



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



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 (MS_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				Septum
Fluid addition 2	Headplate	yes	yes			
Fluid addition 3	Vessel	yes		1/8" Male Luer with Cap	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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