Millipore®
Preparation, Separation,
Filtration & Monitoring Products

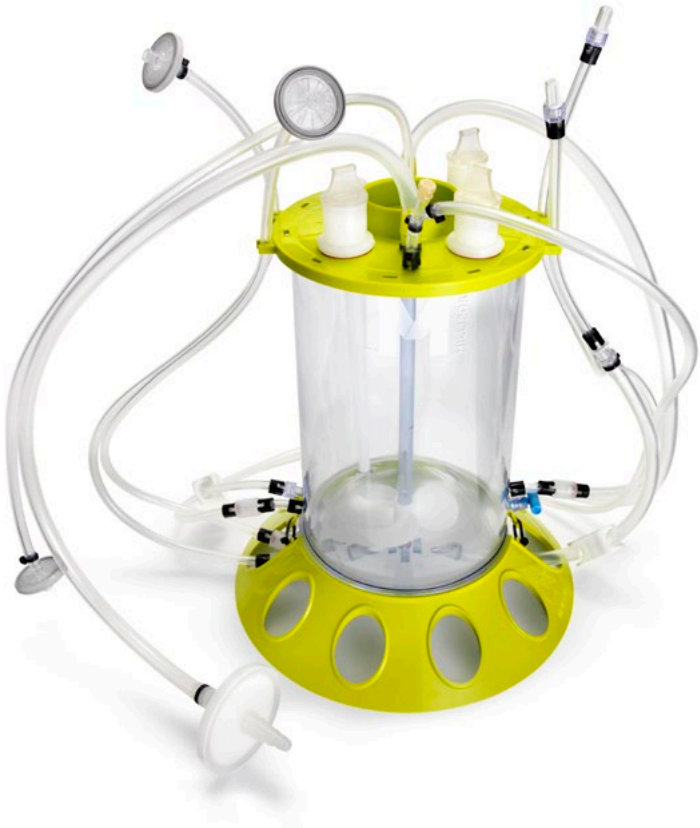
Data Sheet

# Mobius® 3 L Bioreactor

## Eliminate the need to clean, autoclave, and assemble your traditional glass bioreactors and save days of downtime

The Mobius® 3 L bioreactor is a single-use stirred tank bioreactor for bench-scale cell culture in fed-batch or perfusion mode.

It combines the predictability of a stirred tank design with the flexibility of single-use, making it the ideal solution for bench-scale cell culture process development.



### Benefits

- Increased process efficiency with high turnaround time
- Ships pre-assembled and gamma irradiated, reducing setup time
- Compatible with a wide range of controllers
- Single-use technology eliminates the need to clean, autoclave, and assemble your traditional glass bioreactor

### Applications

- Mammalian cells
- Insect cells



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## Operational Flexibility

The Mobius® 3 L bioreactor has all the benefits of single-use technology coupled with the familiarity of traditional benchtop glass stirred tank bioreactors:

- Rigid tank design with the familiar shape of traditional glass bioreactors
- Pre-fitted, weldable C-flex® tubing
- Vent filter, gas overlay, and 2 gas inlet filters
- 3 probe ports and 1 thermowell port
- Open-pipe and sintered microsparger
- Fluid addition/removal
  - 4 fluid addition lines
  - 1 sub-surface fluid inlet/outlet
  - Bottom drain port for harvesting
  - In-line septum for small volume additions (i.e. antifoam)
  - Sampling: sub-surface integrated side sampling to minimize sampling dead volume

## Controller Compatibility

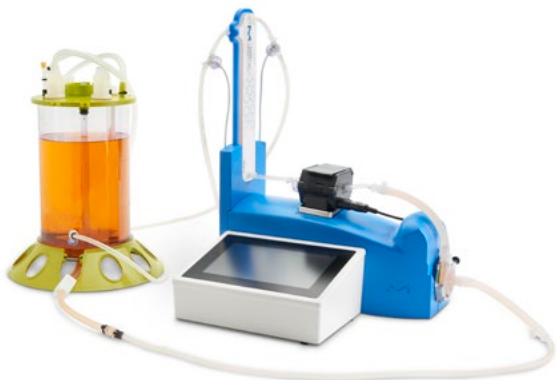
The Mobius® bioreactor integrates with most standard bioreactor controller configurations via a motor adapter (sold separately). Motor adapters are available for a variety of motors, please see ordering information for details. The Mobius® 3 L bioreactor probe ports fit standard 12 mm probes (length: 200–235 mm). In addition, most standard 3 L heating blankets are compatible.

## Part of the BioContinuum® Seed Train Platform

The Mobius® 3 L bioreactor is the ideal solution for N-1 perfusion. Our range of perfusion products help you optimize your seed train intensification process.

Our benchtop Cellicon™ Perfusion Solution is designed to meet your perfused seed train challenges. It consists of a controller and a flat sheet cell retention filter with a single-use assembly running in tangential flow filtration mode. This easy-to-use solution increases perfusion process efficiency, and provides real-time monitoring and control for reliable and consistent performance.

See Cellicon® Perfusion Filter and Controller Data Sheet for more information (MK_DS5310EN).



Our Cellvento® 4CHO-X Expansion Medium is specifically prepared to support seed train applications through N-1. It allows for optimal preparation of cells for production phases in perfusion while supporting high cell growth at low cell-specific perfusion rates (CSPR) to increase productivity at the N-stage.

See Cellvento® 4CHO Data Sheet for more information (DS9502EN00).


## Specifications

| Volume | |
|---|---|
| Total | 3.0 L |
| Minimum | 1.0 L |
| Maximum Working | 2.4 L |

| Dimensions | |
|---|---|
| Vessel diameter (inner) | 5.3" (135.0 mm) |
| Overall height | 9.6" (244.0 mm) |
| Overall weight | 1.5 lb (680.0 g) |
| Base diameter | 9.5" (241.0 mm) |
| Thermowell diameter | 0.4" (7.6 mm) |
| Impeller diameter (Marine; Scoping) | 3.0" (76.2 mm) |

| Materials | |
|---|---|
| Vessel, shaft, and base | Polycarbonate |
| Headplate, thermowell, and impeller | HDPE |
| O-rings and seals | Silicone |
| Check valve | Silicone, Polypropylene |
| Septum | ABS, Polyisoprene |
| Probe port plug | TPE |
| Gamma Irradiation | Minimum 25 kGy |

| Temperature | |
|---|---|
| Maximum Operating Temperature | 40 °C |

| Ports | |
|---|---|
| PG 13.5 threaded (3) | Fits standard 12 mm probes (200–235 mm length) |

## Connections

| | Location | C-Flex® Clear 374 Tubing ID | | Connector | Filter | Component |
|---|---|---|---|---|---|---|
| | | 1/8" (3.2 mm) | 1/4" (6.4 mm) | | | |
| Fluid addition 1 | Headplate | yes | | 1/8" Male Luer with Cap | | Septum |
| Fluid addition 2 | Headplate | yes | yes | | | |
| Fluid addition 3 | Vessel | yes | | | Check valve | |
| Fluid addition 4 | Vessel | yes | | | Check valve | |
| Harvest | Vessel | yes | yes | | Clamp | |
| Fluid Addition or Outlet Line | Vessel | yes | | | Clamp | |
| Air inlet (overlay) | Headplate | yes | | | | |
| Sparge 1 (microsparger) | Vessel | yes | | | yes | Check valve |
| Sparge 2 (open pipe) | Vessel | yes | | | | Check valve |
| Air outlet (vent) | Headplate | | yes | | yes | |

## Gas Filters

| | |
|---|---|
| Overlay and sparge inlets | Millipore Millex® 33 mm 0.22 µm PVDF (hydrophobic) |
| Vent outlet | Gamma stable Opticap® XL 50 Capsule Filters with Millipore Express® SPG Hydrophobic membrane |

## Sampling

Luer actuated valve
Weldable tube with clamp

## Sparging

| | |
|---|---|
| Sintered Polyethylene Microsparger (pore size) | The inserted frit has been designed to produce a 15–30 micron nominal pore size |
| Open pipe sparger diameter | 0.09" (2.3 mm) |

## Compatibility

| | |
|---|---|
| Motor Drive Adapter required | Integrates with most standard 3 L motors |
| Heating blankets | Compatible with most standard 3 L heating blankets |

100% Integrity Testing in Manufacturing: Each unit is tested and must pass a leak integrity test using a pressure decay method.

# Ordering Information

| Description | Catalogue No. |
|---|---|
| Mobius® 3 L Bioreactor* | CR0003L200 |
| **Motor Adapters Compatible with:** | |
| Applikon® my-Control and ez2-Control, Eppendorf DASGIP® | CR0003L102 |
| Bellco Digital Overhead Drive | CR0003L105 |
| Bellco BBC3 | CR0003L106 |
| New Brunswick Celligen® Plus | CR0003L107 |
| New Brunswick Celligen® 115 | CR0003L108 |
| Sartorius BIOSTAT® Bioreactor B-DCU II, Bionet F0 | CR0003L109 |

* Motor adapter must be ordered with the Mobius® 3 L bioreactor

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