



MC SERIES

## 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  
**Valve spring:** 316 stainless steel  
**External springs and pin:** Stainless steel  
**O-rings:** 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.

## Colder's MC Series chrome-plated brass

couplings are built tough and made to last in the most demanding applications. Ideal for use with higher temperatures or pressures, MC Series couplings feature 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

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

## 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.

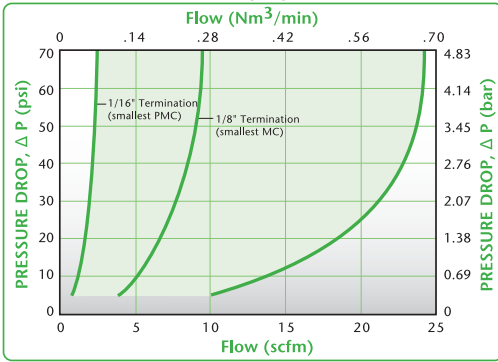
$$Q = C_v \sqrt{\frac{\Delta P}{S}}$$

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

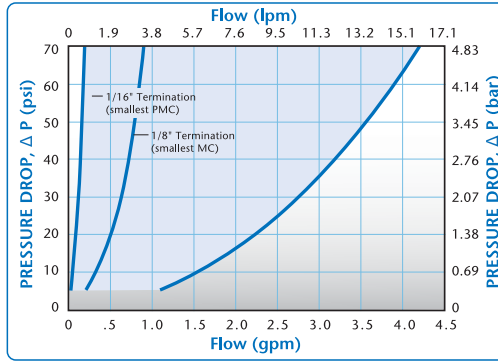
### C<sub>v</sub> Values for 1/8" Flow MC Couplings

BODIES	MC 2004	MCD 2004	MC 2006	MCD 2006	MC 2202	MCD 2202	MC 2204	MCD 2204	MC 2402	MCD 2402	MC 2404	MCD 2404	MC 2602	MC 2304	MC 2104	MCD 2304	MC 2203	MCD 2203
MC1002	.40	.18	.50	.19	.25	.16	.50	.19	.50	.20	.51	.19	.50	.50	.38	.24	.30	.17
MCD1002	.27	.18	.31	.18	.24	.16	.28	.20	.26	.20	.29	.18	.26	.26	.27	.24	.25	.17
MC1004	.40	.21	.50	.24	.26	.18	.50	.24	.50	.20	.51	.24	.50	.50	.38	.26	.30	.19
MCD1004	.29	.19	.32	.23	.25	.17	.30	.23	.27	.21	.28	.23	.27	.28	.29	.24	.25	.183
MC1204	.40	.18	.50	.18	.25	.16	.40	.18	.40	.16	.36	.18	.40	.40	.38	.21	.30	.173
MCD1204	.21	.17	.22	.17	.20	.16	.22	.17	.21	.17	.20	.17	.21	.22	.21	.18	.21	.16
MC1602	.23	.15	.28	.18	.19	.14	.27	.15	.27	.15	.28	.18	.27	.27	.23	.16	.20	.14
MCD1602	.19	.15	.19	.15	.17	.14	.19	.15	.18	.15	.18	.15	.18	.19	.19	.15	.18	.14
MC1604	.33	.23	.44	.24	.24	.18	.44	.23	.44	.20	.38	.24	.38	.44	.33	.26	.26	.19
MCD1604	.23	.17	.26	.21	.22	.16	.26	.21	.26	.19	.25	.21	.21	.26	.23	.24	.22	.16
MC1703	.25	.20	.30	.20	.20	.17	.30	.20	.30	.19	.28	.20	.28	.30	.25	.18	.21	.17
MCD1703	.20	.17	.20	.17	.19	.15	.21	.17	.19	.17	.20	.17	.19	.20	.20	.16	.19	.16

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.



DID YOU KNOW ...

Colder's MC Series couplings are also available in keyed, color-coded versions? Specifically designed for applications requiring foolproof connections and non-interchangeable lines, these couplings are a durable and attractive solution for high-volume applications. Contact Colder for more information.



**Nu** 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.



**POLYETHYLENE**

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

Coupling bodies must have integral terminations to be compatible.

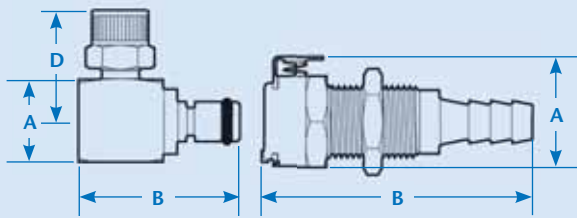
**Features**

- Patented integral seal
- Low density polyethylene
- Chemically resistant
- Compatible

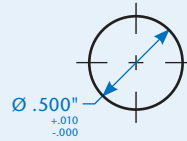
**Benefits**

- 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

## Product Dimensions



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



	PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
<b>COUPLING BODIES</b> (except male thread)	see drawing	.50	.05
<b>MALE THREAD</b>	see drawing	.21	.05
<b>COUPLING INSERTS</b>	see drawing	.30	.05



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







## 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> .76 .76 .76 .76	<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> .76 .76	<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> .76 .76 .76	<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> .76	<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> .76	<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> .76	<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> .76 .76 .76	<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" BSPT		MC2402BSPT	MCD2402BSPT	.58/.72	1.03/1.43		
	1/4" NPT		MC2404	MCD2404	.65	1.08/1.43		
TERMINATION IN-LINE PIPE THREAD (FEMALE)	THREAD SIZE		STRAIGHT THRU	SHUTOFF	A	B		
	1/8" NPT Female		MC2602	MCD2602	.58	.95/1.65		
	1/4" NPT Female		MC2604	MCD2604	.72	1.15/1.82		
	1/4" BSPP Female		MC2604BSPP	MCD2604BSPP	.72	1.23/1.91		
TERMINATION PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B		
	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	MC4004	MCD4004	.72	1.75/1.85		
TERMINATION PANEL MOUNT HOSE BARB	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B		
	1/8" ID	3.2mm ID	MC4202	MCD4202	.72	1.65/1.75		
	3/16" ID	4.8mm ID	MC4203	MCD4203	.72	1.87/1.97		
	1/4" ID	6.4mm ID	MC4204	MCD4204	.72	1.87/1.97		
TERMINATION IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B		
	5/32" OD, .10" ID	4.0mm OD, 2.5mm ID	MC20025	MCD20025	.58	1.13/1.53		
	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	MC2004	MCD2004	.58	1.15/1.55		
	3/8" OD, .25" ID	9.5mm OD, 6.4mm ID	MC2006	MCD2006	.58	1.30/1.50		
TERMINATION IN-LINE HOSE BARB	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B		
	1/8" ID	3.2mm ID	MC2202	MCD2202	.58	1.05/1.65		
	3/16" ID	4.8mm ID	MC2203	MCD2203	.58	1.25/1.85		
	1/4" ID	6.4mm 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	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	D	
	5/32" OD, .10" ID	4.0mm OD, 2.5mm ID	MC21025	MCD21025	.63	1.18/1.28	.81	
	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	MC2104	MCD2104	.63	1.18/1.28	.83	
TERMINATION ELBOW HOSE BARB	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	D	
	1/8" ID	3.2mm ID	MC2302	MCD2302	.62	1.18/1.28	.76	
	1/4" ID	6.4mm ID	MC2304	MCD2304	.63	1.18/1.28	.76	

Also available in  
NSF listed versions,  
please visit our web  
site for part number  
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 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.



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

Copyright © 2012 by Colder Products Company. All rights reserved. Colder Products Company, Colder Products and CPC are registered trademarks with the US Patent & Trademark Office.