

**Revised 2/22/08**

# Pages 1 - 65

**CLEANER | FASTER | SAFER | SMARTER**

*Colder, first choice in couplings*

## Couplings and Fittings For Plastic Tubing

Colder Products Company has been designing and manufacturing quick disconnect couplings, fittings, and connectors since 1978. Our broad range of products can be found in thousands of applications across many markets including industrial, life sciences and chemical handling. Used in a wide range of machinery, devices and processes, innovative coupling and connection technologies from Colder allow flexible tubing to be quickly and safely connected and disconnected.

To meet the needs of such a diverse range of markets and applications, Colder offers more than 7,000 standard product line items, in addition to developing custom-designed couplings. The robust and easy-to-use design of Colder's quick disconnect couplings provide reliable, secure and leak-free connections for fluid and air management.

### Where To Buy

Find your local distributor by visiting [www.colder.com](http://www.colder.com) or call Colder's Customer Service at 1-800-444-2474 or 651-645-0091. You can also send an e-mail to [info@colder.com](mailto:info@colder.com).

### Quality

Quality is a key component of Colder's success. We are an ISO9000-2000 certified company and our clean room is certified to ISO Class 7 certification standards.

### New Products

Exciting additions to Colder's product offering include:

- |  |          |
|--|----------|
| • PMC12 1/4-28 connector for micro-bore tubing | Page 20  |
| • NS2 our newest and smallest non-spill        | Page 28  |
| • Steam-Thru® II Connections                   | Page 86  |
| • DrumQuik PRO closed-loop dispense system     | Page 100 |





## Our Markets

Colder's proprietary, engineered solutions improve the overall functionality and design of the equipment and processes in which they are used. Special product features include built-in shutoff valves to prevent product spills and an easy-to-use, push-button thumb latch for quick connecting and disconnecting. In addition, IdentiQuik Smart Couplings™ integrate RFID (Radio Frequency Identification) to automatically exchange product data at the exact time and location of connection. For users of Colder's advanced coupling technologies the result is cleaner, faster, safer and smarter fluid management. Specific applications for Colder couplings include:

### Industrial

- Colder's broad offering of coupling options is found in many industrial markets. Applications include analytical instrumentation, printing and ink management, engine systems, biohazard detection equipment, electronic cooling and portable hydration systems.

### Life Sciences

- Colder products for the Life Sciences market are assembled in our clean room and satisfy the most stringent acceptance requirements. They are also compatible with popular sterilization techniques. Applications include reusable and disposable connection devices in surgical and dialysis equipment, blood pressure monitoring and patient therapy devices.
- Colder offers single-use connections for media transfer in feeding, harvesting and sampling applications. Innovative solutions provide biopharmaceutical manufacturers the ideal transition from stainless processing equipment to disposable bag systems, manifolds and tube sets.

### Chemical Management

- Colder's wide range of chemically resistant quick disconnect couplings and chemical dispensing systems provide non-spill operation and improve the safety of chemical management environments. Applications include semiconductor and pharmaceutical manufacturing as well as pump, filter, and de-ionized water connections.
- Closed-loop dispensing systems enable fast, easy and economic chemical extraction from drums, IBCs and jerry cans. These systems increase workplace safety and protect workers and the environment from hazardous leaks and spills.
- Colder's fitments, closures, and couplings for bag-in-box and rigid containers are found in many industrial applications such as cleaning, soap and detergent dispensing and bulk ink management.

## Engineered Solutions Worldwide

Colder's success is grounded in its expertise in research & development and application engineering. Many of Colder's standard couplings and fittings began as custom engineered solutions that found broader use in applicable markets. To date, Colder has produced thousands of custom and standard products to meet the fluid handling challenges of various industries worldwide.

## The Colder Advantage

- World's largest supplier of plastic quick disconnect couplings
- Global distribution network enables local delivery on six continents
- Comprehensive product line; more than 7,000 standard items available plus thousands of custom solutions
- 50% of our professional staff is comprised of degreed engineers and other engineering staff
- Extensive modeling capabilities, prototype equipment, an expansive test lab, thousands of solutions



### Regulatory and Compliance

#### FDA and USDA

The U.S. Food and Drug Administration publishes, through the Code of Federal Regulations, standardized criteria which govern the acceptability of materials used in food contact. The U.S. Department of Agriculture publishes similar standards that mirror FDA criteria. Neither agency approves or disapproves products for particular applications. Most of Colder's products are made using resins that comply with applicable FDA or USDA standards. When necessary, the standard o-ring seals are replaced with specific, recognized materials.

#### NSF

NSF International, based in Ann Arbor, Michigan, develops and publishes consensual criteria that govern the acceptability of materials and equipment used in food and beverage processing. They also do testing to verify the performance of materials or devices to their published criteria. Colder lists many of its product lines under the criteria of NSF/ANSI Standard 169 (formerly C-2), which governs components used in food and beverage contact applications.

#### ISO 9001:2000 Certification

ISO 9001:2000 is a standard which assures consistency of a product ordered by customers. Organizations having ISO 9001:2000 certification have demonstrated compliance to the ISO 9001:2000 requirements by an independent registration authority. Colder Products Company's Quality Management System has been approved and certified under the ISO 9001:2000 standard.

#### Regulation of Hazardous Substances

The RoHS Directive stands for "the restriction of the use of certain hazardous substances in electrical and electronic equipment". This Directive bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants.

#### Clean Room Manufacturing

Colder Products Company manufactures certain Life Sciences and Chemical Management product lines in a clean room certified by an external testing service to meet or exceed ISO Class 7 (10,000) at 0.5 mm per ISO 14644 and the former Federal Standard 209E. Certification data can be provided upon request.



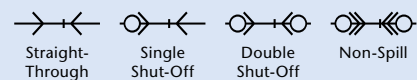
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All couplings are shown connected and actual size unless otherwise noted.  
For additional terminations and configurations, see individual product pages.

### LEGEND



## General Purpose Couplings

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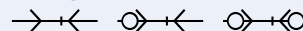


IdentiQuik® RFID available

- 12 SMC & SMF1:** Twist-to-connect design provides reliable and secure alternative to luer-type connections.  
**Material:** Acetal, polypropylene, ABS, chrome-plated brass  
**Tubing ID Sizes:** 1/16" to 1/8" (1.6mm to 3.2mm)

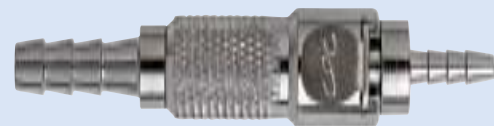
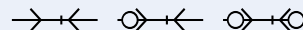


- 16 PMC:** Features one-hand connection and disconnection and integral terminations; easier to use than ball-and-sleeve designs.  
**Material:** Acetal  
**Tubing ID Sizes:** 1/16" to 1/4" (1.6mm to 6.4mm)

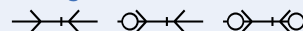


IdentiQuik RFID available

- 20 PMC12:** Offered with a variety of configurations and chemical resistance for demanding applications; gamma sterilizable.  
**Material:** Polypropylene  
**Tubing ID Sizes:** 1/16" to 1/4" (1.6mm to 6.4mm)



- 24 MC:** Durable and able to withstand higher pressure and temperature; easy one-hand connection and disconnection.  
**Material:** Chrome-plated brass  
**Tubing ID Sizes:** 1/8" to 1/4" (3.2mm to 6.4mm)

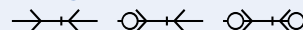


- 28 NS2:** Twist-to-connect design features non-spill valves designed to provide fast, safe and virtually leak-free fluid line connections.  
**Material:** Glass-filled polypropylene  
**Tubing ID Sizes:** 1/8" to 1/4" (3.2mm to 6.4mm)



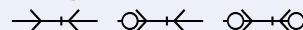
IdentiQuik RFID available

- 30 PLC:** Widest selection of sizes and configurations offered; resistant to most mild chemical solutions.  
**Material:** Acetal  
**Tubing ID Sizes:** 1/4" to 3/8" (6.4mm to 9.5mm)



IdentiQuik RFID available

- 34 PLC12:** Materials of construction offer broad chemical resistance for demanding applications; gamma sterilizable.  
**Material:** Polypropylene  
**Tubing ID Sizes:** 1/4" to 3/8" (6.4mm to 9.5mm)



- 38 LC:** Durable and able to withstand higher pressure and temperature; easy one-hand connection and disconnection.  
**Material:** Chrome-plated brass  
**Tubing ID Sizes:** 1/4" to 3/8" (6.4mm to 9.5mm)





## General Purpose Couplings

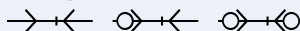
PAGE | DESCRIPTION



**42 ZLC:** Durable and economic solution for meeting price expectations in high volume; interchangeable with many existing Colder coupling series.

**Material:** Die-cast zinc

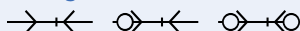
**Tubing ID Sizes:** 1/4" to 3/8" (6.4mm to 9.5mm)



**44 APC:** Features plastic thumb latch, fewer moving parts, and a smooth contoured design to deliver ease-of-use and excellent flow.

**Material:** Acetal

**Tubing ID Sizes:** 1/4" to 3/8" (6.4mm to 9.5mm)



**48 EFC12:** High efficiency valve design provides high flow capability; bulkhead panel mount option facilitates tight seals against tank walls and drums.

**Material:** Polypropylene

**Tubing ID Sizes:** 1/4" and 3/8" (6.4mm and 9.5mm)



**50 NS4:** Non-spill design coupling that virtually eliminates spills, minimizes downtime, and enhances operator safety.

**Material:** Glass-filled polypropylene, ABS

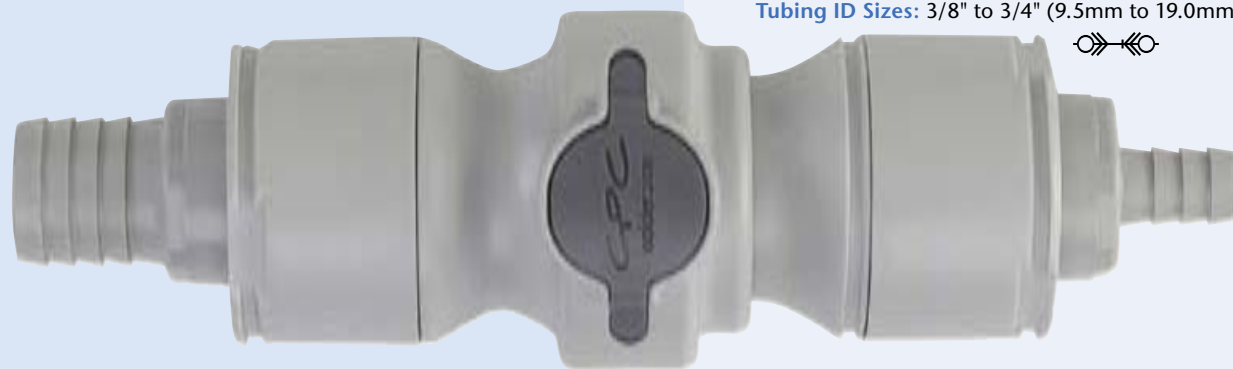
**Tubing ID Sizes:** 1/8" to 3/8" (3.2mm to 9.5mm)



**52 NS6:** Durable, yet lightweight construction that features non-spill valves and is compatible with many chemicals.

**Material:** Glass-filled polypropylene

**Tubing ID Sizes:** 3/8" to 1/2" (9.5mm to 12.7mm)



**54 NSH:** Pressure-balanced non-spill design with 100% metal-free, spring-free flow path.

**Material:** Glass-filled polypropylene

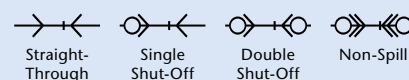
**Tubing ID Sizes:** 3/8" to 3/4" (9.5mm to 19.0mm)



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## LEGEND



## General Purpose Couplings

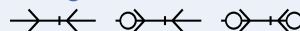
PAGE | DESCRIPTION



**56 HFC12:** Efficient valve design leads to high flow and exceptionally low spillage; shrouded thumb latch is easy to grip and simple to operate.

**Material:** Polypropylene

**Tubing ID Sizes:** 3/8" to 3/4" (9.5mm to 19.0mm)

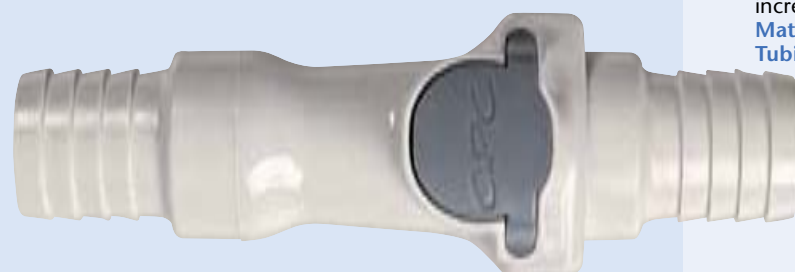
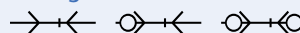


Pictured: HFC57

**60 HFC35 & 57:** Withstands harsh environments and is offered with or without UV-resistant materials to withstand harmful rays without affecting performance.

**Material:** Polysulfone (white), UV polysulfone (black)

**Tubing ID Sizes:** 3/8" to 3/4" (9.5mm to 19.0mm)



**64 FFC35:** Features non-valved and unobstructed flow path to increase flow and minimize turbulence.

**Material:** Polysulfone

**Tubing ID Sizes:** 3/4" (19.0mm)



**66 RPN:** Clip-free design for rack and panel systems; molded valve construction provides high flow and virtually no spillage.

**Material:** Anodized aluminum

**Termination:** SAE-06, 9/16-18 UNF-2A threads



**67 FL:** Highest flow, lowest pressure drop valved couplings to eliminate leak points and shorten completed assemblies.

**Material:** Aluminum

**Tubing ID Sizes:** 1/2" to 3/4" (12.7mm to 19.0mm)



**68 Tentube™:** Allows connection and disconnection of up to ten lines with one slide latch; tubing orientation ensured by physical keying.

**Material:** Acetal, polypropylene

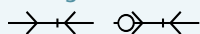
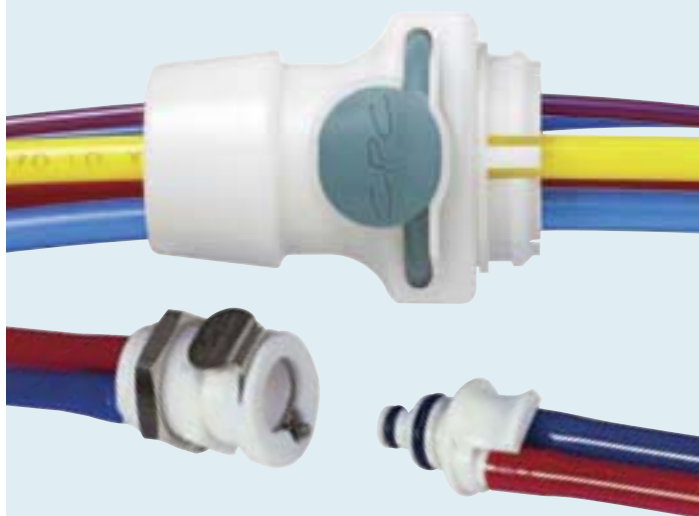
**Tubing ID Sizes:** 1/16" to 1/8" (1.6mm to 3.2mm)



**70 Sixtube™:** Snap-in panel mount design and flexibility to connect and disconnect six separate lines with or without valves.

**Material:** Acetal, polypropylene

**Tubing ID Sizes:** 1/16" to 1/8" (1.6mm to 3.2mm)



**Twin Tube™:** One easy-to-use quick disconnect for two separate non-valved flow paths.

**Material:** Acetal, ABS

**Tubing ID Sizes:** 1/16" to 1/8" (1.6mm to 3.2mm)



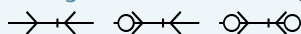
**72 Multi-Mount:** Connects three to five lines at once; keyed to prevent mismatched connections.

**Material:** Acetal, chrome-plated brass

**Tubing ID Sizes:** 1/8" to 3/8" (3.2mm to 9.5mm)



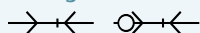
Not to scale.



**74 Keyed, Color-Coded Brass:** Provides foolproof connections and non-interchangeable lines; three keyed and color-coded options.

**Material:** Chrome-plated brass

**Tubing ID Sizes:** 1/8" to 1/4" (3.2mm to 6.4mm)



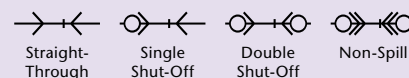
**76 Fittings & Accessories:** Offering includes a variety of ancillary components from fittings and luer lockers to PTFE nuts and dust caps.



Not to scale.



## LEGEND



## Life Sciences - Medical & Bioprocessing

PAGE | DESCRIPTION



**78 SMC:** Twist-to-connect design manufactured and packaged in a clean room.

**Material:** Medical-grade polycarbonate

**Tubing ID Sizes:** 1/16" to 1/8" (1.6mm to 3.2mm)



**79 MPC:** Easy-to-use and secure connection for critical fluid applications; includes pressure sealing caps and plugs and optional locking sleeves.

**Material:** Medical-grade ABS, polycarbonate, and polysulfone

**Tubing ID Sizes:** 1/4" to 3/8" (6.4mm to 9.5mm)



**82 MPX:** Features thin tapered barb to minimize dead space between tubing and coupling; reduces turbulence and area for particle entrapment.

**Material:** Medical-grade polycarbonate, and polysulfone

**Tubing ID Sizes:** 3/8" to 1/2" (9.5mm to 12.7mm)



**84 SaniQuik™:** Integral sanitary termination attaches to hard-plumbed systems with tri-clover clamps; permits quick and easy connection to single-use bag systems, manifolds or tube sets.

**Material:** 316L stainless steel

**Termination Sizes:** 3/4" and 1 1/2" sanitary



**85 Sanitary:** Attaches directly to popular 3/4" mini and 1" maxi size sanitary connections, eliminating the need for cumbersome adapters or tubing assemblies.

**Material:** Medical-grade polysulfone

**Termination Sizes:** 3/4" and 1" sanitary



## Life Sciences - Medical & Bioprocessing

PAGE | DESCRIPTION



**86 Steam-Thru® Connections:** Allow quick and easy sterile connection between biopharmaceutical processing equipment and disposable bag and tube assemblies.

**Material:** Medical-grade polysulfone

**Tubing ID Sizes:** 3/8" to 1/2" (9.5mm to 12.7mm)



**90 HFC39:** Features automatic shutoff valves; cost-effective replacement for expensive, heavy, stainless steel connectors or fittings.

**Material:** Medical-grade polysulfone

**Tubing ID Sizes:** 1/4" to 1/2" (6.4mm to 12.7mm)



**91 MPU:** Twist-to-connect design features easy-to-use locking mechanism that guards against accidental disconnects.

**Material:** Medical-grade polysulfone

**Tubing ID Sizes:** 3/4" (19.0mm)



## High Purity Couplings

PAGE | DESCRIPTION



Pictured: CQV06

**92 ChemQuik® CQH06/CQV06:** All plastic design for ultra-pure media and high chemical resistance.

**Material:** Natural, virgin polypropylene and PVDF

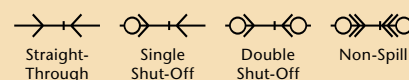
**Tubing Sizes:** 3/8" to 3/4" flare; 3/8" to 3/4" NPT



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## LEGEND




## High Purity Couplings

PAGE | DESCRIPTION



Shown at 50% scale.

- 94 ChemQuik® CQGO6:** Spring-free and metal-free flow path for high flow capacity and non-spill, high purity connections.  
**Material:** Natural, virgin polypropylene  
**Tubing Sizes:** 3/8" to 3/4" flare; 3/8" to 3/4" NPT  




Not to scale.

- 95 ChemQuik Dual Containment System:** Flare nuts and panel mount fittings that facilitate double containment of critical chemical lines.  
**Material:** Natural, virgin polypropylene

## Dispensing Systems

PAGE | DESCRIPTION



Not to scale.

- 96 DrumQuik® Modular:** Two-port modular design for closed system dispensing; used with a variety of quick disconnect couplings.  
**Material:** Natural, virgin PTFE, and polypropylene  
**Thread Sizes:** Industry standard 2" buttress and 2" NPS



Not to scale.

- 98 DrumQuik Universal Drum and Bottle Adaptor Kits:** Used with 3/4" male NPT coupling terminations to adapt dip-tubes to standard drum closures for closed system dispensing.  
**Material:** Natural, virgin polypropylene  
**Thread Sizes:** UDA: none, UDA 2-Port: 3/4" male NPT; BottleQuik®: SP400-38mm



Not to scale.

- 99 DrumQuik Accessories:** Colder offers an array of accessories intended for use with DrumQuik dispensing systems. Accessories include bushings, valves, caps and plugs.
- 100 DrumQuik PRO:** Closed chemical dispensing system with a reusable coupler and a recyclable dip-tube assembly for chemical extraction from drums, jerry cans, and IBCs.  
**Material:** Food grade, virgin polypropylene, and polyethylene  
**Thread Sizes:** 2" American buttress and BCS 56x4

## Dispensing Systems

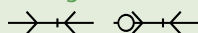
PAGE | DESCRIPTION



- 102 UDC:** Provides closed connection to bag-in-box packaging with 38mm threaded necks.  
**Material:** Polypropylene (coupling) and acetal (cap)  
**Tubing ID Sizes:** 1/4" to 3/8" (6.4mm to 9.5mm)



- 104 Puncture Seal:** Provides closed connection to Hedwin Cubitainer® bag-in-box container systems.  
**Material:** Polypropylene (coupling) and polyethylene (cap)  
**Tubing ID Sizes:** 1/4" to 3/8" (6.4mm to 9.5mm)



- 105 NSF Food Grade:** Colder manufactures many products specifically for the Food & Beverage marketplace under the criteria of NSF/ANSI Standard 169 (formerly C-2).

## Technical Information

PAGE | DESCRIPTION



- 106 Custom Capabilities:** Colder works directly with our customer's design engineering team to solve the most difficult fluid and air management problems.



- 107 Smart Technology:** Colder offers radio frequency Identification (RFID) enabled couplings and smart custom solutions with added electronics that measure and identify critical parameters.



- 108** Chemical Compatibility Table  
**112** Sterilization and Disinfectant Methods  
**113** Chemical Product Material Descriptions





**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. Please refer to page 107 for more information on Colder's patented IdentiQuik® smart coupling technology.

## Features

Twist to connect  
Free coupling rotation  
Available in medical-grade ABS

## Benefits

Prevents accidental disconnects  
Eliminates kinked tubing  
Gamma sterilizable

## 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 (POM), 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 5.0mm ID

**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.

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

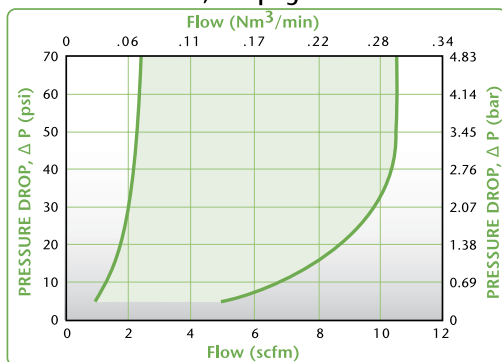
Q=Flow rate in gallons per minute  
C<sub>v</sub>=Average constant of various rates (see chart)  
ΔP=Pressure drop across coupling (psi)  
S=Specific gravity of liquid

### C<sub>v</sub> Values for Subminiature Couplings

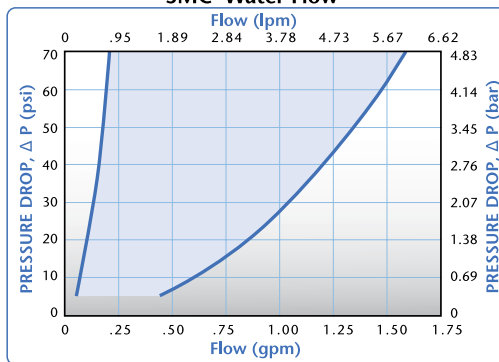
BODIES	SMM01	SMM02	BODIES	SMM01	SMM02
SMF01	.03	.03	SMFD02	.03	.08
SMFD01	.03	.03	SMPT02	.03	.19
SMF02	.03	.19	SMPTD02	.03	.08



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 automatic identification method that relies on storing and remotely retrieving data. Smart coupling applications include: inventory level meters, medical equipment calibration, product protection, and many more. Turn to page 107 for more information about IdentiQuik Smart Couplings™.

## RFID

### Specifications

#### Interrogator Read Range:

Approximately 1"

#### Operating Voltage:

8-25V standard,  
5V only available

#### Power Consumption:

350mW maximum

#### Communication:

RS-232

#### I-Code RFID Tags:

13.56 MHz, 64 bytes,  
48 bytes user  
programmable

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

#### Pressure:

Vacuum to 100 psi, 6.9 bar

#### Temperature:

32° F to 120° F  
( 0° C to 49° C)

Customized parts (voltage, termination, cable length, etc.) available.  
Call for more information.

## SMART COUPLINGS WITH RFID

### IdentiQuik SMC Series

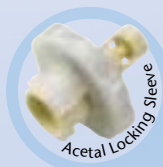
- (( **Identify misconnections:** eliminate out-of-sequence connections or misconnections due to operator error
- (( **Protect your brand:** prevent out-of-date, incorrect or misapplied products from being used
- (( **Prolong equipment life:** prevent the accidental or unintentional use of harmful media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

### Coupling Bodies



#### ACETAL

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B
IN-LINE	1/16" ID	1.6mm ID	iSMF1HPI	iSMFD1HPI	.76	.76/.91
HOSE BARB	1/8" ID	3.2mm ID	iSMF2HPI	iSMFD2HPI	.76	.91/.91
		3mm ID	iSMFM3HPI	iSMFDM3HPI	.76	1.01/1.00



#### POLYPROPYLENE

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
IN-LINE	1/16" ID	1.6mm ID	iSMF121HPI	.76	.76
HOSE BARB	1/8" ID	3.2mm ID	iSMF122HPI	.76	.91

### Coupling Inserts



#### ACETAL

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
IN-LINE	1/16" ID	1.6mm ID	iSMM1HPI	.76	.76
HOSE BARB	1/8" ID	3.2mm ID	iSMM2HPI	.76	.91



#### POLYPROPYLENE

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
IN-LINE	1/16" ID	1.6mm ID	iSMM121HPI	.76	.76
HOSE BARB	1/8" ID	3.2mm ID	iSMM122HPI	.76	.91
		3mm ID	iSMMM3HPI	.76	.81

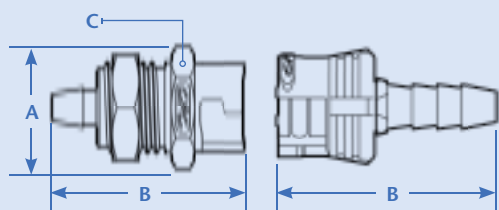
All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters.  
**NOTE:** iSMC Readers are built on a custom basis. Please contact the factory for assistance.



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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
<b>COUPLING BODIES AND INSERTS</b>	7/16	.21	.03

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



## Coupling Bodies



### ACETAL

TERMINATION	THREAD SIZE		STRAIGHT THRU	SHUTOFF	A	B	C
IN-LINE PIPE THREAD	1/8" NPT		SMPT02	SMPTD02	.51	.86	7/16
	1/8" NPT		SMPT02BLK	SMPTD02BLK	.51	.86	7/16

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	
IN-LINE HOSE BARB	1/16" ID	1.6mm ID	SMF01	SMFD01	.48	.75/.90	
	1/16" ID	1.6mm ID	SMF01MBLK	SMFD01MBLK	.48	.75/.90	
		3mm ID	SMFM3	SMFDM3	.48	1.00	
		3mm ID	SMFM3MBLK	SMFDM3MBLK	.48	1.00	
	1/8" ID	3.2mm ID	SMF02	SMFD02	.48	.90	
	1/8" ID	3.2mm ID	SMF02MBLK	SMFD02MBLK	.48	.90	

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	C
PANEL MOUNT HOSE BARB	1/16" ID	1.6mm ID	SMFPM01	SMFPM01	.58	.75/.90	1/2
	1/16" ID	1.6mm ID	SMFPM01BLK	SMFPM01BLK	.58	.75/.90	1/2
		3mm ID	SMFPM03	SMFPM03	.58	1.00	1/2
		3mm ID	SMFPM03BLK	SMFPM03BLK	.58	1.00	1/2
	1/8" ID	3.2mm ID	SMFPM02	SMFPM02	.58	.90	1/2
	1/8" ID	3.2mm ID	SMFPM02BLK	SMFPM02BLK	.58	.90	1/2



### POLYPROPYLENE

TERMINATION	THREAD SIZE		STRAIGHT THRU	A	B	C
IN-LINE PIPE THREAD	1/8" NPT		SMPT0212	.51	.86	7/16

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B	
IN-LINE HOSE BARB (ACETAL LOCKING SLEEVE)	1/16" ID	1.6mm ID	SMF0112	.48	.75/.90	
	1/8" ID	3.2mm ID	SMF0212	.48	.90	

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B	C
PANEL MOUNT HOSE BARB (ACETAL LOCKING SLEEVE)	1/16" ID	1.6mm ID	SMFPM0112	.58	.75/.90	1/2
	1/8" ID	3.2mm ID	SMFPM0212	.58	.90	1/2

Polycarbonate SMC products manufactured in Colder's clean room also available. See page 78.

## SMF1 Disposable Bodies

### ABS



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

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.

## ACETAL

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
IN-LINE HOSE BARB	1/16" ID	1.6mm ID	SMM01	.48	.75
	1/16" ID	1.6mm ID	SMM01MBLK	.48	.75
		3mm ID	SMMM3	.48	.80
		3mm ID	SMMM3MBLK	.48	.80
	1/8" ID	3.2mm ID	SMM02	.48	.90
	1/8" ID	3.2mm ID	SMM02MBLK	.48	.90
	1/8" ID	5mm ID	SMMM5	.48	1.00
	1/8" ID	5mm ID	SMMM5	.48	1.00
TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
PANEL MOUNT HOSE BARB	1/16" ID	1.6mm ID	SMMPM01	.50	.75
	1/16" ID	1.6mm ID	SMMPM01BLK	.50	.75
		3mm ID	SMMPMM3	.50	.80
		3mm ID	SMMPMM3BLK	.50	.80
	1/8" ID	3.2mm ID	SMMPM02	.50	.90
	1/8" ID	3.2mm ID	SMMPM02BLK	.50	.90
	1/8" ID	3.2mm ID	SMMPM02BLK	.50	.90
	1/8" ID	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	SMM02CBMBLK	.48	.90
TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
PANEL MOUNT HOSE BARB	1/8" ID	3.2mm ID	SMMPM02CBBLK	.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
TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	A	B
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
	1/16" ID	1.6mm ID	SMC01MBLK	SMCD01MBLK	1.32/1.46
		3mm ID	SMCM3	SMCDM3	1.62
		3mm ID	SMCM3MBLK	SMCDM3MBLK	1.62
	1/8" ID	3.2mm ID	SMC02	SMCD02	1.61
	1/8" ID	3.2mm ID	SMC02MBLK	SMCD02MBLK	1.61
		3.2mm ID	SMC02MBLK	SMCD02MBLK	1.61
	1/8" ID	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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Specifications

**Pressure:**  
Vacuum to 120 psi, 8.3 bar

**Temperature:**  
-40° F to 180° F  
(-40° C to 82° C)

**Materials:**  
**Main components and valves:** Acetal (POM)  
**Thumb latch:** Stainless steel  
**Valve spring:** 316 stainless steel  
**External springs and pin:** Stainless steel  
**O-rings:** Buna-N

**Color:**  
Natural white, others available

**Tubing Sizes:**  
1/16" to 1/4" ID, 1.6mm to 6.4mm ID

**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.

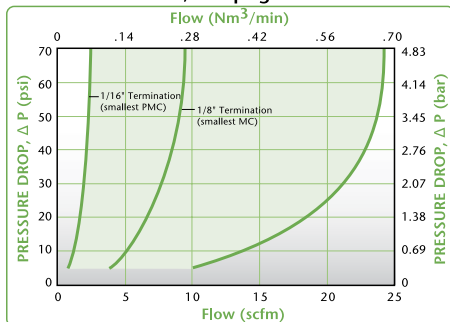
Don't forget: you can always visit [www.colder.com](http://www.colder.com) for more product information.

**The 1/8" flow PMC coupling** covers a wide variety of general-purpose applications. Featuring the Colder thumb latch, the PMC is easier to use than ball-and-sleeve designs. One-hand connection/disconnection and integral terminations make the PMC the choice for ease of use and manufacture.

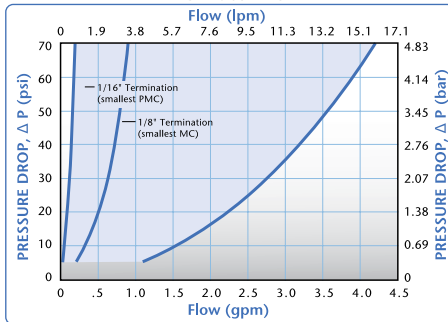
This coupling is NuSeal compatible. See page 25 for details.

Features	Benefits
Hose barb shroud	Protects the fragile 1/16" hose barb
Integral terminations	Fewer leak points, shorter assemblies, faster installations
Compatible	Mates with PMC12 and MC Series couplings (see pages 20 and 24)
Clicks when connected	Assurance of a reliable connection

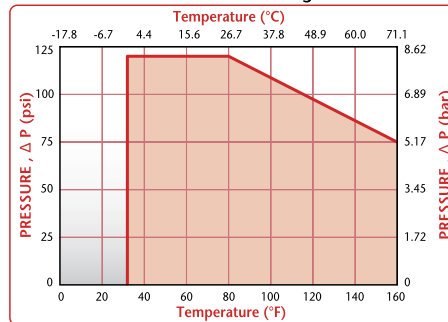
PMC Air Flow, 100 psig Inlet Pressure



PMC Water Flow



PMC Pressure Range



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.

## 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 to the right.

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

Q=Flow rate in gallons per minute  
C<sub>v</sub>=Average constant of various rates (see chart)  
ΔP=Pressure drop across coupling (psi)  
S=Specific gravity of liquid

### C<sub>v</sub> Values for 1/8" Flow PMC Couplings

BODIES	PMC 2004	PMCD 2004	PMC 2006	PMCD 2006	PMC 2202	PMCD 2202	PMC 2204	PMCD 2204	PMC 2402	PMCD 2402	PMC 2404	PMCD 2404	PMC 2602	PMC 2304	PMC 2104	PMCD 2304	PMC 2203	PMCD 2203	PMC 2201	PMCD 2201
PMC1002	.40	.18	.50	.19	.25	.16	.50	.19	.50	.20	.51	.19	.50	.50	.38	.24	.30	.17	.03	.03
PMCD1002	.27	.18	.31	.18	.24	.16	.28	.20	.26	.20	.29	.18	.26	.26	.27	.24	.25	.17	.03	.03
PMC1004	.40	.21	.50	.24	.26	.18	.50	.24	.50	.20	.51	.24	.50	.50	.38	.26	.30	.19	.03	.03
PMCD1004	.29	.19	.32	.23	.25	.17	.30	.23	.27	.21	.28	.23	.27	.28	.29	.24	.25	.18	.03	.03
PMC1204	.40	.18	.50	.18	.25	.16	.40	.18	.40	.16	.36	.18	.40	.40	.38	.21	.30	.17	.03	.03
PMCD1204	.21	.17	.22	.17	.20	.16	.22	.17	.21	.17	.20	.17	.21	.22	.21	.18	.21	.16	.03	.03
PMC1602	.23	.15	.28	.18	.19	.14	.27	.15	.27	.15	.28	.18	.27	.27	.23	.16	.20	.14	.03	.03
PMCD1602	.19	.15	.19	.15	.17	.14	.19	.15	.18	.15	.18	.15	.18	.19	.19	.15	.18	.14	.03	.03
PMC1604	.33	.23	.44	.24	.24	.18	.44	.23	.44	.20	.38	.24	.38	.44	.33	.26	.26	.19	.03	.03
PMCD1604	.23	.17	.26	.21	.22	.16	.26	.21	.26	.19	.25	.21	.21	.26	.23	.24	.22	.16	.03	.03
PMC1703	.25	.20	.30	.20	.20	.17	.30	.20	.30	.19	.28	.20	.28	.30	.25	.18	.21	.17	.03	.03
PMCD1703	.20	.17	.20	.17	.19	.15	.21	.17	.19	.17	.20	.17	.19	.20	.20	.16	.19	.16	.03	.03
PMC1701	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.02
PMCD1701	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.02	.02



## DID YOU KNOW ...

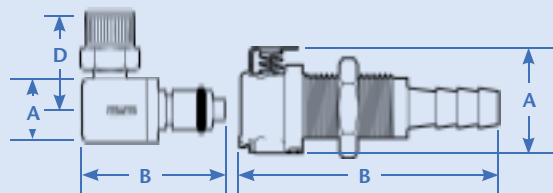
CAD models are available for all Colder couplings. These files are available in many formats including STEP, IGES and native file formats. You can see them online at [www.colder.com](http://www.colder.com).



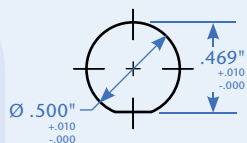
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A = Height/Diameter  
B = Total Length (including valve)  
D = Elbow Radial Length



Greenlee® punch  
number 60077

**COUPLING BODIES**  
**COUPLING INSERTS**

PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
see drawing	.50	.05
1/2	.30	.05



PANEL NUT HEX	PANEL NUT THREAD
5/8	1/2-24UNS









## Coupling Bodies

### ACETAL

	<b>TERMINATION</b> <b>IN-LINE</b> <b>PIPE THREAD</b>	<b>THREAD SIZE</b> 1/8" NPT 1/8" BSPT 1/4" NPT 1/4" BSPT		<b>STRAIGHT THRU</b> PMC1002 PMC1002BSPT PMC1004 PMC1004BSPT	<b>SHUTOFF</b> PMCD1002 PMCD1002BSPT PMCD1004 PMCD1004BSPT	<b>A</b> .79 .79 .79 .79	<b>B</b> 1.00 1.00 1.10 1.10
	<b>TERMINATION</b> <b>PANEL MOUNT</b> <b>FERRULELESS</b> <b>POLYTUBE</b> <b>FITTING, PTF†</b>	<b>TUBING SIZE</b> 5/32" OD, .10" ID 1/4" OD, .17" ID	<b>METRIC EQ.</b> 4.0mm OD, 2.0mm ID 4.0mm OD, 2.5mm ID 6.4mm OD, 4.3mm ID	<b>STRAIGHT THRU</b> PMC12M42 PMC12025 PMC1204	<b>SHUTOFF</b> PMCD12M42 PMCD12025 PMCD1204	<b>A</b> .79 .79 .79	<b>B</b> 1.65 1.70 1.72
	<b>TERMINATION</b> <b>PANEL MOUNT</b> <b>HOSE BARB</b>	<b>TUBING SIZE</b> 1/16" ID 1/8" ID 3/16" ID 1/4" ID	<b>METRIC EQ.</b> 1.6mm ID 3.2mm ID 4.8mm ID 6.4mm ID	<b>STRAIGHT THRU</b> PMC1601 PMC1602 PMC1603 PMC1604	<b>SHUTOFF</b> PMCD1601 PMCD1602 PMCD1603 PMCD1604	<b>A</b> .79 .79 .79 .79	<b>B</b> 1.40 1.65 1.85 1.85
	<b>TERMINATION</b> <b>PANEL MOUNT</b> <b>FEMALE THREAD</b>	<b>THREAD SIZE</b> 10-32 UNF		<b>STRAIGHT THRU</b> PMC181032	<b>SHUTOFF</b> PMCD181032	<b>A</b> .79	<b>B</b> 1.25
	<b>TERMINATION</b> <b>IN-LINE</b> <b>FERRULELESS</b> <b>POLYTUBE</b> <b>FITTING, PTF†</b>	<b>TUBING SIZE</b> 5/32" OD, .10" ID 1/4" OD, .17" ID	<b>METRIC EQ.</b> 4.0mm OD, 2.0mm ID 4.0mm OD, 2.5mm ID 5.0mm OD, 3.0mm ID 6.4mm OD, 4.3mm ID	<b>STRAIGHT THRU</b> PMC13M42 PMC13025 PMC13M5 PMC1304	<b>SHUTOFF</b> PMCD13M42 PMCD13025 PMCD13M5 PMCD1304	<b>A</b> .79 .79 .79 .79	<b>B</b> 1.65 1.65 1.72 1.75
	<b>TERMINATION</b> <b>IN-LINE</b> <b>HOSE BARB</b>	<b>TUBING SIZE</b> 1/16" ID 1/8" ID 3/16" ID 1/4" ID	<b>METRIC EQ.</b> 1.6mm ID 3.2mm ID 4.8mm ID 6.4mm ID	<b>STRAIGHT THRU</b> PMC1701 PMC1702 PMC1703 PMC1704	<b>SHUTOFF</b> PMCD1701 PMCD1702 PMCD1703 PMCD1704	<b>A</b> .79 .79 .79 .79	<b>B</b> 1.41 1.65 1.85 1.85
	<b>TERMINATION</b> <b>IN-LINE</b> <b>FEMALE THREAD</b>	<b>THREAD SIZE</b> 10-32 UNF		<b>STRAIGHT THRU</b> PMC191032	<b>SHUTOFF</b> PMCD191032	<b>A</b> .79	<b>B</b> 1.25

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

## Coupling Inserts ACETAL

<b>TERMINATION</b> <b>IN-LINE</b> <b>PIPE THREAD</b>	<b>THREAD SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	1/8" NPT		PMC2402	PMCD2402	.58	1.03/1.45	
	1/8" BSPT		PMC2402BSPT	PMCD2402BSPT	.58	1.03/1.44	
	1/4" NPT		PMC2404	PMCD2404	.65	1.13/1.42	
	1/4" BSPT		PMC2404BSPT	PMCD2404BSPT	.65	1.13/1.42	
<b>TERMINATION</b> <b>PANEL MOUNT</b> <b>FERRULELESS</b> <b>POLYTUBE</b> <b>FITTING, PTF†</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	 non-valved shown
	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	PMC4004	PMCD4004	.72	1.70/1.82	
<b>TERMINATION</b> <b>PANEL MOUNT</b> <b>HOSE BARB</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	1/16" ID	1.6mm ID	PMC4201	PMCD4201	.72	1.38/1.50	
	1/8" ID	3.2mm ID	PMC4202	PMCD4202	.72	1.63/1.75	
	3/16" ID	4.8mm ID	PMC4203	PMCD4203	.72	1.83/1.95	
	1/4" ID	6.4mm ID	PMC4204	PMCD4204	.72	1.83/1.95	
<b>TERMINATION</b> <b>IN-LINE</b> <b>FERRULELESS</b> <b>POLYTUBE</b> <b>FITTING, PTF†</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	5/32" OD, .10" ID	4.0mm OD, 2.0mm ID	PMC20M42	PMCD20M42	.58	1.08/1.60	
	1/4" OD, .17" ID	4.0mm OD, 2.5mm ID	PMC20025	PMCD20025	.58	1.13/1.65	
	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	PMC2004	PMCD2004	.58	1.15/1.57	
	3/8" OD, .25" ID	9.5mm OD, 6.4mm ID	PMC2006	PMCD2006	.65	1.40/1.52	
<b>TERMINATION</b> <b>IN-LINE</b> <b>HOSE BARB</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	 non-valved shown
	1/16" ID	1.6mm ID	PMC2201	PMCD2201	.50	.80/1.47	
	1/8" ID	3.2mm ID	PMC2202	PMCD2202	.50	1.05/1.67	
	3/16" ID	4.8mm ID	PMC2203	PMCD2203	.50	1.20/1.88	
	1/4" ID	6.4mm ID	PMC2204	PMCD2204	.50	1.22/1.70	
<b>TERMINATION</b> <b>IN-LINE</b> <b>FEMALE THREAD</b>	<b>THREAD SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	10-32 UNF		PMC281032	PMCD281032	.58	.63/1.31	
<b>TERMINATION</b> <b>ELBOW</b> <b>FERRULELESS</b> <b>POLYTUBE</b> <b>FITTING, PTF†</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	5/32" OD, .10" ID	4.0mm OD, 2.5mm ID	PMC21025		.50	1.17	
	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	PMC2104	PMCD2104	.50	1.17/1.21	
<b>TERMINATION</b> <b>ELBOW</b> <b>HOSE BARB</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	 non-valved shown
	1/8" ID	3.2mm ID	PMC2302	PMCD2302	.50	.85/1.21	
	1/4" ID	6.4mm ID	PMC2304	PMCD2304	.50	1.00/1.21	

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



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# PMC12 SERIES

## Specifications

**Pressure:** Vacuum to 120 psi, 8.3 bar

**Temperature:**  
32° F to 160° F (0° C to 71° C)

### Materials:

**Main components and valves:** Polypropylene

**Thumb latch:** Stainless steel

**Valve spring:** 316 stainless steel

**External spring and pin:** Stainless steel

**O-rings:** EPDM

### Color:

Almond

### Tubing Sizes:

Microbore to 1/4" ID, Microbore to 6.4mm ID

**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. Use the graph to the right as a guide.

The 1/8" flow polypropylene PMC12 offers many of the same configuration options as the PMC. The polypropylene material adds greater chemical resistance and is gamma sterilizable. The PMC12 also mates to small diameter rigid tubing. Available with a 1/4-28 flat bottom port and 1/4-28 UNF threads, these couplings eliminate the need to thread and re-thread common compression nuts each time a tubing connection is made.

## Features

Polypropylene material

EPDM o-ring

Colder thumb latch

Integral terminations

## Benefits

Chemically resistant and gamma-sterilizable

Greater chemical resistance

One-hand connection and disconnection

Fewer leak points, shorter assemblies, faster installations

## 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.

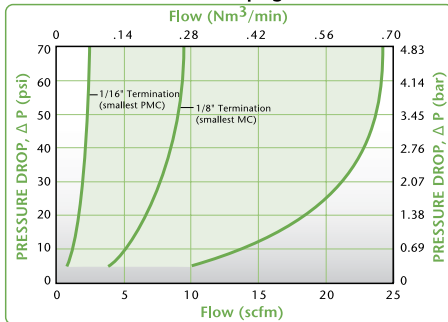
$$Q = C_v \sqrt{\frac{\Delta P}{S}}$$

Q=Flow rate in gallons per minute  
C<sub>v</sub>=Average constant of various rates (see chart)  
ΔP=Pressure drop across coupling (psi)  
S=Specific gravity of liquid

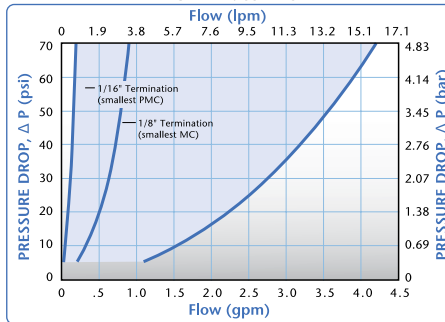
## C<sub>v</sub> Values for 1/8" Flow PMC12 Couplings

BODIES	PMC12 2004	PMCD12 2004	PMC12 2006	PMCD12 2006	PMC12 2202	PMCD12 2202	PMC12 2204	PMCD12 2204	PMC12 2402	PMCD12 2402	PMC12 2404	PMCD12 2404	PMC12 2602	PMCD12 2602	PMC12 2304	PMCD12 2304	PMC12 2203	PMCD12 2203	PMC12 2201	PMCD12 2201
PMC100212	.40	.18	.50	.19	.25	.16	.50	.19	.50	.20	.51	.19	.50	.50	.38	.24	.30	.17	.03	.03
PMCD100212	.27	.18	.31	.18	.24	.16	.28	.20	.26	.20	.29	.18	.26	.26	.27	.24	.25	.17	.03	.03
PMC100412	.40	.21	.50	.24	.26	.18	.50	.24	.50	.20	.51	.24	.50	.50	.38	.26	.30	.19	.03	.03
PMCD100412	.29	.19	.32	.23	.25	.17	.30	.23	.27	.21	.28	.23	.27	.28	.29	.24	.25	.18	.03	.03
PMC120412	.40	.18	.50	.18	.25	.16	.40	.18	.40	.16	.36	.18	.40	.40	.38	.21	.30	.17	.03	.03
PMCD120412	.21	.17	.22	.17	.20	.16	.22	.17	.21	.17	.20	.17	.21	.22	.21	.18	.21	.16	.03	.03
PMC160212	.23	.15	.28	.18	.19	.14	.27	.15	.27	.15	.28	.18	.27	.27	.23	.16	.20	.14	.03	.03
PMCD160212	.19	.15	.19	.15	.17	.14	.19	.15	.18	.15	.18	.15	.18	.19	.19	.15	.18	.14	.03	.03
PMC160412	.33	.23	.44	.24	.24	.18	.44	.23	.44	.20	.38	.24	.38	.44	.33	.26	.26	.19	.03	.03
PMCD160412	.23	.17	.26	.21	.22	.16	.26	.21	.26	.19	.25	.21	.21	.26	.23	.24	.22	.16	.03	.03
PMC170312	.25	.20	.30	.20	.20	.17	.30	.20	.30	.19	.28	.20	.28	.30	.25	.18	.21	.17	.03	.03
PMCD170312	.20	.17	.20	.17	.19	.15	.21	.17	.19	.17	.20	.17	.19	.20	.20	.16	.19	.16	.03	.03
PMC170112	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.02
PMCD170112	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.02	.02

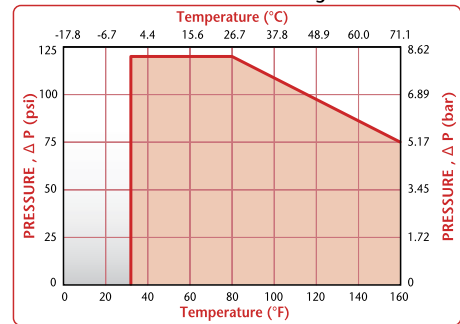
PMC12 Air Flow, 100 psig Inlet Pressure



PMC12 Water Flow



PMC12 Pressure Range



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 automatic identification method that relies on storing and remotely retrieving data. Smart coupling applications include: inventory level meters, medical equipment calibration, product protection, and many more. Turn to page 107 for more information about IdentiQuik Smart Couplings™.

## RFID

### Specifications

#### Interrogator Read Range:

Approximately 1"

#### Operating Voltage:

8-25 V standard,  
5V only available

#### Power

#### Consumption:

350mW maximum

#### Communications:

RS-232

#### I-Code RFID Tags:

13.56 MHz, 64 bytes,  
48 bytes user  
programmable

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

**Pressure:** Vacuum to 120 psi, 8.3 bar

#### Temperature:

32° F to 158° F (0° C to 70° C)

Customized parts (voltage, termination, cable length, etc.) available. Call for more information.

## SMART COUPLINGS WITH REID

### IdentiQuik PMC 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

### Coupling Reader



TERMINATION  
**IN-LINE  
HOSE BARB**

TUBING SIZE  
1/4" ID

METRIC EQ.  
6.4mm ID

SHUTOFF  
iPMC12D4HP24A00

A B  
1.32 2.75

### Coupling Inserts



TERMINATION  
**IN-LINE  
HOSE BARB**

TUBING SIZE  
1/4" ID  
1/4" ID

METRIC EQ.  
6.4mm ID  
6.4mm ID

STRAIGHT THRU  
iPMC124HPI

SHUTOFF  
iPMC12D4HPI

A B C  
.75 1.63 1/2  
.75 1.73 1/2

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

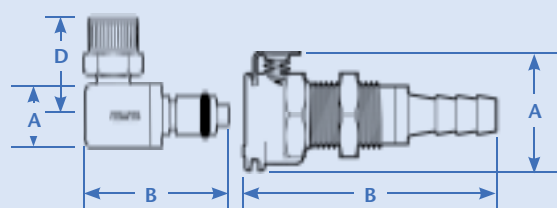
Don't forget: you can always visit [www.colder.com](http://www.colder.com) for more product information.



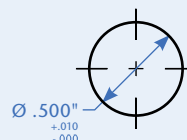
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## Product Dimensions



A = Height/Diameter  
B = Total Length (including valve)  
D = Elbow Radial Length



### COUPLING BODIES

PANEL  
OPENING  
see drawing

MAX. PANEL  
THICKNESS  
.50

MIN. PANEL  
THICKNESS  
.05



PANEL  
NUT HEX  
5/8

PANEL  
NUT THREAD  
1/2-24UNS

## Coupling Bodies

### POLYPROPYLENE



TERMINATION  
IN-LINE  
PIPE THREAD

THREAD SIZE  
1/8" NPT  
1/8" BSPT  
1/4" NPT  
1/4" BSPT

STRAIGHT THRU  
PMC100212  
PMC100212BSPT  
PMC100412  
PMC100412BSPT

SHUTOFF  
PMCD100212  
PMCD100212BSPT  
PMCD100412  
PMCD100412BSPT

A  
.79  
.88  
.79  
.88

B  
1.00  
1.00  
1.10  
1.10



TERMINATION  
PANEL MOUNT  
FERRULELESS  
POLYTUBE  
FITTING, PTF†

TUBING SIZE  
1/4" OD, .17" ID

METRIC EQ.  
6.4mm OD, 4.3mm ID

STRAIGHT THRU  
PMC120412

SHUTOFF  
PMCD120412

A  
.79

B  
1.72



TERMINATION  
PANEL MOUNT  
HOSE BARB

TUBING SIZE  
1/16" ID  
1/8" ID  
1/4" ID

METRIC EQ.  
1.6mm ID  
3.2mm ID  
6.4mm ID

STRAIGHT THRU  
PMC160112  
PMC160212  
PMC160412

SHUTOFF  
PMCD160112  
PMCD160212  
PMCD160412

A  
.79  
.79  
.79

B  
1.40  
1.65  
1.85



TERMINATION  
IN-LINE  
FERRULELESS  
POLYTUBE  
FITTING, PTF†

TUBING SIZE  
1/4" OD, .17" ID

METRIC EQ.  
6.4mm OD, 4.3mm ID

STRAIGHT THRU  
PMC130412

SHUTOFF  
PMCD130412

A  
.79

B  
1.74



TERMINATION  
IN-LINE  
HOSE BARB

TUBING SIZE  
1/16" ID  
1/8" ID  
1/4" ID

METRIC EQ.  
1.6mm ID  
3.2mm ID  
6.4mm ID

STRAIGHT THRU  
PMC170112  
PMC170212  
PMC170412

SHUTOFF  
PMCD170112  
PMCD170212  
PMCD170412

A  
.79  
.79  
.79

B  
1.42  
1.67  
1.87

## PMC12 1/4-28 Coupling Bodies

### POLYPROPYLENE



TERMINATION  
PANEL MOUNT  
WITH A 1/4-28 FLAT  
BOTTOM PORT

SHUTOFF  
PMCD18042812

A  
0.79

B  
1.57



TERMINATION  
IN-LINE  
WITH A 1/4-28 FLAT  
BOTTOM PORT

SHUTOFF  
PMCD19042812

A  
0.79

B  
1.57

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



## POLYPROPYLENE

<b>TERMINATION</b> <b>IN-LINE</b> <b>PIPE THREAD</b>	<b>THREAD SIZE</b> 1/8" NPT		<b>STRAIGHT THRU</b> PMC240212	<b>SHUTOFF</b> PMCD240212	<b>A</b> .58	<b>B</b> 1.03/1.45	
<b>TERMINATION</b> <b>IN-LINE</b> <b>FERRULELESS</b> <b>POLYTUBE</b> <b>FITTING, PTF†</b>	<b>TUBING SIZE</b> 1/4" OD, .17" ID	<b>METRIC EQ.</b> 6.4mm OD, 4.3mm ID	<b>STRAIGHT THRU</b> PMC200412	<b>SHUTOFF</b> PMCD200412	<b>A</b> .58	<b>B</b> 1.15/1.58	
<b>TERMINATION</b> <b>IN-LINE</b> <b>HOSE BARB</b>	<b>TUBING SIZE</b> 1/16" ID 1/8" ID 1/4" ID	<b>METRIC EQ.</b> 1.6mm ID 3.2mm ID 6.4mm ID	<b>STRAIGHT THRU</b> PMC220112 PMC220212 PMC220412	<b>SHUTOFF</b> PMCD220112 PMCD220212 PMCD220412	<b>A</b> .50 .50 .50	<b>B</b> .80/1.47 1.05/1.67 1.20/1.71	
<b>TERMINATION</b> <b>ELBOW</b> <b>FERRULELESS</b> <b>POLYTUBE</b> <b>FITTING, PTF†</b>	<b>TUBING SIZE</b> 5/32" OD, .10" ID 1/4" OD, .17" ID	<b>METRIC EQ.</b> 4.0mm OD, 2.5mm ID 6.4mm OD, 4.3mm ID	<b>STRAIGHT THRU</b> PMC2102512 PMC210412	<b>SHUTOFF</b> PMCD2102512 PMCD210412	<b>A</b> .50 .50	<b>B</b> 1.09/1.21 1.17/1.21	<b>D</b> .77 .77
<b>TERMINATION</b> <b>ELBOW</b> <b>HOSE BARB</b>	<b>TUBING SIZE</b> 1/8" ID 1/4" ID	<b>METRIC EQ.</b> 3.2mm ID 6.4mm ID	<b>STRAIGHT THRU</b> PMC230212 PMC230412	<b>SHUTOFF</b> PMCD230212 PMCD230412	<b>A</b> .50 .50	<b>B</b> 1.09/1.21 1.09/1.21	<b>D</b> .69 .90



## PMC12 1/4-28 Coupling Inserts

### POLYPROPYLENE

<b>TERMINATION</b> <b>IN-LINE</b> <b>WITH 1/4-28 UNF</b> <b>THREADS</b>	<b>STRAIGHT THRU</b> PMC24042812	<b>SHUTOFF</b> PMCD24042812	<b>A</b> .50	<b>B</b> 1.48	
<b>TERMINATION</b> <b>PANEL MOUNT</b> <b>WITH A 1/4-28</b> <b>FLAT BOTTOM</b> <b>PORT</b>		<b>SHUTOFF</b> PMCD48042812	<b>A</b> .72	<b>B</b> 1.55	



## Nuts

<b>TUBING SIZE</b> 1/16" and 1.8mm 1/8" and 3mm 1/16" and 1.8mm 1/8" and 3mm	<b>DESCRIPTION</b> 1/4-28 Polypropylene Nut (natural) 1/4-28 Polypropylene Nut (natural) 1/4-28 Acetal Nut (black) 1/4-28 Acetal Nut (black)	<b>PART NUMBER</b> 2418900 2419000 2419199 2419299
--	--	--



## Ferrules

<b>TUBING SIZE</b> 1/16" 1/8" 1.8mm 3mm	<b>DESCRIPTION</b> Ferrule, ETFE (blue) Ferrule, ETFE (yellow) Ferrule, ETFE (green) Ferrule, ETFE (orange)	<b>PART NUMBER</b> 2419300 2419400 2419500 2419600
---	---	--



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



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## Specifications

### Pressure:

Vacuum to 250 psi, 17.3 bar

### Temperature:

-40° F to 180° F (-40° C to 82° C)

(High temperature versions available with ratings to 400° F)

### Materials:

**Main components:**

Chrome-plated brass

**Thumb latch:** Stainless steel

**Valves:** Acetal (POM)

**Valve spring:** 316 stainless steel

**External springs and pin:** Stainless steel

**O-ring:** Buna-N

**Finish:** Chrome

### Tubing Sizes:

1/8" to 1/4" ID, 3.2mm to 6.4mm ID

**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's products in their own application conditions.

*Note: High temperature versions available with ratings to 400° F. Call Customer Service for more information.*

**Colder's MC Series chrome-plated brass** couplings are built tough and made to last in the most demanding applications. Ideal for use when higher temperature or pressure is present, the MC Series features a one-hand operation for swift and easy connects and disconnects. These couplings offer the flexibility of multiple configurations and terminations and mate with both PMC acetal and PMC12 polypropylene couplings.

### Features

Brass material

High temperature capability

Colder thumb latch

Compatible

### Benefits

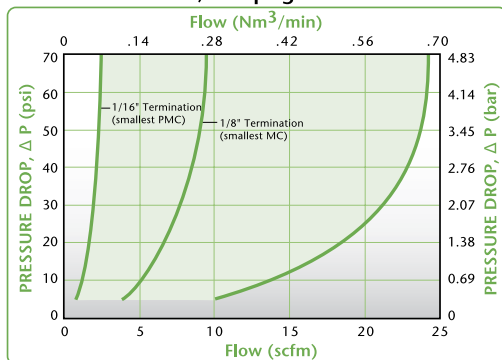
Durable and able to withstand higher pressure and temperature

Versions rated to 400° F (204° C)

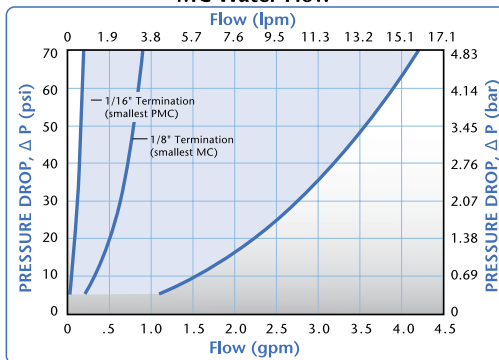
One-hand connection and disconnection

MC mates with PMC and PMC12 Series couplings

MC Air Flow, 100 psig Inlet Pressure



MC 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.

## 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 to the right.

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

Q=Flow rate in gallons per minute  
C<sub>v</sub>=Average constant of various rates (see chart)  
ΔP=Pressure drop across coupling (psi)  
S=Specific gravity of liquid

### C<sub>v</sub> Values for 1/8" Flow MC Couplings

BODIES	MC12 2004	MCD12 2004	MC12 2006	MCD12 2006	MC12 2202	MCD12 2202	MC12 2204	MCD12 2204	MC12 2402	MCD12 2402	MC12 2404	MCD12 2404	MC12 2602	MC12 2304	MC12 2104	MCD12 2304	MC12 2203	MCD12 2203
MC100212	.40	.18	.50	.19	.25	.16	.50	.19	.50	.20	.51	.19	.50	.50	.38	.24	.30	.17
MCD100212	.27	.18	.31	.18	.24	.16	.28	.20	.26	.20	.29	.18	.26	.26	.27	.24	.25	.17
MC100412	.40	.21	.50	.24	.26	.18	.50	.24	.50	.20	.51	.24	.50	.50	.38	.26	.30	.19
MCD100412	.29	.19	.32	.23	.25	.17	.30	.23	.27	.21	.28	.23	.27	.28	.29	.24	.25	.183
MC120412	.40	.18	.50	.18	.25	.16	.40	.18	.40	.16	.36	.18	.40	.40	.38	.21	.30	.173
MCD120412	.21	.17	.22	.17	.20	.16	.22	.17	.21	.17	.20	.17	.21	.22	.21	.18	.21	.16
MC160212	.23	.15	.28	.18	.19	.14	.27	.15	.27	.15	.28	.18	.27	.27	.23	.16	.20	.14
MCD160212	.19	.15	.19	.15	.17	.14	.19	.15	.18	.15	.18	.15	.18	.19	.19	.15	.18	.14
MC160412	.33	.23	.44	.24	.24	.18	.44	.23	.44	.20	.38	.24	.38	.44	.33	.26	.26	.19
MCD160412	.23	.17	.26	.21	.22	.16	.26	.21	.26	.19	.25	.21	.21	.26	.23	.24	.22	.16
MC170312	.25	.20	.30	.20	.20	.17	.30	.20	.30	.19	.28	.20	.28	.30	.25	.18	.21	.17
MCD170312	.20	.17	.20	.17	.19	.15	.21	.17	.19	.17	.20	.17	.19	.20	.20	.16	.19	.16



## Nu-Seal™ Specifications

### Pressure:

Vacuum to 20 psi, 1.4 bar

### Materials:

#### Main components:

Low density polyethylene

### Color:

Translucent

### Tubing Size:

1/8" ID, 3.2mm ID

## Nu-Seal™ quick disconnect coupling inserts

feature a patented integral seal and are USP Class VI compliant. These economic inserts are ideal for applications that require limited connect/disconnect cycles.



### Features

Patented integral seal  
Low density polyethylene  
Chemically resistant  
Compatible

### Benefits

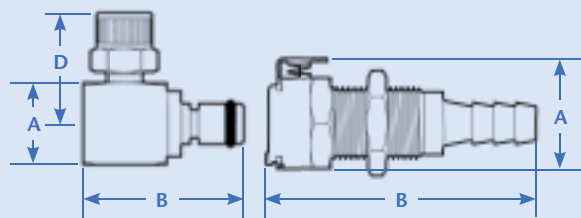
Economical, allows for disposability and provides leak-free connections  
Sterilizable by EtO, E-beam & gamma  
Works in many critical USP Class VI material applications  
Mates with MC, PMC, PMC12 couplings



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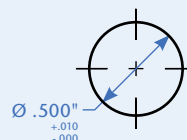
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## Product Dimensions



A = Height/Diameter  
B = Total Length (including valve)

D = Elbow Radial Length



**COUPLING BODIES**  
(except male thread)  
**MALE THREAD**  
**COUPLING INSERTS**

PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
see drawing	.50	.05
1/2	.21	.05
1/2	.30	.05



PANEL NUT HEX	PANEL NUT THREAD
5/8	1/2-24UNS









## Coupling Bodies

### CHROME-PLATED BRASS

	<b>TERMINATION</b> IN-LINE PIPE THREAD	<b>THREAD SIZE</b> 1/8" NPT 1/8" BSPT 1/4" NPT 1/4" BSPT		<b>STRAIGHT THRU</b> MC1002 MC1002BSPT MC1004 MC1004BSPT	<b>SHUTOFF</b> MCD1002 MCD1002BSPT MCD1004 MCD1004BSPT	<b>A</b> .75 .75 .75 .75	<b>B</b> 1.00 1.00 1.10 1.10
	<b>TERMINATION</b> PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†	<b>TUBING SIZE</b> 5/32" OD, .10" ID 1/4" OD, .17" ID	<b>METRIC EQ.</b> 4.0mm OD, 2.5mm ID 6.4mm OD, 4.3mm ID	<b>STRAIGHT THRU</b> MC12025 MC1204	<b>SHUTOFF</b> MCD12025 MCD1204	<b>A</b> .75 .75	<b>B</b> 1.67 1.77
	<b>TERMINATION</b> PANEL MOUNT HOSE BARB	<b>TUBING SIZE</b> 1/8" ID 3/16" ID 1/4" ID	<b>METRIC EQ.</b> 3.2mm ID 4.8mm ID 6.4mm ID	<b>STRAIGHT THRU</b> MC1602 MC1603 MC1604	<b>SHUTOFF</b> MCD1602 MCD1603 MCD1604	<b>A</b> .75 .75 .75	<b>B</b> 1.67 1.89 1.89
	<b>TERMINATION</b> PANEL MOUNT FEMALE THREAD	<b>THREAD SIZE</b> 10-32 UNF		<b>STRAIGHT THRU</b> MC181032	<b>SHUTOFF</b> MCD181032	<b>A</b> .75	<b>B</b> 1.22
	<b>TERMINATION</b> PANEL MOUNT MALE THREAD	<b>THREAD SIZE</b> 1/8" NPT		<b>STRAIGHT THRU</b> MC1502	<b>SHUTOFF</b> MCD1502	<b>A</b> .75	<b>B</b> 1.20
	<b>TERMINATION</b> IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	<b>TUBING SIZE</b> 1/4" OD, .17" ID	<b>METRIC EQ.</b> 6.4mm OD, 4.3mm ID	<b>STRAIGHT THRU</b> MC1304	<b>SHUTOFF</b> MCD1304	<b>A</b> .77	<b>B</b> 1.77
	<b>TERMINATION</b> IN-LINE HOSE BARB	<b>TUBING SIZE</b> 1/8" ID 3/16" ID 1/4" ID	<b>METRIC EQ.</b> 3.2mm ID 4.8mm ID 6.4mm ID	<b>STRAIGHT THRU</b> MC1702 MC1703 MC1704	<b>SHUTOFF</b> MCD1702 MCD1703 MCD1704	<b>A</b> .77 .75 .77	<b>B</b> 1.67 1.89 1.89

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

## CHROME-PLATED BRASS

TERMINATION IN-LINE PIPE THREAD	THREAD SIZE		STRAIGHT THRU	SHUTOFF	A	B	
	1/8" NPT		MC2402	MCD2402	.58	1.03/1.43	
	1/8" NPT Female		MC2602	MCD2602	.58	.95/1.65	
	1/8" BSPT		MC2402BSPT	MCD2402BSPT	.58/.72	1.03/1.43	
	1/4" NPT		MC2404	MCD2404	.65	1.08/1.43	
	1/4" NPT Female		MC2604	MCD2604	.72	1.15/1.82	
TERMINATION PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B	
	1/4" OD, .17" ID		MC4004	MCD4004	.72	1.75/1.85	
TERMINATION PANEL MOUNT HOSE BARB	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B	
	1/8" ID		MC4202	MCD4202	.72	1.65/1.75	
	3/16" ID		MC4203	MCD4203	.72	1.87/1.97	
	1/4" ID		MC4204	MCD4204	.72	1.87/1.97	
TERMINATION IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B	
	5/32" OD, .10" ID		MC20025	MCD20025	.58	1.13/1.53	
	1/4" OD, .17" ID		MC2004	MCD2004	.58	1.15/1.55	
	3/8" OD, .25" ID		MC2006	MCD2006	.58	1.30/1.50	
TERMINATION IN-LINE HOSE BARB	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B	
	1/8" ID		MC2202	MCD2202	.58	1.05/1.65	
	3/16" ID		MC2203	MCD2203	.58	1.25/1.85	
	1/4" ID		MC2204	MCD2204	.58	1.25/1.67	
TERMINATION IN-LINE FEMALE THREAD	THREAD SIZE		STRAIGHT THRU	SHUTOFF	A	B	
	10-32 UNF		MC281032	MCD281032	.58	.63/1.30	
TERMINATION ELBOW FERRULELESS POLYTUBE FITTING, PTF†	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B	
	5/32" OD, .10" ID		MC21025	MCD21025	.63	1.18/1.28	
	1/4" OD, .17" ID		MC2104	MCD2104	.63	1.18/1.28	
TERMINATION ELBOW HOSE BARB	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B	
	1/8" ID		MC2302	MCD2302	.62	1.18/1.28	
	1/4" ID		MC2304	MCD2304	.63	1.18/1.28	

## POLYETHYLENE

Nu-Seal™ Disposable  
Coupling Inserts

TERMINATION IN-LINE HOSE BARB	TUBING SIZE 1/8" ID	METRIC EQ. 3.2 mm ID	PART NO. DSM2202	A .50	D .98
-------------------------------------	------------------------	-------------------------	---------------------	----------	----------

Coupling bodies must have integral terminations to be compatible.



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

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**The NS2 Series couplings** were built on the company's proven platform of non-spill valves designed to provide fast, safe and virtually leak-free fluid line connections. The NS2 offers an easy, twist-to-connect coupling with an integrated locking mechanism and double-sided non-spill shutoff valves. The NS2 is also chemically resistant making it ideal for a diverse range of applications.

### Features

- Efficient, non-spill design
- Twist-to-connect locking
- High flow in a compact design
- Ultra low air inclusion

### Benefits

- Disconnect under pressure with no spills
- Easy, non-spill connections in tight spaces
- Small coupling replaces a larger connector
- Minimizes contaminants, reduces the need to purge lines

## Specifications

**Pressure:** Vacuum to 45 psi, 3.1 bar

**Temperature:** 32° F to 120° F (0° C to 49° C)

### Materials:

**Main components and valves:**  
Glass-filled polypropylene

**Valve spring:** 316 stainless steel

**Seal material:** TPV\*

**Color:** Gray with dark gray accent standard

### Tubing Sizes:

1/8" to 1/4" ID, 1.6mm to 6.4mm ID

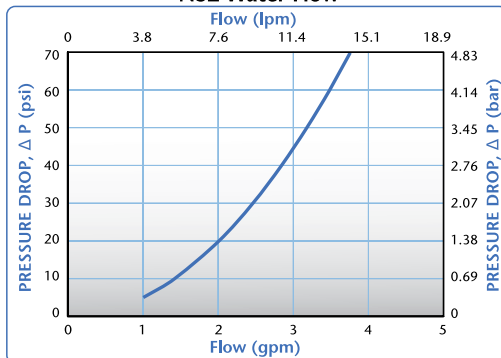
**Spillage:** <0.025 cc/disconnect

**Inclusion:** 0.009 cc/connect

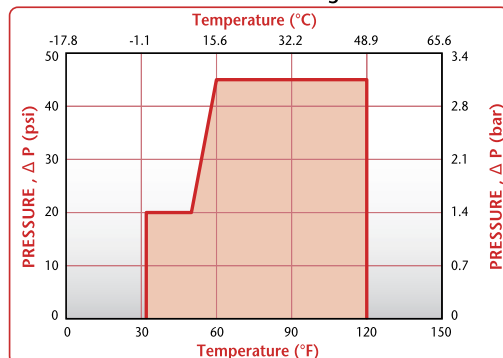
\*The overmold material is known as TPV. (thermoplastic vulcanizate) This TPV is an alloy of polypropylene thermoplastic and fully vulcanized EPDM rubber. The material is typically resistant to water, acids and bases.

**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's products in their own application conditions.

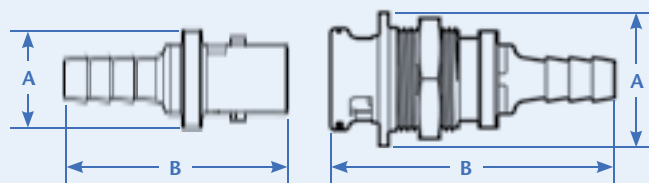
NS2 Water Flow



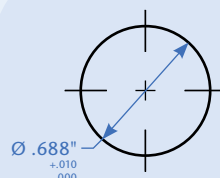
NS2 Pressure Range



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.



A = Height/Diameter  
B = Total Length (including valve)



COUPLING BODIES

PANEL  
OPENING  
see drawing

MAX. PANEL  
THICKNESS  
.34

MIN. PANEL  
THICKNESS  
.035

## Product Dimensions




## Coupling Bodies

### POLYPROPYLENE

TERMINATION IN-LINE PIPE THREAD	THREAD 1/8" NPT		SHUTOFF NS2D1002	A .67	B 1.62	
TERMINATION IN-LINE FERRULESS POLYTUBE FITTING, PTF†	TUBING SIZE 1/4" OD, .17 ID	METRIC EQ. 6.4mm OD, 4.3mm ID	SHUTOFF NS2D1304	A .67	B 1.74	
TERMINATION IN-LINE HOSE BARB	TUBING SIZE 1/8" ID 1/4" ID	METRIC EQ. 3.2mm ID 6.4mm ID	SHUTOFF NS2D1702 NS2D1704	A .67	B 1.74	
TERMINATION PANEL MOUNT FERRULESS POLYTUBE FITTING, PTF†	TUBING SIZE 1/4" OD, .17 ID	METRIC EQ. 6.4mm OD, 4.3mm ID	SHUTOFF NS2D1204	A .68	B 1.73	
TERMINATION PANEL MOUNT HOSE BARB	TUBING SIZE 1/8" ID 1/4" ID	METRIC EQ. 3.2mm ID 6.4mm ID	SHUTOFF NS2D1602 NS2D1604	A .68	B 1.66 1.86	

## Coupling Inserts

### POLYPROPYLENE

TERMINATION IN-LINE PIPE THREAD	THREAD 1/8" NPT		SHUTOFF NS2D2402	A .64	B 1.20	
TERMINATION IN-LINE FERRULESS POLYTUBE FITTING, PTF†	TUBING SIZE 1/4" OD, .17 ID	METRIC EQ. 6.4mm OD, 4.3mm ID	SHUTOFF NS2D2004	A .64	B 1.32	
TERMINATION IN-LINE HOSE BARB	TUBING SIZE 1/8" ID 1/4" ID	METRIC EQ. 3.2mm ID 6.4mm ID	SHUTOFF NS2D2202 NS2D2204	A .64	B 1.25 1.45	

## Accessories

PANEL MOUNT  
GASKET  
REPLACEMENT

For sealing panel mount bodies listed above

MATERIAL  
Buna-N

PART NO.  
1830300



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: Colder's Ferruleless PTF (polytube fitting) terminations do not require ferrules to achieve a secure connection and are therefore easier to use and reuse.



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The 1/4" flow PLC Series is the most popular group of couplings from Colder. Proven worldwide in thousands of applications, the PLC line offers the widest selection of sizes and configurations. PLC couplings are injection molded from acetal thermoplastic and are resistant to most mild chemical solutions. One-hand connection/disconnection, plus integral terminations make the PLC Series the choice for ease of use and manufacture.

The PLC Series is also available with optional RFID (Radio Frequency Identification) capability. Please refer to page 107 for more information on Colder's patented IdentiQuik® smart coupling technology.

Features	Benefits
Colder thumb latch	One-hand connection and disconnection
Integral terminations	Fewer leak points, shorter assemblies, faster installations
Clicks when connected	Assurance of a reliable connection
Compatible	Mates with LC Series couplings

## Specifications

**Pressure:** Vacuum to 120 psi, 8.3 bar

**Temperature:**  
-40° F to 180° (-40° C to 82° C)

**Materials:**  
**Main components and valves:** Acetal (POM)  
**Thumb latch:** Stainless steel  
**Valve spring:** 316 stainless steel  
**External springs and pin:** Stainless steel  
**O-rings:** Buna-N

**Color:** Natural white, others available

**Tubing Sizes:**  
1/4" to 3/8" ID, 6.4mm to 9.5mm ID

**JG® Tubing Specifications:**  
**Tube tolerances:** 1/4" OD, +0.001/-0.004 | 3/8" OD, +0.001/-0.004  
**Tube Types:** Plastic tube: Polyethylene, nylon, polyurethane. For soft or thin wall tubing with JG® terminations, tube supports are recommended.  
**Metal tube:** Brass, copper and mild steel

## 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 to the right.

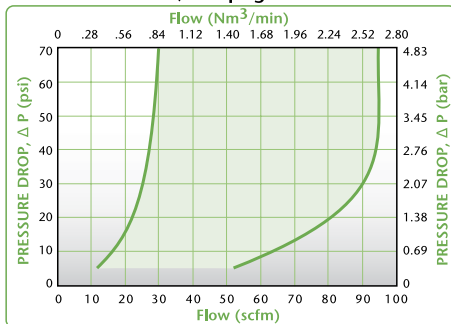
$$Q = C_v \sqrt{\frac{\Delta P}{S}}$$

Q=Flow rate in gallons per minute  
 C<sub>v</sub>=Average constant of various rates (see chart)  
 ΔP=Pressure drop across coupling (psi)  
 S=Specific gravity of liquid

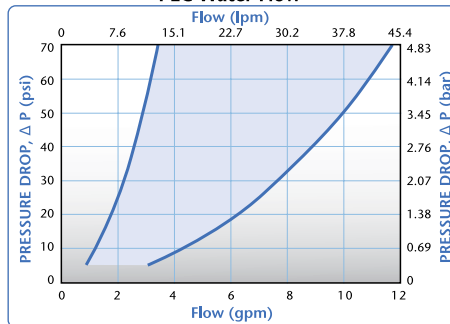
### C<sub>v</sub> Values for 1/4" Flow PLC Couplings

BODIES	PLC 20004	PLCD 20004	PLC 20006	PLCD 20006	PLC 22004	PLCD 22004	PLC 22006	PLCD 22006	PLC 24004	PLCD 24004	PLC 24006	PLCD 24006	PLC 26004
PLC10004	.40	.36	1.05	.58	.83	.56	1.40	.82	1.40	.75	1.40	.77	.83
PLCD10004	.36	.31	.73	.48	.66	.41	.82	.50	.80	.45	.77	.45	.81
PLC10006	.40	.36	1.05	.60	.83	.56	1.40	.81	1.40	.76	1.40	.76	.83
PLCD10006	.37	.31	.81	.47	.70	.43	1.02	.51	.98	.46	.99	.48	.98
PLC12006	.38	.36	.84	.63	.74	.56	1.14	.75	1.14	.70	1.14	.72	.74
PLCD12006	.38	.33	.78	.49	.68	.44	.84	.49	.81	.43	.82	.44	.81
PLC16004	.38	.37	.87	.54	.95	.51	1.00	.70	.95	.64	1.00	.66	.95
PLCD16004	.37	.31	.61	.44	.57	.41	.78	.44	.78	.43	.75	.46	.78
PLC16006	.38	.37	1.00	.57	.95	.53	1.40	.80	1.40	.71	1.40	.73	1.40
PLCD16006	.38	.32	.71	.49	.63	.42	.89	.51	.96	.45	.92	.49	.97

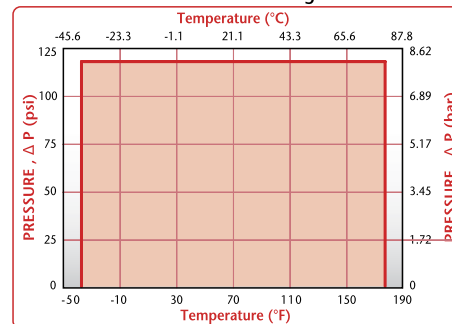
PLC Air Flow, 100 psig Inlet Pressure



PLC Water Flow



PLC Pressure Range



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 automatic identification method that relies on storing and remotely retrieving data. Smart coupling applications include: inventory level meters, medical equipment calibration, product protection, and many more. Turn to page 107 for more information about IdentiQuik Smart Couplings™.

## SMART COUPLINGS WITH REID

### IdentiQuik PLC 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

#### Interrogator Read Range:

Approximately 1"

#### Operating Voltage:

8-25V standard, 5V only available

#### Power Consumption:

350mW maximum

#### Communication:

RS-232

#### I-Code RFID Tags:

13.56 MHz, 64 bytes, 48 bytes user programmable

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

**Pressure:** Vacuum to 120 psi, 8.3 bar

#### Temperature:

32° F to 158° F (0° C to 70° C)

Customized parts (voltage, termination, cable length, etc.) available. Call for more information.

### Coupling Readers



TERMINATION  
**IN-LINE**  
**HOSE BARB**

TUBING SIZE  
1/4" ID  
5/16" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
7.9mm ID  
9.5mm ID

### Product Dimensions (see page 32)

SHUTOFF  
iPLCD4HP24A00  
iPLCD5HP24A00  
iPLCD6HP24A00

A  
1.39  
1.39  
1.39

B  
2.77  
2.76  
2.76

### Coupling Inserts



TERMINATION  
**IN-LINE**  
**HOSE BARB**

TUBING SIZE  
1/4" ID  
5/16" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
7.9mm ID  
9.5mm ID

STRAIGHT THRU  
iPLC4HPI  
iPLC5HPI  
iPLC6HPI

SHUTOFF  
iPLCD4HPI  
iPLCD5HPI  
iPLCD6HPI

A  
1.00  
1.05  
1.05

B  
1.38/2.05  
1.92/2.05  
1.73/1.86

C  
5/8  
5/8  
5/8

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

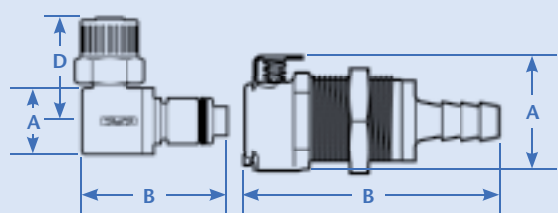
Don't forget: you can always visit [www.colder.com](http://www.colder.com) for more product information.



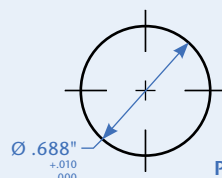
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## Product Dimensions



A = Height/Diameter  
B = Total Length (including valve)  
D = Elbow Radial Length



### COUPLING BODIES

PANEL  
OPENING  
see drawing

MAX. PANEL  
THICKNESS  
.50

MIN. PANEL  
THICKNESS  
.02



PANEL  
NUT HEX  
13/16

PANEL  
NUT THREAD  
11/16-24UNS

## Coupling Bodies

### ACETAL



TERMINATION  
IN-LINE  
PIPE THREAD

THREAD SIZE  
1/4" NPT  
1/4" BSPT  
3/8" NPT  
3/8" BSPT

STRAIGHT THRU  
PLC10004  
PLC10004BSPT  
PLC10006  
PLC10006BSPT

SHUTOFF  
PLCD10004  
PLCD10004BSPT  
PLCD10006  
PLCD10006BSPT

A	B
.89	1.17
.89	1.15
1.01	1.15
1.01	1.15



TERMINATION  
PANEL MOUNT  
FERRULELESS  
POLYTUBE  
FITTING, PTF†

TUBING SIZE  
1/4" OD, .17" ID  
3/8" OD, .25" ID

METRIC EQ.  
6.4mm OD, 4.3mm ID  
8mm OD, 6mm ID  
9.5mm OD, 6.4mm ID  
10mm OD, 8mm ID

STRAIGHT THRU  
PLC12004  
PLC120M8  
PLC12006  
PLC120M10

SHUTOFF  
PLCD12004  
PLCD120M8  
PLCD12006  
PLCD120M10

A	B
1.01	1.87
1.01	1.95
1.01	1.95
1.01	1.95



TERMINATION  
PANEL MOUNT  
HOSE BARB

TUBING SIZE  
1/4" ID  
5/16" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
7.9mm ID  
9.5mm ID

STRAIGHT THRU  
PLC16004  
PLC16005  
PLC16006

SHUTOFF  
PLCD16004  
PLCD16005  
PLCD16006

A	B
1.01	1.95
1.01	1.95
1.01	1.95



TERMINATION  
PANEL MOUNT  
JG® PUSH-TO-  
CONNECT

TUBING SIZE  
1/4" OD

METRIC EQ.  
6.4mm OD

STRAIGHT THRU  
PLC11004

SHUTOFF  
PLCD11004

A	B
1.01	1.95



TERMINATION  
IN-LINE  
FERRULELESS  
POLYTUBE  
FITTING, PTF†

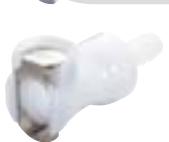
TUBING SIZE  
1/4" OD, .17" ID  
3/8" OD, .25" ID

METRIC EQ.  
6.4mm OD, 4.3mm ID  
8mm OD, 6mm ID  
9.5mm OD, 6.4mm ID  
10mm OD, 8mm ID

STRAIGHT THRU  
PLC13004  
PLC130M8  
PLC13006  
PLC130M10

SHUTOFF  
PLCD13004  
PLCD130M8  
PLCD13006  
PLCD130M10

A	B
.93	1.82
.93	1.95
.93	1.95
.93	1.95



TERMINATION  
IN-LINE  
HOSE BARB

TUBING SIZE  
1/4" ID  
5/16" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
7.9mm ID  
9.5mm ID

STRAIGHT THRU  
PLC17004  
PLC17005  
PLC17006

SHUTOFF  
PLCD17004  
PLCD17005  
PLCD17006

A	B
.93	1.95
.93	1.95
.93	1.95



TERMINATION  
IN-LINE  
JG® PUSH-TO-  
CONNECT

TUBING SIZE  
1/4" OD  
3/8" OD  
(See page 77 for JG accessories)

METRIC EQ.  
6.4mm OD  
9.5mm OD

STRAIGHT THRU  
PLC14004  
PLC14006




SHUTOFF  
PLCD14004  
PLCD14006

A	B
.93	1.95
.93	2.09

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. †NOTE: Colder's Ferruleless Polytube Fitting terminations do not require ferrules to achieve a secure connection, which makes them easier to use and reuse. PTF fittings are designed for semi-rigid tubing, i.e., polyethylene, nylon, polyurethane, etc. NOTE: JG is a registered trademark of John Guest USA, Inc.



## Coupling Inserts ACETAL

<b>ACETAL IN-LINE PIPE THREAD</b>	<b>THREAD SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	1/4" NPT		PLC24004	PLCD24004	.72	1.25/1.66	
	1/4" BSPT		PLC24004BSPT	PLCD24004BSPT	.72	1.53/1.66	
	3/8" NPT		PLC24006	PLCD24006	.87	1.25/1.63	
	3/8" BSPT		PLC24006BSPT	PLCD24006BSPT	.87	1.51/1.63	
<b>ACETAL PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	PLC40004	PLCD40004	.94	1.78/1.91	
		8mm OD, 6mm ID	PLC400M8	PLCD400M8	.94	1.91/2.03	
	3/8" OD, .25" ID	9.5mm OD, 6.4mm ID	PLC40006	PLCD40006	.94	1.91/2.05	
		10mm OD, 8mm ID	PLC400M10	PLCD400M10	.94	1.91/2.05	
<b>ACETAL PANEL MOUNT HOSE BARB</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	1/4" ID	6.4mm ID	PLC42004	PLCD42004	.94	1.91/2.05	
	5/16" ID	7.9mm ID	PLC42005	PLCD42005	.94	1.91/2.05	
	3/8" ID	9.5mm ID	PLC42006	PLCD42006	.94	1.91/2.05	
<b>ACETAL PANEL MOUNT JG® PUSH-TO- CONNECT</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	1/4" OD	6.4mm OD	PLC41004	PLCD41004	.94	1.91/2.05	
<b>ACETAL IN-LINE FERRULELESS POLYTUBE FITTING, PTF†</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	PLC20004	PLCD20004	.72	1.25/1.88	
		8mm OD, 6mm ID	PLC200M8	PLCD200M8	.72	1.38/1.82	
	3/8" OD, .25" ID	9.5mm OD, 6.4mm ID	PLC20006	PLCD20006	.72	1.38/1.82	
		10mm OD, 8mm ID	PLC200M10	PLCD200M10	.72	1.38/1.82	
<b>ACETAL IN-LINE HOSE BARB</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	1/4" ID	6.4mm ID	PLC22004	PLCD22004	.62	1.35/1.99	
	5/16" ID	7.9mm ID	PLC22005	PLCD22005	.62	1.35/1.99	
	3/8" ID	9.5mm ID	PLC22006	PLCD22006	.62	1.36/1.81	
<b>ACETAL IN-LINE JG® PUSH-TO- CONNECT</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	1/4" OD	6.4mm OD	PLC29004	PLCD29004	.63	1.35/1.95	
	3/8" OD	9.5mm OD	PLC29006	PLCD29006	.78	1.51/2.11	
<b>ACETAL ELBOW FERRULELESS POLYTUBE FITTING, PTF†</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	3/8" OD, .25" ID	9.5mm OD, 6.4mm ID	PLC21006	PLCD21006	.61/.62	1.22/1.35	
<b>ACETAL ELBOW HOSE BARB</b>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	1/4" ID	6.4mm ID	PLC23004	PLCD23004	.67/.63	1.10/1.28	
	3/8" ID	9.5mm ID	PLC23006	PLCD23006	.67/.63	1.25/1.28	



### DID YOU KNOW ...

Colder couplings are available in **CUSTOM** colors. Acetal products can be dyed or molded in various colors and polypropylene can be molded in the color of your choice. Minimum quantities do apply; please contact Customer Service at 1-800-444-2474 or 651-645-0091 for more information.

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. Couplings are pictured with valves unless otherwise noted.  
†NOTE: Colder's Ferruleless Polytube Fitting terminations do not require ferrules to achieve a secure connection, which makes them easier to use and reuse. PTF fittings are designed for semi-rigid tubing, i.e., polyethylene, nylon, polyurethane, etc. NOTE: JG is a registered trademark of John Guest USA, Inc.



Call toll free 1-800-444-2474 or visit us at [www.colder.com](http://www.colder.com)

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PLC12 SERIES

**The 1/4" flow polypropylene PLC12** offers many of the same configuration options as the PLC. The polypropylene material adds greater chemical resistance for more demanding applications. PLC12 couplings are also gamma sterilizable.

The PLC12 Series is also available with optional RFID (Radio Frequency Identification) capability. Please refer to page 107 for more information on Colder's patented IdentiQuik smart coupling technology.

Features	Benefits
Polypropylene material	Chemically resistant and gamma sterilizable
EPDM o-rings	Greater chemical resistance
Colder thumb latch	One-hand connection and disconnection
Integral terminations	Fewer leak points, shorter assemblies, faster installations

**Specifications**

- Pressure:**  
Vacuum to 120 psi, 8.3 bar
- 
- Temperature:**  
32° F to 160° F (0° C to 71° C)
- 
- Materials:**  
**Main components and valves:** Polypropylene  
**Thumb latch:** Stainless steel  
**Valve spring:** 316 stainless steel  
**External springs and pin:** Stainless steel  
**O-rings:** EPDM
- 
- Color:**  
Almond
- 
- Tubing Sizes:**  
1/4" to 3/8" ID, 6.4mm to 9.5mm ID
- 

**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's products in their own application conditions. Use the graph at the right as a guide.

**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 to the right.

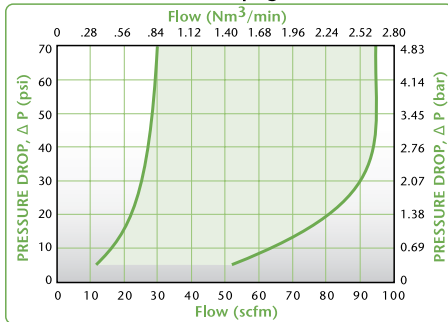
$$Q = C_v \sqrt{\frac{\Delta P}{S}}$$

Q=Flow rate in gallons per minute  
 C<sub>v</sub>=Average constant of various rates (see chart)  
 ΔP=Pressure drop across coupling (psi)  
 S=Specific gravity of liquid

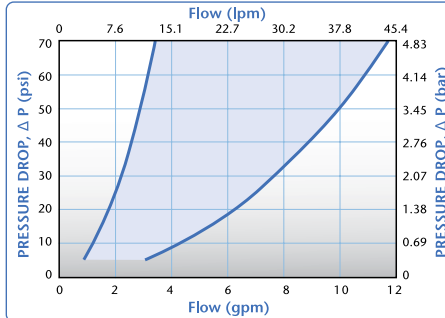
**C<sub>v</sub> Values for 1/4" Flow PLC12 Couplings**

	PLC 20004	PLCD 20004	PLC 20006	PLCD 20006	PLC 22004	PLCD 22004	PLC 22006	PLCD 22006	PLC 24004	PLCD 24004	PLC 24006	PLCD 24006	PLC 26004
PLC1000412	.40	.36	1.05	.58	.83	.56	1.40	.82	1.40	.75	1.40	.77	.83
PLCD1000412	.36	.31	.73	.48	.66	.41	.82	.50	.80	.45	.77	.45	.81
PLC1000612	.40	.36	1.05	.60	.83	.56	1.40	.81	1.40	.76	1.40	.76	.83
PLCD1000612	.37	.31	.81	.47	.70	.43	1.02	.51	.98	.46	.99	.48	.98
PLC1200612	.38	.36	.84	.63	.74	.56	1.14	.75	1.14	.70	1.14	.72	.74
PLCD1200612	.38	.33	.78	.49	.68	.44	.84	.49	.81	.43	.82	.44	.81
PLC1600412	.38	.37	.87	.54	.95	.51	1.00	.70	.95	.64	1.00	.66	.95
PLCD1600412	.37	.31	.61	.44	.57	.41	.78	.44	.78	.43	.75	.46	.78
PLC1600612	.38	.37	1.00	.57	.95	.53	1.40	.80	1.40	.71	1.40	.73	1.40
PLCD1600612	.38	.32	.71	.49	.63	.42	.89	.51	.96	.45	.92	.49	.97

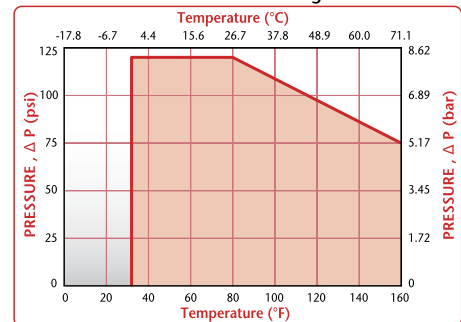
PLC12 Air Flow, 100 psig Inlet Pressure



PLC12 Water Flow



PLC12 Pressure Range



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 automatic identification method that relies on storing and remotely retrieving data. Smart coupling applications include: inventory level meters, medical equipment calibration, product protection, many more. Turn to page 107 for more information about IdentiQuik Smart Couplings™.

## RFID Specifications

### Interrogator Read Range:

Approximately 1"

### Operating Voltage:

8-25V standard, 5V only available

### Power Consumption:

350mW maximum

### Communication:

RS-232

### I-Code RFID Tags:

13.56 MHz, 64 bytes, 48 bytes user programmable

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

**Pressure:** Vacuum to 120 psi, 8.3 bar

### Temperature:

32 F to 158 F (0 C to 70 C)

Customized parts (voltage, termination, cable length, etc.) available. Call for more information.

## SMART COUPLINGS WITH RFID

### IdentiQuik PLC12 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

### Coupling Readers



TERMINATION  
IN-LINE  
HOSE BARB

TUBING SIZE  
1/4" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
9.5mm ID

### Product Dimensions (see page 36)

SHUTOFF  
iPLC12D4HP24A00  
iPLC12D6HP24A00

A  
1.39  
1.39

B  
2.78  
2.78

### Coupling Inserts



TERMINATION  
IN-LINE  
HOSE BARB

TUBING SIZE  
1/4" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
9.5mm ID

STRAIGHT THRU  
iPLC124HPI  
iPLC126HPI

SHUTOFF  
iPLC12D4HPI  
iPLC12D6HPI

A  
1.00  
1.05

B  
1.38/2.05  
1.74/1.87

C  
5/8  
5/8



TERMINATION  
ELBOW  
HOSE BARB

TUBING SIZE  
1/4" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
9.5mm ID

STRAIGHT THRU  
iPLC124HEPI  
iPLC126HEPI

SHUTOFF  
iPLC12D4HEPI  
iPLC12D6HEPI

A  
1.48  
1.48

B  
1.27/1.40  
1.33/1.46

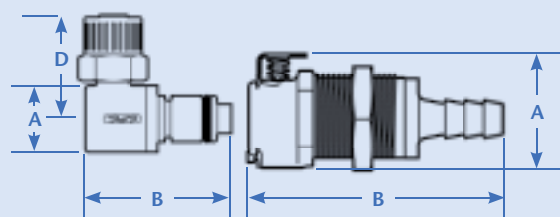
All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters.



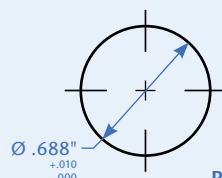
Call toll free 1-800-444-2474 or visit us at [www.colder.com](http://www.colder.com)

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## Product Dimensions



A = Height/Diameter  
B = Total Length (including valve)  
D = Elbow Radial Length



	PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
COUPLING BODIES	see drawing	.50	.02
COUPLING INSERTS	see drawing	.30	.02



PANEL NUT HEX	PANEL NUT THREAD
13/16	11/16-24UNS

## Coupling Bodies

### POLYPROPYLENE

	<b>TERMINATION</b> IN-LINE PIPE THREAD	<b>THREAD SIZE</b> 1/4" BSPT 1/4" NPT 3/8" BSPT 3/8" NPT		<b>STRAIGHT THRU</b> PLC1000412BSPT PLC1000412 PLC1000612BSPT PLC1000612	<b>SHUTOFF</b> PLCD1000412BSPT PLCD1000412 PLCD1000612BSPT PLCD1000612	<b>A</b> 1.01 .89 1.01 .89	<b>B</b> 1.15 1.15 1.15 1.15
	<b>TERMINATION</b> PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†	<b>TUBING SIZE</b> 3/8" OD, 1/4" ID	<b>METRIC EQ.</b> 9.5mm OD, 6.4mm ID	<b>STRAIGHT THRU</b> PLC1200612	<b>SHUTOFF</b> PLCD1200612	<b>A</b> 1.01	<b>B</b> 1.95
	<b>TERMINATION</b> PANEL MOUNT HOSE BARB	<b>TUBING SIZE</b> 1/4" ID 3/8" ID	<b>METRIC EQ.</b> 6.4mm ID 9.5mm ID	<b>STRAIGHT THRU</b> PLC1600412 PLC1600612	<b>SHUTOFF</b> PLCD1600412 PLCD1600612	<b>A</b> 1.01 1.01	<b>B</b> 1.95 1.95
	<b>TERMINATION</b> IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	<b>TUBING SIZE</b> 3/8" OD, 1/4" ID	<b>METRIC EQ.</b> 9.5mm OD, 6.4mm ID	<b>STRAIGHT THRU</b> PLC1300612	<b>SHUTOFF</b> PLCD1300612	<b>A</b> .93	<b>B</b> 1.96
	<b>TERMINATION</b> IN-LINE HOSE BARB	<b>TUBING SIZE</b> 1/4" ID 3/8" ID	<b>METRIC EQ.</b> 6.4mm ID 9.5mm ID	<b>STRAIGHT THRU</b> PLC1700412 PLC1700612	<b>SHUTOFF</b> PLCD1700412 PLCD1700612	<b>A</b> .93 .93	<b>B</b> 1.96 1.96
	<b>TERMINATION</b> IN-LINE SOFTUBE™ FITTING	<b>TUBING SIZE</b> 3/8" OD, 1/4" ID 1/2" OD, 3/8" ID	<b>METRIC EQ.</b> 9.5mm OD, 6.4mm ID 12.7mm OD, 9.5mm ID		<b>SHUTOFF</b> PLCD17040612 PLCD17060812	<b>A</b> .93 .93	<b>B</b> 2.20 2.36

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

## POLYPROPYLENE



<b>TERMINATION</b> <b>IN-LINE</b> <b>PIPE THREAD</b>	<b>THREAD SIZE</b> 1/4" NPT		<b>STRAIGHT THRU</b> PLC2400412	<b>SHUTOFF</b> PLCD2400412	<b>A</b> .72	<b>B</b> 1.26/1.67	
<b>TERMINATION</b> <b>PANEL MOUNT</b> <b>HOSE BARB</b>	<b>TUBING SIZE</b> 1/4" ID 3/8" ID	<b>METRIC EQ.</b> 6.4mm ID 9.5mm ID	<b>STRAIGHT THRU</b> PLC4200412 PLC4200612	<b>SHUTOFF</b> PLCD4200412 PLCD4200612	<b>A</b> .94 .94	<b>B</b> 1.91/2.05 1.91/2.05	
<b>TERMINATION</b> <b>IN-LINE</b> <b>FERRULELESS</b> <b>POLYTUBE</b> <b>FITTING, PTF†</b>	<b>TUBING SIZE</b> 3/8" OD, 1/4" ID	<b>METRIC EQ.</b> 9.5mm OD, 6.4mm ID	<b>STRAIGHT THRU</b> PLC2000612	<b>SHUTOFF</b> PLCD2000612	<b>A</b> .72	<b>B</b> 1.68/1.82	
<b>TERMINATION</b> <b>IN-LINE</b> <b>HOSE BARB</b>	<b>TUBING SIZE</b> 1/4" ID 3/8" ID	<b>METRIC EQ.</b> 6.4mm ID 9.5mm ID	<b>STRAIGHT THRU</b> PLC2200412 PLC2200612	<b>SHUTOFF</b> PLCD2200412 PLCD2200612	<b>A</b> .63 .63	<b>B</b> 1.35/2.00 1.35/1.82	
<b>TERMINATION</b> <b>IN-LINE</b> <b>SOFTUBE™</b> <b>FITTING</b>	<b>TUBING SIZE</b> 3/8" OD, 1/4" ID 1/2" OD, 3/8" ID	<b>METRIC EQ.</b> 9.5mm OD, 6.4mm ID 12.7mm OD, 9.5mm ID		<b>SHUTOFF</b> PLCD22040612 PLCD22060812	<b>A</b> .72 .72	<b>B</b> 2.23 2.18	
<b>TERMINATION</b> <b>ELBOW</b> <b>FERRULELESS</b> <b>POLYTUBE</b> <b>FITTING, PTF†</b>	<b>TUBING SIZE</b> 3/8" OD, 1/4" ID	<b>METRIC EQ.</b> 9.5mm OD, 6.4mm ID	<b>STRAIGHT THRU</b> PLC2100612	<b>SHUTOFF</b> PLCD2100612	<b>A</b> .61/.62	<b>B</b> 1.29/1.36	<b>D</b> .95
<b>TERMINATION</b> <b>ELBOW</b> <b>HOSE BARB</b>	<b>TUBING SIZE</b> 1/4" ID 3/8" ID	<b>METRIC EQ.</b> 6.4mm ID 9.5mm ID	<b>STRAIGHT THRU</b> PLC2300412 PLC2300612	<b>SHUTOFF</b> PLCD2300412 PLCD2300612	<b>A</b> .63 .63	<b>B</b> 1.22/1.36 1.28/1.42	<b>D</b> .96 .96



## DID YOU KNOW ...

Many of Colder's general purpose couplings and fittings can be used across a wide variety of markets and applications?

**Quick tip:** use the Chemical Compatibility Table on page 108 to help determine which product is best for your fluid handling application, or visit [www.colder.com](http://www.colder.com).

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. Couplings are pictured with valves unless otherwise noted.  
†NOTE: Colder's Ferruleless Polytube Fitting terminations do not require ferrules to achieve a secure connection, which makes them easier to use and reuse. PTF fittings are designed for semi-rigid tubing, i.e., polyethylene, nylon, polyurethane, etc.



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## Specifications

### Pressure:

Vacuum to 250 psi, 17.3 bar

### Temperature:

-40° F to 180° F (-40° C to 82° C)

(High temperature versions available with ratings to 400° F)

### Materials:

**Main components:** Chrome-plated brass

**Thumb latch:** Stainless steel

**Valves:** Acetal (POM)

**Valve springs:** 316 stainless steel

**External springs and pin:** Stainless steel

**O-ring:** Buna-N

### Finish:

Chrome

### Tubing Sizes:

1/4" to 3/8" ID, 6.4mm to 9.5mm ID

**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's products in their own application conditions.

*Note: High temperature versions available with ratings to 400° F. Call Customer Service for more information.*

**Colder's LC Series chrome-plated brass** couplings are built tough and made to last in the most demanding applications. Ideal for use when higher temperature or pressure is present, the LC Series features a one-hand operation for swift and easy connects and disconnects. These couplings offer the flexibility of multiple configurations and terminations to mate with both the PLC acetal and PLC12 polypropylene couplings.

### Features

Brass material

Chrome plating

High temperature capability

Colder thumb latch

Compatible

### Benefits

Durable construction withstands higher pressure and temperature

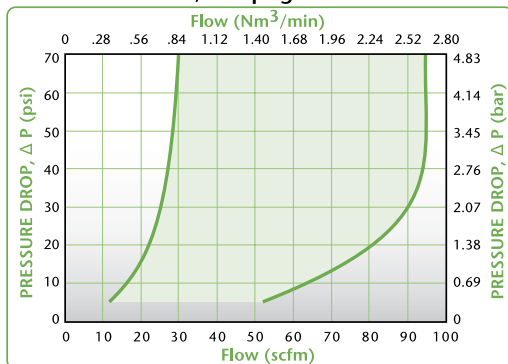
Attractive appearance

Versions rated to 400° F (204° C)

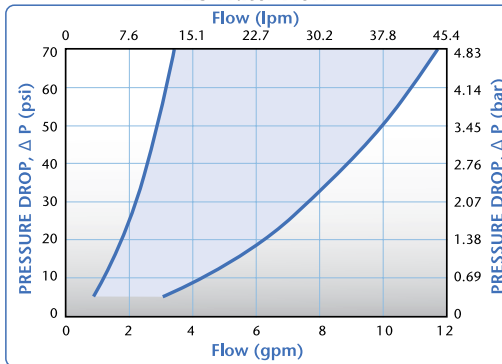
One-hand connection and disconnection

LC mates with PLC Series couplings

LC Air Flow, 100 psig Inlet Pressure



LC 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.

## 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 to the right.

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

Q=Flow rate in gallons per minute

$C_v$ =Average constant of various rates (see chart)

$\Delta P$ =Pressure drop across coupling (psi)

S=Specific gravity of liquid

### $C_v$ Values for 1/4" Flow LC Couplings

BODIES	LC 20004	LCD 20004	LC 20006	LCD 20006	LC 22004	LCD 22004	LC 22006	LCD 22006	LC 24004	LCD 24004	LC 24006	LCD 24006	LC 26004
LC10004	.40	.36	1.05	.58	.83	.56	1.40	.82	1.40	.75	1.40	.77	.83
LCD10004	.36	.31	.73	.48	.66	.41	.82	.50	.80	.45	.77	.45	.81
LC10006	.40	.36	1.05	.60	.83	.56	1.40	.81	1.40	.76	1.40	.76	.83
LCD10006	.37	.31	.81	.47	.70	.43	1.02	.51	.98	.46	.99	.48	.98
LC12006	.38	.36	.84	.63	.74	.56	1.14	.75	1.14	.70	1.14	.72	.74
LCD12006	.38	.33	.78	.49	.68	.44	.84	.49	.81	.43	.82	.44	.81
LC16004	.38	.37	.87	.54	.95	.51	1.00	.70	.95	.64	1.00	.66	.95
LCD16004	.37	.31	.61	.44	.57	.41	.78	.44	.78	.43	.75	.46	.78
LC16006	.38	.37	1.00	.57	.95	.53	1.40	.80	1.40	.71	1.40	.73	1.40
LCD16006	.38	.32	.71	.49	.63	.42	.89	.51	.96	.45	.92	.49	.97



## DID YOU KNOW ...

O-ring selection is a key decision when determining which connector will perform best in your specific application. It's important that you understand the material characteristics and how they can be affected by both the media being transferred and the environment in which the connector is being used:

**Buna-N** is the most common o-ring seal due to its fuel and oil resistance. Temperature range of -30° to 250° F.

**FKM** is best suited for applications where chemical resistance and/or high temperatures are a requirement. The temperature range is -15° to 400° F.

**EPDM** has excellent resistance to polar solvents. This o-ring is not compatible with petroleum. The temperature range is -70° to 300° F.

**Food-grade** material is used when food is being transferred through the connector.

**Silicone** seals have good temperature resistance. The temperature range is -70° to 400° and with special compounds can reach 175° to 450° F. Silicone can also be supplied with Class VI requirements for medical/bioprocessing applications.

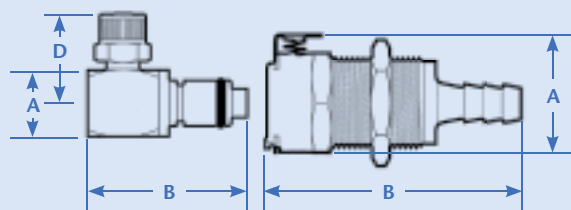
For further information about which o-ring material is best for your application please contact Customer Service at 1-800-444-2474 or 651-645-0091.



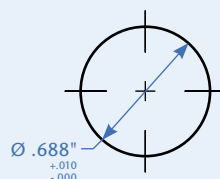
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## Product Dimensions



A = Height/Diameter  
B = Total Length (including valve)  
D = Elbow Radial Length



### COUPLING BODIES

PANEL  
OPENING  
see drawing

MAX. PANEL  
THICKNESS

MIN. PANEL  
THICKNESS

.50

.05



PANEL  
NUT HEX  
13/16

PANEL  
NUT THREAD  
11/16-24 UNS

## Coupling Bodies

### CHROME-PLATED BRASS



CHROME-PLATED  
BRASS  
IN-LINE  
PIPE THREAD

THREAD SIZE  
1/4" NPT  
1/4" BSPT  
3/8" NPT  
3/8" BSPT

STRAIGHT THRU  
LC10004  
LC10004BSPT  
LC10006  
LC10006BSPT

SHUTOFF  
LCD10004  
LCD10004BSPT  
LCD10006  
LCD10006BSPT

A	B
.89	1.15
.89	1.15
.89	1.15
.89	1.15



CHROME-PLATED  
BRASS  
PANEL MOUNT  
FERRULELESS  
POLYTUBE FITTING,  
PTF†

TUBING SIZE  
1/4" OD, .17" ID  
3/8" OD, .25" ID

METRIC EQ.  
6.4mm OD, 4.3mm ID  
9.5mm OD, 6.4mm ID

STRAIGHT THRU  
LC12004  
LC12006

SHUTOFF  
LCD12004  
LCD12006

A	B
.89	1.87
.89	2.00



CHROME-PLATED  
BRASS  
PANEL MOUNT  
HOSE BARB

TUBING SIZE  
1/4" ID  
5/16" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
7.9mm ID  
9.5mm ID

STRAIGHT THRU  
LC16004  
LC16005  
LC16006

SHUTOFF  
LCD16004  
LCD16005  
LCD16006

A	B
.89	2.00
.89	2.00
.89	2.00



CHROME-PLATED  
BRASS  
PANEL MOUNT  
MALE THREAD

THREAD SIZE  
1/4" NPT

STRAIGHT THRU  
LC15004

SHUTOFF  
LCD15004

A	B
.89	1.50



CHROME-PLATED  
BRASS  
IN-LINE  
FERRULELESS  
POLYTUBE FITTING,  
PTF†

TUBING SIZE  
1/4" OD, .17" ID  
3/8" OD, .25" ID

METRIC EQ.  
6.4mm OD, 4.3mm ID  
9.5mm OD, 6.4mm ID

STRAIGHT THRU  
LC13004  
LC13006

SHUTOFF  
LCD13004  
LCD13006

A	B
.89	1.87
.89	2.00



CHROME-PLATED  
BRASS  
IN-LINE  
HOSE BARB

TUBING SIZE  
1/4" ID  
5/16" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
7.9mm ID  
9.5mm ID








STRAIGHT THRU  
LC17004  
LC17005  
LC17006

SHUTOFF  
LCD17004  
LCD17005  
LCD17006

A	B
.89	2.00
.89	2.00
.89	2.00

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

## CHROME-PLATED BRASS

CHROME-PLATED BRASS IN-LINE PIPE THREAD	THREAD SIZE		STRAIGHT THRU	SHUTOFF	A	B		
	1/4" NPT							
	1/4" NPT Female							
	1/4" BSPT							
	1/4" BSPP Female							
	3/8" NPT							
	3/8" BSPT		LC24006BSPT	LCD24006BSPT	.87	1.25/1.55		
CHROME-PLATED BRASS PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B		
	1/4" OD, .17" ID							
	3/8" OD, .25" ID							
	METRIC EQ.		LC40004	LCD40004	.94	1.83/1.98		
	6.4mm OD, 4.3mm ID		LC40006	LCD40006	.94	1.96/2.11		
CHROME-PLATED BRASS PANEL MOUNT HOSE BARB	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B		
	1/4" ID							
	5/16" ID							
	3/8" ID		LC42006	LCD42006	.94	1.96/2.11		
	METRIC EQ.		LC42004	LCD42004	.94	1.96/2.11		
	6.4mm ID		LC42005	LCD42005	.94	1.96/2.11		
	7.9mm ID		LC42006	LCD42006	.94	1.96/2.11		
CHROME-PLATED BRASS IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B		
	1/4" OD, .17" ID							
	3/8" OD, .25" ID							
	METRIC EQ.		LC20004	LCD20004	.72	1.25/1.87		
	6.4mm OD, 4.3mm ID		LC20006	LCD20006	.72	1.38/1.83		
CHROME-PLATED BRASS IN-LINE HOSE BARB	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B		
	1/4" ID							
	5/16" ID							
	3/8" ID		LC22006	LCD22006	.63	1.35/1.83		
	METRIC EQ.		LC22004	LCD22004	.63	1.35/2.00		
	6.4mm ID		LC22005	LCD22005	.63	1.35/1.85		
	7.9mm ID		LC22006	LCD22006	.63	1.35/1.83		
CHROME-PLATED BRASS ELBOW FERRULELESS POLYTUBE FITTING, PTF†	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B	D	
	1/4" OD, .17" ID							
	3/8" OD, .25" ID							
	METRIC EQ.		LC21004	LCD21004	.63	1.28/1.43	.96	
	6.4mm OD, 4.3mm ID		LC21006	LCD21006	.63	1.28/1.43	.83	
	9.5mm OD, 6.4mm ID							
CHROME-PLATED BRASS ELBOW HOSE BARB	TUBING SIZE		STRAIGHT THRU	SHUTOFF	A	B	D	
	1/4" ID							
	3/8" ID							
	METRIC EQ.		LC23004	LCD23004	.63/.62	1.28/1.43	1.28	
	6.4mm ID		LC23006	LCD23006	.63/.62	1.28/1.43	1.28	
	9.5mm ID							



## DID YOU KNOW ...

LC Series couplings can mate with PLC and PLC12 plastic couplings? See pages 30-37 for more information.

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. Couplings are pictured with valves unless otherwise noted.  
†NOTE: Colder's Ferruleless Polytube Fitting terminations do not require ferrules to achieve a secure connection, which makes them easier to use and reuse. PTF fittings are designed for semi-rigid tubing, i.e., polyethylene, nylon, polyurethane, etc.



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The 1/4" flow ZLC Series couplings provide a durable and economical solution for high-volume metal applications. The ZLC is streamlined and lightweight and mates with PLC, PLC12 and LC Series couplings. A high temperature version is also available for more demanding applications.

## Specifications

**Pressure:** Vacuum to 250 psi, 17.3 bar

**Temperature:**  
-10° F to 150° F (-23° C to 66° C)  
(High temperature versions available)

### Materials:

**Main components:** Die-cast zinc

**Thumb latch:** Stainless steel

**Valves:** Acetal (POM)

**Valve springs:** 316 stainless steel

**External springs and pin:** Stainless steel

**O-ring:** Buna-N, others available

**Finish:** Bright nickel

### Tubing Sizes:

1/4" to 3/8" ID, 6.4mm to 9.5mm ID

**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's products in their own application conditions.

## Features

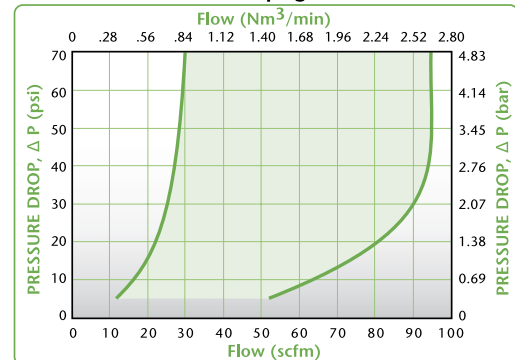
- Die-cast zinc material
- High temperature capability
- Colder thumb latch
- Integral terminations

## Benefits

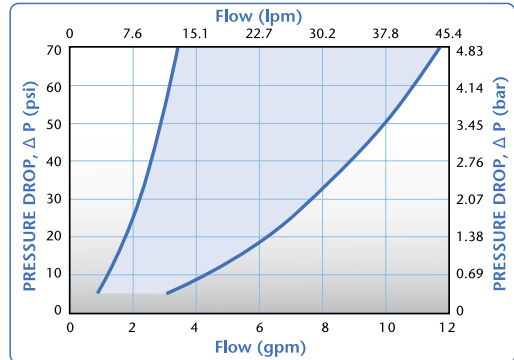
- Durable, lightweight construction withstands higher pressure and temperature
- Versions rated to 400° F (204° C)
- One-hand connection and disconnection
- Eliminate additional components and assembly; reduce coupling size

For tips on o-ring selection, please see page 39.

ZLC Air Flow, 100 psig Inlet Pressure

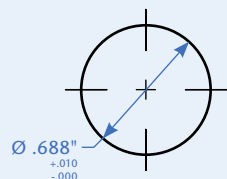


ZLC Water Flow



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.





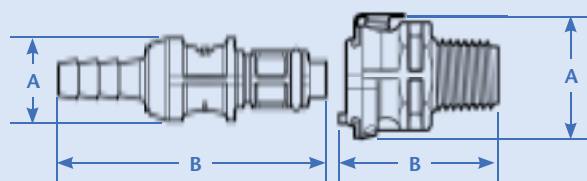
#### COUPLING BODIES

PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
see drawing	.50	.05



PANEL NUT HEX	PANEL NUT THREAD
13/16	11/16-24 UNS

## Product Dimensions



A = Height/Diameter  
B = Total Length (including valve)

## Coupling Bodies

### DIE-CAST ZINC

TERMINATION	THREAD SIZE		STRAIGHT THRU	SHUTOFF	X-BODY†	A	B
IN-LINE	1/4" NPT		ZLC10004	ZLCD10004	ZLCX10004	0.94	1.15
PIPE THREAD*	1/4" BSPT		ZLC10004BSPT	ZLCD10004BSPT	ZLCX10004BST	0.94	1.15
TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	X-BODY†	A	B
IN-LINE	1/4" ID	6.4mm ID	ZLC17004	ZLCD17004	ZLCX17004	1.02	1.96
HOSE BARB**	5/16" ID	7.9mm ID	ZLC17005	ZLCD17005	ZLCX17005	1.02	1.96
	3/8" ID	9.5mm ID	ZLC17006	ZLCD17006	ZLCX17006	1.02	1.96
TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	X-BODY†	A	B
PANEL MOUNT	1/4" ID	6.4mm ID	ZLC16004	ZLCD16004	ZLCX16004	0.94	2.02
HOSE BARB**	5/16" ID	7.9mm ID	ZLC16005	ZLCD16005	ZLCX16005	0.94	2.02
	3/8" ID	9.5mm ID	ZLC16006	ZLCD16006	ZLCX16006	0.94	2.02

## Coupling Bodies

### DIE-CAST ZINC

TERMINATION	TUBING SIZE	METRIC EQ.	SHUTOFF	A	B
IN-LINE	1/4" ID	6.4mm ID	ZLCD22004	0.88	2.01
HOSE BARB**	5/16" ID	7.9mm ID	ZLCD22005	0.88	2.01
	3/8" ID	9.5mm ID	ZLCD22006	0.88	2.01

## Accessories

PANEL MOUNT GASKET REPLACEMENT	MATERIAL	PART NO.
For sealing panel mount bodies listed above	Buna-N	1830300



ZLC couplings are intended for high volume applications (500 piece minimum). ZLC samples are available for testing. For lower volume applications, please consider Colder's LC, PLC or PLC12 Series couplings.

\*As with all tapered pipe threads, it is typical to use a thread sealant (tape or paste). \*\*Due to the manufacturing process, the hose barbs on ZLC couplings have less "bite" on the tubing than typical Colder hose barbs. To ensure tubing retention, Colder recommends the use of a hose clamp. † X-body is the lowest cost body option. Works only with straight thru inserts—will not activate shutoff inserts.



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## Specifications

### Pressure:

Vacuum to 120 psi, 8.3 bar

### Temperature:

-40° F to 180° F (-40° C to 82° C)

### Materials:

**Main components and valves:** Acetal (POM)

**Thumb latch:** Acetal

**Valve spring:** 316 stainless steel

**External spring:** 302 stainless steel

**O-rings:** Buna-N

### Color:

Natural white with light gray latch

### Tubing Sizes:

1/4" to 3/8" ID, 6.4mm to 9.5mm ID

**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.

**The 1/4" flow APC Series couplings** feature a plastic thumb latch, fewer moving parts and a smooth contoured design to deliver ease-of-use and excellent flow in a compact size. The patented APC Series has been expanded to include couplings with valves and thumb latch shrouds. A more rugged design on some models adds durability to increase the APC's application range.

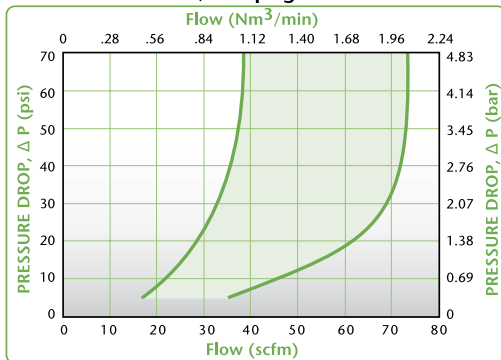
### Features

Plastic thumb latch  
Shrouded thumb latch  
Integral terminations  
Compatibility

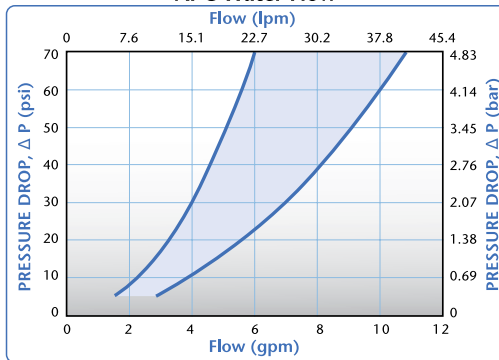
### Benefits

No exposed metal parts  
Protects against accidental disconnects  
Fewer leak points, shorter assemblies, faster installations  
Mates with most EFC couplings

APC Air Flow, 100 psig Inlet Pressure



APC 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.

## 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 to the right.

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

Q=Flow rate in gallons per minute

$C_v$ =Average constant of various rates (see chart)

$\Delta P$ =Pressure drop across coupling (psi)

S=Specific gravity of liquid

### $C_v$ Values for APC Couplings

BODIES	APC 20004	APCD 20004	APC 20006	APCD 20006	APC 22004	APCD 22004	APC 22006	APCD 22006	APC 24004	APCD 24004	APC 24006	APCD 24006
APC10004	0.4	0.4	1.2	0.9	1.0	0.9	2.0	0.9	1.9	0.8	1.7	0.8
APCD10004	0.4	0.4	1.0	0.7	1.0	0.7	0.8	0.7	1.2	0.6	0.8	0.6
APC10006	0.4	0.4	1.2	0.9	1.2	0.7	1.8	0.9	2.0	0.9	1.7	0.8
APCD10006	0.4	0.4	1.3	0.8	0.6	0.5	1.1	0.7	1.3	0.7	1.0	0.7
APC13004SH	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.4
APCD13004SH	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
APC13006SH	0.4	0.4	1.0	0.7	0.9	0.6	1.1	0.7	1.1	0.7	1.0	0.7
APCD13006SH	0.4	0.4	0.8	0.6	0.7	0.5	0.8	0.6	0.9	0.6	0.8	0.6
APC17004SH	0.4	0.4	0.8	0.6	1.0	0.7	0.9	0.7	0.8	0.6	0.7	0.6
APCD17004SH	0.4	0.4	0.7	0.5	0.8	0.6	0.7	0.6	0.7	0.5	0.6	0.5
APC17006SH	0.4	0.4	1.2	0.9	4.0	0.9	2.4	0.9	2.0	0.9	1.9	0.8
APCD17006SH	0.4	0.4	1.2	0.8	1.3	0.8	1.2	0.7	1.2	0.7	1.1	0.7



### DID YOU KNOW ...

The shelf life of a connector is dependent upon the connector materials and the storage conditions. Colder manufactures quick disconnect couplings and connections made from a variety of metal, plastic, and elastomeric raw materials. In general, it is best to store any Colder product in an environment shielded from light at a temperature between 50 °F and 90 °F.

The shelf life of Colder couplings and connections is estimated to be 3 years minimum if the storage conditions comply with those shown above.

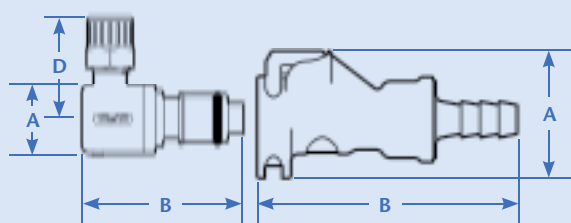
NOTE: For product containing lubricated o-rings, the lubricant will dry out over time. Prior to use, it may be advisable to re-lubricate external o-rings. For product containing silicone o-rings, if lube is allowable, use of a synthetic lube is recommended.



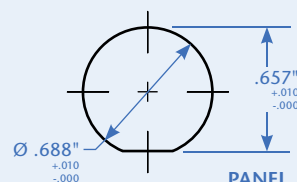
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## Product Dimensions



A = Height/Diameter  
B = Total Length (including valve)  
D = Elbow Radial Length



COUPLING BODIES

PANEL  
OPENING  
see drawing

MAX. PANEL  
THICKNESS  
.50

MIN. PANEL  
THICKNESS  
.02



PANEL  
NUT HEX  
13/16

PANEL  
NUT THREAD  
11/16-24 UNS

## Coupling Bodies

### ACETAL



TERMINATION  
IN-LINE  
PIPE THREAD

THREAD SIZE  
1/4" NPT  
1/4" BSPT  
3/8" NPT  
3/8" BSPT

STRAIGHT THRU  
APC10004  
APC10004BSPT  
APC10006  
APC10006BSPT

SHUTOFF  
APCD10004  
APCD10006

A	B
.93	1.40
.93	1.40
.93	1.40
.93	1.40



TERMINATION  
IN-LINE  
HOSE BARB

TUBING SIZE  
1/4" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
9.5mm ID

STRAIGHT THRU  
APC17004  
APC17006

SHUTOFF  
APCD17004  
APCD17006

A	B
.93	1.35
.93	1.35



TERMINATION  
IN-LINE WITH  
SHROUD  
FERRULELESS  
POLYTUBE  
FITTING, PTF†

TUBING SIZE  
1/4" OD, .17" ID  
3/8" OD, .25" ID

METRIC EQ.  
6.4mm OD, 4.3mm ID  
8mm OD, 6mm ID  
9.5mm OD, 6.4mm ID  
10mm OD, 8mm ID

STRAIGHT THRU  
APC13004SH  
APC130M8SH  
APC13006SH  
APC130M10SH

SHUTOFF  
APCD13004SH  
APCD130M8SH  
APCD13006SH  
APCD130M10SH

A	B
.90	1.94
.90	2.07
.90	2.07
.90	2.07



TERMINATION  
IN-LINE  
HOSE BARB

TUBING SIZE  
1/4" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
9.5mm ID

STRAIGHT THRU  
APC17004SH  
APC17006SH

SHUTOFF  
APCD17004SH  
APCD17006SH

A	B
.90	2.07
.90	2.07



TERMINATION  
PANEL MOUNT  
FERRULELESS  
POLYTUBE  
FITTING, PTF†

TUBING SIZE  
1/4" OD, .17" ID  
3/8" OD, .25" ID

METRIC EQ.  
6.4mm OD, 4.3mm ID  
8mm OD, 6mm ID  
9.5mm OD, 6.4mm ID  
10mm OD, 8mm ID

STRAIGHT THRU  
APC12004  
APC120M8  
APC12006  
APC120M10

SHUTOFF  
APCD12004  
APCD120M8  
APCD12006  
APCD120M10

A	B
1.03	1.97
1.03	2.10
1.03	2.10
1.03	2.10



TERMINATION  
PANEL MOUNT  
HOSE BARB

TUBING SIZE  
1/4" ID  
5/16" ID  
3/8" ID

METRIC EQ.  
6.4mm ID  
7.9mm ID  
9.5mm ID

STRAIGHT THRU  
APC16004  
APC16005  
APC16006

SHUTOFF  
APCD16004  
APCD16005  
APCD16006

A	B
1.03	2.10
1.03	2.10
1.03	2.10

## Accessories



PANEL MOUNT  
GASKET  
REPLACEMENT






For sealing panel mount bodies listed above

MATERIAL  
Buna-N

PART NO.  
1830300

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

## Coupling Inserts ACETAL

TERMINATION IN-LINE PIPE THREAD	THREAD SIZE		STRAIGHT THRU	SHUTOFF	A	B	 non-valved shown	
	1/4" NPT		APC24004	APCD24004	.72	1.43/1.77		
	1/4" BSPT		APC24004BSPT	APCD24004BSPT	.72	1.63/1.77		
	3/8" NPT		APC24006	APCD24006	.72	1.50/1.64		
	3/8" BSPT		APC24006BSPT	APCD24006BSPT	.72	1.51/1.65		
TERMINATION IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	 non-valved shown	
	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	APC20004	APCD20004	.72	1.86/1.99		
		8mm OD, 6mm ID	APC200M8	APCD200M8	.72	1.79/1.93		
	3/8" OD, .25" ID	9.5mm OD, 6.4mm ID	APC20006	APCD20006	.72	1.78/1.91		
		10mm OD, 8mm ID	APC200M10	APCD200M10	.72	1.79/1.93		
TERMINATION IN-LINE HOSE BARB	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	 non-valved shown	
	1/4" ID	6.4mm ID	APC22004	APCD22004	.60/.72	1.40/2.10		
	3/8" ID	9.5mm ID	APC22006	APCD22006	.63/.72	1.40/1.92		
TERMINATION ELBOW FERRULELESS POLYTUBE FITTING, PTF†	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	D	 non-valved shown
	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	APC21004	APCD21004	1.22	1.32/1.45	.91	
	3/8" OD, .25" ID	9.5mm OD, 6.4mm ID	APC21006	APCD21006	1.27	1.33/1.46	.96	
TERMINATION ELBOW HOSE BARB	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	D	 non-valved shown
	1/4" ID	6.4mm ID	APC23004	APCD23004	.63	1.20/1.45	.96	
	3/8" ID	9.5mm ID	APC23006	APCD23006	.63	1.20/1.50	.96	



### DID YOU KNOW ...

One of the most versatile coupling series, the APC can be found in such diverse applications as hospital beds and support surfaces, sports hydration equipment, cold and compression therapy and many more! This product platform is also frequently used to develop custom designs. Contact Customer Service at 1-800-444-2474 or 651-645-0091 to learn how we can adapt the APC coupling to your specific requirements.

**Quick Tip:** These cost-effective, high-value connectors are also available in NSF listed versions for food and beverage dispensing. See page 105 for NSF part numbers.

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. Couplings are pictured with valves unless otherwise noted.  
†NOTE: Colder's Ferruleless Polytube Fitting terminations do not require ferrules to achieve a secure connection, which makes them easier to use and reuse. PTF fittings are designed for semi-rigid tubing, i.e., polyethylene, nylon, polyurethane, etc.



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## The 9/22" flow EFC Series

couplings feature a high efficiency valve design that provides a greater flow capability than any other coupling its size. Chemically resistant polypropylene material makes it ideal for harsh environments. The EFC Series adds a bulkhead panel mount option for tight seals against tank walls and drums.

### Features

High efficiency valve  
Plastic thumb latch  
Polypropylene material  
Compatible

### Benefits

More flow in a compact size  
Fewer moving parts  
Chemically resistant and gamma sterilizable  
Mates with most APC couplings

## EFC12 SERIES

## Specifications

### Pressure:

Vacuum to 105 psi, 7.2 bar

### Temperature:

32° F to 160° F (0° C to 71° C)

### Materials:

Main components and valves: Polypropylene

Thumb latch: Polypropylene

Valve spring: 316 stainless steel

Panel mount gasket: EPDM

External springs: 302 stainless steel

O-rings: EPDM

### Color:

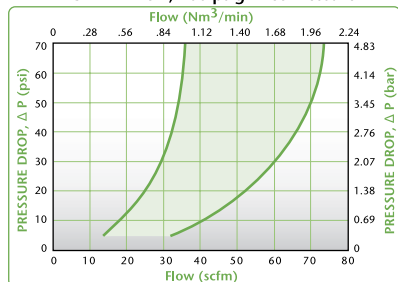
Gray with dark gray latch

### Tubing Sizes:

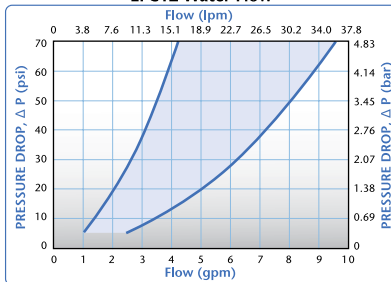
1/4" to 3/8" ID, 6.4mm to 9.5mm

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.

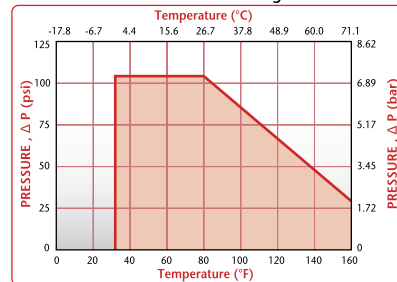
EFC12 Air Flow, 100 psig Inlet Pressure



EFC12 Water Flow



EFC12 Pressure Range



## 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.

### C<sub>v</sub> Values for EFC12 Couplings

BODIES	EFC 22412	EFCD 22412	EFC 22612	EFCD 22612	EFC 23412	EFCD 23412	EFC 23612	EFCD 23612	EFCD 24412	EFCD 24612
EFC10412	0.51	0.51	0.51	0.51	0.50	0.45	0.50	0.50	0.51	0.51
EFC10612	0.61	0.51	1.13	0.72	0.50	0.45	0.81	0.69	0.51	0.72
EFC16412	0.51	0.51	0.51	0.51	0.50	0.45	0.50	0.50	0.51	0.51
EFC16612	0.61	0.51	1.13	0.72	0.50	0.45	0.81	0.69	0.51	0.72
EFC17412	0.51	0.51	0.51	0.51	0.50	0.45	0.50	0.50	0.51	0.51
EFC17612	0.61	0.51	1.13	0.72	0.50	0.45	0.81	0.69	0.51	0.72

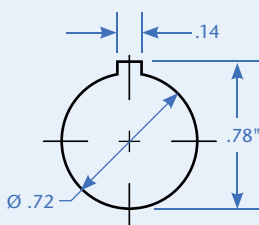
$$Q = C_v \sqrt{\frac{\Delta P}{S}}$$

Q = Flow rate in gallons per minute

C<sub>v</sub> = Average constant of various rates (see chart)

ΔP = Pressure drop across coupling (psi)

S = Specific gravity of liquid



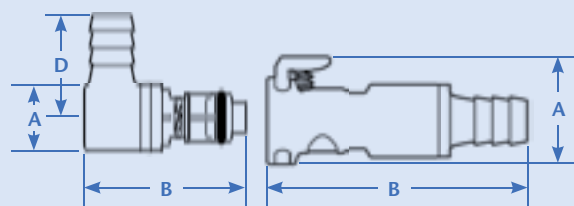
EFC Series  
Gasket Thickness: .06"  
Mounting Hole: .720" diameter  
Coupling Spacing: 1.25" min.  
Greenlee® 720 Keyway Punch and  
730BB-3/4 Hole Punch.

COUPLING BODIES	PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
	see drawing	.50	.03



PANEL NUT HEX	PANEL NUT THREAD
13/16	11/16-24 UNS

## Product Dimensions



A = Height/Diameter  
B = Total Length (including valve)  
D = Elbow Radial Length

## Coupling Bodies

### POLYPROPYLENE

**TERMINATION**  
**IN-LINE**  
**PIPE THREAD**

**THREAD SIZE**  
1/4" NPT  
3/8" NPT

**SHUTOFF**

**A**

**B**

EFCD10412 ‡	.93	2.29
EFCD10612 ‡	.93	2.29



**TERMINATION**  
**BULKHEAD**  
**PANEL MOUNT**  
**HOSE BARB**

**TUBING SIZE**  
1/4" ID  
3/8" ID

**METRIC EQ.**  
6.4mm ID  
9.5mm ID

**SHUTOFF**

**A**

**B**

EFCD16412	1.25	2.23
EFCD16612	1.25	2.23



**TERMINATION**  
**IN-LINE**  
**HOSE BARB**

**TUBING SIZE**  
1/4" ID  
3/8" ID

**METRIC EQ.**  
6.4mm ID  
9.5mm ID

**SHUTOFF**

**A**

**B**

EFCD17412	.93	2.23
EFCD17612	.93	2.23



## Coupling Inserts

### POLYPROPYLENE

**TERMINATION**  
**IN-LINE**  
**PIPE THREAD**

**THREAD SIZE**  
1/4" NPT  
3/8" NPT

**SHUTOFF**

**A**

**B**

EFCD24412 ‡	.72	1.77
EFCD24612 ‡	.72	1.77



**TERMINATION**  
**IN-LINE**  
**HOSE BARB**

**TUBING SIZE**  
1/4" ID  
3/8" ID

**METRIC EQ.**  
6.4mm ID  
9.5mm ID

**STRAIGHT THRU**  
EFC22412  
EFC22612

**SHUTOFF**

**A**

**B**

EFCD22412	.60/.72	1.33/2.08
EFCD22612	.60/.72	1.33/1.90



**TERMINATION**  
**ELBOW**  
**HOSE BARB**

**TUBING SIZE**  
1/4" ID  
3/8" ID

**METRIC EQ.**  
6.4mm ID  
9.5mm ID

**STRAIGHT THRU**  
EFC23412  
EFC23612

**SHUTOFF**

**A**

**B**

**D**

EFCD23412	.63	1.32/1.45	.96
EFCD23612	.63	1.32/1.45	.96



## Accessories

**PANEL MOUNT**  
**GASKET**  
**REPLACEMENT**

For sealing panel mount bodies listed above

**MATERIAL**  
EPDM

**PART NO.**  
668400



All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. Couplings are pictured with valves unless otherwise noted. Straight thru dimension is listed first when two measurements are provided. ‡ Indicates coupling that can be used with DrumQuik®.



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## Specifications

### Pressure:

Vacuum to 120 psi, 8.3 bar

### Temperature:

32 F° to 160° F (0° C to 71° C)

### Materials:

**Main components and valves:**  
Glass-filled polypropylene with TPV\* overmold,  
ABS with TPE\* soft-touch overmold

**Thumb latch:** Glass-filled polypropylene, ABS

**Valve spring:** 316 stainless steel

**External spring:** 316 stainless steel

**O-rings:** EPDM

### Color:

**Polypropylene:** Gray with dark gray overmold standard; gray with red or blue overmold available†

**ABS:** White with teal overmold

### Tubing Sizes:

1/8" to 3/8" ID, 3.2mm to 9.5mm ID

**Lubricants:** Krytox® PFPE (inert)

**Spillage:** <0.10 cc/disconnect

\*The overmold material TPV (thermoplastic vulcanizate) is used with the NS4 polypropylene couplings. TPV is an alloy of polypropylene thermoplastic and fully vulcanized EPDM rubber. TPV is typically resistant to water, acids and bases. The overmold material TPE (thermoplastic elastomer) is used with the NS4 ABS couplings. TPE is a blend of additives and copolymers in a special formulation that forms extremely durable bonds to the ABS substrate, while offering the traditional properties of soft-touch overmold.

†NOTE: Standard product is gray; color options require a set-up charge and minimum quantities. Please contact Colder for details.

**NS4 Series couplings** feature non-spill valves in a compact size, at a great price. Use the NS4 when even a few drops pose problems regarding safety, media cost or environmental regulations. These innovative couplings are lightweight, chemically resistant and easy to use. The non-spill design effectively eliminates spills, minimizes downtime and enhances operator safety.

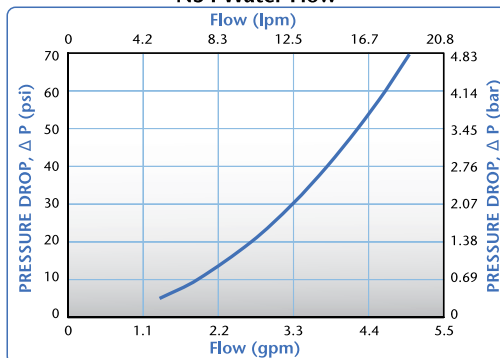
### Features

Non-spill design  
Color coding  
Glass-filled polypropylene  
Medical-grade ABS

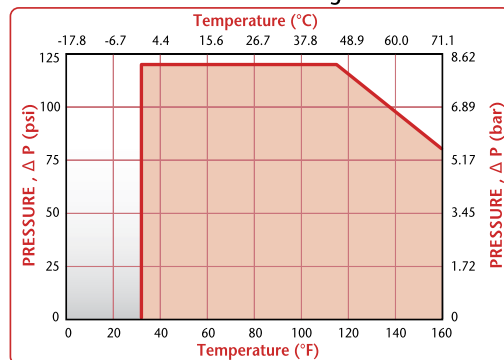
### Benefits

Disconnect under pressure with no spills  
Instant visual differentiation of media lines  
Durable and compatible with many chemicals  
Gamma sterilizable

NS4 Water Flow



NS4 Pressure Range






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.

	PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
<b>COUPLING INSERTS</b>	see drawing on page 53	.25	.03

## Product Dimensions (see page 53)






### Coupling Bodies

## POLYPROPYLENE / ABS

<b>TERMINATION</b> <i>IN-LINE PIPE THREAD</i>	<b>THREAD SIZE</b> 1/4" NPT 1/4" BSPT		<b>POLYPROPYLENE SHUTOFF</b> NS4D10004 NS4D10004BSPT	<b>ABS SHUTOFF</b> NS4D1000406 ‡ NS4D10004BSPT06	<b>A</b> 1.05 1.05	<b>B</b> 2.31 2.29	
<b>TERMINATION</b> <i>IN-LINE FERRULESS POLYTUBE FITTING, PTF†</i>	<b>TUBING SIZE</b> 3/8" OD, 1/4" ID	<b>METRIC EQ.</b> 9.5mm OD, 6.4mm ID	<b>POLYPROPYLENE SHUTOFF</b> NS4D13006	<b>ABS SHUTOFF</b> NS4D1300606	<b>A</b> 1.05	<b>B</b> 2.45	
<b>TERMINATION</b> <i>IN-LINE HOSE BARB</i>	<b>TUBING SIZE</b> 1/8" ID* 1/4" ID 3/8" ID	<b>METRIC EQ.</b> 3.2mm ID* 6.4mm ID 9.5mm ID	<b>POLYPROPYLENE SHUTOFF</b> NS4D17002 NS4D17004 NS4D17006	<b>ABS SHUTOFF</b> NS4D1700206 NS4D1700406 NS4D1700606	<b>A</b> 1.05 1.05 1.05	<b>B</b> 2.09 2.34 2.34	

### Coupling Inserts

## POLYPROPYLENE / ABS

<b>TERMINATION</b> <i>IN-LINE PIPE THREAD</i>	<b>THREAD SIZE</b> 1/4" NPT 1/4" BSPT		<b>POLYPROPYLENE SHUTOFF</b> NS4D24004 ‡ NS4D24004BSPT	<b>ABS SHUTOFF</b> NS4D2400406 NS4D24004BSPT06	<b>A</b> .96 .96	<b>B</b> 1.95 1.95	
<b>TERMINATION</b> <i>IN-LINE FERRULESS POLYTUBE FITTING, PTF†</i>	<b>TUBING SIZE</b> 3/8" OD, 1/4" ID	<b>METRIC EQ.</b> 9.5mm OD, 6.4mm ID	<b>POLYPROPYLENE SHUTOFF</b> NS4D20006	<b>ABS SHUTOFF</b> NS4D2000606	<b>A</b> .96	<b>B</b> 2.09	
<b>TERMINATION</b> <i>IN-LINE HOSE BARB</i>	<b>TUBING SIZE</b> 1/8" ID* 1/4" ID 3/8" ID	<b>METRIC EQ.</b> 3.2mm ID* 6.4mm ID 9.5mm ID	<b>POLYPROPYLENE SHUTOFF</b> NS4D22002 NS4D22004 NS4D22006	<b>ABS SHUTOFF</b> NS4D2200206 NS4D2200406 NS4D2200606	<b>A</b> .96 .96 .96	<b>B</b> 1.73 1.98 1.98	
<b>TERMINATION</b> <i>PANEL MOUNT FERRULESS POLYTUBE FITTING, PTF†</i>	<b>TUBING SIZE</b> 3/8" OD, 1/4" ID	<b>METRIC EQ.</b> 9.5mm OD, 6.4mm ID	<b>POLYPROPYLENE SHUTOFF</b> NS4D40006	<b>ABS SHUTOFF</b> NS4D4000606	<b>A</b> 1.17	<b>B</b> 2.43	
<b>TERMINATION</b> <i>PANEL MOUNT HOSE BARB</i>	<b>TUBING SIZE</b> 1/8" ID* 1/4" ID 3/8" ID	<b>METRIC EQ.</b> 3.2mm ID* 6.4mm ID 9.5mm ID	<b>POLYPROPYLENE SHUTOFF</b> NS4D42002 NS4D42004 NS4D42006	<b>ABS SHUTOFF</b> NS4D4200206 NS4D4200406 NS4D4200606	<b>A</b> 1.17 1.17 1.17	<b>B</b> 2.07 2.32 2.32	

### Accessories

<b>PANEL MOUNT GASKET</b>	For sealing panel mount inserts listed above	<b>MATERIAL</b> EPDM FKM	<b>PART NO.</b> 1879800 1889500	
-------------------------------	--	--------------------------------	---------------------------------------	---

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: Colder's Ferruleless PTF (polytube fitting) terminations do not require ferrules to achieve a secure connection and are therefore easier to use and reuse. ‡Indicates coupling that can be used with DrumQuik®. \*NOTE: Patented 1/8" ID (3.2mm) hose barb connection has a support shroud allowing a maximum tube OD of 1/4" (6.4mm).



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# NS6 SERIES

**NS6 Series** couplings feature non-spill valves at a great price. Use the NS6 when even a few drops of spillage pose problems regarding safety, media cost or environmental regulations. These innovative couplings are lightweight, chemically resistant and easy to use. The non-spill design virtually eliminates spills, minimizes downtime and enhances operator safety. Soft touch overmold makes them comfortable in the hand and very attractive.

## Features

- Non-spill design
- Color coding
- Glass-filled polypropylene
- Colder thumb latch

## Benefits

- Disconnect under pressure with no spills
- Instant visual differentiation of media lines
- Durable and compatible with many chemicals
- One-hand connection and disconnection

## Specifications

### Pressure:

Vacuum to 120 psi, 8.3 bar (see graph)

### Temperature:

32° F to 160° F (0° C to 71° C) (see graph)

### Materials:

#### Main components:

Glass-filled polypropylene with TPV\* soft touch overmold

**Thumb latch:** Glass-filled polypropylene

**Valve spring (wetted):** 316 stainless steel

**External spring:** 316 stainless steel

**O-rings:** EPDM

### Color:

Gray with dark gray overmold standard; gray with red or blue overmold available†

### Tubing Sizes:

3/8" to 1/2" ID, 9.5mm to 12.7mm ID

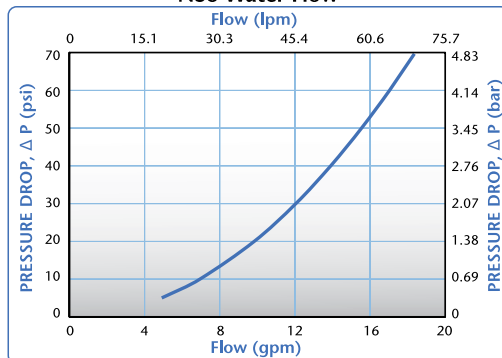
**Lubricants:** Krytox® PFPE (inert)

**Spillage:** ~0.03 cc/disconnect @ 0 psi,  
~0.30 cc/disconnect @ 120 psi

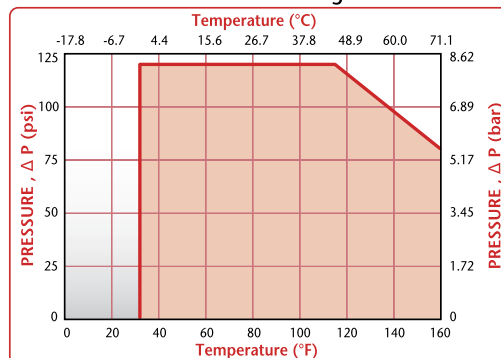
\*The overmold material is known as TPV. (thermoplastic vulcanizate) This TPV is an alloy of polypropylene thermoplastic and fully vulcanized EPDM rubber. The material is typically resistant to water, acids and bases.

†NOTE: Standard product is gray; color options require a set-up charge and minimum quantities. Please contact Colder for details.

NS6 Water Flow

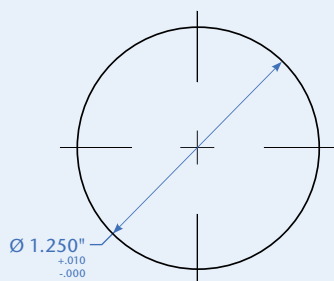


NS6 Pressure Range



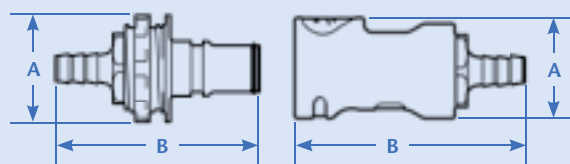
These graphs are intended to give you a general idea of the performance capabilities of each product line. The shaded area of each graph represents the operating range of the product family, i.e., upper and lower values are shown. Therefore, depending on the exact coupling configurations selected, you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





COUPLING INSERTS	PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
	see drawing	.25	.03

## Product Dimensions



A = Height/Diameter    B = Total Length (including valve)

## Coupling Bodies

### POLYPROPYLENE

<b>TERMINATION</b> <i>IN-LINE PIPE THREAD</i>	<b>THREAD SIZE</b> 1/2" NPT 1/2" BSPT		<b>SHUTOFF</b> NS6D10008 ‡ NS6D10008BSPT	<b>A</b> 1.31 1.31	<b>B</b> 3.01 3.01
<b>TERMINATION</b> <i>IN-LINE COMPRESSION</i>	<b>TUBING SIZE</b> 1/2" OD	<b>METRIC EQ.</b> 12.7mm OD	<b>SHUTOFF</b> NS6D13008	<b>A</b> 1.31	<b>B</b> 3.53
<b>TERMINATION</b> <i>IN-LINE HOSE BARB</i>	<b>TUBING SIZE</b> 3/8" ID 1/2" ID	<b>METRIC EQ.</b> 9.5mm ID 12.7mm ID	<b>SHUTOFF</b> NS6D17006 NS6D17008	<b>A</b> 1.31 1.31	<b>B</b> 3.16 3.16



## Coupling Inserts

### POLYPROPYLENE

<b>TERMINATION</b> <i>IN-LINE PIPE THREAD</i>	<b>THREAD SIZE</b> 1/2" NPT 1/2" BSPT		<b>SHUTOFF</b> NS6D24008 ‡ NS6D24008BSPT	<b>A</b> 1.31 1.31	<b>B</b> 2.44 2.44
<b>TERMINATION</b> <i>IN-LINE COMPRESSION</i>	<b>TUBING SIZE</b> 1/2" OD	<b>METRIC EQ.</b> 12.7mm OD	<b>SHUTOFF</b> NS6D20008	<b>A</b> 1.31	<b>B</b> 3.01
<b>TERMINATION</b> <i>IN-LINE HOSE BARB</i>	<b>TUBING SIZE</b> 3/8" ID 1/2" ID	<b>METRIC EQ.</b> 9.5mm ID 12.7mm ID	<b>SHUTOFF</b> NS6D22006 NS6D22008	<b>A</b> 1.31 1.31	<b>B</b> 2.59 2.59
<b>TERMINATION</b> <i>PANEL MOUNT COMPRESSION</i>	<b>TUBING SIZE</b> 1/2" OD	<b>METRIC EQ.</b> 12.7mm OD	<b>SHUTOFF</b> NS6D40008	<b>A</b> 1.50	<b>B</b> 3.32
<b>TERMINATION</b> <i>PANEL MOUNT HOSE BARB</i>	<b>TUBING SIZE</b> 3/8" ID 1/2" ID	<b>METRIC EQ.</b> 9.5mm ID 12.7mm ID	<b>SHUTOFF</b> NS6D42006 NS6D42008	<b>A</b> 1.50 1.50	<b>B</b> 2.85 2.85



## Accessories

<b>PANEL MOUNT GASKET</b>	For sealing panel mount inserts listed above	<b>MATERIAL</b> EPDM FKM	<b>PART NO.</b> 1884300 1889600
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All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. Couplings are pictured with valves unless otherwise noted. ‡Indicates coupling that can be used with DrumQuik®.



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**The NSH Series** couplings are general purpose versions of our pressure-balanced, non-spill, ChemQuik® CQG06 couplings. Molded polypropylene, EPDM seals and a 100% springless and metal-free flow path provide broad chemical resistance and exceptionally high flow capacity, allowing instant disconnects (and reconnects), even under pressure. Their non-spill design virtually eliminates spills, minimizes downtime and enhances operator safety in a very low cost package.

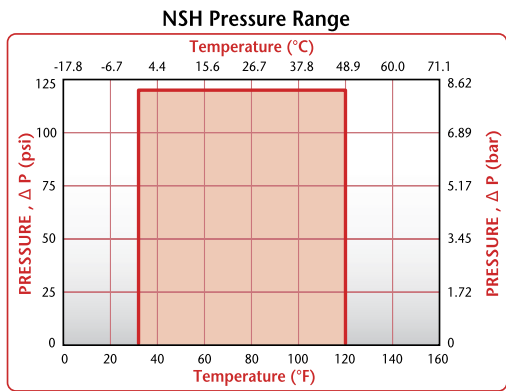
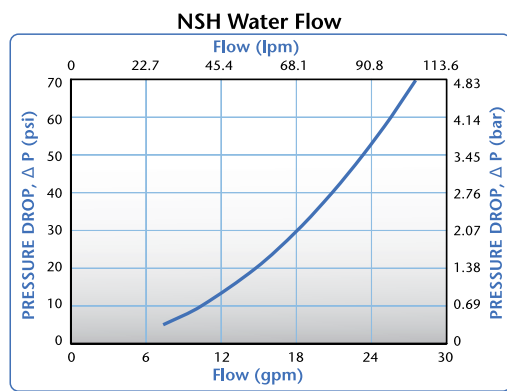
Features	Benefits
Non-spill design	Ultimate protection from chemicals and fumes
Pressure-balanced design	Failsafe disconnect, even if under pressure; easy to reconnect at high pressure
Springless flow path design	Eliminates source of metallic contaminants
Optional color coding	Helps prevent accidental misconnects

Specifications

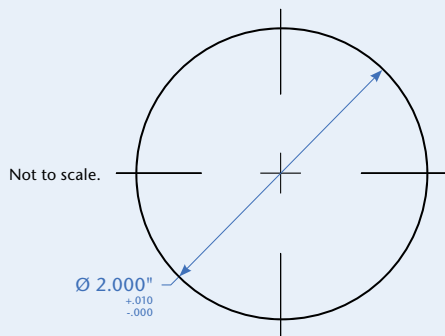
- Pressure:**  
Vacuum to 120 psi, 8.3 bar
- Temperature:**  
32° F to 120° F (0° C to 49° C)
- Materials:**  
**Main components:** Glass-filled polypropylene  
**Thumb latch:** Glass-filled polypropylene  
**O-rings:** EPDM  
**Springs (non-wetted):** 316 stainless steel  
**Compression nuts:** White polypropylene
- Color:**  
Gray with dark gray accent standard; red or blue thumb latch and insert tip available.
- Tubing Sizes:**  
3/8" to 3/4" ID, 9.5mm to 19.0mm ID
- Lubricants:** Krytox® PFPE (inert)
- Spillage/air inclusion:**  
<0.1 cc (ml)/disconnect (reconnect)
- Panel Mount:**  
Optional adaptor kit (see accessories section)

Compatible with ChemQuik® Dual Containment System; Compatible with DrumQuik® MODULAR Dispense System, Universal and Asian Drum Adaptors.

**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. Use the graphs below as a guide.

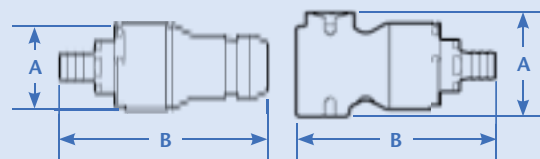


These graphs are intended to give you a general idea of the performance capabilities of each product line. The shaded area of each graph represents the operating range of the product family, i.e., upper and lower values are shown. Therefore, depending on the exact coupling configurations selected, you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



	PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
<b>COUPLING BODIES OR INSERTS</b>	see drawing	.50	.12

## Product Dimensions



A = Height/Diameter  
B = Total Length (including valve)

## Coupling Bodies

### POLYPROPYLENE

TERMINATION	THREAD SIZE		SHUTOFF	A	B	
IN-LINE PIPE THREAD	3/8" FEMALE NPT		NSHD19006	2.0	3.70	
	3/8" BSPT		NSHD10006BSPT ‡	2.0	3.67	
	1/2" NPT		NSHD10008	2.0	3.81	
	3/4" NPT		NSHD10012 ‡	2.0	4.01	
TERMINATION	TUBING SIZE	METRIC EQ.	SHUTOFF	A	B	
IN-LINE COMPRESSION	3/8" OD	9.5mm OD	NSHD13006	2.0	3.97	
	1/2" OD	12.7mm OD	NSHD13008	2.0	4.10	
TERMINATION	TUBING SIZE	METRIC EQ.	SHUTOFF	A	B	
IN-LINE HOSE BARB	3/8" ID	9.5mm ID	NSHD17006	2.0	3.73	
	1/2" ID	12.7mm ID	NSHD17008	2.0	3.73	
	5/8" ID	15.9mm ID	NSHD17010	2.0	3.88	
	3/4" ID	19.0mm ID	NSHD17012	2.0	3.88	

## Coupling Inserts

### POLYPROPYLENE

TERMINATION	THREAD SIZE		SHUTOFF	A	B	
IN-LINE PIPE THREAD	3/8" FEMALE NPT		NSHD26006	1.64	3.87	
	3/8" BSPT		NSHD24006BSPT ‡	1.64	3.84	
	1/2" NPT		NSHD24008	1.64	3.98	
	3/4" NPT		NSHD24012 ‡	1.64	3.98	
TERMINATION	TUBING SIZE	METRIC EQ.	SHUTOFF	A	B	
IN-LINE COMPRESSION	3/8" OD	9.5mm OD	NSHD20006	1.64	4.14	
	1/2" OD	12.7mm OD	NSHD20008	1.64	4.27	
TERMINATION	TUBING SIZE	METRIC EQ.	SHUTOFF	A	B	
IN-LINE HOSE BARB	3/8" ID	9.5mm ID	NSHD22006	1.64	3.90	
	1/2" ID	12.7mm ID	NSHD22008	1.64	3.90	
	5/8" ID	15.9mm ID	NSHD22010	1.64	4.05	
	3/4" ID	19.0mm ID	NSHD22012	1.64	4.05	

## Accessories

### DESCRIPTION

\*Panel mount kit with panel seal  
Dust plug/cap for body or insert

### PART NO.

NSH PMKIT 12  
1800700 (not shown)



All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. \*Panel mount kit can be used with body for front mount or insert for front or rear mount.

‡Indicates coupling that can be used with DrumQuik®.



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HFC12 SERIES

## Specifications

### Pressure:

Vacuum to 60 psi, 4.2 bar

### Temperature:

32° F to 160° F (0° C to 71° C)

### Materials:

**Main components and valves:** Polypropylene

**Thumb latch:** Polypropylene

**Valve spring (wetted):**

316 stainless steel

**External springs:** 316 stainless steel

**O-rings:** EPDM

**Panel mount gasket:** EPDM

**Compression nut, gripper, ferrule:** Polypropylene

### Color:

Gray with dark gray latch

### Tubing Sizes:

3/8" to 3/4" ID, 9.5mm to 19.0mm ID

### For compression termination specifications:

3/8" OD or 1/2" OD, +0.010/-0.000

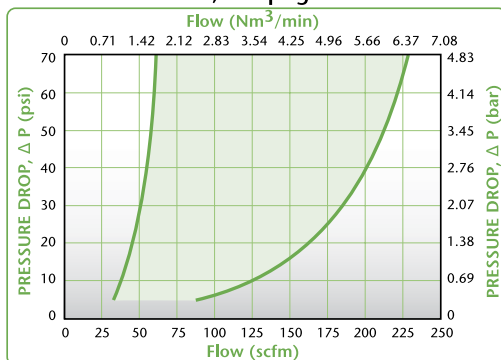
**WARNING:** Pressure, temperature, chemicals, and operating environment can affect the performance of couplings. It is the customer's responsibility to test the suitability of Colder products in their own application conditions. Use the graphs on the following page as a guide.

*Note:  
Optional o-ring and  
spring materials are  
available, please  
contact Colder  
for details.*

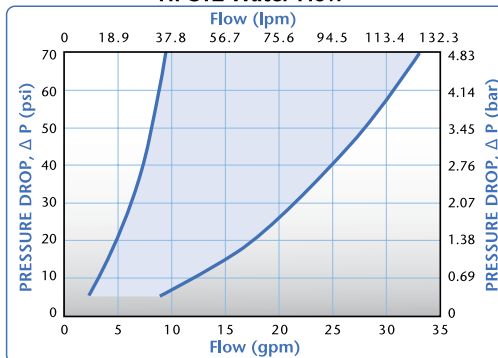
**Patented HFC12 Series** couplings have flow comparable to many 1/2" flow couplings in a 3/8" body size. Compact and lightweight, HFC couplings replace bulky and heavy brass ball-and-sleeve couplings in a wide range of applications. An ergonomic design and a large, shrouded thumb latch pad produce a coupling that is easy to grip and simple to operate. An efficient valve design leads to high flow and low spillage.

Features	Benefits
High efficiency valve	More flow in a compact size
Ergonomic design	Easy to grip, simple to operate
Polypropylene material	Chemically resistant and gamma sterilizable
Compatible	Mates with HFC35 and HFC57 couplings

HFC12 Air Flow, 100 psig Inlet Pressure

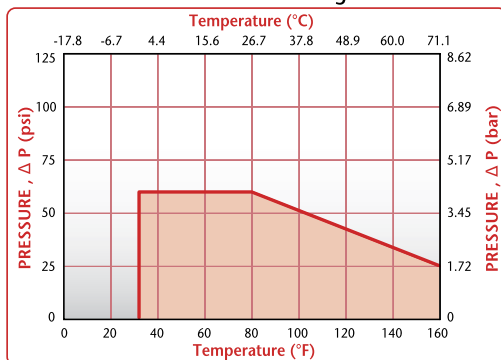


HFC12 Water Flow



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.

HFC12 Pressure Range



Don't forget: you can always visit [www.colder.com](http://www.colder.com) for more product information.



### DID YOU KNOW ...

Colder offers over 7,000 standard couplings for a wide variety of applications such as low-pressure air and fluid line connections, high-purity chemical management and bioprocessing connectors. Contact us at 1-800-444-2474 or 651-645-0091 to learn how Colder can make your connections cleaner, faster, safer and smarter!

## 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 to the right.

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

Q=Flow rate in gallons per minute  
 $C_v$ =Average constant of various rates (see chart)  
 $\Delta P$ =Pressure drop across coupling (psi)  
 $S$ =Specific gravity of liquid

### $C_v$ Values for High Flow Couplings (HFC12)

BODIES	HFC 22612	HFCD 22612	HFC 22812	HFCD 22812	HFC 23612	HFCD 23612	HFC 23812	HFCD 23812	HFC 24612	HFCD 24612	HFC 24812	HFCD 24812	HFC 221212	HFCD 221212
HFCD10612	1.27	1.27	1.62	1.51	1.14	1.14	1.46	1.36	1.80	1.58	1.70	1.65	-	-
HFCD10812	1.28	1.34	1.62	1.51	1.15	1.24	1.46	1.36	1.81	1.54	1.72	1.56	-	-
HFCD16612	1.07	1.00	1.17	1.14	0.96	0.90	1.05	1.03	1.33	1.26	1.30	1.24	-	-
HFCD16812	1.25	1.23	1.61	1.52	1.13	1.11	1.45	1.37	1.79	1.60	1.68	1.56	-	-
HFCD17612	1.07	1.00	1.17	1.14	0.96	0.90	1.05	1.03	1.33	1.26	1.30	1.24	-	-
HFCD17812	1.25	1.23	1.61	1.52	1.13	1.11	1.45	1.37	1.79	1.60	1.68	1.56	-	-
HFC171212	-	-	-	-	-	-	-	-	-	-	-	-	3.94	-
HFCD171212	-	-	-	-	-	-	-	-	-	-	-	-	-	2.04

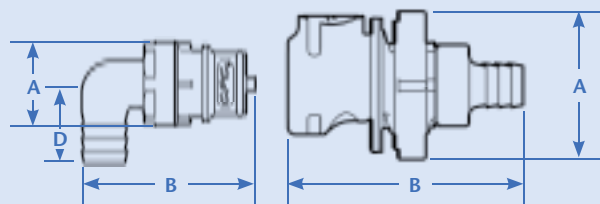


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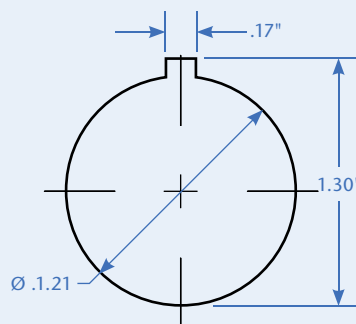
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## Product Dimensions



A = Height/Diameter  
B = Total Length (including valve)  
D = Elbow Radial Length



Gasket Thickness: .06"  
Mounting Hole: 1.21" diameter  
Coupling Spacing: 1.62" minimum

	PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
<b>COUPLING BODIES</b>	see drawing	.25	.03

## Coupling Bodies

### POLYPROPYLENE



**TERMINATION**  
**IN-LINE**  
**PIPE THREAD**

**THREAD SIZE**  
3/8" NPT  
3/8" BSPT  
1/2" NPT  
3/4" NPT

**STRAIGHT THRU**  
HFC10612 ‡  
HFC10612BSPT  
HFC10812  
HFC101212 ‡

**SHUTOFF**  
HFCD10612 ‡  
HFCD10612BSPT  
HFCD10812  
HFCD101212 ‡

A	B
1.44	2.69
1.44	2.72
1.44	2.88
1.44	3.07



**TERMINATION**  
**BULKHEAD PANEL**  
**MOUNT**  
**HOSE BARB**

**TUBING SIZE**  
3/8" ID  
1/2" ID  
5/8" ID  
3/4" ID

**METRIC EQ.**  
9.5mm ID  
12.7mm ID  
15.9mm ID  
19.0mm ID

**STRAIGHT THRU**  
HFC16612  
HFC16812  
HFC161012  
HFC161212

**SHUTOFF**  
HFCD16612  
HFCD16812  
HFCD161012  
HFCD161212

A	B
1.82	2.82
1.82	2.82
1.82	2.94
1.82	2.94



**TERMINATION**  
**BULKHEAD**  
**PANEL MOUNT**  
**COMPRESSION**

**TUBING SIZE**  
3/8" OD  
1/2" OD

**METRIC EQ.**  
9.5mm OD  
12.7mm OD

**STRAIGHT THRU**  
HFC12612  
HFC12812

**SHUTOFF**  
HFCD12612  
HFCD12812

A	B
1.82	2.96
1.82	3.11



**TERMINATION**  
**IN-LINE**  
**HOSE BARB**

**TUBING SIZE**  
3/8" ID  
1/2" ID  
5/8" ID  
3/4" ID

**METRIC EQ.**  
9.5mm ID  
12.7mm ID  
15.9mm ID  
19.0mm ID

**STRAIGHT THRU**  
HFC17612  
HFC17812  
HFC171012  
HFC171212

**SHUTOFF**  
HFCD17612  
HFCD17812  
HFCD171012  
HFCD171212

A	B
1.44	2.79
1.44	2.79
1.44	2.94
1.44	2.94



**TERMINATION**  
**IN-LINE**  
**COMPRESSION**

**TUBING SIZE**  
3/8" OD  
1/2" OD

**METRIC EQ.**  
9.5mm OD  
12.7mm OD

**STRAIGHT THRU**  
HFC13612  
HFC13812

**SHUTOFF**  
HFCD13612  
HFCD13812

A	B
1.44	2.96
1.44	3.11

## Accessories



**PANEL MOUNT**  
**GASKET**  
**REPLACEMENT**

For sealing panel mount bodies  
listed above

**MATERIAL**  
EPDM

**PART NO.**  
621200

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. ‡Indicates coupling that can be used with DrumQuik®.

## Coupling Inserts

# POLYPROPYLENE

TERMINATION IN-LINE PIPE THREAD	THREAD SIZE		STRAIGHT THRU	SHUTOFF	A	B	
	3/8" NPT		HFC24612 ‡	HFCD24612 ‡	1.16	1.77/1.89	
	3/8" BSPT		HFC24612BSPT	HFCD24612BSPT	1.16	1.80/1.92	
	1/2" NPT		HFC24812	HFCD24812	1.16	1.95/2.07	
	3/4" NPT		HFC241212 ‡	HFCD241212 ‡	1.23	2.14/2.26	
TERMINATION IN-LINE HOSE BARB	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	
	3/8" ID	9.5mm ID	HFC22612	HFCD22612	1.00	1.97/2.09	
	1/2" ID	12.7mm ID	HFC22812	HFCD22812	1.00	1.97/2.09	
	5/8" ID	15.9mm ID	HFC221012	HFCD221012	1.00	2.01/2.13	
	3/4" ID	19.0mm ID	HFC221212	HFCD221212	1.00	2.14/2.26	
TERMINATION IN-LINE COMPRESSION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	
	3/8" OD	9.5mm OD	HFC20612	HFCD20612	1.00	2.14/2.26	
	1/2" OD	12.7mm OD	HFC20812	HFCD20812	1.00	2.29/2.41	
TERMINATION ELBOW HOSE BARB	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	D
	3/8" ID	9.5mm ID	HFC23612	HFCD23612	1.00	1.93/2.05	.93
	1/2" ID	12.7mm ID	HFC23812	HFCD23812	1.00	1.97/2.09	.93
	3/4" ID	19.0mm ID	HFC231212	HFCD231212	1.00	1.95/2.07	.93



When selecting a valved coupling for your application, make sure to order a part number with a D just before the numeric portion of the part number. For example, HFC101212 does not have a shut-off valve; HFCD101212 would be the correct part number to order for a valved coupling.

To visually identify a part to determine whether or not it is valved, disconnect the coupling body and insert, and then look through the part. If you can see light all the way through, your part is non-valved. If there is anything obstructing the light, you probably have a valved part. Please contact Customer Service at 1-800-444-2474 or 651-645-0091 if you need further assistance.

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. Couplings are pictured with valves unless otherwise noted. ‡Indicates coupling that can be used with DrumQuik®.



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## Specifications

### Pressure:

Vacuum to 125 psi, 8.6 bar

### Temperature:

-40° F to 280° F (-40° C to 138° C)

### Materials:

#### Main components and valves:

HFC35 - Polysulfone

HFC57 - UV-resistant polysulfone

#### Thumb latch:

HFC35 - Polysulfone

HFC57 - UV-resistant polysulfone

Valve spring: 316 stainless steel

External springs: 316 stainless steel

O-rings: EPDM

Panel mount gasket: EPDM

Female GHT gasket: FDA EPDM

### Colors:

HCF35 - Natural white, dark gray latch

HCF57 - Black, black latch

### Tubing Sizes:

3/8" to 3/4" ID, 9.5mm to 19.0mm ID

**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. Use the graphs on the following page as a guide.

Actual size

**HFC35 Series** polysulfone couplings are able to withstand demanding applications and feature physical strength, chemical resistance and autoclavability.

**HFC57 Series** polysulfone couplings are UV-resistant and able to withstand continued exposure to harmful UV rays without affecting performance.

Both can operate in harsh environments in temperatures from -40° F to 280° F (-40° C to 138° C) and pressures from vacuum to 125 psi (8.6 bar). An ergonomic design and a large, shrouded thumb latch pad produce a coupling that is easy to grip and simple to operate. An efficient valve design leads to high flow and exceptionally low spillage. Both series also add bulkhead panel mount, garden hose thread and Hastelloy® C spring options.

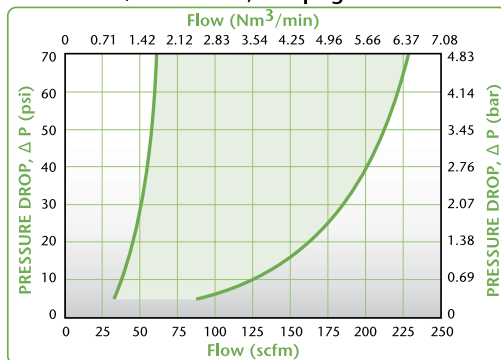
### Features

Polysulfone (HFC35)  
UV Polysulfone (HFC57)  
High efficiency valve  
Ergonomic design  
Compatible

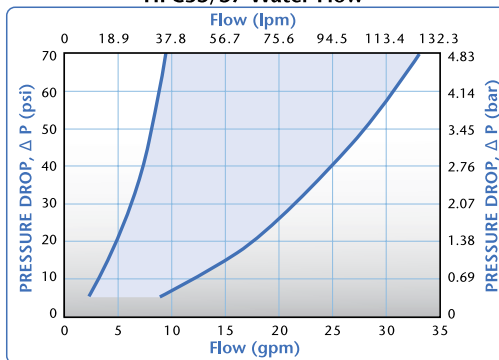
### Benefits

Physically strong and autoclavable  
Physically strong and UV-resistant  
More flow and less spillage in a compact size  
Easy to grip, simple to operate  
Mates with HFC12 couplings

HFC35/57 Air Flow, 100 psig Inlet Pressure

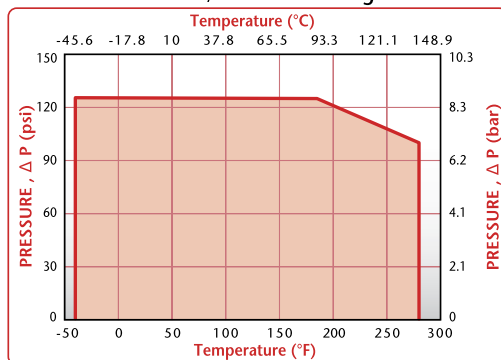


HFC35/57 Water Flow



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.

HFC35/57 Pressure Range



Don't forget: you can always visit [www.colder.com](http://www.colder.com) for more product information.



### DID YOU KNOW ...

When specifying products with pipe thread terminations, don't forget to consult Colder's white paper on NPT pipe threads.

Visit the TECHNICAL section of [www.colder.com](http://www.colder.com).



### DID YOU KNOW ...

the HFC57 Series polysulfone couplings are UV-resistant and able to withstand continued exposure to harmful rays without affecting performance?

These couplings offer all the same features as our HFC12 and HFC35 Series with the added advantage of UV-resistance to protect the strength and durability of your fluid connections. Use the HFC57 couplings in outdoor applications such as watercraft, lawn irrigation systems and solar heating on roofs and decks where a connector is subjected to the harsh rays of the sun.






Call toll free 1-800-444-2474 or visit us at [www.colder.com](http://www.colder.com)


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## HFC35 Coupling Bodies

# POLYSULFONE




	<b>TERMINATION</b> <i>IN-LINE PIPE THREAD</i>	<b>THREAD SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>
		3/8" NPT		HFC10635	HFCD10635	1.44	2.73
		3/8" BSPT		HFC10635BSPT	HFCD10635BSPT	1.44	2.73
		1/2" NPT		HFC10835	HFCD10835	1.44	2.88
		1/2" BSPT		HFC10835BSPT	HFCD10835BSPT	1.44	2.88
		3/4" NPT		HFC101235	HFCD101235	1.44	3.12
	<b>TERMINATION</b> <i>IN-LINE PIPE THREAD</i>	<b>THREAD SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>
		3/4" GHT		HFC191235GHT	HFCD191235GHT	1.44	2.70
	<b>TERMINATION</b> <i>BULKHEAD PANEL MOUNT HOSE BARB</i>	<b>TUBING SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>
		3/8" ID		HFC16635	HFCD16635	1.82	2.82
		1/2" ID		HFC16835	HFCD16835	1.82	2.82
		5/8" ID		HFC161035	HFCD161035	1.82	2.94
	<b>TERMINATION</b> <i>IN-LINE HOSE BARB</i>	<b>TUBING SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>
		3/8" ID		HFC17635	HFCD17635	1.44	2.82
		1/2" ID		HFC17835	HFCD17835	1.44	2.82
		5/8" ID		HFC171035	HFCD171035	1.44	2.94
		3/4" ID		HFC171235	HFCD171235	1.44	2.94

## Accessories

	<b>PANEL MOUNT GASKET REPLACEMENT</b>	For sealing panel mount bodies listed above	<b>MATERIAL</b> EPDM	<b>PART NO.</b> 621200
	<b>GHT GASKET REPLACEMENT</b>	For sealing female threads	<b>MATERIAL</b> FDA EPDM	<b>PART NO.</b> 2339400

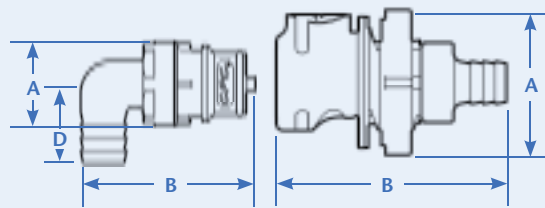
## HFC35 Coupling Inserts

# POLYSULFONE

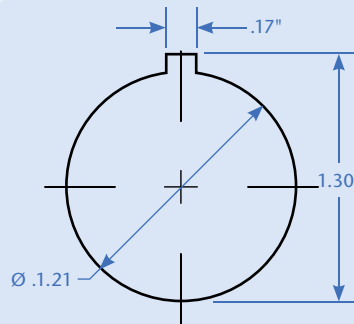
	<b>TERMINATION</b> <i>IN-LINE PIPE THREAD</i>	<b>THREAD SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>
		3/8" NPT		HFC24635	HFCD24635	1.16	1.82/1.94
		3/8" BSPT		HFC24635BSPT	HFCD24635BSPT	1.16	1.97/2.09
		1/2" NPT		HFC24835	HFCD24835	1.16	1.97/2.09
		1/2" BSPT		HFC24835BSPT	HFCD24835BSPT	1.16	1.17/2.09
		3/4" NPT		HFC241235	HFCD241235	1.23	2.22/2.34
	<b>TERMINATION</b> <i>IN-LINE PIPE THREAD</i>	<b>THREAD SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>
		3/4" GHT		HFC241235GHT	HFCD241235GHT	1.23	2.21/2.33
	<b>TERMINATION</b> <i>IN-LINE HOSE BARB</i>	<b>TUBING SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>
		3/8" ID		HFC22635	HFCD22635	1.00	1.91/2.03
		1/2" ID		HFC22835	HFCD22835	1.00	1.91/2.03
		5/8" ID		HFC221035	HFCD221035	1.00	2.03/2.15
	<b>TERMINATION</b> <i>ELBOW HOSE BARB</i>	<b>TUBING SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>
		3/8" ID		HFC23635	HFCD23635	1.00	1.92/2.04
		1/2" ID		HFC23835	HFCD23835	1.00	1.96/2.08
			<b>METRIC EQ.</b>				<b>D</b>
			9.5mm ID				.93
			12.7mm ID				.93

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





A = Height/Diameter  
B = Total Length (including valve)  
D = Elbow Radial Length



Gasket Thickness: .06"  
Mounting Hole: 1.21" diameter  
Coupling Spacing: 1.62" minimum

## Product Dimensions

	PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
<b>COUPLING BODIES</b>	see drawing	.25	.03

## HFC57 Coupling Bodies UV POLYSULFONE

<b>TERMINATION</b> <i>IN-LINE</i> <i>PIPE THREAD</i>	<b>THREAD SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	3/8" BSPT		HFC10657BSPT	HFCD10657BSPT	1.44	2.73	
	1/2" NPT		HFC10857	HFCD10857	1.44	2.88	
	1/2" BSPT		HFC10857BSPT	HFCD10857BSPT	1.44	2.88	
	3/4" BSPT		HFC101257BSPT	HFCD101257BSPT	1.44	3.12	
	3/4" GHT		HFC101257GHT	HFCD101257GHT	1.44	2.94	
<b>TERMINATION</b> <i>IN-LINE</i> <i>PIPE THREAD</i>	<b>THREAD SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	3/4" GHT		HFC191257GHT	HFCD191257GHT	1.44	2.70	
	3/4" BSPP		HFC191257BSPP	HFCD191257BSPP	1.44	2.70	
<b>TERMINATION</b> <i>BULKHEAD</i> <i>PANEL MOUNT</i> <i>HOSE BARB</i>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>		<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	3/8" ID	9.5mm ID		HFCD16657	1.82	2.82	
	1/2" ID	12.7mm ID		HFCD16857	1.82	2.82	
	5/8" ID	15.9mm ID		HFCD161057	1.82	2.94	
	3/4" ID	19.0mm ID		HFCD161257	1.82	2.94	
<b>TERMINATION</b> <i>IN-LINE</i> <i>HOSE BARB</i>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	3/8" ID	9.5mm ID	HFC17657	HFCD17657	1.44	2.82	
	1/2" ID	12.7mm ID	HFC17857	HFCD17857	1.44	2.82	
	5/8" ID	15.9mm ID	HFC171057	HFCD171057	1.44	2.94	
	3/4" ID	19.0mm ID	HFC171257	HFCD171257	1.44	2.94	

## Accessories

<b>PANEL MOUNT GASKET REPLACEMENT</b>	For sealing panel mount bodies listed above	<b>MATERIAL</b> EPDM	<b>PART NO.</b> 621200	
<b>GHT GASKET REPLACEMENT</b>	For sealing female threads	<b>MATERIAL</b> FDA EPDM	<b>PART NO.</b> 2339400	

## HFC57 Coupling Inserts UV POLYSULFONE

<b>TERMINATION</b> <i>IN-LINE</i> <i>PIPE THREAD</i>	<b>THREAD SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	3/8" BSPT		HFC24657BSPT	HFCD24657BSPT	1.16	1.84/1.96	
	1/2" BSPT		HFC24857BSPT	HFCD24857BSPT	1.16	1.99/2.07	
	1/2" NPT		HFC24857	HFCD24857	1.16	1.95/2.11	
	3/4" BSPT		HFC241257BSPT	HFCD241257BSPT	1.23	2.19/2.31	
	3/4" GHT		HFC241257GHT	HFCD241257GHT	1.16	2.15/2.27	
<b>TERMINATION</b> <i>IN-LINE</i> <i>PIPE THREAD</i>	<b>THREAD SIZE</b>		<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	3/4" GHT		HFC261257GHT	HFCD261257GHT	1.37	1.79/1.91	
	3/4" BSPP		HFC261257BSPP	HFCD261257BSPP	1.37	1.79/1.91	
<b>TERMINATION</b> <i>IN-LINE</i> <i>HOSE BARB</i>	<b>TUBING SIZE</b>	<b>METRIC EQ.</b>	<b>STRAIGHT THRU</b>	<b>SHUTOFF</b>	<b>A</b>	<b>B</b>	
	3/8" ID	9.5mm ID	HFC22657	HFCD22657	1.00	1.91/2.03	
	1/2" ID	12.7mm ID	HFC22857	HFCD22857	1.00	1.91/2.03	
	5/8" ID	15.9mm ID	HFC221057	HFCD221057	1.00	2.03/2.15	
	3/4" ID	19.0mm ID	HFC221257	HFCD221257	1.00	2.03/2.15	

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



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## FFC35 Series

1/2" flow couplings feature double the flow of the HFC Series couplings. The FFC Series has a non-valved bore that increases flow and minimizes turbulence. The polysulfone material is able to withstand demanding applications and features physical strength, chemical resistance and autoclavability. An ergonomic design and a large, shrouded thumb pad produce a coupling that is easy to grip and simple to operate.

### Features

- No valves
- Polysulfone material
- Ergonomic design

### Benefits

- Exceptional flow
- Physically strong and autoclavable
- Easy to grip, simple to operate

## Specifications

**Pressure:** Vacuum to 125 psi, 8.6 bar

**Temperature:**  
-40° F to 280° F (-40° C to 138° C)

### Materials:

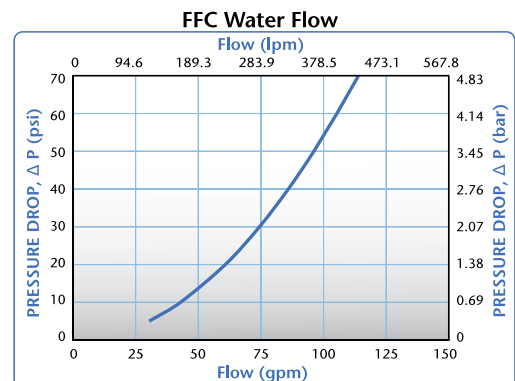
- Main components:** Polysulfone
- Thumb latch:** Polysulfone
- External spring:** 316 stainless steel
- O-rings:** FDA Buna-N
- Panel mount gasket:** EPDM
- Female GHT gasket:** FDA EPDM

### Color:

Natural white with dark gray latch

**Tubing Sizes:** 3/4" ID, 19.0mm ID

**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. Use the graphs on the following page as a guide.



This graph is intended to give you a general idea of the performance capabilities of each product line.

## Non-Valved

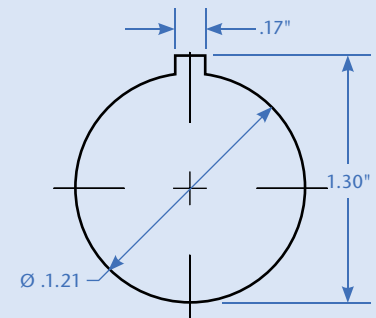
Colder's FFC35 Series couplings feature a wide open, straight-thru flow path.

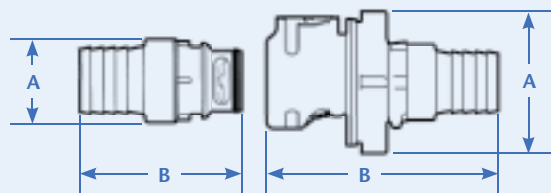


## Panel Mount Dimensions

	PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
COUPLING BODIES	see drawing	.25	.03

Gasket Thickness: .06"  
Mounting Hole: 1.21" diameter  
Coupling Spacing: 1.62" minimum









A = Height/Diameter  
B = Total Length


## Product Dimensions (cont.)

### Coupling Bodies

## POLYSULFONE




TERMINATION IN-LINE PIPE THREAD	THREAD SIZE 1/2" NPT 1/2" BSPT 3/4" NPT 3/4" BSPT 3/4" GHT		STRAIGHT THRU FFC10835 FFC10835BSPT FFC101235 FFC101235BSPT FFC101235GHT	A 1.44 1.44 1.44 1.44 1.44	B 2.88 2.88 3.12 3.12 2.94	
TERMINATION IN-LINE PIPE THREAD	THREAD SIZE 3/4" GHT 3/4" BSPP		STRAIGHT THRU FFC191235GHT FFC191235BSPP	A 1.44 1.44	B 2.70 2.70	
TERMINATION BULKHEAD PANEL MOUNT HOSE BARB	TUBING SIZE 3/4" ID	METRIC EQ. 19.0mm ID	STRAIGHT THRU FFC161235	A 1.82	B 2.94	
TERMINATION IN-LINE HOSE BARB	TUBING SIZE 3/4" ID	METRIC EQ. 19.0mm ID	STRAIGHT THRU FFC171235	A 1.44	B 2.94	

### Accessories

TERMINATION PANEL MOUNT GASKET REPLACEMENT	For sealing panel mount bodies listed above	MATERIAL EPDM	PART NO. 621200	
TERMINATION GHT GASKET REPLACEMENT	For sealing female threads	MATERIAL FDA EPDM	PART NO. 2339400	

### Coupling Inserts

## POLYSULFONE

TERMINATION IN-LINE PIPE THREAD	THREAD SIZE 1/2" NPT 1/2" BSPT 3/4" NPT 3/4" BSPT 3/4" GHT		STRAIGHT THRU FFC24835 FFC24835BSPT FFC241235 FFC241235BSPT FFC241235GHT	A 1.16 1.16 1.23 1.23 1.16	B 1.95 1.95 2.14 2.14 2.01	
TERMINATION IN-LINE PIPE THREAD	THREAD SIZE 3/4" GHT 3/4" BSPP		STRAIGHT THRU FFC261235GHT FFC261235BSPP	A 1.37 1.37	B 1.77 1.77	
TERMINATION IN-LINE HOSE BARB	TUBING SIZE 3/4" ID	METRIC EQ. 19.0mm ID	STRAIGHT THRU FFC221235	A 1.00	B 2.02	

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



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