

Biostat® D 50/D 100

In-situ sterilizable pilot-scale fermentor

Flexible fermentor system

Automatic in-situ sterilization

Digital measurement and control

Minimal space requirement

“Open frame” design

The Biostat® D 50/D 100 is a pilot-scale fermentor system with the choice of either 50l or 100l working volume culture vessels.

The modular design consists of the supply unit, the culture vessel and the control cabinet.

The open frame design of the supply unit provides ready access and ease of maintenance and operation.

The jacketed stainless steel culture vessels, with spiral baffles for efficient and homogenous heat transfer, are available with a height to diameter ratio of 3:1. This is in line with

the well proven scale-up strategy. For easy operation, the vessels are free-standing on legs.

The Biostat® D 50/D 100 comes equipped with a digital measurement and control system, including probes for temp., pH, dissolved oxygen, foam and four built-in peristaltic pumps.

Batch, fed-batch and continuous cultures can all be performed with the Biostat® D 50/D 100.

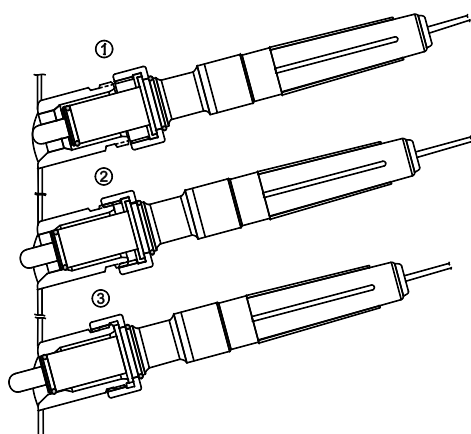
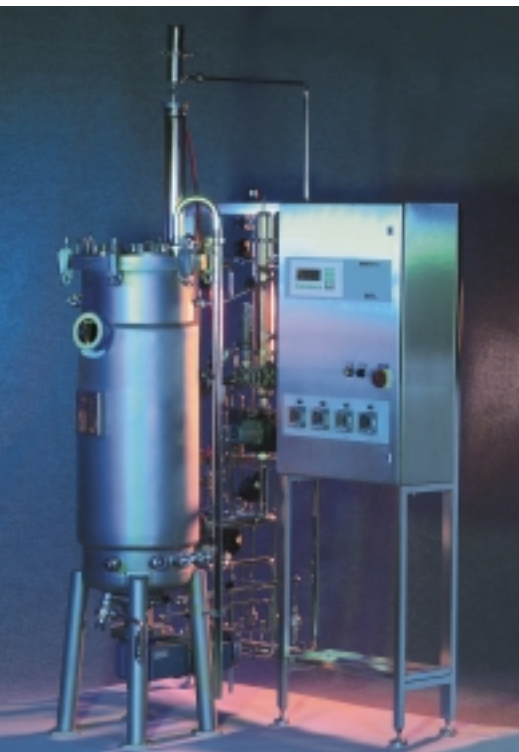
The high performance AC motor in combination with the 3 Rushton turbines provides

an efficient mixing and dispersion of gas bubbles at high aeration rates.

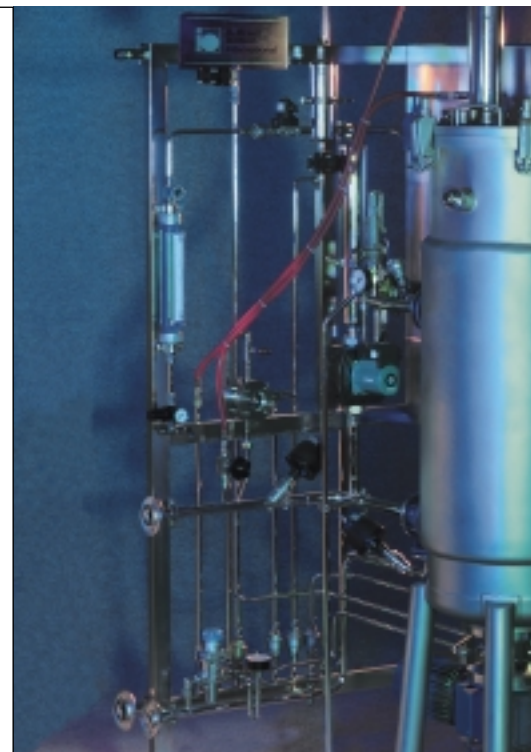
Accessories for cell culture applications are available upon request.

The stainless steel control cabinet of the Biostat® D 50/D 100 includes all electrical components, frequency converter, pilot valves and the powerful digital measurement and control system.

- **New: "BBI Safety-Port"**
- **Available with DCU 3 control system**
- **Suitable for high cell density fermentation**
- **Validation support documentation available**
- **Connection to supervisory control system**



- ① Insertion of electrode
- ② Tightening
- ③ Operating position



The control hardware is based on our proven DFC (Digital Fermenter Control) circuit board. This microprocessor system is especially designed for bioprocess (fermentation/cell culture) automation. The DFC contains the measurement amplifiers and actuator signal outputs. This approach leads to high system reliability.

Software functionality includes process measurements, calibration routines and a standard set of control loops. An automatic sterilization sequence for the culture vessel, inclusive

the air inlet and exhaust filters, is also standard.

The multiloop cascade controller for dissolved oxygen, the substrate controller with set point profile capability and the temperature interlock with heater shut-down are additional features of the software.

The software is developed under a quality control system which follows the GAMP (Good Automated Manufacturing Practice) guidelines. This helps guarantee consistency throughout the software's lifecycle.

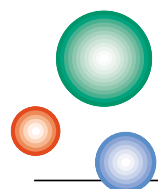
The ergonomically designed user interface, combined with a proven, function-oriented menu structure, ensures user-friendly operation with minimal training.

Easy to learn operation is important in both academic and industrial operating environments.

For extended measurement and control functionality the Biostat® D 50/D 100 fermentor systems are available with the proven DCU 3 control system as well. This includes a touch screen operator panel with graphic display.

Additionally available options like an airflow controller, pressure measurement and control, turbidity measurement, etc., all contribute to make the Biostat® D 50/D 100 an unbeatable package.

For cGMP production environments B. Braun Biotech can optionally provide validation support. Similar to custom systems, we can provide support for the required qualifications (IQ/OQ Tests) and documentation tasks related to the Biostat® D 50/D 100.



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