

**FLOWLINX**



# COMPONENT CATALOG

Smart Fluid Handling Solutions That Get the Job Done Safely

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## DESCRIPTION:

FlowLinX® Sanitary Clamps are designed for quick and efficient installation. The innovative clamp design retains the sanitary fittings in the clamp body for effortless one-handed operation. The audible click of the clamp ensures the connection is secure without over compression of the gasket. FlowLinX® Sanitary Clamps are available in 1/2" to 3/4" (Mini) flange and 1" to 1-1/2" (Maxi) flange sizes and are ASME-BPE compliant.




## SPECIFICATIONS:

- Manufactured in an ISO 8 Cleanroom


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- ISO 9001:2015 Certified Facility


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-  Zip Tie Compatible for Process ID and Tamper Evident

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-  Tested to 94 PSI (6.5 bar) for Leak Resistance

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-  Sterilizable by Gamma Irradiation or Autoclave

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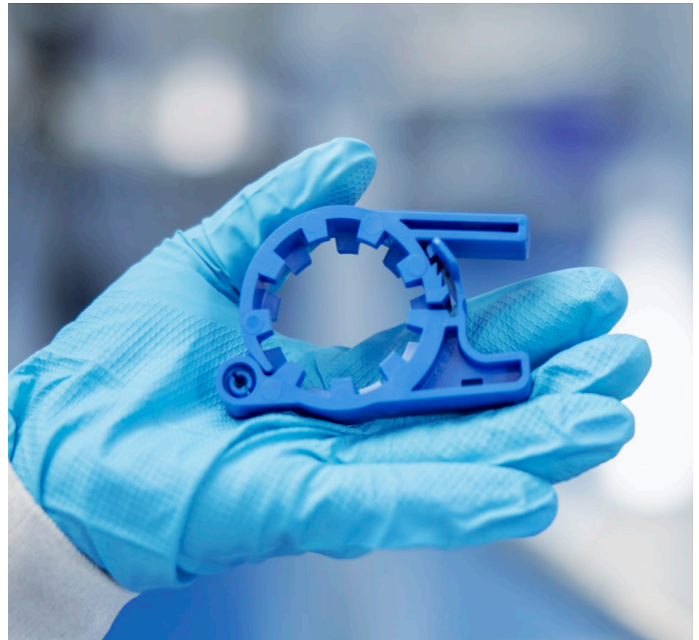
-  Made from Polyketone

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- USP Class VI & ISO 10993-5

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-  5-Year Shelf Life



PART NUMBER	DESCRIPTION	PACK SIZE
F-CL-0750	F-CL-0750 - Mini TC Clamp	25
F-CL-1500	F-CL-1500 - Maxi TC Clamp	25

# Sanitary Fittings

## DESCRIPTION:

FlowLinX® Sanitary Fittings are designed for single use fluid transfer applications where sanitary processing is critical. They are available in 3/4" and 1-1/2" flange sizes and can be easily assembled with silicone and TPE tubing. FlowLinX® Sanitary Fittings are available in polypropylene material and are compatible with other TC flanges made to ASME-BPE specifications. End caps are also available.

## SPECIFICATIONS:

- Manufactured in an ISO 8 Cleanroom

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- ISO 9001:2015 Certified Facility

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- Tested to 94 PSI (6.5 bar) for Leak Resistance

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- Smooth Inner Surface for Superior Flow

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- Sterilizable by Gamma Irradiation, ETO or Autoclave

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- USP Class VI & Animal Free

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- Lot Traceability on each Fitting

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- Validation Package with BPOG Extractables Testing Available

\*5-year shelf life from date of manufacture

BARB SIZE (in.)	FLANGE SIZE in. (mm)	BORE I.D. (in.)	FLANGE DIAMETER (in.)	OVERALL LENGTH (in.)
1/4" (0.250)	3/4" (19.0 mm)	0.185	0.984	1.500
1/4" (0.250)	1-1/2" (38.1 mm)	0.185	1.984	1.650
3/8" (0.375)	3/4" (19.0 mm)	0.300	0.984	1.640
3/8" (0.375)	1-1/2" (38.1 mm)	0.300	1.984	1.640
1/2" (0.500)	3/4" (19.0 mm)	0.400	0.984	1.870
1/2" (0.500)	1-1/2" (38.1 mm)	0.400	1.984	1.870
1/2" (0.500)	1" Ladish	0.400	1.984	1.760
3/4" (0.750)	3/4" (19.0 mm)	0.593	0.984	1.870
3/4" (0.750)	1-1/2" (38.1 mm)	0.615	1.984	2.207



PART NUMBER	DESCRIPTION	PACK QTY.
F-TC-0250M	3/4" (Mini) Sanitary Flange x 1/4" Barb	25
F-TC-0250X	1-1/2" (Maxi) Sanitary Flange x 1/4" Barb	25
F-TC-0375M	3/4" (Mini) Sanitary Flange x 3/8" Barb	25
F-TC-0375X	1-1/2" (Maxi) Sanitary Flange x 3/8" Barb	25
F-TC-0500M	3/4" (Mini) Sanitary Flange x 1/2" Barb	25
F-TC-0500X	1-1/2" (Maxi) Sanitary Flange x 1/2" Barb	25
F-TC-0750M	3/4" (Mini) Sanitary Flange x 3/4" Barb	25
F-TC-0750X	1-1/2" (Maxi) Sanitary Flange x 3/4" Barb	25
F-TC-1000X	1-1/2" (Maxi) Sanitary Flange x 1" Barb	25
F-TC-0500L-PF	1" (Ladish) Sanitary Flange x 1/2" Barb	5

PART NUMBER	DESCRIPTION	PACK QTY.
F-EC-1500	1-1/2" (Maxi) TC End Cap	50
F-EC-0750	3/4" (Mini) TC End Cap	50



# Sanitary Elbows

## SPECIFICATIONS:

- ✓ Manufactured in an ISO 8 Cleanroom

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- ✓ ISO 9001:2015 Certified Facility

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- ♥ Meets USP Class VI and Animal Free

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- ⊗ Tested to 94 PSI (6.5 bar) for Leak Resistance

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- ↻ Smooth Inner Surface for Superior Flow

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- ✓ Meets FDA 177.2600

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- ✓ Meets ISO 10993-4, -5

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- ⚙ Sterilize by Gamma Irradiation, ETO or Autoclave



PART NUMBER	DESCRIPTION	PACK SIZE
F-TCE-0750-PF	FlowLinX® 0.750" Sanitary Elbow, 5/PK	5
F-TCE-1000-PF	FlowLinX® 1.000" (Ladish) Sanitary Elbow, 5/PK	5
F-TCE-1500-PF	FlowLinX® 1.500" Sanitary Elbow, 5/PK	5



# Sanitary Tees

## DESCRIPTION:

FlowLinX® Sanitary Tees are designed for single use fluid transfer applications and are available in polypropylene material. Sanitary Tees are compatible with other TC flanges made to ASME-BPE specifications and can be combined with FlowLinX® clamps and gaskets for a complete system.



## SPECIFICATIONS:

- Manufactured in an ISO 8 Cleanroom

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- ISO 9001:2015 Certified Facility

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- Meets USP Class VI and Animal Free

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- Tested to 94 PSI (6.5 bar) for Leak Resistance

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- Smooth Inner Surface for Superior Flow

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- Meets FDA 1772600

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- Meets ISO 10993-4, -5

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- Sterilize by Gamma Irradiation, ETO or Autoclave



PART NUMBER	DESCRIPTION	PACK SIZE
F-TCT-0750-PF	FlowLinX® 0.75" TC Sanitary Tee, 5/PK	5
F-TCT-1500-PF	FlowLinX® 1.500" Sanitary Tee, 5/PK	5

# Sanitary Reducers

## SPECIFICATIONS:

- ☑ Manufactured in an ISO 8 Cleanroom

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- ☑ ISO 9001:2015 Certified Facility

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- ♥ USP Class VI and Animal Free

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- ↻ Smooth Inner Surface for Superior Flow

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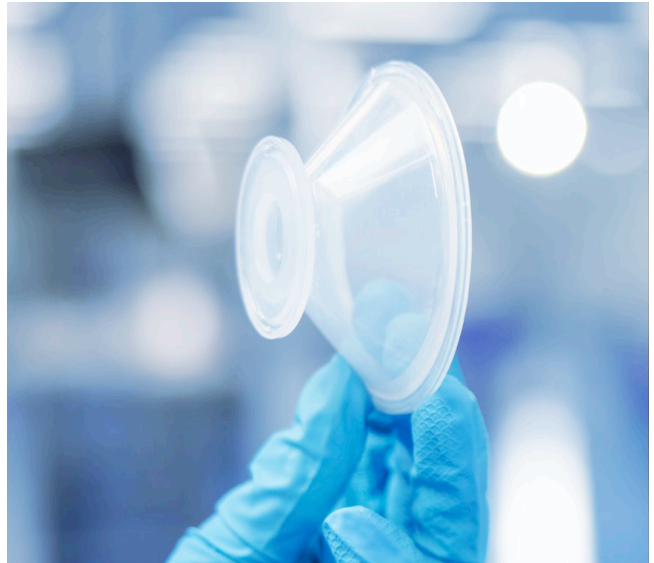
- 🛡 Meets FDA 177.2600

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- 🛡 Meets ISO 10993-4, -5

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- 🌀 Sterilize by Gamma Irradiation, ETO or Autoclave



PART NUMBER	DESCRIPTION	PACK SIZE
F-TC-315X-PF	FlowLinX® 3" to 1.5" Sanitary Reducer	1
F-TC-15075-PF	FlowLinX® 1.5" to 0.75" Sanitary Reducer	5

## DESCRIPTION:

The FlowLinX® Instrument Tee (IT) is ideal for pharmaceutical and biotechnology applications where pressure monitoring and accuracy are important. The instrument tee is made of polypropylene material that is gamma compatible and animal component free. Hose barb connections are available from 3/8" to 1" for use with silicone and TPE tubing. Each FlowLinX® IT features a 1½" sanitary flange for connecting a pressure transducer and can be integrated into a fluid path assembly with a FlowLinX® gasket, sanitary clamp and end cap.



## SPECIFICATIONS:

- Manufactured in an ISO 7 Cleanroom

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- ISO 9001:2015 Certified Facility

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- Animal Component Free

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- Meets FDA 177.2600

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- Meets USP <88>, ISO 10993-4, -5

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- 3 Year Shelf Life



PART NUMBER	DESCRIPTION
F-IT-0375-PF	FlowLinX® Instrument Tee, 1.5" Sanitary x 3/8" Barb
F-IT-0500-PF	FlowLinX® Instrument Tee, 1.5" Sanitary x 1/2" Barb
F-IT-0750-PF	FlowLinX® Instrument Tee, 1.5" Sanitary x 3/4" Barb
F-IT-1000-PF	FlowLinX® Instrument Tee, 1.5" Sanitary x 1" Barb



## DESCRIPTION:

The Sidewinder® is a unique ratcheting multi-use pinch clamp for precise fluid flow regulation. The innovative design allows for quick and easy installation on any tubing assembly, while eliminating the need to install on tubing prior to adding fittings and end connectors. The integral holes in the clamp are zip tie compatible for process identification (ID) and tamper evident. The Sidewinder® is compatible with multiple tubing types and is available in two sizes for tubing up to 0.375" OD and 0.750" OD.



## SPECIFICATIONS:

- Manufactured in an ISO 8 Cleanroom

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- ISO 9001:2015 Certified Facility

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- Multi-Position Ratchet for Precise Flow Regulation

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- Zip Tie Compatible for Process ID and Tamper Evident

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- Multi-Use: Quick and Easy Installation

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- For Unreinforced Tubing up to 65 Durometer

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- Sterilizable by Gamma Irradiation

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- Made from Polyketone

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- USP Class VI & ISO 10993-5

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- 5-Year Shelf Life



## PART NUMBERS:

PART NUMBER	DESCRIPTION	PACK SIZE
F-PV-0375	FlowLinX® Pinch Valve, up to 0.375" OD	25
F-PV-0750	FlowlinX Pinch Valve, up to 0.750" OD	25

# PINCH VALVE

## DESCRIPTION:

The FlowLinX® Pinch Valve is a guillotine style pinch clamp ideal for precise flow regulation, especially on higher durometer and braided tubing where clamping can be difficult. The clamp can be easily and efficiently secured at any length along complex tubing assemblies. It is autoclavable and gamma stable made from glass reinforced nylon making it a reliable and reusable option for your fluid handling needs.

## SPECIFICATIONS:

- ✓ Manufactured in an ISO 8 Cleanroom

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- ✓ ISO 9001:2015 Certified Facility

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- ✂ Tested to 100 PSI (6.9 bar) for tubing up to 80 durometer or single braid

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- ⚙ Multi-Use Clamp

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- ☼ Sterilizable by Gamma Irradiation or Autoclave

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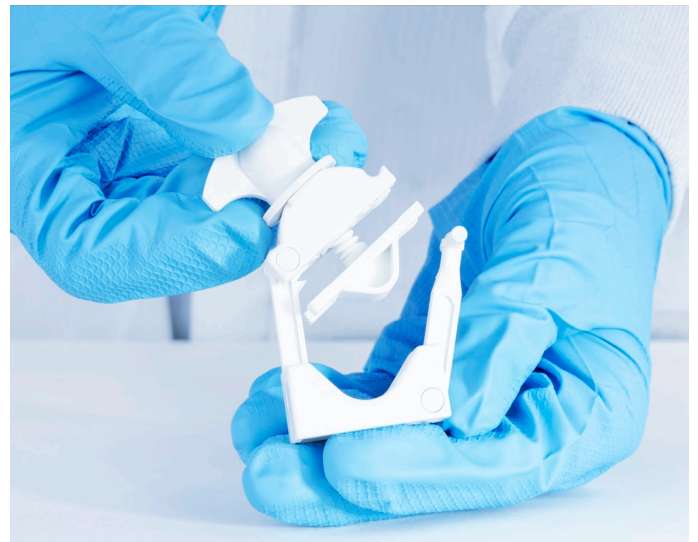
- ✂ Made from Glass Reinforced Nylon

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- ✓ USP <88> & ISO 10993-5

## PART NUMBERS:

PART NUMBER	DESCRIPTION	PACK SIZE
F-PVG-0500	FlowLinX® Pinch Valve, up to 0.500" OD	10
F-PVG-1375	FlowLinX® Pinch Valve, up to 1.375" OD	10





## FlowLinX® Silicone Tubing Solutions

Unlock processing excellence at every stage of your production with FlowLinX® silicone tubing solutions. Engineered for exceptional flexibility and durability, FlowLinX® silicone tubing solutions meet the strictest biocompatibility and regulatory requirements, have broad chemical resistance and are manufactured in ISO Class 7 cleanrooms.

### APPLICATIONS:

- Cell Culture and Fermentation
- Media and Buffer Transfer
- Harvesting and Filtration
- Sterile Fluid Transfer
- Final Filling

## Simplify Your Validation Process: One Resin for All

FlowLinX® silicone tubing solutions are manufactured using the same product contact resin for all products. Each tubing product is supported by a comprehensive validation package ensuring ease of implementation and use in your process. Request your package: <https://carolinaflow.com/contact/#request-quote>



## Purity You Can Count On

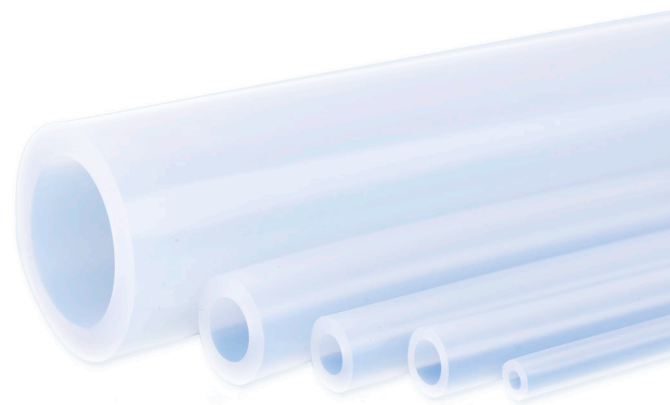
With unrivaled quality, FlowLinX® silicone tubing solutions are animal component free, meet USP <85> and USP <788> and have low leachables.



# Silicone Tubing Solutions

PRODUCT OVERVIEW	CCST	CCPG	CCSB
<b>Manufacturing Specifications</b>			
ISO Class 7	X	X	X
Laser Etching/Labeling	X	X	X
Full Production Lot Traceability	X	X	X
Post-cured		X	
<b>Material of Construction</b>			
Platinum Cured Silicone, F-HCR-22520	X	X	X
<b>Biocompatibility</b>			
USP <85>, Bacterial Endotoxin	X	X	X
USP <88>, Biological Reactivity Tests, Class VI, In Vivo	X	X	X
ISO 10993-4, Hemolysis	X	X	X
ISO 10993-5, Cytotoxicity	X	X	X
ISO 10993-10, Irritation and Sensitization	X	X	X
ISO 10993-11, Systemic Toxicity	X	X	X
<b>Physiochemical</b>			
USP <661>, Plastic Packaging Systems	X	X	X
EP 3.1.9, Plastic Packaging Systems and Materials of Construction	X	X	X
FDA 21 CFR 177.2600, Rubber Articles Intended for Repeated Use	X	X	X
Broad Chemical Resistance	X	X	X
<b>Particulate</b>			
USP <788>, Particulate Matter in Injections	X	X	X
<b>Extractables</b>			
USP <665>	X	X	X
<b>Legislation</b>			
REACH	X	X	X
RoHS	X	X	X
Conflict Mineral	X	X	X
<b>Shelf Life</b>			
5 Years, Non-Sterile/Non-Irradiated	X	X	X
<b>Other</b>			
BSE/TSE Free	X	X	X
Latex Free	X	X	X
Phthalate Free	X	X	X
BPA Free	X	X	X
Melamine Free	X	X	X
Nitrosamine Free	X	X	X
High Pressure Performance (+ 100 psi)			X
Excellent Pumpability		X	
<b>Sterilization Methods</b>			
Gamma Irradiation	X	X	X
X-Ray	X	X	X
Autoclave	X	X	X

ATTRIBUTE	ASTM METHOD	VALUE
Durometer, Shore A	D2240	65
Specific Gravity	D412	1.16
Elongation at Break	D792	350%
Operating Temperature		-70C to 190C
UV Resistance		Excellent
Color/Transparency		Translucent





# CCST Transfer Tubing

## CCST Transfer Tubing

CCST unreinforced platinum silicone is ideal for transfer and short run pumping applications as an end-to-end process tubing.



ID (INCH)	ID (MM)	OD (INCH)	OD (MM)	WALL (INCH)	WALL (MM)	BURST PRESSURE (PSI)	BURST PRESSURE (BAR)	COIL SIZE		
								50 FT (15 M)	100 FT (30 M)	SPOOL
1/16"	1.6	1/8"	3.2	1/32"	0.8	126	8.7	CCST-0063-0125	CCST-0063-0125-C100	CCST-0063-0125-S2500
1/16"	1.6	3/16"	4.8	1/16"	1.6	132	9.1	CCST-0063-0188	CCST-0063-0188-C100	CCST-0063-0188-S2000
1/8"	3.2	1/4"	6.4	1/16"	1.6	110	7.6	CCST-0125-0250	CCST-0125-0250-C100	CCST-0125-0250-S1200
1/8"	3.2	5/16"	8.0	3/32"	2.4	134	9.2	CCST-0125-0313	CCST-0125-0313-C100	CCST-0125-0313-S750
1/8"	3.2	3/8"	9.6	1/8"	3.2	160	11	CCST-0125-0375	CCST-0125-0375-C100	CCST-0125-0375-S500
3/16"	4.8	5/16"	8.0	1/16"	1.6	82	5.7	CCST-0188-0313	CCST-0188-0313-C100	CCST-0188-0313-S750
3/16"	4.8	3/8"	9.6	3/32"	2.4	102	7.0	CCST-0188-0375	CCST-0188-0375-C100	CCST-0188-0375-S500
3/16"	4.8	7/16"	11.1	1/8"	3.2	105	7.2	CCST-0188-0438	CCST-0188-0438-C100	CCST-0188-0438-S400
1/4"	6.4	3/8"	9.6	1/16"	1.6	62	4.3	CCST-0250-0375	CCST-0250-0375-C100	CCST-0250-0375-S500
1/4"	6.4	7/16"	11.1	3/32"	2.4	88	6.1	CCST-0250-0438	CCST-0250-0438-C100	CCST-0250-0438-S400
1/4"	6.4	1/2"	12.7	1/8"	3.2	92	6.3	CCST-0250-0500	CCST-0250-0500-C100	CCST-0250-0500-S300
5/16"	8.0	1/2"	12.7	3/32"	2.4	76	5.2	CCST-0313-0500	CCST-0313-0500-C100	CCST-0313-0500-S300
5/16"	8.0	9/16"	14.3	1/8"	3.2	94	6.5	CCST-0313-0563	CCST-0313-0563-C100	CCST-0313-0563-S250
3/8"	9.6	1/2"	12.7	1/16"	1.6	45	3.1	CCST-0375-0500	CCST-0375-0500-C100	CCST-0375-0500-S300
3/8"	9.6	9/16"	14.3	3/32"	2.4	59	4.1	CCST-0375-0563	CCST-0375-0563-C100	CCST-0375-0563-S250
3/8"	9.6	5/8"	15.9	1/8"	3.2	76	5.2	CCST-0375-0625	CCST-0375-0625-C100	CCST-0375-0625-S200
1/2"	12.7	3/4"	19.0	1/8"	3.2	60	4.1	CCST-0500-0750	CCST-0500-0750-C100	CCST-0500-0750-S150
5/8"	15.9	7/8"	22.2	1/8"	3.2	49	3.4	CCST-0625-0875	CCST-0625-0875-C100	--
3/4"	19.0	1"	25.4	1/8"	3.2	46	3.2	CCST-0750-1000	CCST-0750-1000-C100	--
3/4"	19.0	1.125"	28.6	3/16"	4.8	53	3.7	CCST-0750-1125	CCST-0750-1125-C100	--
1"	25.4	1.375"	34.9	3/16"	4.8	50	3.4	CCST-1000-1375	CCST-1000-1375-C100	--

# CCPG Pump Tubing

## CCPG Pump Tubing

CCPG is designed for the most critical applications where long pump life and high accuracy are required. Manufactured from platinum cured silicone, CCPG is post-cured to remove siloxanes and minimize potential leachables impact to your product process.



ID (INCH)	ID (MM)	OD (INCH)	OD (MM)	WALL (INCH)	WALL (MM)	TUBING SIZE NUMBER	COIL SIZE	
							25 FT (7.5 M)	50 FT (15 M)
1/32"	0.8	5/32"	4	1/16"	1.6	13	CCPG-0032-0157-C25	CCPG-0032-0157
3/64"	1.2	11/64"	4.4	1/16"	1.6		CCPG-0047-0173-C25	CCPG-0047-0173
1/16"	1.6	3/16"	4.8	1/16"	1.6	14	CCPG-0063-0188-C25	CCPG-0063-0188
3/32"	2.4	7/32"	5.6	1/16"	1.6		CCPG-0094-0219-C25	CCPG-0094-0219
1/8"	3.2	1/4"	6.4	1/16"	1.6	16	CCPG-0125-0250-C25	CCPG-0125-0250
3/16"	4.8	5/16"	8	1/16"	1.6	25	CCPG-0188-0313-C25	CCPG-0188-0313
1/4"	6.4	3/8"	9.6	1/16"	1.6	17	CCPG-0250-0375-C25	CCPG-0250-0375
5/16"	8	7/16"	11.2	1/16"	1.6		CCPG-0313-0438-C25	CCPG-0313-0438
1/32"	0.8	7/32"	5.6	3/32"	2.4		CCPG-0032-0219-C25	CCPG-0032-0219
1/16"	1.6	1/4"	6.4	3/32"	2.4		CCPG-0063-0250-C25	CCPG-0063-0250
1/8"	3.2	5/16"	8	3/32"	2.4		CCPG-0125-0313-C25	CCPG-0125-0313
3/16"	4.8	3/8"	9.6	3/32"	2.4	15	CCPG-0188-0375-C25	CCPG-0188-0375
1/4"	6.4	7/16"	11.2	3/32"	2.4	24	CCPG-0250-0438-C25	CCPG-0250-0438
5/16"	8	1/2"	12.8	3/32"	2.4	35	CCPG-0313-0500-C25	CCPG-0313-0500
3/8"	9.6	9/16"	14.3	3/32"	2.4	36	CCPG-0375-0563-C25	CCPG-0375-0563
3/32"	2.4	11/32"	8.8	1/8"	3.2		CCPG-0094-0346-C25	CCPG-0094-0346
3/16"	4.8	7/16"	11.2	1/8"	3.2		CCPG-0188-0438-C25	CCPG-0188-0438
1/4"	6.4	1/2"	12.8	1/8"	3.2	26	CCPG-0250-0500-C25	CCPG-0250-0500
3/8"	9.6	5/8"	15.9	1/8"	3.2	73	CCPG-0375-0625-C25	CCPG-0375-0625
1/2"	12.8	3/4"	19	1/8"	3.2	82	CCPG-0500-0750-C25	CCPG-0500-0750
3/4"	19	1"	25.4	1/8"	3.2	90	CCPG-0750-1000-C25	CCPG-0750-1000
5/8"	15.9	7/8"	22.3	1/8"	3.2		CCPG-0625-0875-C25	CCPG-0625-0875
3/8"	9.6	3/4"	19	3/16"	4.8	70	CCPG-0375-0750-C25	CCPG-0375-0750
1/2"	12.8	7/8"	22.3	3/16"	4.8	88	CCPG-0500-0875-C25	CCPG-0500-0875
5/8"	15.9	1"	25.4	3/16"	4.8	89	CCPG-0625-1000-C25	CCPG-0625-1000
3/4"	19	1.125"	28.6	3/16"	4.8		CCPG-0750-1125-C25	CCPG-0750-1125
1"	25.4	1.375"	34.9	3/16"	4.8		CCPG-1000-1375-C25	CCPG-1000-1375



## CCSB and CCDB Braided Silicone Hose

CCSB single braided and CCDB double braided reinforced silicone hose... have great overall performance and excellent resistance to temperature, ozone and steam. Manufactured in an ISO 7 cleanroom, it's biocompatibility and low volatiles ensure suitability for biopharmaceutical, pharma and food applications. Made with polyester yarn inside the wall, CCSB and CCDB provide elevated pressure ratings and are available in various coil lengths.



### CCSB BRAIDED SILICONE HOSE:

ID (INCH)	ID (MM)	OD (INCH)	OD (MM)	WALL (INCH)	WALL (MM)	BURST PRESSURE PSI	BURST PRESSURE BAR	COIL SIZE		
								25 FT (7.5 M)	50 FT (15 M)	100 FT (30 M)
1/8"	3.2	3/8"	9.6	1/8"	3.2	670	46.2	CCSBS-0125-C25	CCSBS-0125	CCSBS-0125-C100
3/16"	4.8	7/16"	11.1	1/8"	3.2	700	48.3	CCSBS-0188-C25	CCSBS-0188	CCSBS-0188-C100
1/4"	6.4	1/2"	12.7	1/8"	3.2	500	34.5	CCSBS-0250-C25	CCSBS-0250	CCSBS-0250-C100
3/8"	9.6	5/8"	15.9	1/8"	3.2	500	34.5	CCSBS-0375-C25	CCSBS-0375	CCSBS-0375-C100
1/2"	12.7	7/8"	22.2	3/16"	4.8	450	31	CCSBS-0500-C25	CCSBS-0500	CCSBS-0500-C100
5/8"	15.9	1"	25.4	3/16"	4.8	450	31	CCSBS-0625-C25	CCSBS-0625	CCSBS-0625-C100
3/4"	19.0	1.125"	28.6	3/16"	4.8	330	22.8	CCSBS-0750-C25	CCSBS-0750	--
1"	25.4	1.405"	35.7	13/64"	5.1	250	17.2	CCSBS-1000-C25	CCSBS-1000	--

### CCDB BRAIDED SILICONE HOSE:

ID (INCH)	ID (MM)	OD (INCH)	OD (MM)	WALL (INCH)	WALL (MM)	COIL SIZE	
						25 FT (7.5M)	50 FT (15M)
1/2"	12.7	1"	25.4	1/4"	6.4	CCDBS-0500-C25	CCDBS-0500
3/4"	19.0	1-1/4"	31.8	1/4"	6.4	CCDBS-0750-C25	CCDBS-0750
1"	25.4	1-1/2"	38.1	1/4"	6.4	CCDBS-1000-C25	CCDBS-1000

### DESCRIPTION:

FlowLinX® manifold luer lock clips are the most effective solution for ensuring your male luer to female luer fitting connection remains integral while in transit or in use. Luer lock clips are designed to be used with industry standard stopcock sampling manifolds and luer lock fittings. Ensure luer lock clips are integrated into your FlowLinX® sampling manifold assembly, and sample worry free.

### SPECIFICATIONS:

- Manufactured in an ISO 8 Cleanroom

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- ISO 9001:2015 Certified Facility

---

- Meets USP <88> Class VI and Animal Free

---

- Meets FDA 177.2600

---

- Meets ISO 10993-4, -5

---

- Fits with Qosina Stopcock manifolds, PN 99876 and 17551

---

- Fits with Eldon James and Nordson Male Luer Locks

---

- Sterilizable by Gamma Irradiation, ETO and Autoclave



PART NUMBER	DESCRIPTION	PACK SIZE
F-MLL-PF	FlowLinX® Manifold Luer Lock Clip	100

# SAMPLING NEEDLE ASSEMBLIES

## DESCRIPTION:

FlowLinX® sampling assemblies are ideal for aseptic fluid sampling applications used in cell culture, fermentation, chromatography, sterile bulk and transfer. The closed system design allows for easy implementation to monitor critical process parameters. Made from USP <88> Class VI materials, the sampling assemblies are available in individual or multi-sampling units with 1mm or 2mm sampling needles.



*Choose from standard configurations or customize to your requirements.*

PART NUMBER	SAMPLING VOLUME (ML)	NEEDLE SIZE (MM)	QUANTITY/PACK	FIGURE
F-SNA-1.0-50ML	50mL	1	5	1
F-SNA-1.0-100ML	100mL	1	5	1
F-SNA-1.0-250ML	250mL	1	5	1
F-SNA-1.0-1000ML	1000mL	1	5	1
F-SNM-1.0-50ML	5 x 50mL	1	5	2
F-SNM-1.0-100ML	5 x 100mL	1	5	2
F-SNM-1.0-250ML	5 x 250mL	1	5	2
F-SNA-2.0-50ML	50mL	2	5	1
F-SNA-2.0-100ML	100mL	2	5	1
F-SNA-2.0-250ML	250mL	2	5	1
F-SNA-2.0-1000ML	1000mL	2	5	1
F-SNM-2.0-50ML	5 x 50mL	2	5	2
F-SNM-2.0-100ML	5 x 100mL	2	5	2
F-SNM-2.0-250ML	5 x 250mL	2	5	2

PART NUMBER	DESCRIPTION	NO. OF PORTS
F-SNH-1.0	FlowLinX® 50mm Sampling Port Holder, for 1.0mm Needle	5
F-SNH-2.0	FlowLinX® 50mm Sampling Port Holder, for 2.0mm Needle	5

PART NUMBER	DESCRIPTION	NEEDLE SIZE (MM)	QUANTITY/PACK
F-SN-1.0	FlowLinX® Sampling Needle	1.0	5
F-SN-2.0	FlowLinX® Sampling Needle	2.0	5
F-SNB-1.0	FlowLinX® Port Plug	1.0	5
F-SNB-2.0	FlowLinX® Port Plug	2.0	5



SAMPLING NEEDLE ASSEMBLY

5-PORT SAMPLING NEEDLE HOLDER  
1MM AND 2MM SAMPLING NEEDLES





## SPECIFICATIONS:

- Manufactured in an ISO 8 Cleanroom


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- ISO 9001:2015 Certified Facility


---

- USP Class VI

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-  Sterilizably by gamma irradiation

---

-  Aseptically connect using TPE tube welder

---

- Available with sterility assurance level 10<sup>-6</sup> per ISO 11137



PART NUMBER	DESCRIPTION	MATERIAL	HOSE BARB ID	CLOSURE SIZE	PACK SIZE
F-CC-50ML	50mL Tube Cap, 2 port	HDPE	(2) - 1/8"	50mL	50
F-CC-15ML	15mL Tube Cap, 2 port	HDPE	(2) - 1/8"	15mL	50
00113096	15 mL PerformR® Centrifuge Tube	PS	N/A	15mL	125
00113097	50 mL SuperClear® Centrifuge Tube	PP	N/A	50mL	50
00114530	15 mL SuperClear® Centrifuge Tube	PP	N/A	15mL	50

PART NUMBER	SAMPLE VOLUME	CONTAINER MATERIAL	CONFIGURATION	QUANTITY/PACK	STERILITY CLAIM	FIGURE DETAILS
F-CTA-PP-15D	15mL	Polypropylene	Line 1: 1/8" x 1/4"; 12" OAL w/ dip tube Line 2: 1/8" x 1/4"; 3" OAL w/ vent filter	5	Non-Sterile	Figure 1
F-CTA-PS-15D	15mL	Polystyrene		5	Non-Sterile	Figure 1
F-CTA-PP-15D-S	15mL	Polypropylene		5	Sterile	Figure 1
F-CTA-PS-15D-S	15mL	Polystyrene		5	Sterile	Figure 1
F-CTA-PP-15	15mL	Polypropylene	Line 1: 1/8" x 1/4"; 12" OAL Line 2: 1/8" x 1/4"; 3" OAL w/ vent filter	5	Non-Sterile	Figure 2
F-CTA-PS-15	15mL	Polystyrene		5	Non-Sterile	Figure 2
F-CTA-PP-15-S	15mL	Polypropylene		5	Sterile	Figure 2
F-CTA-PS-15-S	15mL	Polystyrene		5	Sterile	Figure 2
F-CTA-PP-50D	50mL	Polypropylene	Line 1: 1/8" x 1/4"; 12" OAL w/ dip tube Line 2: 1/8" x 1/4"; 3" OAL w/ vent filter	5	Non-Sterile	Figure 3
F-CTA-PP-50D-S	50mL	Polypropylene		5	Sterile	Figure 3
F-CTA-PP-50	50mL	Polypropylene	Line 1: 1/8" x 1/4"; 12" OAL Line 2: 1/8" x 1/4"; 3" OAL w/ vent filter	5	Non-Sterile	Figure 4
F-CTA-PP-50-S	50mL	Polypropylene		5	Sterile	Figure 4

Please see Figure Details on the following page.

Figure 1

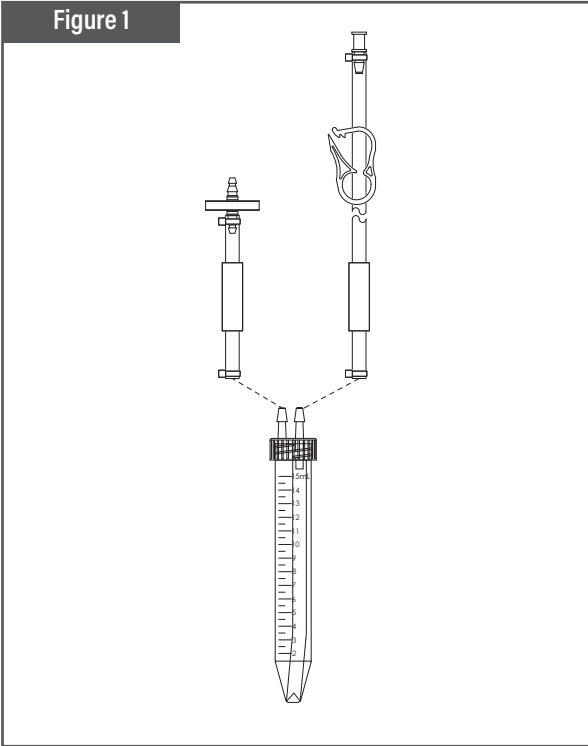


Figure 2

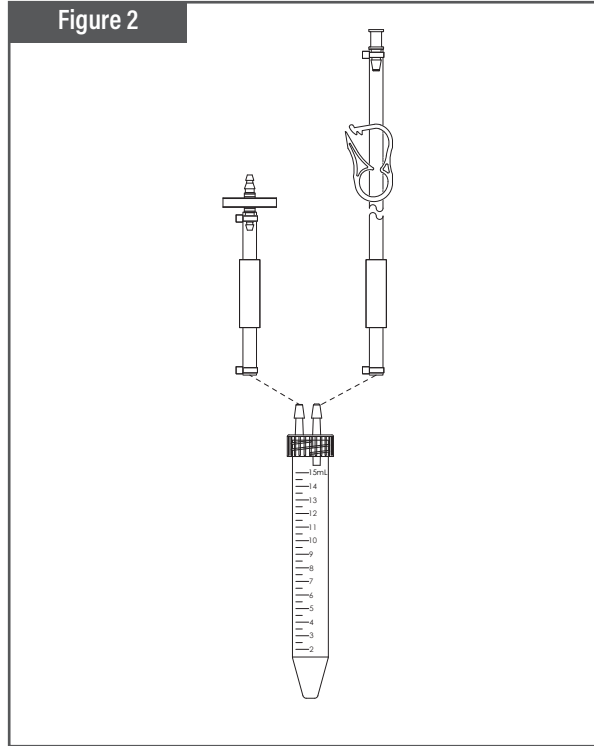


Figure 3

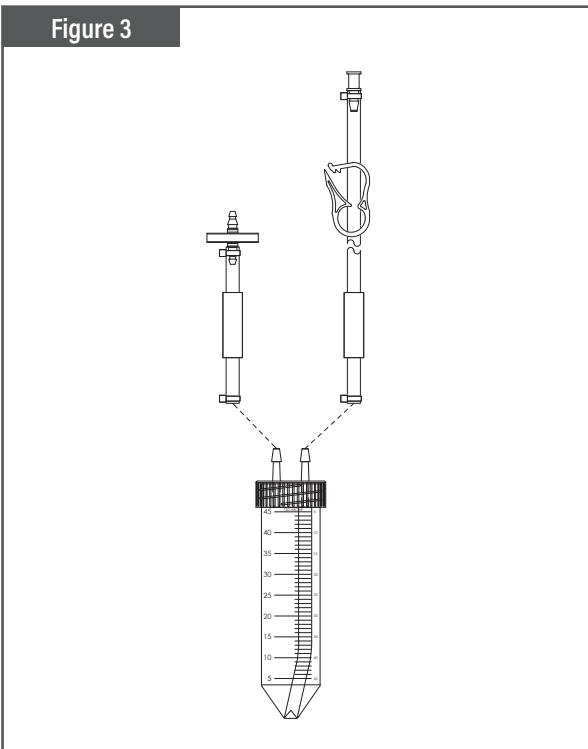
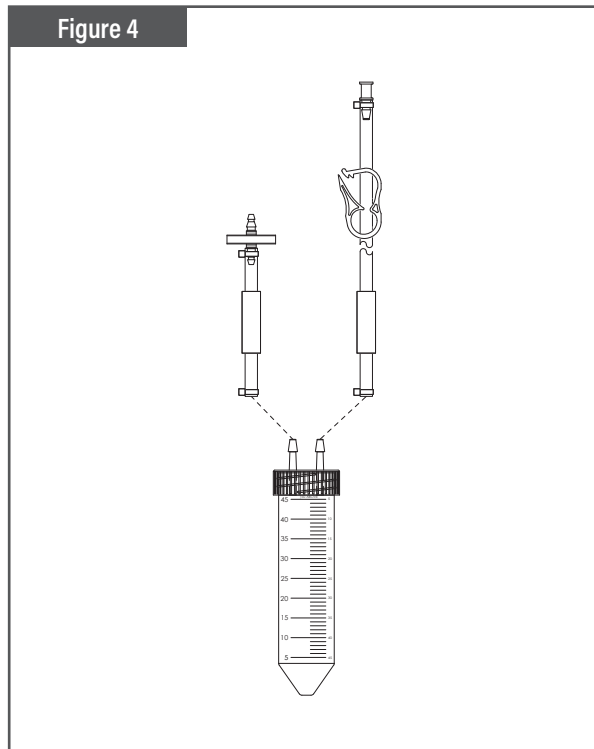


Figure 4



## SPECIFICATIONS:

- ☑ Manufactured in an ISO 8 Cleanroom

---

- ☑ ISO 9001:2015 Certified Facility

---

- ♥ USP Class VI and animal component free

---

- 🌀 Sterilizable by autoclave and gamma irradiation

---

- 📦 Available with sterility assurance level 10<sup>-6</sup> per ISO 11



PART NUMBER	DESCRIPTION	CAP MATERIAL	HOSE BARB ID	CLOSURE SIZE	PACK SIZE
F-BCC-45-1	2 port Cap, GL45	PP	(2) - 1/8"	GL45	10
F-BCC-45-2	2 port Cap, GL45	PP	(2) - 1/4"	GL45	10
F-BCC-45-3	3 port Cap, GL45	PP	(3) - 1/8"	GL45	10

PART NUMBER	DESCRIPTION	TUBING	CONFIGURATION	STERILITY CLAIM	FIGURE DETAILS
F-BCCA-45-2-PCS	2 port Cap Assembly, GL45	Platinum Cured Silicone	Line 1: 1/8" x 1/4"; 24" OAL w/ 12" dip tube Line 2: 1/8" x 1/4"; 4" OAL	Each	Non-Sterile Figure 1
F-BCCA-45-2-TPE	2 port Cap Assembly, GL45	AdvantaFlex® TPE		Each	Non-Sterile Figure 1
F-BCCA-45-2-PM	2 port Cap Assembly, GL45	PharMed®		Each	Non-Sterile Figure 1
F-BCCA-45-3-PCS	3 port Cap Assembly, GL45	Platinum Cured Silicone	Line 1: 1/8" x 1/4"; 24" OAL w/ 12" dip tube Line 2: 1/8" x 1/4"; 24" OAL w/ 12" dip tube Line 3: 1/8" x 1/4"; 4" OAL	Each	Non-Sterile Figure 2
F-BCCA-45-3-TPE	3 port Cap Assembly, GL45	AdvantaFlex® TPE		Each	Non-Sterile Figure 2
F-BCCA-45-3-PM	3 port Cap Assembly, GL45	PharMed®		Each	Non-Sterile Figure 2

PART NUMBER	DESCRIPTION	COMPATIBLE CLOSURE
F-TW-36	F-TW-36   Torque Wrench set to 36 in-lbs (48mm & GL45)	F-BCC-45-1
		F-BCC-45-2
		F-BCC-45-3
F-TWA-45	F-TWA-45   Torque Wrench Adapter GL45	F-BCC-45-1
		F-BCC-45-2
		F-BCC-45-3



# GL45 Caps and Assemblies for Glass Containers

Figure 1

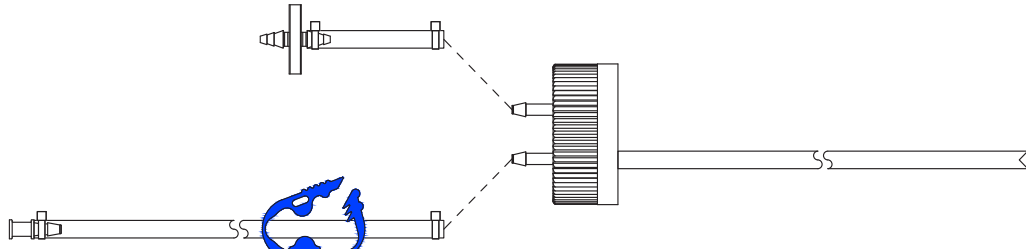
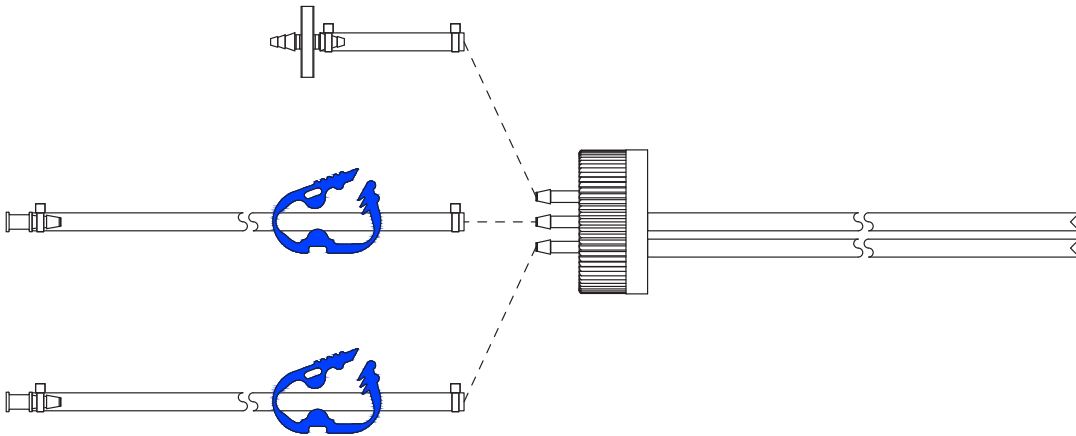


Figure 2



## SPECIFICATIONS:

- ☑ Manufactured in an ISO 8 Cleanroom

---

- ☑ ISO 9001:2015 Certified Facility

---

- ♥ USP Class VI and animal component free

---

- ⚙ Sterilizable by autoclave and gamma irradiation

---

- 🛡 Available with sterility assurance level 10<sup>-6</sup> per ISO 11137



PART NUMBER	DESCRIPTION	CAP MATERIAL	HOSE BARB ID	CLOSURE SIZE	PACK SIZE
F-BCC-83-1	3 port Cap, 83B	PP	(2) - 1/2", (1) - 1/4"	83B	10
F-BCC-83-2	3 port Cap, 83B	PP	(2) - 3/8", (1) - 1/4"	83B	10
F-BCC-83-3	3 port Cap, 83B	PP	(3) - 1/4"	83B	10

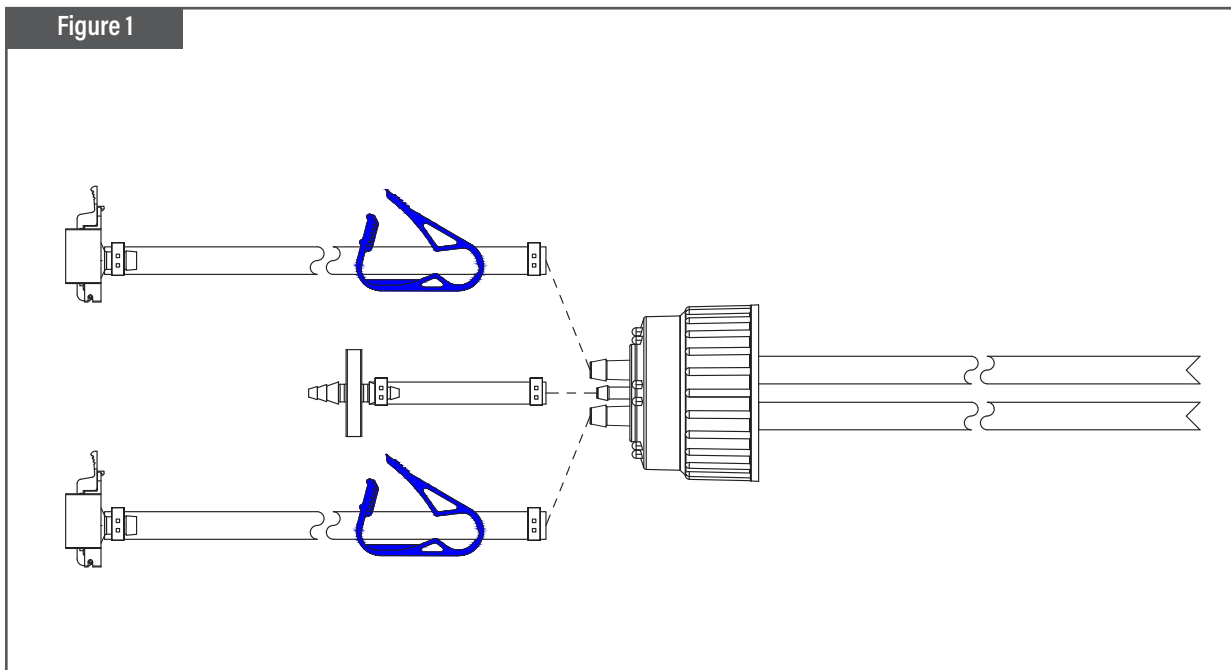
PART NUMBER	DESCRIPTION	TUBING	CONFIGURATION	QUANTITY	STERILITY CLAIM	FIGURE DETAILS
F-BCCA-83-2-PCS	3 port Cap, 83B, for 5L Carboy, PCS	Platinum Cured Silicone	Line 1: 3/8" x 5/8"; 24" OAL w/AseptiQuik® G, 12" dip tube Line 2: 3/8" x 5/8"; 24" OAL w/AseptiQuik® G, 12" dip tube Line 3: 1/4 x 1/2", 4" OAL w/ .2µm vent filter	Each	Sterile	Figure 1
F-BCCA-83-2-TPE	3 port Cap, 83B, for 5L Carboy, TPE	AdvantaFlex® TPE		Each	Sterile	Figure 1
F-BCCA-83-2-PM	3 port Cap, 83B, for 5L Carboy, PharMed®	PharMed®		Each	Sterile	Figure 1
F-BCCA-83-2-PCS	3 port Cap, 83B, for 10L Carboy, PCS	Platinum Cured Silicone	Line 1: 3/8" x 5/8"; 24" OAL w/AseptiQuik® G, 12" dip tube Line 2: 3/8" x 5/8"; 24" OAL w/AseptiQuik® G, 12" dip tube Line 3: 1/4 x 1/2", 4" OAL w/ .2µm vent filter	Each	Sterile	Figure 1
F-BCCA-83-2-TPE	3 port Cap, 83B, for 10L Carboy, TPE	AdvantaFlex® TPE		Each	Sterile	Figure 1
F-BCCA-83-2-PM	3 port Cap, 83B, for 10L Carboy, PharMed®	PharMed®		Each	Sterile	Figure 1
F-BCCA-83-2-PCS	3 port Cap, 83B, for 20L Carboy, PCS	Platinum Cured Silicone	Line 1: 3/8" x 5/8"; 24" OAL w/AseptiQuik® G, 12" dip tube Line 2: 3/8" x 5/8"; 24" OAL w/AseptiQuik® G, 12" dip tube Line 3: 1/4 x 1/2", 4" OAL w/ .2µm vent filter	Each	Sterile	Figure 1
F-BCCA-83-2-TPE	3 port Cap, 83B, for 20L Carboy, TPE	AdvantaFlex® TPE		Each	Sterile	Figure 1
F-BCCA-83-2-PM	3 port Cap, 83B, for 20L Carboy, PharMed®	PharMed®		Each	Sterile	Figure 1

Please see Figure Details on the following page.

**TORQUE TOOLS:**

PART NUMBER	DESCRIPTION	COMPATIBLE CLOSURE
F-TW-73	F-TW-73   Torque Wrench set to 73 in-lbs (83B)	F-BCC-83-1
		F-BCC-83-2
		F-BCC-83-3
F-TWA-83	F-TWA-83   Torque Wrench Adapter 83B	F-BCC-83-1
		F-BCC-83-2
		F-BCC-83-3

Figure 1





# ULTRA CLEAN BOTTLES

## DESCRIPTION:

FlowTainer® ultra clean bottles are the optimal solution for critical fluid handling in upstream and downstream processing, such as filling, freezing, thawing, storage, and transport. The robust impact resistant bottles are made from USP Class VI and animal ingredient free polycarbonate. Manufactured in an ISO 7 cleanroom, ultra clean bottles undergo stringent testing to ensure the highest quality standards are met, such as USP <85> and USP <788>.

FlowTainer® ultra clean bottles are available from 5 mL to 20 L with a variety of hose barb cap configurations for use with platinum cured silicone and TPE tubing.



## SPECIFICATIONS:

- ☑ Manufactured in an ISO 7 Cleanroom
- ✓ ISO 9001:2015 Certified Facility
- ☰ Easy to read graduations
- 🌡️ Ultra-low temperature storage and transport to -90°C
- ❤️ USP Class VI and animal component free
- 🌀 Sterilizable by gamma irradiation and autoclave
- ❄️ Excellent for freezing and storage applications
- 📦 Validation package available
- 🛡️ Available with sterility assurance level  $10^{-6}$  per ISO 11137



ULTRA-LOW TEMPERATURE STORAGE

# ULTRA CLEAN BOTTLES

## FLOWTAINER® REGULATORY OVERVIEW:

### Material of Construction

Polycarbonate (PC) Bottle and HDPE Cap

### Biocompatibility

USP <85>, Bacterial Endotoxin

USP <87>, Biological Reactivity Tests, Cytotoxicity, In Vitro

USP <88>, Biological Reactivity Tests, Class VI, In Vivo

ISO 10993-4, Hemolysis

### Physiochemical

USP <661>, Plastic Packaging Systems

FDA 21 CFR 177.1580, Polycarbonate Resins

FDA 21 CFR 177.1520, Olefin Polymers

### Particulate

USP <788>, Particulate Matter in Injections

### Extractables

Per guidelines of BPOG and USP <665>

### Legislation

REACH

RoHS

### Shelf Life

3 Years, Non-Sterile/Non-Irradiated



# FLOWTAINER® ULTRA CLEAN BOTTLES

## BOTTLE PART NUMBERS:

PART NUMBER	VOLUME	BOTTLE MATERIAL	CAP MATERIAL	CLOSURE SIZE	STERILITY CLAIM	PACK/CASE
F-PCB-005ML	5 mL	PC	HDPE	24 mm	Non-Sterile	25/500
F-PCB-005ML-G	5 mL	PC	HDPE	24 mm	Sterile	25/500
F-PCB-020ML	20 mL	PC	HDPE	24 mm	Non-Sterile	25/500
F-PCB-020ML-G	20 mL	PC	HDPE	24 mm	Sterile	25/500
F-PCB-125ML	125 mL	PC	HDPE	48 mm	Non-Sterile	5/50
F-PCB-125ML-G	125 mL	PC	HDPE	48 mm	Sterile	5/50
F-PCB-500ML	500 mL	PC	HDPE	48 mm	Non-Sterile	2/48
F-PCB-500ML-G	500 mL	PC	HDPE	48 mm	Sterile	2/48
F-PCB-001L	1 L	PC	HDPE	48 mm	Non-Sterile	2/28
F-PCB-001L-G	1 L	PC	HDPE	48 mm	Sterile	2/28
F-PCB-002L	2 L	PC	HDPE	48 mm	Non-Sterile	1/20
F-PCB-002L-G	2 L	PC	HDPE	48 mm	Sterile	1/20
F-PCB-005L	5 L	PC	HDPE	70 mm	Non-Sterile	1/6
F-PCB-005L-G	5 L	PC	HDPE	70 mm	Sterile	1/6
F-PCB-010L	10 L	PC	HDPE	70 mm	Non-Sterile	1/3
F-PCB-010L-G	10 L	PC	HDPE	70 mm	Sterile	1/3
F-PCB-020L	20 L	PC	HDPE	70 mm	Non-Sterile	1/3
F-PCB-020L-G	20 L	PC	HDPE	70 mm	Sterile	1/3

## CLOSURES FOR FLOWTAINER™ ULTRA CLEAN BOTTLES

PART NUMBER	DESCRIPTION	CAP MATERIAL	HOSE BARB ID	CLOSURE SIZE	STERILITY CLAIM
F-BCC-48-1	2 Port Cap, 48 mm	HDPE	(1) - 1/8", (1) - 1/4"	48 mm	Non-Sterile
F-BCC-48-2	2 Port Cap, 48 mm	HDPE	(2) - 1/4"	48 mm	Non-Sterile
F-BCC-48-3	2 Port Cap, 48 mm	HDPE	(2) - 1/8"	48 mm	Non-Sterile
F-BCC-48-4	3 Port Cap, 48 mm	HDPE	(3) - 1/4"	48 mm	Non-Sterile
F-BCC-48-5	3 Port Cap, 48 mm	HDPE	(2) - 1/4", (1) - 1/8"	48 mm	Non-Sterile
F-BCC-70-1	2 Port Cap, 70 mm	HDPE	(2) - 1/4"	70 mm	Non-Sterile
F-BCC-70-2	3 Port Cap, 70 mm	HDPE	(3) - 1/4"	70 mm	Non-Sterile
F-BCC-70-3	4 Port Cap, 70 mm	HDPE	(4) - 3/8"	70 mm	Non-Sterile
F-BCC-70-4	4 Port Cap, 70 mm	HDPE	(4) - 1/4"	70 mm	Non-Sterile



# FLOWTAINER® ULTRA CLEAN BOTTLES

## TORQUE TOOLS:

PART NUMBER	DESCRIPTION	COMPATIBLE CLOSURE
F-TW-36	F-TW-36   Torque Wrench set to 36 in-lbs (48mm)	F-BCC-48-1
		F-BCC-48-2
		F-BCC-48-3
		F-BCC-48-4
		F-BCC-48-5
F-TW-59	F-TW-59   Torque Wrench set to 59 in-lbs (70mm & GL45)	F-BCC-70-1
		F-BCC-70-2
		F-BCC-70-3
		F-BCC-70-4
F-TWA-48FT	F-TWA-48FT   Torque Wrench Adapter 48mm FlowTaine®	F-BCC-48-1
		F-BCC-48-2
		F-BCC-48-3
		F-BCC-48-4
		F-BCC-48-5
F-TWA-70FT	F-TWA-70FT   Torque Wrench Adapter 70mm FlowTainer®	F-BCC-70-1
		F-BCC-70-2
		F-BCC-70-3
		F-BCC-70-4



## PETG BOTTLE SPECIFICATIONS:

- Manufactured in an ISO 7 Cleanroom
- ISO 9001:2015 Certified Facility
- USP Class VI and Animal Component Free
- Non-Pyrogenic and DNase/RNase Free
- Sterilizable by Gamma Irradiation
- Available with Sterility Assurance Level  $10^{-6}$  per ISO 11137

## PET BOTTLE SPECIFICATIONS:

- Manufactured in an ISO 7 Cleanroom
- ISO 9001:2015 Certified Facility
- USP Class VI and Animal Component Free
- Non-Pyrogenic and DNase/RNase Free
- Sterilizable by Gamma Irradiation
- Available with Sterility Assurance level  $10^{-6}$  per ISO 11137

## PETG/PET BOTTLE REGULATORY OVERVIEW

### Material of Construction

PETG or PET

### Biocompatibility

USP <85>, Bacterial Endotoxin

USP <87>, Biological Reactivity Tests, Cytotoxicity, In Vitro

USP <88>, Biological Reactivity Tests, Class VI, In Vivo

ISO 10993-4, Hemolysis

ISO 10993-5, Cytotoxicity

ISO 10993-6, Implantation

ISO 10993-10, Irritation and Sensitization

ISO 10993-11, Systemic Toxicity

### Physiochemical

USP <661>, Plastic Packaging Systems

### Particulate

USP <788>, Particulate Matter in Injections

### Legislation

REACH

RoHS

### Shelf Life

3 Years, Non-Sterile/Non-Irradiated

## MEDIA BOTTLES:

PART NUMBER	VOLUME	BOTTLE MATERIAL	QTY PER PACK/CASE	STERILITY CLAIM
F-PGB-060ML-G	60mL	PETG	24/192	Sterile
F-PGB-060ML			24/192	Non-Sterile
F-PGB-125ML-G	125 mL	PETG	24/96	Sterile
F-PTB-125ML-G		PET		
F-PGB-125ML	125 mL	PETG	24/96	Non-Sterile
F-PTB-125ML		PET		
F-PGB-250ML-G	250 mL	PETG	30/60	Sterile
F-PTB-250ML-G		PET	56/224	
F-PGB-250ML	250 mL	PETG	30/60	Non-Sterile
F-PTB-250ML		PET	56/224	
F-PGB-500ML-G	500 mL	PETG	24/48	Sterile
F-PTB-500ML-G		PET	40/120	
F-PGB-500ML	500 mL	PETG	24/48	Non-Sterile
F-PTB-500ML		PET	40/120	
F-PGB-001L-G	1 L	PETG	12/24	Sterile
F-PTB-001L-G		PET	20/40	
F-PGB-001L	1 L	PETG	12/24	Non-Sterile
F-PTB-001L		PET	20/40	
F-PGB-002L-G	2 L	PETG	12/12	Sterile
F-PGB-002L		PETG	12/12	Non-Sterile



## MEDIA BOTTLE CAPS:

PART NUMBER	DESCRIPTION	CAP MATERIAL	HOSE BARB ID	CLOSURE SIZE	PACK SIZE
F-MBC-2B	2 Port Cap	Polypropylene	(2) -1/8"	125mL/250mL/500mL/1L/2L Media Bottle	12
F-MBC-3B	3 Port Cap	Polypropylene	(3) -1/8"	125mL/250mL/500mL/1L/2L Media Bottle	12
F-MBC-2C	2 Port Cap	Polypropylene	(2) -1/8"	60mL Media Bottle	12



# MEDIA BOTTLES, ASSEMBLIES AND CAPS

## MEDIA BOTTLE ASSEMBLY WITH 2 PORT CAP:

PART NUMBER	VOLUME	BOTTLE MATERIAL	CONFIGURATION	QTY PER PACK/CASE	STERILITY CLAIM	FIGURE DETAILS
F-PGBA-125ML-2	125mL	PETG	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC; Diptube Line 2: 1/8" x 1/4", 4" OAL w/ vent filter	1/6	Sterile	Figure 1
F-PTBA-125ML-2		PET				
F-PGBA-250ML-2	250ml	PETG	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC; Diptube Line 2: 1/8" x 1/4", 4" OAL w/ vent filter	1/6	Sterile	Figure 2
F-PTBA-250ML-2		PET				
F-PGBA-500ML-2	500mL	PETG	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC; Diptube Line 2: 1/8" x 1/4", 4" OAL w/ vent filter	1/6	Sterile	Figure 3
F-PTBA-500ML-2		PET				

## MEDIA BOTTLE ASSEMBLY WITH 3 PORT CAP:

PART NUMBER	VOLUME	BOTTLE MATERIAL	CONFIGURATION	QTY PER PACK/CASE	STERILITY CLAIM	FIGURE DETAILS
F-PGBA-125ML-3	125mL	PETG	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC ; Diptube Line 2: 1/8" x 1/4", 4" OAL w/ vent filter Line 3: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC; Diptube	1/6	Sterile	Figure 1
F-PTBA-125ML-3		PET				
F-PGBA-250ML-3	250ml	PETG	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC ; Diptube Line 2: 1/8" x 1/4", 4" OAL w/ vent filter Line 3: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC; Diptube	1/6	Sterile	Figure 2
F-PTBA-250ML-3		PET				
F-PGBA-500ML-3	500mL	PETG	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC ; Diptube Line 2: 1/8" x 1/4", 4" OAL w/ vent filter Line 3: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC; Diptube	1/6	Sterile	Figure 3
F-PTBA-500ML-3		PET				
F-PGBA-001L-3	1L	PETG	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC ; Diptube Line 2: 1/8" x 1/4", 4" OAL w/ vent filter Line 3: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC; Diptube	1/6	Sterile	Figure 4
F-PTBA-001L-3		PET				



## PC FLASK SPECIFICATIONS:

- Manufactured in an ISO 7 Cleanroom
- ISO 9001:2015 Certified Facility
- USP Class VI and Animal Component Free
- Non-Pyrogenic and DNase/RNase Free
- Sterilizable by Gamma Irradiation and Autoclave
- Available with Sterility Assurance level  $10^{-6}$  per ISO 11137

## PETG FLASK SPECIFICATIONS:

- Manufactured in an ISO 7 Cleanroom
- ISO 9001:2015 Certified Facility
- USP Class VI and Animal Component Free
- Non-Pyrogenic and DNase/RNase Free
- Sterilizable by Gamma Irradiation
- Available with Sterility Assurance level  $10^{-6}$  per ISO 11137

## PC/PETG FLASK REGULATORY OVERVIEW

### Material of Construction

PC or PETG

### Biocompatibility

USP <85>, Bacterial Endotoxin

USP <87>, Biological Reactivity Tests, Cytotoxicity, In Vitro

USP <88>, Biological Reactivity Tests, Class VI, In Vivo

ISO 10993-4, Hemolysis

ISO 10993-5, Cytotoxicity

ISO 10993-6, Implantation

ISO 10993-10, Irritation and Sensitization

ISO 10993-11, Systemic Toxicity

### Physicochemical

USP <661>, Plastic Packaging Systems

### Particulate

USP <788>, Particulate Matter in Injections

### Legislation

REACH

RoHS

### Shelf Life

3 Years, Non-Sterile/Non-Irradiated

## ERLENMEYER FLASKS:

PART NUMBER	VOLUME	FLASK BOTTOM	FLASK MATERIAL	STERILITY CLAIM	QTY PER PACK/CASE
F-PCF-125ML-G	125mL	Baffled	Polycarbonate	Sterile	1/24
F-PGFP-125ML-G		Plain	PETG		
F-PCFP-125ML-G		Plain	Polycarbonate		
F-PCF-125ML	125mL	Baffled	Polycarbonate	Non-Sterile	1/24
F-PGFP-125ML		Plain	PETG		
F-PCFP-125ML		Plain	Polycarbonate		
F-PCF-250ML-G	250mL	Baffled	Polycarbonate	Sterile	1/12
F-PGFP-250ML-G		Plain	PETG		
F-PCFP-250ML-G		Plain	Polycarbonate		
F-PCF-250ML	250mL	Baffled	Polycarbonate	Non-Sterile	1/12
F-PGFP-250ML		Plain	PETG		
F-PCFP-250ML		Plain	Polycarbonate		
F-PCF-500ML-G	500mL	Baffled	Polycarbonate	Sterile	1/12
F-PGFP-500ML-G		Plain	PETG		
F-PCFP-500ML-G		Plain	Polycarbonate		
F-PCF-500ML	500mL	Baffled	Polycarbonate	Non-Sterile	1/12
F-PGFP-500ML		Plain	PETG		
F-PCFP-500ML		Plain	Polycarbonate		
F-PCF-001L-G	1L	Baffled	Polycarbonate	Sterile	1/12
F-PGFP-001L-G		Plain	PETG		
F-PCFP-001L-G		Plain	Polycarbonate		
F-PCF-001L	1L	Baffled	Polycarbonate	Non-Sterile	1/12
F-PGFP-001L		Plain	PETG		
F-PCFP-001L		Plain	Polycarbonate		
F-PCFP-003L-G	3L	Plain	Polycarbonate	Sterile	1/12
F-PCFP-005L-G	5L	Plain	Polycarbonate		1/6
F-PCFP-003L	3L	Plain	Polycarbonate	Non-Sterile	1/12
F-PCFP-005L	5L	Plain	Polycarbonate		1/6

## FLASK CAPS:

PART NUMBER	DESCRIPTION	CAP MATERIAL	HOSE BARB ID	CLOSURE SIZE	PACK SIZE	STERILITY CLAIM
F-FCC-2BS	2 Port Cap	Polypropylene	(2) - 1/8"	125mL Erlenmeyer Flask	12	Non-Sterile
F-FCC-3BS	3 Port Cap	Polypropylene	(3) - 1/8"	125mL Erlenmeyer Flask	12	Non-Sterile
F-FCC-2B	2 Port Cap	Polypropylene	(2) - 1/8"	250mL/500mL/1L Erlenmeyer Flask	12	Non-Sterile
F-FCC-3B	3 Port Cap	Polypropylene	(3) - 1/8"	250mL/500mL/1L Erlenmeyer Flask	12	Non-Sterile
F-FCC-2BL	2 Port Cap	Polypropylene	(2) - 1/4"	3L/5L Erlenmeyer Flask	12	Non-Sterile
F-FCC-3BL	3 Port Cap	Polypropylene	(3) - 1/4"	3L/5L Erlenmeyer Flask	12	Non-Sterile
F-FCC-1	Solid Flat Cap	Polypropylene	N/A	125mL Erlenmeyer Flask	12	Non-Sterile
F-FCC-2	Solid Flat Cap	Polypropylene	N/A	250mL/500mL/1L Erlenmeyer Flask	12	Non-Sterile
F-FCC-3	Solid Flat Cap	Polypropylene	N/A	3L/5L Erlenmeyer Flask	12	Non-Sterile



## ERLENMEYER FLASK ASEPTIC TRANSFER CAP:

PART NUMBER	FLASK VOLUME	CONFIGURATION	QUANTITY PER PACK/CASE	STERILITY CLAIM	FIGURE DETAILS
F-FCA-250ML-2	250ml	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock ; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter	1/4	Sterile	Figure 1
F-FCA-500ML-2	500mL	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock ; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter			
F-FCA-001L-2	1L	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock ; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter			
F-FCA-003L-2	3L	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock ; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter	1/2		
F-FCA-005L-2	5L				

## FLASK ASSEMBLIES: 2 PORT CAP

PART NUMBER	VOLUME	FLASK BOTTOM	FLASK MATERIAL	CONFIGURATION	QUANTITY PER PACK/CASE	STERILITY CLAIM	FIGURE DETAILS
F-PCFA-250ML-2	250mL	Baffled	Polycarbonate	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock ; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter	1/4	Sterile	Figure 2
F-PGFPA-250ML-2		Plain	PETG				
F-PCFPA-250ML-2		Plain	Polycarbonate				
F-PCFA-500ML-2	500mL	Baffled	Polycarbonate	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock ; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter			
F-PGFPA-500ML-2		Plain	PETG				
F-PCFPA-500ML-2		Plain	Polycarbonate				
F-PCFA-001L-2	1L	Baffled	Polycarbonate	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock ; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter			
F-PGFPA-001L-2		Plain	PETG				
F-PCFPA-001L-2		Plain	Polycarbonate				
F-PCFA-003L-2	3L	Plan	Polycarbonate	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock ; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter	1/2		Figure 3
F-PCFA-005L-2	5L	Plain	Polycarbonate	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock ; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter			Figure 4

## FLASK ASSEMBLIES: 3 PORT CAP

PART NUMBER	VOLUME	FLASK BOTTOM	FLASK MATERIAL	CONFIGURATION	QUANTITY PER PACK/CASE	STERILITY CLAIM	FIGURE DETAILS
F-PCFA-250ML-3	250ml	Baffled	Polycarbonate	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter Line 3: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC; Diptube	1/4	Sterile	Figure 5
F-PGFPA-250ML-3		Plain	PETG				
F-PCFPA-250ML-3		Plain	Polycarbonate				
F-PCFA-500ML-3	500mL	Baffled	Polycarbonate	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter Line 3: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC; Diptube			
F-PGFPA-500ML-3		Plain	PETG				
F-PCFPA-500ML-3		Plain	Polycarbonate				
F-PCFA-001L-3	1L	Baffled	Polycarbonate	Line 1: 1/8" x 1/4" TPE Tubing; 24" OAL w/ Male Luer Lock; Diptube Line 2: 1/8" x 1/4" , 4" OAL w/ vent filter Line 3: 1/8" x 1/4" TPE Tubing; 24" OAL w/ MPC; Diptube			
F-PGFPA-001L-3		Plain	PETG				
F-PCFPA-001L-3		Plain	Polycarbonate				



## SPECIFICATIONS:

- Manufactured in an ISO 7 Cleanroom

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- ISO 9001:2015 Certified Facility

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- USP Class VI and Animal Component Free

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- Available with pH and DO Optical Sensors

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- Available in 1L, 2L, 10L, 20L and 50L sizes

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- All Hose Barb Ports are ¼" ID

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- Optimized for cell lines that have Irgafos™ antioxidant sensitivity

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- Sterility Assurance Level 10<sup>-6</sup> per ISO 11137

## BAG FILM REGULATORY OVERVIEW

### Material of Construction

ULDPE Fluid Contact Layer

### Biocompatibility

USP <85>, Bacterial Endotoxin

USP <88>, Biological Reactivity Tests, Class VI, In Vivo

USP <87>, Biological Reactivity Tests, In Vitro

ISO 10993-4, Hemolysis

ISO 10993-5, Cytotoxicity

ISO 10993-6, Implantation

ISO 10993-10, Irritation and Sensitization

ISO 10993-11, Systemic Toxicity

### Physiochemical

USP <661>, Plastic Packaging Systems

EP 3.2.2.1, Plastic Containers for Aqueous Solutions for Infusion

### Extractables

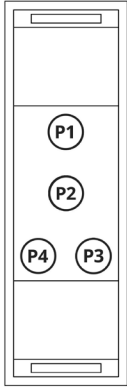
Per BPOG Protocol



## BLANK CHAMBERS

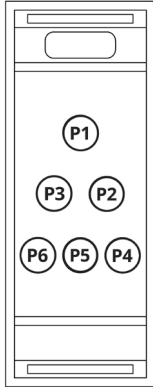
PART NUMBER	CAPACITY	VERSION	FIGURE
F-RBC-001L	1L	Basic	1
F-RBC-002L	2L	Basic	2
F-RBC-002L-S	2L	pH/DO Sensors	3
F-RBC-010L	10L	Basic	4
F-RBC-010L-S	10L	pH/DO Sensors	5
F-RBC-020L	20L	Basic	6
F-RBC-020L-S	20L	pH/DO Sensors	7
F-RBC-050L	50L	Basic	8
F-RBC-050L-S	50L	pH/DO Sensors	9

Figure 1



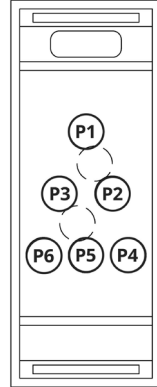
F-RBW-001L

Figure 2



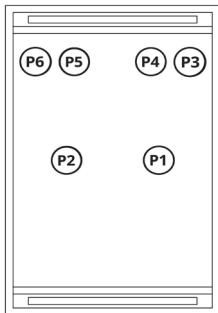
F-RBW-002L

Figure 3



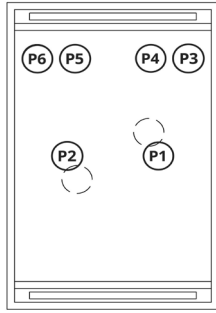
F-RBW-002L-S

Figure 4



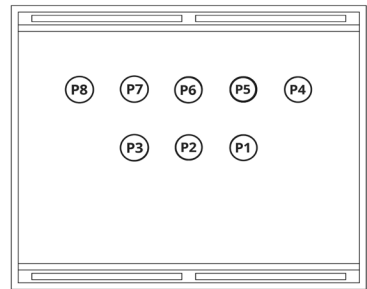
F-RBW-010L

Figure 5



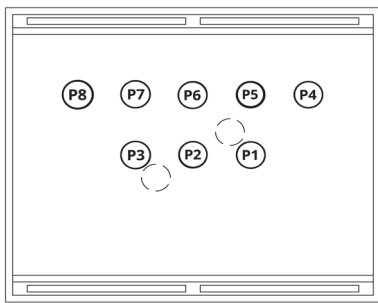
F-RBW-010L-S

Figure 6



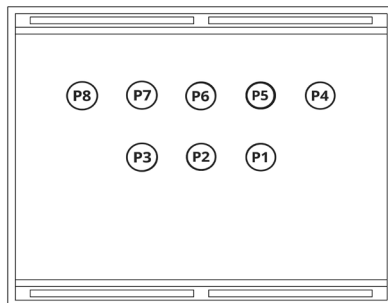
F-RBW-020L

Figure 7



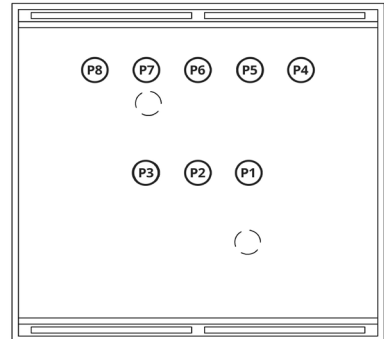
F-RBW-020L-S

Figure 8



F-RBW-050L

Figure 9



F-RBW-050L-S



# 2D BIO BAG CHAMBERS

## DESCRIPTION:

FlowLinX® 2D bio bag chambers are designed for aseptic fluid handling in upstream and downstream processing, such as sampling, buffer and media storage, and chromatography. The bag chamber design allows for easy product recovery with minimal product hold up. Made from USP Class VI components, FlowLinX® 2D bio bag chambers are available from 50mL to 50L in 3 port and 4 port configurations.



## SPECIFICATIONS:

- Manufactured in an ISO 7 Cleanroom

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- ISO 9001:2015 Certified Facility

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- USP <88> Class VI & Animal Component Free

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- Aseptically connect using AseptiQuik® or TPE tube welder

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- Aseptically disconnect using TPE tube sealer

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- Double bagged and ready to use

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- Sterility assurance level  $10^{-6}$  per ISO 11137



# 2D BIO BAG CHAMBERS

## 2D BAG ORDERING INFORMATION:

PART NUMBER	DESCRIPTION	VOL	PORT CONFIGURATION
F-2DB-050ML	FlowLinX® 2D Bag, 3 x 1/8" HB, 50mL	50mL	1/8"×3
F-2DB-050ML-SEAL-1	FlowLinX® 2D Bag, 1 x 1/8" HB, 50mL		1/8"×3 (2 Blocked)
F-2DB-050ML-SEAL-2	FlowLinX® 2D Bag, 2 x 1/8" HB, 50mL		1/8"×3 (1 Blocked)
F-2DB-100ML	FlowLinX® 2D Bag, 3 x 1/8" HB, 100mL	100mL	1/8"×3
F-2DB-100ML-SEAL-1	FlowLinX® 2D Bag, 1 x 1/8" HB, 100mL		1/8"×3 (2 Blocked)
F-2DB-100ML-SEAL-2	FlowLinX® 2D Bag, 2 x 1/8" HB, 100mL		1/8"×3 (1 Blocked)
F-2DB-250ML	FlowLinX® 2D Bag, 3 x 1/8" HB , 250mL	250mL	1/8"×3
F-2DB-250ML-SEAL-1	FlowLinX® 2D Bag, 1 x 1/8" HB , 250mL		1/8"×3 (2 Blocked)
F-2DB-250ML-SEAL-2	FlowLinX® 2D Bag, 2 x 1/8" HB , 250mL		1/8"×3 (1 Blocked)
F-2DB-500ML	FlowLinXr® 2D Bag, 3 x 1/4" HB , 500mL	500mL	1/4"×3
F-2DB-500ML-SEAL-1	FlowLinXr® 2D Bag, 1 x 1/4" HB , 500mL		1/4"×3 (2 Blocked)
F-2DB-500ML-SEAL-2	FlowLinX® 2D Bag, 2 x 1/4" HB , 500mL		1/4"×3 (1 Blocked)
F-2DB-001L	FlowLinX® 2D Bag, 3 x 1/4" HB, 1L	1L	1/4"×3
F-2DB-001L-SEAL-1	FlowLinX® 2D Bag, 1 x 1/4" HB, 1L		1/4"×3 (2 Blocked)
F-2DB-001L-SEAL-2	FlowLinX® 2D Bag, 2 x 1/4" HB, 1L		1/4"×3 (1 Blocked)
F-2DB-002L	FlowLinX® 2D Bag, 3 x 1/4" HB, 2L	2L	1/4"×3
F-2DB-002L-SEAL-1	FlowLinX® 2D Bag, 1 x 1/4" HB, 2L		1/4"×3 (2 Blocked)
F-2DB-002L-SEAL-2	FlowLinX® 2D Bag, 2 x 1/4" HB, 2L		1/4"×3 (1 Blocked)
F-2DB-003L	FlowLinX® 2D Bag, 3 x 1/4" HB, 3L	3L	1/4"×3
F-2DB-003L-SEAL-1	FlowLinX® 2D Bag, 1 x 1/4" HB, 3L		1/4"×3 (2 Blocked)
F-2DB-003L-SEAL-2	FlowLinX® 2D Bag, 2 x 1/4" HB, 3L		1/4"×3 (1 Blocked)
F-2DB-005L	FlowLinX® 2D Bag, 3 x 3/8" HB, 1 x 1/4" HB, 5L	5L	3/8"×3, 1/4"×1
F-2DB-005L-SEAL-1	FlowLinX® 2D Bag, 1 x 3/8" HB, 5L		3/8"×3 (2 Blocked), 1/4"×1 (1)
F-2DB-005L-SEAL-2	FlowLinX® 2D Bag, 2 x 3/8" HB, 5L		3/8"×3 (1 Blocked), 1/4"×1 (1 Blocked)
F-2DB-005L-SEAL-3	FlowLinX® 2D Bag, 3 x 3/8" HB, 5L		3/8"×3, 1/4"×1 (1 Blocked)
F-2DB-005L-SEAL-4	FlowLinX® 2D Bag, 1 x 3/8" HB, 1 x 1/4" HB, 5L		3/8"×3 (2 Blocked), 1/4"×1
F-2DB-005L-SEAL-5	FlowLinX® 2D Bag, 2 x 3/8" HB, 1 x 1/4" HB, 5L	3/8"×3 (1 Blocked), 1/4"×1	

Continued on next page...

# 2D BIO BAG CHAMBERS

## 2D BAG ORDERING INFORMATION (CONTINUED):

PART NUMBER	DESCRIPTION	VOL	PORT CONFIGURATION
F-2DB-010L	FlowLinX® 2D Bag, 3 x 3/8" HB, 1 x 1/4" HB, 10L	10L	3/8"³, 1/4"¹
F-2DB-010L-SEAL-1	FlowLinX® 2D Bag, 1 x 3/8" HB, 10L		3/8"³ (2 Blocked), 1/4"¹ (1 Blocked)
F-2DB-010L-SEAL-2	FlowLinX® 2D Bag, 2 x 3/8" HB, 10L		3/8"³ (1 Blocked), 1/4"¹ (1 Blocked)
F-2DB-010L-SEAL-3	FlowLinX® 2D Bag, 3 x 3/8" HB, 10L		3/8"³, 1/4"¹ (1 Blocked)
F-2DB-010L-SEAL-4	FlowLinX® 2D Bag, 1 x 3/8" HB, 1 x 1/4" HB, 10L		3/8"³ (2 Blocked), 1/4"¹
F-2DB-010L-SEAL-5	FlowLinX® 2D Bag, 2 x 3/8" HB, 1 x 1/4" HB, 10L		3/8"³ (1 Blocked), 1/4"¹
F-2DB-020L	FlowLinX® 2D Bag, 3 x 3/8" HB, 1 x 1/4" HB, 20L	20L	3/8"³, 1/4"¹
F-2DB-020L-SEAL-1	FlowLinX® 2D Bag, 1 x 3/8" HB, 20L		3/8"³ (2 Blocked), 1/4"¹ (1 Blocked)
F-2DB-020L-SEAL-2	FlowLinX® 2D Bag, 2 x 3/8" HB, 20L		3/8"³ (1 Blocked), 1/4"¹ (1 Blocked)
F-2DB-020L-SEAL-3	FlowLinX® 2D Bag, 3 x 3/8" HB, 20L		3/8"³, 1/4"¹ (1 Blocked)
F-2DB-020L-SEAL-4	FlowLinX® 2D Bag, 1 x 3/8" HB, 1 x 1/4" HB, 20L		3/8"³ (2 Blocked), 1/4"¹
F-2DB-020L-SEAL-5	FlowLinX® 2D Bag, 2 x 3/8" HB, 1 x 1/4" HB, 20L		3/8"³ (1 Blocked), 1/4"¹
F-2DB-030L	FlowLinX® 2D Bag, 3 x 3/8" HB, 1 x 1/4" HB, 30L	30L	3/8"³, 1/4"¹
F-2DB-030L-SEAL-1	FlowLinX® 2D Bag, 1 x 3/8" HB, 30L		3/8"³ (2 Blocked), 1/4"¹ (1 Blocked)
F-2DB-030L-SEAL-2	FlowLinX® 2D Bag, 2 x 3/8" HB, 30L		3/8"³ (1 Blocked), 1/4"¹ (1 Blocked)
F-2DB-030L-SEAL-3	FlowLinX® 2D Bag, 3 x 3/8" HB, 30L		3/8"³, 1/4"¹ (1 Blocked)
F-2DB-030L-SEAL-4	FlowLinX® 2D Bag, 1 x 3/8" HB, 1 x 1/4" HB, 30L		3/8"³ (2 Blocked), 1/4"¹
F-2DB-030L-SEAL-5	FlowLinX® 2D Bag, 2 x 3/8" HB, 1 x 1/4" HB, 30L		3/8"³ (1 Blocked), 1/4"¹
F-2DB-050L	FlowLinX® 2D Bag, 3 x 3/8" HB, 1 x 1/4" HB, 50L	50L	3/8"³, 1/4"¹
F-2DB-050L-SEAL-1	FlowLinX® 2D Bag, 1 x 3/8" HB, 50L		3/8"³ (2 Blocked), 1/4"¹ (1 Blocked)
F-2DB-050L-SEAL-2	FlowLinX® 2D Bag, 2 x 3/8" HB, 50L		3/8"³ (1 Blocked), 1/4"¹ (1 Blocked)
F-2DB-050L-SEAL-3	FlowLinX® 2D Bag, 3 x 3/8" HB, 50L		3/8"³, 1/4"¹ (1 Blocked)
F-2DB-050L-SEAL-4	FlowLinX® 2D Bag, 1 x 3/8" HB, 1 x 1/4" HB, 50L		3/8"³ (2 Blocked), 1/4"¹
F-2DB-050L-SEAL-5	FlowLinX® 2D Bag, 2 x 3/8" HB, 1 x 1/4" HB, 50L		3/8"³ (1 Blocked), 1/4"¹

## DESCRIPTION:

FlowLinX® powder bags and stands are designed for powder filling, containment and discharge for the manufacturing of liquid media, buffers and other chemicals. The bag chamber design allows for maximum powder recovery and is available with a wash line for post-discharge rinsing. Made from USP Class VI components and ULDPE film, FlowLinX® powder bags are available from 5kg to 50kg with either a 3" or 4" sanitary tri-clamp flange. Choose from standard sterile or non-sterile configurations or customize the bag to your requirements.

## SPECIFICATIONS:

- Manufactured in an ISO 7 Cleanroom
- ISO 9001:2015 Certified Facility
- USP <88> Class VI & Animal Component Free
- Sterile or Non-Sterile Configurations
- 3" or 4" Sanitary Flange
- Sterility Assurance Level  $10^{-6}$  per ISO 11137

## APPLICATIONS:

- Bulk/Dry Powder Media
- Buffer Media
- Intermediates
- API
- Excipients





## BAG FILM REGULATORY OVERVIEW:

### Material of Construction

ULDPE Fluid Contact Layer

### Biocompatibility

USP <85>, Bacterial Endotoxin

USP <88>, Biological Reactivity Tests, Class VI, In Vivo

USP <87>, Biological Reactivity Tests, Cytotoxicity, In Vitro

ISO 10993-4, Hemolysis

ISO 10993-5, Cytotoxicity

ISO 10993-6, Implantation

ISO 10993-10, Irritation and Sensitization

ISO 10993-11, Systemic Toxicity

### Physicochemical

USP <661>, Plastic Packaging Systems

EP 3.2.2.1, Plastic Containers for Aqueous Solutions for Infusion

### Extractables

Per BPOG Protocol

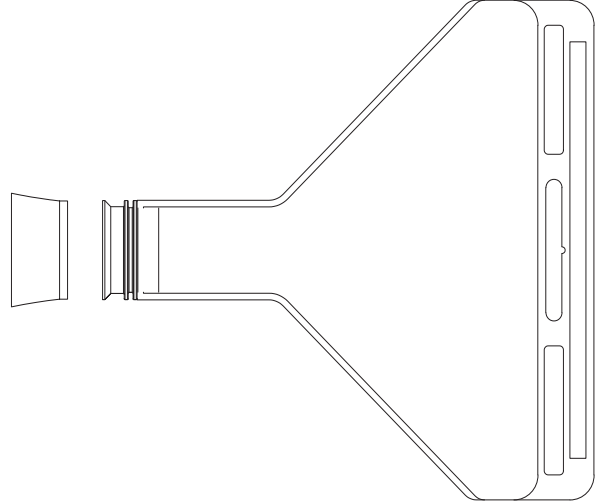


FIGURE 1 - SANITARY SEAL W/ DUST COVER

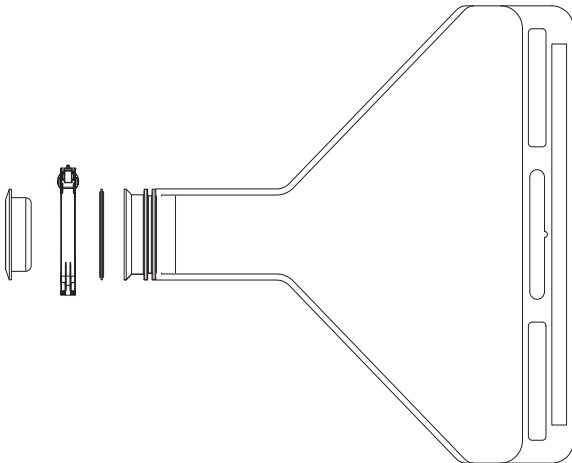


FIGURE 2 - SANITARY SEAL W/ END CAP

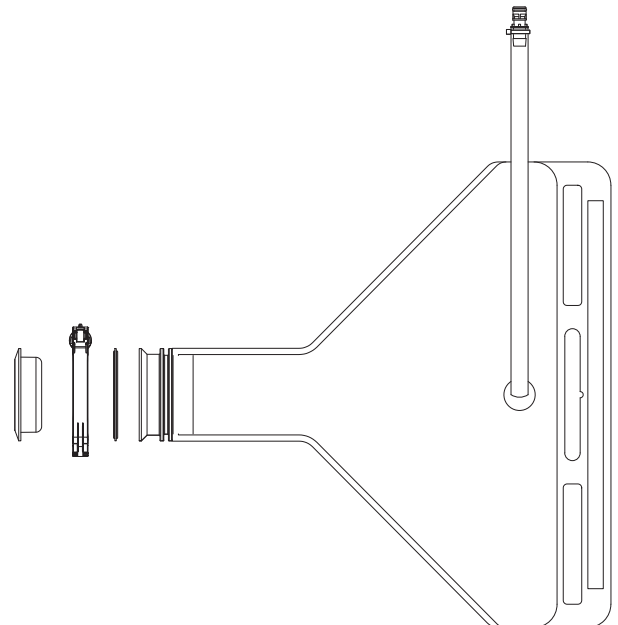


FIGURE 3 - SANITARY SEAL W/ WASH LINE

# POWDER BAGS AND STANDS

## ORDERING INFORMATION:

PART NUMBER	VOLUME	CONFIGURATION	STERILITY CLAIM	QTY	FIGURE
F-PB-05-3TC	5L	3" Sanitary Seal w/ Dust Cover	Non-Sterile	Each	1
F-PB-10-3TC	10L			Each	
F-PB-15-3TC	15L			Each	
F-PB-25-3TC	25L			Each	
F-PB-50-3TC	50L			Each	
F-PB-05-4TC	5L	4" Sanitary Seal w/ Dust Cover		Each	
F-PB-10-4TC	10L			Each	
F-PB-15-4TC	15L			Each	
F-PB-25-4TC	25L			Each	
F-PB-50-4TC	50L			Each	
F-PBC-05-3TC-S	5L	3" Sanitary Seal w/ End Cap	Sterile	Each	2
F-PBC-10-3TC-S	10L			Each	
F-PBC-15-3TC-S	15L			Each	
F-PBC-25-3TC-S	25L			Each	
F-PBC-50-3TC-S	50L			Each	
F-PBC-05-4TC-S	5L	4" Sanitary Seal w/ End Cap		Each	
F-PBC-10-4TC-S	10L			Each	
F-PBC-15-4TC-S	15L			Each	
F-PBC-25-4TC-S	25L			Each	
F-PBC-50-4TC-S	50L			Each	
F-PBCW-05-3TC-S	5L	3" Sanitary Seal w/ End Cap Line 1: Wash Line, 3/8" x 5/8" PCS w/ MPC	Each	3	
F-PBCW-10-3TC-S	10L		Each		
F-PBCW-15-3TC-S	15L		Each		
F-PBCW-25-3TC-S	25L		Each		
F-PBCW-50-3TC-S	50L		Each		
F-PBCW-05-4TC-S	5L	4" Sanitary Seal w/ End Cap Line 1: Wash Line, 3/8" x 5/8" PCS w/ MPC	Each		
F-PBCW-10-4TC-S	10L		Each		
F-PBCW-15-4TC-S	15L		Each		
F-PBCW-25-4TC-S	25L		Each		
F-PBCW-50-4TC-S	50L		Each		

PART NUMBER	CONFIGURATION	QTY
PBS-3TC	3" Sanitary Bag Stand	Each
PBS-4TC	4" Sanitary Bag Stand	Each

FlowLinX® molded sanitary assemblies are the optimal choice for aseptic fluid transfer, sampling, sterile filling, and other critical bioprocess applications. Made from platinum cured silicone, molded sanitary assemblies are available in mini (0.75"), maxi (1.5") and 2" sanitary versions with a variety of tubing sizes and lengths. The one-piece leak proof design features a gasket molded into the face of the sanitary which ensures proper connection alignment, reduces operator contact with the fluid path and eliminates entrapment.



*Choose from standard configurations or customize to your requirements.*



## SPECIFICATIONS:

- Manufactured in an ISO 8 Cleanroom
- ISO 9001:2015 Certified Facility
- Animal Component Free
- Mini (0.75"), maxi (1-1/2"), and 2" sanitary sizes
- Polysulfone or stainless-steel backup cups
- Sterility assurance level  $10^{-6}$  per ISO 11137

## SILICONE REGULATORY OVERVIEW:

<p><b>Material of Construction</b></p> <p>Platinum Cured Silicone</p>	<p><b>Physiochemical</b></p> <p>USP &lt;661&gt;, Plastic Packaging Systems</p> <p>EP 3.1.9, Plastic Packaging Systems and Materials of Construction</p> <p>FDA 21 CFR 177.2600, Rubber Articles Intended for Repeated Use</p>
<p><b>Biocompatibility</b></p> <p>USP &lt;85&gt;, Bacterial Endotoxin</p> <p>USP &lt;88&gt;, Biological Reactivity Tests, Class VI, In Vivo</p> <p>ISO 10993-3, Mutagenicity</p> <p>ISO 10993-4, Hemolysis</p> <p>ISO 10993-5, Cytotoxicity</p> <p>ISO 10993-10, Irritation and Sensitization</p> <p>ISO 10993-11, Systemic Toxicity</p>	<p><b>Extractables</b></p> <p>Per BPOG Protocol</p> <p><b>Legislation</b></p> <p>REACH</p> <p>RoHS</p> <p>Conflict Mineral</p>

## TUBING SELECTOR

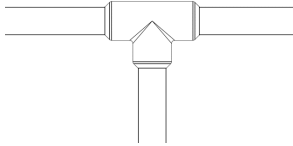
EXAMPLE PRODUCT ID:

FA S 188375 X X P 6 U

Assembly	Tubing Type	Tubing Size	First End Type	Second End Type	Backup Cup	Length	Treatment Type
FA: Flowlinx Assembly	S: Silicone Unreinforced	<p><b>Unreinforced:</b></p> <p>188375: 0.188" x 0.375"</p> <p>188438: 0.188" x 0.438"</p> <p>250375: 0.250" x 0.375"</p> <p>250438: 0.250" x 0.438"</p> <p>250500: 0.250" x 0.500"</p> <p>313438: 0.313" x 0.438"</p> <p>313563: 0.313" x 0.563"</p> <p>375500: 0.375" x 0.500"</p> <p>375563: 0.375" x 0.563"</p> <p>375625: 0.375" x 0.625"</p> <p>500750: 0.500" x 0.750"</p> <p>625875: 0.625" x 0.875"</p> <p>7501000: 0.750" x 1.000"</p> <p>10001375: 1.000" x 1.375"</p>	<p>X: Maxi Sanitary</p> <p>M: Mini Sanitary</p> <p>2: 2" Sanitary</p>	<p>X: Maxi Sanitary</p> <p>M: Mini Sanitary</p> <p>2: 2" Sanitary</p> <p>O: Open End</p>	<p>P: Polysulfone</p> <p>S: Stainless</p>	<p>6: 6"</p> <p>12: 12"</p> <p>24: 24"</p> <p>36: 36"</p> <p>48: 48"</p> <p>60: 60"</p> <p>72: 72"</p> <p>84: 84"</p> <p>96: 96"</p> <p>120: 120"</p>	<p>U: non-sterile</p> <p>S: sterile</p>
	B: Silicone Reinforced	<p><b>Braid Reinforced:</b></p> <p>250: 0.250" ID</p> <p>375: 0.375" ID</p> <p>500: 0.500" ID</p> <p>625: 0.625" ID</p> <p>1000: 1.000" ID</p>					

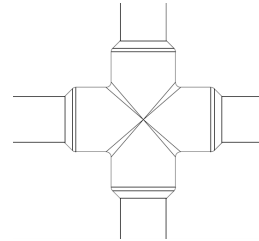


# TEES, WYES AND CROSSES



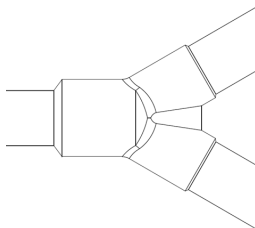
TEES

TUBING ID	TUBING OD
1/8" (3.2 mm)	1/4" (6.4 mm)
1/4" (6.4 mm)	7/16" (11.1 mm)
1/4" (6.4 mm)	1/2" (12.7 mm)
3/8" (9.5 mm)	5/8" (15.9 mm)
1/2" (12.7 mm)	3/4" (19.1 mm)
1/2" (12.7 mm)	7/8" (22.2 mm)
3/4" (19.1 mm)	1" (25.4 mm)
1" (25.4 mm)	1-3/8" (34.9 mm)



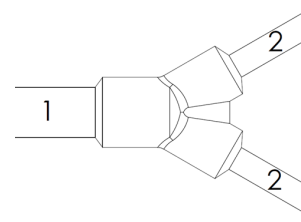
CROSSES

TUBING ID	TUBING OD
1/8" (3.2 mm)	1/4" (6.4 mm)
1/4" (6.4 mm)	7/16" (11.1 mm)
1/4" (6.4 mm)	1/2" (12.7 mm)
3/8" (9.5 mm)	5/8" (15.9 mm)
1/2" (12.7 mm)	3/4" (19.1 mm)
1/2" (12.7 mm)	7/8" (22.2 mm)
3/4" (19.1 mm)	1" (25.4 mm)
1" (25.4 mm)	1-3/8" (34.9 mm)



WYES

TUBING ID	TUBING OD
1/32" (0.8 mm)	5/32" (4.0 mm)
3/64" (1.2 mm)	11/64" (4.4 mm)
1/16" (1.6 mm)	3/16" (4.8 mm)
3/32" (2.4 mm)	7/32" (5.6 mm)
1/8" (3.2 mm)	1/4" (6.4 mm)
1/8" (3.2 mm)	5/16" (7.9 mm)
3/16" (4.8 mm)	5/16" (7.9 mm)
1/4" (6.4 mm)	7/16" (11.1 mm)
3/8" (9.5 mm)	5/8" (15.9 mm)
1/2" (12.7 mm)	3/4" (19.1 mm)
3/4" (19.1 mm)	1" (25.4 mm)
1" (25.4 mm)	1-3/8" (34.9 mm)



REDUCING WYES

TUBING ID 1	TUBING OD 1	Tubing ID 2	Tubing ID 2
1/16" (1.6 mm)	3/16" (4.8 mm)	3/64" (1.2 mm)	11/64" (4.4 mm)
3/32" (2.4 mm)	7/32" (5.6 mm)	1/16" (1.6 mm)	3/16" (4.8 mm)
1/8" (3.2 mm)	1/4" (6.4 mm)	3/64" (1.2 mm)	11/64" (4.4 mm)
1/8" (3.2 mm)	1/4" (6.4 mm)	1/16" (1.6 mm)	3/16" (4.8 mm)
1/8" (3.2 mm)	1/4" (6.4 mm)	3/32" (2.4 mm)	7/32" (5.6 mm)
3/16" (4.8 mm)	3/8" (9.5 mm)	1/16" (1.6 mm)	3/16" (4.8 mm)
3/16" (4.8 mm)	3/8" (9.5 mm)	1/8" (3.2 mm)	1/4" (6.4 mm)
1/4" (6.4 mm)	3/8" (9.5 mm)	1/8" (3.2 mm)	1/4" (6.4 mm)
1/4" (6.4 mm)	3/8" (9.5 mm)	3/16" (4.8 mm)	3/8" (9.5 mm)
1/4" (6.4 mm)	1/2" (12.7 mm)	3/16" (4.8 mm)	3/8" (9.5 mm)
3/8" (9.5 mm)	5/8" (15.9 mm)	1/4" (6.4 mm)	7/16" (11.1 mm)
1/2" (12.7 mm)	3/4" (19.1 mm)	3/8" (9.5 mm)	5/8" (15.9 mm)

\*Additional sizes available upon request [customerservice@carolinaflow.com](mailto:customerservice@carolinaflow.com)



# MOLDED CLOSURES

PART NUMBER	TYPE	CLOSURE SIZE	FLOWTAINER® BOTTLE SIZE	CONFIGURATION (TOP)	CONFIGURATION (DIP TUBE)	QTY PER PACK/ CASE	FIGURE
F-TPC-24-1	TPE	24mm	60 mL PETG/PET	Line 1: 1/8" x 1/4", 12" OAL Line 2: 1/8" x 1/4", 12" OAL	Line 1: 1/8" x 1/4", 3.5" OAL	1/6	1
F-TPC-38-1	TPE	38-430	125mL to 2L PETG/PET	Line 1: 1/8" x 1/4", 24" OAL Line 2: 1/8" x 1/4", 24" OAL	Line 1: 1/8" x 1/4", 12" OAL	1/6	2
F-TPC-38-2	TPE	38-430	125mL to 2L PETG/PET	Line 1: 1/8" x 1/4", 24" OAL Line 2: 1/8" x 1/4", 24" OAL Line 3: 1/8" x 1/4", 4" OAL	Line 1: 1/8" x 1/4", 12" OAL	1/6	3
F-TPC-53-1	TPE	53B	N/A	Line 1: 1/8" x 1/4", 24" OAL Line 2: 1/8" x 1/4", 24" OAL	Line 1: 1/8" x 1/4", 12" OAL	1/6	4
F-TPC-RB-1	TPE	Roller Bottle	PS Roller Bottle	Line 1: 1/8" x 1/4", 24" OAL Line 2: 1/8" x 1/4", 24" OAL	Line 1: 1/8" x 1/4", 24" OAL	1/6	5
F-SIC-24-1	PCS	24mm	60 mL PETG/PET	Line 1: 1/8" x 1/4", 12" OAL Line 2: 1/8" x 1/4", 12" OAL	Line 1: 1/8" x 1/4", 3.5" OAL	1/6	1
F-SIC-38-1	PCS	38-430	125mL to 2L PETG/PET	Line 1: 1/8" x 1/4", 24" OAL Line 2: 1/8" x 1/4", 24" OAL	Line 1: 1/8" x 1/4", 12" OAL	1/6	2
F-SIC-38-2	PCS	38-430	125mL to 2L PETG/PET	Line 1: 1/8" x 1/4", 24" OAL Line 2: 1/8" x 1/4", 24" OAL Line 3: 1/8" x 1/4", 4" OAL	Line 1: 1/8" x 1/4", 12" OAL	1/6	3
F-SIC-53-1	PCS	53B	N/A	Line 1: 1/8" x 1/4", 24" OAL Line 2: 1/8" x 1/4", 24" OAL	Line 1: 1/8" x 1/4", 12" OAL	1/6	4

\*Additional sizes available upon request [customerservice@carolinaflow.com](mailto:customerservice@carolinaflow.com)



Figure 1

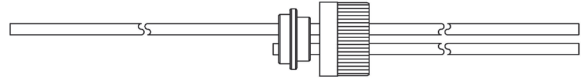


Figure 2

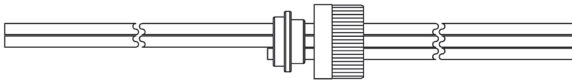


Figure 3

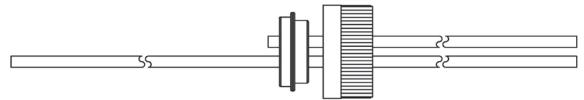


Figure 4

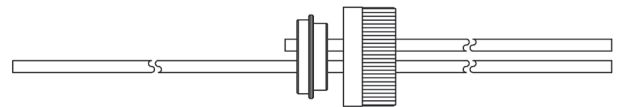


Figure 5

The DuoMixer® is an advanced single use mixer designed for mixing applications such as media and buffer formulation, intermediate processing, drug substance purification and drug product formulation. The unique impeller design and servo motor are based on high performance magnetic mixing technology that is fast and powerful for effective mixing of powders and viscous products.



## MODELS AVAILABLE (CAPACITY):

- ◆ DuoMixer® (50 - 3,000 L)
- ◆ MiniDuoMix® (2 - 20 L)

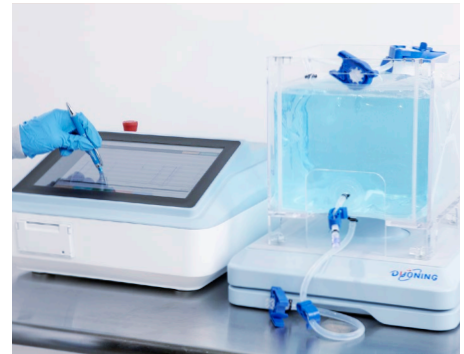




## The MiniDuoMix® is a benchtop mixer for liquid-liquid and liquid-solid mixing from 500mL to 20 L for cGMP manufacturing:

- ◆ Standard automation modules for stirring and weighing
- ◆ Optional modules for pH and conductivity monitoring are available
- ◆ HMI touchscreen and user-friendly software for automated control of modules, user permissions, password management, data charts, alarm and calibration
- ◆ Install bag and start processing in minutes

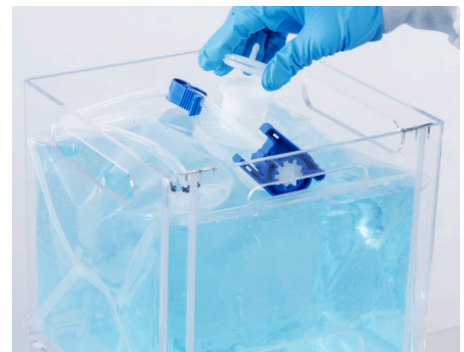
DESCRIPTION	SPECIFICATION
<b>Material of Construction</b>	
Mixer Drive Base	ABS
Mixer Tank Holder	Acrylic
Mixing Volumes	2 L   5 L   10 L   20 L
Impeller Range	0 to 500 RPM
Footprint (L x W)	20 x 14 in. (502 x 350 mm)
Height	22 in. (550 mm)
Weight	25 Lbs. (11.4 Kg)
Voltage	120 Volts
Current	2.5 Amps
Power	300 Watts
Operating Temperature	0°C to 60°C
Data Panel Interface Connection	USB



MINIDUOMIX® WITH HMI TOUCHSCREEN



WEIGHING MEASUREMENT AND CONTROL VIA LOADCELL



EASY INSTALLATION OF BAG

## MIXER CONFIGURATOR OPTIONS

Please use the configurator to design your specific mixing system. Contact our sales representatives and application specialists to assist you with the optimal MiniDuoMix® design for your process application.

EXAMPLE PRODUCT ID:

USMINIMIX 1B SA 2S HP HC T P

Controller	Mixer Base	Acrylic Holders	Stainless Steel Jacketed Holders	pH Measurement	Conductivity Measurement	Temperature Measurement	Printer and Paper
MINIMIX= DuoMini Controller Unit	1B = DuoMini Mixer Base	SA = Acrylic Holder Set	2S = 2L SS Jacketed Holder	HP = DuoMini Reusable pH Sensor - Hamilton	HC = DuoMini Reusable Conductivity Sensor - Hamilton	T = DuoMini PT100 Temperature Sensor	P = Printer and Printer Paper
	2B = 2 DuoMini Mixer Bases	2A = 2L Acrylic Holder	5S = 5L SS Jacketed Holder				
	3B = 3 DuoMini Mixer Bases	5A = 5L Acrylic Holder	10S = 10L SS Jacketed Holder	(OPTIONAL)	MC = DuoMini Reusable Conductivity Sensor - Mettler Toledo	(OPTIONAL)	(OPTIONAL)
	(OPTIONAL)	10A = 10L Acrylic Holder	20S = 20L SS Jacketed Holder				
		20A = 20L Acrylic Holder					
	(OPTIONAL)	(OPTIONAL)	(OPTIONAL)	(OPTIONAL)	(OPTIONAL)	(OPTIONAL)	(OPTIONAL)

## The DuoMixer® is a floor mixer for liquid-liquid and liquid-solid mixing from 50 L to 3,000 L for cGMP manufacturing:



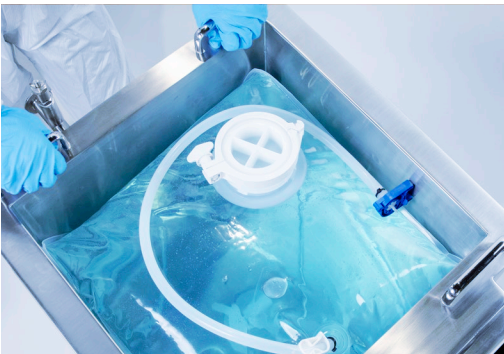
- ◆ Standard automation modules for stirring and weighing
- ◆ Optional modules for pH, temperature and conductivity monitoring are available
- ◆ Optional hardware for printing and acid & base addition (2 pump heads)
- ◆ Available with or without jacket
- ◆ 15" HMI touchscreen and user-friendly software for automated control of modules, user permissions, password management, data charts, alarm and calibration
- ◆ Install bag and start processing in minutes
- ◆ Minimum working volume is 10% to 20% of mixer working volume

### MATERIAL OF CONSTRUCTION

DESCRIPTION	SPECIFICATION
Mixer Tank	304L Stainless Steel
Windows	Polycarbonate
Surface Finish	Acid Cleaned, Brushed Stainless Steel
Mixing Volume	50 L   100 L   200 L   300 L   500 L   1,000 L   1,500 L   2,000 L   2,500 L   3,000 L
Impeller Range	50 L to 300 L: 240 RPM   500 L to 3,000 L: 200 RPM
Voltage	120 Volts
Current	for Volume ≥ 1,000 L, 16.7 Amps; for Volume < 1,000 L, 8.5 Amps
Power	for Volume ≥ 1,000 L, 2000 Watts; for Volume < 1,000 L, 1000 Watts
Operating Temperature	0°C to 60°C
Mobility: 50 L to 1,000 L	Tank on Stainless Cart with Handles and Cleanroom Wheels
Mobility: 1,500 L to 3,000 L	Tank on Stainless Cart with Fixed Feet
Integrated Load Cells	Mettler Toledo, SWB-505
Load Cell Ingress Protection (IP) Rating	IP68
HMI	15" Touchscreen
Data Panel Interface Connections	RS232, DB9, RJ45, USB
RTD Temperature Sensor	GTAM, PT100, 3mm, TIT-MPA3B1
pH Sensor	Mettler Toledo, inPro3100i
Conductivity Sensor	Mettler Toledo, inPro7100i
Printer	BrightTek, WH-E36
Acid Base Pumps	Watson Marlow 313D or 314D

## DIMENSIONS, WEIGHT, WEIGHING CAPACITY & ACCURACY

VOLUME	APPROX. DIMENSIONS MM (IN.) L X W X H	WEIGHT KG (LBS.)	MAX CAPACITY (KG)	ACCURACY
50 L	875 x 519 x 1,175 (34 x 20 x 46)	120 (265)	200	C3 (0.0230%)
100 L	922 x 615 x 1,195 (26 x 24 x 47)	135 (298)	400	C3 (0.0230%)
200 L	1,040 x 730 x 1,205 (41 x 29 x 47.5)	155 (342)	400	C3 (0.0230%)
300 L	1,140 x 835 x 1,342 (45 x 33 x 53)	200 (441)	880	C3 (0.0230%)
500 L	1,385 x 985 x 1,402 (54 x 39 x 55)	300 (661)	2200	C3 (0.0230%)
1,000 L	1,507 x 1,154 x 1,532 (59 x 45 x 60)	350 (772)	2200	C3 (0.0230%)
1,500 L	1,700 x 1,445 x 1,491 (67 x 57 x 59)	400 (882)	2200	C3 (0.0230%)
2,000 L	2,593 x 1,308 x 1,412 (102 x 52 x 56)	495 (1,091)	4400	C3 (0.0230%)
2,500 L	2,602 x 1,302 x 1,573 (102 x 51 x 62)	545 (1,202)	4400	C3 (0.0230%)
3,000 L	2,608 x 1,368 x 1,762 (102 x 54 x 69)	600 (1,323)	4400	C3 (0.0230%)



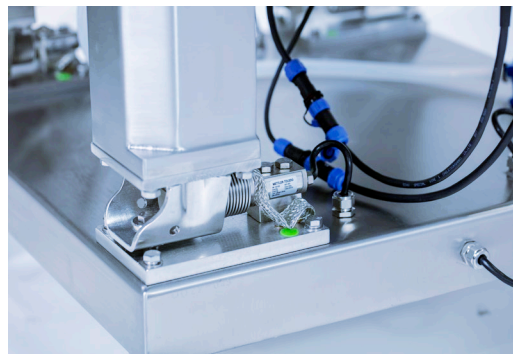
EASY INSTALLATION OF BAG



DUOMIXER® 15" HMI TOUCHSCREEN



3" OR 4" PORT FOR POWDER ADDITION



WEIGHING MEASUREMENT & CONTROL VIA LOADCELL



## MATERIAL OF CONSTRUCTION

DESCRIPTION	SPECIFICATION
Mixer Tank	304L Stainless Steel
Windows	Polycarbonate
Surface Finish	Acid Cleaned, Brushed Stainless Steel
Mixing Volume	50 L   100 L   200 L   300 L   500 L   1,000 L   1,500 L   2,000 L   2,500 L   3,000 L
Impeller Range	50 L to 300 L: 240 RPM   500 L to 3,000 L: 200 RPM
Voltage	120 Volts
Current	for Volume ≥ 1,000 L, 16.7 Amps; for Volume < 1,000 L, 8.5 Amps
Power	for Volume ≥ 1,000 L, 2000 Watts; for Volume < 1,000 L, 1000 Watts
Operating Temperature	0°C to 60°C
Mobility: 50 L to 1,000 L	Tank on Stainless Cart with Handles and Cleanroom Wheels
Mobility: 1,500 L to 3,000 L	Tank on Stainless Cart with Fixed Feet
Integrated Load Cells	Mettler Toledo, SWB-505
Load Cell Ingress Protection (IP) Rating	IP68
HMI	15" Touchscreen
Data Panel Interface Connections	RS232, DB9, RJ45, USB
RTD Temperature Sensor	GTAM, PT100, 3mm, TIT-MPA3B1
pH Sensor	Mettler Toledo, inPro3100i
Conductivity Sensor	Mettler Toledo, inPro7100i
Printer	BrightTek, WH-E36
Acid Base Pumps	Watson Marlow 313D or 314D

## DIMENSIONS, WEIGHT, WEIGHING CAPACITY & ACCURACY

VOLUME	APPROX. DIMENSIONS MM (IN.) L X W X H	WEIGHT KG (LBS.)	MAX CAPACITY (KG)	ACCURACY
50 L	977 x 529 x 1,155 (38 x 21 x 46)	150 (331)	200	C3 (0.0230%)
100 L	1,059 x 600 x 1,175 (42 x 24 x 46)	190 (419)	400	C3 (0.0230%)
200 L	1,131 x 729 x 1,237 (45 x 29 x 49)	230 (507)	400	C3 (0.0230%)
300 L	1,233 x 834 x 1,320 (49 x 33 x 52)	270 (595)	880	C3 (0.0230%)
500 L	1,496 x 1,028 x 1,467 (59 x 41 x 58)	515 (1,135)	2200	C3 (0.0230%)
1,000 L	1,577 x 1,160 x 1,452 (62 x 46 x 57)	630 (1,389)	2200	C3 (0.0230%)
1,500 L	1,761 x 1,450 x 1,524 (69 x 57 x 60)	790 (1,742)	2200	C3 (0.0230%)
2,000 L	2,604 x 1,338 x 1,442 (103 x 53 x 57)	1,010 (2,227)	4400	C3 (0.0230%)
2,500 L	2,612 x 1,315 x 1,603 (103 x 52 x 63)	1,100 (2,425)	4400	C3 (0.0230%)
3,000 L	2,619 x 1,398 x 1,792 (103 x 55 x 71)	1,250 (2,756)	4400	C3 (0.0230%)

## MIXER CONFIGURATOR OPTIONS

Please use the configurator to design your specific mixing system. Contact our sales representatives and application specialists to assist you with the optimal DuoMixer® design for your process application.

EXAMPLE PRODUCT ID:

USMIX 50L A C J N P T W

Mixer	Working Volume	Acid/Base Pumps	Conductivity Measurement	Jacket	Printer	pH Measurement	Temperature Measurement	Weighing
MIX = Mixer	50 L 100 L 200 L 300 L 500 L 1,000 L 1,500 L 2,000 L 2,500 L 3,000 L	A = Acid / Base Pumps  (OPTIONAL)	C = Conductivity Sensor  (OPTIONAL)	J = Jacket  (OPTIONAL)	N = Printer  (OPTIONAL)	P = pH Sensor  (OPTIONAL)	T = Temperature Sensor  (OPTIONAL)	W = Weighing

**DESCRIPTION:**

FlowLinX® filling needles are engineered with precision and purity ensuring operational safety and accurate dosing. Compatible with different brand filling machines, FlowLinX® filling needles are made from high grade materials and are validated to meet stringent regulatory requirements. Choose from standard designs or customize to your dosing equipment. Implement confidently and boost productivity without compromising on quality.

**REGULATORY OVERVIEW:**

**Material of Construction**

316L Stainless Steel and Polycarbonate

**Biocompatibility**

USP <85>, Bacterial Endotoxin

USP <88>, Biological Reactivity Tests, Class VI, In Vivo

USP <87>, Biological Reactivity Tests, Class VI, In Vitro

**Physiochemical**

USP <661>, Plastic Packaging Systems

**Particulate**

USP <788>, Particulate Matter in Injections

**Legislation**

REACH

RoHS

Conflict Mineral

**Shelf Life**

5 Years, Non-Sterile/Non-Irradiated

**Other**

Animal Product Free

Nitrosamine Free

Latex Free

Phthalate Free

BPA and Melamine Free

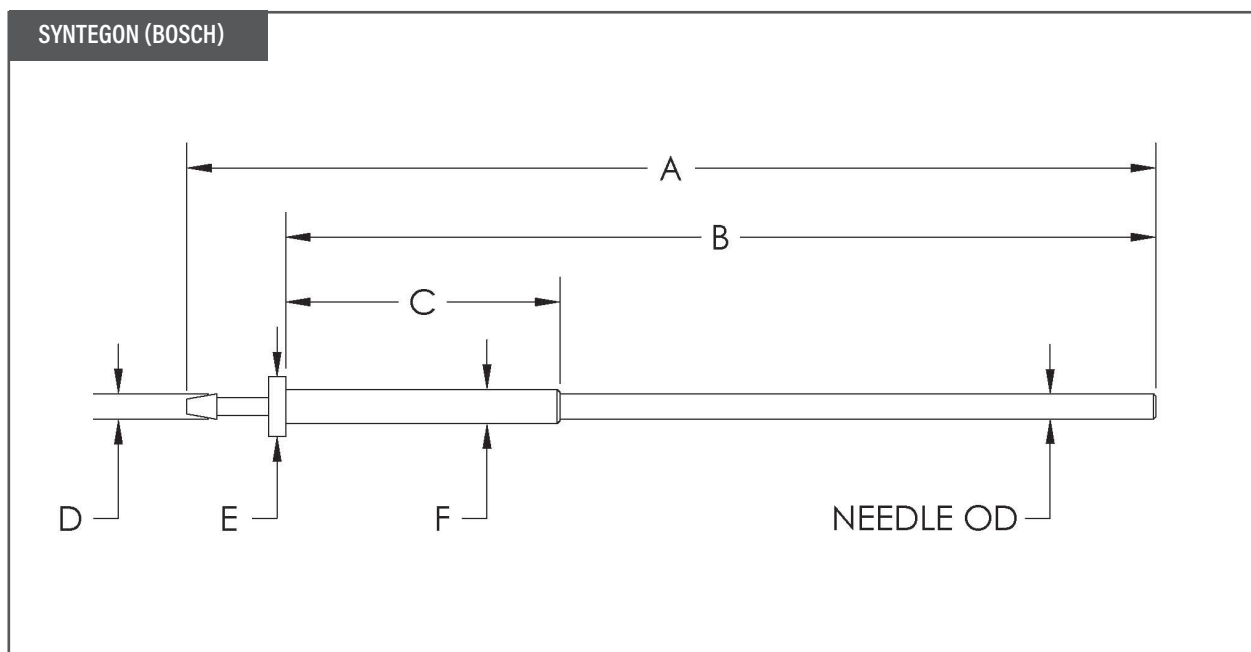


**SPECIFICATIONS:**

- Manufactured in an ISO 8 Cleanroom
- ISO 9001:2015 Certified Facility
- Available Non-sterile or Sterile
- Packaged 10 per Box
- Sterilizable by Gamma Irradiation and Autoclave

**NEEDLE BRANDS:**

- Bosch
- Groninger
- IMA
- OPTIMA Inova
- Cytiva



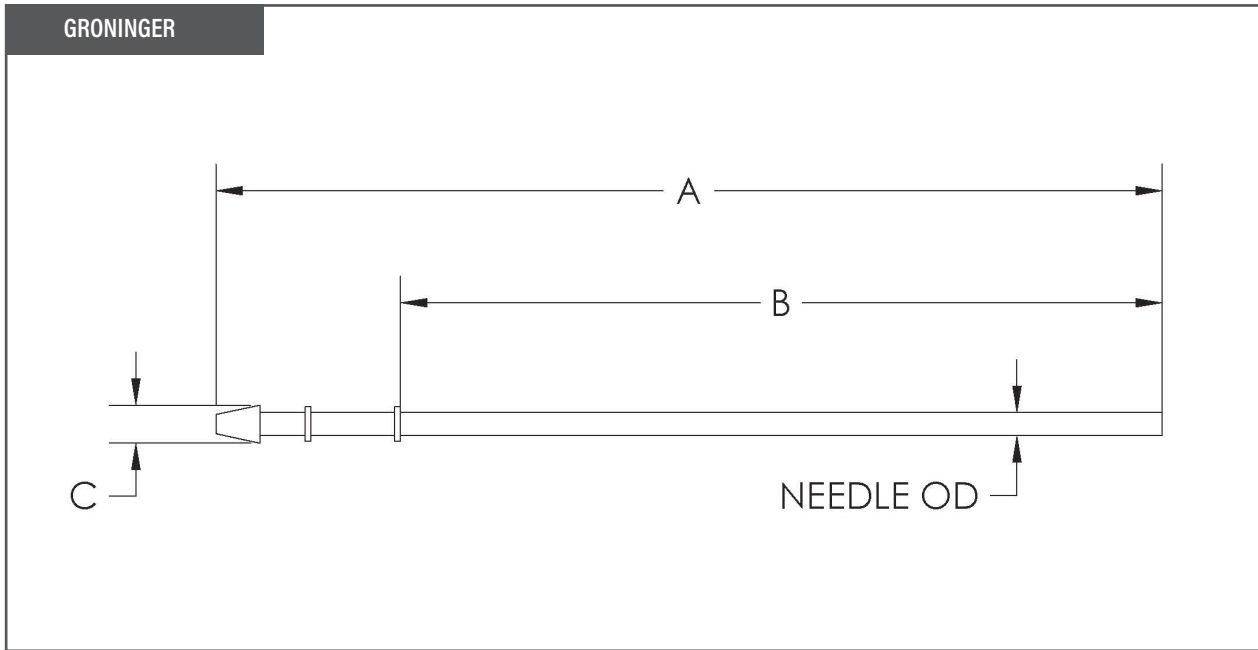
## SYNTEGON (BOSCH) NEEDLE DIMENSIONS

PART NUMBER	NEEDLE ID MM [IN.]	NEEDLE OD MM [IN.]	A	B	C	D	E	F
						MM [IN.]		
F-FN-BSM-1.6-094	1.6 [0.063 ± 0.002]"	2.1 [0.083 ± 0.001]"				H.B. FOR 3/32 I.D.	9.52 [0.3750]"	
F-FN-BSM-2.1-125	2.1 [0.085 ± 0.002]"	2.8 [0.109 ± 0.001]"				H.B. FOR 1/8 I.D.	9.52 [0.3750]"	
F-FN-BSM-3.0-125	3.0 [0.118 ± 0.003]"	3.8 [0.148 ± 0.001]"	181.6 [7.150]"	161.3 [6.350]"	50.8 [2.00]"	H.B. FOR 1/8 I.D.	9.52 [0.3750]"	6.4 [0.25]"
F-FN-BSM-3.2-188	3.2 [0.128 ± 0.002]"	3.8 [0.148 ± 0.001]"				H.B. FOR 3/16 I.D.	9.52 [0.3750]"	
F-FN-BSM-4.0-188	4.0 [0.160 ± 0.002]"	4.6 [0.180 ± 0.001]"				H.B. FOR 3/16 I.D.	11.00 [0.4370]"	

**TOLERANCES UNLESS OTHERWISE STATED:**

- X.X ± 0.020"
- X.XX ± 0.010"
- X.XXX ± 0.005"



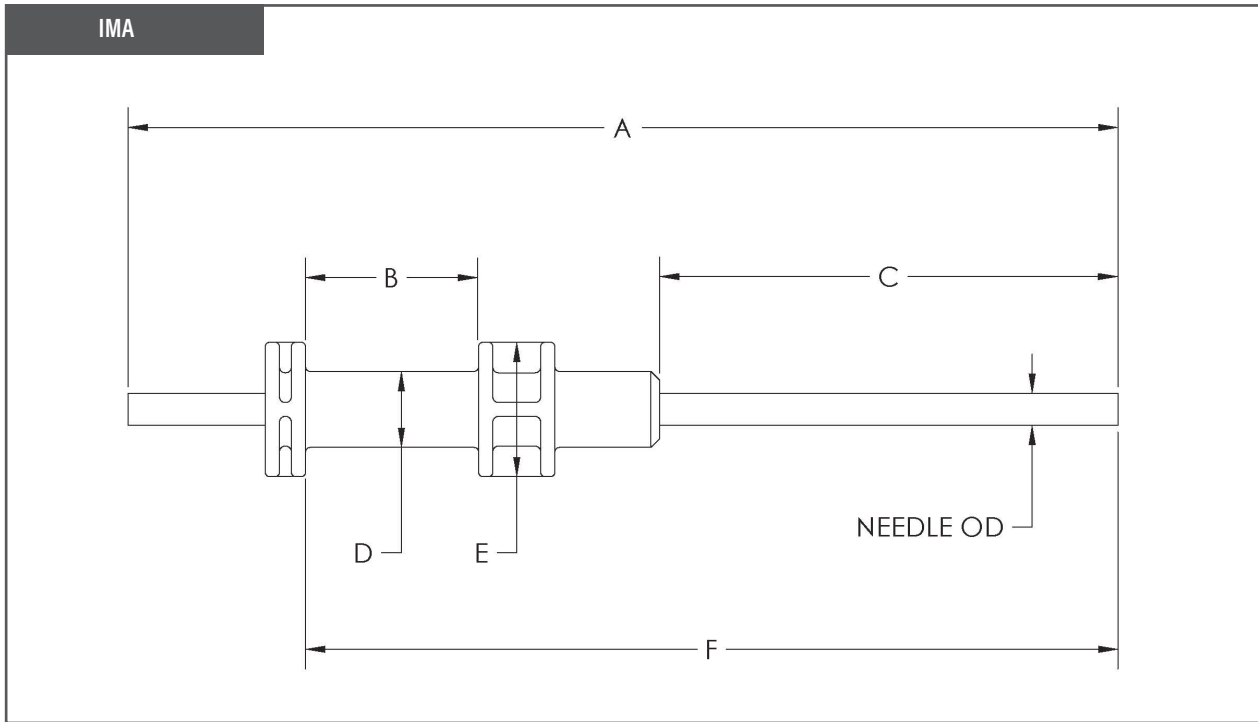


## GRONINGER NEEDLE DIMENSIONS

PART NUMBER	NEEDLE ID MM [IN.]	NEEDLE OD MM [IN.]	A	B MM [IN.]	C
F-FN-GRO-1.6-063	1.6 [0.063 ± 0.002]	2.1 [0.083 ± 0.001]	165.0 [6.496]	133.0 [5.200]	H.B. FOR 3/32 I.D.
F-FN-GRO-2.1-125	2.1 [0.085 ± 0.002]	2.8 [0.109 ± 0.001]			H.B. FOR 1/8 I.D.
F-FN-GRO-3.0-156	3.0 [0.118 ± 0.003]	3.7 [0.148 ± 0.001]			H.B. FOR 5/32 I.D.
F-FN-GRO-3.2-156	3.2 [0.128 ± 0.002]	3.8 [0.148 ± 0.001]			H.B. FOR 5/32 I.D.
F-FN-GRO-4.0-250	4.0 [0.160 ± 0.002]	4.6 [0.180 ± 0.001]			H.B. FOR 1/4 I.D.
F-FN-GRO-5.0-250	5.0 [0.197 +0.004, -0.002]	6.0 [0.237 +0.003, -0.001]			H.B. FOR 1/4 I.D.

**TOLERANCES UNLESS OTHERWISE STATED:**

- X.X ± 0.020"
- X.XX ± 0.010"
- X.XXX ± 0.005"

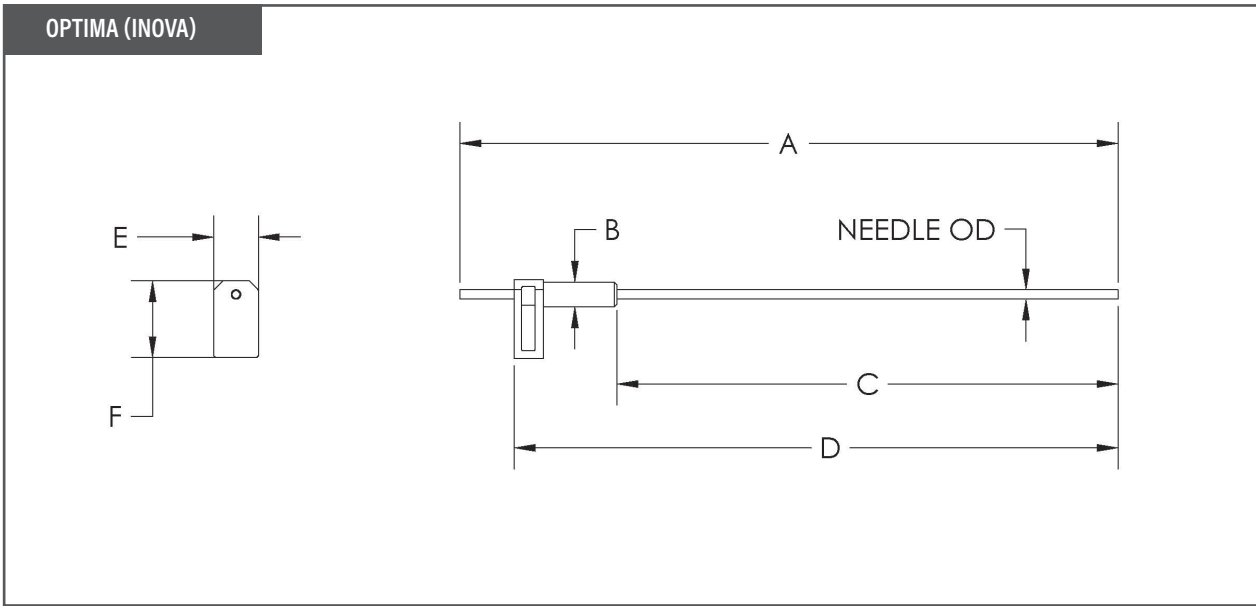


## IMA NEEDLE DIMENSIONS

PART NUMBER	NEEDLE ID MM [IN.]	NEEDLE OD MM [IN.]	A	B	C	D	E	F
			MM [IN.]					
F-FN-IMA-0.8-1.1	0.8 [0.032 +0.0015, -0.005]	1.1 [0.042 ± 0.0005]	115.8 [4.56]	20.1 [0.793]	53.6 [2.11]	8.9 [0.351]	15.7 [0.62]	95.0 [3.74]
F-FN-IMA-1.6-2.1	1.6 [0.063 ± 0.002]	2.1 [0.083 ± 0.001]						
F-FN-IMA-2.1-2.8	2.1 [0.085 ± 0.002]	2.8 [0.109 ± 0.001]						
F-FN-IMA-3.2-3.8	3.2 [0.128 ± 0.002]	3.8 [0.148 ± 0.001]						

**TOLERANCES UNLESS OTHERWISE STATED:**

- X.X ± 0.020"
- X.XX ± 0.010"
- X.XXX ± 0.005"

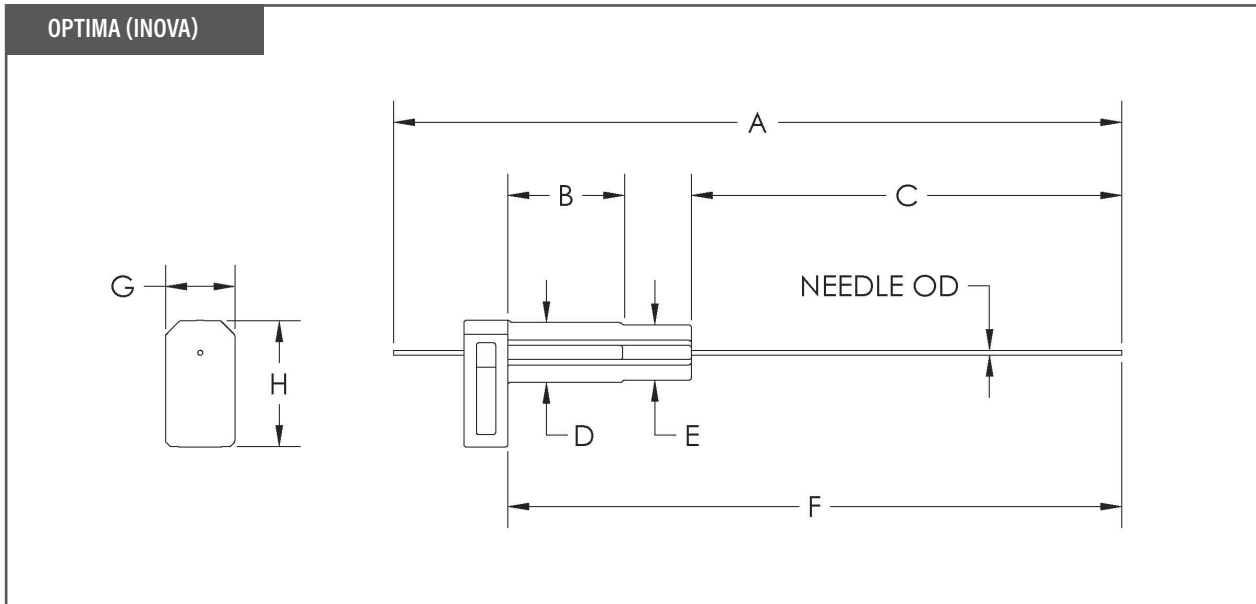


### OPTIMA (INOVA) NEEDLE (SMALL HUB) DIMENSIONS

PART NUMBER	NEEDLE ID MM [IN.]	NEEDLE OD MM [IN.]	A	B	C D E F			
					MM [IN.]			
F-FN-OPS-0.8-1.1	0.8 [0.032 +0.0015, -0.005]	1.1 [0.042 ± 0.0005]						
F-FN-OPS-1.6-2.1	1.6 [0.063 ± 0.002]	2.1 [0.083 ± 0.001]	139.2 [5.480]	8.0 [0.314]	879 [3.460]	121.4 [4.780]	15.0 [0.591]	25.2 [1.000]
F-FN-OPS-2.1-2.8	2.1 [0.085 ± 0.002]	2.8 [0.109 ± 0.001]						

**TOLERANCES UNLESS OTHERWISE STATED:**

- X.X ± 0.020"
- X.XX ± 0.010"
- X.XXX ± 0.005"



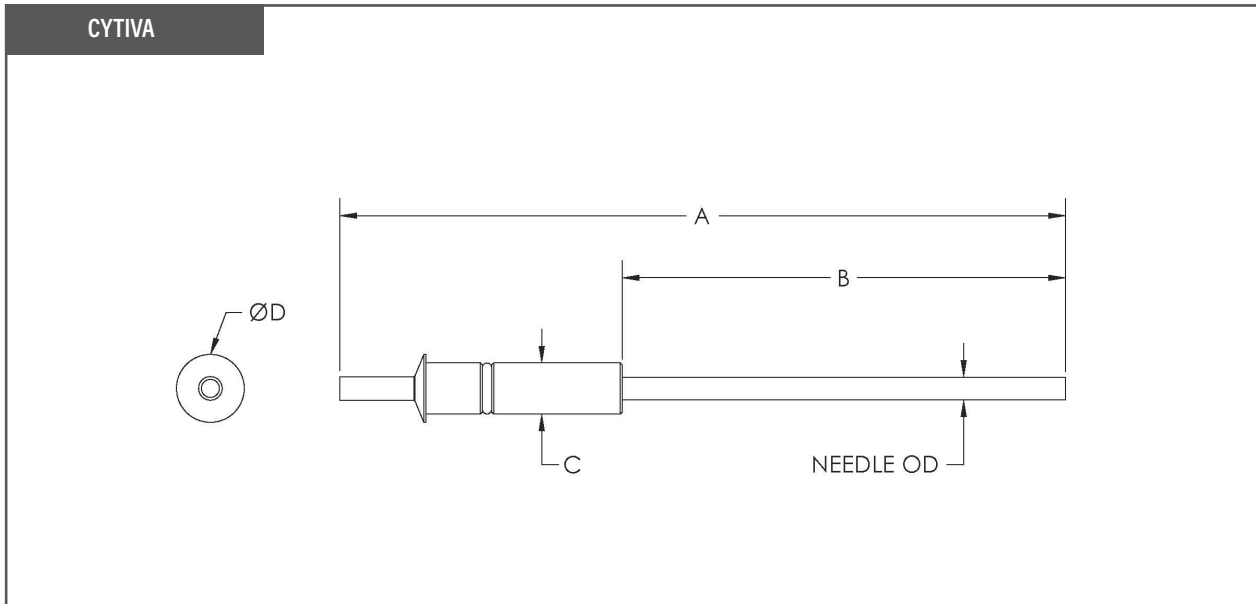
### OPTIMA (INOVA) NEEDLE (LARGE HUB) DIMENSIONS

PART NUMBER	NEEDLE ID MM [IN.]	NEEDLE OD MM [IN.]	A	B	C	MM [IN.]				
						D	E	F	G	H
F-FN-OPL-0.8-1.1	0.8 [0.032 +0.0015, -0.005]	1.1 [0.042 ± 0.0005]	157.7 [6.208]"	25.0 [0.984]"	90.2 [3.551]"	13.0 [0.511 -0.002]	12.0 [0.472]	130.0 [5.118]	15.0 [0.590]	27.5 [1.082]
F-FN-OPL-1.6-2.1	1.6 [0.063 ± 0.002]	2.1 [0.083 ± 0.001]								
F-FN-OPL-3.2-3.8	3.2 [0.128 ± 0.002]	3.8 [0.148 ± 0.001]								
F-FN-OPL-4.0-4.6	4.0 [0.160 ± 0.002]	4.6 [0.180 ± 0.001]								
F-FN-OPL-5.0-6.0	5.0 [0.197 +0.004, -0.002]	6.0 [0.237 +0.003, -0.001]								

**TOLERANCES UNLESS OTHERWISE STATED:**

- X.X ± 0.020"
- X.XX ± 0.010"
- X.XXX ± 0.005"





## CYTIVA NEEDLE DIMENSIONS

PART NUMBER	NEEDLE ID MM [IN.]	NEEDLE OD MM [IN.]	A	B	C	D
			MM [IN.]			
F-FN-PAL-0.8-1.1	0.8 [0.032 +0.0015, -0.005]	1.1 [0.042 ± 0.0005]	120 [4.720]	75 [2.952]	8.6 [0.340]	12 [0.472]
F-FN-PAL-1.2-1.5	1.2 [0.047 ± 0.001]	1.5 [0.058 ± 0.0005]				
F-FN-PAL-1.6-2.1	1.6 [0.063 ± 0.002]	2.1 [0.083 ± 0.001]				
F-FN-PAL-2.4-3.1	2.4 [0.094 ± 0.002]	3.1 [0.120 ± 0.001]			10.9 [0.430]	14 [0.55]
F-FN-PAL-3.2-3.8	3.2 [0.128 ± 0.002]	3.8 [0.148 ± 0.001]				
F-FN-PAL-4.0-4.6	4.0 [0.160 ± 0.002]	4.6 [0.180 ± 0.001]				
F-FN-PAL-5.0-6.0	5.0 [0.197 +0.004, -0.002]	6.0 [0.237 +0.003, -0.001]				

TOLERANCES UNLESS OTHERWISE STATED:

X.X ± 0.020"

X.XX ± 0.010"

X.XXX ± 0.005"

## DESCRIPTION:

Custom ported and optimized beta bag design for consistent product flow and high recovery. Choose from a range of hose barb and sanitary ports from 1/8" to 3". Whether you are using a DPTE® Alpha port, Biosafe® port or another port, we can provide you with a custom ready-to-use beta bag configuration that can be easily integrated into a flow path assembly for isolator transfer.



CATALOG NUMBER	INTERNAL PART NUMBER	DESCRIPTION	PACK QTY
FL-GBB-0188	00122902	GETINGE 190mm BAG w/ 3/16" ID OPPOSING BARB	1
FL-GBB-0250	00122903	GETINGE 190mm BAG w/ 1/4" ID OPPOSING BARB	1
FL-GBB-0375	00122904	GETINGE 190mm BAG w/ 3/8" ID OPPOSING BARB	1
FL-GBB-0500	00122905	GETINGE 190mm BAG w/ 1/2" ID OPPOSING BARB	1
FL-GBB-MAXITC	00122906	GETINGE 190mm BAG w/ 1.5" TC PORT	1
FL-GBB-3TC	00122907	GETINGE 190mm BAG w/ 3" TC PORT	1
FL-SBB-0188	00122910	SARTORIUS BIOSAFE BAG w/ 3/16" ID OPPOSING BARB	1
FL-SBB-0250	00122911	SARTORIUS BIOSAFE BAG w/ 1/4" ID OPPOSING BARB	1
FL-SBB-0375	00122912	SARTORIUS BIOSAFE BAG w/ 3/8" ID OPPOSING BARB	1
FL-SBB-0500	00122913	SARTORIUS BIOSAFE BAG w/ 1/2" ID OPPOSING BARB	1
FL-SBB-MAXITC	00122914	SARTORIUS BIOSAFE BAG w/ 1.5" TC PORT	1
FL-SBB-3TC	00122915	SARTORIUS BIOSAFE BAG w/ 3" TC PORT	1
FL-CBB-0188	00122916	CRL 190mm BAG w/ 3/16" ID OPPOSING BARB	1
FL-CBB-0250	00122917	CRL 190mm BAG w/ 1/4" ID OPPOSING BARB	1
FL-CBB-0375	00122918	CRL 190mm BAG w/ 3/8" ID OPPOSING BARB	1
FL-CBB-0500	00122920	CRL 190mm BAG w/ 1/2" ID OPPOSING BARB	1
FL-CBB-MAXITC	00122921	CRL 190mm BAG w/ 1.5" TC PORT	1
FL-CBB-3TC	00122922	CRL 190mm BAG w/ 3" TC PORT	1