

Unmatched versatility by Bionet's **F1 BIOREACTOR** control unit to ensure all empirical combinations needed before you consolidate your bioprocess

With the **F1 benchtop bioreactor control unit**, our biopharma clients can tailor their needs with ease, given the unmatched configurability in terms of **gas requirements**, and the possibility to accommodate all bioreactor types, including stirred glass and single-use vessels as well as **2D rocking single-use bags**.

More about F1



Or press here::

<https://catalog.bionet.com/f1-benchtop-bioreactor/>



F1 Control Unit



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<https://catalog.bionet.com/f1-benchtop-bioreactor/#features>

Bionet and its single-use range of technologies

Bionet strategically integrates unique features into our bioreactors and TFF systems.

Our patented Celltainer 2D rocking bioreactor series is a game-changing solution to enhance high cell density and protein production levels. Additionally, you can reduce **production costs and contamination risks**.

Our F1 bioreactor series with single-use stirred vessels



Or press here::

<https://catalog.bionet.com/f1-benchtop-bioreactor/#models>



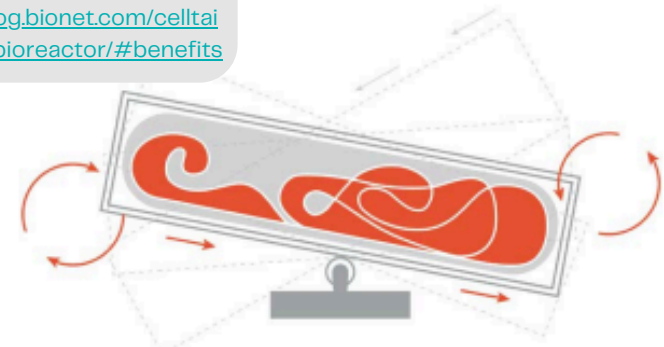
Discover the patented 2D Rocking single-use bioreactor



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<https://catalog.bionet.com/celltainer-15l-2d-bioreactor/#benefits>

 **Cell tainer**
Part of **bionet**



Decreased cost and risk while improving quality via the patented Expansion Channel accessory

The expansion channel for our single-use CELL-tainer allows you to **achieve a higher optical density in a shorter time**. Our patented expansion channel provides **high-volume expandability** in the same bag. It's available for lab (CTB) and pilot (CT-15) systems, under development for CT-150.

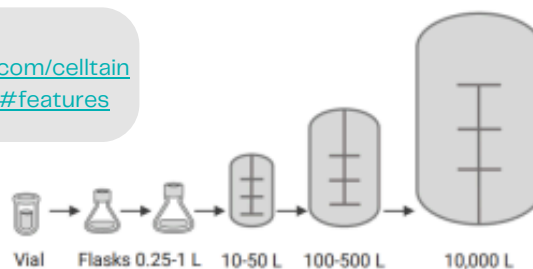
More about the expansion channel



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Traditional 10,000 L seed train



Lower capital costs

- Fewer equipment
- Reduced facility footprint

Lower operating costs

- Fewer consumables
- Reduced labour

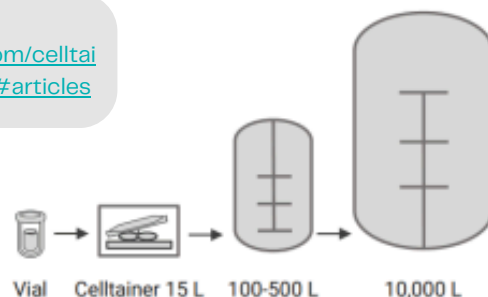
Application note



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<https://catalog.bionet.com/celltainer-15l-2d-bioreactor/#articles>

Celltainer 10,000 L seed train



Reducing contamination risks

- Less preparations
- Fewer transfers

Waste reduction:

- Bags
- Tubing
- Connectors
- Filters

Enhanced high cell density and protein production with the Celltainer patented 2D rocking motion

The patented 2D movement rocking motion brings several benefits to your application:

- Ensures G/L mass transfer up to $> 400 \text{ h}^{-1} \text{ kLa}$, especially relevant in high cell density cultures;
- Avoids foam formation, easing operation and downstream challenges;
- Reduces shear effects;
- Improves cooling mechanisms.

High cell density with up to $> 400 \text{ h}^{-1} \text{ kLa}$



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Application note



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We turn science into the solutions

Scaling up is a major challenge in bioprocessing.

We apply science to seek designs and validation methods to remove scalability concerns.

Research by the Zurich University of Applied Sciences (ZHAW) showcases **how the Celltainer patented 2D rocking outperforms wave-mixed bioreactors regarding oxygen transfer.**

Moreover, a method was developed to allow the characterisation of these bioreactors with **complex motion and non-rigid shape via 3D scanner methodologies** on top of existing numerical methods, to simulate different bag shapes and their impact on mass transfer, mixing time and power input.

This CFD study allowed Bionet to define the geometry and moving pattern of its new benchtop Celltainer model while **down-scaling the performance and ensuring scalability.**

CFD modelling study



Or press here::

<https://www.frontiersin.org/article/10.3389/fceng.2022.1021416/full>

Scaling up with Celltainer



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<https://catalog.bionet.com/celltainer-15l-2d-bioreactor/>

Discover the Full Range of Bioreactors

Our bioreactor solutions are ergonomically designed to meet the highest standards of efficiency and innovation, offering configurability and expandability.

From advanced control systems to versatile vessel options, we provide everything necessary to improve your bioprocessing capabilities. Explore our products to find the perfect fit for your research and production needs.

Bioreactors Cultivating life, power progress

See
more



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<https://bionet.com/technologies/bioreactor-models/>

