



The SMC & SMF1 are Colder'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.

The SMC Series is also available with optional RFID (Radio Frequency Identification) capability.

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

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

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 (chrome-plated brass)

Tubing Sizes:
 1/16" to 1/8" ID, 1.6mm to 3.2mm

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

Note: BS EN 1060-3 compatible - prevents misconnections in medical applications like blood pressure cuffs

Liquid Flow Rates Liquid Flow Rate Information for Couplings

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

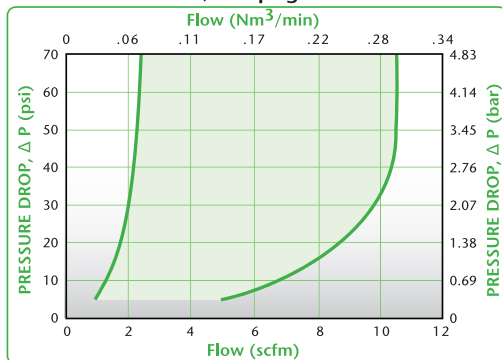
$$Q = C_v \sqrt{\frac{\Delta P}{S}}$$

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

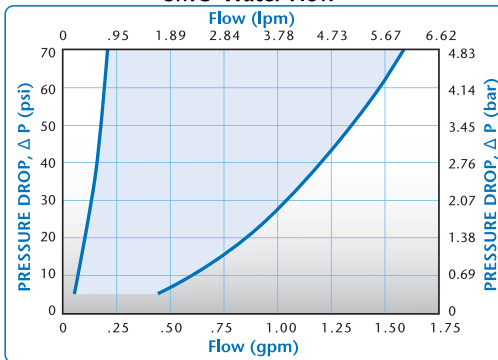
C_v Values for Subminiature Couplings

BODIES	SMM01	SMM02	BODIES	SMM01	SMM02
SMF01	.03	.03	SMFD02	.03	.08
SMFD01	.03	.03	SMPT02	.03	.19
SMF02	.03	.19	SMPTD02	.03	.08

SMC Air Flow, 100 psig Inlet Pressure



SMC Water Flow



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.



The IdentiQuik® Series of smart couplings are RFID enabled couplings used on equipment and in processes. RFID is an identification method that relies on remotely writing and reading data. Smart coupling applications include: inventory level meters, surgical tool identification, product protection and many more.

SMART COUPLINGS WITH RFID

IdentiQuik SMC Series

- (((**Identify misconnections:** eliminate out-of-sequence connections or misconnections due to operator error
- (((**Protect your brand:** prevent out-of-date, incorrect or misapplied products from being used
- (((**Prolong equipment life:** prevent the accidental or unintentional use of harmful media
- (((**Save time:** automatic documentation of package and media lot numbers, date codes and more

RFID Specifications

RF Communication Range:
Approximately 1"

Operating Voltage:
8-25V standard,
5V only available

Power Consumption:
350mW maximum

Communication:
ASCII RS-232 (DB-9)

RFID Tag:
13.56 MHz
ISO-15693 - 112 bytes
programmable

NOTE: RFID tags not approved for e-beam or gamma sterilization.

Operating Temperature:
32°F to 150°F
(0°C to 65°C)

Materials are listed on page 12. Customized parts (materials, voltage, termination, cable length, etc.) available. Call for more information.

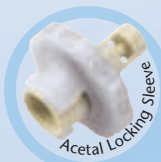
Coupling Inserts



ACETAL

Product Dimensions (See drawing on page 14)

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B
<i>IN-LINE</i>	1/16" ID	1.6mm ID	iSMF1HP1	iSMFD1HPI	.76	.76/.91
<i>HOSE BARB</i>	1/8" ID	3.2mm ID	iSMF2HP1	iSMFD2HPI	.76	.91/.91
		3mm ID	iSMFM3HP1	iSMFDM3HPI	.76	1.01/1.00



POLYPROPYLENE

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
<i>IN-LINE</i>	1/16" ID	1.6mm ID	iSMM121HP1	.76	.76
<i>HOSE BARB</i>	1/8" ID	3.2mm ID	iSMF122HP1	.76	.91



ACETAL

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
<i>IN-LINE</i>	1/16" ID	1.6mm ID	iSMM1HP1	.76	.76
<i>HOSE BARB</i>	1/8" ID	3.2mm ID	iSMM2HP1	.76	.91



POLYPROPYLENE

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
<i>IN-LINE</i>	1/16" ID	1.6mm ID	iSMM121HP1	.76	.76
<i>HOSE BARB</i>	1/8" ID	3.2mm ID	iSMM122HP1	.76	.91
		3mm ID	iSMMM3HP1	.76	.81

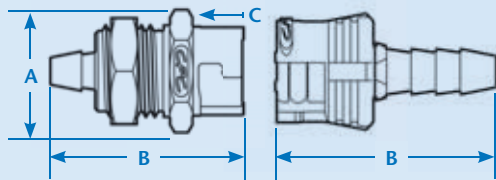
All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. **NOTE:** iSMC Readers are built on a custom basis. I-Code SL1 tags are available for existing applications, contact the factory for assistance.



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Product Dimensions



A = Height/Diameter
 B = Total Length (including valve)
 C = Hex Size on Main Component

	PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
COUPLING BODIES AND INSERTS	7/16	.21	.03



PANEL NUT HEX	PANEL NUT THREAD
1/2	7/16-24UNS

Coupling Bodies

Polycarbonate SMC products manufactured in Colder's cleanroom also available. See page 76.

ACETAL

	TERMINATION IN-LINE PIPE THREAD	THREAD SIZE 1/8" NPT 1/8" NPT		STRAIGHT THRU SMPT02 SMPT02BLK	SHUTOFF SMPTD02 SMPTD02BLK	A .51 .51	B .86 .86	C 7/16 7/16
	TERMINATION IN-LINE HOSE BARB	TUBING SIZE 1/16" ID 1/16" ID 1/8" ID 1/8" ID	METRIC EQ. 1.6mm ID 1.6mm ID 3.0mm ID 3.0mm ID 3.2mm ID 3.2mm ID	STRAIGHT THRU SMF01 SMF01MBLK SMFM3 SMFM3MBLK SMF02 SMF02MBLK	SHUTOFF SMFD01 SMFD01MBLK SMFDM3 SMFDM3MBLK SMFD02 SMFD02MBLK	A .48 .48 .48 .48 .48 .48	B .75/.90 .75/.90 1.00 1.00 .90 .90	
	TERMINATION PANEL MOUNT HOSE BARB	TUBING SIZE 1/16" ID 1/16" ID 1/8" ID 1/8" ID	METRIC EQ. 1.6mm ID 1.6mm ID 3.0mm ID 3.0mm ID 3.2mm ID 3.2mm ID	STRAIGHT THRU SMFPM01 SMFPM01BLK SMFPM3 SMFPM3BLK SMFPM02 SMFPM02BLK	SHUTOFF SMFPM01 SMFPM01BLK SMFPM3 SMFPM3BLK SMFPM02 SMFPM02BLK	A .58 .58 .58 .58 .58 .58	B .75/.90 .75/.90 1.00 1.00 .90 .90	C 1/2 1/2 1/2 1/2 1/2 1/2

POLYPROPYLENE

	TERMINATION IN-LINE PIPE THREAD	THREAD SIZE 1/8" NPT		STRAIGHT THRU SMPT0212		A .51	B .86	C 7/16
	TERMINATION IN-LINE HOSE BARB (ACETAL LOCKING SLEEVE)	TUBING SIZE 1/16" ID 1/8" ID	METRIC EQ. 1.6mm ID 3.2mm ID	STRAIGHT THRU SMF0112 SMF0212		A .48 .48	B .75/.90 .90	
	TERMINATION PANEL MOUNT HOSE BARB (ACETAL LOCKING SLEEVE)	TUBING SIZE 1/16" ID 1/8" ID	METRIC EQ. 1.6mm ID 3.2mm ID	STRAIGHT THRU SMFPM0112 SMFPM0212		A .58 .58	B .75/.90 .90	C 1/2 1/2

SMF1 Disposable Bodies

ABS



TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
IN-LINE	1/8" ID	3.2mm ID	SMF10297	.38	.82
HOSE BARB	1/8" ID	3.2mm ID	SMF10297MBLK	.42	.82
		5mm ID	SMF1M597	.42	.69
		5mm ID	SMF1M597MBLK	.42	.69

DID YOU KNOW ... For applications that do not require a disconnection from equipment or parts at any point during use, Colder offers polypropylene and nylon fittings that are well suited for 1/16" and 3/8" ID tubing. These fittings feature Colder's quality hose barbs and are available in straight, tee and elbow configurations. See page 74 for more information.

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.

Coupling Inserts

(All SMC inserts are shown non-valved)

ACETAL

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B	
IN-LINE HOSE BARB	1/16" ID	1.6mm ID	SMM01	.48	.75	
		1.6mm ID	SMM01MBLK	.48	.75	
	1/8" ID	3.0mm ID	SMMM3	.48	.80	
		3.0mm ID	SMMM3MBLK	.48	.80	
		3.2mm ID	SMM02	.48	.90	
		3.2mm ID	SMM02MBLK	.48	.90	
		5.0mm ID	SMMM5	.48	1.00	
	PANEL MOUNT HOSE BARB	1/16" ID	1.6mm ID	SMMPM01	.50	.75
			1.6mm ID	SMMPM01BLK	.50	.75
1/8" ID		3.0mm ID	SMMPM03	.50	.80	
		3.0mm ID	SMMPM03BLK	.50	.80	
1/8" ID		3.2mm ID	SMMPM02	.50	.90	
		3.2mm ID	SMMPM02BLK	.50	.90	



CHROME-PLATED BRASS

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
IN-LINE HOSE BARB	1/8" ID	3.2mm ID	SMM02CMBLK	.48	.90
PANEL MOUNT HOSE BARB	1/8" ID	3.2mm ID	SMMPM02CMBLK	.50	.90



POLYPROPYLENE

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
IN-LINE HOSE BARB (ACETAL LOCKING SLEEVE)	1/16" ID	1.6mm ID	SMM0112	.48	.75
	1/8" ID	3.2mm ID	SMM0212	.48	.90
PANEL MOUNT HOSE BARB (ACETAL LOCKING SLEEVE)	1/16" ID	1.6mm ID	SMMPM0112	.50	.75
	1/8" ID	3.2mm ID	SMMPM0212	.50	.90



ACETAL

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	B
IN-LINE HOSE BARB	1/16" ID	1.6mm ID	SMC01	SMCD01	1.32/1.46
		1.6mm ID	SMC01MBLK	SMCD01MBLK	1.32/1.46
	1/8" ID	3.0mm ID	SMCM3	SMCDM3	1.62
		3.0mm ID	SMCM3MBLK	SMCDM3MBLK	1.62
	1/8" ID	3.2mm ID	SMC02	SMCD02	1.61
		3.2mm ID	SMC02MBLK	SMCD02MBLK	1.61

SMC Complete In-Line Couplings



POLYPROPYLENE

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



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.



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