

# Bench-top and Pilot Bioreactors



Bring exceptional precision, scalability,  
and control to your bioprocessing.

**INFORS HT**  
We bring life to your laboratory

# Confidence to scale, freedom to innovate

## Bioreactors built to grow with your process

Bioprocessing professionals face growing demands for faster development cycles, reliable scalability, and precision control to maximize yields and streamline production. With INFORS HT bioreactors, what you develop at the bench is never left behind, it's ready to scale. Our innovative, intuitive technologies give you the confidence to transition smoothly from early-stage research to commercial-scale production, empowering productivity and driving breakthroughs.



### Scalable design from lab to pilot

Use similar components, vessel geometries, and control systems across benchtop and pilot scales. This consistency simplifies validation, operator training, and technology transfer.



### Expert support from start to scale

From design and installation to maintenance and upgrades, our team works closely with you to adapt your system to evolving process requirements.



### Seamless data integration with eve® software

Our bioreactors connect to the eve® platform for full visibility across parameters, automated control, and reliable data tracking in batch, fed-batch, or continuous processes. They also integrate easily with other third-party systems for maximum flexibility.

# Minifors 2

## Jumpstart your bioprocess R&D with this compact and easy-to-use bioreactor

Easily initiate and manage cell culture or microbial experiments from research and development through process development with this plug-and-play Minifors 2 bench-top bioreactor system.



### Quickly begin your experiments

Get your experiments started quickly with minimal experience thanks to the preconfigured delivery and intuitive controls of this bench-top bioreactor. Simply connect the device, mount the vessel, connect pumps and sensors, and begin your work quickly.



### Compact and easy to handle

Requiring very little space on the lab bench, this compact bench-top bioreactor is designed for optimal handling and operation. All components are easily accessible and allow for stress-free transport within the vessel holder, to and from autoclave, fitting within smaller autoclaves with only 30 cm inner diameter.



### Easily automate your data management

Save time and resources by automating your data management with eve®, a web-based bioprocess platform software. Accessing your data from anywhere so you can collaborate with colleagues at different facilities, leading to faster research results.

## Product specifications

- Vessel sizes (and working volumes): 1.5 L (0.3 - 1 L), 3 L (0.6 - 2 L), and 6 L (1.1 - 4 L)
- Base unit dimensions (Width including operating panel x Depth including hose connection): 455 x 415 mm / 17.9 x 16.3 in.
- 4 high-performance pumps with configurable operating modes: digital (fixed-speed) or analog (variable speed)

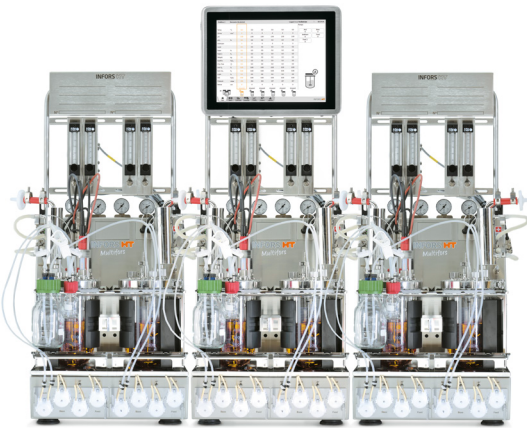


Learn more at  
[infors-ht.com/minifors](https://infors-ht.com/minifors)

# Multifors 2

## Manage multiple bioreactor vessels in parallel while mitigating risks during scale-up

Increase efficiency during process development and characterization by configuring your Multifors® 2 bench-top bioreactor with the same sensor technology as your production bioreactor systems.



### Maximum options while minimizing contamination risks

The magnetic drive system allows for maximum headplate ports and ergonomics while minimizing the contamination risk and wear on components; capable of 1600 RPM operation for extended continuous batches.



### Increase productivity and minimize downtime within existing lab space

Save time, space, and resources with optimized parallel bioprocessing, operating up to 6 Multifors® bioreactor vessels from one touchscreen control. With a small footprint and robust housing, you can make the most of your bench space.



### Easily scale-up your process

Be prepared to scale-up from the bench using the same sensor technologies as the larger scale bioreactors, delivering comparable data. Optional PAT tools are available to offer a straightforward way of preparing for later production at bench or pilot-scale bioreactors.

## Product specifications

- Vessel sizes (and working volumes): 400 mL (115 - 250 mL), 750 mL (180 - 500 mL), and 1400 mL (320 - 1000 mL)
- Small footprint: 45 x 38 cm (18 x 15 in) with integrated pumps, reagent holders, and mass flow controller (MFC)
- Glass vessels available in total volume range from 0.4 L to 1 L



Learn more at  
[infors-ht.com/multifors](https://infors-ht.com/multifors)

# Labfors 5

## Bring flexible universal control to your process development in larger bench-top volumes

Further optimize your microbial applications with a larger scale bench-top bioreactor system that provides flexibility, process control, and qualification.



### **Build your bioreactor to fit your needs**

Configure the Labfors 5 bench-top bioreactor to fit your specific application needs with a selection of various stirrers, spargers, and accessories. Set your temperature control system and gassing strategy to carry out a range of batch, fed-batch, and continuous cultivations.



### **Compact design allows for excellent handling**

Easily access ports and the top plate due to the practical and compact design of this bioreactor. Autoclaving is also made easy with removable pump heads that can be sterilized with the vessel.



### **Work more efficiently in your lab**

Organize your laboratory more efficiently by connecting the Labfors 5 bioreactor touchscreen control up to 6 systems at once. Operate them simultaneously to save time and manual labor.

## Product specifications

- Vessel sizes (working volumes): 2 L (0.5-1.2 L), 3.6 L (0.5-2.3 L), 7.5 L (1-5L), and 13 L (2.2-10 L)
- Base unit with control panel dimensions for 2, 3.6, and 7.5 L volumes (W x D x H): 464 x 462 x 996 mm (18.3 x 18.2 x 39.2 in)
- Base unit with control panel dimensions for 13 L volumes (W x D x H): 586 x 512 x 996 mm (23.1 x 20.2 x 39.2 in)
- Direct drive up to 1500 min<sup>-1</sup> with the high-torque motor option



Learn more at  
[infors-ht.com/Labfors](https://infors-ht.com/Labfors)

# Labfors 5 for solid substrates

## Your ideal bioreactor system for bioprocesses and enzymatic processes with solid substrates

Increase productivity and yield during your simultaneous saccharification and fermentation (SSF) processes, breaking down high concentrations of various raw materials, with this compact Labfors 5 bench-top bioreactor.



### Precise and gentle temperature control

By controlling the temperature of both the substrate and the double jacket, the two-fold system optimizes temperature control for the entire bioprocess, preventing overheating along the interior vessel wall, and keeping enzymatic activity high.



### Ideal mixing capabilities

Because liquids and solids have different mixing properties, choose from a selection of stirrers for the right stirring system no matter what the substrate. With the high-torque, direct drive motor option, the system has enough power to also mix high concentrations of various raw materials.



### Easily feed solids

Large headplate opening (40 mm) for feeding solids and semi solids into the vessel to support high density substrates in processes that do not require aseptic conditions.

## Product specifications

- Vessel size (and working volume): 3.6 L (1-2.5 L)
- Base unit with control panel dimensions (W x D x H): 464 x 462 x 996 mm (18.3 x 18.2 x 39.2 in)
- Parallel operation via touchscreen controller up to 6 vessels
- Direct drive up to 1000 min<sup>-1</sup> with the high-torque motor option



Learn more at  
[infors-ht.com/Labfors-solids](https://infors-ht.com/Labfors-solids)

# Techfors-S

## Process development made easy with this compact, stainless-steel bioreactor

Easily transfer your process from the bench to pilot scale with a modular Techfors-S pilot bioreactor, giving you all the same familiar components and accessories that you have on the bench with automated process control.



### **Easily scale-up from bench**

Regardless of your experience in bioprocessing, the Techfors-S pilot bioreactor is easy to operate with 360-degree access to all system components, which are the same as our bench-top bioreactors, ranging from the sensor technology to gassing strategies.



### **Seamless data transfer**

Easily transfer your data from R&D to process development with eve<sup>®</sup>, a web-based bioprocess platform software that integrates with your bioreactors so you can efficiently control, monitor, and analyze your data.



### **True collaboration from start to finish**

Engage with our experienced engineering team to configure your Techfors-S bioreactor with the flexibility to define your utility connections, sensor technology, sample and harvest ports, automated steam sterilization, certification packages, and more.

## Product specifications

- Vessel sizes (and working volumes): 15 L (3-10 L), 30 L (5.3-20 L), and 45 L (7-30 L)
- Dimensions (W x D x H): 1017 x 934 x 1870 mm (2392 mm / 94.2 in with optional crane) with 360° access to system components
- Optimum temperature control even at volumes as low as 3 L, essential for modern fed-batch fermentations

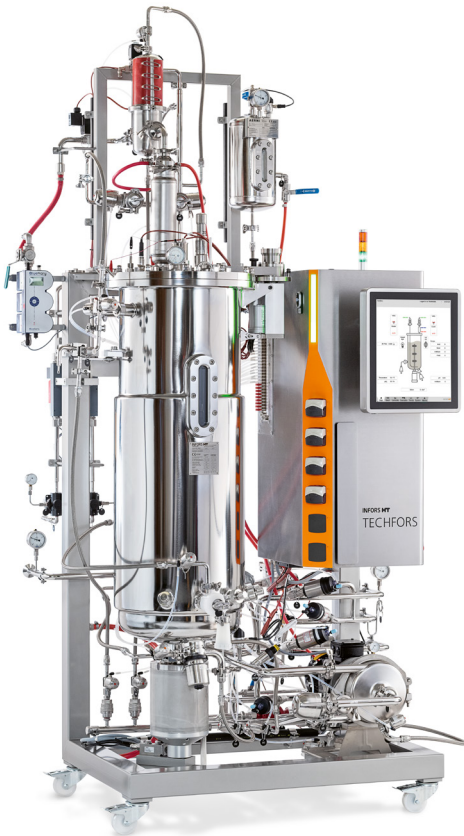


Learn more at  
[infors-ht.com/techfors-s](https://infors-ht.com/techfors-s)

# Techfors

## A customizable stainless-steel bioreactor with a compact design

Bring flexibility and automation to your process development with a Techfors pilot bioreactor, custom-configured specifically to your individual application needs and backed by our team of technical engineering and service experts.



### **Flexibility and customization**

Your bioprocess applications can be demanding. Custom-configure your own Techfors pilot bioreactor to meet your specific needs, bringing true flexibility to your laboratories, pilot plants, or production suites.



### **Detailed custom engineering and project planning**

Our technology team will partner with you to build your ideal bioreactor, sharing their expertise and accompanying you from planning to installation and continued maintenance support.



### **Evolve your bioreactor as your processes change**

Even after installation, your Techfors bioreactor design can be expanded with additional options, sensors, and analytical devices. For validated installations, you also receive additional documentation, upon request.

## Product specifications

- Custom designed vessel sizes up to 1,000 L with a working volume up to 660 L
- Capable of scaling from INFORS HT bench-top bioreactor systems to the Techfors bioreactor
- Qualification and validation available upon request



Learn more at  
[infors-ht.com/Techfors](https://infors-ht.com/Techfors)

# eve<sup>®</sup> bioprocess software

Unify process control and data management  
in a single bioprocess software platform

eve<sup>®</sup> bioprocess platform software can do more than just plan, control and analyze your bioprocesses. This software platform integrates your equipment and process data in a web-browser based platform from many different manufacturers.



## **Integrate your bioprocessing equipment data**

Integrate data from your bioreactors, shakers, and analytical instruments from multiple manufacturers along with your experimental requirements from project, experiment, and batch planning to analysis the results.



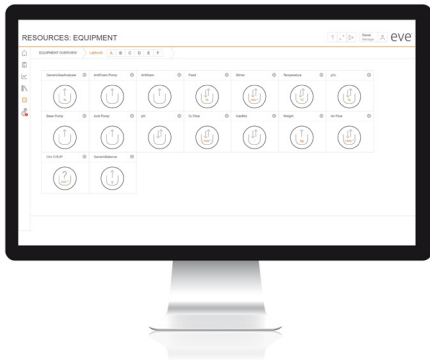
## **Access your data from anywhere**

eve<sup>®</sup> bioprocess platform software is installed in your private network and is web-browser based, allowing you to monitor, control, and analyze your data right from your web browser.



## **Powerful batch planning, control, and reporting**

Create and automate intuitively complex batch strategies and phases, leverage preconfigured functions to control batch parameters, and create audit trail reports.



## eve<sup>®</sup> software packages

### **Monitor basic bioprocesses**

Take the first steps to digitize your bioprocess. The comprehensive functions for planning, monitoring and documenting batches are ideally suited for simple applications in the bioreactor.

### **Control and automate bioprocesses**

Further automate your process through digitalization to help eliminate the potential for human error by implementing recipes, batch strategies, and soft sensors.

### **Premium version supporting validation**

Suitable for validated environments according to FDA CFR 21 Part 11. In addition to the comprehensive options, users receive added safety features and validation documents.



Learn more at  
[infors-ht.com/eve](https://infors-ht.com/eve)

# Bioreactor services

Maintain optimal performance and longevity



## Service offerings

- Custom engineering and project management
- Installation and relocation preparation
- Emergency repairs
- Preventive and corrective maintenance
- Installation and operational qualifications (IQ/OQ)
- Factory acceptance testing (FAT) and site acceptance testing (SAT)

We pride ourselves on building bioreactors that stand the test of time. However, consistent and proactive maintenance is key to ensuring your machine operates at its best. Regular upkeep not only extends the lifespan of your bioreactor but also guarantees peak performance in every process.



Learn more at  
[infors-ht.com/bioreactor-services](https://infors-ht.com/bioreactor-services)

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