

## BIOSTAT<sup>®</sup> PBR – Photosynthetic Power

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The BIOSTAT<sup>®</sup> PBR 2S is a new generation of photobioreactor systems utilizing thin layer pipe illumination.

Specifically designed for cultivation of phototropic organisms including micro algae, moss, bacteria and plant cells, this system incorporated a number of features enabling even the most shear sensitive cell types to be cultivated under optimum conditions.

The photosynthesis module, made of borosilicate glass, has been designed utilizing helix based geometry to produce optimum illumination efficiency per unit surface area.

The recirculation vessel provides a range of measuring probes as temperature, pH, DO and turbidity probe and serves as a base unit for additional functions such as a gassing | degassing and media conditioning. Both components are designed for high recirculation rates in order to prevent fouling. Optimum illumination levels utilizing fluorescent lamps can be manually controlled or automatically via cell density turbidity measurement device.

The control system presents an "easy-to-use" touch screen control system with integrated measurement and control hardware, pumps, temperature and gassing systems, for excellent process control.

Supplied with an application-driven, configuration package this system incorporates all facilities for immediate start-up. The BIOSTAT<sup>®</sup> PBR is available with scalable working volumes from 3 – 100 L.

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The BIOSTAT® PBR 2S is ideal for:

- Graphical user interface with touch screen operation
- Control loops for pH, DO, Temperature, illumination level, recirculation rate, substrate addition, gas mixing, gas flow rate
- Manual or automatic illumination control
- Integrated turbidity measurement
- Illumination intensity control via cell concentration
- CO2 addition via pH control or manual gas control
- Integrated 4-Gas mixing system for aerobic and anaerobic cultivations
- Integrated thermostat system
- Scalable system design
- Validation support available
- Configurable software for future system extensions
- Inclusive Supervisory Process control software MFCS/DA

**Photos for Press Release:**



BIOSTAT® PBR 2S

Photos are available as graphic files

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