

# OVERMOLDED SOLUTIONS: PLATINUM SILICONE AND TPE

Imagine the flexibility to design intricate, custom features that were previously unattainable. From sanitary (TCs) to crosses and bottle closures, CCG's team of application engineers can work with you to design custom shapes with accuracy, enhancing the performance of your process.

**When a single drop of fluid can make the difference in someone's health, you need smart fluid handling solutions that get the job done safely.**

Manufacturers worldwide rely on connector products that improve yield, cut costs and reduce time to market. Our components are specially engineered to maximize design flexibility, allowing you to create robust single use systems.

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# OVERMOLDED SILICONE SOLUTIONS: PLATINUM SILICONE AND TPE

## DESCRIPTION

FlowLinX® molded solutions are precision engineered to elevate efficiency, safety and quality in your critical bioproduction processes.

Imagine the flexibility to design intricate, custom features that were previously unattainable. From sanitary (TCs) to crosses and bottle closures, CCG's team of application engineers can work with you to design custom shapes with accuracy, enhancing the performance of your process.

Manufactured in ISO 8 cleanrooms using state-of-the-art equipment and automation, FlowLinX® molded solutions can be uniquely designed to solve your toughest challenges. Our overmolded silicone and TPE materials have unmatched

biocompatibility and superior chemical resistance ensuring your equipment remains compatible with sensitive biological materials.

Experience seamless leak-proof fluid transfer with FlowLinX® molded solutions. Maximize fluid flow and minimize the risks of leaks and contamination that commonly occur with hose barb fittings and tubing fasteners.

FlowLinX® molded solutions comply with the most stringent bioprocessing regulations and standards. We prioritize quality, safety, and reliability in every component we manufacture.



MULTIPOINT TC WITH REDUCERS



THRU TC CONNECTED TO A BETA BAG FOR ISOLATOR TRANSFER

# MOLDED SILICONE SOLUTIONS

## LIQUID SILICONE RUBBER REGULATORY OVERVIEW:

### Material of Construction

Platinum Cured Silicone

### Biocompatibility

USP <85>, Bacterial Endotoxin

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

ISO 10993-4, Hemolysis

ISO 10993-5, Cytotoxicity

ISO 10993-10, Irritation and Sensitization

ISO 10993-11, Systemic Toxicity

### Physiochemical

USP <661>, Plastic Packaging Systems

EP 3.1.9, Plastic Packaging Systems and Materials of Construction

FDA 21 CFR 177.2600, Rubber Articles Intended for Repeated Use

### Extractables

Per BPOG Protocol

### Legislation

REACH

RoHS

Conflict Mineral

### Shelf Life

5 Years, Non-Sterile/Non-Irradiated

## SPECIFICATIONS:

- ☑ Manufactured in an ISO 8 cleanroom
- 🛡 ISO 9001:2015 certified facility
- ♥ Animal Component Free
- 📏 Available with sterility assurance level 10<sup>-6</sup> to ISO 11137
- 🔗 Sanitary (TC), tees, wyes, crosses, elbows, reducers, bottle closures
- 🌐 Compatible with multiple tubing brands and durometers
- 🌸 Autoclave, gamma irradiation and x-ray compatible



SINKER FOR FLUID ADDITION AND REMOVAL IN A BOTTLE/CARBOY

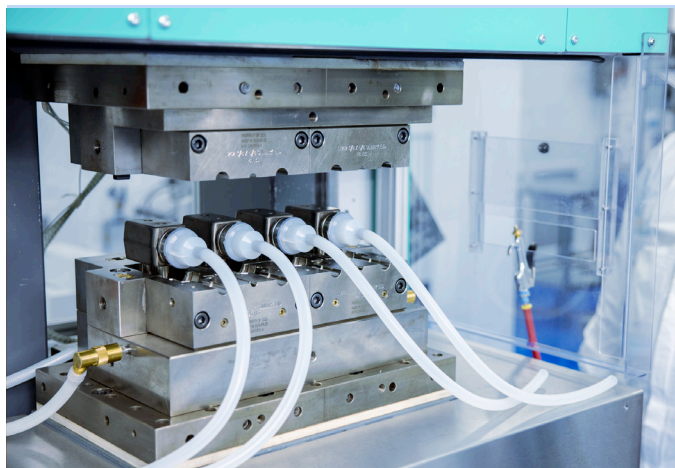


PUMP WYE WITH REDUCER: AVAILABLE IN MICRO BORE SIZES AS SMALL AS 0.032" (0.76MM) TUBING ID






# MOLDED SILICONE SOLUTIONS







# MOLDED SANITARY ASSEMBLIES

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



# MOLDED SANITARY ASSEMBLIES

## ASSEMBLY CONFIGURATOR

EXAMPLE PRODUCT ID: FAS188375MMP6U

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



# TPE OVERMOLDING



## TPE REGULATORY OVERVIEW

### Material of Construction

TPE (Thermoplastic elastomer)

### Biocompatibility

USP <85>, Bacterial Endotoxin

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

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

ISO 10993-4, Hemolysis

ISO 10993-10, Irritation and Sensitization

ISO 10993-11, Systemic Toxicity

### Physicochemical

USP <661>, Plastic Packaging Systems

EP 3.2.9, Rubber Closures for Containers

FDA 21 CFR 177.2600, Rubber Articles Intended for Repeated Use

### Particulate

USP <788>, Particulate Matter in Injections

### Extractables

Per USP <665>

### Legislation

REACH

RoHS

Conflict Mineral

### Shelf Life

5 Years, Non-Sterile/Non-Irradiated

# TPE MOLDED BOTTLE ASSEMBLIES

PART NUMBER	VOLUME	BOTTLE MATERIAL	CONFIGURATION	QTY PER PACK/CASE	FIGURE DETAILS
F-TCA-60ML-PG-1	60mL	PETG	Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, vent filter	1/6	1
F-TCA-125ML-PT-1	125mL	PET	Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, vent filter	1/6	1
F-TCA-125ML-PT-2			Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, with diptube Line 3: 1/8" x 1/4", 12" OAL, vent filter	1/6	2
F-TCA-125ML-PG-1		PETG	Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, vent filter	1/6	1
F-TCA-125ML-PG-2			Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, with diptube Line 3: 1/8" x 1/4", 12" OAL, vent filter	1/6	2
F-TCA-250ML-PT-1			250mL	PET	Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, vent filter
F-TCA-250ML-PT-2	Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, with diptube Line 3: 1/8" x 1/4", 12" OAL, vent filter	1/6			2
F-TCA-250ML-PG-1	PETG	Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, vent filter		1/6	1
F-TCA-250ML-PG-2		Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, with diptube Line 3: 1/8" x 1/4", 12" OAL, vent filter		1/6	2
F-TCA-500ML-PT-1	500mL	PET	Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, vent filter	1/6	1
F-TCA-500ML-PT-2			Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, with diptube Line 3: 1/8" x 1/4", 12" OAL, vent filter	1/6	2
F-TCA-500ML-PG-1		PETG	Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, vent filter	1/6	1
F-TCA-500ML-PG-2			Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, with diptube Line 3: 1/8" x 1/4", 12" OAL, vent filter	1/6	2
F-TCA-001L-PT-1	1L	PET	Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, vent filter	1/6	1
F-TCA-001L-PT-2			Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, with diptube Line 3: 1/8" x 1/4", 12" OAL, vent filter	1/6	2
F-TCA-001L-PG-1		PETG	Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, vent filter	1/6	1
F-TCA-001L-PG-2			Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, with diptube Line 3: 1/8" x 1/4", 12" OAL, vent filter	1/6	2
F-TCA-002L-PG-1	2L	PETG	Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, vent filter	--	--
F-TCA-002L-PG-2			Line 1: 1/8" x 1/4", 12" OAL, with diptube Line 2: 1/8" x 1/4", 12" OAL, with diptube Line 3: 1/8" x 1/4", 12" OAL, vent filter	--	--





# TPE MOLDED BOTTLE ASSEMBLIES

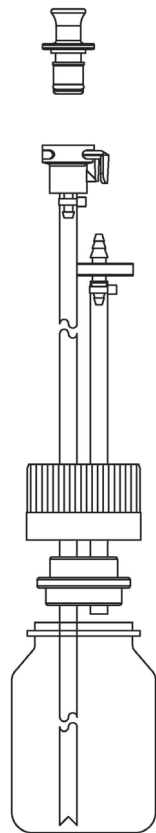


Figure 1

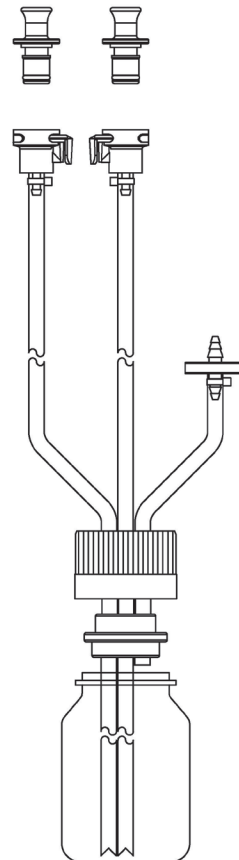


Figure 2

# TPE MOLDED CLOSURES

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



Figure 1

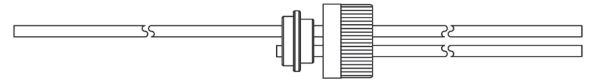


Figure 2

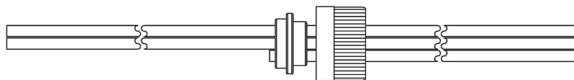


Figure 3

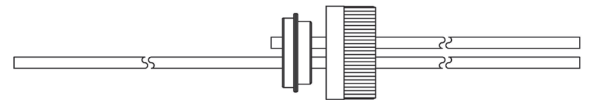


Figure 4

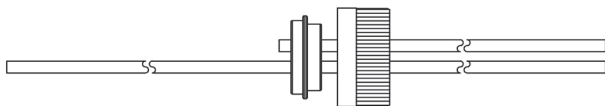


Figure 5