

**BioReactors**

# **HEL BioXplorer 5000**

**The Benchmark For R & D  
Bioreactors Ranging From  
0.5 L to 5 L**



**The ideal system for the production of high-yield microbial & mammalian cell cultures with high-pressure options**



better chemistry – faster

[www.helgroup.com](http://www.helgroup.com)

# BioXplorer 5000

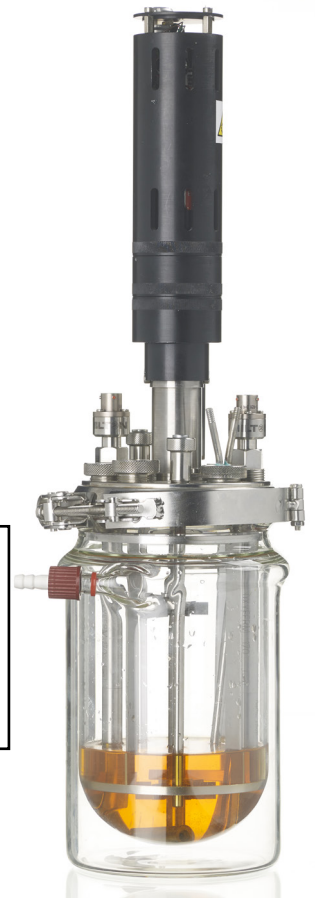
## Automated Bench Scale Bioreactors

The BioXplorer 5000 reactor range is designed to enable users to obtain a better understanding of their bioprocesses at bench scale. The entire range offers an easy-to-handle, customisable and upgradable system with interchangeable culture volumes from 0.5 L to 5 L.

- | Increase your process knowledge and take advantage of an exhaustive list of standard options and several innovative features including automated inventory monitoring, on line cell density analysis, and automatic KLa determination.
- | Obtain the best solution to fit your needs with either a preconfigured or customized system. The open system architecture and flexible software allows external modules to be seamlessly integrated.
- | Get the best possible user experience. The intuitive, powerful software is designed to offer ease of use while maintaining advance operating features including optional integration with in house data management systems.
- | Increase your productivity and control multiple reactors in parallel from a single software.

The BioXplorer 5000 range is ideal for:

- | Microbial and mammalian cell culture
- | High yield production of microbes in aerobic or anaerobic conditions
- | Process development and optimisation and scale up studies

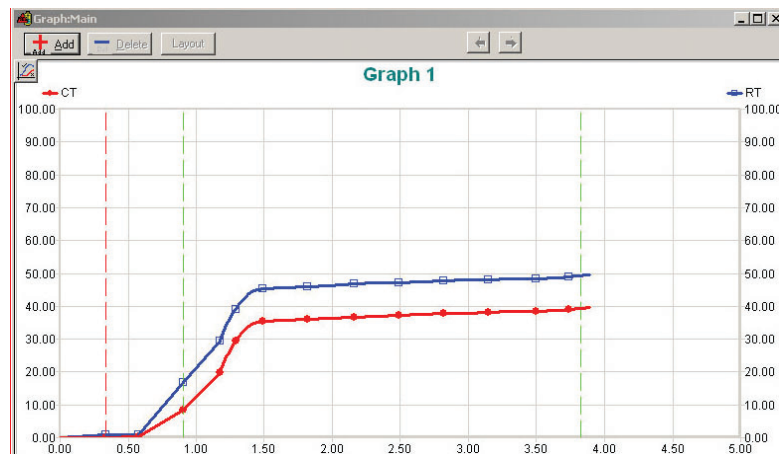


# Benefit from Bioprocessing at Elevated Pressure

Studies have shown that pressure can enhance many aspects of a bioprocess from improving yields to enhanced C1 gas use. The BioXplorer 5000 high pressure range offers the opportunity to investigate the effects of elevated pressures at bench scale.

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- | Discover how pressure affects your bioprocesses at pressures up to 10 bar (higher can be supplied). Investigate the effects of pressure on DO, cell growth and other parameters with full feedback controls and advanced software features
- | Study the effects of differing feed gas compositions with automated gas mixing and exhaust gas feedback controls
- | Increase productivity with the option for parallel operation with multiple high pressure bioreactors
- | Work with confidence with a full suite of integrated safety features and the experience of leading experts in high pressure reactor design and operation



The BioXplorer 5000 Pressure range is ideal for:

- | Gas fermentation and the use of C1 gases as carbon sources
- | Enhancing oxygen uptake and improving yields
- | Simulating head pressures seen at much larger scales

# Specifications

	Glass	Stainless Steel
<b>Max. Pressure</b>	Atmospheric	10 Bar
<b>Working Volumes</b>	400 ml to 5 L	400 ml to 5 L
<b>Stirring Speed</b>	50 - 1000 RPM*	50 - 1500 RPM*
<b>Impellers</b>	Ruston   Marine   Pitched	Ruston   Marine   Pitched
<b>Stirring Drive</b>	Overhead drive	Overhead drive
<b>Temp. Range</b>	-20 to 200 °C**	-20 to 200 °C**
<b>Temp. Control</b>	Heated Jacket   Circulator	Heated Jacket   Circulator
<b>Applications</b>	Mammalian   Microbial   Gas Fermentation	Mammalian   Microbial   Gas Fermentation
<b>pH Control</b>	Acid/base liquid feed	Acid/base liquid feed
<b>Anti-Foam</b>	Optional	Optional
<b>Pumps</b>	V6 Syringe	V6 Syringe (5 Bar), HPLC (10 Bar)
<b>OD Measurement</b>	Optional	Optional
<b>Gas Mixing</b>	Air, N <sub>2</sub> , O <sub>2</sub> , CO, CH <sub>4</sub> and CO <sub>2</sub>	Air, N <sub>2</sub> , O <sub>2</sub> , CO, CH <sub>4</sub> and CO <sub>2</sub>

\*Speeds dependent on stirrer drive, media properties and aeration rate.

\*\*Sub-ambient cooling requires optional cooling module.

## About HEL

HEL is an international company that specialises in chemical reactors, bioreactors and related data/logging tools for process R&D in the pharmaceutical, fine chemical, biotechnology and petrochemical industries. Established in 1987 and with the clients worldwide our key strengths are:

Knowledgeable staff – highly qualified and experienced chemical engineers and chemists

Quality – underpinned by ISO9001 certification for over 16 years

Service – choice of service contracts backed by an established culture of unmatched client support

Range of products – both of-the-shelf and custom designs, manual and fully automated controls, low and high pressure/temperature applications, single and parallel/multi-vessel products

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