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NEXT-GENERATION BIOREACTORS

Kbiotech
SWISS

BIO-BOOK COMPACT SUB AND STR BIOREACTORS FOR FERMENTATION AND CELL CULTURE

EFFICIENCY AND GROWTH. RIGHT NOW

Kbiotech is a dynamic company specialized in engineering and manufacturing of innovative bioprocess equipment primarily Bioreactors and Fermenters.

We are pleased to launch our new line of Compact laboratory bioreactors for educational applications but also for advanced bioprocessing and development.

Applications include cell culture, stem cells, fermentation of bacteria, fungus, yeasts, photo-sensitive organisms such as plants and algae and more. Kbiotech provides our customers with superior reliability, efficiency and high-value returns operators require in today's competitive market.

LAB EFFICIENCY

Small footprint Bioreactor occupying a truly reduced surface of 280x400x600mm WxDxH or 11.0×15.75×24.4 inches (US) to meet the limitations of space in many laboratories.

KBIOTECH NEXT-GENERATION BIOREACTORS

BIO-BOOK Compact Bioreactors is a line of latest generation bioreactors that can be used for educational applications, but also for advanced bioprocessing and development. Applications include cell culture, stem cells, fermentation of bacteria, fungus, yeasts, photo-sensitive organisms such as plants, algae and more.

Powerful PLC Controller, Advanced SCADA Software, 4 built-in controlled speed peristaltic pumps, automated Gas mixing for microbial fermentation and cell cultivation, Digital and Analog interface for many sensors pH, Dissolved Oxygen, Temperature, Level, Foam, Mass Balance and online analyzers such as Biomass, Gas Analyzer, Glucose Analyzer and more.

One Biocontroller for Glass and Single use vessels starting at 100mL w/v to 20/50L capacity. Parallel controller and Software capability up to 12 bioreactors systems to accelerate the development of your bioprocesses

MORE FLEXIBILITY WITH GLASS AND SINGLE-USE VESSEL

The BIO-BOOK Compact controller allows you to interchange glass and single use vessels with related adapters. Available vessel capacity as follow;

Glass re-usable vessel
300 mL, 500 mL, 1-2-3-5-7-10-15-20 Liters

SUB disposable vessel
3-10-20-30 Liters

Integration of commercially available SUB's
Merk-Millipore, Eppendorf, Sartorius, Cercell

Use of re-usable and disposable pH / DO sensors

The only utility connections you need to operate the Compact Bioreactor are electricity and gas supply.

RICH CONNECTIVITY

The BIO-BOOK Compact bioreactor is based on a real-time embedded industrial controller with a combination of many real-time monitorable parameters like sensors and actuators, reconfigurable and expandable IO Modules to increase the controller capabilites and an Ethernet expansion chassis to to communicate with many devices like PC workstation's, Laptop and modern portable devices for remote access via password protection.

INTELLIGENT HMI-PC INTERFACE WITH ONBOARD SCADA SOFTWARE BIOFLEX™

HMI-PC interface large colored screen 14 size with the license free Scada Software BIOFLEX allows you to fully monitor, control and supervise your bioprocess without the need to purchase additional devices or software for data processing.

INTEGRATED HEATING AND COOLING DEVICE WITH THE KBIOTECH BIO-CHILLER

Suitable for fermentation and cell cultivation the BIO-BOOK Compact thermo regulation system allows minimizes water usage in your laboratory. You won't need to worry about finding a suitable water source for your bioreactor.

TECHNICAL DATA

Power supply: 120 – 240 (±10 %) V, 50/60 Hz, 10 A, Single Phase
Water supply: Quick-connect; 10 psig (0.69 barg)
Communication: 1 × USB, Ethernet (SCADA, IP Network)
User Interface: 14" Touchscreen or desktop PC
Dimensions: (W × D × H): 28.0 × 40.0 × 60.0 cm / 11 × 15.75 × 24.4 inches
Weight w/o accessories: 15.5 kg / 34.1 Lb

KEY ADVANTAGES

- Compact design, small footprint 280x400x-600mm WxDxH or 11.0×15.75×24.4 Inches (US)
- Suitable for glass and single use vessel
- Great accuracy and reliability with adaptive P.I.D. control
- Integrated Data Management and Data Acquisition Software
- Touch panel PC or conventional PC workstation
- Integrated heating and cooling system with the Kbiotech BIO-CHILLER
- Real-time industrial controller, reconfigurable IO Modules, Ethernet expansion
- Simplicity of installation, programming and maintenance
- Sensor Flash® non-volatile memory to save your bioprocess data
- Certified for GLP and GMP classified environments
- Sales and service world-wide

Kbiotech's parallel system has a unique characteristic that enables you to interchange re-usable and disposable single-use vessels from 300 ml to 30 litres.

Kbiotech's parallel system has a unique characteristic that enables you to interchange re-usable and disposable single-use vessels from 100 ml to 50 litres.

Market-leading master controller technology for advanced data-logging and embedded monitoring applications.

Unlimited series I/O modules for custom analogue input, analogue output, digital I/O, counter/timer, and CAN measurement and logging system.

Modules are available for a variety of sensor measurements.

TWIN & PARALLEL BIOREACTOR

Kbiotech parallel bioreactors offer advanced controller functionalities designed to meet demanding requirements in both research and process development, as well as for media optimisation and screening studies.

A wide choose of interchangeable Autoclavable and Disposable vessels from 50mL to 75 Litres volume.

Our newly engineered control system takes many of our well-proven design features into a new era, offering unprecedented benefits to process development laboratories around the world, including unrivalled capabilities for downscale and upscale modelling of various culture processes and the provision of new levels of power and flexibility.

The PARALLEL system features a POWERFUL master control tower with satellite Module for pumps, gas mixing, temperature control and chillers. Thanks to its high flexibility the parallel system can be configured with up to 36 bioreactors, each providing independent control of the applicable culture vessel.

SUPERIOR PERFORMANCE

Built-in optical pH and dissolved oxygen sensors for improved accuracy and durability.

Integrated MFCS massflow controllers for cell culture and microbial fermentation strategies.

Variable speed pumps with bi-directional flow for precise addition of liquids.

Magnetic coupler guarantees absolutely contamination free cultures.

The modular design of our systems offers flexible solutions for bioprocess developments with mammalian, insect and human cells, as well as stem cells and microbial cultures at a laboratory scale.

Our parallel systems are characterised by parallel operations, accurate controls, and comprehensive information management.

They support the seamless integration of external analysers (PAT), control units and software.

Superior BIOFLEX™ control software supports sophisticated process control, comprehensive data and information management and Design of Experiments (DoE).

Integrated measurement of online sensors such as biomass, optical density, gas analyser, glucose analyser, alcohol analyser, pCO2 analyser, HPLCs, auto sampler and others.

Immediate module replacement with zero downtime.

Online maintenance service and support with remote diagnostics.

KEY ADVANTAGES

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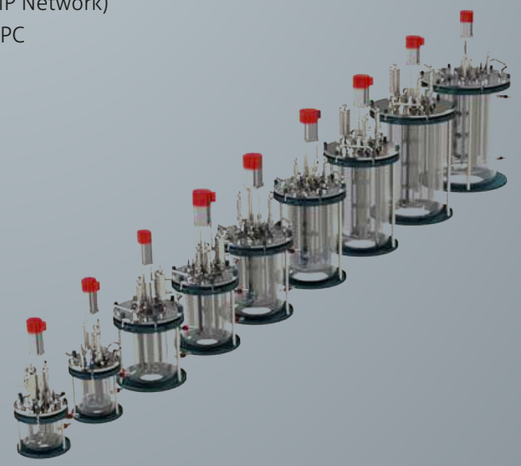
- SensorFlash® non-volatile memory to save your bioprocess data
- Certified for GLP and GMP classified environments
- Sales and service available worldwide

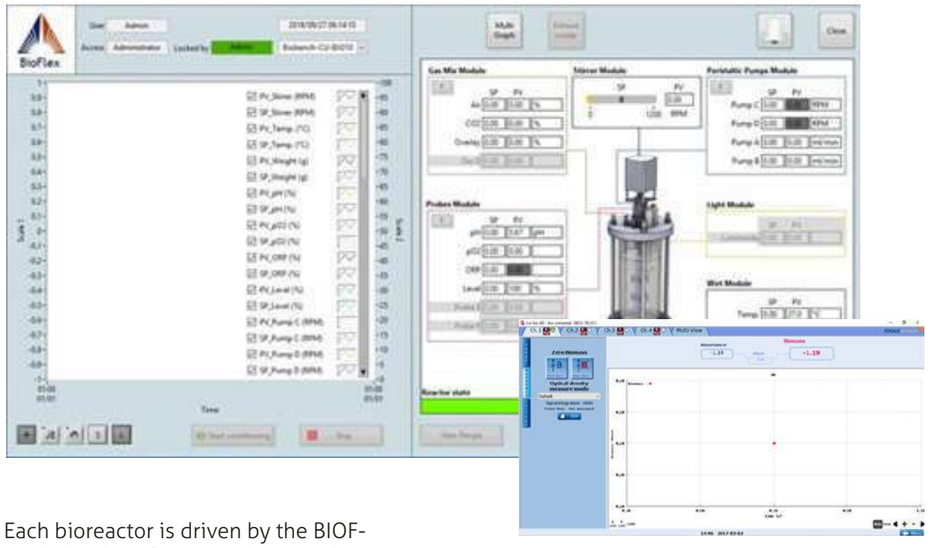
TECHNICAL DATA

Power supply: 120 – 240 (±10 %) V, 50/60 Hz, 10 A, Single Phase
Water supply: Quick-connect; 10 psig (0.69 barg)
Dimensions: (W×D×H): 40.0×40.0×60.0 cm / 15.75×15.75×24.4 inches
Communication: 1 × USB, Ethernet (SCADA, IP Network)
User Interface: 14“ Touchscreen or desktop PC
Weight w/o accessories: 35.0 kg / 77.0 lbs



BIOFLEX™ SOFTWARE

ONE SOFTWARE PLATFORM FOR SUB, STR AND PARALLEL BIOREACTORS



Each bioreactor is driven by the BIOFLEX™ Scada software, with an intelligent interface that is easily accessible for beginners to experienced users. Thanks to the intuitive user interface, Bioflex is simple to operate, with reduced operator errors and reduced training needs.

BIO-FLEX™ is a bioprocess software designed for R&D, process development, optimization and scale up to industrialization.

Bioflex is high flexibility for a batch, feed batch or a continuous culture with Advanced control strategies (pH STAT, DO STAT, Turbido-stat, exponential, complex calculations), perfusion programs, off line data and profiles management, data batch records, data export to excel and more. Bioflex is the only software platform that allows you to manage Single-use, Reusable and Parallel bioreactors systems without the need to acquire additional licenses or expensive factory upgrades.

This open source Software allows to integrate, at any time, conventional and sophisticated online sensors such as Biomass Monitor, Gas analyzers, pCO2 probe, Glucose and Multi-assay analyzers and actuators (pumps, MFC or Rotameters, valves, etc.).

Bioflex software support the latest Windows released platforms and can be installed on a Laptop, PC Workstations, tablets and enables you to monitor and control your bioreactor at any time: in the laboratory, in the office or even at home.

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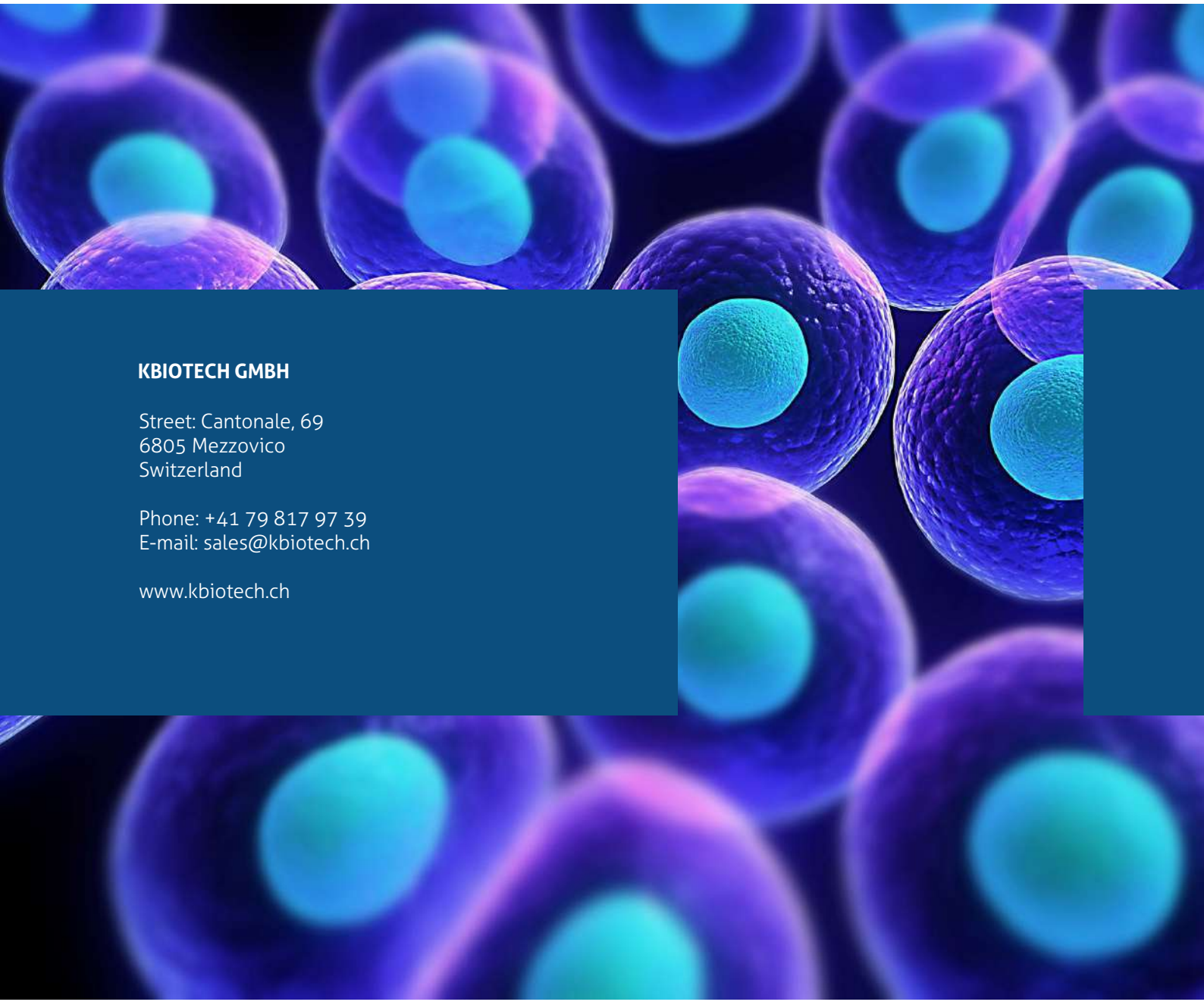

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