

Mobius® Bioreactors

A scalable, ergonomic system with the flexibility to fit your process

Mobius® Bioreactors are a scalable portfolio of stirred tank bioreactors that provide flexibility by configuring software, hardware and single-use assemblies for use in fed batch and perfusion cell culture applications.

Our bioreactor platform has been designed to ensure that ease-of-use and operational flexibility at small scale can be translated to full scale production.

Benefits

- Installation of single-use assemblies designed with you in mind for safe and repeatable operation
- 5:1 turndown ratio provides you with the most flexible seeding and growth strategy
- Works as a standalone system or integrated as part of your facility's automation platform
- Demonstrated scalability of key engineering parameters gives you confidence to scale-up your process
- Lynx® connectors ensure a critical, sterile connection
- Mobius® SensorReady Technology, a novel way to monitor and control the bioreactor



Mobius® 50 L Bioreactor



Mobius® 200 L Bioreactor



Mobius® 1000 L Bioreactor



Mobius® 2000 L Bioreactor



Specifications

	Mobius® 50 L Bioreactor	Mobius® 200 L Bioreactor	Mobius® 1000 L Bioreactor	Mobius® 2000 L Bioreactor
Working Volume	10-50 L	40-200 L	200-1000 L	400-2000 L
Total Bioreactor Volume (Liquid + Head Space)	60 L	250 L	1250 L	2500 L
Total Height-to-Diameter Ratio (nominal)	2.0:1	2.0:1	2.0:1	2.0:1
Ratio impeller diameter/ vessel diameter	0.3	0.3	0.3	0.3
Diameter	34 cm (13.4 in.)	54 cm (21.3 in.)	92 cm (36.2 in.)	116 cm (45.6 in.)
Maximum Operating Pressure	17 mbar (0.25 psi)	17 mbar (0.25 psi)	17 mbar (0.25 psi)	17 mbar (0.25 psi)
Operating Temperature	4 to 40°C	4 to 40°C	4 to 40°C	4 to 40°C
Impeller Motor Speed Operating Range	30-300 rpm	30-140 rpm	10-100 rpm	10-90 rpm
Impeller Position	Bottom Mount 15° from center	Bottom Mount 15° from center	Bottom Mount 15° from center	Bottom Mount 15° from center
Impeller Diameter	10.85 cm (4.27 in.)	18.28 cm (7.2 in.)	27.94 cm (11 in.)	33.02 cm (13 in.)
Impeller Geometry	Pitched blade (4 blades at 13° pitch)	Pitched blade (4 blades at 13° pitch)	Pitched blade (4 blades at 13° pitch)	Pitched blade (4 blades at 13° pitch)
Impeller Power Number	3.2	4	3.5	3.3
Internal Baffle	X-Baffle	X-Baffle	X-Baffle	X-Baffle
Mobius® Vent Filter Assembly	Opticap® XL5 capsule with Aervent® 0.2 µm membrane	Opticap® XL5 capsule with Aervent® 0.2 µm membrane	Opticap® XL5 capsule with Aervent® 0.2 µm membrane	Opticap® XL5 capsule with Aervent® 0.2 µm membrane
Vent Filter Flow Rate/Vent	80 LPM @ 0.25 psi	80 LPM @ 0.25 psi	80 LPM @ 0.25 psi	80 LPM @ 0.25 psi
Overlay Filter	Millipak® Filter with	Millipak® Filter with	Opticap® XL300 with	Opticap® XL300 with
Microsparger Filter	 0.22 µm hydrophobic Durapore® membrane 	0.22 µm hydrophobic Durapore® membrane	0.2 µm Millipore Express® SPG	0.2 μm Millipore Express® SPG
Open Pipe Filter	· .		membrane	membrane
Overlay Filter Max Flow Rate	25 LPM	25 LPM	100 LPM	100 LPM
Microsparger Filter Flow Rate	10 LPM	20 LPM	100 LPM	100 LPM
Open Pipe Flow Rate	10 LPM	20 LPM	100 LPM	100 LPM
Ring Sparger Flow Rate	10 LPM	20 LPM	100 LPM	100 LPM
Open Pipe Diameter	1.5 mm	1.5 mm	4.0 mm	4.0 mm
Durability	30 days	30 days	30 days	30 days

Specifications (continued)

	Mobius® 50 L Bioreactor	Mobius® 200 L Bioreactor	Mobius® 1000 L Bioreactor	Mobius® 2000 L Bioreactor
Stainless Steel Vessel & Control Box				
Power Supply Voltage The system is supplied with a 5 m power cord. User must supply an appropriate plug or cap for the cord.	110 or 230 VAC, 50/60 Hz, 1 phase, 14-7 Amps	208 or 230 VAC, 50/60 Hz, 1 phase, 11-10 Amps	208 or 230 VAC, 50/60 Hz, 1 phase, 24-22 Amps	208 or 230 VAC, 1 phase, 50/60 Hz, 24-22 Amps
Vent Filter Heaters	1	1	3	3
Vent Filter Heater Temperature Set Point	40°C	40°C	40°C	40°C
Vessel Jacket Volume (nominal)	3.3 L (0.87 gal)	7.8 L (2.1 gal)	19.2L (5.1 gal)	33.7 L (8.9 gal)
Vessel Jacket Maximum Working Pressure	Rated to 150 psi ASMEU stamp*	Rated to 150 psi ASME U stamp*	Rated to 150 psi ASME U stamp*	Rated to 150 psi ASME U stamp*
Mettler Toledo Load Cells	3	3	3	3
Load Cell Range	0-60 kg	0-250 kg	0-1100 kg	0-2048 kg
Transmitter for Reusable pH Probes	2	2	2	2
Transmitter for Reusable DO Probes	2	2	2	2
Spare Inputs	2	2	2	2
Spare Outputs	2	2	2	2
Peristaltic Pumps	Up to 5 (300, 500 or 600 series)	Up to 5 (300, 500 or 600 series)	Up to 5 (500, 600 or 700 series)	Up to 5 (500, 600 or 700 series)
Mass Flow Controllers (MFC)	4-6	4-6	4-6	4-6
Connection to MFCs	Swagelok® connectors	Swagelok® connectors	Swagelok® connectors	Swagelok® connectors
Display on Control Box	15" Siemens Touchscreen	15" Siemens Touchscreen	19" Siemens Touchscreen	19" Siemens Touchscreen
Bioreactor Dimensions	H: 1.93 m (76 in.) W: 1.30 m (51 in.) D: 1.09 m (43 in.)	H: 2.10m (83 in.) W: 1.65 m (65 in.) D: 1.19 m (47 in.)	H: 3.10 m (122 in.) W: 1.95 m (77 in.) D: 1.65 m (65 in.)	H: 3.58 m (141 in.) W: 2.20 m (87 in.) D: 1.89 m (75 in.)
General tolerances	+/- 12 mm (0.4 in.)	+/- 12 mm (0.4 in.)	+/- 12 mm (0.4 in.)	+/- 12 mm (0.4 in.)
Bioreactor Weight (Approximate) (Stainless Steel Vessel & Control Box)	520 kg (1146 lb.)	630 kg (1389 lb.)	1225 kg (2700 lb.)	1415 kg (3120 lb.)

^{*}Optional feature

Common Control Platform® (CCP®) Specifications

On-board Report Generator	Yes
On-board Unit Procedure Editor	Yes
Unit Procedure Version Control	Yes
Definable User Access Levels	Yes
Ready to integrate into:	
Network domain	Yes
Alarm system	Yes
Data historian	Yes
Back-up solution	Yes
Ready for remote access*	Yes, using Windows® remote desktop
Ready for antivirus installation	Yes (tested with Avast®)

^{*} Not recommended for GMP operations



Materials of Construction

	Mobius® 50 L Bioreactor	Mobius® 200 L Bioreactor	Mobius® 1000 L Bioreactor	Mobius® 2000 L Bioreactor
Mobius® Hardware (Vessel, Control Box & Skid)	304 L Stainless Steel			
Flexware® Assembly for the Mobius® Bioreacto	rs			
Internal Film Baffle	PureFlex™ Film	PureFlex™ Film	PureFlex™ Film	PureFlex™ Film
Film	PureFlex™ Film	PureFlex™ Film	PureFlex™ Plus Film	PureFlex™ Plus Film
Front Plate	_	_	HDPE	HDPE
Hose Barbs	HDPE	HDPE	HDPE	HDPE
Microsparger	Hydrophobic Flask Spun Polyethylene Film	Hydrophobic Flask Spun Polyethylene Film	Hydrophobic Flask Spun Polyethylene Film	Hydrophobic Flask Spun Polyethylene Film
Ring Sparger	PureFlex™ Plus Film	PureFlex™ Plus Film	PureFlex™ Plus Film	PureFlex™ Plus Film
Sparger Sub-assembly	Polypropylene, Polyethylene, and Polyester	Polypropylene, Polyethylene, and Polyester	Polypropylene, Polyethylene, and Polyester	Polypropylene, Polyethylene, and Polyester
Main Impeller	Polypropylene	Polypropylene	Polypropylene	Polypropylene
Tubing	C-Flex® 374 or Silicone Pharma 50			
Mobius® SensorReady Pump	Polypropylene	Polypropylene	Polypropylene	Polypropylene
Lynx® S2S Male and Female Coupling (½ in.)				
Lynx® S2S Connector	Polysulfone	Polysulfone	Polysulfone	Polysulfone
Gasket	Silicone	Silicone	Silicone	Silicone
Mobius® SensorReady Assembly (all configuration)	tions)			
Housing	Polysulfone	Polysulfone	Polysulfone	Polysulfone
O-rings	Silicone	Silicone	Silicone	Silicone
Lynx® S2S Male and Female Coupling (½ in.)				
Lynx® S2S Connector	Polysulfone	Polysulfone	Polysulfone	Polysulfone
Gasket	Silicone	Silicone	Silicone	Silicone
Primary Tubing (connects Mobius® SensorReady main body to Lynx® S2S connector)	Silicone	Silicone	Silicone	Silicone
Sample Tubing	C-Flex® 374	C-Flex® 374	C-Flex® 374	C-Flex® 374
Vent Filter	Millex®-FG (0.20 µm hydrophobic PTFE)			
Sample Ports	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Mobius® Bioreactor Vent Filter Assembly				
Vent filter	Aervent (0.20 µm hydrophobic PTFE), and polypropylene			
Tubing	Silicone	Silicone	Silicone	Silicone
Lynx® S2S Male Coupling (½ in.)				
Lynx® S2S Connector	Polysulfone	Polysulfone	Polysulfone	Polysulfone
Gasket	Silicone	Silicone	Silicone	Silicone

Mobius® 50 L and 200 L Bioreactor Tubing Specifications

Location	Tubing	Material	Inner Diam. (in.)	Outer Diam. (in.)	End Connection
Тор	Vent Filter Tubing	Silicone	cannot b	e welded	Female Lynx® Connector
	Vent Filter Tubing	Silicone	cannot b	e welded	Female Lynx® Connector
	Pressure Sensor	Silicone	cannot b	e welded	Pressure Sensor
	Gas Overlay	Silicone	cannot b	e welded	Millipak® Filter
	Addition Tubing	Silicone	1/4	1/2	Plug
		Silicone	1/8	1/4	_
		C-Flex®	1/8	1/4	_
	Addition Tubing	Silicone	1/4	1/2	Plug
		Silicone	1/8	1/4	_
		C-Flex®	1/8	1/4	_
	Addition Tubing	Silicone	1/4	1/2	Plug
		Silicone	1/8	1/4	_
		C-Flex®	1/8	1/4	_
	Addition Tubing	Silicone	1/4	1/2	Plug
		Silicone	1/8	1/4	_
		C-Flex®	1/8	1/4	_
	Addition Tubing	Silicone	3/8	5/8	Plug
		C-Flex®	3/8	5/8	_
		C-Flex®	1/4	7/16	_
		C-Flex®	1/8	1/4	_
	Addition Tubing	Silicone	1/2	3/4	Plug
		C-Flex®	1/2	3/4	_
		C-Flex®	3/8	5/8	_
Side	Addition Tubing	Silicone	1/2	3/4	Plug
		C-Flex®	1/2	3/4	_
		C-Flex®	3/8	5/8	_
	Raised Harvest	Silicone	1/2	3/4	Plug
		C-Flex®	1/2	3/4	_
	SensorReady Outlet	Silicone	cannot b	e welded	Male Lynx® Connector
	Temperature Probe Port				Male Luer
Bottom	Drain Harvest	Silicone	1/2	3/4	1.5 TC
		C-Flex®	1/2	3/4	
		C-Flex®	3/8	5/8	Plug
	SensorReady Inlet	Silicone	cannot b	e welded	Female Lynx® Connector
			cannot b	e welded	Check-valve
		Silicone		e welded	Millipak® Filter
	Sparge Line #2	Silicone	cannot b	e welded	Check-valve
	· -	Silicone	cannot b	e welded	Millipak® Filter

Mobius 50 L and 200 L Perfusion Flexware® Tubing Specifications

Location	Tubing	Material	Inner Diam. (in.)	Outer Diam. (in.)	End Connection
Тор	Vent Filter Tubing	Silicone	cannot b	e welded	Female Lynx® Connector
	Vent Filter Tubing	Silicone	cannot b	e welded	Female Lynx® Connector
	Pressure Sensor	Silicone	cannot b	e welded	Pressure Sensor
	Gas Overlay	Silicone	cannot b	e welded	Millipak® Filter
	Addition Tubing	Silicone	1/4	1/2	Plug
		CFlex	1/4	7/16	
		Silicone	1/8	1/4	
		CFlex	1/8	1/4	
	Addition Tubing	Silicone	1/4	1/2	Plug
		Silicone	1/8	1/4	
		CFlex	1/8	1/4	
	Addition Tubing	Silicone	1/4	1/2	Plug
		Silicone	1/8	1/4	
		CFlex	1/8	1/4	
	Addition Tubing	Silicone	1/4	1/2	Plug
		Silicone	1/8	1/4	
		CFlex	1/8	1/4	
	Addition Tubing	Silicone	3/8	5/8	Plug
		CFlex	3/8	5/8	
		CFlex	1/4	7/16	
		CFlex	1/8	1/4	
	Addition Tubing	Silicone	1/2	3/4	Plug
		CFlex	1/2	3/4	
		CFlex	3/8	5/8	
Side	CRD line 1	Silicone	3/4	1	AseptiQuik x 3/4 HB
	CRD line 2	Silicone	3/4	1	AseptiQuik x 3/4 HB
	SensorReady Outlet	Silicone	cannot b	e welded	Male Lynx® Connector
	Temperature Probe Port				Male Luer
Bottom	Drain Harvest	Silicone	1/2	3/4	1.5 TC
		CFlex	1/2	3/4	
		CFlex	3/8	5/8	Plug
	SensorReady Inlet	Silicone	cannot b	e welded	Female Lynx® Connector
	Sparge Line #1	Silicone	cannot b	e welded	Check-valve
		Silicone	cannot b	e welded	Millipak® Filter
	Sparge Line #2	Silicone	cannot b	e welded	Check-valve
		Silicone		e welded	Millipak® Filter

Mobius® 1000 L and 2000 L Bioreactor Tubing Specifications

TOP Vent Filter Tubing Silicone cannot be welded Female Lynx® Connector Vent Filter Tubing Silicone cannot be welded Female Lynx® Connector Vent Filter Tubing Silicone cannot be welded Female Lynx® Connector Vent Filter Tubing Silicone cannot be welded Female Lynx® Connector Vent Filter Tubing Silicone cannot be welded Female Lynx® Connector Vent Filter Tubing Silicone cannot be welded Female Lynx® Connector Pressure Sensor Silicone cannot be welded Pressure Sensor Gas Overlay Silicone cannot be welded Pressure Sensor Addition Tubing Silicone 1/2 3/4 Opticap® XL 300 Addition Tubing Silicone 1/2 3/4 1/2 1/2 Addition Tubing Silicone 1/8 1/4 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	Location	Tubing	Material	Inner Diam. (in.)	Outer Diam. (in.)	End Connection
Vent Filter Tubing Silicone cannot be welded Female Lynx® Connector Vent Filter Tubing Silicone cannot be welded Female Lynx® Connector Vent Filter Tubing Silicone cannot be welded Female Lynx® Connector Vent Filter Tubing Silicone cannot be welded Female Lynx® Connector Fessure Sensor Silicone cannot be welded Pressure Sensor Gas Overlay Silicone 1/2 3/4 Opticap® XL300 Addition Tubing Silicone 1/2 3/4 Plug Addition Tubing Silicone 1/8 1/4 1/2 Addition Tubing Silicone 1/8 1/4 1/2 1/4 1/2 1/4 1/4 1/2 1/4	Тор	Vent Filter Tubing	Silicone	cannot	be welded	Female Lynx® Connector
Vent Filter Tubing Silicone cannot be welded Fermale Lynx® Connector Vent Filter Tubing Silicone cannot be welded Fermale Lynx® Connector Vent Filter Tubing Silicone cannot be welded Fermale Lynx® Connector Pressure Sensor Silicone cannot be welded Pressure Sensor Gas Overlay Silicone 1/2 3/4 Plug Addition Tubing Silicone 1/2 3/4 Plug Addition Tubing Silicone 1/8 1/2 2 Addition Tubing Silicone 1/8 1/4 1/2 Plug Addition Tubing Silicone 1 13/8 1/4 Plug Plug Addition Tubing Silicone 1 13/8 1/4 Plug Plug Addition Tubing Silicone 1 13/8 1/4 Plug Plug C-Flex® 1/2 3/4 1 Plug Plug Plug Plug Plug Plug Plug Plug Plug		Vent Filter Tubing	Silicone	cannot	be welded	Female Lynx® Connector
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Vent Filter Tubing Silicone cannot be welded Female Lynx® Connector Pressure Sensor Silicone cannot be welded Pressure Sensor Gas Overlay Silicone cannot be welded Opticap® XL 300 Addition Tubing Silicone 1/2 3/4 Plug Addition Tubing Silicone 1/8 1/2 3/8 Plug Addition Tubing Silicone 1/8 1/4 1/2 Plug Addition Tubing Silicone 1 1/3 1/8 Plug Addition Tubing Silicone 1 1/3 1/8 Plug Addition Tubing Silicone 1/2 3/4 1 Plug Addition Tubing Silicone 1/2 3/4 1 Plug Feliex® 1/2 3/4 1 Plug Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone <td< td=""><td></td><td>Vent Filter Tubing</td><td>Silicone</td><td>cannot</td><td>be welded</td><td>Female Lynx® Connector</td></td<>		Vent Filter Tubing	Silicone	cannot	be welded	Female Lynx® Connector
Pressure Sensor Silicone cannot be welded Pressure Sensor Gas Overlay Silicone cannot be welded Opticap® XL 300 Addition Tubing Silicone 1/2 3/4 Plug C-Flex® 3/8 5/8 5/8 Plug Addition Tubing Silicone 1/4 1/2 Plug Addition Tubing Silicone 1/8 1/4 1/2 Plug Addition Tubing Silicone 1 1 3/8 1/4 1/2 Plug Addition Tubing Silicone 1 1 3/8 1/4 1/2 Plug Plug Addition Tubing Silicone 1/2 3/4 1 1/2 3/4 1 Plug		Vent Filter Tubing	Silicone	cannot	be welded	Female Lynx® Connector
Gas Overlay Silicone cannot be welded Opticap® XL300 Addition Tubing Silicone 1/2 3/4 Plug CFlex® 3/8 5/8 Plug Addition Tubing Silicone 1/4 1/2 Plug Silicone 1/8 1/4 1/2 Plug Addition Tubing Silicone 1 13/8 1/4 Addition Tubing Silicone 1 13/8 1/4 Addition Tubing Silicone 1 3/4 1 Addition Tubing Silicone 1/2 3/4 1 Addition Tubing Silicone 3/8 5/8 Plug Silcone 3/8 5/8 Plug CFlex® 3/8 5/8 Plug Addition Tubing Silicone 3/8 5/8 Plug CFlex® 3/8 5/8 Plug CFlex® 3/8 5/8 Plug Addition Tubing Silicone 1/2 3/4		Vent Filter Tubing	Silicone	cannot	be welded	Female Lynx® Connector
Addition Tubing Silicone 1/2 3/4 Plug C-Flex* 1/2 3/4 Plug Addition Tubing Silicone 1/4 1/2 Plug Addition Tubing Silicone 1/8 1/4 Plug Addition Tubing Silicone 1 1/3/8 Plug C-Flex* 1/2 3/4 1 Addition Tubing Silicone 1/2 3/4 Plug C-Flex* 1/2 3/4 Plug Addition Tubing Silicone 3/8 5/8 Silicone 3/8 5/8 Plug Addition Tubing Silicone 1/2 3/4 Plug Addition Tubing Silicone 1/2 3/4 Plug Addition Tubing Silicone		Pressure Sensor	Silicone	cannot	be welded	Pressure Sensor
		Gas Overlay	Silicone	cannot	be welded	Opticap® XL 300
C-Flex® 3/8 5/8		Addition Tubing	Silicone	1/2	3/4	Plug
Addition Tubing Silicone 1/4 1/2 Plug Silicone 1/8 1/4 1/2 Plug Addition Tubing Silicone 1 1 3/8 Plug Addition Tubing Silicone 1 1 3/8 Plug Addition Tubing Silicone 1/2 3/4 1 Addition Tubing Silicone 1/2 3/4 Plug Silicone 1/2 3/4 Plug Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone 1/2 3/4 Plug Addition Tubing Silicone 1/2 3/4 Plug Addition Tubing Silicone 1 1 3/8 Plug Addition Tubing Silicone 1 1 3/8 Plug Addition Tubing Silicone 1 1 3/			C-Flex®	1/2	3/4	_
Silicone			C-Flex®	3/8	5/8	_
Addition Tubing Silicone 1 1 3 3 3 4 1 4 1 3 3 4 1 4 3 4 4 1 4 3 3 4 4 1 4 3 3 4 4 1 4 3 3 4 4 1 4 3 3 4 4 1 4 3 3 4 4 1 4 3 3 4 4 1 4 3 3 4 4 4 4 4 4 4		Addition Tubing	Silicone	1/4	1/2	Plug
Addition Tubing Silicone 1 1 3/8 Plug C-Flex® 3/4 1 1 1 3/8 Plug Addition Tubing Silicone 1/2 3/4 1 Plug Addition Tubing Silicone 1/2 3/4 Plug Plug Side Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone 1/2 3/4 Plug Addition Tubing Silicone 1/2 3/4 Plug Addition Tubing Silicone 1 1 3/8 Plug Addition Tubing Silicone 1 1 3/8 Plug Addition Tubing Silicone 1 1 3/8 Plug Addition Tubing Silicone cannot be welded Male Lynx® Con			Silicone	1/8	1/4	_
C-Flex® 3/4 1 1 C-Flex® 1/2 3/4 Addition Tubing			C-Flex®	1/8	1/4	_
Part		Addition Tubing	Silicone	1	1 3/8	Plug
Addition Tubing Silicone 1/2 3/4 Plug C-Flex® 1/2 3/4 Plug C-Flex® 3/8 5/8 Plug Side Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone 1/2 3/4 Male Lynx® Connector August Female Lynx® Connector 1/2 3/4 Male Lynx® Connector August Female Lynx® Connec			C-Flex®	3/4	1	_
C-Flex® 1/2 3/4			C-Flex®	1/2	3/4	_
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Side Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone 3/8 5/8 Plug Addition Tubing Silicone 1/2 3/4 Plug Addition Tubing Silicone 1/2 3/4 Plug Addition Tubing Silicone 1 3/4 Plug Addition Tubing Silicone 1 3/4 Plug Addition Tubing Silicone 1 3/4 Plug Addition Tubing Silicone cannot be welded Male Lynx® Connector Addition Tubing Silicone 1 1 3/8 Plug Addition Tu			C-Flex®	1/2	3/4	_
Addition Tubing			C-Flex®	3/8	5/8	_
Addition Tubing Silicone C-Flex® 3/8 mode of the second	Side	Addition Tubing	Silicone	3/8	5/8	Plug
C-Flex® 3/8 5/8 Addition Tubing Silicone 1/2 3/4 Plug			C-Flex®	3/8	5/8	_
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$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Addition Tubing	Silicone	1/2	3/4	Plug
			C-Flex®	1/2	3/4	_
SensorReady OutletSiliconecannot be weldedMale Lynx® ConnectorTemperature Probe PortMale LuerBottomDrain Harvest TubingSilicone11 3/8PlugC-Flex®1/23/4SensorReady InletSiliconecannot be weldedFemale Lynx® ConnectorSparge Line #1C-Flex®cannot be weldedCheck-valveSparge Line #2C-Flex®cannot be weldedOpticap® XL 300 Filter		Raised Harvest Tubing	Silicone	1	1 3/8	Plug
$\begin{tabular}{ l l l l l l l l l l l l l l l l l l l$			C-Flex®	1/2	3/4	_
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		SensorReady Outlet	Silicone	cannot	be welded	Male Lynx® Connector
C-Flex®1/23/4SensorReady InletSiliconecannot be weldedFemale Lynx® ConnectorSparge Line #1C-Flex®cannot be weldedCheck-valveSiliconecannot be weldedOpticap® XL 300 FilterSparge Line #2C-Flex®cannot be weldedCheck-valve		Temperature Probe Port				Male Luer
SensorReady InletSiliconecannot be weldedFemale Lynx® ConnectorSparge Line #1C-Flex®cannot be weldedCheck-valveSiliconecannot be weldedOpticap® XL 300 FilterSparge Line #2C-Flex®cannot be weldedCheck-valve	Bottom	Drain Harvest Tubing	Silicone	1	1 3/8	Plug
Sparge Line #1C-Flex®cannot be weldedCheck-valveSiliconecannot be weldedOpticap® XL 300 FilterSparge Line #2C-Flex®cannot be weldedCheck-valve			C-Flex®	1/2	3/4	_
Silicone cannot be welded Opticap® XL 300 Filter Sparge Line #2 C-Flex® cannot be welded Check-valve		SensorReady Inlet	Silicone	cannot	be welded	Female Lynx® Connector
Sparge Line #2 C-Flex® cannot be welded Check-valve		Sparge Line #1	C-Flex®	cannot	be welded	Check-valve
			Silicone	cannot	be welded	Opticap® XL 300 Filter
Silicone cannot be welded Opticap® XL 300 Filter		Sparge Line #2	C-Flex®	cannot	be welded	Check-valve
			Silicone	cannot	be welded	Opticap® XL 300 Filter

Regulatory Information

Controller	Rated IP65
CE	The Mobius® Bioreactors are self declared to meet the applicable European Directives. Please reference the product's Declaration Of Conformity for more information.
CCP® Software	Developed according to GAMP5 guidelines
	Designed to support compliance to 21 CFR part 11
Animal Origin Statement	All wetted materials of all consumables are either free of animal origin or comply with EMA/410/01 rev.3

^{*}If the Authority Having Jurisdiction (AHJ) in your area requires additional certification, please contact your Merck representative to schedule the necessary field label from a Nationally Recognized Testing Laboratory (NRTL) under OSHA's requirements.

Component Material testing

Materials of construction for the Mobius® Flexware assemblies, SensorReady Assemblies and Vent Filter Assemblies meet:

Tests	Properties
USP<88>	Biological Reactivity Test in Vivo, Class VI
USP<87>	Biological Reactivity Test in Vitro, Cytoxicity
USP<85>	Bacterial Endotoxin
USP<788>	Particulate Matter
USP<661>	Physicochemical test for plastics

Shelf Life

Flexware® Assemblies for Mobius® 50–2000 L Bioreactors	2 years
The Mobius® SensorReady Dual and Quad RS Assembly	2 years
Vent Filter Assemblies for Mobius® 50–2000 L Bioreactors	2 years
Flexware® Assemblies for Mobius® 50–2000 L Bioreactors	Gamma irradiated to a dose of 25–40 kGy
Vent Filter Assemblies for Mobius® 50–2000 L Bioreactors	Each assembly has been sterilized using a validated Ethylene Oxide Sterilization Process to a sterility assurance level of 10 ⁻⁶



Ordering Information

Description	Cat. No.
Mobius® Vent Filter Assembly	
Mobius® Vent Filter Assembly	CRVFL05E01
Mobius® SensorReady Assemblies	
Mobius® SensorReady Dual Reusable Assembly	CRSR110A01
Mobius® SensorReady Quad Reusable Assembly	CRSR120A01
Flexware® Assemblies	
Flexware® Assembly (PendoTECH) for the Mobius® 50 L Bioreactor – Ring Sparger	CR0050L103
Flexware® Assembly (PendoTECH) for the Mobius® 50 L Bioreactor – Microsparger	CR0050L104
Flexware® Assembly (TruTorr®) for the Mobius® 50 L Bioreactor – Ring Sparger	CR0050L105
Flexware® Assembly (TruTorr®) for the Mobius® 50 L Bioreactor – Microsparger	CR0050L106
Flexware® Perfusion Assembly for Mobius® 50 L Bioreactor – Ring Sparger	CR0050L202
Flexware® Perfusion Assembly for Mobius® 50 L Bioreactor – Microsparger	CR0050L203
Flexware® Assembly (PendoTECH) for the Mobius® 200 L Bioreactor – Ring Sparger	CR0200L103
Flexware® Assembly (PendoTECH) for the Mobius® 200 L Bioreactor – Microsparger	CR0200L104
Flexware® Assembly (TruTorr®) for the Mobius® 200 L Bioreactor – Ring Sparger	CR0200L105
Flexware® Assembly (TruTorr®) for the Mobius® 200 L Bioreactor – Microsparger	CR0200L106
Flexware® Perfusion Assembly for Mobius® 200 L Bioreactor – Ring Sparger	CR0200L202
Flexware® Perfusion Assembly for Mobius® 200 L Bioreactor – Microsparger	CR0200L203
Flexware® Assembly for the Mobius® 1000 L Bioreactor – Ring Sparger	CR1000L103
Flexware® Assembly for the Mobius® 1000 L Bioreactor – Microsparger	CR1000L104
Flexware® Assembly for the Mobius® 2000 L Bioreactor – Ring Sparger	CR2000L103
Flexware® Assembly for the Mobius® 2000 L Bioreactor – Microsparger	CR2000L104
Accessories	
Stainless steel plugs for RS SensorReady	CRSRSSPA01
Mobius® Bioreactor Clamp Kit	CRCLAMPKIT01
Mobius® Bioreactor Clamp Kit (4 pack)	CRCLAMPKIT04

Ordering Information

Description

Bioprocessing Systems Services	
The pharmaceutical and biotechnology industries are highly regulated and to help you navigarange of services. These services help you save time, lower costs, and comply with regulatio performed by our global experts who have a unique intimate knowledge of our equipment be	ns. For your peace of mind, all services are
Mobius® 50 L Bioreactor	
50L SU Bioreactor FAT Protocol & Execution	Please contact Merck representative
50L SU Bioreactor SAT Protocol & Execution for non-GMP	SSVSATB05
50L SU Bioreactor IQ/OQ Protocol & Execution	SSVQUAB05
50L SU Bioreactor Essential Service Plan	SSVESPB05
50L SU Bioreactor Advanced Coverage Service Plan	SSVADCB05*
50L SU Bioreactor On-site Preventive Maintenance Protocol and Execution- additional to System Service Reliance Plan	SSVPRMB05
*For Advanced Service Reliance Plan, please order SSVESPB05 + SSVADCB05	
Mobius® 200 L Bioreactor	
200L SU Bioreactor FAT Protocol & Execution	Please contact Merck representative
200L SU Bioreactor SAT Protocol & Execution for non-GMP	SSVSATB20
200L SU Bioreactor IQ/OQ Protocol & Execution	SSVQUAB20
200L SU Bioreactor Essential Service Plan	SSVESPB20
200L SU Bioreactor Advanced Coverage Service Plan	SSVADCB20*
200L SU Bioreactor On-site Preventive Maintenance Protocol & Execution - additional to System Service Reliance Plan	SSVPRMB20
*For Advanced Service Reliance Plan, please order SSVESPB20 + SSVADCB20	
Mobius® 1000 L Bioreactor	
1000L SU Bioreactor FAT Protocol & Execution	Please contact Merck representative
1000L SU Bioreactor IQ/OQ Protocol & Execution	SSVQUAB1K
1000L SU Bioreactor Essential Service Plan	SSVESPB1K
1000L SU Bioreactor Advanced Coverage Service Plan	SSVADCB1K*
1000L SU Bioreactor On-site Preventive Maintenance Protocol and Execution - additional to System Service Reliance Plan	SSVPRMB1K
*For Advanced Service Reliance Plan, please order SSVESPB1K + SSVADCB1K	
Mobius® 2000 L Bioreactor	
2000L SU Bioreactor FAT Protocol & Execution	Please contact Merck representative
2000L SU Bioreactor IQ/OQ Protocol & Execution	SSVIOQB2K
2000L SU Bioreactor Essential Service Plan	SSVESPB2K
2000L SU Bioreactor Advanced Coverage Service Plan	SSVADCP2K*
2000L SU Bioreactor On-site Preventive Maintenance Protocol and Execution - additional to System Service Reliance Plan	SSVOPMB2K
*For Advanced Service Reliance Plan, please order SSVESPB2K + SSVADCB2K	
Training	
Mobius® Bioreactor operator training	PTROPEB

Cat. No.

PTR0PEB-ADV

Mobius® Bioreactor Advanced Training

Related Resources

Mobius® 3 L Bioreactor Datasheet	DS26770000
Mobius® Single-use Bioreactor Datasheet	DS3377EN00
Scalability of the Mobius® Single-use Bioreactor Application Note	AN1258EN00
Mobius® SensorReady Technology: A Flexible Approach for Monitoring Mobius® Single-use Bioreactors	TB5773EN00
Mobius® Single-use Bioreactors: Platform Scalability	WP3850EN

For more information on Mobius® Bioreactors, including additional documentation, videos and animations, please visit MerckMillipore.com/bioreactor

> Merck KGaA Frankfurter Strasse 250 64293 Darmstadt, Germany

To place an order or receive technical assistance, visit MerckMillipore.com/contactPS

For additional information, visit

MerckMillipore.com

