Cultivated B

Fit-for-purpose bioreactor technology

The Cultivated B and its subsidiary: n!Biomachines

Cultivated B

AUXO V® benchtop bioreactors

Designed for **precision and versatility**, our benchtop AUXO V® bioreactors (from 1L to 200L) offer **unparalleled control for research and development.** Engineered for both seasoned researchers and pioneering scientists, they facilitate breakthroughs by **combining reliability with intuitive operation.** Our bioreactors are tailored to empower bioprocessing innovation, allowing for **seamless scalability and flexibility** in various research settings. Our benchtop bioreactors are the ideal tool for those seeking to push the boundaries of biotechnology, providing a **robust platform for experimentation and discovery.**

The AUXO V® is fit-for-purpose — designed and engineered to meet the precise requirements of the biological processes it supports.

reddot winner 2024

2024 Stevie® Award Winner

TITAN GOLD WINNER 2024

2024 WORLD CELL-BASED INNOVATION AWARDS WINNER

Fit-for-purpose bioreactors for next-gen bioprocessing:

Specialized

Fit-for-purpose design allows for AUXO V® bioreactors to be optimized for specific biological processes, enhancing performance, yield, and product quality for a dedicated cell type or products, ensuring superior outcomes.

Affordable

Our fit-for-purpose bioreactors are designed to meet specific needs without superfluous features, reducing costs in design, operation, and maintenance, making them more affordable for specific applications.

Scalable

Our bioreactors can be tailored for easy scaling, allowing for efficient transition from research-scale to commercial-scale production, accommodating growing demand without sacrificing performance or quality.

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High-precision fluid pumps

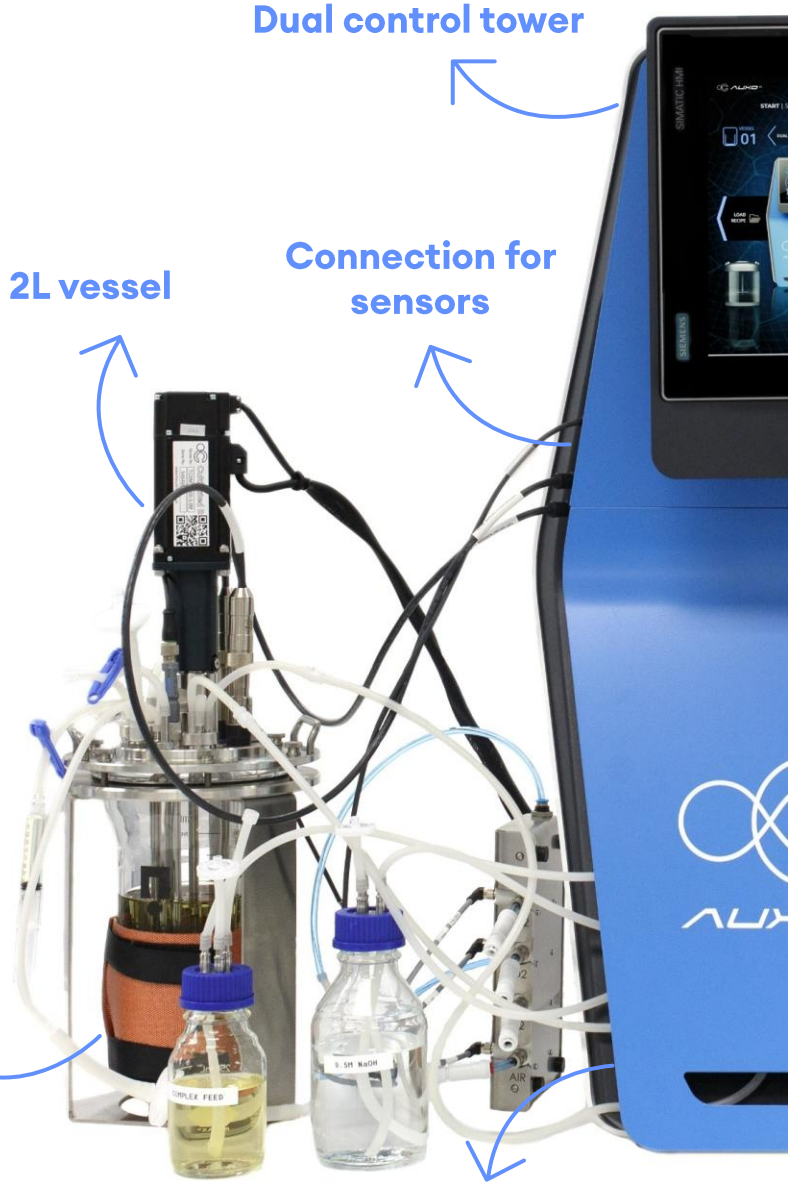
WATSON MARLOW Fluid Technology Solutions

Impellers

Wide range of optimized blades (rushton, marine, pitched, etc.)

PLC electronics provided by

SIEMENS



Materials

Either glass (small vessels) or stainless steel 316L (> 15L)

Functionality

Multi-use capability allows for optimized cost distribution

Optimization

CFD simulations optimize heating/ cooling systems and propeller mixing efficiency

Modularity

Including cooling unit, cover lifting, etc.

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10.1” touch screen

Agitator

Vessel 15L

Mass flow controller

Head plate

Customizable for various applications and sensor packages

Sensor technology

HAMILTON

n!Biomachines

Elevate your operations with our offer of end-to-end services:

- Installation
- Training
- Maintenance
- Online support

AUXO V® exclusive features

Next-gen bioreactor **software**

Our bioreactor offers real-time analytics, customizable workflows, and robust data management to enhance biomanufacturing outcomes for different experience levels.

Select from pre-programmed recipes and choose between direct or remote control for efficient bioprocess control.

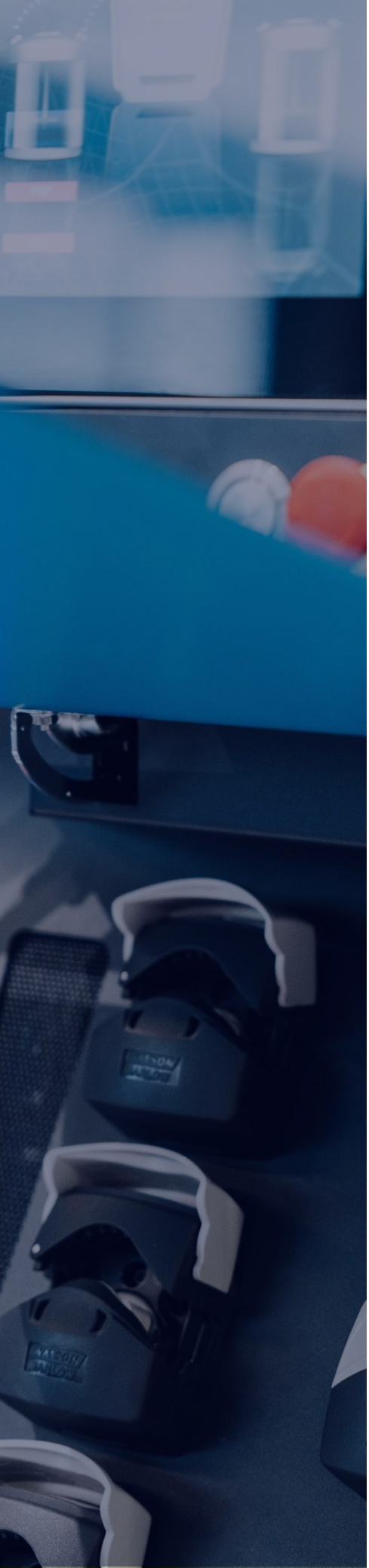
- Innovative, user-friendly HMI
- AI-powered software evolution
- Pre-configured operation system

AI-enabled **biosensors**

- Simultaneous, real-time Multi-parameter tracking (amino acids, lactic acids, glucose, etc.)
- Exceptional sensitivity
- AI-empowered analysis for improved reliability and process optimization
- Eliminates manual sampling, reducing contamination risks and ensuring uninterrupted bioreactor operations

APPLICATIONS

- Biopharma
- Food & beverage
- Waste valorization
- Alternative proteins production



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Technical specifications

Multi-use vessels

Sizes	Available models (1-2L, 3L, 7L, 15L, 50L, 100L, 200L) More sizes available upon request
Housing	Glass: up to 15L vessels Steel: >15L vessels (316 stainless steel)
Impellers	Wide choice of optimized impeller blades including Rushton, marine-style, pitched-blade, etc.
Gas supply (submerged)	2 (microbial culture) or 4 (cell culture) gas mixing with sparger and headspace outlet
Stirring speed	0–2000rpm, based on organism & vessel size
Temperature control system	Glass: Electrical heating and temperature control Steel: Water jacket cooling system
Sterilization	**All small sizes are autoclavable.** CIP / SIP (upon request for 50L and above)
Customizations	Customization “fit-for-purpose” based on application (cell culture, microbial, plant-based,..)

Controller

Controller	Industrial Programmable Logic Controller from Siemens. Up to 2 vessels
Display/operation	10” Touch screen from Siemens
Electronics	21CFR standards
Interfaces	USB 2.0, Industrial Ethernet, MODBUS
Peristaltic pumps	High precision fluid pumps (Watson Marlow technology, 114ST, 0-600RPM). Up to 4 peristaltic pumps per vessel. Connection for external pumps available
Gas valves	4 for compressed air, oxygen, CO2 and N2

Sensors

DO	Hamilton digital sensor. 7 - 100% (0.1% resolution)
pH	Hamilton digital sensor. 0 – 14 (0.1 resolution)
Temperature	Pt 100 sensor. 0 – 100°C (0.1°C resolution)
Optional sensors	Foam, glucose, lactate, more available upon request

Software

User management	Level-stratified user management with access control
Recipes	Both pre-configured and custom
Export formats	.csv and .xls
Remote monitoring	Web based
Recording capacity	Up to 30 days