SMC
SERIES CONNECTOR

SMC and SMF1 are among the smallest couplings at CPC™. 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, 1.6 mm to 3.2 mm and 5.0 mm

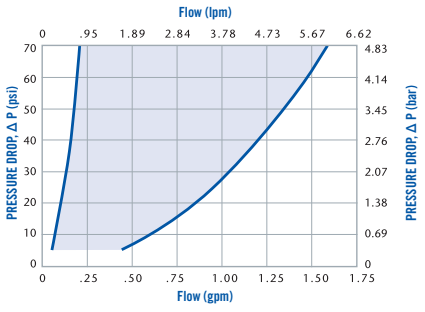
WARNING: Pressure, temperature, chemicals, and operating environment can affect the performance of couplings. It is the customer's responsibility to test the suitability of CPC products in their own application conditions.

SCAN

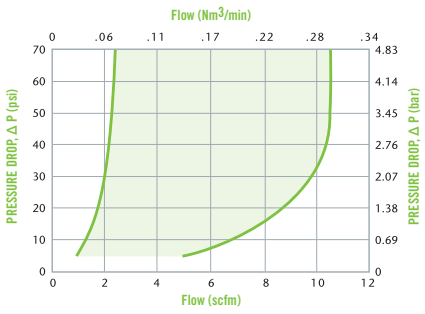
cpcworldwide.com/SMC

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

SMC WATER FLOW



SMC AIR FLOW • 100 psig inlet pressure



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.

CPC
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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.

CPC

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

BODIES	INSERTS	
	S MM01	S MM02
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_V** = 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			SMPTD02BLK	0.51 (13)	0.86 (21.8)	7/16 (11.1)
IN-LINE HOSE BARB	1/16" ID	1.6 mm ID	SMF01	SMFD01	0.48 (12.2)	0.75/.90 (19.1/22.9)	
		1.6 mm ID	SMF01MBLK		0.48 (12.2)	0.75/.90 (19.1/22.9)	
		3.0 mm ID	SMFM3	SMFDM3	0.48 (12.2)	1 (25.4)	
	1/8" ID	3.0 mm ID	SMFM3MBLK		0.48 (12.2)	1 (25.4)	
	1/8" ID	3.2 mm ID	SMF02	SMFD02	0.48 (12.2)	0.90 (22.9)	
	1/8" ID	3.2 mm ID	SMF02MBLK	SMFD02MBLK	0.48 (12.2)	0.90 (22.9)	
PANEL MOUNT HOSE BARB	1/16" ID	1.6 mm ID	SMFPM01	SMFPMD01	0.58 (14.7)	0.75/.90 (19.1/22.9)	1/2 (12.7)
	1/16" ID	1.6 mm ID	SMFPM01BLK		0.58 (14.7)	0.75/.90 (19.1/22.9)	1/2 (12.7)
		3.0 mm ID	SMFP mm3	SMFPMDM3	0.58 (14.7)	1 (25.4)	1/2 (12.7)
		3.0 mm ID		SMFPMDM3BLK	0.58 (14.7)	1 (25.4)	1/2 (12.7)
	1/8" ID	3.2 mm ID	SMFPM0212	SMFPMD02	0.58 (14.7)	0.90 (22.9)	1/2 (12.7)
	1/8" ID	3.2 mm ID	SMFPM02BLK	SMFPMD02BLK	0.58 (14.7)	0.90 (22.9)	1/2 (12.7)

COUPLING BODIES - Polypropylene







TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	SHUTOFF	A	B	C
IN-LINE PIPE THREAD	1/8" NPT		SMPT0212		0.51 (13)	0.86 (21.84)	7/16 (11.1)
IN-LINE HOSE BARB (ACETAL LOCKING SLEEVE)	1/16" ID	1.6 mm ID	SMF0112	SMFD0112	0.48 (12.2)	0.75/.90 (19.1/22.9)	
	1/8" ID	3.2 mm ID	SMF0212		0.48 (12.2)	0.90 (22.9)	
PANEL MOUNT HOSE BARB (ACETAL LOCKING SLEEVE)	1/16" ID	1.6 mm ID	SMFPM0112		0.58 (14.7)	0.75/.90 (19.1/22.9)	1/2 (12.7)
	1/8" ID	3.2 mm ID	SMFPM0212		0.58 (14.7)	0.90 (22.9)	1/2 (12.7)

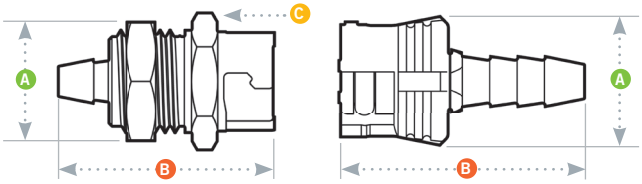
SMF1 DISPOSABLE BODIES - ABS



TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	A	B	C
IN-LINE HOSE BARB	1/8" ID	3.2 mm ID	SMF10297	0.38 (9.7)	0.82 (20.8)	
	1/8" ID	3.2 mm 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	1.6 mm ID	S mm01	0.48 (12.2)	0.75 (19.1)
	1/16" ID	1.6 mm ID	S mm01MBLK	0.48 (12.2)	0.75 (19.1)
		3.0 mm ID	S mmM3	0.48 (12.2)	0.8 (20.3)
	1/8" ID	3.2 mm ID	S mm02	0.48 (12.2)	0.8 (20.3)
	1/8" ID	3.2 mm ID	S mm02MBLK	0.48 (12.2)	0.9 (22.9)
		4.0 mm ID	S mmM4	0.48 (12.2)	0.9 (22.9)
		5.0 mm ID	S mmM5	0.48 (12.2)	1.02 (25.9)
		5.0 mm ID	S mmM5MBLK	0.48 (12.2)	1.02 (25.9)
PANEL MOUNT HOSE BARB	1/16" ID	1.6 mm ID	S mmPM01	0.5 (12.7)	0.75 (19.1)
	1/16" ID	1.6 mm ID	S mmPM01BLK	0.5 (12.7)	0.75 (19.1)
		3.0 mm ID	S mmP mm3	0.5 (12.7)	0.8 (20.3)
	1/8" ID	3.2 mm ID	S mmPM02	0.5 (12.7)	0.9 (22.9)
	1/8" ID	3.2 mm ID	S mmPM02BLK	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	1.6 mm ID	S mm0112	0.48 (12.19)	0.75 (19.1)
	1/8" ID	3.2 mm ID	S mm0212	0.48 (12.19)	0.9 (22.9)
PANEL MOUNT HOSE BARB (ACETAL LOCKING SLEEVE)	1/16" ID	1.6 mm ID	S mmPM0112	0.5 (12.7)	0.75 (19.1)
	1/8" ID	3.2 mm ID	S mmPM0212	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	1.6 mm ID	SMC01	SMCD01	1.32/1.46 (33.5/37.1)
	1/16" ID	1.6 mm ID			1.32/1.46 (33.5/37.1)
		3.0 mm ID	SMC02		1.62 (41.1)
		3.0 mm ID	SMC02MBLK		1.62 (41.1)
	1/8" ID	3.2 mm ID		SMCD02	1.61 (40.9)
	1/8" ID	3.2 mm 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	1.6 mm ID	SMC0112	1.32 (33.5)
	1/8" ID	3.2 mm ID	SMC0212	1.61 (40.9)

SMC ACCESSORY CHART - Acetal



TERMINATION		O-RING MATERIAL	PART NO.	A	B
MALE PLUG		Buna-N	S mmP	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 the Colder Products Company® 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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