

Mobius® MIX Single-Use Mixing Systems

Integrated Mixing and Filtration
Technology Delivers Economic and
Processing Flexibility

The Mobius® MIX single-use mixing solution delivers advanced technology for mixing pharmaceutical ingredients from intermediate to final drug products and for the preparation of process solutions, such as buffers and media.

Features and benefits:

- Magnetically-driven levitating impeller for improved mixing consistency and efficiency
- Range of sizes available from 10 L to 1000 L
- 100, 200 and 500 L models are available in plastic or stainless steel
- Broad working volume, from a minimum volume that is approximately 10% to 20% of the working volume with maximum volume of 10% over (size dependent) the working volume, for processing flexibility
- Closed, sterile, and zero deadleg sampling directly from the mixing bag
- Monitor & control remotely with Ready To Connect control box
- Integrated load cells and temperature sensor
- In-process pH and conductivity measurement option
- Data collection with Chart Recorder option, supporting compliance with 21 CFR Part 11



Mobius® MIX single-use mixing systems



Ready To Connect control box

Specifications

Description	10 L/50 L	100 L	200 L	500 L	1000 L
Carrier - Plastic					
Materials of construction					
Tank	HDPE	LLDPE	LLDPE	LLDPE	
Stand	304L stainless steel	HDPE	HDPE	HDPE	
Latch	N/A	18-8 stainless steel	18-8 stainless steel	18-8 stainless steel	
Casters	Polyurethane	Polyurethane	Polyurethane	Polyurethane	
Dimensions					
L X W	29.5 x 25.6 in. (750 x 650 mm)	35 x 31 in. (890 x 790 mm)	38 x 32 in. (970 x 810 mm)	48 x 39 in. (1220 x 990 mm)	
Height	38.4 in. (980 mm)	48 in. (1220 mm)	49 in. (1240 mm)	66 in. (1680 mm)	
Weight	123 lb (56 kg)	74 lb (34 kg)	86 lb (39 kg)	200 lb (91 kg)	
Minimum working volume (to cover the impeller)	1 L / 2 L	9 L	23 L	26 L	
Minimum sampling volume	6.5 L / 20 L	40 L	80 L	210 L	
Maximum working volume	11 L / 55 L	110 L	220 L	550 L	
Storage temperature	0-40 °C (non-condensing environment)	0-40 °C (non-condensing environment)	0-40 °C (non-condensing environment)	0-40 °C (non-condensing environment)	
Operating temperature	4-40 °C (non-condensing environment)	4-40 °C (non-condensing environment)	4-40 °C (non-condensing environment)	4-30 °C (non-condensing environment)	
Carrier - Stainless Steel					
Materials of construction					
Tank		304L stainless steel	304L stainless steel	304L stainless steel	304L stainless steel
Stand		304L stainless steel	304L stainless steel	304L stainless steel	304L stainless steel
Latch		18-8 stainless steel	18-8 stainless steel	18-8 stainless steel	18-8 stainless steel
Casters		304L stainless steel	304L stainless steel	304L stainless steel	304L stainless steel
Dimensions					
L X W (jacketed)		33 x 26 in. (830 x 670 mm)	37 x 31 in. (940 x 790 mm)	46 x 41 in. (1170 x 1050 mm)	58 x 49 in. (1470 x 1240 mm)
L X W		33 x 26 in. (830 x 670 mm)	37 x 31 in. (940 x 790 mm)	46 x 41 in. (1170 x 1050 mm)	54 x 49 in. (1370 x 1240 mm)
Height		50 in. (1270 mm)	52 in. (1310 mm)	65 in. (1660 mm)	70 in. (1770 mm)
Weight (jacketed)		410 lb (186 kg)	485 lb (220 kg)	825 lb (374 kg)	1200 lb (544 kg)
Weight (unjacketed)		285 lb (129 kg)	325 lb (147 kg)	530 lb (240 kg)	900 lb (408 kg)
Minimum working volume (to cover the impeller)		9 L	23 L	26 L	25 L
Minimum sampling volume		40 L	80 L	210 L	290 L
Maximum working volume		110 L	220 L	550 L	1100 L
Fluid volume in jacket (approx.)		1.6 gal (6 L)	2.1 gal (7.8 L)	4.4 gal (16.8 L)	5.4 gal (20.5 L)
Heat transfer area of jacket (approx.)		10.4 sq. ft (0.97 sq. m)	13.2 sq. ft (1.23 sq. m)	28.5 sq. ft (2.65 sq. m)	34.9 sq. ft (3.24 sq. m)
Maximum working pressure of jacket		150 psi (10.3 bar)	150 psi (10.3 bar)	150 psi (10.3 bar)	150 psi (10.3 bar)
Stainless steel jacketed mixers ASME U-1 code stamped		Optional	Optional	Optional	Optional
Mettler Toledo SWB505 MultiMount™* load cells (qty 3) Load Cell Ingress protection rating		0-120 kg ±1% FS IP 68	0-240 kg ±1% FS IP 68	0-600 kg ±1% FS IP 68	0-1200 kg ±1% FS IP 68
RTD temperature sensor JUMO*		0-60°C ± 1°C	0-60°C ± 1°C	0-60°C ± 1°C	0-60°C ± 1°C
pH sensor Hamilton**		0-14 pH ±0.1 pH	0-14 pH ±0.1 pH	0-14 pH ±0.1 pH	0-14 pH ±0.1 pH
Conductivity sensor Hamilton**		0.2-200 mS/cm ±10% FS	0.2-200 mS/cm ±10% FS	0.2-200 mS/cm ±10% FS	0.2-200 mS/cm ±10% FS
Storage temperature		0-40 °C (non-condensing environment)	0-40 °C (non-condensing environment)	0-40 °C (non-condensing environment)	0-40 °C (non-condensing environment)
Operating temperature		4-60 °C (non-condensing environment)	4-60 °C (non-condensing environment)	4-60 °C (non-condensing environment)	4-60 °C (non-condensing environment)

* Included with carriers compatible with Ready To Connect control box
Available as an option with the carriers compatible with standard control box

** Only available as an option with the Ready To Connect control box

Description	10 L/50 L	100 L	200 L	500 L	1000 L
Motor					
Weight	3.1 lb (1.4 kg)	10.8 lb (4.9 kg)	10.8 lb (4.9 kg)	29 lb (13.1 kg)	29 lb (13.1 kg)
Electrical (max)	50 W	300 W	300 W	1200 W	1200 W
Design speed (max)*	1000 rpm	500 rpm	500 rpm	250 rpm	250 rpm
Cable length	9 ft (2.7 m)	10 ft (3 m)	10 ft (3 m)	10 ft (3 m)	10 ft (3 m)
Ingress protection rating	IP 67	IP 67	IP 67	IP 67	IP 67
Regulatory information	CE marked	CE marked	CE marked	CE marked	CE marked
Standard Control Box					
Materials of construction	304L stainless steel	304L stainless steel	304L stainless steel	304L stainless steel	304L stainless steel
Weight	24.3 lb (11 kg)	30 lb (14 kg)	30 lb (14 kg)	30 lb (14 kg)	30 lb (14 kg)
Electrical	100-120 VAC / 200-240 VAC single phase	115/230 VAC 50/60 Hz single phase	115/230 VAC 50/60 Hz single phase	208 VAC 3 phase or 230 VAC single phase	208 VAC 3 phase or 230 VAC single phase
Cable length	9 ft (2.7 m)	8 ft (2.5 m)	8 ft (2.5 m)	8 ft (2.5 m)	8 ft (2.5 m)
Ingress protection rating	IP 65	IP 65	IP 65	IP 55	IP 55
Regulatory information	CE marked	CE marked	CE marked	CE marked	CE marked
Ready To Connect Control Box					
Materials of construction		304L stainless steel		304L stainless steel	
Dimensions L X W Height		26 x 22 in. (660 x 560 mm) 52 in. (1320 mm)		26 x 22 in. (660 x 560 mm) 52 in. (1320 mm)	
Weight		238 lb (108 kg)		238 lb (108 kg)	
Electrical		100/240 VAC, 50/60Hz, 7.7/4.4 A single phase		200-240 VAC, 50/60Hz, 9.8 A single phase 200-208 VAC, 3 Phase, 8.3 A (North America)	
Cable length		16 ft (4.9 m)		16 ft (4.9 m)	
Ingress protection rating		IP 55		IP 55	
Regulatory information		CE. CB Scheme		CE. CB Scheme	
Data Recorder Eurotherm		Optional		Optional	

* Maximum operating speed has to be validated for each process individually, depending on volume, viscosity, etc.

Description	
Mixer Container Assembly Materials of Construction	
Mix container	PureFlex™ or PureFlex™ Plus Film
Adapters	SterilEnz™ LDPE
Luer plugs	Kynar® polyvinylidene fluoride
Connectivity	CPC® polysulfone
Tubing	Silicone
Pinch clamp	PVDF
Impeller	Sintered neodymium magnet NdFeB encased in polypropylene
Powder port	Polyethylene
TC gasket	Silicone
TC clamp	Nylon
TC end cap	Polypropylene
Cup	HDPE
Probe port O-ring Plug	HDPE Silicone Polypropylene
Needle-free sample port O-ring	HDPE Silicone
Conductivity and pH sensor (multi-use)	EPDM and stainless steel 316L

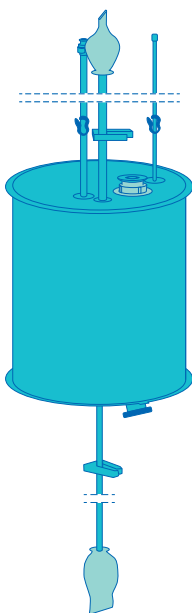
Ordering Information

Mobius® MIX carriers with standard control box

	MIX 10	MIX 50	MIX 10/50	MIX 100	MIX 200	MIX 500	MIX 1000
LLDPE and HDPE carrier with electronics (includes carrier, control box unit, motor, hand-held control, and cable)							
100-120 VAC / 200-240 VAC	SN5MIX10EL1	SN5MIX50EL1	SN5MIX1050EL1				
120V, 50/60 HZ				MIX0100L100	MIX0200L100		
208V, 50/60 HZ						MIX0500L100	
230V, 50/60 HZ				MIX0100L101	MIX0200L101	MIX0500L101	
Carrier Only							
HDPE	SN5MIX10EL0	SN5MIX50EL0	SN5MIX1050EL0				
LDPE				MIX0100L102	MIX0200L102	MIX0500L102	
Stainless steel jacketed				MIXJ100L102	MIXJ200L102	MIXJ500L102	MIXJ1000L102
Stainless steel jacketed, ASME certified				MIXJ100L102A	MIXJ200L102A	MIXJ500L102A	MIXJ1000L102A
Stainless steel jacketed with load cells				MIXJ100L102L	MIXJ200L102L	MIXJ500L102L	MIXJ1000L102L
Stainless steel jacketed, ASME certified and load cells				MIXJ100L102LA	MIXJ200L102LA	MIXJ500L102LA	MIXJ1000L102LA
Stainless steel unjacketed				MIXU100L102	MIXU200L102	MIXU500L102	MIXU1000L102
Stainless steel unjacketed with load cells				MIXU100L102L	MIXU200L102L	MIXU500L102L	MIXU1000L102L
Accessories							
Control box unit, 120 V				MIX0200L103	MIX0200L103		
Control box unit, 208 V						MIX0500L103	MIX0500L103
Control box unit, 230 V				MIX0200L104	MIX0200L104	MIX0500L104	MIX0500L104
Control box unit, 240 V	SN5SPKCTRLBX	SN5SPKCTRLBX	SN5SPKCTRLBX				
Motor	SN5SPKEL1MIXER	SN5SPKEL1MIXER	SN5SPKEL1MIXER	MIX0200L107	MIX0200L107	MIX0500L107	MIX0500L107
Hand control and cable	MIX0200L106	MIX0200L106	MIX0200L106	MIX0200L106	MIX0200L106	MIX0200L106	MIX0200L106
Electrical power cord (country specific)*	MIX0200L108	MIX0200L108	MIX0200L108	MIX0200L108	MIX0200L108	—	—
Spare Parts							
Please refer to spare parts list MK_CA7420EN (available on MerckMillipore.com)							

A complete system is made up of a carrier, control box, motor, and hand control. A power cord with plug is provided with the control box.

*Another power cord has to be ordered separately to get the right plug for customers located in the following countries: Argentina, Australia, Columbia, New Zealand, Paraguay, Uruguay, Denmark, Israel, Chile, Ethiopia, Italy, Bangladesh, Burma, Pakistan, S. Africa, Sri Lanka, and Switzerland.



Example of a 100 L single-use assembly

Single-Use assemblies to fit Mobius® MIX Carriers with standard control box

Volume	Film	Part Code	Closed Top Bag	Liner	Certification	Qty / Pk	Top Ports					Bottom Port	Side Ports
							1/4" ID Silicone tubing - 36" + 1/4" Female Luer + Plug	1/2" ID Silicone tubing - 36" + Female Colder MPX + Plug	1/2" ID Silicone tubing - 36" + 1,5" Sterilenze™ TC	3/4" ID Silicone tubing - 36" + 1,5" Sterilenze™ TC	1" ID Silicone tubing - 36" + 1,5" TC	2" ID Bung port 4" TC Powder port	1/2" ID Silicone tubing - 60" + 1,5" Sterilenze™ TC
10 L	PureFlex™	MIX0010LB05	✓		Bronze	5		1	1		1	1	
		MIX0010LG05	✓		Gold	5		1	1			1	
		MIX0010LSG05	✓		Gold	5		1	1			1	1
		MIX0010LLIN		✓	Bronze	5						1	
50 L		MIX0050LB05	✓		Bronze	5		1	1		1		1
		MIX0050LG05	✓		Gold	5		1	1			1	
		MIX0050LSPB05	✓		Bronze	5		1	1		1	1	1
		MIX0050LSG05	✓		Gold	5		1	1			1	1
100 L		MIX0050LLIN		✓	Bronze	5							1
		MIX0100LB05	✓		Bronze	5	1	1		1	1	1	
		MIX0100LG05	✓		Gold	5	1	1		1		1	
		MIX0100LSPB04	✓		Bronze	4	1	1		1	1	1	2
200 L		MIX0100LSG04	✓		Gold	4	1	1		1	1	1	2
		MIX0100LLIN		✓	Bronze	5						1	
		MIX0200LB05	✓		Bronze	5	1	1		1	1	1	
		MIX0200LG05	✓		Gold	5	1	1		1	1	1	
		MIX0200LSPB04	✓		Bronze	4	1	1		1	1	1	2
		MIX0200LSG04	✓		Gold	4	1	1		1	1	1	2
		MIX0200LLIN		✓	Bronze	5						1	

Volume	Film	Part Code	Closed Top Bag	Liner	Certification	Qty / Pk	Top Ports					Bottom Port	Side Ports
							1/2" ID Silicone tubing - 36" + Female Colder MPX + Plug	3/4" ID Silicone tubing - 36" + Female Colder MPU + Plug	3/4" ID Silicone tubing - 66" + Female Colder MPU + Plug	1" ID Silicone tubing - 36" + 1,5" TC	1" ID Silicone tubing - 66" + 1,5" TC	2" ID Bung port 4" TC Powder port	1" ID Silicone tubing - 60" + 1,5" TC
500 L	PureFlex™	MIX0500LB04	✓		Bronze	4	1	1		1	1	1	
		MIX0500LG04	✓		Gold	4	1	1		1		1	
		MIX0500LSPB04	✓		Bronze	4	1	1		1	1	1	2
		MIX0500LSG04	✓		Gold	4	1	1		1		1	2
		MIX0500LLIN		✓	Bronze	4						1	
1000 L		MIX1000LSPB03	✓		Bronze	3			1	2	1	1	3
		MIX1000LSPG03	✓		Gold	3			1	2	1	1	3

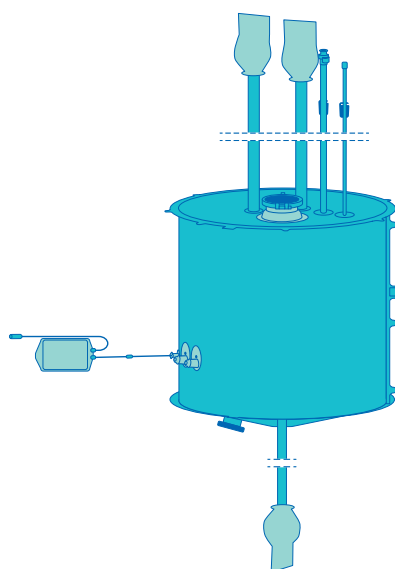
Mobius® MIX Carriers with Ready To Connect control box

A complete system is made up of carrier, control box, motor, and power cord

	MIX 100	MIX 200	MIX 500	MIX 1000
Carrier Only				
Stainless steel jacketed with temperature sensor and load cells	SMIXJ100TL	SMIXJ200TL	SMIXJ500TL	SMIXJ1000TL
Stainless steel jacketed, ASME certified with temperature sensor and load cells	SMIXJ100TLA	SMIXJ200TLA	SMIXJ500TLA	SMIXJ1000TLA
Accessories				
Control box unit, 115/230 V (1PH)-50/60 Hz	SMCBMMC3V4			
Control box unit, 115/230 V (1PH)-50/60 Hz-Sensor Pack (pH & Conductivity)	SMCBMMC3V4S			
Control box unit, 115/230 V (1PH)-50/60 Hz-Data Recorder	SMCBMMC3V4R			
Control box unit, 115/230 V (1PH)-50/60 Hz-Sensor Pack (pH & Conductivity)-Data Recorder	SMCBMMC3V4SR			
Control box unit, 208 V (3PH)-60 Hz			SMCBMMC4V2	
Control box unit, 208 V (3PH)-60 Hz-Sensor Pack (pH & Conductivity)			SMCBMMC4V2S	
Control box unit, 208 V (3PH)-60 Hz-Data Recorder			SMCBMMC4V2R	
Control box unit, 208 V (3PH) Hz-Sensor Pack (pH & Conductivity)-Data Recorder			SMCBMMC4V2SR	
Control box unit, 230 V (1PH)-50 Hz			SMCBMMC4V3	
Control box unit, 230 V (1PH)-50 Hz-Sensor Pack (pH & Conductivity)			SMCBMMC4V3S	
Control box unit, 230 V (1PH)-50 Hz-Data Recorder			SMCBMMC4V3R	
Control box unit, 230 V (1PH)-50 Hz-Sensor Pack (pH & Conductivity)-Data Recorder			SMCBMMC4V3SR	
Motor	MIX0200L107		MIX0500L107	
Power Cords (Country specific)				
North America, NEMA 5-15P, IEC Plug Type B	SMPCNA			
Europe, CEE 7/7, IEC Plug Type F	SMPCEU			
Australia, New Zealand, AS/NZS 3112, IEC Plug Type I	SMPCANZ			
India, IS1293, IEC Plug Type M	SMP CIN			
Switzerland, SEV-1011 Type 12, IEC Plug Type J	SMP CSZ			
United Kingdom, BS 1363/A, IEC Plug Type G	SMP CUK			
Japan, JIS 8303, IEC Plug Type B	SMP CJP			
China, GB2099, IEC Plug Type I	SMP CCH			
Single Phase Flying Leads (without plug)	SMP C1FL			
200/208 VAC 3 Phase Flying Leads (JP/NA) (without plug)	SMP C3FL			

Spare Parts

Please refer to spare parts list MK_CA7420EN (available on MerckMillipore.com)



Example of 200 L single-use assembly

Single-Use assemblies to fit Mobius® MIX Carriers with Ready To Connect control box

Volume	Film	Part Code	Closed Top Bag	Liner	Certification	Qty / Pk	Top Ports				Bottom Port	Side Ports			
							1/4" ID Silicone tubing - 36" + 1/4" Female Luer + Plug"	1/2" ID Silicone tubing - 36" + Female Colder MPX + Plug	3/4" ID Silicone tubing - 36" + 1,5" Sterilize™ TC	1" ID Silicone tubing - 36" + 1,5" TC	4" TC Powder port	3/4" ID Silicone tubing - 60" + 1,5" Sterilize™ TC	Needle Free Sample Port + NovaSeptum® NS711-10250 - 250 mL BAG	Probe port	
100 L	PureFlex™	SMIX0100LB4M	✓		Bronze	4	1	1	1	1	1	1	1	2	
		SMIX0100LS4M	✓		Silver	4	1	1	1	1	1	1	1	2	
		SMIX0100LG4M	✓		Gold	4	1	1	1	1	1	1	1	2	
		SMIXL0100LB4M		✓	Bronze	4						1	1	2	
	PureFlex™ Plus	SMIX0100LBPL4M	✓		Bronze	4	1	1	1	1	1	1	1	2	
		SMIX0100LSPL4M	✓		Silver	4	1	1	1	1	1	1	1	2	
		SMIX0100LGPL4M	✓		Gold	4	1	1	1	1	1	1	1	2	
		SMIXL0100LBPL4M		✓	Bronze	4						1	1	2	
200 L	PureFlex™	SMIX0200LB4M	✓		Bronze	4	1	1	1	1	1	1	1	2	
		SMIX0200LS4M	✓		Silver	4	1	1	1	1	1	1	1	2	
		SMIX0200LG4M	✓		Gold	4	1	1	1	1	1	1	1	2	
		SMIXL0200LB4M		✓	Bronze	4						1	1	2	
	PureFlex™ Plus	SMIX0200LBPL4M	✓		Bronze	4	1	1	1	1	1	1	1	2	
		SMIX0200LSPL4M	✓		Silver	4	1	1	1	1	1	1	1	2	
		SMIX0200LGPL4M	✓		Gold	4	1	1	1	1	1	1	1	2	
		SMIXL0200LBPL4M		✓	Bronze	4						1	1	2	
Volume	Film	Part Code	Closed Top Bag	Liner	Certification	Qty / Pk	Top Ports				Bottom Port	Side Ports			
							1/2" ID Silicone tubing - 36" + Female Colder MPX + Plug	3/4" ID Silicone tubing - 36" + Female Colder MPU + Plug	3/4" ID Silicone tubing - 60" + Female Colder MPU + Plug	1" ID Silicone tubing - 36" + 1,5" TC	1" ID Silicone tubing - 60" + 1,5" TC	4" TC Powder port	1" ID Silicone tubing - 60" + 1,5" TC	Needle Free Sample Port + NovaSeptum® NS711-10250 - 250 mL BAG	Probe port
500 L	PureFlex™	SMIX0500LB3M	✓		Bronze	3	1	1		2	1	1	1	2	
		SMIX0500LS3M	✓		Silver	3	1	1		2	1	1	1	2	
		SMIX0500LG3M	✓		Gold	3	1	1		2	1	1	1	2	
		SMIXL0500LB3M		✓	Bronze	3							1	1	2
	PureFlex™ Plus	SMIX0500LBPL3M	✓		Bronze	3	1	1		2	1	1	1	2	
		SMIX0500LSPL3M	✓		Silver	3	1	1		2	1	1	1	2	
		SMIX0500LGPL3M	✓		Gold	3	1	1		2	1	1	1	2	
		SMIXL0500LBPL3M		✓	Bronze	3							1	1	2
1000 L	PureFlex™	SMIX1000LB3M	✓		Bronze	3			1		3	1	1	1	2
		SMIX1000LS3M	✓		Silver	3			1		3	1	1	1	2
		SMIX1000LG3M	✓		Gold	3			1		3	1	1	1	2
		SMIXL1000LB3M		✓	Bronze	3							1	1	2
	PureFlex™ Plus	SMIX1000LBPL3M	✓		Bronze	3			1		3	1	1	1	2
		SMIX1000LSPL3M	✓		Silver	3			1		3	1	1	1	2
		SMIX1000LGPL3M	✓		Gold	3			1		3	1	1	1	2
		SMIXL1000LBPL3M		✓	Bronze	3							1	1	2

For additional information,
please visit www.merckmillipore.com

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