

# SMC SERIES CONNECTOR

**The SMC and SMF1** are among CPC's smallest couplings. These twist-to-connect couplings provide a reliable and more secure alternative to luer-type connections. They also allow 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:

**Acetal, Chrome-Plated Brass:**

-40°F to 180°F (-40°C to 82°C)

**Polypropylene:**

32°F to 180°F (0°C to 82°C)

**ABS:** -40°F to 160°F (-40°C to 71°C)

### MATERIALS:

**Main Components:** ABS, acetal, polypropylene, chrome-plated brass, stainless steel

**Locking sleeves:** Acetal

**Valves:** Acetal

**Valve spring:** 316 stainless steel

**O-rings:** Buna-N with acetal or chrome-plated brass, EPDM with polypropylene

### COLOR:

**Main components:** Natural white (acetal and ABS), almond (polypropylene), chrome and black (acetal)

### TUBING SIZES:

1/16" to 1/8" ID, 1.6mm to 3.2mm and 5.0mm

*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 products in their own application conditions.*

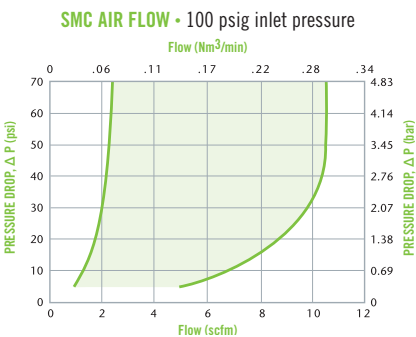
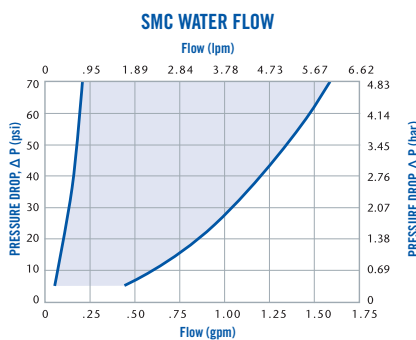


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### FEATURES

- Twist to connect → Prevents accidental disconnects
- Free coupling rotation → Eliminates kinked tubing
- Quarter turn latch clicks when connected → Prevents damage due to over torquing

### BENEFITS



## DID YOU KNOW

Polycarbonate SMC products manufactured in CPC's cleanroom are also available.

← 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.



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## ASK AN ENGINEER

When you have questions, our team of expert engineers has answers. Click on the QR Code to get connected.



### 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<sub>v</sub> VALUES

	INSERTS	
	SMM01	SMM02
<b>BODIES</b> SMF01	0.03	0.03
SMFD01	0.03	0.03
SMF02	0.03	0.19
SMFD02	0.03	0.08
SMPT02	0.03	0.19
SMFD02	0.03	0.08

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

Q = Flow rate in gallons per minute

C<sub>v</sub> = Average coefficient across various flow rates (see chart)

ΔP = Pressure drop across coupling (psi)

S = Specific gravity of liquid

# SMC SERIES DIMENSIONS

## COUPLING BODIES - Acetal



TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	SHUTOFF	A	B	C
IN-LINE PIPE THREAD	1/8" NPT		SMPT02	SMPTD02	0.51 (13)	0.86 (21.8)	7/16 (11.1)
	1/8" NPT		SMPT02BLK	SMPTD02BLK	0.51 (13)	0.86 (21.8)	7/16 (11.1)
IN-LINE HOSE BARB	1/16" ID	1.6mm ID	SMF01	SMFD01	0.48 (12.2)	0.75/90 (19.1/22.9)	
	—	1.6mm ID	SMF01MBLK	SMFD01MBLK	0.48 (12.2)	0.75/90 (19.1/22.9)	
	—	3.0mm ID	SMFM3	SMFDM3	0.48 (12.2)	1 (25.4)	
	1/8" ID	3.0mm ID	SMFM3MBLK	SMFDM3MBLK	0.48 (12.2)	1 (25.4)	
	1/8" ID	3.2mm ID	SMF02	SMFD02	0.48 (12.2)	0.90 (22.9)	
	1/8" ID	3.2mm ID	SMF02MBLK	SMFD02MBLK	0.48 (12.2)	0.90 (22.9)	
PANEL MOUNT HOSE BARB	1/16" ID	1.6mm ID	SMFPM01	SMFPM01	0.58 (14.7)	0.75/90 (19.1/22.9)	1/2 (12.7)
	1/16" ID	1.6mm ID	SMFPM01BLK	SMFPM01BLK	0.58 (14.7)	0.75/90 (19.1/22.9)	1/2 (12.7)
	—	3.0mm ID	SMFPM3	SMFPM3	0.58 (14.7)	1 (25.4)	1/2 (12.7)
	—	3.0mm ID	SMFPM3BLK	SMFPM3BLK	0.58 (14.7)	1 (25.4)	1/2 (12.7)
	1/8" ID	3.2mm ID	SMFPM02	SMFPM02	0.58 (14.7)	0.90 (22.9)	1/2 (12.7)
	1/8" ID	3.2mm ID	SMFPM02BLK	SMFPM02BLK	0.58 (14.7)	0.90 (22.9)	1/2 (12.7)

## COUPLING BODIES - Polypropylene



TERMINATION	TUBING/THREAD SIZE	STRAIGHT THRU	SHUTOFF	A	B	C
IN-LINE PIPE THREAD	1/8" NPT		SMPT0212	0.51 (13)	0.86 (21.8)	7/16 (11.1)
IN-LINE HOSE BARB (ACETAL LOCKING SLEEVE)	1/16" ID	1.6mm ID	SMF0112	0.48 (12.2)	0.75/90 (19.1/22.9)	
	1/8" ID	3.2mm ID	SMF0212	0.48 (12.2)	0.90 (22.9)	
PANEL MOUNT HOSE BARB (ACETAL LOCKING SLEEVE)	1/16" ID	1.6mm ID	SMFPM0112	0.58 (14.7)	0.75/90 (19.1/22.9)	1/2 (12.7)
	1/8" ID	3.2mm ID	SMFPM0212	0.58 (14.7)	0.90 (22.9)	1/2 (12.7)

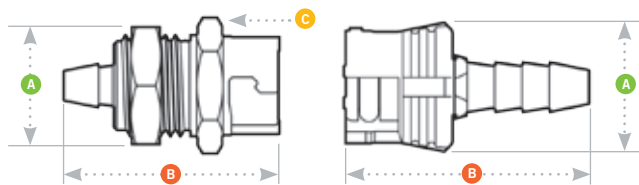
## SMF1 DISPOSABLE BODIES - ABS



TERMINATION	TUBING/THREAD SIZE	STRAIGHT THRU	SHUTOFF	A	B	C
IN-LINE HOSE BARB	1/8" ID	3.2mm ID	SMF10297	0.38 (9.7)	0.82 (20.8)	
	1/8" ID	3.2mm ID	SMF10297MBLK	0.42 (10.7)	0.82 (20.8)	

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. MBLK = molded black material. BLK = dyed black material.

## PRODUCT DIMENSIONS



A = Height/Diameter    B = Total Length    C = Hex Size on Main Component

## PANEL DIMENSIONS

	PANEL OPENING	PANEL THICKNESS MAX. – MIN.	PANEL NUT HEX	PANEL NUT THREAD
COUPLING BODIES	7/16	0.21 – 0.03	1/2	7/16-24UNF
COUPLING INSERTS	7/16	0.21 – 0.03	1/2	7/16-24UNF

## COUPLING INSERTS - Acetal



TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	A	B
IN-LINE HOSE BARB	1/16" ID	1.6mm ID	SMM01	0.48 (12.2)	0.75 (19.1)
	1/16" ID	1.6mm ID	SMM01MBLK	0.48 (12.2)	0.75 (19.1)
	—	3.0mm ID	SMMM3	0.48 (12.2)	0.8 (20.3)
	1/8" ID	3.2mm ID	SMM02	0.48 (12.2)	0.8 (20.3)
	1/8" ID	3.2mm ID	SMM02MBLK	0.48 (12.2)	0.9 (22.9)
	—	4.0mm ID	SMMM4	0.48 (12.2)	0.9 (22.9)
	—	5.0mm ID	SMMM5	0.48 (12.2)	1.02 (25.9)
	—	5.0mm ID	SMMM5MBLK	0.48 (12.2)	1.02 (25.9)
PANEL MOUNT HOSE BARB	1/16" ID	1.6mm ID	SMPM01	0.5 (12.7)	0.75 (19.1)
	1/16" ID	1.6mm ID	SMPM01BLK	0.5 (12.7)	0.75 (19.1)
	—	3.0mm ID	SMPM03	0.5 (12.7)	0.8 (20.3)
	1/8" ID	3.2mm ID	SMPM02	0.5 (12.7)	0.9 (22.9)
	1/8" ID	3.2mm ID	SMPM02BLK	0.5 (12.7)	0.9 (22.9)

## COUPLING INSERTS - Polypropylene



TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	A	B
IN-LINE HOSE BARB (ACETAL LOCKING SLEEVE)	1/16" ID	1.6mm ID	SMM0112	0.48 (12.19)	0.75 (19.1)
	1/8" ID	3.2mm ID	SMM0212	0.48 (12.19)	0.9 (22.9)
PANEL MOUNT HOSE BARB (ACETAL LOCKING SLEEVE)	1/16" ID	1.6mm ID	SMPM0112	0.5 (12.7)	0.75 (19.1)
	1/8" ID	3.2mm ID	SMPM0212	0.5 (12.7)	0.9 (22.9)

## SMC COMPLETE IN-LINE COUPLINGS - Acetal



TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	SHUTOFF	B
IN-LINE HOSE BARB	1/16" ID	1.6mm ID	SMC01	SMCD01	1.32/1.46 (33.5/37.1)
	1/16" ID	1.6mm ID	SMC01MBLK	SMCD01MBLK	1.32/1.46 (33.5/37.1)
	—	3.0mm ID	SMC02	SMCDM3	1.62 (41.1)
	—	3.0mm ID	SMC02MBLK		1.62 (41.1)
	1/8" ID	3.2mm ID		SMCD02	1.61 (40.9)
	1/8" ID	3.2mm ID			1.61 (40.9)

## SMC COMPLETE IN-LINE COUPLINGS - Polypropylene



TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	B
IN-LINE HOSE BARB	1/16" ID	1.6mm ID	SMC0112	1.32 (33.5)
	1/8" ID	3.2mm ID	SMC0212	1.61 (40.9)

## SMC ACCESSORY CHART - Acetal



TERMINATION	O-RING MATERIAL	PART NO.	A	B
MALE PLUG	Buna-N	SMMP	0.48 (12.2)	0.50 (12.7)

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. MBLK = molded black material. BLK = dyed black material.

WARRANTY: All sales are subject to Colder Products Company's limited express warranty set forth in the CPC catalog. Contact your local distributor or CPC Customer Service for warranty provisions.

Warning: Due to the wide variety of possible fluid media and operating conditions, unintended consequences may result from the use of this product, all of which are beyond the control of CPC. It is the user's responsibility to carefully determine and test for compatibility for use with their application. All such risks shall be assumed by the buyer.

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