



BIOSTAT® CultiBag STR 200L



Flow range [L/min]:

	Rotameter	Mass Flow Controller*
Air Sparger	2.3 – 23	0.4 – 20
Air Overlay	2.3 – 23	–
N ₂	2.3 – 23	–
O ₂	2.3 – 23	0.4 – 20
CO ₂	2.3 – 23	–

* Must be ordered separately as set of 2 MFC

Pumps

- 2 × integrated digital peristaltic pumps
- Configurable to pH or substrate controller
- Optional 2 additional feed pumps

Temperature

- 1 × 1.000 W and 2 × 500 W heating blankets around bag holder
- Temperature range : ambient – 40°C
- Automatic safety shutdown for prevention of overheating
- Filter Heater on exhaust filter

Agitation System

- Magnetic drive
- Speed range from 20 up to 150 rpm
- Quiet operation
- Stirrer pre-installed inside disposable CultiBag STR

Packages

The BIOSTAT® CultiBag STR 200L disposable bioreactor packages are specially configured for cell culture applications. The integrated, automatically-controlled, 4-gas mixing system provides advanced sparger and overlay aeration. Air is routed to Overlay and Air, N₂, O₂ and CO₂ are routed to Sparger. Both lines are automatically adjusted via DO and pH controller. Alternatively CO₂ may also be directed together with Air to Overlay. Rotameters are available for control of Air Sparger, Air Overlay, CO₂, O₂ and N₂. An optional set of two mass flow controllers is available for individual flow rate adjustments of O₂ and Air Sparger.

BIOSTAT® STR 200L Control Tower

- For measurement & control hardware, pumps & gassing system
- Control of one disposable CultiBag STR
- Installed on separate skid

Digital Control

- Graphical user interface with colour display and touch screen operation
- Integrated amplifiers for temperature, pressure, disposable DO sensors, disposable pH sensors
- Additional amplifiers for reusable DO & pH sensors available
- Integrated control loops for Temperature, DO, pH, Agitation, Gas flow and substrate
- Multi-stage DO cascade control
- Calibration of DO and pH sensors
- In-process DO and pH recalibration
- Trend display for up to 6 process values
- Up to 2 direct balance connections

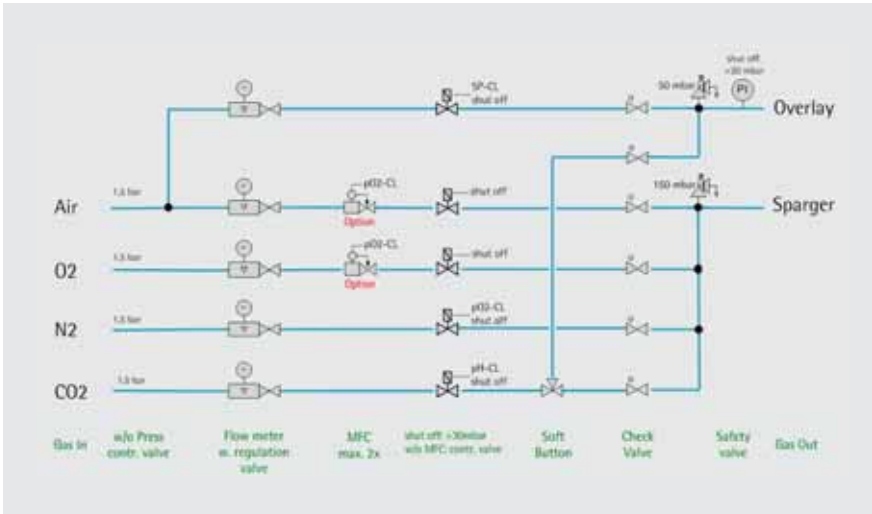
Gassing Module

- 1 × Sparger outlet
- 1 × Overlay outlet
- 4-Gasmixing of Air, N₂, O₂ and CO₂ for Sparger gassing
- Air for Overlay gassing
- Alternatively CO₂ can be directed to Overlay via a soft button
- Solenoid valves for Air (2x), N₂(1x), O₂ (1x) and CO₂ (1x)
- Rotameters for Air (2x), CO₂(1x), N₂(1x) and O₂ (1x)
- One optional set of two Massflow Controllers* for Air sparger (1x) and O₂ (1x)
- Controlled via pH/DO regulation

По вопросам продаж и поддержки обращайтесь:

Астана+7(7172)727-132, Волгоград(844)278-03-48, Воронеж(473)204-51-73, Екатеринбург(343)384-55-89,
Казань(843)206-01-48, Краснодар(861)203-40-90, Красноярск(391)204-63-61, Москва(495)268-04-70,
Нижний Новгород(831)429-08-12, Новосибирск(383)227-86-73, Ростов-на-Дону(863)308-18-15, Самара(846)206-03-16,
Санкт-Петербург(812)309-46-40, Саратов(845)249-38-78, Уфа(347)229-48-12

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Bag Holder

- Installed on separate skid to the control tower; for easy connection and disconnection as required.
- Stainless Steel housing
- Electropolished
- Mobile
- 2 side windows for side ports
- Viewing window
- Double door for installation of bags

Sensors

- Disposable optical chemical sensors for pH and DO are pre-installed in every bag
- Range: pH: 5.5 – 8.5
- DO: 0 – 100%
- pT100 reusable sensor for temperature measurement installed in a sleeve

Disposable Cultivation Chamber: CultiBag STR 200L

- Total volume: 280 L
- Working volume: 50 L – 200 L
- Aspect Ratio (H:D) 2:1
- Stirrer pre-installed inside bag
- 2 × impellers
- Choice between 6-blade and 3-blade impellers
- Overlay and Sparger line
- Choice between ring and microsparger
- Dip tube
- Side Ports:
 - 1 × DO sensor
 - 1 × pH sensor
 - 1 × T sensor
 - 1 × Needleless sampling device
- Bottom Drain Port
- Top Ports:
 - 2 × Gas IN, 1 × Gas OUT, including sterile filters
 - 6 × Feeding | Inoculation lines
- USP Class VI

SCADA Software BioPAT® MFCS/DA

- Plug and Play configuration
- Online data acquisition
- Sample data management
- Enhanced Plotting
- Export functions
- Easy to use programming interface
- Upgrade to advanced BioPAT® MFCS/Win control software possible

Applications

- Cell culture of insect and mammalian cells
- Cell mass, protein, MAb & vaccine production
- Industrial and academic research
- Process development
- Process optimization
- Up- and down-scale studies
- Seed Culture cultivation
- Large scale production up to 200 L

Features and Benefits

- Single configuration
- Disposable Bioreactor in traditional reusable vessel design
- Large working volume range
- Flexible gassing system
- Individual gas flow adjustments via rotameters and optional Mass flow controllers
- Disposable DO and pH sensors
- First completely disposable and scalable bioreactor on the market
- Bag holder design allows fast change from one cultivation to another
- Pressure safety control
- Advanced multi-stage cascaded DO control
- Intuitive touch screen interface for easy operation
- Traditional impeller and sparger types
- Convenient bag installation via double door
- Small footprint
- Supervisory Process Control software (BioPAT® MFCS/DA) included

Technical Specifications

Description	Hardware BIOSTAT® CultiBag STR 200L
Volume	
Total Volume	280 L
Minimum Working Volume	50 L
Maximum Working Volume	200 L
Power Supply	
208 VAC	×
400 VAC	×
Bag Holder	
Installed on skid	×
Electro-polished	×
Hemispherical doors	2
Holder for Air filters	×
Temperature Control	Heating Only
Viewing window	×
Opening for sideports	×
pT 100 probe	1
Sensor Clamps	×
Filter Heater	1
Top drive motor	1
Control Tower	
Version	Single
Installed on skid	×
Temperature Control	Ambient – 40°C
Stirrer Speed	20 – 150 rpm
pH control	5.5 – 8.5
DO control	0 – 100%
Amplifiers for:	
– Disposable DO sensor	×
– Disposable pH sensor	×
– Reusable DO sensor	(x)
– Reusable pH sensor	(x)
– Temperature	×
Cascade Control	×
Recalibration function for:	
– Disposable DO sensor	×
– Disposable pH sensor	×

Description	Hardware BIOSTAT® CultiBag STR 200L
Interface	
– Ethernet	×
– RS232	4
– External	4
BioPAT® MFCS/DA	×
Gassing module	
Rotameter [L/min]:	
Sparger Line	
– O ₂	×
– N ₂	×
– CO ₂	×
– Air	×
Overlay Line	
– Air	×
MFC for	
Sparger Line	
– O ₂	(x)*
– Air	(x)*
Soft Button for	
CO ₂	×
Pumps & Balances	
Peristaltic Pumps	2
Additional internal Pumps	(1)
Additional external Pumps	(1)
Balances	(2)

* For BIOSTAT® CultiBag STR 200L Mass Flow Controllers for O₂ and Air must be ordered together as one package.
() optional, must be ordered separately

Ordering Information

Basic Hardware

DH-200LOS1B3

DH = Disposable Hardware

- = BIOSTAT® CultiBag STR

P = BIOSTAT® CultiBag STR Plus

Volume

L = Units (Example: L = liter)

O = Optical

S1 = Stirrer Bar, Single Version

B = Bag Holder skid with heating blanket

Voltage

3 = 208 VAC (50/60 Hz)

4 = 400 VAC (50/60 Hz)

Hardware	Order Code	Description
Single version	DH-200LOS1B3/4	Package BIOSTAT® CultiBag STR 200L – 208VAC/400VAC – 1 × Skid with BIOSTAT® STR 200L Control Tower – 1 × Skid with Bag holder 200L for installation of single-use CultiBag STR 200L
Accessories	Order Code	Description
Massflow controller Package	DS200L-SBMOA	Package of 2 mass flow controller for O ₂ and Air sparger; Range: 0.4-20 slpm
Amplifiers for classical DO & pH sensor	DS200L-SBAC	Amplifiers for probes based on classical technology for pH and DO
WM 313 pump	8847983	Peristaltic WM 313 internal pump, analogue
WM 323 pump	8843970	Peristaltic WM 323 external pump, analogue

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