



BIOSTAT[®]er
Economy
fermentor | bioreactor
benchtop system

Engineering by
Sartorius BBI Systems

Biostat® er ... pre-packaged for "first time" fermentation



BIOSTAT® er is a compact autoclavable fermentor | bioreactor system. Specially designed for vocational/academic education and "start-up" companies.

A single housing design concept with integrated measurement and control hardware, pumps, temperature-, gassing- and motor system, save valuable laboratory bench space.

Application driven configured packages for microbial culture and cell culture are available including all components needed for immediate operation.

A powerful software package for operation via PC as well as a SCADA software package is included in each pre-packaged system.

BIOSTAT® er is applicable for

- Microbial culture – growth of bacteria, yeast and fungi
- Cell culture – growth of animal, insect and plant cells
- Transition from shaking or tissue culture flasks
- Small scale protein expression
- For teaching and education

Features

- Ready to use packages for microbial or cell culture
- Control capabilities for temperature, pH, DO, stirrer speed, gas mixing and substrate
- Configurable 2-stage DO controller via stirrer speed, gas mixing or substrate
- pH in line calibration
- Trend display
- Substrate controller for unused internal or external feed pump
- Interchangeable culture vessels with 1 L, 2 L or 5 L working volume
- Industrial proven hardware
- Powerful PC operating software
- Data storage and visualization software package MFCS/DA
- Step by step guide for installation and use

Technical Specification

Required bench size approx. W×H×D [mm]

Basic housing	210×455×425	
Space requirements per culture vessel. (inner autoclave dimension Ø × H [mm])	1 L	220×500*
	2 L	250×550*
	5 L	280×700*

Utilities

Power supply	230 VAC or 120 VAC
Gasses	Controlled @ 1.5 bar; dry, particle and oil free
Water	Controlled @ 2 bar
Drain	@ 0 bar

* Option for height reduction using a flexible adaptor for the exhaust cooler (8844593)

Ordering information

Description	BIOSTAT®er Microbial culture packages			BIOSTAT®er Cell culture packages		
	1 L	2 L	5 L	1 L	2 L	5 L
Culture vessel	1 L	2 L	5 L	1 L	2 L	5 L
Cat. No. 230 VAC	8843814-0	8843816-0	8843818-0	8843822-0	8843824-0	8843826-0
Cat. No. 120 VAC	8843815-0	8843817-0	8843819-0	8843823-0	8843825-0	8843827-0
Package with DO probe	-1	-1	-1	-1	-1	-1
Package with Laptop	-2	-2	-2	-2	-2	-2
Package with Laptop and DO probe	-3	-3	-3	-3	-3	-3
Culture Vessel						
Total volume [L]	1.6	3	6.6	1.6	3	6.6
Working volume [L]	0.4-1	0.6-2	0.4-5	0.4-1	0.6-2	0.4-5
Culture vessel tripod	•			•		
Stirrer shaft with sealing	•			•		
6-blade disk impeller (Rushton impeller)	2			–		
3-blade segment impeller (Marine impeller)	–			1		
Agitation [rpm]	20-1200	20-1200	20-800	20-1200	20-1200	20-800
Storage bottle 250 mL	2	2	–	2	2	–
Storage bottle 500 mL	–	–	2	–	–	2
Air inlet and exhaust filter	2			3		
Aeration tube with ring-sparger	•			–		
Aeration tube with µ-sparger	–			•		
Inoculation port	•			•		
Exhaust cooler	•			•		
4-Way addition fitting	•			•		
Universal adaptor 3.2 mm for overlay aeration	–			•		
Sample- Harvest pipe	•			•		
Manual sampler	•			•		
Cooling finger	•			○ 8846456	8847819	8847827
Heating blanket	•			•		
pH Electrode, cable	•			•		
Temperature sensor Pt 100 with pocket	•			•		
Basic unit						
Digital controller	•			•		
Control capabilities for temperature, pH, DO (2 stage cascade), stirrer speed, substrate*	•			•		
Rotameter for Air [l/min]	0.16-1.6	0.42-4.2	1.3-13	–	–	
Gassing with individual gas flow path, control valve and Rotameter; N ₂ without control valve						
Air & N ₂ [ml/min]	–	–		16-166	33-333	50-500
O ₂ & CO ₂ [ml/min]				3.3-33	16-166	33-333
Peristaltic pumps (integrated)	2			2		
Dry heating system with plug connector for heating blanket and controlled cooling water valve for cooling finger	•			•		
Tubing, O-Ring spare set	•			•		
PC operation software package	•			•		
SCADA Software MFCS/DA	•			•		

• = included, – = not included, – – = unavailable, ○ = option

* Functionality only with optional available system extensions

Technical specification are subject to change without notice.

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