TECHMI BIO INDUSTRIAL
1,000-L BIOREACTOR







INDUSTRIAL FERMENTER / BIOREACTOR, 1,000 L

TECHMI BIO 1000 is a fermentation control system equipped with a 1,000-liter stainless steel fermenter, designed for biotechnology production. It is ideal for small production volumes or for scaling up larger productions, serving as an intermediate step in fermentation cascades. It is also available in a dual-unit configuration, with two 1,000-liter fermenters. A bioreactor is a device designed to maintain a controlled and optimal environment that promotes the growth and development of microorganisms, plant cells, or animal cells, and enables biological processes such as fermentation to be carried out efficiently and reproducibly.



KEY FEATURES

Settings	**Specifications**
Model	TECHMI BIO 1000
Total geometric capacity	1000 L
Material of Construction	AISI 316L stainless steel
Control System	Siemens S7-1200 Programmable Logic Controller with LCD Touchscreen
Control Variables	Temperature, pH, dissolved oxygen (DO), defoamers, and fill level
Dosing System	4 automatic peristaltic pumps (acid, alkali, defoamer, and nutrients/culture medium)
Additional Tools	Level Measurement and Weighing Sensors from Mettler Toledo
Process Fittings	Ignition (flame), feeding, sampling, unloading, and cleaning, as well as additional connections
Lighting	12-V Emergency Lighting System

- AISI 316L stainless steel construction, suitable for biotechnology applications.
- Automated fermentation control with monitoring of temperature, pH, dissolved oxygen, and antifoaming agent.
- Vessel and jacket designed for a nominal pressure of 0.3 MPa; the jacket features an optimized design that improves heat transfer and temperature uniformity.
- Dosing system with peristaltic pumps for acid, base, nutrients, and antifoam.
- Special sampling and drain valves, as well as fittings for product transfer.
- Mettler Toledo load cells for monitoring the system's weight.
- Design suited for industrial production with various connections for instrumentation and control.
- Wide-angle level indicator and 12 V safety lighting.
- Available in a dual configuration (2 × 1,000 L).

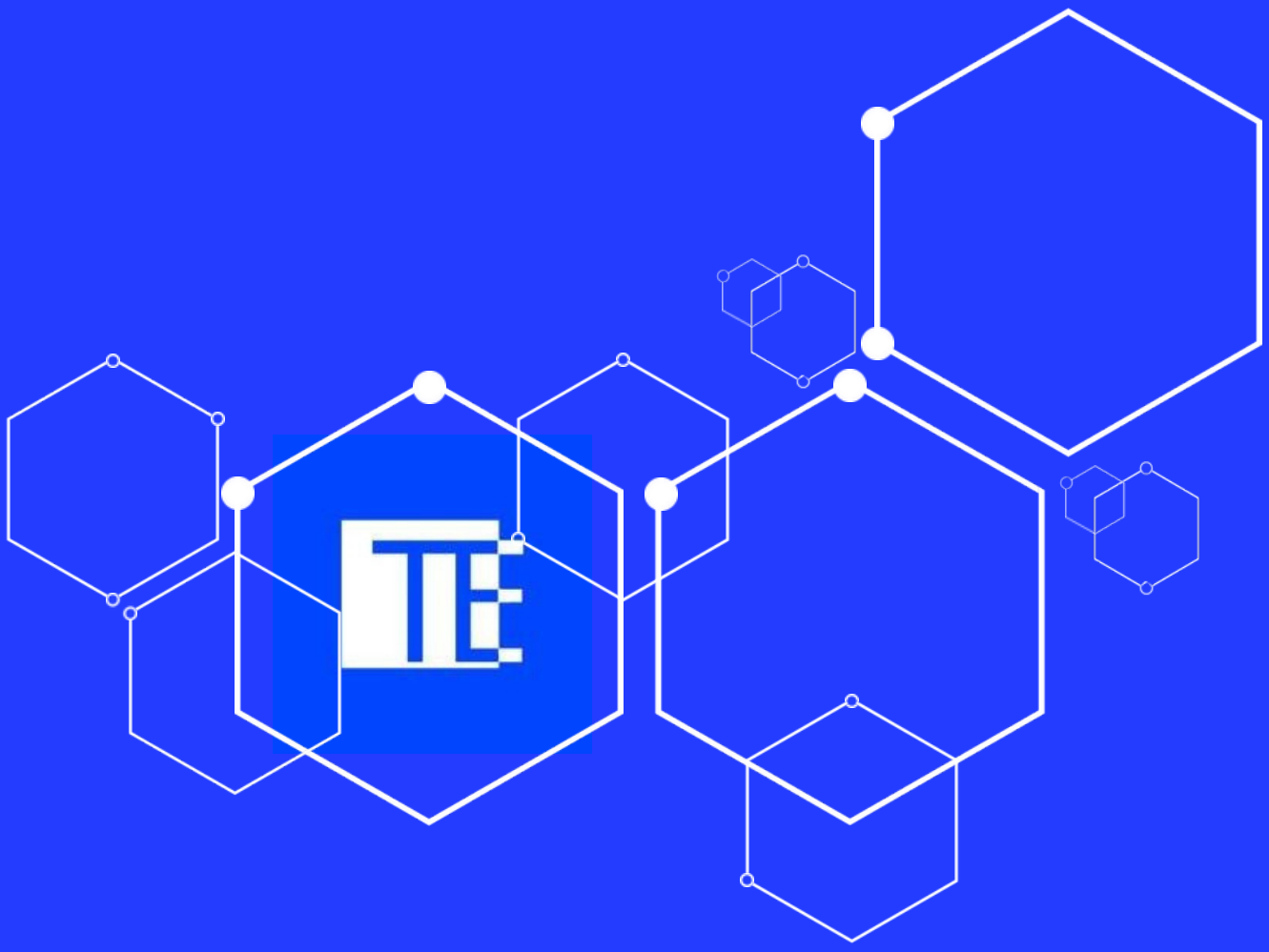
Industrial applications:

The TECHMI BIO 1000 is designed for fermentation processes and biotechnological developments, including:

- Production of microorganisms and biomass.
- Development and manufacture of biological products.
- Fermentation for applications in agriculture, the food industry, pharmaceuticals, and bioenergy.
- Production of metabolites and compounds of biotechnological interest.
- Scale-up and optimization of fermentation processes.



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