

SMC SERIES CONNECTOR

The SMC is a twist-to-connect coupling that provides a reliable and more secure alternative to luer-type connections. It also allows for the tubing to rotate freely when connected. This important feature prevents both kinked tubing and accidental disconnection during use.



SPECIFICATIONS

PRESSURE:

Vacuum to 100 psi, 6.9 bar

TEMPERATURE:

-40°F to 250°F (-40°C to 121°C)

MATERIALS:

Main components: Polycarbonate, USP Class VI, ADCF

Locking sleeves: Polycarbonate, USP Class VI, ADCF

O-rings: Buna-N

COLOR:

Main components: Purple tint

STERILIZATION:

Gamma: Up to 50 kGy irradiation

TUBING SIZES:

1/16" to 1/8" ID, 1.6mm to 3.2mm ID

FEATURES

Twist to connect

Free coupling rotation

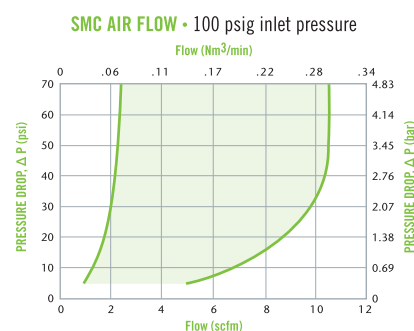
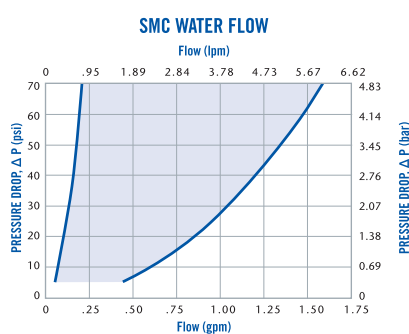
Safer; prevents misconnections

BENEFITS

Prevents accidental disconnects

Eliminates kinked tubing

Does not mate to luers



These graphs are intended to give you a general idea of the performance capabilities of each product line. The shaded area of each graph represents the operating range of the product family, i.e., upper and lower values are shown. Therefore, depending on the exact coupling configurations selected, you can reasonably expect values to fall within the shaded area.



cpcworldwide.com/SMC

SMC SERIES DIMENSIONS

COUPLING BODIES - Polycarbonate

	TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
	IN-LINE HOSE BARB	1/16" ID	1.6mm ID	SMF0191	0.48 (12.2)	0.75/0.90 (19.1/22.9)
		1/8" ID	3.2mm ID	SMF0291	0.48 (12.2)	0.9 (22.9)

COUPLING INSERTS - Polycarbonate

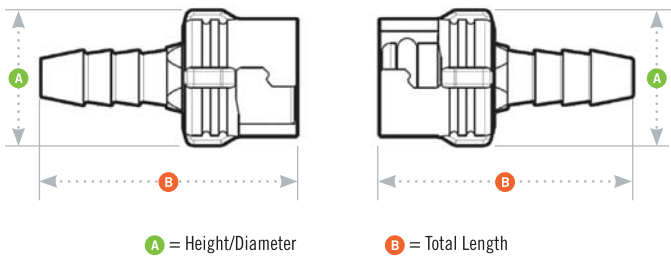
	TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
	IN-LINE HOSE BARB	1/16" ID	1.6mm ID	SMM0191	0.48 (12.2)	0.75 (19.1)
		1/8" ID	3.2mm ID	SMM0291	0.48 (12.2)	0.9 (22.9)

COUPLING SET - Polycarbonate

	TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
	HOSE BARB	1/16" ID	1.6mm ID	SMC0191	0.48 (12.2)	1.32 (33.5)
		1/8" ID	3.2mm ID	SMC0291	0.48 (12.2)	1.61 (40.9)

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. PTF fittings are designed for semi-rigid tubing, i.e., polyethylene, nylon, polyurethane, etc. †NOTE: CPC's Ferruleless PTF (polytube fitting) terminations do not require ferrules to achieve a secure connection and are therefore easier to use and reuse.

PRODUCT DIMENSIONS



LIQUID FLOW RATE INFORMATION FOR COUPLINGS

The chart below shows the flow rate for CPC couplings. Each coupling was tested with water at 70°F (21°C). To determine flow rates for specific coupling configurations use the formula below.

C_v VALUES

$$Q=C_v\sqrt{\frac{\Delta P}{S}}$$

- Q = Flow rate in gallons per minute
- C_v = Average coefficient across various flow rates (see chart)
- ΔP = Pressure drop across coupling (psi)
- S = Specific gravity of liquid

MPC™ SERIES CONNECTOR

The MPC™ series couplings add ease of use and security to critical fluid handling applications. Choose from a full line of connectors and configurations, including pressure sealing caps and plugs, in sizes to fit 1/8" to 3/8" tubing. MPC couplings offer optional locking sleeves to further guard against accidental disconnects. In addition, coupling halves can be rotated when connected to reduce tube kinks.

SPECIFICATIONS

OPERATING PRESSURE:

Vacuum to 60 psi, 4.1 bar

OPERATING TEMPERATURE:

ABS:

-40°F to 160°F (-40°C to 71°C)

Polycarbonate:

-40°F to 250°F (-40°C to 121°C)

Polysulfone:

-40°F to 300°F (-40°C to 149°C)

MATERIALS:

Main components:

ABS (white), USP Class VI, Polycarbonate (purple tint), USP Class VI, ADCF Polysulfone (amber tint), USP Class VI, ADCF

Locking sleeves:

Polysulfone (white), USP Class VI, ADCF

Thumb Latches:

Polycarbonate (white), USP Class VI, ADCF Polysulfone (amber tint), USP Class VI, ADCF

O-rings: Silicone (clear), platinum-cured, USP Class VI, ADCF and Buna-N (black)

STERILIZATION:

Gamma: Up to 50 kGy irradiation

Autoclave:

Polycarbonate: Up to 250°F (121°C), 30 minutes, up to 10 repetitions. Sterilize uncoupled only.

Polysulfone: Up to 270°F (132°C) for 60 minutes, up to 25 repetitions. Sterilize uncoupled only.

TUBING SIZES:

1/8" to 3/8" ID (3.2mm to 9.5mm)

WARNING: Pressure, temperature, chemicals, and operating environment can affect the performance of couplings. It is the customer's responsibility to test the suitability of CPC's products in their own application conditions.

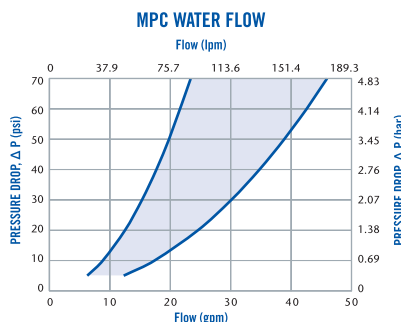
FEATURES

- Ergonomic thumb latch → Easy to operate – even with gloved hands
- USP Class VI materials → Meet biocompatibility requirements
- Sterilizable by autoclave, EtO, e-beam, or gamma → Reusable, yet economical enough to allow disposability
- Parting line-free hose barb → Eliminates potential leak path
- ADCF-free materials → Meet BSE/TSE requirements

BENEFITS

NOTE

MPC Series mates with Back-to-Back Adapters, SaniQuik™ and Sanitary Series.



This graph is intended to give you a general idea of the performance capabilities of each product line. The shaded area of the graph represents the operating range of the product family, i.e. upper and lower values are shown. Therefore, depending on the exact coupling configurations selected, you can reasonably expect values to fall within the shaded area.



MPC™ SERIES DIMENSIONS

COUPLING BODIES - ABS / Polycarbonate / Polysulfone

TERMINATION	TUBING SIZE	METRIC EQ	FLOW	STRAIGHT THRU	O-RINGS	A	B
	1/4" ID	6.4mm ID	0.21"	MPC17004T		0.96 (24.4)	1.3 (33.0)
	3/8" ID	9.5mm ID	0.29"	MPC17006T		0.96 (24.4)	1.3 (33.0)
	1/8" ID	3.2mm ID	0.09"	MPC17002T03		0.96 (24.4)	1.1 (27.9)
	1/4" ID	6.4mm ID	0.21"	MPC17004T03		0.96 (24.4)	1.1 (27.9)
	3/8" ID	9.5mm ID	0.29"	MPC17006T03		0.96 (24.4)	1.1 (27.9)
	1/8" ID	3.2mm ID	0.09"	MPCK17002T03		0.99 (25.1)	1.1 (27.9)
	1/4" ID	6.4mm ID	0.21"	MPCK17004T03		0.99 (25.1)	1.3 (33.0)
	3/8" ID	9.5mm ID	0.29"	MPCK17006T03		0.99 (25.1)	1.3 (33.0)
	1/8" ID	3.2mm ID	0.09"	MPC17002T39		0.96 (24.4)	1.1 (27.9)
	1/4" ID	6.4mm ID	0.21"	MPC17004T39		0.96 (24.4)	1.1 (27.9)
	3/8" ID	9.5mm ID	0.29"	MPC17006T39		0.96 (24.4)	1.1 (27.9)
	1/8" ID	3.2mm ID	0.09"	MPCK17002T39		0.99 (25.1)	1.1 (27.9)
	1/4" ID	6.4mm ID	0.21"	MPCK17004T39		0.99 (25.1)	1.3 (33.0)
	3/8" ID	9.5mm ID	0.29"	MPCK17006T39		0.99 (25.1)	1.3 (33.0)

COUPLING INSERTS - ABS / Polycarbonate / Polysulfone

TERMINATION	TUBING SIZE	METRIC EQ	FLOW	STRAIGHT THRU	O-RINGS	A	B
	1/4" ID	6.4mm ID	0.21"	MPC22004TM	Silicone Seal USP Class VI	0.6 (15.2)	1.3 (33.0)
	3/8" ID	9.5mm ID	0.29"	MPC22006TM	Silicone Seal USP Class VI	0.6 (15.2)	1.3 (33.0)
	1/4" ID	6.4mm ID	0.21"	MPC22004T	Buna-N Seal USP Class V	0.6 (15.2)	1.3 (33.0)
	3/8" ID	9.5mm ID	0.29"	MPC22006T	Buna-N Seal USP Class V	0.6 (15.2)	1.3 (33.0)
	1/8" ID	3.2mm ID	0.09"	MPC22002T03M	Silicone Seal USP Class VI	0.6 (15.2)	1.1 (27.9)
	1/4" ID	6.4mm ID	0.21"	MPC22004T03M	Silicone Seal USP Class VI	0.6 (15.2)	1.3 (33.0)
	3/8" ID	9.5mm ID	0.29"	MPC22006T03M	Silicone Seal USP Class VI	0.6 (15.2)	1.3 (33.0)
	1/8" ID	3.2mm ID	0.09"	MPC22002T03	Buna-N Seal USP Class V	0.6 (15.2)	1.1 (27.9)
	1/4" ID	6.4mm ID	0.21"	MPC22004T03	Buna-N Seal USP Class V	0.6 (15.2)	1.3 (33.0

MPC™ SERIES CONNECTOR (CONT.)

ADAPTORS



SEALING CAP	W/LOCK	MATERIAL	A	B
MPC32003	MPCK32003	Polycarbonate	0.96 (24.4 mm)	1.3 (33.0 mm)
MPC32039	MPCK32039	Polysulfone	0.99 (25.1 mm)	1.3 (33.0 mm)

SEALING PLUG	O-RING	MATERIAL	A	B
MPC30003M	Silicone Seal USP Class VI	Polycarbonate	0.75 (19.1 mm)	1.24 (31.5 mm)
MPC30039M	Silicone Seal USP Class VI	Polysulfone	0.75 (19.1 mm)	1.24 (31.5 mm)

PART NO.	DESCRIPTION	MATERIAL
MPC30L	Leash plug for MPC body	Soft, flexible, medical-grade PVC
MPC32L	Leash plug for MPC insert	Soft, flexible, medical-grade PVC

LIQUID FLOW RATE INFORMATION FOR COUPLINGS

The chart below shows the flow rate for CPC couplings. Each coupling was tested with water at 70°F (21°C). To determine flow rates for specific coupling configurations use the formula below.

C_v VALUES

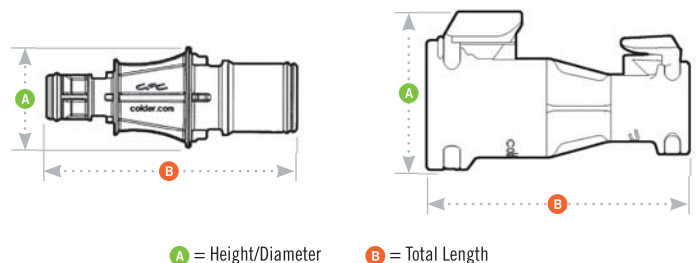
INSERTS

BODIES	MPC22002T03	MPC22004T03	MPC22006T03
MPC17002T03	0.11	-	0.21
MPC17004T03	-	2.8	2.8
MPC17006T03	0.14	2.8	5.5

$$Q = C_v \sqrt{\frac{\Delta P}{S}}$$

Q = Flow rate in gallons per minute
C_v = Average coefficient across various flow rates (see chart)
ΔP = Pressure drop across coupling (psi)
S = Specific gravity of liquid

BACK-TO-BACK PRODUCT DIMENSIONS



BACK-TO-BACK SERIES CONNECTOR



MPC™/MPX® Back-to-Back Adapters give end users the flexibility of connecting single-use systems that feature identical coupling connections at the end of their tubing. Combining both MPC and MPX couplings provides a reducing option for users who need to transition between tubing diameters ranging from 1/8" to 1/2".

FEATURES

Compatible with MPC and MPX Series inserts

Tubing reduction option

Ergonomic thumb latches

ADCF-free materials

BENEFITS

Easy conversion to industry standard connections or single-use systems

Allows easy transition between multiple size tubing from 1/8" to 1/2" ID

Easy to operate - even with gloved hands

Meet BSE/TSE requirements

BACK-TO-BACK INSERT ADAPTORS - Polysulfone



PART NO.	TYPE	A	B
MPC22C2239M	MPC to MPC	0.74 (18.8)	2.04 (51.8)
MPC22X2239M	MPC to MPX	0.98 (24.9)	2.42 (61.5)
MPX22X2239M	MPX to MPX	0.98 (24.9)	2.73 (69.3)

BACK-TO-BACK BODY ADAPTORS - Polycarbonate



PART NO.	TYPE	A	B
MPC17C1703	MPC to MPC	0.96 (24.4)	1.81 (46.0)
MPX17X1703	MPX to MPX	1.28 (32.5)	2.44 (62.0)
MPC17X1703	MPC to MPX	1.28 (32.5)	2.13 (54.1)

BACK-TO-BACK BODY ADAPTORS - Polysulfone



PART NO.	TYPE	A	B
MPC17C1739	MPC to MPC	0.96 (24.4)	1.81 (46.0)
MPX17X1739	MPX to MPX	1.28 (32.5)	2.44 (62.0)
MPC17X1739	MPC to MPX	1.28 (32.5)	2.13 (54.1)

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters.

SPECIFICATIONS

PRESSURE:

Vacuum to 60 psi, 4.1 bar

TEMPERATURE:

Polycarbonate:

-40°F to 250°F (-40°C to 121°C)

Polysulfone:

-40°F to 300°F (-40°C to 149°C)

MATERIALS:

Main Components:

Polycarbonate (purple tint), USP Class VI, ADCF

Polysulfone (amber tint), USP Class VI, ADCF

Thumb Latches:

Polycarbonate (white), USP Class VI, ADCF

Polysulfone (amber tint), USP Class VI, ADCF

O-rings:

Silicone (clear), platinum-cured, USP Class VI, ADCF

STERILIZATION:

MPX[®] SERIES CONNECTOR

MPX[®] Series couplings add ease of use and security to your most critical fluid handling applications. Choose from a full line of connectors and configurations, including pressure sealing caps and plugs in sizes to fit 3/8" and 1/2" tubing. MPX couplings offer optional locking sleeves to further guard against accidental disconnects. In addition, coupling halves can be rotated when connected reducing tube kinks.



SPECIFICATIONS

PRESSURE:

Vacuum to 60 psi, 4.1 bar

TEMPERATURE:

Polycarbonate:

-40°F to 250°F (-40°C to 121°C)

Polysulfone:

-40°F to 300°F (-40°C to 149°C)

MATERIALS:

Main components:

Polycarbonate (purple tint), USP Class VI, ADCF

Polysulfone (amber tint), USP Class VI, ADCF

Locking sleeves:

Polysulfone (white), USP Class VI, ADCF

Thumb Latches:

Polycarbonate (white), USP Class VI, ADCF

Polysulfone (amber tint), USP Class VI, ADCF

O-rings: Silicone (clear), platinum-cured,

USP Class VI, ADCF

STERILIZATION:

Gamma: Up to 50 kGy irradiation

Autoclave:

Polycarbonate: Up to 250°F (121°C), 30 minutes, up to 10 repetitions. Sterilize uncoupled only.

Polysulfone: Up to 270°F (132°C) for 60 minutes, up to 25 repetitions. Sterilize uncoupled only.

TUBING SIZES:

3/8" to 1/2" ID (9.5mm to 12.7mm)

WARNING: Pressure, temperature, chemicals, and operating environment can affect the performance of couplings. It is the customer's responsibility to test the suitability of CPC's products in their own application conditions.

FEATURES

Ergonomic thumb latch

USP Class VI materials

Sterilizable by autoclave, EtO, e-beam, or gamma

Parting line-free hose barb

ADCF-free materials

BENEFITS

Easy to operate – even with gloved hands

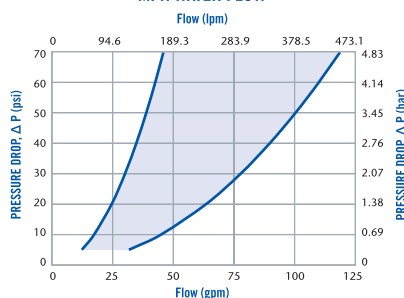
Meet biocompatibility requirements

Reusable, yet economical enough to allow disposability

Eliminates potential leak path

Meet BSE/TSE requirements

MPX WATER FLOW



MPX® SERIES DIMENSIONS

COUPLING BODIES - Polycarbonate



TERMINATION	TUBING	METRIC EQ.	FLOW	STRAIGHT THRU	A	B
IN-LINE HOSE BARB	1/2" ID	12.7mm ID	0.50"	MPX17803	1.28 (32.5)	1.96 (49.8)
IN-LINE HOSE BARB WITH LOCK	1/2" ID	12.7mm ID	0.50"	MPXK17803	1.28 (32.5)	1.96 (49.8)



COUPLING BODIES - Polysulfone



TERMINATION	TUBING	METRIC EQ.	FLOW	STRAIGHT THRU	A	B
IN-LINE HOSE BARB	1/2" ID	12.7mm ID	0.50"	MPX17839	1.28 (32.5)	1.96 (49.8)
IN-LINE HOSE BARB WITH LOCK	1/2" ID	12.7mm ID	0.50"	MPXK17839	1.28 (32.5)	1.96 (49.8)



COUPLING INSERTS - Polycarbonate



TERMINATION	TUBING	METRIC EQ.	FLOW	STRAIGHT THRU	O-RING	A	B
IN-LINE HOSE BARB	3/8" ID	9.5mm ID	0.38"	MPX22603M	Silicone Seal USP Class VI	0.85 (21.6)	1.9 (48.3)
	1/2" ID	12.7mm ID	0.50"	MPX22803M	Silicone Seal USP Class VI	0.85 (21.6)	1.9 (48.3)

COUPLING INSERTS - Polysulfone



TERMINATION	TUBING	METRIC EQ.	FLOW	STRAIGHT THRU	O-RING	A	B
IN-LINE HOSE BARB	3/8" ID	9.5mm ID	0.38"	MPX22639M	Silicone Seal USP Class VI	0.85 (21.6)	1.9 (48.3)
	1/2" ID	12.7mm ID	0.50"	MPX22839M	Silicone Seal USP Class VI	0.85 (21.6)	1.9 (48.3)

MATING PARTS



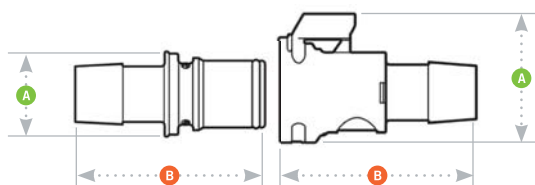
SEALING CAP	W/LOCK	MATERIAL	A	B
MPX32003	MPXK32003	Polycarbonate	1.28 (32.5)	1.67 (42.4)
MPX32039	MPXK32039	Polysulfone	1.28 (32.5)	1.67 (42.4)



SEALING PLUG	O-RING	MATERIAL	A	B
MPX30003M	Silicone Seal USP Class VI	Polycarbonate	1.1 (27.9)	1.66 (42.2)
MPX30039M	Silicone Seal USP Class VI	Polysulfone	1.1 (27.9)	1.66 (42.2)

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters.

PRODUCT DIMENSIONS



A = HEIGHT/DIAMETER

B = TOTAL LENGTH

SANITARY SERIES CONNECTOR

Sanitary couplings attach directly to 3/4", 1" and 1-1/2" sanitary terminations to provide greater flexibility for integrating components into single-use or hybrid (single-use to stainless) process systems. Standard bag systems with quick couplings can be easily connected to equipment with sanitary terminations, while single-use cartridge filters can be converted to incorporate quick couplings for greater system modularity.



SPECIFICATIONS

PRESSURE:

Vacuum to 60 psi, 4.1 bar

OPERATING TEMPERATURE:

-40°F to 300°F (-40°C to 149°C)

STERILIZATION:

Gamma: Up to 50 kGy irradiation

Autoclave: Up to 270°F (132°C) for 60 minutes, up to 25 repetitions. Sterilize uncoupled only.

TERMINATIONS:

3/4", 1" and 1-1/2" sanitary

MATERIALS:

Main components:

Polysulfone (amber tint), USP Class VI, ADCF

Thumb Latches:

PVDF (white), USP Class VI, ADCF

O-rings: Silicone (clear), platinum-cured, USP Class VI, ADCF

WARNING: Pressure, temperature, chemicals, and operating environment can affect the performance of couplings. It is the customer's responsibility to test the suitability of CPC's products in their own application conditions.

FEATURES

3/4", 1" and 1-1/2" sanitary terminations →

Compatible with MPC™ and MPX® Series couplings →

Integral coupling adaptor →

ADCF-free materials →

BENEFITS

Install to equipment with sanitary gaskets and sanitary clamps

Quick and easy connections to industry standard plastic couplings

Provides flexibility to easily convert sanitary terminations on filter cartridge or equipment

Meet BSE/TSE requirements



cpcworldwide.com/Sanitary

NOTE

Mates with MPC and MPX bodies, inserts and sealing caps and plugs and Back-to-Back Adapters (pages 124-129).

SANITARY SERIES DIMENSIONS

COUPLING BODIES - Polysulfone



PART NO.	SIZE	A	B	C
MPC3301239	3/4"	0.98 (24.9)	1.4 (35.6)	1 (25.4)
MPX3301239	3/4"	1.28 (32.5)	1.7 (43.2)	1 (25.4)
MPC3301639	1"	1.5 (38.1)	1.4 (35.6)	1.5 (38.1)

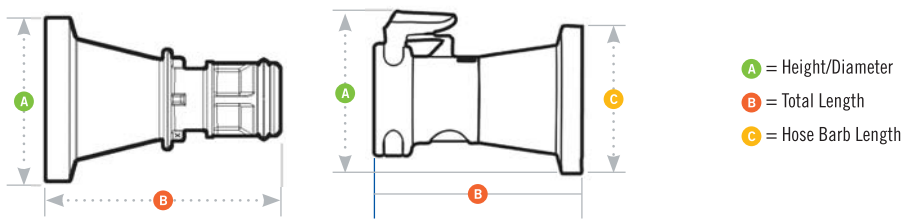
COUPLING INSERTS - Polysulfone




PART NO.	SIZE		A	B	C
MPC44012T39M	3/4"	Silicone Seal USP Class VI	0.98 (24.9)	1.4 (35.6)	1 (25.4)
MPC44024T39M	1-1/2"	Silicone Seal USP Class VI	1.98 (50.3)	1.4 (35.6)	1 (25.4)
MPX44012T39M	3/4"	Silicone Seal USP Class VI	0.98 (24.9)	1.71 (43.4)	
MPX44024T39M	1-1/2"	Silicone Seal USP Class VI	1.98 (50.3)	1.71 (43.4)	

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters.
Note: Sanitary couplings are compatible with both stainless steel and plastic clamps. Clamps and gaskets are referenced for illustration and are not available through CPC.

PRODUCT DIMENSIONS



NOTES

SANIQUIK™ SERIES CONNECTOR

CPC's SaniQuik™ connection answers the question of how to integrate single-use components with your existing stainless processing equipment. This integral sanitary termination attaches to hard-plumbed systems with tri-clover clamps. Once attached it permits quick and easy connection to single-use bag systems, manifolds or tube sets with CPC disposable coupling bodies. SaniQuik connections reduce sanitary gasket replacement, enabling cost-effective media transfer solutions for feeding, harvesting or sampling applications.



SPECIFICATIONS

PRESSURE:

Vacuum to 60 psi, 4.1 bar

TEMPERATURE:

-40°F to 300°F (-40°C to 149°C)

MATERIALS:

Main component: 316L stainless steel

O-rings: Silicone (clear), platinum-cured, USP Class VI, ADCF

STERILIZATION: Autoclave

TERMINATION SIZES:

3/4" and 1-1/2" sanitary

WARNING: Pressure, temperature, chemicals, and operating environment can affect the performance of couplings. It is the customer's responsibility to test the suitability of CPC's products in their own application conditions.



SCAN

cpcworldwide.com/SaniQuik

FEATURES

3/4" and 1-1/2" sanitary standard terminations

Compatible with MPC™ and MPX® Series couplings

Integral coupling adaptor

ADCF-free materials

BENEFITS

Connect to hard plumbed systems with sanitary gaskets and sanitary clamps

Quick and easy connections to industry standard plastic couplings on single-use bag and tube sets

Disconnecting coupling reduces sanitary gasket replacement

Meet BSE/TSE requirements

NOTE

Mates with MPC and MPX bodies, inserts and sealing plugs and Back-to-Back Adapters (pages 124-129).

SANIQUIK™ SERIES DIMENSIONS

CONNECTIONS - 316L stainless



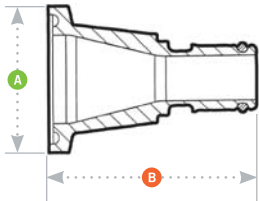
DESCRIPTION	PART NO.	MATING COUPLING	SANITARY SIZE	SANITARY BORE	A	B
SILICONE SEAL USP CLASS VI	SQCC221212M	MPC Series	3/4"	3/4"	0.98 (24.9)	1.39 (35.3)
	SQCC222424M	MPC Series	1-1/2"	1-1/2"	1.98 (50.3)	1.5 (38.1)
	SQCX221212M	MPX Series	3/4"	3/4"	0.98 (24.9)	1.43 (36.3)
	SQCX222416M	MPX Series	1-1/2"	1"	1.98 (50.3)	1.50 (38.1)
	SQCX222424M	MPX Series	1-1/2"	1-1/2"	1.98 (50.3)	1.50 (38.1)

ACCESSORIES - Silicone (Clear)

DESCRIPTION	PART NO.	MATING COUPLING
PLATINUM-CURED USP CLASS VI REPLACEMENT SEALS	2260100	SQCC221212M, SQCC222424M
	2260200	SQCX221212M, SQCX222416M, SQCX222424M

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters.

PRODUCT DIMENSIONS



- A = Height/Diameter
- B = Total Length

NOTES