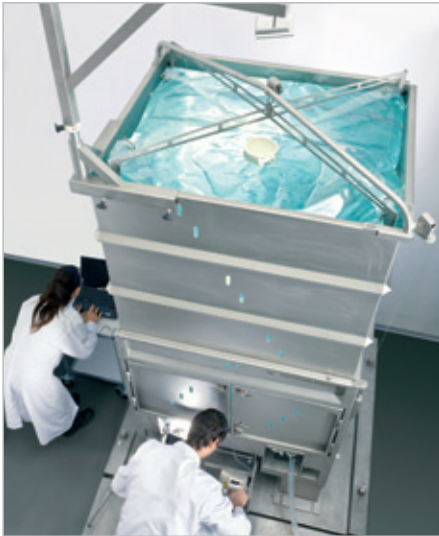




Standard Flexel[®] for Magnetic Mixer¹ 50 L to 2,000 L



Description

The Flexel[®] for Magnetic Mixer is a single-use mixing solution using the ATMI patented Magnetic Mixer Technology, the Sartorius Stedim Biotech Flexel[®] Bag for Magnetic Mixer and the proven Palletank[®] technology.

The easy bag installation and handling paired with the mixing efficiency make the Flexel[®] for Magnetic Mixer the single-use mixing system of choice for buffer, media or feed formulation as well as for large volume mixing.

Mixing performances have been proven from 50 L to 2,000 L for buffer and media preparations in single-use Flexel[®] Bag for Magnetic Mixer (performance details available with application notes). Note: Custom 2,500 L and 3,000 L volumes can also be offered upon request

Components

1. Palletank[®] for Magnetic Mixer is a stainless steel container designed to perfectly fit with the Flexel[®] Bag for Magnetic Mixer with its integrated impeller. It includes a railed port for coupling the mobile Magnetic Mixer drive unit with the Palletank[®] for Magnetic Mixer and a clamp holder to facilitate powder transfer. The hinged door allows easy installation of the bag system whereas the front bottom gate facilitates easy tubing and sensors access.

- From 50 L to 1,000 L:
Cubical shape of Palletank[®] for Magnetic Mixer with windows on lateral sides enable the user to visually inspect the mixing process. The cubical shape facilitates the installation and offers scalability from 50 L to 1,000 L with improved mixing efficiency. The Palletank[®] for Magnetic Mixer is also available standard either with a heat exchange jacket and | or with integrated loadcells and weight indicator:
 - The Palletank[®] Jacketed for Magnetic Mixer is built according to ASME or PED directives. The heat exchange jacket and insulation system allows for efficient chilling, heating, cold or warm storage of biopharmaceutical fluids.
 - The Palletank[®] Weighing for Magnetic Mixer is configured with built-in load cells linked to the weighing indicator for fast and reliable volume measurement. The CAIS1 Combits 1 indicator allows strain gauge weighing and provides an easy-to-read user interface.
 - The Palletank[®] Jacketed and Weighing for Magnetic Mixer combines both Palletank[®] Jacketed and Palletank[®] Weighing specifications.

¹ This product uses ATMI patented Magnetic Mixer technology.

A draining system could also be installed into the Palletank® for Magnetic Mixer to ensure complete drainage of the Flexel® Bags for Magnetic Mixer without bag manipulation by the user. The draining system from 50 L to 1,000 L is composed by a slope board, a lifting device and a tubing positionner. At the end of the draining, the lifting device is activated to drive the liquid toward the bottom line and recover more than 99.9% of the initial volume.

– 1,500 L and 2,000 L:

Large volume Palletank® for Magnetic Mixer is inspired from the well-proven design of Palletank® for storage with a geometry to minimize footprint while providing the vortex required for rapid powder dissolution. A stainless steel cross mounted on a pulley system enables to unfold the Flexel® Bag for Magnetic Mixer for an easy filling and optimized draining. Large volume Palletank® for Magnetic Mixer are now available in standard range with heat exchange jacket and | or integrated weighing system.

2. Magnetic Mixer drive unit generates the rotation of the single-use magnetic impeller coupled to a non-shedding ceramic bearing, enabling Flexel® for Magnetic Mixer to efficiently dissolve and disperse powders, suspensions, solutions or mix emulsions. The interchangeable Magnetic Mixer drive unit is mobile, cart-mounted and designed to interface with any of the standard Palletank® for Magnetic Mixer.

3. Flexel® Bag for Magnetic Mixer with pre-assembled magnetic impeller assembly:

– From 50 L to 1,000 L:

Flexel® Bag for Magnetic Mixer contains an in center magnetic impeller assembly. Its cubical design simplifies installation and facilitates the unfolding and folding of the bag during filling and draining operations. The patented protection cap provides robustness avoiding contact of the impeller with the film during transport. It also offers a large 8" diameter port for powder transfer.

– 1,500 L and 2,000 L Flexel® Bag for Magnetic Mixer contains a slightly off-centered magnetic impeller assembly integrated to the well-proven design of Flexel® 3D Bag. Powder transfer is facilitated with the 4" powder addition port that provides direct connection of 15 L or 30 L Powder Transfer Bag hanged on a Powder Bag Holder.

Clean and Sterile Mixing Operation

Flexel® for Magnetic Mixer is a compact and non-invasive single-use mixing system with a bottom-mounted magnetically-driven impeller capable of providing efficient high-torque mixing for all powder-liquid and liquid-liquid mixing applications. The impeller rotates on a low-friction, inert bearing assembly designed to allow high mixing efficiency from 50 L to 2,000 L while ensuring low particle shedding (USP <788> compliance after 8 hours of rotation at 300 rpm in WFI).

Features & Benefits

50 L to 2,000 L Flexel® for Magnetic Mixing

Complete volume range: 50 L, 100 L, 200 L, 400 L, 650 L, 1,000 L, 1,500 L, 2,000 L (2,500 and 3,000 L available as custom products)	Full scalability with proven performances (application notes available on demand)
Low-friction, inert bearing assembly	Low particle shedding (USP <788> compliance after 8 hours of rotation in WFI)
Strong magnetic coupling	High-torque, high rotation speed for rapid powders dissolution
Face bottom port(s)	Easy installation and access to tubing and sensors
Standard designs of Flexel® Bag for Magnetic Mixer	Save on development, engineering costs and leadtime
Mobile Magnetic Mixer drive unit	Single drive unit can serve multiple mixing Palletank® of different volumes Full compatibility from 50 L to 2,000 L
Full compliance with ISO 11137	Highest sterility assurance level

50 L to 1,000 L Flexel® for Magnetic Mixing

Cubical shape	Easy installation, filling and draining with a single operator
8" PE top powder port with cap (sanitary fitting)	Prevents film damage during packaging and transport Offers large diameter port for powder transfer Provides connection to Powder Bag (with a reducer) Enables mixing until complete bag's drainage
Lateral windows	Visual check of correct bag installation and mixing process
Draining system	>99.9% recovery
Hinged door on Palletank® for Magnetic Mixer	Facilitates installation

1,500 L, 2,000 L Flexel® for Magnetic Mixing

Rectangular shape and system for bag's unfolding prior to filling	Easy installation, filling and draining with a single operator Provides limited footprint Enables impeller rotation with minimum volume of 100 L
4" PE powder port with cap (sanitary fitting) held in stainless steel clamp holder	Provides direct connection to Powder Transfer Bag
Modular Palletank® with separate modules	Facilitates fitting through doors in existing facilities
Front and lateral doors on Palletank® for Magnetic Mixer	Facilitates bag installation
Pulley system on Palletank® for hoisting the bag and for optimized draining	Easy filling >99.9% recovery

Validation

Flexel® Bags for Magnetic Mixer have been qualified applying the most stringent and innovative test regimes. Biological, chemical and physical tests combined with extensive extractable testing provide users of Flexel® Bags for Magnetic Mixer with data representing the widest range of process fluids in a variety of processing conditions. Full compliance with ISO11137 allows for a validated claim of sterility on all Sartorius Stedim Biotech Single-Use Products with a sterility assurance level of 10^{-6} over the shelf life.

Flexel® Bags for Magnetic Mixer are tested for compliance to:

- USP <87>: Biological reactivity tests, in Vitro
- USP <88>: Biological reactivity tests, in Vivo
- USP <661>: Containers-Physicochemical tests – Plastics
- USP <788> Particulate matter in injections – Large-volume injections and E.P. 2.9.19: Particulate contamination-sub-visible particles
- USP<85> and EP 2.1.14: Bacterial endotoxins test
- ISO 11737: Microbiological methods-Determination of a population of microorganisms on products
- ISO 11137: Sterilization of Health care products-Radiation

Quality Assurance

Sartorius Stedim Biotech Quality Systems for single-use products follow applicable ISO and FDA regulations. Design, manufacture and sterilization processes are conducted under conditions that mirror biopharmaceutical operations and meet cGMP requirements.

Security of Supply

Sartorius Stedim Biotech has established multiple manufacturing sites with consistent industrial processes. The expertise of designing single-use solutions based on collaborative supplier management and customer demand planning assures a state-of-the-art and robust supply chain that can cope with strong market growth.

Applications

The Magnetic Mixer drive unit delivers strong torque and high rotation speed for efficient mixing in a wide variety of biopharmaceutical applications. With its efficient high-torque impeller, Flexel® Bags for Magnetic Mixer can ideally be applied for powder-liquid and liquid-liquid mixing applications, requiring powerful mixing such as:

- Buffer preparation
- Media preparation
- Feed substrate preparation
- Hydration and dissolution of hydrophobic powders
- Large volume bulk intermediate resuspension and homogenization
- Large volume product formulation

Ask for the following Sartorius Stedim Biotech application notes to access details of mixing performances.

Specifications

1. Magnetic Mixer Drive Unit

Power	Single Phase 230 V, 50 60 Hz
EU	Single Phase 110 V, 60 Hz
USA	Single Phase 230 V,
Japan	Transformer (110 V Input), 50 60 Hz
Input Wattage	< 150 Watts
Footprint	84 × 41 cm (33 in × 16 in)
Drive Unit height to top of handle	104 cm (41 in)
Weight	25 kg (55 lb)
Ambient Temperature	4° to 30°C
Max. Humidity	85 % (non-condensing), * avoid condensation, * for indoor use
Mobility	Mounted on stainless cart with four clean room wheels and push handle
IP rating	NEMA 4X, IP 65
Impeller speed	0 – 300 RPM
Initial set-up time	Not applicable
Vessel changeover	< 5 Minutes
CE mark	Compliant
Material for external surfaces	Stainless Steel #316L
Noise Level	57.1 dBA

2. Flexel® Bag for Magnetic Mixer

Bag chamber	S40 Flexel® 3D Bag Chamber with Multi- Layer Film, including EVOH gas barrier layer and PE contact layer
Impeller position:	Bottom centered
50 L to 1,000 L	Bottom off-centered
1,500 L and 2,000 L	
Impeller size	161 mm (6.35")
Tubing material	Silicone, C-Flex®
Number of ports	1 top port, 4 front bottom ports
Fittings	MPC quick connect coupling, Tri-clamp, needleless sampling port
Volumes	50 L, 100 L, 200 L, 400 L, 650 L, 1,000 L, 1,500 L, 2,000 L
Nominal filling volume	Minimum(?) – Maximum volume
50 L	30 L – 67 L
100 L	40 L – 110 L
200 L	60 L – 230 L
400 L	120 L – 420 L
650 L	160 L – 720 L
1,000 L	170 L – 1,050 L
1,500 L	100 L – 1,500 L
2,000 L	100 L – 2,000 L
Product recovery ⁽³⁾	> 99.9%
Process temperatures	0 – 50°C
Sterilization	by Gamma Irradiation

² Minimum volume under aseptic conditions with closed bag.
Mentioned minimum volumes are lowered with open bags.

³ Draining performances when using the draining system.



Magnetic Mixer Drive Unit



Palletank® for Magnetic Mixer

3. Palletank® for Magnetic Mixer

3.1 Palletank® for Magnetic Mixer w/o weighing and w/o jacket

Main construction materials	304L Stainless Steel Windows made of PC and EPDM sealing
Surface finish	Glass bead blasted and passivated
Door	50 L to 1,000 L: Front hinged door and PC windows 1,500 L and 2,000 L: Front and lateral hinged doors.
Port	Railed port for drive unit coupling
Bag tubing gate	Front bottom port for bag lines sensor access
Mobility (50 L to 1,000 L)	Mounted on stainless cart with four clean room wheels and push handles
Volumes	50 L, 100 L, 200 L, 400 L, 650 L, 1,000 L, 1,500 L and 2,000 L
Dimensions (Approx.)	W × D × H
50 L	883 × 651 × 985 mm (34 × 26 × 43 in)
100 L	883 × 651 × 1,090 mm (34 × 26 × 43 in)
200 L	883 × 651 × 1,190 mm (34 × 26 × 47 in)
400 L	956 × 818 × 1,342 mm (38 × 32 × 53 in)
650 L	1,160 × 972 × 1,452 mm (46 × 38 × 57 in)
1,000 L	1,301 × 1,113 × 1,652 mm (51 × 44 × 65 in)
1,500 L	1,340 × 1,125 × 2,240 mm (53 × 44 × 88 in)
2,000 L	1,340 × 1,135 × 2,740 mm (53 × 45 × 108 in)
Minimum door height 1,500 L and 2,000 L	1,550 mm (61 in)
Minimum ceiling height	
1,500 L	2,800 mm (110 in)
2,000 L	3,300 mm (130 in)
Weight (approx.)	
50 L	42 kg (93 lb)
100 L	53 kg (117 lb)
200 L	68 kg (150 lb)
400 L	99 kg (218 lb)
650 L	126 kg (278 lb)
1000 L	210 kg (463 lb)
1,500 L	380 kg (836 lb)
2,000 L	453 kg (996 lb)



Palletank® for Magnetic Mixer Jacketed

3.2 Palletank® for Magnetic Mixer Jacketed

3.2.1. PED version (for Europe, Asia and NEMA)³

Main construction materials	304L Stainless Steel Perlit balls (Insulation)
Surface finish	Glass bead blasted and passivated
Door	Front insulated hinged doors (except 50 L and 100 L, no door) Lateral insulated hinged doors for 1,500 L and 2,000 L
Port	Railed port for drive unit coupling
Bag tubing gate	PTFE front bottom gate for bag lines sensor access
Mobility	Mounted on stainless cart with four clean room wheels and push handles
Operating temperature	0 – 50°C (32 – 122°F)
Working pressure	-1 to 6 bars (-14 to 87 psi)
Test pressure	9 bars (131 psi)
PED	Compliant
Insulated	On all sides, the bottom and the lid
Jacketed	4 sides and bottom (50 L and 100 L) 3 sides and bottom (200 L to 1000 L) 3 sides and bottom for 1500 L base module and top module insulated only
Heat transfer fluid Inlet Outlet	Manual 3/4" Ball valve and 3/4" Tri-clamp connection
Heat transfer fluid volume in the jacket (Approx.)	
50 L	4 L
100 L	5 L
200 L	7 L
400 L	10 L
650 L	13 L
1,000 L	19 L
1,500 L	25 L
2,000 L	25 L
Volumes	50 L, 100 L, 200 L, 400 L, 650 L, 1,000 L, 1,500 L and 2,000 L
Dimensions (Approx.)	W × D × H
50 L	737 × 773 × 1,096 mm (29 × 30 × 43 in)
100 L	823 × 816 × 1,201 mm (32 × 32 × 47 in)
200 L	934 × 906 × 1,301 mm (37 × 36 × 51 in)
400 L	1,098 × 1,153 × 1,451 mm (43 × 45 × 57 in)
650 L	1,235 × 1,287 × 1,561 mm (49 × 51 × 61 in)
1,000 L	1,337 × 1,374 × 1,761 mm (53 × 54 × 69 in)
1,500 L	1,500 × 1,650 × 2,400 mm (59 × 64 × 95 in)
2,000 L	1,500 × 1,650 × 2,900 mm (59 × 64 × 114 in)
Weight (approx.)	
50 L	115 kg (254 lb)
100 L	142 kg (313 lb)
200 L	210 kg (463 lb)
400 L	305 kg (673 lb)
650 L	386 kg (851 lb)
1,000 L	496 kg (1,094 lb)
1,500 L	680 kg (1,500 lb)
2,000 L	895 kg (1,970 lb)

³ The above specifications are applicable to FXC116199, FXC116200, FXC116201, FXC116202, FXC116203, FXC122370 and FXC122371.

3.2.2. ASME version (for North America and Canada)⁴

Main construction materials	304L Stainless Steel Foamglass and ceramic fiber
Surface finish	Glass bead blasted and passivated
Door	Front insulated hinged doors (except 50 L and 100 L, no door) Lateral insulated hinged doors for 1,500 L and 2,000L
Port	Railed port for drive unit coupling
Bag tubing gate:	UHMW front bottom gate for bag lines sensor access
Mobility	Mounted on stainless cart with four clean room wheels and push handles
Operating temperature	0 – 50°C (32 – 122°F)
Working pressure	10 bars (150 psi)
Test pressure	13 bars (196 psi)
Heat exchanger	ASME certified and stamped per Section 8, division 1
Piping to from heat exchanger	Designed and built under the ASME code for pressure piping, B31
Insulated	On all sides, the bottom and the lid
Jacketed	4 sides and bottom (50 L and 100 L) 3 sides and bottom (200 L to 1,000 L) 3 sides and bottom for 1,500 L base module and top module insulated only
Heat transfer fluid Inlet Outlet	Male NPT connection
Heat transfer fluid volume in the jacket (Approx.)	
50 L	4 L
100 L	5 L
200 L	7 L
400 L	10 L
650 L	13 L
1,000 L	17 L
1,500 L	25 L
2,000 L	25 L

Volumes	50 L, 100 L, 200 L, 400 L, 650 L, 1,000 L, 1,500 L and 2,000 L
Dimensions (Approx.)	W × D × H
50 L	774 × 694 × 1,070 mm (30 1/2" × 27 5/16" × 42 1/8" in)
100 L	817 × 783 × 1,175 mm (32 3/16" × 30 13/16" × 46 1/4" in)
200 L	902 × 904 × 1,271 mm (35 1/2" × 35 5/8" × 50 1/16" in)
400 L	1,091 × 1,078 × 1,368 mm (42 15/16" × 42 7/16" × 53 7/8")
650 L	1,207 × 1,212 × 1,478 mm (47 1/2" × 47 3/4" × 58 3/16")
1,000 L	1,337 × 1,433 × 1,750 mm (53 1/4" × 56 3/8" × 68 7/8" in)
1,500 L	1,500 × 1,650 × 2,415 mm (59 × 65 × 95 in)
2,000 L	1,500 × 1,650 × 2,895 mm (59 × 65 × 114 in)
Weight (approx.)	
50 L	144 kg (317 lb)
100 L	191 kg (422 lb)
200 L	254 kg (560 lb)
400 L	336 kg (740 lb)
650 L	437 kg (964 lb)
1,000 L	601 kg (1,326 lb)
1,500 L	680 kg (1,500 lb)
2,000 L	895 kg (1,970 lb)

⁴ The above specifications are applicable to FXC117445, FXC117446, FXC117447, FXC117448, FXC117449, FXC122372 and FXC122373

3.3 Palletank® for Magnetic Mixer Weighing

Main construction materials	304L Stainless Steel Windows made of PC and EPDM sealing
Surface finish	Glass bead blasted and passivated
Door	Front hinged door door and PC windows
Port	Railed port for drive unit coupling
Bag tubing gate	Front bottom gate for bag lines sensor access
Mobility	Mounted on stainless cart with four clean room wheels and push handles

Integrated CombiCS 1 CAIS1 – Scale Indicator

Material of construction	Stainless Steel 1.4301
Max. readability	31.250 digits
IP protection rate	IP69K
Operating temperature range	-10°C to 40°C (14°F to 104°F)

Integrated Loadcells PR 6211

IP protection rate	IP68 (depth of 1.5 m for 10,000 hrs.), IP69K
--------------------	--

High overload protection

Material	Stainless steel 1.4542
Vibration resistance	Acc. to IEC 68-2-6 Fc; 20 g, 100 h, 10 ... 150 Hz
Design	Low installation height

Integrated lift-off protection

Volumes	Max weighing capacity in Kg	Resolution in g	Accuracy in g
50 L	75	50	100
100 L	150	100	200
200 L	250	100	200
400 L	500	200	400
650 L	800	200	400
1,000 L	1,200	500	1,000
1,500 L	2,000	500	1,000
2,000 L	2,400	1,000	2,000
Volumes	50 L, 100 L, 200 L, 400 L, 650 L, 1,000 L, 1,500 L and 2,000 L		

Dimensions ⁵ (Approx.)	W × D × H
50 L	853 × 651 × 985 mm (33 × 26 × 43 in)
100 L	853 × 651 × 1,090 mm (33 × 26 × 43 in)
200 L	853 × 651 × 1,190 mm (33 × 26 × 47 in)
400 L	956 × 818 × 1,342 mm (38 × 32 × 53 in)
650 L	1,160 × 972 × 1,452 mm (46 × 38 × 57 in)
1,000 L	1,301 × 1,113 × 1,652 mm (51 × 44 × 65 in)
1,500 L	1,340 × 1,125 × 2,240 mm (53 × 44 × 88 in)
2,000 L	1,340 × 1,125 × 2,740 mm (53 × 44 × 107 in)

Weight (approx.)	
50 L	55 kg (121 lb)
100 L	63 kg (139 lb)
200 L	80 kg (176 lb)
400 L	110 kg (242 lb)
650 L	135 kg (298 lb)
1,000 L	220 kg (485 lb)
1,500 L	510 kg (1,125 lb)
2,000 L	590 kg (1,300 lb)

⁵ The given dimensions are the footprint dimensions. Please refer to the technical drawings for detailed dimensions including scale indicator holder.

3.4 Palletank® for Magnetic Mixer Jacketed and Weighing

3.4.1. PED version (for Europe, Asia and NEMEA)⁵

Main construction materials	304L Stainless Steel Perlit balls (Insulation)
Surface finish	Glass bead blasted and passivated
Door	Front insulated hinged doors (except 50 L and 100 L, no door) Lateral insulated hinged doors for 1,500 L and 2,000 L
Port	Railed port for drive unit coupling
Bag tubing gate	PTFE front bottom gate for bag lines sensor access
Mobility	Mounted on stainless cart with four clean room wheels and push handles
Operating temperature	0 – 50°C (32°F – 122°F)
Working pressure	-1 to 6 bars (-14 to 87 psi)
Test pressure	9 bars (131 psi)
PED	Compliant
Insulated	On all sides, the bottom and the lid
Jacketed	4 sides and bottom (50 L and 100 L) 3 sides and bottom (200 L to 1,000 L) 3 sides and bottom for 1500L base module and top module insulated only

Heat Transfer Fluid Inlet Outlet	Manual 3/4" Ball valve and 3/4" Tri-Clamp connection
------------------------------------	--

Heat Transfer fluid Volume in the jacket (Approx.)

50 L	4 L
100 L	5 L
200 L	7 L
400 L	10 L
650 L	13 L
1,000 L	19 L
1,500 L	25 L
2,000 L	25 L

Integrated CombiCS 1 CAIS1 – Scale Indicator

Material of construction	Stainless steel 1.4301
IP protection rate	IP69K
Operating temperature range	-10°C to 40°C (14°F to 104°F)

Integrated Loadcells PR 6211

IP protection rate	IP68 (depth of 1.5 m for 10,000 hrs.), IP69K
--------------------	--

High overload protection

Material	Stainless steel 1.4542
Vibration resistance	Acc. to IEC 68-2-6 Fc; 20 g, 100 h, 10 ... 150 Hz
Design	Low installation height

Integrated lift-off protection			
Volumes	Max weighing capacity in Kg	Resolution in g	Accuracy in g
50 L	75	50	100
100 L	150	100	200
200 L	250	100	200
400 L	500	200	400
650 L	800	200	400
1,000 L	1,200	500	1,000
1,500 L	2,000	500	1,000
2,000 L	2,400	1,000	2,000
Volumes	50 L, 100 L, 200 L, 400 L, 650 L, 1,000 L, 1,500 L and 2,000 L		
Dimensions (Approx.)	W × D × H		
50 L	1,200 × 770 × 1,100 mm (48 × 31 × 44 in)		
100 L	1,200 × 810 × 1,200 mm (48 × 32 × 48 in)		
200 L	1,255 × 950 × 1,300 mm (50 × 38 × 52 in)		
400 L	1,490 × 1,050 × 1,450 mm (59 × 42 × 58 in)		
650 L	1,600 × 1,260 × 1,560 mm (63 × 50 × 62 in)		
1,000 L	1,745 × 1,370 × 1,760 mm (69 × 54 × 70 in)		
2,000 L	1,500 × 1,650 × 2,400 mm (59 × 64 × 95 in)		
Weight (Approx.)			
50 L	142 kg (313 lb)		
100 L	180 kg (397 lb)		
200 L	240 kg (529 lb)		
400 L	395 kg (871 lb)		
650 L	495 kg (1,091 lb)		
1,000 L	633 kg (1,396 lb)		
1,500 L	496 kg (1,094 lb)		
2,000 L	680 kg (1,500 lb)		

⁵ Applicable to FXC122362, FXC122363, FXC122364, FXC122365, FXC122366, FXC122367, FXC122368 and FXC122369

3.4.2. ASME version (for North America and Canada)⁶

Main construction materials	304 L Stainless Steel Foamglass and ceramic fiber
Surface finish	Glass bead blasted and passivated
Door	Front insulated hinged door (except 50 L and 100 L, no door) Lateral insulated hinged doors for 1,500 L and 2,000 L
Port	Railed port for drive unit coupling
Bag tubing gate	UHMW front bottom gate for bag lines sensor access
Mobility	Mounted on stainless cart with four clean room wheels and push handles
Operating temperature	0 – 50°C (32°F – 122°F)
Working pressure	10 bars (150 psi)
Test pressure	13 bars (196 psi)
Heat exchanger	ASME certified and stamped per Section 8, division 1
Piping to from heat exchanger	Designed and built under the ASME code for pressure piping, B31
Insulated	On all sides, the bottom and the lid
Jacketed	4 sides and bottom (50 L and 100 L) 3 sides and bottom (200 L to 1,000 L) 3 sides and bottom for 1,500 L base module and top module insulated only
Heat Transfer Fluid Inlet Outlet	Male NPT connection
Heat Transfer fluid volume in the jacket (Approx.)	
50 L	4 L
100 L	5 L
200 L	7 L
400 L	10 L
650 L	13 L
1,000 L	17 L
1,500 L	25 L
2,000 L	25 L

Integrated Combics 1 CAIS1 – Scale Indicator

Material of construction	Stainless steel 1.4301
IP protection rate	IP69K
Operating temperature range	–10°C to 40°C (14°F to 104°F)

Integrated Loadcells PR 6211

IP protection rate	IP68 (depth of 1.5 m for 10,000 hrs.), IP69K
High overload protection	
Material	Stainless steel 1.4542
Vibration resistance	Acc. to IEC 68-2-6 Fc; 20 g, 100 h, 10 ... 150 Hz
Design	Low installation height

Integrated lift-off protection			
Volumes	Max weighing capacity in Kg	Resolution in g	Accuracy in g
50 L	75	50	100
100 L	150	100	200
200 L	250	100	200
400 L	500	200	400
650 L	800	200	400
1,000 L	1,200	500	1,000
1,500 L	2,000	500	1,000
2,000 L	2,400	1,000	2,000
Volumes	50 L, 100 L, 200 L, 400 L, 650 L, 1,000 L, 1,500 L and 2,000 L		
Dimensions (Approx.)	W × D × H		
50 L	1,200 × 770 × 1,100 mm (48 × 31 × 44 in)		
100 L	1,200 × 810 × 1,200 mm (48 × 32 × 48 in)		
200 L	1,255 × 950 × 1,300 mm (50 × 38 × 52 in)		
400 L	1,490 × 1,050 × 1,450 mm (59 × 42 × 58 in)		
650 L	1,600 × 1,260 × 1,560 mm (63 × 50 × 62 in)		
1,000 L	1,745 × 1,370 × 1,760 mm (69 × 54 × 70 in)		
1,500 L	1,500 × 1,650 × 2,400 mm (59 × 64 × 95 in)		
2,000 L	1,500 × 1,650 × 2,900 mm (59 × 64 × 114 in)		
Weight (approx.)			
50 L	160 kg (354 lb)		
100 L	225 kg (497 lb)		
200 L	335 kg (740 lb)		
400 L	430 kg (950 lb)		
650 L	530 kg (1,171 lb)		
1,000 L	700 kg (1,547 lb)		
1,500 L	780 kg (1,719 lb)		
2,000 L	895 kg (1,973 lb)		

⁶ Applicable to FXC122353, FXC122354, FXC122356, FXC122357, FXC122358, FXC122359, FXC122360 and FXC122361

3.5 Draining system

Main construction materials	304L Stainless Steel EPDM PVC
Surface finish	Glass bead blasted and passivated
Volumes	50 L, 100 L, 200 L, 400 L, 650 L and 1,000 L
Dimensions Slope board (Approx.)	W × D × H
50 L	400 × 386 × 50 mm (16 × 15 × 2 in)
100 L	486 × 470 × 50 mm (19 × 19 × 2 in)
200 L	607 × 590 × 50 mm (24 × 23 × 2 in)
400 L	772 × 753 × 50 mm (30 × 30 × 2 in)
650 L	906 × 885 × 50 mm (36 × 35 × 2 in)
1,000 L	1,045 × 1,006 × 60 mm (41 × 40 × 2 in)
Weight Slope board + lifting device + tubing positioner (approx.)	
50 L	8 kg
100 L	10 kg
200 L	12 kg
400 L	15 kg
650 L	19 kg
1,000 L	23 kg
Activation of the lifting device	< 15 kg (max allowed weight)

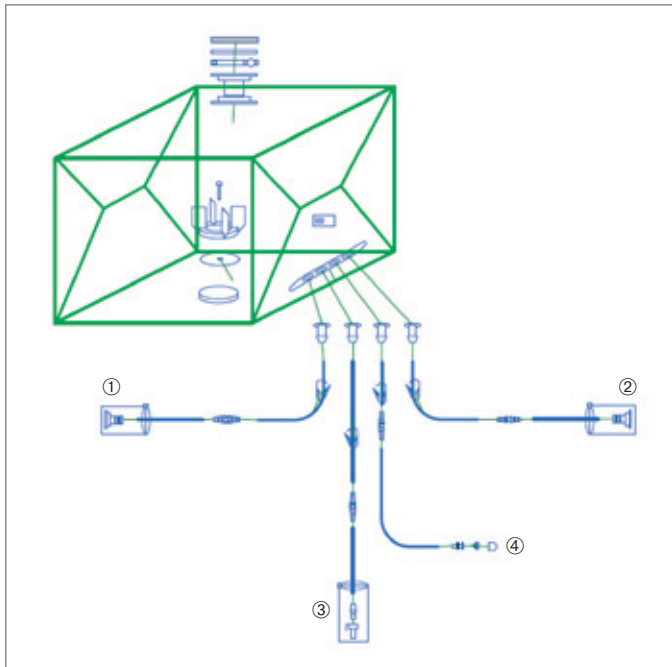


Draining system

Ordering Information

1. Flexel® Bags for Magnetic Mixer

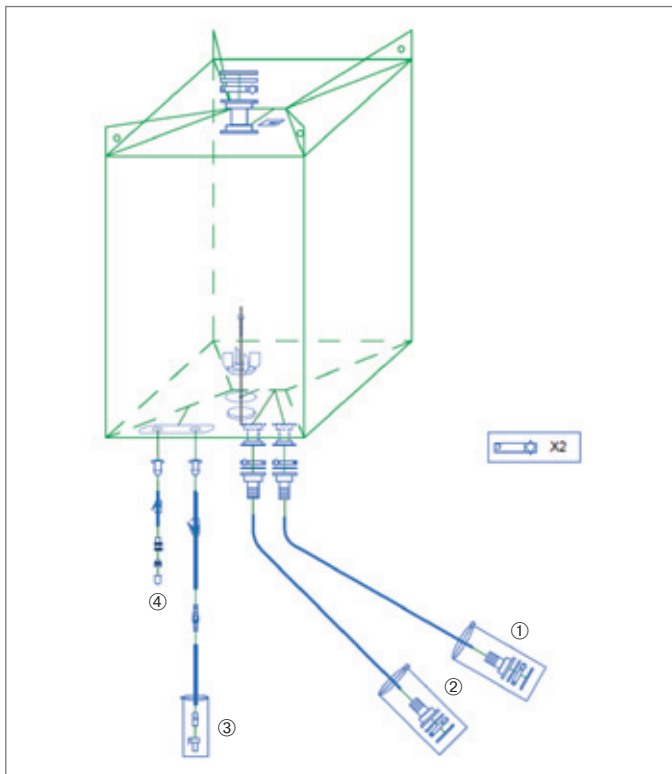
1.1. Flexel® Bags for Magnetic Mixer 50 L to 1,000 L



Line	Function	Tubing material	Tubing diameters and length	End Connector
Line 1	Fill	Silicone + TPE	1/2" x 3/4" x 1.5 m (60")	1-1/2" Tri-Clamp
Line 2	Drain	Silicone + TPE	1/2" x 3/4" x 1.5 m (60")	1-1/2" Tri-Clamp
Line 3	Addition	Silicone + TPE	1/2" x 3/4" x 1.5 m (60")	1/2" MPX male + sealing cap
Line 4	Addition Sampling	Silicone + TPE	1/8" x 1/4" x 0.6 m (23.6")	LL female + needle free sampling port

Part Number	Description	Qty/Box
FMB114867	STD Flexel® Cubical MagMixer 50 L (TPE)	2
FMB114870	STD Flexel® Cubical MagMixer 100 L (TPE)	2
FMB114893	STD Flexel® Cubical MagMixer 200 L (TPE)	2
FMB114894	STD Flexel® Cubical MagMixer 400 L (TPE)	2
FMB114895	STD Flexel® Cubical MagMixer 650 L (TPE)	2
FMB114896	STD Flexel® Cubical MagMixer 1,000 L (TPE)	2

1.2 Flexel® Bags for Magnetic Mixer 1,500 L and 2,000 L



Line	Function	Tubing material	Tubing diameters and length	End Connector
Line 1	Fill	Silicone	1" x 1 - 3/8" x 3.0 m (119")	1-1/2" Tri-Clamp + cap + external clamp
Line 2	Drain	Silicone	1" x 1 - 3/8" x 3.0 m (119")	1-1/2" Tri-Clamp + cap + external clamp
Line 3	Addition	Silicone + TPE	1/2" x 3/4" x 1.5 m (60")	1/2" MPX male + sealing cap
Line 4	Addition Sampling	Silicone	1/4" x 7/16" x 0.1 m (4")	LL female + needle free sampling port

Top port:	Powder addition	-	-	-
4" Tri-Clamp + cap				

Part Number	Description	Qty/Box
FMB116244	STD Flexel® Palletank® Magnetic Mixer 1,500 L (TPE)	1
FMB116245	STD Flexel® Palletank® Magnetic Mixer 2,000 L (TPE)	1

2. Palletank® for Magnetic Mixer

All Palletank® for Magnetic Mixer are delivered with adaption set and clamp holder

2.1 Palletank® for Magnetic Mixer w | o weighing and w | o jacket

Part Number	Description
FXC110820	STD Palletank® Cubical Mix 50 L (Impeller)
FXC112230	STD Palletank® Cubical Mix 100 L (Impeller)
FXC110821	STD Palletank® Cubical Mix 200 L (Impeller)
FXC111135	STD Palletank® Cubical Mix 400 L (Impeller)
FXC110822	STD Palletank® Cubical Mix 650 L (Impeller)
FXC113384	STD Palletank® Cubical Mix 1,000 L (Impeller)
FXC117339	STD Palletank® Mix 1,500 L (Impeller)
FXC117340	STD Palletank® Mix 2,000 L (Impeller)

2.2 Palletank® for Magnetic Mixer Jacketed

– PED Version (for Europe, Asia and NEMEA)

Part Number	Description
FXC116199	STD Palletank® Cubical Jacketed-Mix 50 L (Impeller PED)
FXC116200	STD Palletank® Cubical Jacketed-Mix 100 L (Impeller PED)
FXC116201	STD Palletank® Cubical Jacketed-Mix 200 L (Impeller PED)
FXC116202	STD Palletank® Cubical Jacketed-Mix 400 L (Impeller PED)
FXC116203	STD Palletank® Cubical Jacketed-Mix 650 L (Impeller PED)
FXC116204	STD Palletank® Cubical Jacketed-Mix 1000 L (Impeller PED)
FXC122370	STD Palletank® Cubical Jacketed-Mix 1500 L (Impeller PED)
FXC122371	STD Palletank® Cubical Jacketed-Mix 2000 L (Impeller PED)

– ASME Version (for North America and Canada)

Part Number	Description
FXC117745	STD Palletank® Cubical Jacketed-Mix 50 L (Impeller ASME)
FXC117746	STD Palletank® Cubical Jacketed-Mix 100 L (Impeller ASME)
FXC117747	STD Palletank® Cubical Jacketed-Mix 200 L (Impeller ASME)
FXC117748	STD Palletank® Cubical Jacketed-Mix 400 L (Impeller ASME)
FXC117749	STD Palletank® Cubical Jacketed-Mix 650 L (Impeller ASME)
FXC117750	STD Palletank® Cubical Jacketed-Mix 1,000 L (Impeller ASME)
FXC122372	STD Palletank® Cubical Jacketed-Mix 1,500 L (Impeller ASME)
FXC122373	STD Palletank® Cubical Jacketed-Mix 2,000 L (Impeller ASME)

2.3 Palletank® for Magnetic Mixer Weighing

Part Number	Description
FXC114153	STD Palletank® Cubical Mix 50 L (Impeller Weighing)
FXC114154	STD Palletank® Cubical Mix 100 L (Impeller Weighing)
FXC114155	STD Palletank® Cubical Mix 200 L (Impeller Weighing)
FXC114156	STD Palletank® Cubical Mix 400 L (Impeller Weighing)
FXC114157	STD Palletank® Cubical Mix 650 L (Impeller Weighing)
FXC114158	STD Palletank® Cubical Mix 1,000 L (Impeller Weighing)
FXC122374	STD Palletank® Cubical Mix 1,500 L (Impeller Weighing)
FXC122375	STD Palletank® Cubical Mix 2,000 L (Impeller Weighing)

2.4 Palletank® for Magnetic Mixer Jacketed and Weighing

– PED Version (for Europe, Asia and NEMEA)

Part Number	Description
FXC122362	STD Palletank® Cubical Jacketed-Weighing-Mix 50 L (Impeller PED)
FXC122363	STD Palletank® Cubical Jacketed-Weighing-Mix 100 L (Impeller PED)
FXC122364	STD Palletank® Cubical Jacketed-Weighing-Mix 200 L (Impeller PED)
FXC122365	STD Palletank® Cubical Jacketed-Weighing-Mix 400 L (Impeller PED)
FXC122366	STD Palletank® Cubical Jacketed-Weighing-Mix 650 L (Impeller PED)
FXC122367	STD Palletank® Cubical Jacketed-Weighing-Mix 1,000 L (Impeller PED)
FXC122368	STD Palletank® Cubical Jacketed-Weighing-Mix 1,500 L (Impeller PED)
FXC122369	STD Palletank® Cubical Jacketed-Weighing-Mix 2,000 L (Impeller PED)

– ASME Version (for North America and Canada)

Part Number	Description
FXC122353	STD Palletank® Cubical Jacketed-Weighing-Mix 50 L (Impeller ASME)
FXC122354	STD Palletank® Cubical Jacketed-Weighing-Mix 100 L (Impeller ASME)
FXC122356	STD Palletank® Cubical Jacketed-Weighing-Mix 200 L (Impeller ASME)
FXC122357	STD Palletank® Cubical Jacketed-Weighing-Mix 400 L (Impeller ASME)
FXC122358	STD Palletank® Cubical Jacketed-Weighing-Mix 650 L (Impeller ASME)
FXC122359	STD Palletank® Cubical Jacketed-Weighing-Mix 1,000 L (Impeller ASME)
FXC122360	STD Palletank® Cubical Jacketed-Weighing-Mix 1,500 L (Impeller ASME)
FXC122361	STD Palletank® Cubical Jacketed-Weighing-Mix 2,000 L (Impeller ASME)

2.5 Accessories for Palletank® for Magnetic Mixer

Part Number	Description
FXA122376	STD Palletank® Cubical Accessory Draining System 50 L
FXA122377	STD Palletank® Cubical Accessory Draining System 100 L
FXA122378	STD Palletank® Cubical Accessory Draining System 200 L
FXA122379	STD Palletank® Cubical Accessory Draining System 400 L
FXA122380	STD Palletank® Cubical Accessory Draining System 650 L
FXA122381	STD Palletank® Cubical Accessory Draining System 1,000 L
FXA122382	STD Palletank® Cubical Accessory Lifting System upgrade 1,500 – 3,000 L

3. Drive Unit

Part Number	Description
LT-DU-005-US	Magnetic Mixer Drive Unit, 110 V, US Power Cord
LT-DU-006-EU	Magnetic Mixer Drive Unit, 230 V, EU Power Cord
LT-DU006-UK	Magnetic Mixer Drive Unit, 230 V, UK Power Cord
LT-DU006-SW	Magnetic Mixer Drive Unit, 230 V, Swiss Power Cord
LT-DU006-AU	Magnetic Mixer Drive Unit, 230 V, Australian Power Cord
LT-DU006-JA	Magnetic Mixer Drive Unit, 230 V, Japanese Power Cord and Transformer

4. Spare Parts

Spare Parts for Palletank® for Magnetic Mixer

Part Number	Description
FXA112074	STD Palletank® Spare Part Adaptation Set
FXA112559	STD Palletank® Cubical Spare Part Clamp Holder 50 L
FXA112560	STD Palletank® Cubical Spare Part Clamp Holder 100 L
FXA112083	STD Palletank® Cubical Spare Part Clamp Holder 200 L
FXA112086	STD Palletank® Cubical Spare Part Clamp Holder 400 L
FXA112085	STD Palletank® Cubical Spare Part Clamp Holder 650 L
FXA113527	STD Palletank® Cubical Spare Part Clamp Holder 1000 L
FXA117368	STD Palletank® Cubical Spare Part Clamp Holder 1500-3000 L

Spare Parts for Magnetic Mixer drive unit

Part Number	Description
2100024	Fuse
MM-LTOE061	Magnetic Mixer Rollers (sold in set of 2) (Same part as LT-DBSC016)
MM-SVSP030	T Handle for Magnetic Mixer
MM-DBBI007	Magnetic Clamp
MM-LTOE060	M2 Latch Assembly
MM-LTOE059	M1 Latch Assembly

Sartorius Stedim Biotech GmbH
August-Spindler-Strasse 11
37079 Goettingen, Germany

Phone +49.551.308.0

Fax +49.551.308.3289

www.sartorius-stedim.com

USA Toll-Free +1.800.368.7178

UK +44.1372.737159

France +33.442.845600

Italy +39.055.63.40.41

Spain +34.90.2110935

Russian Federation +7.812.327.5.327

Japan +81.3.4331.4300

Specifications subject to change
without notice. Printed and copyrighted
by Sartorius Stedim Biotech GmbH. | W
Publication No.: SPT2023-e131205
Order No.: 85032-540-43
Ver. 12 | 2013