

# MC SERIES CONNECTOR



**CPC'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

CPC 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

## 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

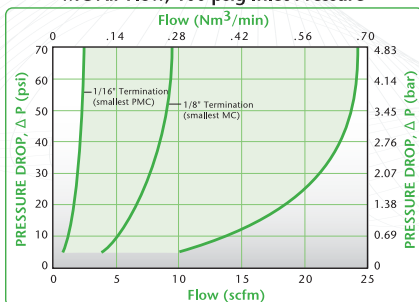
**WARNING:** Pressure, temperature, chemicals, and operating environment can affect the performance of couplings. It is the customer's responsibility to test the suitability of CPC products in their own application conditions. Use the graph to the right as a guide.

**Note:**  
High temperature versions available with ratings to 400 F. Call customer service for more information.

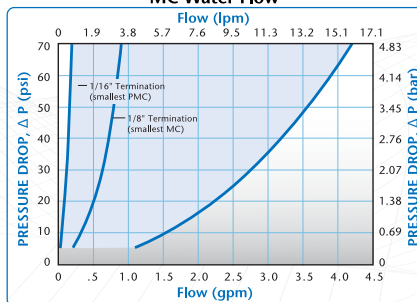
Also available in NSF listed versions, please visit our website for part number information.



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?



### CPC OFFERS KEYED, COLOR-CODED COUPLING OPTIONS:

CPC'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 CPC for more information.

## Liquid Flow Rate Information for Couplings

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

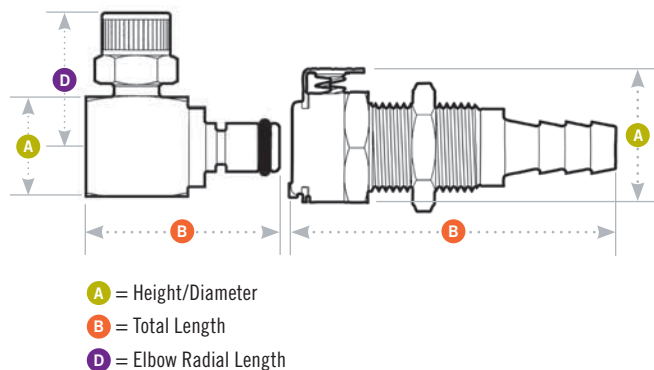
ΔP = Pressure drop across coupling (psi)

S = Specific gravity of liquid

### C<sub>v</sub> VALUES FOR 1/8" FLOW MC COUPLINGS

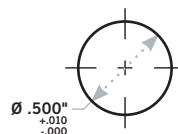
BODIES	INSERTS	MC 2004	MCD 2004	MC 2006	MCD 2006	MC 2202	MCD 2202	MC 2204	MCD 2204	MC 2402	MCD 2402	MC 2404	MCD 2304	MC 2602	MCD 2304	MC 2104	MCD 2304	MC 2203	MCD 2203
MC1002		.40	.18	.50	.19	.25	.16	.50	.19	.50	.20	.51	.19	.50	.50	.38	.24	.30	.17
MCD1002		.27	.18	.31	.18	.24	.16	.28	.20	.26	.20	.29	.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 DIMENSIONS



## Panel Dimensions

	PANEL OPENING	PANEL THICKNESS MAX.—MIN.	PANEL NUT HEX	PANEL NUT THREAD
<b>COUPLING BODIES</b> (except male thread)	see drawing	.50 — .05	5/8	1/2-24UNS
<b>MALE THREAD</b>	see drawing	.21 — .06	5/8	1/2-24UNS
<b>COUPLING INSERTS</b>	see drawing	.30 — .06	5/8	1/2-24UNS



## Coupling Bodies • CHROME-PLATED BRASS

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	<span style="color: green;">A</span>	<span style="color: red;">B</span>
<b>IN-LINE PIPE THREAD</b>	1/8" NPT		MC1002	MCD1002	.76	1.00
	1/8" BSPT		MC1002BSPT	MCD1002BSPT	.76	1.00
	1/4" NPT		MC1004	MCD1004	.76	1.10
	1/4" BSPT		MC1004BSPT	MCD1004BSPT	.76	1.10
<b>PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†</b>	5/32" OD, .10" ID	4.0mm OD, 2.5mm ID	MC12025	MCD12025	.76	1.67
	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	MC1204	MCD1204	.76	1.77
<b>PANEL MOUNT HOSE BARB</b>	1/8" ID	3.2mm ID	MC1602	MCD1602	.76	1.67
	3/16" ID	4.8mm ID	MC1603	MCD1603	.76	1.89
	1/4" ID	6.4mm ID	MC1604	MCD1604	.76	1.89
<b>PANEL MOUNT FEMALE THREAD</b>	10-32 UNF		MC181032	MCD181032	.76	1.22
<b>PANEL MOUNT MALE THREAD</b>	1/8" NPT		MC1502	MCD1502	.76	1.20
<b>IN-LINE FERRULELESS POLYTUBE FITTING, PTF†</b>	1/4" OD, .17" ID	6.4mm OD, 4.3mm ID	MC1304	MCD1304	.76	1.77
<b>IN-LINE HOSE BARB</b>	1/8" ID	3.2mm ID	MC1702	MCD1702	.76	1.67
	3/16" ID	4.8mm ID	MC1703	MCD1703	.76	1.89
	1/4" ID	6.4mm ID	MC1704	MCD1704	.76	1.89

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters.  
 †NOTE: CPC'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 CPC for more information.

## Coupling Inserts • CHROME-PLATED BRASS



**TERMINATION**  
**IN-LINE**  
**PIPE THREAD**  
(non-valved shown)



**IN-LINE**  
**PIPE THREAD**  
**(FEMALE)**



**PANEL MOUNT**  
**FERRULELESS**  
**POLYTUBE FITTING,**  
**PTF†**



**PANEL MOUNT**  
**HOSE BARB**



**IN-LINE**  
**FERRULELESS**  
**POLYTUBE FITTING,**  
**PTF†**



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



**IN-LINE**  
**FEMALE THREAD**



**ELBOW**  
**FERRULELESS**  
**POLYTUBE FITTING,**  
**PTF†**



**ELBOW**  
**HOSE BARB**

### TUBING/THREAD SIZE METRIC EQ.

1/8" NPT  
1/8" BSPT  
1/4" NPT

### STRAIGHT THRU

MC2402  
MC2402BSPT  
MC2404

### SHUTOFF

MCD2402  
MCD2402BSPT  
MCD2404

**A**

**B**

**D**

.58  
.58/.72  
.65

1.03/1.43  
1.03/1.43  
1.08/1.43

1/8" NPT Female  
1/4" NPT Female  
1/4" BSPP Female

MC2602  
MC2604  
MC2604BSPP

MCD2602  
MCD2604  
MCD2604BSPP

.58  
.72  
.72

.95/1.65  
1.15/1.82  
1.23/1.91

1/4" OD, .17" ID 6.4mm OD, 4.3mm ID

MC4004

MCD4004

.72

1.75/1.85

1/8" ID 3.2mm ID  
3/16" ID 4.8mm ID  
1/4" ID 6.4mm ID

MC4202  
MC4203  
MC4204

MCD4202  
MCD4203  
MCD4204

.72  
.72  
.72

1.65/1.75  
1.87/1.97  
1.87/1.97

5/32" OD, .10" ID 4.0mm OD, 2.5mm ID  
1/4" OD, .17" ID 6.4mm OD, 4.3mm ID  
3/8" OD, .25" ID 9.5mm OD, 6.4mm ID

MC20025  
MC2004  
MC2006

MCD20025  
MCD2004  
MCD2006

.58  
.58  
.58

1.13/1.53  
1.15/1.55  
1.30/1.50

1/8" ID 3.2mm ID  
3/16" ID 4.8mm ID  
1/4" ID 6.4mm ID

MC2202  
MC2203  
MC2204

MCD2202  
MCD2203  
MCD2204

.58  
.58  
.58

1.05/1.65  
1.25/1.85  
1.25/1.67

10-32 UNF

MC281032

MCD281032

.58

.63/1.30

5/32" OD, .10" ID 4.0mm OD, 2.5mm ID  
1/4" OD, .17" ID 6.4mm OD, 4.3mm ID

MC21025  
MC2104

MCD21025  
MCD2104

.63  
.63

1.18/1.28 .81  
1.18/1.28 .83

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

MC2302  
MC2304

MCD2302  
MCD2304

.62  
.63

1.18/1.28 .76  
1.18/1.28 .76

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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