

Labfors 5

Universal applicability for single or parallel bioprocesses with no compromises



The Labfors bioreactors with their modular philosophy give us an enormous flexibility. Together with our PAT methods, we can combine various strains with dynamic process conditions and efficiently develop bioprocesses.

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Universal applicability

Flexible configurations

The Labfors 5 bench-top bioreactor provides an easy-to-handle, flexible and upgradable system for culture volumes from 0.5 L up to 10 L. Preconfigured packages for cell cultures and microbials are available. Special options even qualify the Labfors 5 for cultivation of phototrophic organisms, halophile microorganisms and for biofuel applications. A single-use vessel option adds further flexibility.

Touch screen with OPC server

Bioprocess control begins with the quality and flexibility of the local controller. The Labfors 5 splashproof touch screen controller provides accurate and reliable measurement and control for up to 6 vessels. Connecting external devices such as balances, HPLC, MS, glucose analyser, SCADA software, etc., is easily possible via OPC.

Parallel-bioreactor-option

The Labfors 5 features a new parallel-bioreactor-option which allows up to 6 vessels to be independently controlled from a single touch screen. Special features optimise the system for parallel bioreactor operation.

Faster results with optimised handling

The Labfors 5 high-precision pump heads can be removed on a single plate in groups of 4 and autoclaved with the vessel. This reduces handling time and handling errors considerably as tubing does not need to be threaded around the pump heads and adjusted before use.

100 % aseptic sampling

The INFORS HT Super Safe Sampler allows you to take smallest samples without wasting any culture. The truly aseptic design makes contamination during sampling impossible.

Space-saving, compact design

With a footprint as low as 464 x 462 mm, the Labfors 5 saves valuable bench space. This reduces the overall cost and allows greater research capacity in the same space.

HIGHLIGHT

Automatic cleaning and sterilisation

The optional LabCIP is designed for microbial bioprocesses. At the push of a button, your Labfors 5 bioreactor is automatically cleaned (CIP) and sterilised (SIP). This can be done overnight, for example. Therefore, the downtime of your bioreactor is minimised and the throughput massively increased.



Applications

- High-density cultures for protein production
- Photosensitive cultivations
- Biofuels
- Process analytical technology (PAT)
- Process development
- Process optimization
- Scale-up
- Scale-down
- Statistical studies
- Growth studies
- Anaerobic cultures
- Halophile strains
- Brewing research

Key technical data

Minimum dimensions (W x D x H): 464 x 462 x 996 mm Vessels: 2; 3.6; 7.5; 10; 13 L total volume

Maximum expansion: Up to 6 base units per touch screen controller

Speed range: 10–1500 min⁻¹ direct drive, 20–300 min⁻¹ magnetic drive (depending on vessel and motor options)

Temperature range: 5 °C above coolant to 70 °C (water jacket) or 95 °C (heating pad)

Pump flow rate: 0.0034 to 3.46 mL/min (standard tubing), 0.017 to 17.16 mL/min (large size tubing), 0.0012 to 1.24 mL/min (small size tubing)

Standard parameters: Stirrer speed, temperature, pH, pO₂, antifoam, feed