TepoFlex®

Biocontainer Assemblies

MEISSNER
FILTRATION PRODUCTS

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One-Touch®

Meissner Filtration Products designs, develops, manufactures, and supplies high quality single-use systems. From film to filter, everything necessary to create clean, convenient biocontainer assemblies can be found under one roof.

One-Touch® Single-Use Systems

Experience One-Touch® Single-Use Systems

The One-Touch® single-use systems portfolio is built on a solid foundation of quality, operational excellence and technical expertise, which is unparalleled in the industry. Our commitment to quality is demonstrated by the use of pre-qualified dynamic single-use component libraries and extensive product quality certification. Combined, they provide an unprecedented level of quality documentation and traceability for each fluid contact component.

We operate in a paperless, highly automated, manufacturing environment with a very high degree of error proofing, and one of the shortest lead times in the industry. Product quality certification is fully integrated and the serialization of each and every single-use product manufactured is one of our quality hallmarks. Our single-use systems design engineers are recognized for their design and scale-up expertise, process flow recommendations and validation support. The profound polymer expertise and the in-house manufacture of many of the underlying components that go into single-use assemblies allows us to elevate our value proposition. Meissner guarantees sterility validation is ensured and maintained according to ISO 11137 methodology.
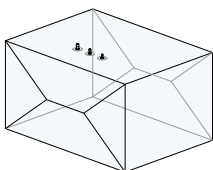
Fundamentals

❶ Biocontainers

TepoFlex® biocontainers are composed of Meissner's five layer polyolefin-based TepoFlex® film, which provides superior extractables and leachables profiles, water vapor and oxygen barriers, and fluid integrity. (Page 6)

❸ Connectors

Meissner's TepoFlex® biocontainer assemblies can be ordered with a wide range of connectors or end fittings to address the desired process connectivity. (Page 36)
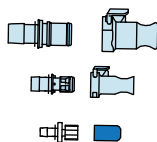
❺ FlexStation®

These premium rigid outer containers are available in 100 -1000 L volumes and are compatible with standard TepoFlex® biocontainer assemblies. The collapsible containers provide a rugged shipping solution and are also ideal for intra-facility use. A complete line of stainless steel carts is available for the FlexStation® product line. (Page 46)
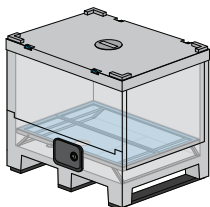
❼ FlexCessories™

Meissner offers a line of custom products specifically designed to support and enhance One-Touch® assemblies. (Page 42)
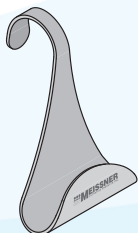
❷ Tubing

TepoFlex® biocontainer assemblies come standard with either TPE or Platinum-cured silicone tubing. Tubing is available in a variety of lengths and diameters to suit customer specific needs. (Page 41)
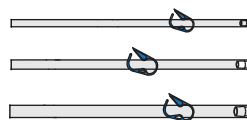
❹ Filters

Meissner's full line of single-use capsule filters are available for use with TepoFlex® biocontainer assemblies. Compact and easy to use, capsule filters are engineered to satisfy the highest standards of filtration reliability and convenience. Capsule filters combine a full range of filter media, pore size ratings and surface areas to satisfy numerous applications. (Page 33)
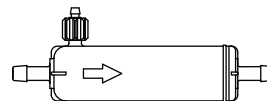
❻ BioFlex®

Meissner's BioFlex® single-use fluid path assemblies provide an enhanced level of convenience and maximize the flexibility of single-use and conventional systems. (Page 43)
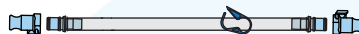
❽ QuaDrums®

Available in 50 - 200 L volumes and compatible with standard TepoFlex® biocontainer assemblies, these economic rigid outer containers offer a number of benefits over standard cylindrical drums. Dollies and lids are also available to complement the functionality of the QuaDrum® product line. (Page 45)

Standard Shapes & Sizes

① 2D End-Ported

50 mL - 20 L

End-ported biocontainers feature a hanging design which facilitates complete fluid recovery and ease of handling.
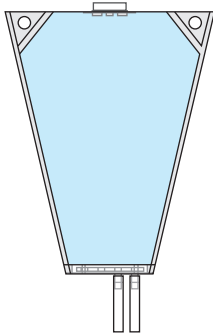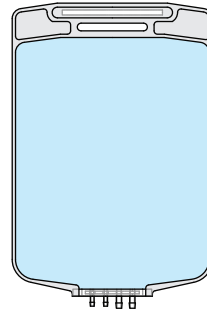
② FlexFill®

500 mL - 5 L

FlexFill® biocontainers are ideally suited for applications where fast and dependable aseptic transfer of small process volumes is required. FlexFill® assemblies allow users to directly transfer sterile bottled liquids to single-use or multiple-use bioreactor systems in non-permissive environments.

③ 3D Top-Ported for QuaDrums®

50 L - 200 L

Top-ported biocontainers designed for Meissner's QuaDrum® rigid outer containers offer a convenient and space-saving alternative to traditional cylindrical drums.
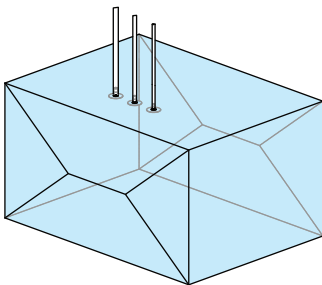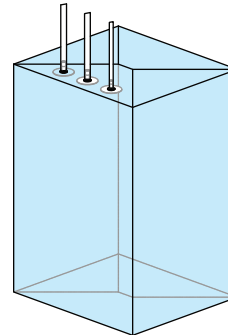
④ 3D Top-Ported for FlexStation®

100 L - 1,000 L

Top-ported biocontainers designed specifically for Meissner's FlexStation® rigid outer container.

⑤ 3D Top & Bottom-Ported for FlexStation®

100 L - 500 L

Meissner's bottom-ported biocontainer assemblies dispense and drain via gravity, and are built to fit FlexStation® rigid outer containers.
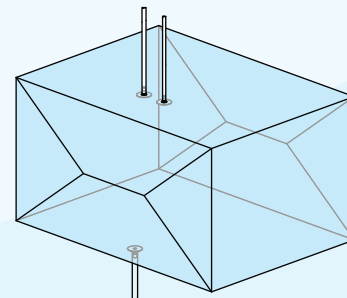
One-Touch® TepoFlex® Film

Meissner's polyolefin-based TepoFlex® film is optimized for single-use system requirements within the biopharmaceutical industry. The film's exceptional clarity is a testament to its cleanliness. Free of slip agents, TepoFlex® film couples a low leachables profile with the industry's highest combined gas and water vapor barrier properties. This feature mitigates the risk of degradation of culture media, buffers, intermediate and bulk drug products stored in TepoFlex® biocontainers. Both impact and tear resistant, TepoFlex® biocontainers are durable and retain >95% of the film strength in the seams. This quality attribute mitigates the risk of loss of fluid integrity.

TepoFlex® film is certified animal component free (ACF). The film is extruded, manufactured into biocontainers and packaged in ISO Class 7 cleanrooms. TepoFlex®

biocontainers and all sterile BioFlex® fluid path assemblies are supplied gamma-irradiated to ensure an SAL of 10^{-6} substantiated according to ISO 11137 methodology.

TepoFlex® film, biocontainers, and components of single-use assemblies are supported by a comprehensive Qualification Guide. This guide brings together all relevant quality documentation and certification in one extractables data document in order to help to speed your qualification and validation process.

> TepoFlex® film is manufactured without the use of slip agents to reduce potential product interference and lower the film's overall leachables profile.

| Model Solvents	Typical Values*
WFI	< 2 ppm
PBS pH 3	< 2 ppm
PBS pH 11	< 1 ppm
3M NaCl	≤ 1 ppm
96% EtOH	≤ 5 ppm
1% Tween 80	< 5 ppm
0.1M H_3PO_4	< 1 ppm
0.5M NaOH	< 1 ppm

* Extractables:
Typical values represent the upper boundary set by the highest value obtained in the extractables study for TepoFlex® biocontainers – tested for 3 months at 40 °C and 75% RH – from any of the target compounds identified by a comprehensive analytical screen consisting of TOC, IEC, ICP-OES, ICP-AES, GC/MS and LC/MS.

What are slip agents, and what is the benefit of removing them?
Slip agents are polymer additives, commonly referred to as internal lubricants such as oleamide, erucamide and stearamide. When added to the polymer matrix, slip agents migrate to the film's outer layers. This results in a waxy surface coating which imparts surface lubricity, allowing the film to slide easily over itself. However, slip agents reduce film clarity and may interfere with the seal integrity of biocontainers. Most importantly, slip agents are a significant source of extractable substances, have been shown to interfere with bioassays, and may affect product stability and shelf life. TepoFlex® film does not contain slip agents.

Property[1]	Test Protocol	Typical Values	
Optical			
Haze	ASTM D1003-07	5%	
Clarity	ASTM D1746-03	93%	
Total luminous transmittance	ASTM D1003-07	92%	
Barrier			
Water Vapor Transmission Rate [2]	ASTM F1249-06	0.42 g/m² • 24h	0.027 g/100 in² • 24h
O_2 Transmission Rate [3]	ASTM F1927-07	0.06 cm³/m² • 24h	0.004 cm³/100 in² • 24h
CO_2 Transmission Rate [4]	ASTM F2476-05	<1.0 cm³/m² • 24h	<0.06 cm³/100 in² • 24h
Fluid Integrity			
Film strength retained in seam	ASTM D882-02	>95%	

TepoFlex® film passes biocompatibility according to USP <87>, USP <88>, USP <661>, ISO 10993 parts 5, 6, 10 and 11, as well as EP 3.1.5.

[1] Determined on samples gamma irradiated at 29.2 - 36.6 kGy.
[2] RH test gas: 100%; RH carrier gas: 0%
[3] RH test gas: 50%; RH carrier gas: 100%
[4] RH test gas: 50%; RH carrier gas: 0%

This technical information consists of typical product data and should not be used as a specification.

Standard TepoFlex®
Biocontainer Assemblies
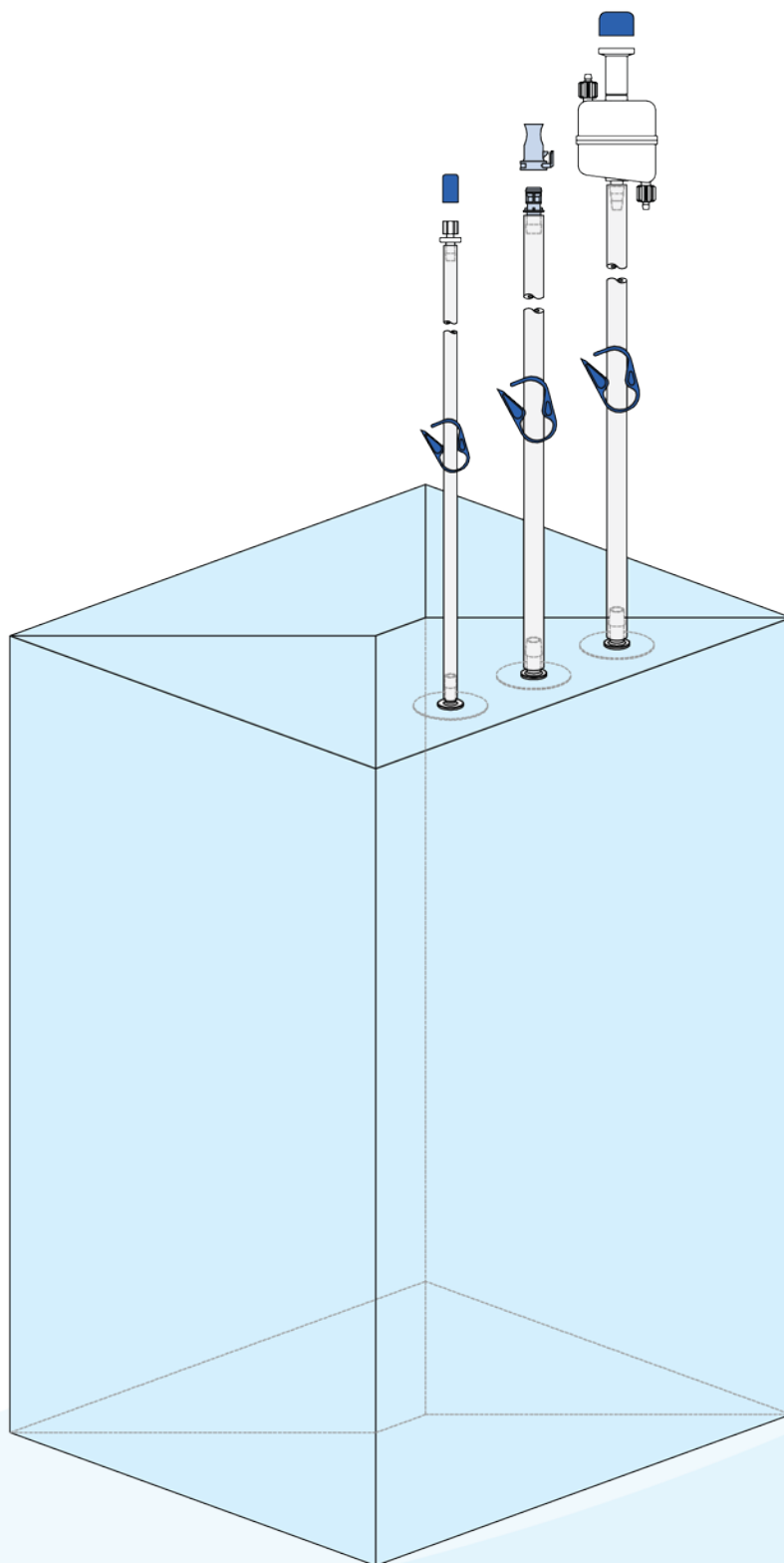
Small Volume Assemblies
Filter Included

Bill of Materials

Item	Description	Material	Qty
1	1 L - 2 L End-Ported Biocontainer	TepoFlex®	1
2	Ratchet Pinch Clamp, Medium	Polypropylene	2
3	¼" x ⅜"Tubing, 12" Length 6.4 mm x 9.5 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	2
4	Coupling Insert, ¼" Hose Barb, MPC Coupling Insert, 6.4 mm Hose Barb, MPC	Polycarbonate	1
5	Sealing Cap, MPC	Polycarbonate	1
6	¼" x ⅜" Tubing, 3" Length 6.4 mm x 9.5 mm Tubing, 7.6 cm Length	TPE or Platinum-Cured Silicone	1
7	¼" x ⅛" Hose Barb Reduction Fitting 6.4 mm x 3.2 mm Hose Barb Reduction Fitting	Polypropylene	1
8	⅛" x ¼" Tubing, 12" Length 3.2 mm x 6.4 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	1
9	Ratchet Pinch Clamp, Small	Polypropylene	1
10	⅛" Hose Barb x Female Luer Adapter 3.2 mm Hose Barb x Femaile Luer Adapter	Polypropylene	1
11	Male Luer Plug	Polypropylene	1
12	Protective Cover, Small	Vinyl	1
13	Meissner Capsule Filter	See options on p. 33	1
14	Protective Cover, ¼" (6.4 mm) Hose Barb	Vinyl	1
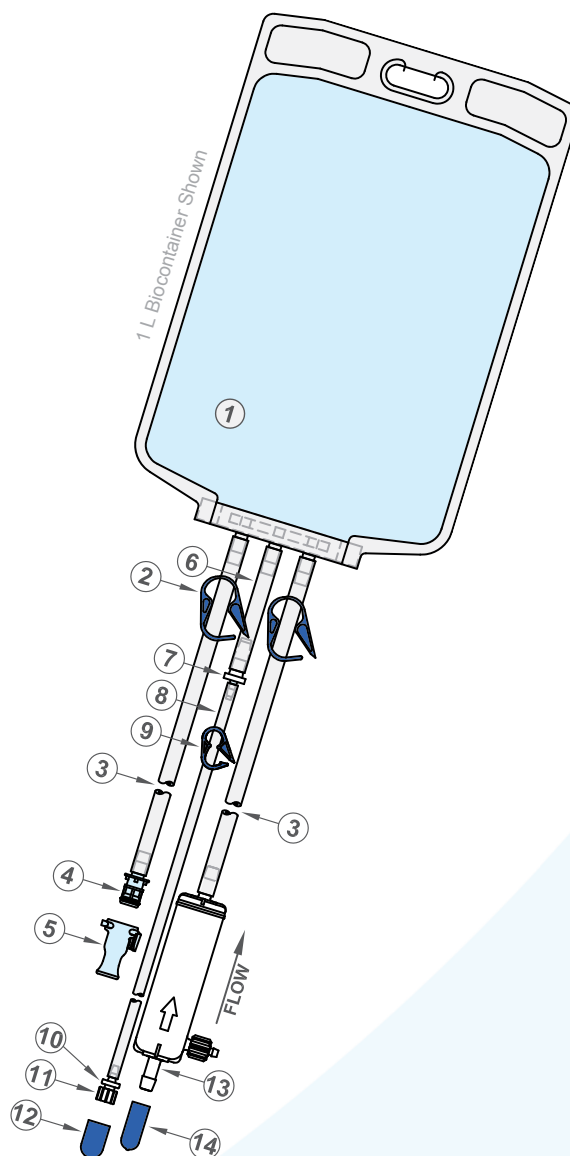
1 L Biocontainer Shown

Standards

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3101B-E02B01-00	EverLUX® 0.2 µm	CM2STW0.2-115	TPE		
DSR3101B-E02B11-00	EverLUX® 0.2 µm	CM2STW0.2-115	Platinum-Cured Silicone		
DSR3101B-S01B01-00	STyLUX® 0.1 µm	CM2ST0.1-115	TPE		
DSR3101B-S01B11-00	STyLUX® 0.1 µm	CM2ST0.1-115	Platinum-Cured Silicone		
DSR3101B-S02B01-00	STyLUX® 0.2 µm	CM2ST0.2-115	TPE	1 L	7.8" x 12.1" 19.8 cm x 30.7 cm
DSR3101B-S02B11-00	STyLUX® 0.2 µm	CM2ST0.2-115	Platinum-Cured Silicone		
DSR3101B-V01B01-00	SteriLUX® 0.1 µm	CM2VTH0.1-115	TPE		
DSR3101B-V01B11-00	SteriLUX® 0.1 µm	CM2VTH0.1-115	Platinum-Cured Silicone		
DSR3101B-V02B01-00	SteriLUX® 0.2 µm	CM2VTH0.2-115	TPE		
DSR3101B-V02B11-00	SteriLUX® 0.2 µm	CM2VTH0.2-115	Platinum-Cured Silicone		

TepoFlex® →Small Volume →Filter Included

Standards (continued)

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3102B-E02B01-00	EverLUX® 0.2 µm	CM2STW0.2-115	TPE	2 L	9.5" x 13.4" 24.1 cm x 34.0 cm
DSR3102B-E02B11-00	EverLUX® 0.2 µm	CM2STW0.2-115	Platinum-Cured Silicone		
DSR3102B-S01B01-00	STyLUX® 0.1 µm	CM2ST0.1-115	TPE		
DSR3102B-S01B11-00	STyLUX® 0.1 µm	CM2ST0.1-115	Platinum-Cured Silicone		
DSR3102B-S02B01-00	STyLUX® 0.2 µm	CM2ST0.2-115	TPE		
DSR3102B-S02B11-00	STyLUX® 0.2 µm	CM2ST0.2-115	Platinum-Cured Silicone		
DSR3102B-V01B01-00	SteriLUX® 0.1 µm	CM2VTH0.1-115	TPE		
DSR3102B-V01B11-00	SteriLUX® 0.1 µm	CM2VTH0.1-115	Platinum-Cured Silicone		
DSR3102B-V02B01-00	SteriLUX® 0.2 µm	CM2VTH0.2-115	TPE		
DSR3102B-V02B11-00	SteriLUX® 0.2 µm	CM2VTH0.2-115	Platinum-Cured Silicone		

TepoFlex® → Small Volume → Filter Included

Small Volume Assemblies
Filter Not Included

Bill of Materials

Item	Description	Material	Qty
1	50 mL - 2 L End-Ported Biocontainer	TepoFlex®	1
2	Ratchet Pinch Clamp, Medium	Polypropylene	2
3	¼" x ⅜" Tubing, 6" Length 6.4 mm x 9.5 mm Tubing, 15.2 cm Length	TPE or Platinum-Cured Silicone	2
4	¼" hose barb x Female Luer Adapter 6.4 mm hose barb x Female Luer Adapter	Polypropylene	1
5	Male Luer Plug	Polypropylene	1
6	Protective Cover, Small	Vinyl	2
7	¼" Hose Barb x Male Luer Adapter 6.4 mm Hose Barb x Male Luer Adapter	Polypropylene	1
8	Female Luer Plug	Polypropylene	1

250 mL biocontainer shown
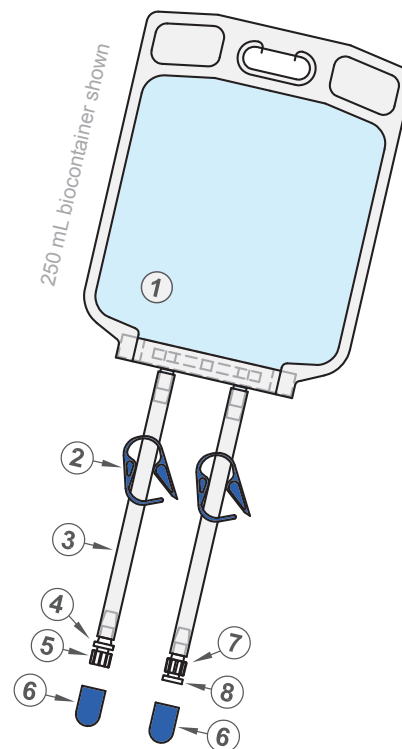
Standards

Part Number	Biocontainer		Tubing
	Volumes	Dimensions	
DUF2191B-N00B01-00	50 mL	5.3" x 5.4" 13.3 cm x 13.7 cm	TPE
DUF2194B-N00B01-00	250 mL	6.0" x 7.9" 15.2 cm x 20.1 cm	TPE
DUF2195B-N00B01-00	500 mL	7.0" x 10.4" 17.8 cm x 26.4 cm	TPE
DUF2101B-N00B01-00	1 L	7.8" x 12.1" 19.8 cm x 30.7 cm	TPE
DUF2102B-N00B01-00	2 L	9.5" x 13.4" 24.1 cm x 34.0 cm	TPE

Part Number	Biocontainer		Tubing
	Volumes	Dimensions	
DUF2191B-N00B11-00	50 mL	5.3" x 5.4" 13.3 cm x 13.7 cm	Platinum-Cured Silicone
DUF2194B-N00B11-00	250 mL	6.0" x 7.9" 15.2 cm x 20.1 cm	Platinum-Cured Silicone
DUF2195B-N00B11-00	500 mL	7.0" x 10.4" 17.8 cm x 26.4 cm	Platinum-Cured Silicone
DUF2101B-N00B11-00	1 L	7.8" x 12.1" 19.8 cm x 30.7 cm	Platinum-Cured Silicone
DUF2102B-N00B11-00	2 L	9.5" x 13.4" 24.1 cm x 34.0 cm	Platinum-Cured Silicone

TepoFlex® → Small Volume → Filter Not Included

Small Volume Plus Assemblies
Filter Not Included

Bill of Materials

Item	Description	Material	Qty
1	50 mL - 2 L End-Ported Biocontainer	TepoFlex®	1
2	¼˝ x ⅜˝ Tubing, 3˝ Length 6.4 mm x 9.5 mm Tubing, 7.6 cm Length	TPE	2
3	¼˝ Hose Barb x Female Luer Adapter 6.4 mm Hose Barb x Female Luer Adapter	Polypropylene	1
4	Swabable Valve / Needleless Injection Site	Polycarbonate / Silicone	1
5	Male Luer Cap	Polycarbonate	1
6	¼˝ x ⅛˝ Hose Barb Reduction Fitting 6.4 mm x 3.2 mm Hose Barb Reduction Fitting	Polypropylene	1
7	Ratcheting Pinch Clamp, Small	Polypropylene	1
8	⅛˝ x ¼˝ Tubing, 24˝ Length 3.2 mm x 6.4 mm Tubing, 61.0 cm Length	TPE	1
9	⅛˝ (3.2 mm) Hose Barb Plug	Polypropylene	1
10	Ratcheting Pinch Clamp, Medium	Polypropylene	1
11	¼˝ x ⅜˝ Tubing, 6˝ Length 6.4 mm x 9.5 mm Tubing, 15.2 cm Length	TPE	1
12	¼˝ Hose Barb x Male Luer Adapter 6.4 mm Hose Barb x Male Luer Adapter	Polypropylene	1
13	Female Luer Plug	Polypropylene	1
14	Protective Cover, Small	Vinyl	1

250 mL biocontainer shown
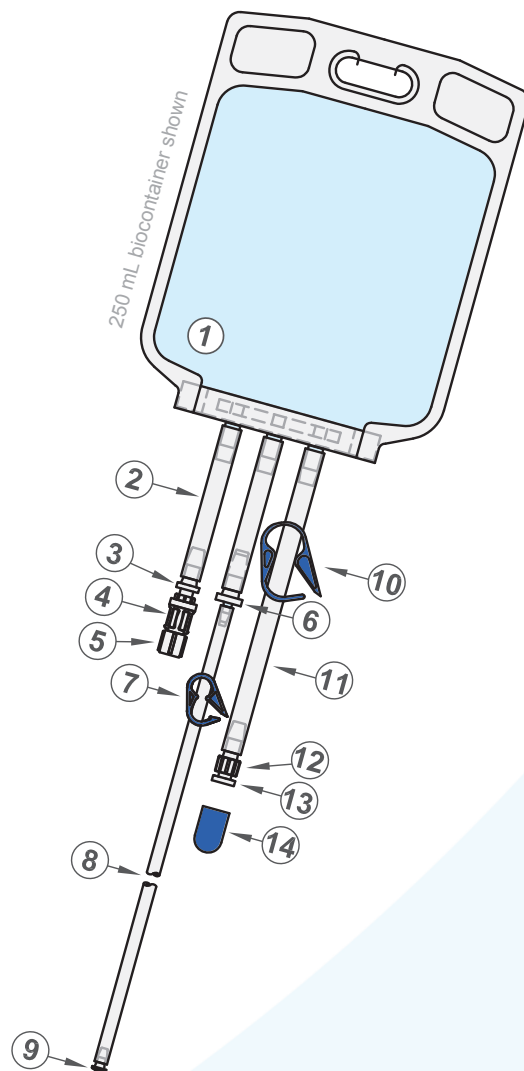
Standards

Part Number	Biocontainer		Tubing
	Volume	Dimensions	
DUF3191B-N00B01-00	50 mL	5.3" x 5.4" 13.3 cm x 13.7 cm	TPE
DUF3194B-N00B01-00	250 mL	6.0" x 7.9" 15.2 cm x 20.1 cm	TPE
DUF3195B-N00B01-00	500 mL	7.0" x 10.4" 17.8 cm x 26.4 cm	TPE
DUF3101B-N00B01-00	1 L	7.8" x 12.1" 19.8 cm x 30.7 cm	TPE
DUF3102B-N00B01-00	2 L	9.5" x 13.4" 24.1 cm x 34.0 cm	TPE

TepoFlex® → Small Volume → Filter Not Included

Process Volume Assemblies
Filter Included

Bill of Materials

Item	Description	Material	Qty
1	5 L - 20 L End-Ported Biocontainer	TepoFlex®	1
2	Ratchet Pinch Clamp, Medium	Polypropylene	1
3	¼″ x ⅜″ Tubing, 12″ Length 6.4 mm x 9.5 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	1
4	¼″ Hose Barb x Female Luer Adapter 6.4 mm Hose Barb x Female Luer Adapter	Polypropylene	1
5	Male Luer Plug	Polypropylene	1
6	Protective Cover, Small	Vinyl	1
7	⅜″ x ⁹/₁₆″ Tubing, 12″ Length 9.5 mm x 14.3 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	1
8	Ratchet Pinch Clamp, Large	PBT	2
9	Coupling Insert, ⅜″ Hose Barb, MPC Coupling Insert, 9.5 mm Hose Barb, MPC	Polycarbonate	1
10	Sealing Cap, MPC	Polycarbonate	1
11	⅜″ x ⁹/₁₆″ Tubing, 24″ Length 9.5 mm x 14.3 mm Tubing, 61 cm Length	TPE or Platinum-Cured Silicone	1
12	Meissner Capsule Filter	See options on pg 33	1
13	Protective Cover, Intermediate	Vinyl	1
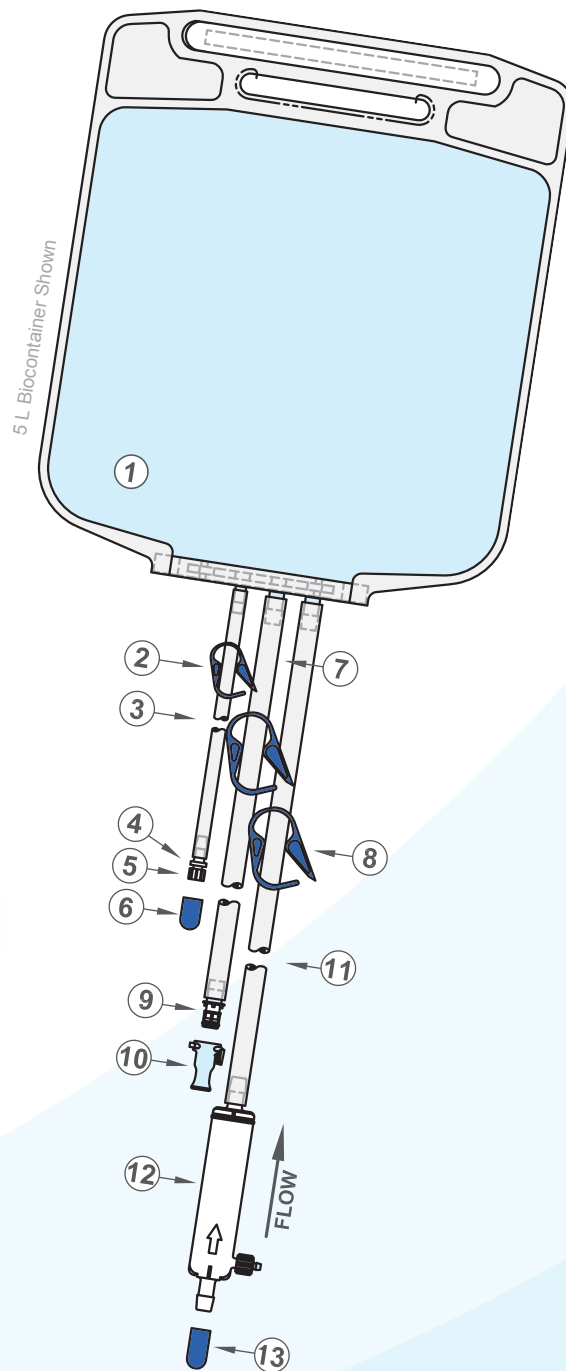
5 L Biocontainer Shown

FLOW

TepoFlex® → Process Volume → Filter Included

Standards

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3104B-E02B01-00	EverLUX® 0.2 µm	CK2STW0.2-225	TPE	5 L	13.0" x 15.5" 33.0 cm x 39.4 cm
DSR3104B-E02B11-00	EverLUX® 0.2 µm	CK2STW0.2-225	Platinum-Cured Silicone		
DSR3104B-S01B01-00	STyLUX® 0.1 µm	CK2ST0.1-225	TPE		
DSR3104B-S01B11-00	STyLUX® 0.1 µm	CK2ST0.1-225	Platinum-Cured Silicone		
DSR3104B-S02B01-00	STyLUX® 0.2 µm	CK2ST0.2-225	TPE		
DSR3104B-S02B11-00	STyLUX® 0.2 µm	CK2ST0.2-225	Platinum-Cured Silicone		
DSR3104B-V01B01-00	SteriLUX® 0.1 µm	CK2VTH0.1-225	TPE		
DSR3104B-V01B11-00	SteriLUX® 0.1 µm	CK2VTH0.1-225	Platinum-Cured Silicone		
DSR3104B-V02B01-00	SteriLUX® 0.2 µm	CK2VTH0.2-225	TPE		
DSR3104B-V02B11-00	SteriLUX® 0.2 µm	CK2VTH0.2-225	Platinum-Cured Silicone		

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3105B-E02B01-00	EverLUX® 0.2 µm	CK2STW0.2-225	TPE	10 L	15.0" x 22.0" 38.1 cm x 55.9 cm
DSR3105B-E02B11-00	EverLUX® 0.2 µm	CK2STW0.2-225	Platinum-Cured Silicone		
DSR3105B-S01B01-00	STyLUX® 0.1 µm	CK2ST0.1-225	TPE		
DSR3105B-S01B11-00	STyLUX® 0.1 µm	CK2ST0.1-225	Platinum-Cured Silicone		
DSR3105B-S02B01-00	STyLUX® 0.2 µm	CK2ST0.2-225	TPE		
DSR3105B-S02B11-00	STyLUX® 0.2 µm	CK2ST0.2-225	Platinum-Cured Silicone		
DSR3105B-V01B01-00	SteriLUX® 0.1 µm	CK2VTH0.1-225	TPE		
DSR3105B-V01B11-00	SteriLUX® 0.1 µm	CK2VTH0.1-225	Platinum-Cured Silicone		
DSR3105B-V02B01-00	SteriLUX® 0.2 µm	CK2VTH0.2-225	TPE		
DSR3105B-V02B11-00	SteriLUX® 0.2 µm	CK2VTH0.2-225	Platinum-Cured Silicone		

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3106B-E02B01-00	EverLUX® 0.2 µm	CK2STW0.2-225	TPE	20 L	17.3" x 27.0" 43.9 cm x 68.6 cm
DSR3106B-E02B11-00	EverLUX® 0.2 µm	CK2STW0.2-225	Platinum-Cured Silicone		
DSR3106B-S01B01-00	STyLUX® 0.1 µm	CK2ST0.1-225	TPE		
DSR3106B-S01B11-00	STyLUX® 0.1 µm	CK2ST0.1-225	Platinum-Cured Silicone		
DSR3106B-S02B01-00	STyLUX® 0.2 µm	CK2ST0.2-225	TPE		
DSR3106B-S02B11-00	STyLUX® 0.2 µm	CK2ST0.2-225	Platinum-Cured Silicone		
DSR3106B-V01B01-00	SteriLUX® 0.1 µm	CK2VTH0.1-225	TPE		
DSR3106B-V01B11-00	SteriLUX® 0.1 µm	CK2VTH0.1-225	Platinum-Cured Silicone		
DSR3106B-V02B01-00	SteriLUX® 0.2 µm	CK2VTH0.2-225	TPE		
DSR3106B-V02B11-00	SteriLUX® 0.2 µm	CK2VTH0.2-225	Platinum-Cured Silicone		

TepoFlex® → Process Volume → Filter Included

Process Volume Assemblies
Filter Not Included

Bill of Materials

Item	Description	Material	Qty
1	5 L - 20 L End-Ported Biocontainer	TepoFlex®	1
2	⅜" x ⁹⁄₁₆" Tubing, 6" Length 9.5 mm x 14.3 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	2
3	Ratchet Pinch Clamp, Large	PBT	2
4	Coupling Insert, ⅜" Hose Barb, MPC Coupling Insert, 9.5 mm Hose Barb, MPC	Polycarbonate	2
5	Sealing Cap, MPC	Polycarbonate	2

Standards

Part Number	Biocontainer		Tubing
	Volumes	Dimensions	
DUF2104B-N00B01-00	5 L	13.0" x 15.5" 33.0 cm x 39.4 cm	TPE
DUF2104B-N00B11-00	5 L	13.0" x 15.5" 33.0 cm x 39.4 cm	Platinum-Cured Silicone
DUF2105B-N00B01-00	10 L	15.0" x 22.0" 38.1 cm x 55.9 cm	TPE
DUF2105B-N00B11-00	10 L	15.0" x 22.0" 38.1 cm x 55.9 cm	Platinum-Cured Silicone
DUF2106B-N00B01-00	20 L	17.3" x 27.0" 43.9 cm x 68.6 cm	TPE
DUF2106B-N00B11-00	20 L	17.3" x 27.0" 43.9 cm x 68.6 cm	Platinum-Cured Silicone

5 L Biocontainer Shown

TepoFlex® → Process Volume → Filter Not Included

Process Volume Plus Assemblies
Filter Not Included

Bill of Materials

Item	Description	Material	Qty
1	5 L - 20 L End-Ported Biocontainer	TepoFlex®	1
2	Ratchet Pinch Clamp, Medium	Polypropylene	1
3	¼" x ⅜" Tubing, 12" Length 6.4 mm x 9.5 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	1
4	¼" Hose Barb x Female Luer Adapter 6.4 mm Hose Barb x Female Luer Adapter	Polypropylene	1
5	Male Luer Plug	Polypropylene	1
6	Protective Cover, Small	Vinyl	1
7	Ratchet Pinch Clamp, Large	PBT	2
8	⅜" x ⁹⁄₁₆" Tubing, 12" Length 9.5 mm x 14.3 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	2
9	Coupling Insert, ⅜" Hose Barb, MPC Coupling Insert, 9.5 mm Hose Barb, MPC	Polycarbonate	1
10	Sealing Cap, MPC	Polycarbonate	1
11	Coupling Body, ⅜" Hose Barb, MPC Coupling Body, 9.5 mm Hose Barb, MPC	Polycarbonate	1
12	Sealing Plug, MPC	Polycarbonate	1

5 L Biocontainer Shown

Standards

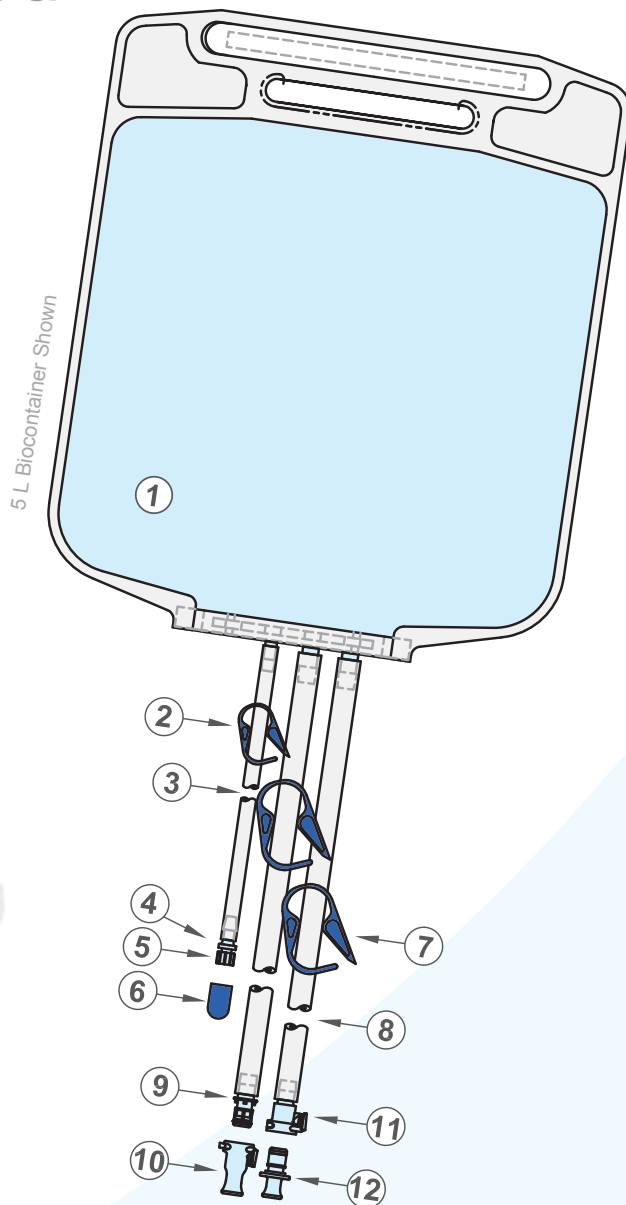| Part Number	Biocontainer		Tubing
	Volumes	**Dimensions**	
DUF3104B-N00B01-00	5 L	13.0" x 15.5" 33.0 cm x 39.4 cm	TPE
DUF3104B-N00B11-00	5 L	13.0" x 15.5" 33.0 cm x 39.4 cm	Platinum-Cured Silicone
DUF3105B-N00B01-00	10 L	15.0" x 22.0" 38.1 cm x 55.9 cm	TPE
DUF3105B-N00B11-00	10 L	15.0" x 22.0" 38.1 cm x 55.9 cm	Platinum-Cured Silicone
DUF3106B-N00B01-00	20 L	17.3" x 27.0" 43.9 cm x 68.6 cm	TPE
DUF3106B-N00B11-00	20 L	17.3" x 27.0" 43.9 cm x 68.6 cm	Platinum-Cured Silicone

TepoFlex® → Process Volume → Filter Not Included
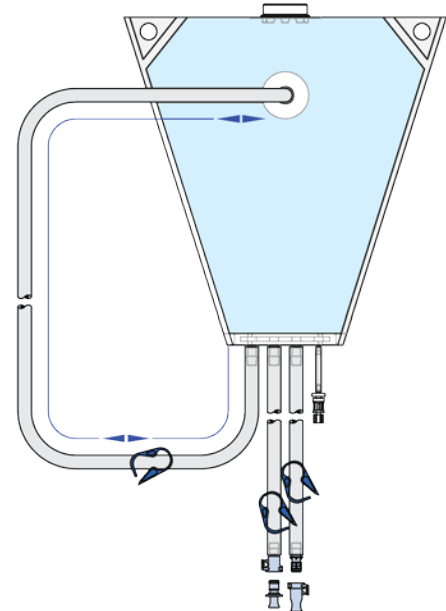
3D Biocontainer
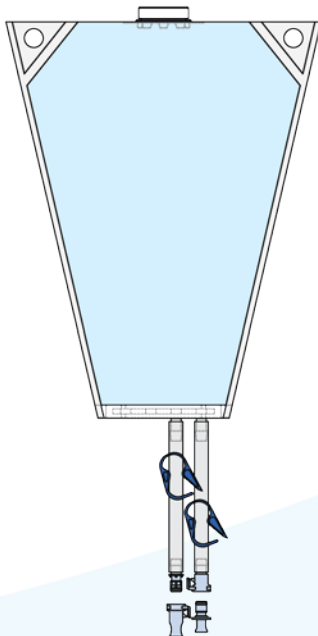# FlexFill®
Transfer Assembly

FlexFill® biocontainer transfer assemblies were specifically designed for fast and reliable aseptic transfer of small process volumes. FlexFill® assemblies allow operators to conveniently transfer bottled cell culture media, sera, reagents, supplements, buffers and microcarriers to a bioreactor. FlexFill® mitigates the risk of product contamination and effectively addresses the challenges associated with directly transferring sterile bottled liquids to single-use or multiple-use bioreactor systems in non-permissive environments. Once filled, the liquid can either be stored in the biocontainer assembly or transferred, incrementally or in its entirety, without any hold up volume to a culture system.

- Volumes from 500 mL to 5 L
- Extra large screw cap port, conveniently located
- Stainless steel FlexCessory™ stand available, for ease of filling
- Readily customizable
- Up to four separate fluid paths may be incorporated
- May include a recirculation loop, customized to interface with any peristaltic pump
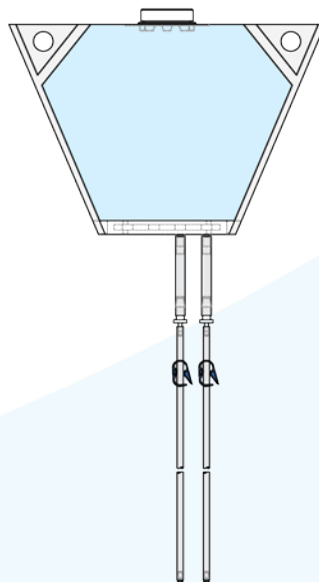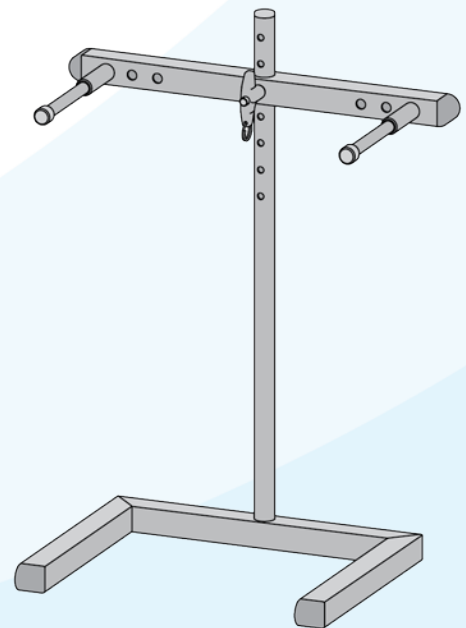- Recirculation flow can occur in either direction, depending on the application

Mixing

Basic

Aseptic Processing


Stainless Steel FlexCessory™ Stand

TepoFlex® → FlexFill® → Transfer Assembly

3D Biocontainer

FlexFill®
Transfer Assembly

Bill of Materials: 500 mL - 2 L

Item	Description	Material	Qty
1	500 mL - 2 L FlexFill® Biocontainer	TepoFlex®	1
2	48-400 Screw Cap	PP/LDPE	1
3	¼" x ⅜" Tubing, 6" Length 6.4 mm x 9.5 mm Tubing, 15.2 cm Length	TPE or Platinum-Cured Silicone	2
4	Ratchet Pinch Clamp, Medium	Polypropylene	2
5	¼˝ Hose Barb x Female Luer Adapter 6.4 mm Hose Barb x Female Luer Adapter	Polypropylene	1
6	Male Luer Plug	Polypropylene	1
7	Protective Cover, Small	Vinyl	2
8	¼˝ Hose Barb x Male Luer Adapter 6.4 mm Hose Barb x Male Luer Adapter	Polypropylene	1
9	Female Luer Plug	Polypropylene	1

500 mL Biocontainer Shown

3 L Biocontainer Shown
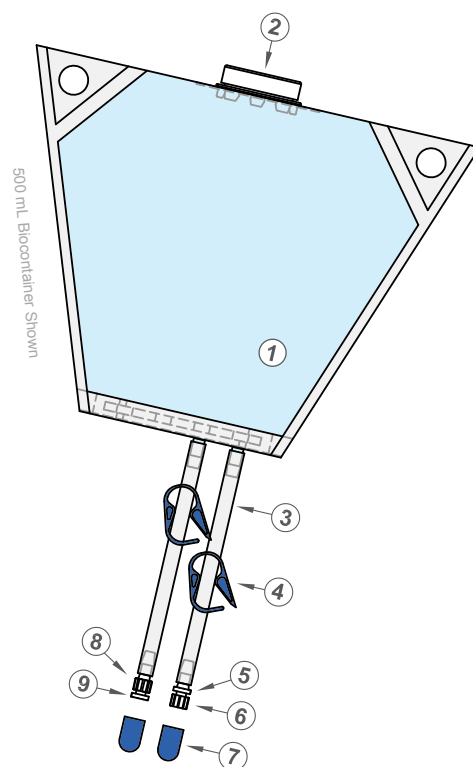
Bill of Materials: 3 L - 5 L

Item	Description	Material	Qty
1	3 L - 5 L FlexFill® Biocontainer	TepoFlex®	1
2	48-400 Screw Cap	PP/LDPE	1
3	⅜" x ⁹/₁₆" Tubing, 6˝ Length 9.5 mm x 14.3 mm Tubing, 15 cm Length	TPE or Platinum-Cured Silicone	2
4	Ratchet Pinch Clamp, Large	PBT	2
5	Coupling Body, ⅜" Hose Barb, MPC Coupling Body, 9.5 mm Hose Barb, MPC	Polycarbonate	1
6	Sealing Plug, MPC	Polycarbonate	1
7	Coupling Insert, ⅜" Hose Barb, MPC Coupling Insert, 9.5 mm Hose Barb, MPC	Polycarbonate	2
8	Sealing Cap, MPC	Polycarbonate	1

TepoFlex® → FlexFill® → Transfer Assembly Standards
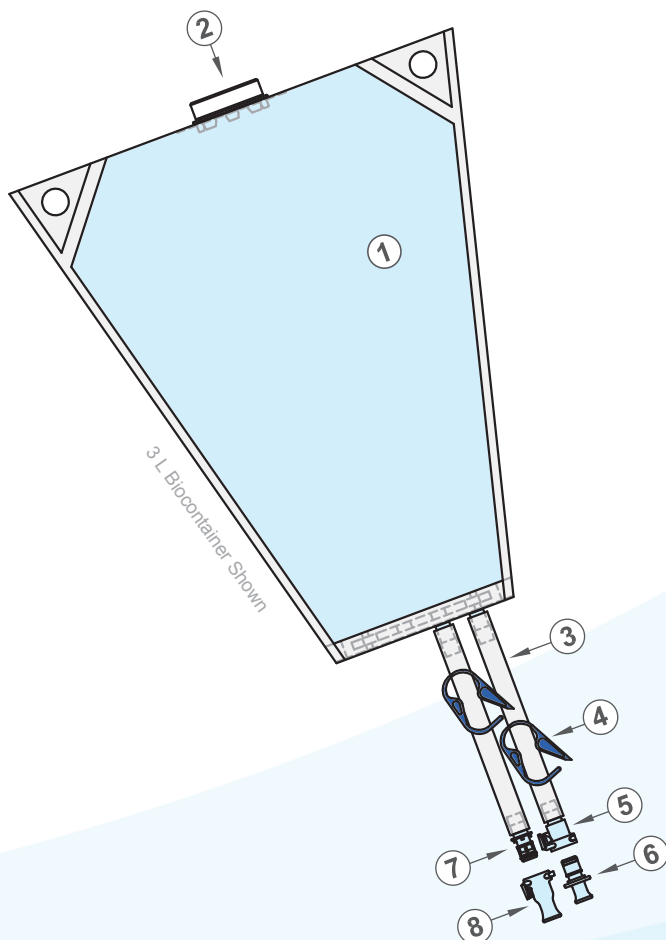
Standards

Part Number	Volume	Tubing
DUF3195B-N00-B2106-01	500 mL	Platinum-Cured Silicone
DUF3101B-N00-B2106-01	1 L	Platinum-Cured Silicone
DUF3102B-N00-B2106-01	2 L	Platinum-Cured Silicone
DUF3103B-N00-B2106-01	3 L	Platinum-Cured Silicone
DUF3104B-N01-B2106-01	4 L	Platinum-Cured Silicone
DUF3104B-N00-B2106-01	5 L	Platinum-Cured Silicone

Part Number	Volume	Tubing
DUF3195B-N00-B2107-01	500 mL	TPE
DUF3101B-N00-B2107-01	1 L	TPE
DUF3102B-N00-B2107-01	2 L	TPE
DUF3103B-N00-B2107-01	3 L	TPE
DUF3104B-N01-B2107-01	4 L	TPE
DUF3104B-N00-B2107-01	5 L	TPE

Adjustable FlexFill® Stainless Steel Stand	FABS-006A

TepoFlex® → FlexFill® → Transfer Assembly Standards

Pillow-Style Assemblies
Filter Included

Bill of Materials

Item	Description	Material	Qty
1	50-200 L Face-Ported Biocontainer	TepoFlex®	1
2	Ratchet Pinch Clamp, Large	PBT	2
3	⅜" x ⁹/₁₆" Tubing, 24" Length 9.5 mm x 14.3 mm Tubing, 61 cm Length	TPE or Platinum-Cured Silicone	1
4	Meissner Capsule Filter	See options on p. 33	1
5	Protective Cover, Small	Vinyl	2
6	⅜" x ⁹/₁₆" Tubing, 12" Length 9.5 mm x 14.3 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	1
7	Coupling Insert, ⅜" Hose Barb, MPC Coupling Insert, 9.5 mm Hose Barb, MPC	Polycarbonate	1
8	Sealing Cap, MPC	Polycarbonate	1
9	Ratchet Pinch Clamp, Medium	Polypropylene	1
10	¼" x ⅜" Tubing, 12" Length 6.4 mm x 9.5 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	1
11	¼" Hose Barb x Female Luer Adapter 6.4 mm Hose Barb x Female Luer Adapter	Polypropylene	1
12	Male Luer Plug	Polypropylene	1
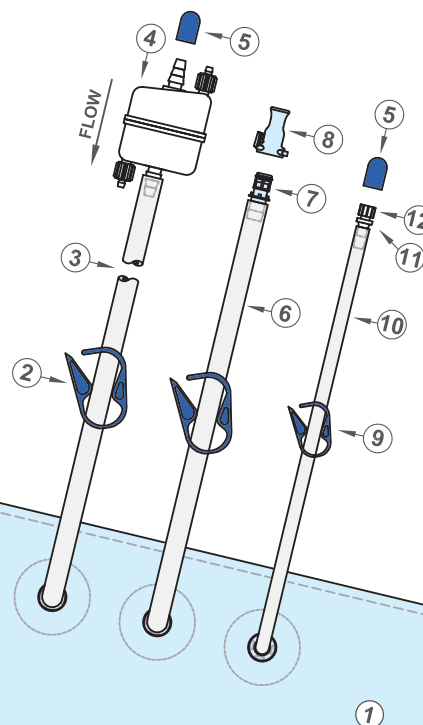
50 L Biocontainer Assembly Shown

Standards

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3307B-E02B01-00	EverLUX® 0.2 µm	CF2STW0.2-33B4	TPE	50 L	22" x 39" 55.9 cm x 99.1 cm
DSR3307B-E02B11-00	EverLUX® 0.2 µm	CF2STW0.2-33B4	Platinum-Cured Silicone		
DSR3307B-S01B01-00	STyLUX® 0.1 µm	CF2ST0.1-33B4	TPE		
DSR3307B-S01B11-00	STyLUX® 0.1 µm	CF2ST0.1-33B4	Platinum-Cured Silicone		
DSR3307B-S02B01-00	STyLUX® 0.2 µm	CF2ST0.2-33B4	TPE		
DSR3307B-S02B11-00	STyLUX® 0.2 µm	CF2ST0.2-33B4	Platinum-Cured Silicone		
DSR3307B-V01B01-00	SteriLUX® 0.1 µm	CS2VTH0.1-224	TPE		
DSR3307B-V01B11-00	SteriLUX® 0.1 µm	CS2VTH0.1-224	Platinum-Cured Silicone		
DSR3307B-V02B01-00	SteriLUX® 0.2 µm	CS2VTH0.2-224	TPE		
DSR3307B-V02B11-00	SteriLUX® 0.2 µm	CS2VTH0.2-224	Platinum-Cured Silicone		

TepoFlex® → Face-Ported → Filter Included

Standards (continued)

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3308B-E02B01-00	EverLUX® 0.2 µm	CS2STW0.2-224	TPE	100 L	29.5" x 46" 74.9 cm x 116.8 cm
DSR3308B-E02B11-00	EverLUX® 0.2 µm	CS2STW0.2-224	Platinum-Cured Silicone		
DSR3308B-S01B01-00	STyLUX® 0.1 µm	CS2ST0.1-224	TPE		
DSR3308B-S01B11-00	STyLUX® 0.1 µm	CS2ST0.1-224	Platinum-Cured Silicone		
DSR3308B-S02B01-00	STyLUX® 0.2 µm	CS2ST0.2-224	TPE		
DSR3308B-S02B11-00	STyLUX® 0.2 µm	CS2ST0.2-224	Platinum-Cured Silicone		
DSR3308B-V01B01-00	SteriLUX® 0.1 µm	CS2VTH0.1-224	TPE		
DSR3308B-V01B11-00	SteriLUX® 0.1 µm	CS2VTH0.1-224	Platinum-Cured Silicone		
DSR3308B-V02B01-00	SteriLUX® 0.2 µm	CS2VTH0.2-224	TPE		
DSR3308B-V02B11-00	SteriLUX® 0.2 µm	CS2VTH0.2-224	Platinum-Cured Silicone		

| Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3309B-E02B01-00	EverLUX® 0.2 µm	CS2STW0.2-224	TPE	200 L	35.5" x 56" 90.2 cm x 142.2 cm
DSR3309B-E02B11-00	EverLUX® 0.2 µm	CS2STW0.2-224	Platinum-Cured Silicone		
DSR3309B-S01B01-00	STyLUX® 0.1 µm	CS2ST0.1-224	TPE		
DSR3309B-S01B11-00	STyLUX® 0.1 µm	CS2ST0.1-224	Platinum-Cured Silicone		
DSR3309B-S02B01-00	STyLUX® 0.2 µm	CS2ST0.2-224	TPE		
DSR3309B-S02B11-00	STyLUX® 0.2 µm	CS2ST0.2-224	Platinum-Cured Silicone		
DSR3309B-V01B01-00	SteriLUX® 0.1 µm	CS2VTH0.1-224	TPE		
DSR3309B-V01B11-00	SteriLUX® 0.1 µm	CS2VTH0.1-224	Platinum-Cured Silicone		
DSR3309B-V02B01-00	SteriLUX® 0.2 µm	CS2VTH0.2-224	TPE		
DSR3309B-V02B11-00	SteriLUX® 0.2 µm	CS2VTH0.2-224	Platinum-Cured Silicone		

TepoFlex® → Face-Ported → Filter Included

Basic Pillow-Style Assemblies
Filter Not Included

Bill of Materials

Item	Description	Material	Qty
1	50-200 L Face-Ported Biocontainer	TepoFlex®	1
2	Ratchet Pinch Clamp, Large	PBT	2
3	⅜" x ⁹/₁₆" Tubing, 12" Length 9.5 mm x 14.3 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	2
4	Coupling Body, ⅜" Hose Barb, MPC Coupling Body, 9.5 mm Hose Barb, MPC	Polycarbonate	1
5	Sealing Plug, MPC	Polycarbonate	1
6	Coupling Insert, ⅜" Hose Barb, MPC Coupling Insert, 9.5 mm Hose Barb, MPC	Polycarbonate	1
7	Sealing Cap, MPC	Polycarbonate	1
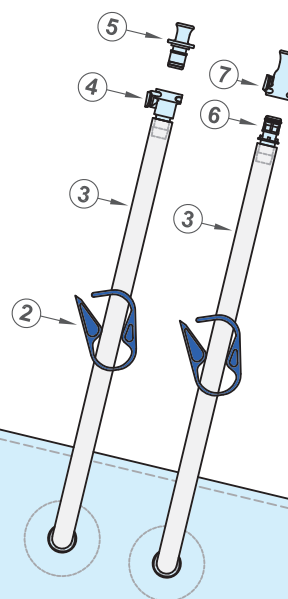
Standards

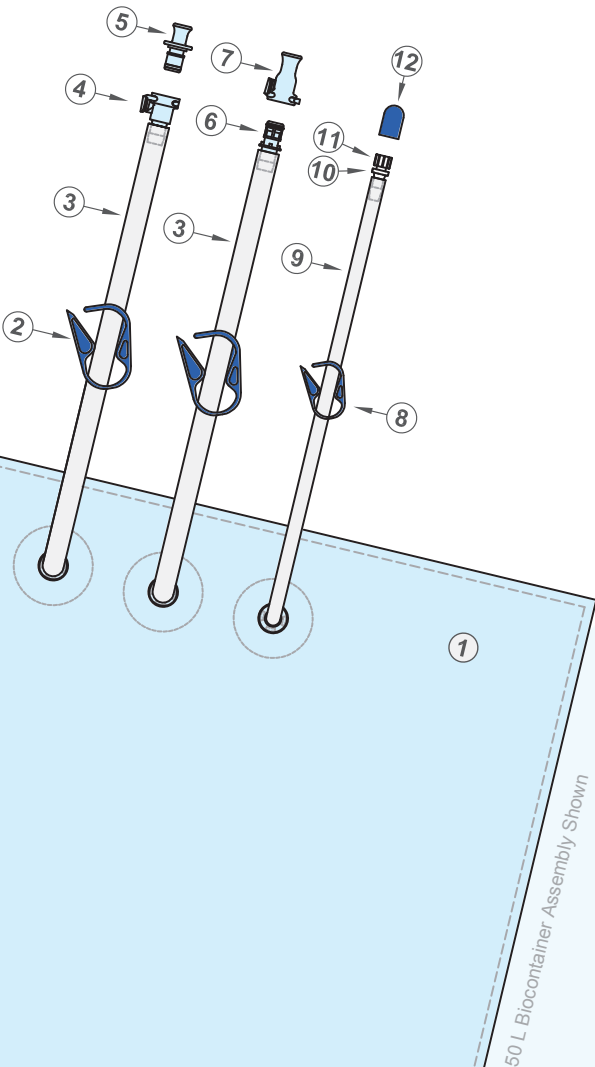| Part Number	Biocontainer		Tubing
	Volumes	Dimensions	
DUF2307B-N00B01-00	50 L	22.0" x 39.0" 55.9 cm x 99.1 cm	TPE
DUF2307B-N00B11-00	50 L	22.0" x 39.0" 55.9 cm x 99.1 cm	Platinum-Cured Silicone
DUF2308B-N00B01-00	100 L	29.5" x 46.0" 74.9 cm x 116.8 cm	TPE
DUF2308B-N00B11-00	100 L	29.5" x 46.0" 74.9 cm x 116.8 cm	Platinum-Cured Silicone
DUF2309B-N00B01-00	200 L	35.5" x 56.0" 90.2 cm x 142.2 cm	TPE
DUF230B-N00B11-00	200 L	35.5" x 56.0" 90.2 cm x 142.2 cm	Platinum-Cured Silicone

50 L Biocontainer Assembly Shown

TepoFlex® → Face-Ported → Filter Not Included

Pillow-Style Assemblies
Filter Not Included

Bill of Materials

Item	Description	Material	Qty
1	50-200 L Face-Ported Biocontainer	TepoFlex®	1
2	Ratchet Pinch Clamp, Large	PBT	2
3	⅜" x ⁹⁄₁₆" Tubing, 12" Length 9.5 mm x 14.3 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	2
4	Coupling Body, ⅜" Hose Barb, MPC Coupling Body, 9.5 mm Hose Barb, MPC	Polycarbonate	1
5	Sealing Plug, MPC	Polycarbonate	1
6	Coupling, ⅜" Hose Barb, MPC Body Coupling, 9.5 mm Hose Barb, MPC	Polycarbonate	1
7	Sealing Cap, MPC	Polycarbonate	1
8	Ratchet Pinch Clamp, Medium	Polypropylene	1
9	¼" x ⅜" Tubing, 12" Length 6.4 mm x 9.5 mm Tubing, 30.5 cm Length	TPE or Platinum-Cured Silicone	1
10	¼" Hose Barb x Female Luer Adapter	Polypropylene	1
11	Male Luer Plug	Polypropylene	1
12	Protective Cover, Small	Vinyl	1

50 L Biocontainer Assembly Shown

Standards

Part Number	Biocontainer		Tubing
	Volumes	Dimensions	
DUF3307B-N00B01-00	50 L	22.0" x 39.0" 55.9 cm x 99.1 cm	TPE
DUF3307B-N00B11-00	50 L	22.0" x 39.0" 55.9 cm x 99.1 cm	Platinum-Cured Silicone
DUF3308B-N00B01-00	100 L	29.5" x 46.0" 74.9 cm x 116.8 cm	TPE
DUF3308B-N00B11-00	100 L	29.5" x 46.0" 74.9 cm x 116.8 cm	Platinum-Cured Silicone
DUF3309B-N00B01-00	200 L	35.5" x 56.0" 90.2 cm x 142.2 cm	TPE
DUF3309B-N00B11-00	200 L	35.5" x 56.0" 90.2 cm x 142.2 cm	Platinum-Cured Silicone

TepoFlex® → Face-Ported → Filter Not Included

FLOW

Standards

100 L Biocontainer Assembly Shown
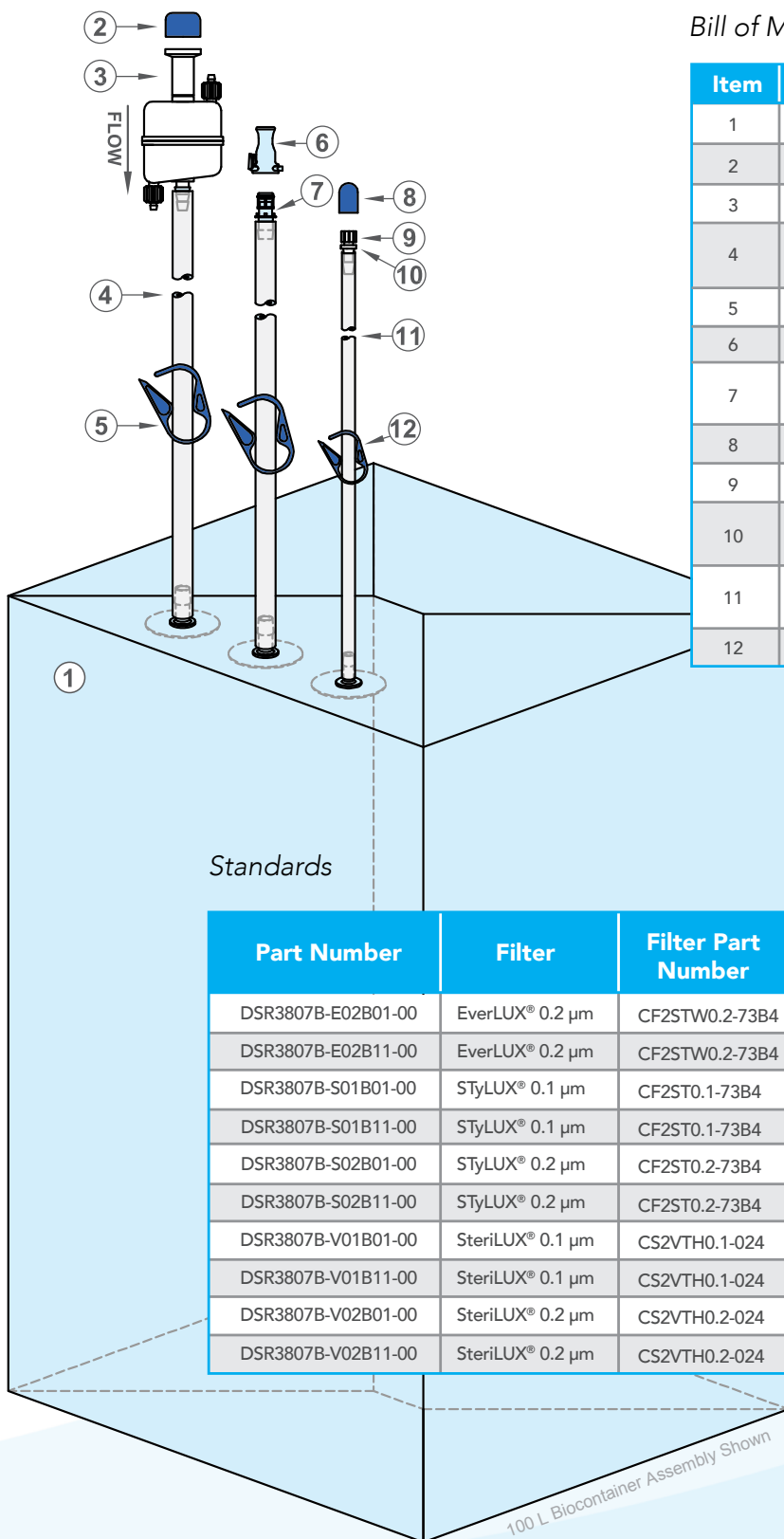
Bill of Materials

Item	Description	Material	Qty
1	50-200 L Face-Ported Biocontainer	TepoFlex®	1
2	Protective Cover, TC	Vinyl	1
3	Meissner Capsule Filter	See options on p. 33	1
4	⅜" x ⁹⁄₁₆" Tubing, 24" Length / 9.5 mm x 14.3 mm Tubing, 61 cm Length	TPE or Platinum-Cured Silicone	2
5	Ratchet Pinch Clamp, Large	PBT	2
6	Sealing Cap, MPC	Polycarbonate	1
7	Coupling Insert, ⅜" Hose Barb, MPC / Coupling Insert, 9.5 mm Hose Barb, MPC	Polycarbonate	1
8	Protective Cover, Small	Vinyl	1
9	Male Luer Plug	Polypropylene	1
10	¼" Hose Barb x Female Luer Adapter / 6.4 mm Hose Barb x Female Luer Adapter	Polypropylene	1
11	¼" x ⅜" Tubing, 24" Length / 6.4 mm x 9.5 mm Tubing, 61 cm Length	TPE or Platinum-Cured Silicone	1
12	Ratchet Pinch Clamp, Medium	Polypropylene	1

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3807B-E02B01-00	EverLUX® 0.2 µm	CF2STW0.2-73B4	TPE	50 L	Compatible with QuaDrum® 50
DSR3807B-E02B11-00	EverLUX® 0.2 µm	CF2STW0.2-73B4	Platinum-Cured Silicone		
DSR3807B-S01B01-00	STyLUX® 0.1 µm	CF2ST0.1-73B4	TPE		
DSR3807B-S01B11-00	STyLUX® 0.1 µm	CF2ST0.1-73B4	Platinum-Cured Silicone		
DSR3807B-S02B01-00	STyLUX® 0.2 µm	CF2ST0.2-73B4	TPE		
DSR3807B-S02B11-00	STyLUX® 0.2 µm	CF2ST0.2-73B4	Platinum-Cured Silicone		
DSR3807B-V01B01-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	TPE		
DSR3807B-V01B11-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	Platinum-Cured Silicone		
DSR3807B-V02B01-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	TPE		
DSR3807B-V02B11-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	Platinum-Cured Silicone		

TepoFlex® → For QuaDrum® → Filter Included

Standards (continued)

Part Number	Filter	Filter Part Number	Tubing	Biocontainer		
				Volume	**Dimensions**	
DSR3808B-E02B01-00	EverLUX® 0.2 µm	CS2STW0.2-024	TPE	100 L	Compatible with QuaDrum® 100	
DSR3808B-E02B11-00	EverLUX® 0.2 µm	CS2STW0.2-024	Platinum-Cured Silicone			
DSR3808B-S01B01-00	STyLUX® 0.1 µm	CS2ST0.1-024	TPE			
DSR3808B-S01B11-00	STyLUX® 0.1 µm	CS2ST0.1-024	Platinum-Cured Silicone			
DSR3808B-S02B01-00	STyLUX® 0.2 µm	CS2ST0.2-024	TPE			
DSR3808B-S02B11-00	STyLUX® 0.2 µm	CS2ST0.2-024	Platinum-Cured Silicone			
DSR3808B-V01B01-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	TPE			
DSR3808B-V01B11-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	Platinum-Cured Silicone			
DSR3808B-V02B01-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	TPE			
DSR3808B-V02B11-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	Platinum-Cured Silicone			

Part Number	Filter	Filter Part Number	Tubing	Biocontainer		
				Volume	**Dimensions**	
DSR3809B-E02B01-00	EverLUX® 0.2 µm	CS2STW0.2-024	TPE	200 L	Compatible with QuaDrum® 200	
DSR3809B-E02B11-00	EverLUX® 0.2 µm	CS2STW0.2-024	Platinum-Cured Silicone			
DSR3809B-S01B01-00	STyLUX® 0.1 µm	CS2ST0.1-024	TPE			
DSR3809B-S01B11-00	STyLUX® 0.1 µm	CS2ST0.1-024	Platinum-Cured Silicone			
DSR3809B-S02B01-00	STyLUX® 0.2 µm	CS2ST0.2-024	TPE			
DSR3809B-S02B11-00	STyLUX® 0.2 µm	CS2ST0.2-024	Platinum-Cured Silicone			
DSR3809B-V01B01-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	TPE			
DSR3809B-V01B11-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	Platinum-Cured Silicone			
DSR3809B-V02B01-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	TPE			
DSR3809B-V02B11-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	Platinum-Cured Silicone			

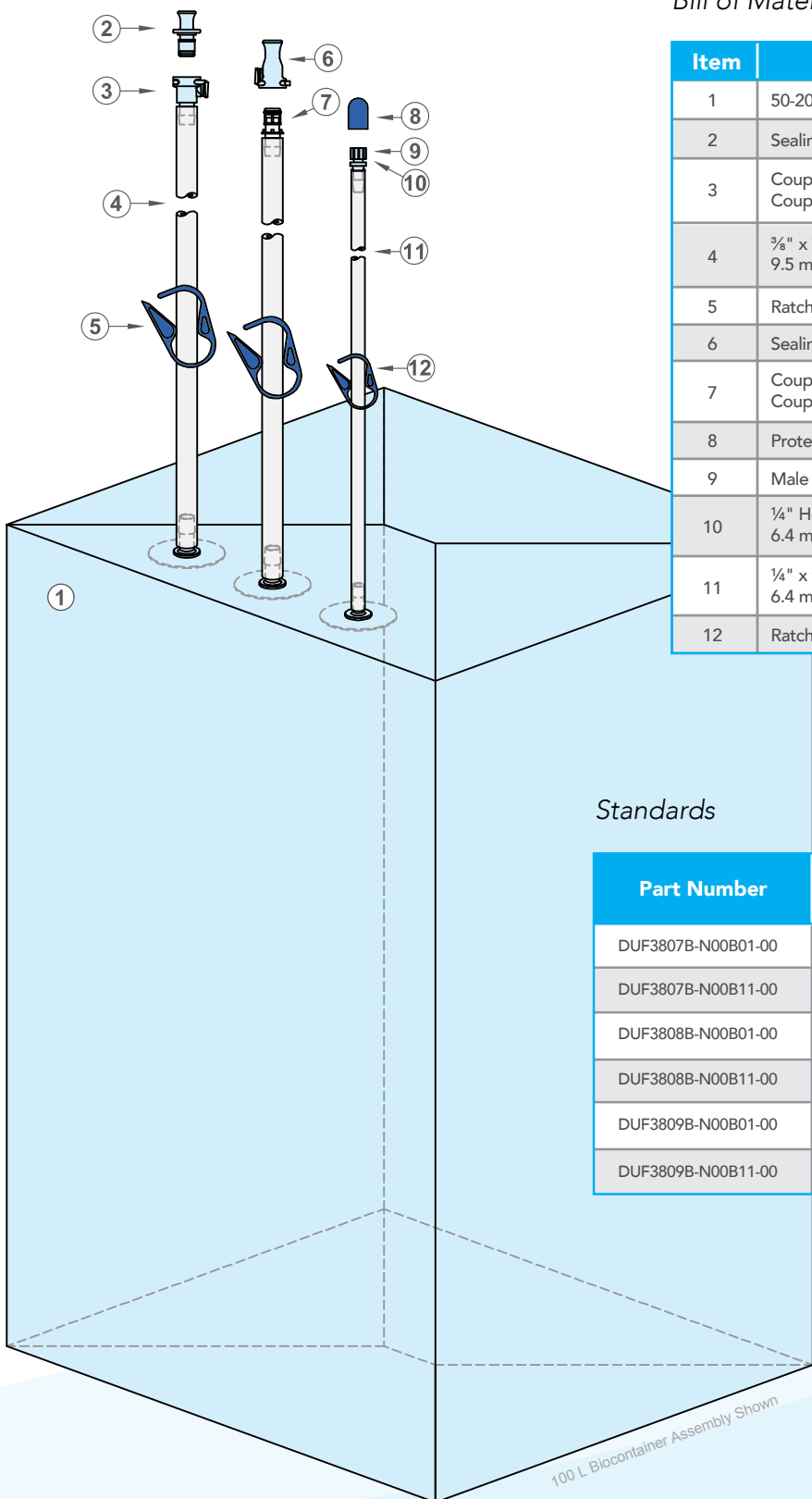**TepoFlex® → For QuaDrum® → Filter Included**

Assemblies for QuaDrum®
Filter Not Included

100 L Biocontainer Assembly Shown

Bill of Materials

Item	Description	Material	Qty
1	50-200 L Face-Ported Biocontainer	TepoFlex®	1
2	Sealing Plug, MPC	Polycarbonate	1
3	Coupling Insert, ⅜" Hose Barb, MPC Coupling Insert, 9.5 mm Hose Barb, MPC	Polycarbonate	1
4	⅜" x ⁹⁄₁₆" Tubing, 24" Length 9.5 mm x 14.3 mm Tubing, 61 cm Length	TPE or Platinum-Cured Silicone	2
5	Ratchet Pinch Clamp, Large	PBT	2
6	Sealing Cap, MPC	Polycarbonate	1
7	Coupling Insert, ⅜" Hose Barb, MPC Coupling Insert, 9.5 mm Hose Barb, MPC	Polycarbonate	1
8	Protective Cover, Small	Vinyl	1
9	Male Luer Plug	Polypropylene	1
10	¼" Hose Barb x Female Luer Adapter 6.4 mm Hose Barb x Female Luer Adapter	Polypropylene	1
11	¼" x ⅜" Tubing, 24" Length 6.4 mm x 9.5 mm Tubing, 61 cm Length	TPE or Platinum-Cured Silicone	1
12	Ratchet Pinch Clamp, Medium	Polypropylene	1

Standards

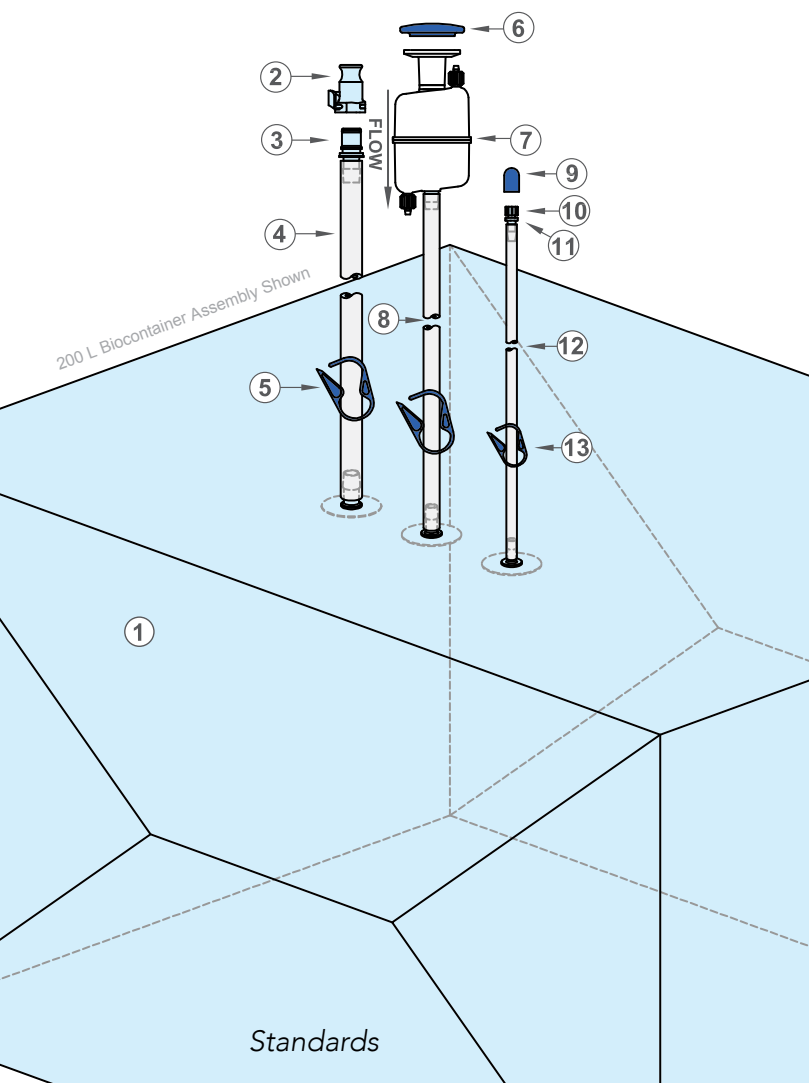| Part Number	Biocontainer		Tubing
	Volumes	Dimensions	
DUF3807B-N00B01-00	50 L	Compatible with QuaDrum® 50	TPE
DUF3807B-N00B11-00	50 L	Compatible with QuaDrum® 50	Platinum-Cured Silicone
DUF3808B-N00B01-00	100 L	Compatible with QuaDrum® 100	TPE
DUF3808B-N00B11-00	100 L	Compatible with QuaDrum® 100	Platinum-Cured Silicone
DUF3809B-N00B01-00	200 L	Compatible with QuaDrum® 200	TPE
DUF3809B-N00B11-00	200 L	Compatible with QuaDrum® 200	Platinum-Cured Silicone

TepoFlex® → For QuaDrum® → Filter Not Included

200 L Biocontainer Assembly Shown

Bill of Materials

Item	Description	Material	Qty
1	100 - 1,000 L Biocontainer	TepoFlex®	1
2	Sealing Cap, MPX	Polycarbonate	1
3	Coupling Insert, ½" Hose Barb, MPX Copling Insert, 12.7 mm Hose Barb, MPX	Polycarbonate	1
4	½" x ¾" Tubing, 36" Length 12.7 mm x 19.1 mm Tubing, 91.4 cm Length	TPE or Platinum-Cured Silicone	1
5	Ratchet Pinch Clamp, Large	PBT	2
6	1½" TC Protective Cover 38.1 mm TC Protective Cover	Vinyl	1
7	Meissner Capsule Filter	See options on pg. 33	1
8	⅜" x ⁹/₁₆" Tubing, 36" Length * 9.5 mm x 14.3 mm Tubing, 91.4 cm Length	TPE or Platinum-Cured Silicone	1
9	Protective Cover, Small	Vinyl	1
10	Male Luer Plug	Polypropylene	1
11	¼" Hose Barb x Female Luer Adapter 6.4 mm Hose Barb x Female Luer Adapter	Polypropylene	1
12	¼" x ⅜" Tubing, 36" Length 6.4 mm x 9.5 mm Tubing, 91.4 cm Length	TPE or Platinum-Cured Silicone	1
13	Ratchet Pinch Clamp, Medium	Polypropylene	1

* ½" x ¾" (9.5 mm x 14.3 mm)
Tubing on 1,000 L Models

Standards

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3408B-E02B01-00	EverLUX® 0.2 µm	CS2STW0.2-024	TPE		
DSR3408B-E02B11-00	EverLUX® 0.2 µm	CS2STW0.2-024	Platinum-Cured Silicone		
DSR3408B-S01B01-00	STyLUX® 0.1 µm	CS2ST0.1-024	TPE		
DSR3408B-S01B11-00	STyLUX® 0.1 µm	CS2ST0.1-024	Platinum-Cured Silicone		
DSR3408B-S02B01-00	STyLUX® 0.2 µm	CS2ST0.2-024	TPE	100 L	Compatible with FlexStation® 100
DSR3408B-S02B11-00	STyLUX® 0.2 µm	CS2ST0.2-024	Platinum-Cured Silicone		
DSR3408B-V01B01-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	TPE		
DSR3408B-V01B11-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	Platinum-Cured Silicone		
DSR3408B-V02B01-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	TPE		
DSR3408B-V02B11-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	Platinum-Cured Silicone		

TepoFlex® → For FlexStation® → Filter Included

Standards (continued)

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3409B-E02B01-00	EverLUX® 0.2 µm	CS2STW0.2-024	TPE	200 L	Compatible with FlexStation® 200
DSR3409B-E02B11-00	EverLUX® 0.2 µm	CS2STW0.2-024	Platinum-Cured Silicone		
DSR3409B-S01B01-00	STyLUX® 0.1 µm	CS2ST0.1-024	TPE		
DSR3409B-S01B11-00	STyLUX® 0.1 µm	CS2ST0.1-024	Platinum-Cured Silicone		
DSR3409B-S02B01-00	STyLUX® 0.2 µm	CS2ST0.2-024	TPE		
DSR3409B-S02B11-00	STyLUX® 0.2 µm	CS2ST0.2-024	Platinum-Cured Silicone		
DSR3409B-V01B01-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	TPE		
DSR3409B-V01B11-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	Platinum-Cured Silicone		
DSR3409B-V02B01-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	TPE		
DSR3409B-V02B11-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	Platinum-Cured Silicone		

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3413B-E02B01-00	EverLUX® 0.2 µm	CL2STW0.2-024	TPE	500 L	Compatible with FlexStation® 500
DSR3413B-E02B11-00	EverLUX® 0.2 µm	CL2STW0.2-024	Platinum-Cured Silicone		
DSR3413B-S01B01-00	STyLUX® 0.1 µm	CL2ST0.1-024	TPE		
DSR3413B-S01B11-00	STyLUX® 0.1 µm	CL2ST0.1-024	Platinum-Cured Silicone		
DSR3413B-S02B01-00	STyLUX® 0.2 µm	CL2ST0.2-024	TPE		
DSR3413B-S02B11-00	STyLUX® 0.2 µm	CL2ST0.2-024	Platinum-Cured Silicone		
DSR3413B-V01B01-00	SteriLUX® 0.1 µm	CL2VTH0.1-024	TPE		
DSR3413B-V01B11-00	SteriLUX® 0.1 µm	CL2VTH0.1-024	Platinum-Cured Silicone		
DSR3413B-V02B01-00	SteriLUX® 0.2 µm	CL2VTH0.2-024	TPE		
DSR3413B-V02B11-00	SteriLUX® 0.2 µm	CL2VTH0.2-024	Platinum-Cured Silicone		

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3415B-E02B01-00	EverLUX® 0.2 µm	CR2STW0.2-1T0C4	TPE	1,000 L	Compatible with FlexStation® 1000
DSR3415B-E02B11-00	EverLUX® 0.2 µm	CR2STW0.2-1T0C4	Platinum-Cured Silicone		
DSR3415B-S01B01-00	STyLUX® 0.1 µm	CR2ST0.1-1T0C4	TPE		
DSR3415B-S01B11-00	STyLUX® 0.1 µm	CR2ST0.1-1T0C4	Platinum-Cured Silicone		
DSR3415B-S02B01-00	STyLUX® 0.2 µm	CR2ST0.2-1T0C4	TPE		
DSR3415B-S02B11-00	STyLUX® 0.2 µm	CR2ST0.2-1T0C4	Platinum-Cured Silicone		
DSR3415B-V01B01-00	SteriLUX® 0.1 µm	CR2VTH0.1-1T0C4	TPE		
DSR3415B-V01B11-00	SteriLUX® 0.1 µm	CR2VTH0.1-1T0C4	Platinum-Cured Silicone		
DSR3415B-V02B01-00	SteriLUX® 0.2 µm	CR2VTH0.2-1T0C4	TPE		
DSR3415B-V02B11-00	SteriLUX® 0.2 µm	CR2VTH0.2-1T0C4	Platinum-Cured Silicone		

TepoFlex® → For FlexStation® → Filter Included

Assemblies for FlexStation®
Filter Not Included

Bill of Materials

Item	Description	Material	Qty
1	100 - 1,000 L Biocontainer	TepoFlex®	1
2	Sealing Cap, MPX	Polycarbonate	1
3	Coupling Insert, ½" Hose Barb, MPX Copling Insert, 12.7 mm Hose Barb, MPX	Polycarbonate	1
4	½" x ¾" Tubing, 36" Length 12.7 mm x 19.1 mm Tubing, 91.4 cm Length	TPE or Platinum-Cured Silicone	1
5	Ratchet Pinch Clamp, Large	PBT	2
6	Sealing Cap, MPC*	Polycarbonate	1
7	Coupling Insert, ⅜″ Hose Barb, MPC** Coupling Insert, 9.5 mm Hose Barb, MPC	Polycarbonate	1
8	⅜" x ⁹/₁₆" Tubing, 36" Length *** 9.5 mm x 14.3 mm Tubing, 91.4 cm Length	TPE or Platinum-Cured Silicone	1
9	Protective Cover, Small	Vinyl	1
10	Male Luer Plug	Polypropylene	1
11	¼" Hose Barb x Female Luer Adapter 6.4 mm Hose Barb x Female Luer Adapter	Polypropylene	1
12	¼" x ⅜" Tubing, 36" Length 6.4 mm x 9.5 mm Tubing, 91.4 cm Length	TPE or Platinum-Cured Silicone	1
13	Ratchet Pinch Clamp, Medium	Polypropylene	1

* Sealing Cap, MPX on 1,00 L Model
** Coupling Insert, ½" Hosebarb, MPX on 100 L Model
*** ½" (12.7 mm) x ¾" (19.0 mm) Tubing on 100 L Model

200 L Biocontainer Assembly Shown
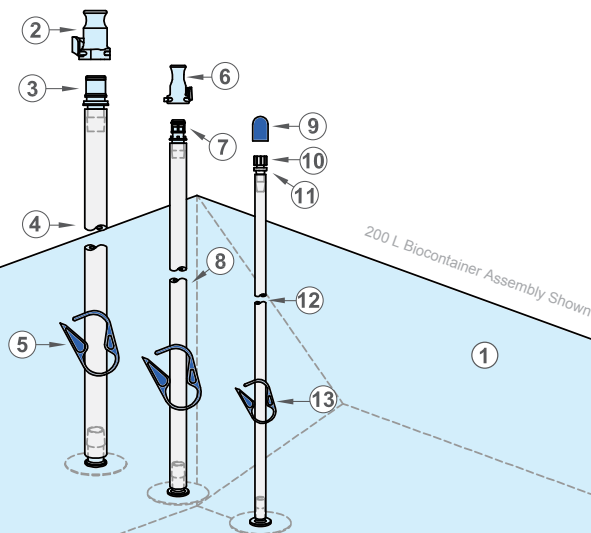
Standards

Part Number	Biocontainer		Tubing
	Volumes	Dimensions	
DUF3408B-N00B01-00	100 L	Compatible with FlexStation® 100	TPE
DUF3408B-N00B11-00	100 L	Compatible with FlexStation® 100	Platinum-Cured Silicone
DUF3409B-N00B01-00	200 L	Compatible with FlexStation® 200	TPE
DUF3409B-N00B11-00	200 L	Compatible with FlexStation® 200	Platinum-Cured Silicone
DUF3413B-N00B01-00	500 L	Compatible with FlexStation® 500	TPE
DUF3413B-N00B11-00	500 L	Compatible with FlexStation® 500	Platinum-Cured Silicone
DUF3415B-N00B01-00	1,000 L	Compatible with FlexStation® 1,000	TPE
DUF3415B-N00B11-00	1,000 L	Compatible with FlexStation® 1,000	Platinum-Cured Silicone

TepoFlex® → For FlexStation® → Filter Not Included

Assemblies for FlexStation®
Filter Included

Bill of Materials
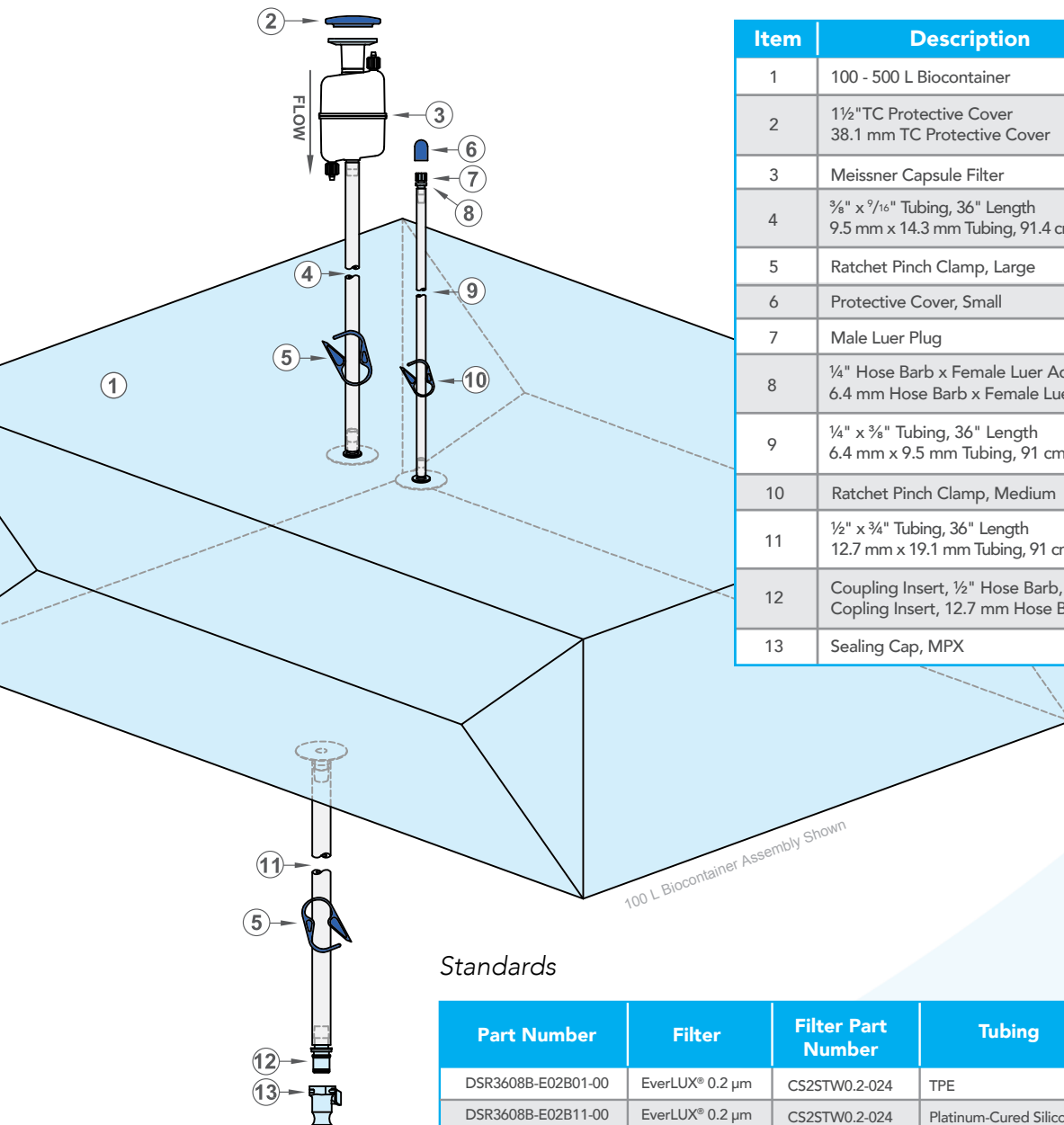
Item	Description	Material	Qty
1	100 - 500 L Biocontainer	TepoFlex®	1
2	1½"TC Protective Cover 38.1 mm TC Protective Cover	Vinyl	1
3	Meissner Capsule Filter	See options on pg. 32	1
4	⅜" x ⁹/₁₆" Tubing, 36" Length 9.5 mm x 14.3 mm Tubing, 91.4 cm Length	TPE or Platinum-Cured Silicone	1
5	Ratchet Pinch Clamp, Large	PBT	2
6	Protective Cover, Small	Vinyl	1
7	Male Luer Plug	Polypropylene	1
8	¼" Hose Barb x Female Luer Adapter 6.4 mm Hose Barb x Female Luer Adapter	Polypropylene	1
9	¼" x ⅜" Tubing, 36" Length 6.4 mm x 9.5 mm Tubing, 91 cm Length	TPE or Platinum-Cured Silicone	1
10	Ratchet Pinch Clamp, Medium	Polypropylene	1
11	½" x ¾" Tubing, 36" Length 12.7 mm x 19.1 mm Tubing, 91 cm Length	TPE or Platinum-Cured Silicone	1
12	Coupling Insert, ½" Hose Barb, MPX Copling Insert, 12.7 mm Hose Barb, MPX	Polycarbonate	1
13	Sealing Cap, MPX	Polycarbonate	1

FLOW

100 L Biocontainer Assembly Shown

Standards

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3608B-E02B01-00	EverLUX® 0.2 µm	CS2STW0.2-024	TPE	100 L	Compatible with FlexStation® 100
DSR3608B-E02B11-00	EverLUX® 0.2 µm	CS2STW0.2-024	Platinum-Cured Silicone		
DSR3608B-S01B01-00	STyLUX® 0.1 µm	CS2ST0.1-024	TPE		
DSR3608B-S01B11-00	STyLUX® 0.1 µm	CS2ST0.1-024	Platinum-Cured Silicone		
DSR3608B-S02B01-00	STyLUX® 0.2 µm	CS2ST0.2-024	TPE		
DSR3608B-S02B11-00	STyLUX® 0.2 µm	CS2ST0.2-024	Platinum-Cured Silicone		
DSR3608B-V01B01-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	TPE		
DSR3608B-V01B11-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	Platinum-Cured Silicone		
DSR3608B-V02B01-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	TPE		
DSR3608B-V02B11-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	Platinum-Cured Silicone		

TepoFlex® → Top & Bottom-Ported → Filter Included

Standards (continued)

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3609B-E02B01-00	EverLUX® 0.2 µm	CS2STW0.2-024	TPE	200 L	Compatible with FlexStation® 200
DSR3609B-E02B11-00	EverLUX® 0.2 µm	CS2STW0.2-024	Platinum-Cured Silicone		
DSR3609B-S01B01-00	STyLUX® 0.1 µm	CS2ST0.1-024	TPE		
DSR3609B-S01B11-00	STyLUX® 0.1 µm	CS2ST0.1-024	Platinum-Cured Silicone		
DSR3609B-S02B01-00	STyLUX® 0.2 µm	CS2ST0.2-024	TPE		
DSR3609B-S02B11-00	STyLUX® 0.2 µm	CS2ST0.2-024	Platinum-Cured Silicone		
DSR3609B-V01B01-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	TPE		
DSR3609B-V01B11-00	SteriLUX® 0.1 µm	CS2VTH0.1-024	Platinum-Cured Silicone		
DSR3609B-V02B01-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	TPE		
DSR3609B-V02B11-00	SteriLUX® 0.2 µm	CS2VTH0.2-024	Platinum-Cured Silicone		

Part Number	Filter	Filter Part Number	Tubing	Biocontainer	
				Volume	Dimensions
DSR3613B-E02B01-00	EverLUX® 0.2 µm	CL2STW0.2-024	TPE	500 L	Compatible with FlexStation® 500
DSR3613B-E02B11-00	EverLUX® 0.2 µm	CL2STW0.2-024	Platinum-Cured Silicone		
DSR3613B-S01B01-00	STyLUX® 0.1 µm	CL2ST0.1-024	TPE		
DSR3613B-S01B11-00	STyLUX® 0.1 µm	CL2ST0.1-024	Platinum-Cured Silicone		
DSR3613B-S02B01-00	STyLUX® 0.2 µm	CL2ST0.2-024	TPE		
DSR3613B-S02B11-00	STyLUX® 0.2 µm	CL2ST0.2-024	Platinum-Cured Silicone		
DSR3613B-V01B01-00	SteriLUX® 0.1 µm	CL2VTH0.1-024	TPE		
DSR3613B-V01B11-00	SteriLUX® 0.1 µm	CL2VTH0.1-024	Platinum-Cured Silicone		
DSR3613B-V02B01-00	SteriLUX® 0.2 µm	CL2VTH0.2-024	TPE		
DSR3613B-V02B11-00	SteriLUX® 0.2 µm	CL2VTH0.2-024	Platinum-Cured Silicone		

TepoFlex® → Top & Bottom-Ported → Filter Included

Assemblies for FlexStation®
Filter Not Included

Bill of Materials

Item	Description	Material	Qty
1	100 - 500 L Biocontainer	TepoFlex®	1
2	Sealing Cap, MPC	Polycarbonate	1
3	Coupling Insert, ⅜" Hose Barb, MPC Coupling Insert, 9.5 mm Hose Barb, MPC	Polycarbonate	1
4	⅜" x ⁹⁄₁₆" Tubing, 36" Length 9.5 mm x 14.3 mm Tubing, 91 cm Length	TPE or Platinum-Cured Silicone	1
5	Ratchet Pinch Clamp, Large	PBT	2
6	Protective Cover, Small	Vinyl	1
7	Male Luer Plug	Polypropylene	1
8	¼" Hose Barb x Female Luer Adapter 6.4 mm Hose Barb x Female Luer Adapter	Polypropylene	1
9	¼" x ⅜" Tubing, 36" Length 6.4 mm x 9.5 mm Tubing, 91 cm Length	TPE or Platinum-Cured Silicone	1
10	Ratchet Pinch Clamp, Medium	Polypropylene	1
11	½" x ¾" Tubing, 36" Length 12.7 mm x 19.1 mm Tubing, 91 cm Length	TPE or Platinum-Cured Silicone	1
12	Coupling Insert, ½" Hose Barb, MPX Copling Insert, 12.7 mm Hose Barb, MPX	Polycarbonate	1
13	Sealing Cap, MPX	Polycarbonate	1

100 L Biocontainer Assembly Shown

Standards

Part Number	Biocontainer		Tubing
	Volumes	Dimensions	
DUF3608B-N00B01-00	100 L	Compatible with FlexStation® 100	TPE
DUF3608B-N00B11-00	100 L	Compatible with FlexStation® 100	Platinum-Cured Silicone
DUF3609B-N00B01-00	200 L	Compatible with FlexStation® 200	TPE
DUF3609B-N00B11-00	200 L	Compatible with FlexStation® 200	Platinum-Cured Silicone
DUF3613B-N00B01-00	500 L	Compatible with FlexStation® 500	TPE
DUF3613B-N00B11-00	500 L	Compatible with FlexStation® 500	Platinum-Cured Silicone

TepoFlex® → Top & Bottom- Ported → Filter Not Included

Filter Selection

Meissner Capsule Filters:

Standard TepoFlex® biocontainer assemblies are available with either EverLUX® STW, STyLUX® ST, or SteriLUX® VTH grade capsule filters. These absolute, microbially rated filters meet full traceability requirements for the pharmaceutical industry, and are 100% integrity tested during manufacture. Each product is fully validatable. All capsules are manufactured in conformance to cGMP.

Filter Types/Sizes:

CM/CK	CF-B	CS	CL	CR

Capsule Features:

• High purity polypropylene housing and support materials provide maximum chemical resistance with minimal extractables

• Efficient, compact design minimizes internal hold-up volume

• Permanently assembled, one-piece construction assures reliable fluid filtration with no bypass

• Available with a variety of connectors

• Thermally sealed without glues, adhesives or epoxies, ensuring purity and reliability under severe conditions

• Biologically inert and non-toxic; Contains no adhesives or surfactants, insuring low extractables and rapid rinse-ups

• TepoFlex® biocontainer assemblies may be ordered with any of Meissner's full line of capsule filters. Please see Meissner's "Capsule Filters" or "UltraCap® / UltraCap® H.D." brochures for a full list of available filtration media
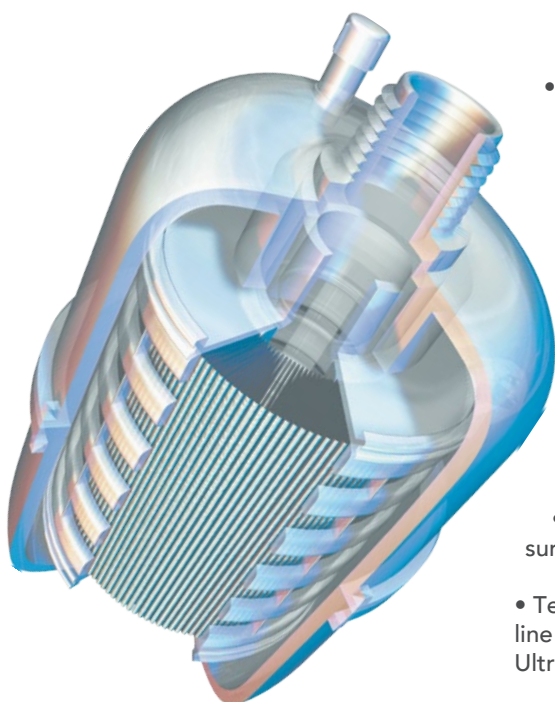
Part Number Breakdown (for filters listed on standard assemblies):

C	K	2	VTH	0.1	-115

	Surface Area	PP Shell Type	Filter Type	Pore Size	Inlet / Outlet Connections
Standard Capsule	SteriLUX®, STyLUX®: M: 0.22 ft² (200 cm²) K: 0.43 ft² (400 cm²) CF-B: 0.7 ft² (500 cm²) S: 1.6 ft² (1115 cm²) L: 3.3 ft² (2415 cm²) R: 6.8 ft² (6317 cm²) EverLUX®: M: 0.22 ft² (200 cm²) K: 0.43 ft² (400 cm²) CF-B: 0.6 ft² (500 cm²) S: 1.2 ft² (1115 cm²) L: 2.6 ft² (2415 cm²) R: 6.8 ft² (6317 cm²)	2: Gamma-Stable, ACF (Animal Component Free)	STW: EverLUX® ST: StyLUX® VTH: SteriLUX®	0.1 μm 0.2 μm	- 115: One sanitary vent valve with ¼" (6.4 mm) hose barb inlet/outlet - 225: One sanitary vent valve with ⅜" (9.5 mm) hose barb inlet/outlet - 224: Two sanitary vent valves with ⅜" (9.5 mm) hose barbs inlet/outlet - 024: Two sanitary vent valves with HB; 1" (25.4 mm) sanitary flange inlet, ⅜" (9.5 mm) hose barb outlet -73B4 Two sanitary vent valves with HB; ¾" (19.1 mm) sanitary flange inlet, ¼"-⅜" (6.4 - 9.5 mm) hose barb outlet -33B4 Two sanitary vent valves with HB; ¼"-⅜" (6.4 - 9.5 mm) hose barb inlet/outlet

Filter Media Options

SteriLUX® PVDF

SteriLUX® disposable capsule filters are absolute-rated PVDF membrane filters optimized for sterile filtration, prefiltration and clarification of pharmaceutical and biological solutions. The surface-modified SteriLUX® membrane filter
is manufactured by Meissner's
proprietary process to provide immediate water-wettability, unmatched flow, high mechanical strength, thermal and chemical stability, and ultra-low
binding characteristics.

Advantages
- Available in 0.1 µm and 0.2 µm ratings for standard biocontainer assemblies
- Qualifies as a sterilizing grade filter per ASTM F838-05 liquid bacterial challenge
- High flow rates at low pressure drops
- Ultraclean – no additives or surfactants
- 100% integrity tested
- Hydrophilic PVDF membrane
- Fully integrity testable in water

- High thermal and hydrolytic stability
- Extremely low protein and preservative binding
- Extremely low extractables
- Cleanroom manufactured

Applications
SteriLUX® capsule filters can be used to filter microbiological growth media, cell and tissue culture media and additives, bulk pharmaceutical chemicals, acids, bases, organic solvents, pharmaceutical preparations and active ingredients, parenterals, biopharmaceuticals, vaccines, serum, blood products, ophthalmic solutions, orals, topicals, protein solutions, buffers, salts, diluents, diagnostics, cosmetics and toiletries, solvent/product mixtures, reagents, water for injection (WFI), and compressed gases.

Specifications
Filter Media: Polyvinylidene Fluoride (PVDF) Membrane

Bacterial Retention:
ASTM F838-05 Challenge
0.1 µm, 0.2 µm > 10^7 LRV/cm^2
     Brevundimonas diminuta
0.1 µm and 0.2 µm meet the FDA definition of a sterilizing grade filter

SteriLUX® Capsule Typical Water Flow Rates
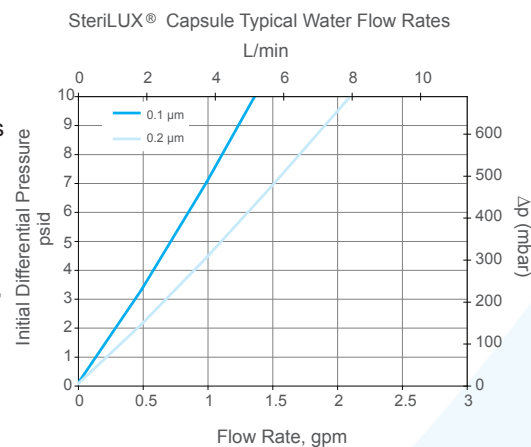
Data shown is for CS style capsule with ⅜" HB connections. Consult factory for complete flow rate information.

StyLUX® PES

STyLUX® disposable capsule filters are absolute-rated, polyethersulfone membrane filters designed to provide greater bacteria and particle removal at high flow rates and extremely low pressure drops. STyLUX® capsules contain an asymmetric membrane which offers the greatest assurance of filtration performance, stability and service life for controlling contaminants in
demanding environments. The highly porous polyethersulfone membrane is permanently hydrophilic, has exceptional flow rates, and provides excellent compatibility and extremely low extractables in a wide range of fluids and applications.

Advantages
- Available in 0.1 µm and 0.2 µm ratings for standard biocontainers
- Qualifies as a sterilizing grade filter per ASTM F838-05 liquid bacterial challenge
- Extremely high flow rates at low pressure drops
- Ultraclean – no additives, surfactants, or post treatments
- 100% integrity tested during manufacture

- Fully integrity testable in water
- Permanently hydrophilic membrane
- High thermal and hydrolytic stability
- Wide chemical compatibility through pH range 1-14
- Highly passive to protein adsorption, low binding
- Reliable integrity under severe process conditions
- Cleanroom manufactured

Applications
StyLUX® capsule filters offer the greatest security for high quality filtration in a wide variety of applications. STyLUX® capsules are designed for removal of particulates, colloids and microorganisms from a broad range of pharmaceutical and biological liquids. Typical liquids include
pharmaceutical preparations, antibiotics, vaccines, protein solutions, immunologicals, virus suspensions, radiodiagnostics, enzymes, ophthalmic solutions, reagents, salt solutions, nutrients, tissue culture media, serum and blood-based products, biologicals and many more.

Specifications
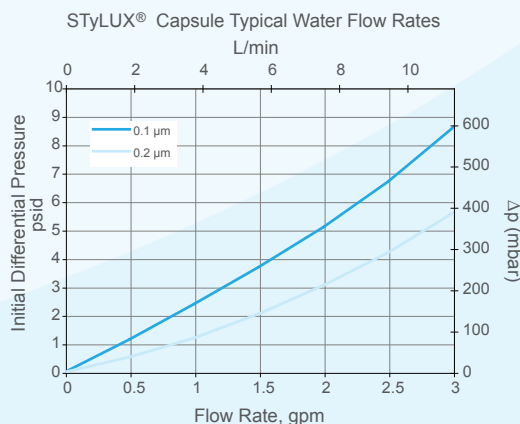Filter Media: Polyethersulfone (PES) Membrane
Bacterial Retention:
ASTM F838-05 Challenge
0.1 µm, 0.2 µm > 10^7 LRV/cm^2
     Brevundimonas diminuta
0.1 µm and 0.2 µm meet the FDA definition of a sterilizing grade filter

STyLUX® Capsule Typical Water Flow Rates

Data shown is for CS style capsule with ⅜" HB connections. Consult factory for complete flow rate information.

EverLUX® PES

The EverLUX® polyethersulfone (PES) capsule filter is designed for very high contaminant capacity, extended service life and high flow with low pressure drop in a wide range of biological fluids. Optimized for sterile filtration, prefiltration and clarification applications, the permanently hydrophilic EverLUX® membrane offers up to 2.5 times higher flow rates than other PES membranes. Its asymmetric structure extends the membrane's capacity and service life by withstanding higher particle loads and protein concentrations. Increased membrane thickness allows the EverLUX® to retain its sterilizing properties, while its tapered pore structure allows more contaminant capacity than even conventional PES membranes. The fast-flowing, high-throughput, low-binding and bacteria-retentive properties of the EverLUX® PES membrane make it a very reliable, cost effective and time saving filter.

Advantages
- Available in 0.2 µm ratings for standard biocontainers
- Pharmaceutical validated, sterilizing grade
- Unique, patented PES membrane with very high flow rates and exceptional service life
- Minimum pressure drop

- Chemical compatibility across pH 1-14
- Low adsorption, high transmission of proteins, active ingredients, and preservatives
- Superior throughput in high contaminant fluids, including growth media, serum and protein-containing solutions.
- Lower filtration costs through increased service life and contaminant-holding capacity
- Fully integrity testable in water
- 100% integrity tested during manufacture
- Cleanroom manufactured

Applications
EverLUX® capsules are frequently used for buffers, blood products, complex biologicals, serum, cell and tissue culture media, process intermediates, supernatants, vaccines and ophthalmic solutions.

Specifications
Filter Membrane: Polyethersulfone (PES)

EverLUX® capsules are made with filter media which meets the criteria for a non-fiber releasing filter as defined in 21 CFR 210.3 (b)(6). EverLUX® capsule components are biosafe in compliance with USP Class VI Plastics biologicals reactivity tests. All materials of construction are FDA approved for food contact use per CFR Title 21,177.
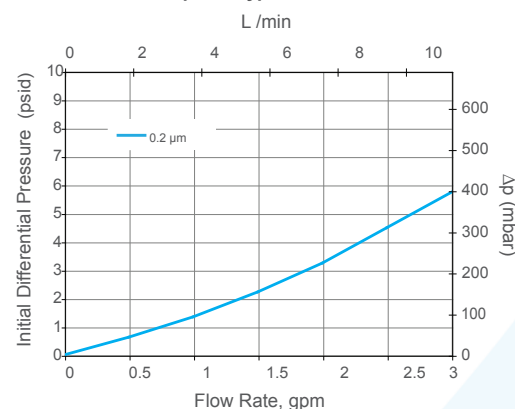
Bacterial Retention:
ASTM F838-05 Challenge:
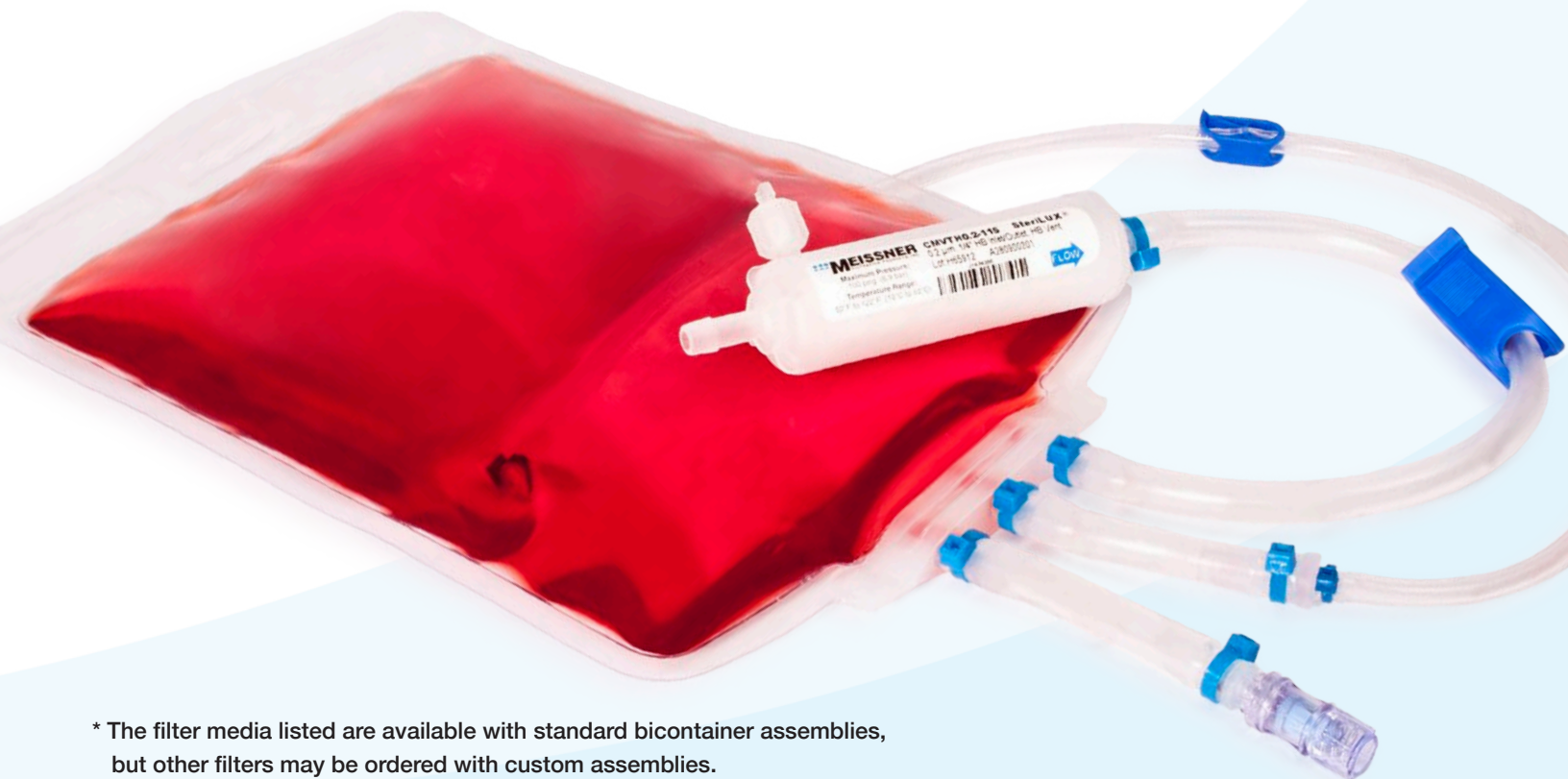STW 0.2 µm > 10^7 cfu/cm^2
Brevundimonas diminuta
STW 0.2 µm meets the FDA definition of a sterilizing grade filter.

EverLUX® Capsule Typical Water Flow Rates

Data shown is for CS style capsule with ⅜" HB connections. Consult factory for complete flow rate information.

* The filter media listed are available with standard bicontainer assemblies, but other filters may be ordered with custom assemblies.
* To view Meissner's full range of filter media, please visit www.meissner.com.

Connector Selection

PC Quick Disconnect Couplings (QDC)- MPC Series

Materials
• Polycarbonate (PC)
• Animal Component Free (ACF)

Common Vernacular
• Coupling Body
   º Female QDC or MPC body
• Sealing Plug
   º Male / QDC / MPC Plug
• Coupling Insert
   º Male QDC or MPC Insert
• Sealing Cap
   º Female QDC or MPC Cap

Typical Usage and Applications
• Industry standard quick connect
• Buffer and culture media transfer lines
• Filter and tubing sets
• More economical than polysulfone series

Connectivity
• Coupling Body
   º ⅛" (3.2)mm, ¼" (6.4 mm) or ⅜" (9.5 mm) HB
   º Female quick connect interface
• Sealing Plug
   º Male quick connect interface
• Coupling Insert
   º ⅛" (3.2)mm, ¼" (6.4 mm) or ⅜" (9.5 mm) HB
   º Male quick connect interface
• Sealing Cap
   º Female quick connect interface

Gamma Irradiation
• Blue in color pre-gamma irradiation
• Grey to clear post-gamma
• Up to 50 kGy

PC Large Bore Quick Disconnect Couplings - MPX Series

Materials
• Polycarbonate (PC)
• Animal Component Free (ACF)

Common Vernacular
• Coupling Body
   º Female QDC or MPX Body
• Sealing Plug
   º Male / QDC / MPX Plug
• Coupling Insert
   º Male QDC or MPX Insert
• Sealing Cap
   º Female / QDC / MPX Cap

Typical Usage and Applications
• Industry standard large bore quick connect
• Buffer and culture media transfer lines
• Filter and tubing sets
• More economical than polysulfone series

Connectivity
• Coupling Body
   º ½" (12.7 mm) HB
   º Female large bore quick connect interface
• Sealing Plug
   º Male large bore quick connect interface
• Coupling Insert
   º ⅜" (9.5 mm) or ½" (12.7 mm) HB
   º Male large bore quick connect interface
• Sealing Cap
   º Female large bore quick connect interface

Gamma Irradiation
• Blue in color pre-gamma irradiation
• Grey to clear post-gamma
• Up to 50 kGy

Connector Selection (continued)

Luer Fittings

Materials
• Polypropylene (PP)
• Animal Component Free (ACF)

Common Vernacular
• Luer-LokTM

Typical Usage and Applications
• Sampling operations
  ° Small volume sample
    chambers
  ° Syringe sampling
• Industry standard small flow
  connectivity

Principle Components
• Luer x HB Adapters
• Luer Caps

Connectivity
• ⅛" (3.2 mm) to ¼" (6.4 mm)
HB
• Female and Male Luer
  Connections

Gamma Irradiation
• Up to 50 kGy

Tubing Clamps

Common Vernacular
• Pinch Clamp
• Ratchet Pinch Clamp

Typical Usage and Applications
• When activated stops or
  constricts flow on given
  tubing line

Connectivity
• Large Clamp – Outer tubing up to ¾"
(19.0 mm) in diameter
• Medium Clamp – Outer tubing up to
$\frac{7}{16}$" (11.1 mm) in diameter
• Small Clamp – Outer tubing up to ¼"
(6.4 mm) in diameter

Materials of Construction
• Large Clamp – PEI
• Medium and Small Clamps -
  Polypropylene

Protective Covers

Typical Usage and Applications
• For protection of components
  during shipping and storage,
  not intended for in process use.

Materials of Construction
• Vinyl

Connector Selection

Connector Selection (continued)

TC Fittings

Materials
• Polypropylene (PP)
• Platinum-cured silicone
   (TC Gaskets)
• Animal Component Free (ACF)

Common Vernacular
• Sanitary Fittings
• Tri-Clamp® Fittings

Typical Usage and Applications
• Single-use / multi-use process
   equipment connectivity
• Large volume drain / fill lines
• High flow rate applications

Principle Components
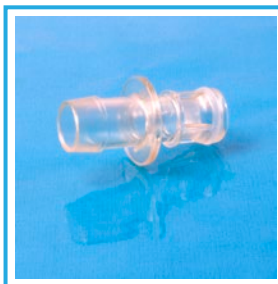• TC x Hose Barb Adapters
• TC Gaskets
• TC Blind Caps
• TC Clamps

Connectivity
• ¼" (6.4 mm), ⅜" (9.5 mm), 1" (25.4)
   ½" (12.7 mm), or ¾" (19.0 mm) HB
• TC Sizes: ¾" (19.0 mm) , 1" - 1 ½"
   (25.4 - 38.1 mm)

Gamma Irradiation
• Up to 50 kGy

PSU Quick Disconnect Couplings (QDC) - MPC Series

Materials
• Polysulfone (PSU)
• Animal Component Free (ACF)

Common Vernacular
• Coupling Body
   ° Female QDC or MPC Body
• Sealing Plug
   ° Male / QDC / MPC Plug
• Coupling Insert
   ° Male QDC or MPC insert
• Sealing Cap
   ° Female / QDC / MPC Cap

Typical Usage and Applications
• Industry standard quick connect
• Buffer and culture media
   transfer lines
• Filter and tubing sets
• Higher temperature rating than
   polycarbonate makes it more
   suitable to applications where
   autoclaving may be required

Connectivity
• Coupling Body
   ° ⅛" (3.2)mm, ¼" (6.4 mm) or
      ⅜" (9.5 mm) HB
   ° Female quick connect interface
• Sealing Plug
   ° Male quick connect interface
• Coupling Insert
   ° ⅛" (3.2)mm, ¼" (6.4 mm) or
      ⅜" (9.5 mm) HB
   ° Male quick connect interface
• Sealing Cap
   ° Female quick connect interface

Gamma Irradiation
• Up to 50 kGy
• Minimal color shift post-gamma;
   Yellow in color

Connector Selection (continued)

PSU Large Bore Quick Disconnect Couplings - MPX Series

Materials
• Polysulfone (PSU)
• Animal Component Free (ACF)

Common Vernacular
• Coupling Body
   ° Female QDC or MPX Body
• Sealing Plug
   ° Male / QDC / MPX Plug
• Coupling Insert
   ° Male QDC or MPX Insert
• Sealing Cap
   ° Female / QDC / MPX Cap

Typical Usage and Applications
• Industry standard large bore
   quick connect
• Buffer solution and cell culture
   media transfer lines
• Filter and Tubing sets
• Higher temperature rating than
   polycarbonate makes it more
   suitable to applications where
   autoclaving may be required

Connectivity
• Coupling Body
   ° ½" (12.7 mm) HB
   ° Female large bore quick
      connect interface
• Sealing Plug
   ° Male large bore quick
      connect interface
• Coupling Insert
   ° ⅜" (9.5 mm) or ½" (12.7 mm) HB
   ° Male large bore quick
      connect interface
• Sealing Cap
   ° Female large bore quick
      connect interface

Gamma Irradiation
• Up to 50 kGy
• Minimal color shift post-gamma;
   Yellow in color

Sampling and Injection Sites

Materials
• Needleless Injection Site
   ° Polycarbonate
   ° Silicone
• Traditional Injection Site
   (Latex Free)
   ° ABS
   ° PVC
   ° Polyisoprene

Common Vernacular
• Septum Port
• Swabable Valve
• Sample Port

Typical Usage and Applications
• Sampling operations
   ° Small volume sample
      chambers
   ° Syringe sampling
• Industry standard small flow
   connectivity

Connectivity
• Needleless Sample/Injection Site
   ° Connection – Male Luer
   ° Sample/Injection Site – Female
      Luer
• Traditional Sample/Injection Site
   ° Connection – Male Luer
   ° Sample/Injection Site – Needle

Connector Selection (continued)

Hose Barb Fittings

Materials
• Polypropylene (PP)
• Animal Component Free (ACF)

Typical Usage and Applications
• Sampling systems
• Tubing manifolds

Connectivity
• ⅛" → 1" Hose Barbs
   (3.2 mm → 25.4 mm)

Gamma Irradiation
• Up to 50 kGy

Single-Use / Multiple-Use Interface

Materials
• Polysulfone (PSU)
• Seals – Silicone
• Animal Component Free (ACF)

Common Vernacular
• STC Fitting
• Steam-Thru® Connection
• Steam Fitting

Typical Usage and Applications
• Sterile connection
   of a pre-sterilized single-use
   system to conventional fixed,
   e.g., stainless steel equipment
• Harvest from bioreactor to
   pre-sterilized single-use systems
• Feed from single-use systems to
   bioreactors

Connectivity
• To single-use system: ⅜"
   (9.5 mm) or ½" (12.7 mm) HB
• To process equipment: ¾" TC
Connection
• To steam trap: ¾" (19.1 mm) TC

Gamma Irradiation
• Up to 50 kGy

Quick Disconnect Couplings with integrated valves - HFC Series

Materials
• Polysulfone (PSU)
• Seals – Silicone
• Animal Component Free (ACF)

Common Vernacular
• HFC fitting
• QDC with shut-off valve
• Aseptic Disconnect

Typical Usage and Applications
• Disconnections without the
   possibility of spilled process fluid
• Disconnections aseptically
   outside of controlled areas
• Commonly used in lieu of tube
   sealer or where tubing material,
   e.g., silicone, cannot be heat sealed

Connectivity
• Coupling Body
   ° ¼" (6.4 mm), ⅜" (9.5 mm),
      or ½" (12.7 mm) HB
   ° Female quick connect with
      integrated valve interface
• Coupling Insert
   ° ¼" (6.4 mm), ⅜" (9.5 mm),
      or ½" (12.7 mm) HB
   ° Male quick connect with or
      without integrated valve interface

Gamma Irradiation
• Up to 50 kGy

Tubing Selection

## For Standard Biocontainer Assemblies

BioFlex® TPE (thermoplastic elastomer)

Meissner's manufactured BioFlex® TPE tubing offers high performance for critical pharmaceutical and biopharmaceutical applications. BioFlex® TPE can be thermally welded and sealed to accommodate aseptic connection and disconnection for maximum flexibility in your process. Meissner's tubing is remarkably clear and free of silicone oils and animal derived ingredients.

Platinum-Cured Silicone

Meissner uses top quality platinum-cured silicone manufactured specifically for use within the biopharmaceutical and pharmaceutical markets. This ultraclean tubing comes standard in 50A durometer, is certified Animal Component Free (ACF), and is compatible with peristaltic pumping operations.
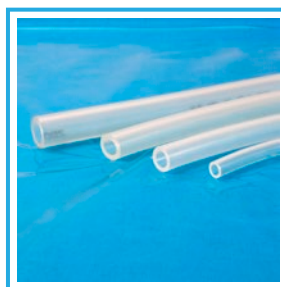
Thermoplastic Elastomer

TPE allows for the integration of thermal welding (aseptic connection) and sealing (aseptic disconnection) connectivity steps into your biopharmaceutical process. Meissner incorporates 374 C-Flex® 62A durometer TPE tubing into many standard product offerings.

Also Available
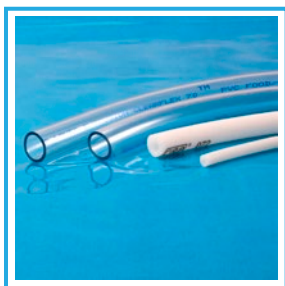
AdvantaFlex® TPE

This 69A durometer, ACF, TPE tubing is very similar to the 374 C-Flex® with the added advantage of increased compatibility with peristaltic pumping operations and a very low extractables and leachables profile.

High Durometer and Extended Life

Higher Durometer and Extended Pump Life Silicone Tubing – Meissner offers silicone tubing in a higher durometer formulation, 65A, for applications where tubing resilience may be required, such as in extended time peristaltic pumping applications (e.g., recirculation mixing, TFF applications, etc.).

PVC

Meissner offers medical grade radiation stable PVC tubing for applications where RF weldability, tubing clarity, and/or process economics are primary drivers.

Other

Meissner can accommodate custom tubing requirements as necessary, e.g., Sta-Pure®, Tygon®, etc. Please contact Meissner for further details.

One-Touch® FlexCessories™
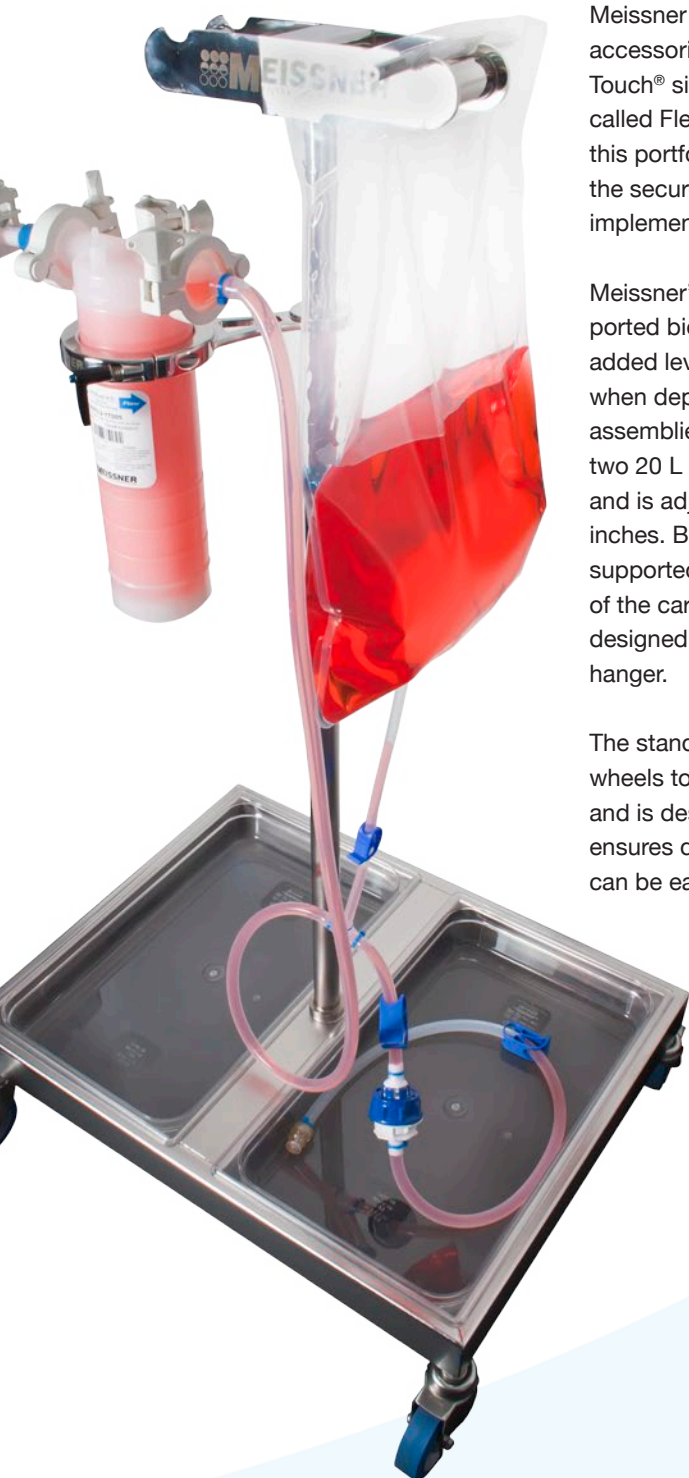
Meissner has developed a line of accessories to complement our One-Touch® single-use systems portfolio called FlexCessories™. The products in this portfolio are designed to facilitate the secure deployment and streamlined implementation of single-use systems.

Meissner's FlexCessory™ dual end-ported biocontainer cart provides an added level of convenience and security when deploying end-ported biocontainer assemblies. The stand can support up to two 20 L end-ported biocontainers and is adjustable to a height of 72 inches. Biocontainer assemblies can be supported directly on the notched head of the cart or hung from an ergonomically designed stainless steel FlexCessory™ hanger.

The stand is equipped with two locking wheels to ensure security while stationary and is designed with a footprint that ensures dynamic stability. The height can be easily adjusted by using the center post clamp. The stainless steel cart incorporates two removable polycarbonate drip trays in its base for ease of sanitization. Optional attachments are available to secure single-use filter capsules, such as the UltraCap® H.D. capsule filter, to the cart's center post. This arrangement is ideal for use with single-use assemblies designed to accommodate pre-use filter integrity testing procedures.

Meissner's FlexCessory™ stainless steel hanger is designed for use with Meissner end-ported biocontainer assemblies from 5 L to 20 L. It is ergonomically shaped to offer maximum comfort when lifting and hanging biocontainer. The hanger can be used alone or with the dual end-ported biocontainer cart to provide additional functionality. FlexCessory™ hangers provide operators a convenient way to hang biocontainer assemblies from mixing equipment, bioreactors, lab benches, etc.

BioFlex®
Fluid Path Assemblies

Meissner's BioFlex® single-use fluid path assemblies provide secure fluid transfer in critical biopharmaceutical processing applications. The assemblies reduce process risk while providing an enhanced level of convenience that maximizes flexibility in the deployment of single-use systems, as well as conventional systems.

Customizable to process requirements, the assemblies are available with a range of connectivity, tubing and accessory component options to achieve the functionality necessary for your process. Fluid path assemblies can be integrated with filter capsules in a selection of surface areas and media to cater to applications ranging from process stream sterilization and clarification to sterile venting applications. Meissner has extensive experience in single-use system design and implementation and can deliver customized designs using pre-qualified components in some of the industries' shortest lead times.

Meissner's BioFlex® fluid path assemblies are supplied with comprehensive documentation and traceability. Each assembly is serialized, which may reduce batch record requirements in some cases. When the fluid path assembly includes a filter, the filter serial number is linked to the assembly's serial number. Meissner provides a single cohesive certification package for the complete fluid path assembly which includes component specific lot number information, TSE risk and qualification status as well as applicable filter certification material and specific gamma irradiation dosage information.

Sterilization
Meissner fluid path assemblies are supplied gamma irradiated at a dosage which has been substantiated as a sterilizing dosage via ANSI/AAMI/ISO 11137-2:2006 methodology.

Assembly Design, Components and Filters
The fluid path assembly configurations on page 44 illustrate a variety of common applications, although they have unlimited permutations. Assemblies are configured from our comprehensive library of pre-qualified components. For applications which require filtration, Meissner offers capsule filters for processing volumes from 10 mL to over 10,000 L in a wide variety of filtration media.

BioFlex® Fluid Path Assemblies

BioFlex® Fluid Path Assemblies (continued)

Connecting Stainless Steel Process Equipment to Stainless Steel Process Equipment

CR2VTH0.1-1T0C4 → Steam Through Connector

Steam Through Connector → Steam Through Connector

Connecting a Single-Use System to Stainless Steel Process Equipment

Quick Connect → CS2ST0.2-224 → Steam Through Connector

Aseptic Connector → Steam Through Connector

Connecting a Single-Use System to a Single-Use System

Quick Connect → CF2ST0.1-33B4 → TPE Tubing & Plug

Quick Connect → Quick Connect

Connecting Stainless Steel Process Equipment to a Single-Use System

Tri-Clamp Fitting → CL2VTH0.2-224 → Quick Connect

Steam Through Connector → Aseptic Connector

Filling Assemblies and Manifolds

CL2VTH0.2-024 → Four Line Manifold Terminating in Luers
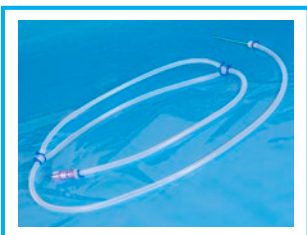
Luer Fitting → Pump-Y → Filling Needle

Fluid Transfer with Sampling and/or Flushing Functionality

CR2ST0.2-2T0C4 → T to Flush Biocontainer → MPX

Quick Connect → T to Sampling Line → Quick Connect

Notes:
- → Arrows indicate flow direction
- Steam Through Connectors provide aseptic connectivity between SUS and stainless steel process equipment
- TPE (Thermo Plastic Elastomer) Tubing + Plug is for use in conjunction with tubing welders
- Aseptic Connectors are designed to allow sterile connections to be made outside of controlled environments
- Quick Connects can be manipulated aseptically under a laminar flow hood
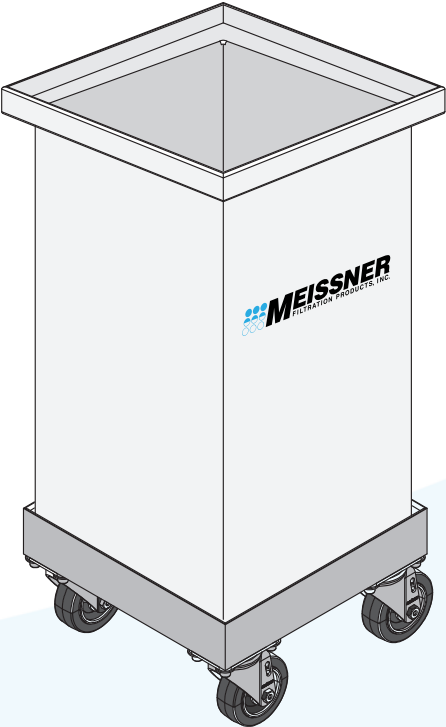
QuaDrum®
Rigid Outer Containers

Designed to make the most efficient use of floor space, Meissner's QuaDrum® containers offer easy, accurate and repeatable biocontainer deployment relative to standard drums. The footprint of the QuaDrum® container creates a more stable rigid outer container than a cylindrical drum. Polyethylene QuaDrum® containers are chemically resistant and easy to sanitize. Stainless steel dollies are available for QuaDrum® containers and offer mobility and an added level of dynamic stability during intra-facility transport.

Ordering Information

	QuaDrum® 50	QuaDrum® 100	QuaDrum® 200
QuaDrum® Volume	50 L	100 L	200 L
Drum Part Number	FASD-050D	FASD-100D	FASD-200D
Standard Lid Part Number	FASD-050L	FASD-100L	FASD-200L
Access Lid Part Number	FASD-050A	FASD-100A	FASD-200A
Dolly Part Number	FASC-050C	FASC-100C	FASC-200C
Footprint	12" x 12" (31 cm x 31 cm)	18" x 12" (46 cm x 31 cm)	24" x 18" (61 cm x 46 cm)
Functional Temperature	0°C - 40°C	0°C - 40°C	0°C - 40°C
Material	Polyethylene	Polyethylene	Polyethylene
Weight when empty	10.8 lbs (4.9 kg)	16.2 lbs (7.4 kg)	37.2 lbs (16.9 kg)

QuaDrum® Rigid Outer Containers

One-Touch® FlexStation®
Rigid Transport & Shipping Containers

FlexStation® rigid transport and shipping containers are available in standard sizes of 100, 200, 500 and 1000 liters to fit Meissner's TepoFlex® 3D biocontainers. These durable plastic outer containers are reusable and collapsible for storage and handling when not in use. When used in combination, Meissner's One-Touch® single-use systems portfolio of TepoFlex® biocontainers deployed in 100L, 200L, and 500L FlexStation® rigid outer containers has been qualified for liquid transport in accordance with International Safe Transit Association (ISTA) Series 3 testing. FlexStation® containers complement Meissner's line of single-use TepoFlex® biocontainers to provide robust fluid management solutions ideally suited for intra-facility transfers and inter-facility transport of buffers, culture media, and bulk product, or simply as a cost-effective alternative to stationary stainless steel storage bins.

Meissner also offers stainless steel carts and pallet trucks specifically designed for FlexStation®. These accessory carts allow for easy intra-facility FlexStation® movement.

	FlexStation® 100	FlexStation® 200	FlexStation® 500	FlexStation® 1000
Part Number	FSB0100FB	FSB0200FB	FSB0500BD	FSB1000TD
Volume	100 L	200 L	500 L	1000 L
Outside Dimensions				
Length	31.9" (809 mm)	31.9" (809 mm)	47.2" (1200 mm)	47.2" (1200 mm)
Width	24.0" (609 mm)	24.0" (609 mm)	31.5" (800 mm)	39.4" (1000 mm)
Height	32.8" (833 mm)	32.8" (833 mm)	36.3" (915 mm)	49.5" (1260 mm)
Collapsed Height	15.9" (403 mm)	15.9" (403 mm)	18.5" (475 mm)	18.5" (475 mm)
Height when stacked 2 high	64.8" (1646 mm)	64.8" (1646 mm)	71.3" (1810 mm)	97.8" (2480 mm)
Footprint	5.4 ft² (0.5 m²)	5.4 ft² (0.5 m²)	10.3 ft² (0.96 m²)	12.9 ft² (1.2 m²)
Container Capacity	661 lb (300 kg)	661 lb (300 kg)	1433 lb (650 kg)	2,860 lb (1300 kg)
Functional Temperature	0°C - 40°C	0°C - 40°C	0°C - 40°C	0°C - 40°C
Material	Polypropylene	Polypropylene	ABS	ABS
Weight when empty	66 lb (30 kg)	53 lb (24 kg)	225 lb (102 kg)	225 lb (102 kg)

Accessories for FlexStation®	FlexStation® 100 / 200 Cart	FlexStation® 500 Cart	FlexStation® 1000 Cart	FlexStation® SS Pallet Truck
Part Number	FSCS02A	FSCL04A	FSCL11A	Please consult factory

FlexStation®, FlexStation® Accessory Carts

Stainless Steel Bins

ConeCraft Stainless Bins

Meissner Filtration Products, Inc. collaborates with **ConeCraft Incorporated**, a premier manufacturer of stainless steel outer containers serving the biopharmaceutical industry. ConeCraft is recognized for their expertise and innovation in designing rigid outer containers for integration with single-use systems. The combination of ConeCraft's core competency with Meissner's single-use system design and manufacturing expertise provides customized fluid handling solutions that are unrivaled in the industry.

TepoFlex® biocontainer assemblies complement ConeCraft's custom stainless steel containers for complete single-use fluid management solutions.

- Mobile or stationary systems
- Single or multi-bins, modules and skids
- Various heating/cooling and insulation options
- Temperature measurement
- Integrated mixing through internal or external recirculation loops
- Non-invasive volume measurement using pressure transducers, load cells and guided wave radar (GWR)
- Integrated capsule filters

Frequently Asked Questions

1 Why should I consider switching to a single-use system?

• Cleaning requirements are reduced, minimizing associated validation requirements.
• Campaign turnaround times are reduced.
• The risk of cross-contamination is minimized.
• Process equipment validation is simplified and less time consuming.
• Single-use systems allow for greater flexibility and easy product campaigning.

2 Why should I choose One-Touch® over another single-use system?

From chambers to tubing to filters, Meissner can guarantee the forward and backward traceability of every component in your biocontainer assembly. Our single-use systems are manufactured and packaged in an ISO Class 7 cleanroom, where every component is monitored by Meissner's integrated MRP/MES system, referred to as Meissner Virtual Production (MVP). Exceptional laboratory and engineering services coupled with unmatched quality and traceability make Meissner a smart supply choice.

3 Can Meissner customize my TepoFlex® biocontainer assembly?

Meissner offers various levels of customization to suit our clients' needs. We frequently fit chambers with customer-specified tubing lengths or connectors, and can easily create tubing sets to provide additional flexibility. Our engineers can also create custom biocontainers to meet the requirements of your specified rigid outer container.

4 Why is the filter located upstream of the chamber?

TepoFlex® biocontainers are designed to hold sterile fluids for extended periods of time. Consequently, removing bioburden before it enters the chamber allows for maximum filter efficiency and helps maintain the quality of the customer's product.

5 Are One-Touch® biocontainers sterile?

TepoFlex® biocontainers are gamma irradiated at 25-40 kGy, ensuring an SAL of 10^{-6}.

6 Where are TepoFlex® biocontainers manufactured?

Meissner manufactures each of its biocontainers in a cGMP facility. The extrusion of TepoFlex® film, manufacture of chambers, and assembly operations all take place in ISO class 7 cleanrooms.