactured, and validated in compliance with

- IEC 60601-1
- ISO 9001:2015
- ISO 13485:2016
- ISO 14001:2015
- WHO-GMP
- CE standards

Reflecting our commitment to global quality, regulatory compliance, and operational excellence

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In Place Sterilizable Fermenter Specification

The Insitu Series fermenters and bioreactors, designed for laboratory, pilot, and large-scale industrial applications. Available in standalone, twin, and parallel configurations, this series offers the flexibility required to meet diverse experimental and production needs.

Manufactured from SS316/SS316L stainless steel, provides a non-corrosive, non-toxic, and sterile environment, ensuring optimal conditions for microbial, fungal, cell culture, stem cells, synthetic meat, biosimilars, bioethanol, and other bioprocess applications

Covering a volume range from 5L to 50KL, the series supports lab, pilot, and industrial-scale bioprocessing. For volumes 50L and above, Cleaning-In-Place (CIP) systems are integrated for hygiene, efficiency, and regulatory compliance.

Available in Basic, Semi-Automatic, and Fully Automatic modes, the Insitu Series enables precise process control while ensuring 21 CFR Part 11 compliance for data integrity and traceability.

Combining robust engineering, advanced automation, and regulatory adherence, the Insitu Series delivers reliable, reproducible results, empowering researchers and manufacturers to drive innovation across a wide spectrum of bioprocesses.

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General Overview for 100L Fermenter

In Place Sterilizable Fermenters	
Total Volume	100L
Working Volume	75L
Type	In place Sterilization (SIP) & Cleaning In Place (CIP)
H:D Ratio	2.5:1
Vessel	Cylindrical
Material of Construction	
All wetted parts	SS-316/316L, Borosilicate Glass
Jacket/Limpet/No n-Contact Part	SS-304/Borosilicate Glass
Leg/Lugs support	SS-304, Leg Support
Gaskets/O-rings	Silicon & EPDM (FDA Compliant)
Finishing	
Inner Surface	220 Grit Finished & Mirror Polished $Ra \pm 0.4\mu\text{m}$
External Surface	180 Grit Matt finish $Ra \pm 1.6\mu\text{m}$

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Design Guidance			
Design Code	As per ASME BPE 2019		
Pressure	Parameter	Vessel	Jacket
	Working	Up to - 2.0 Kg/cm ²	Up to - 3.5 Kg/cm ²
	Design	Full Vacuum - 3.0 Kg/cm ²	Full Vacuum - 4.0 Kg/cm ²
	Hydraulic Test	4.0 Kg/cm ²	6.0 Kg/cm ²
Temperature	Working	10 – 140 Deg. C	10 – 140 Deg. C
	Design	0 – 150 Deg. C	0 – 150 Deg.C
Agitation			
Drive	Top Driven Single Mechanical Dry Seal		
Impeller Type	Rushton Turbine, 6 Blades (RT6) – 3 nos.		
Baffles	4 nos., Fixed type		
Motor Type	Standard AC motor		
RPM	70-700		

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Ports	
Top Dish/Top Plate	Feeding Septum Ports – Acid/Base/Antifoam/Feed, Inoculation port, spare port, Pressure Transmitter, Foam Sensor, Safety Valve, Air Exhaust, Condenser, Transfer port
Side Port	pH port, DO Port, Temp. Sensor port, Spare Port, Jacket Safety Valve, Jacket inlet, Jacket Outlet, Air overlay, Sparger, Sampling Port, Light Glass, View Glass
Bottom	Bottom flush valve/Transfer valve
Aeration	
Designed for	1 VVM
Sparger	Ring type sparger with bottom perforations
Air Filters	1-micron prefilter, 0.2 µm main air inlet and exhaust air filters
Filter Integrity Testing	Provision for In-situ Integrity testing provided
Filter /Air Line Sterilization	Automatic/Manual
Air Volume Measurement & Control	Automatic through MFC/Manual Through Rotameter/
Air Exhaust	Reflux Condenser that can efficiently handle a volume of out flowing air/gas
Back Pressure Control	Automatic Control through BPCV/Manual

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Sampling System	
Type	Zero Dead Leg Sampling valve with complete assembly consists of Steam In, Steam Lock and Sampling valve. Whole assembly is In-situ sterilizable
Harvesting System	
Type	Zero Dead Leg Harvesting valve with complete assembly consists of Steam In, Transfer Valve. Whole assembly is In-situ sterilizable
SIP System	
Type	Auto SIP System
Requirement	121 Deg. C in all wet process area
Validation	As per ASME BPE
Thermal Circuit	
Temperature Control	Heating assembly and circulation pump, temperature sensor, valves
Pipelining	
Pipelining	All utility and process pipelining will be connected with the fermenter system

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Safety

	Vessel	Jacket
Valve	Sanitary safety valve	Safety valve
Pressure Rating	2 Barg	3.6 Barg
Temperature	0-130 Deg. C	0-150 Deg. C
Seat	EPDM/Silicone	EPDM
MOC	SS-316L	SS-316L

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Utilities

We also supply and integrate complete utility systems required for seamless fermenter operation, Steam Generator (Boiler), Chiller Circulator, Oil Free Air Compressor, and CIP/SIP support systems. Our turnkey utility solutions ensure reliable performance, energy efficiency, and uninterrupted bioprocess operations.



Steam Generator



Chiller Circulator



Air Compressor

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After-Sales Support & Services

At GHPBio, our commitment extends beyond delivery. We provide comprehensive after-sales support, ensuring your systems operate at peak efficiency throughout their lifecycle.

Our Services Include:

- Installation & Commissioning - Seamless setup for immediate productivity
- Training & Technical Support - Empowering your team to maximize performance
- Maintenance & Upgrades - Preventive and corrective services to ensure longevity
- Process Optimization - Expert guidance for continuous improvement
- Remote Monitoring & Assistance - Timely support for uninterrupted operations

With a customer-focused approach, we partner closely with clients to ensure reliable, efficient, and compliant operations, from start-up to scaling production

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Why Choose US

- 20+ years of expertise in bioreactors, fermentation technology, and end-to-end bioprocess solutions.
- Specialized proficiency in microbial, fungal, and cell culture processes, sterile operations, and downstream processing.
- Custom-designed, high-performance bioprocess equipment built for biotech, pharma, food, and renewable energy applications.
- Advanced solutions for emerging sectors including stem cells, synthetic meat, algae, biopolymers, and biofuels.
- Global compliance with GLP, GMP, FDA, CE, IEC 60601-1, ISO 9001, ISO 13485 & 14001, and WHO-GMP standards.
- Strong QA/QC framework ensuring audit-ready, validation-ready, and fully traceable manufacturing processes.
- Comprehensive lifecycle services including installation, training, AMC/CMC, retrofitting, upgrades, relocation, and 24x7 customer support.

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Our Services:

Our commitment extends far beyond equipment delivery. We provide end-to-end services to ensure your bioprocess systems perform reliably and efficiently throughout their lifecycle.

- Installation & Commissioning
- Training & Skill Development
- AMC/CMC
- Retrofitting & Upgrades
- Relocation Services
- Warranty & Extended Coverage
- Spare Parts & Consumables
- Consultancy & Process Optimization
- Customer Support

Contact Us:

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Innovating Bioprocess Solutions for a Sustainable Future

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“Together, Let’s Shape the Future of Biotechnology”

