

# 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.

## 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.



cpcworldwide.com/MC

## FEATURES

Brass material



High temperature capability



CPC thumb latch



Compatible



## BENEFITS

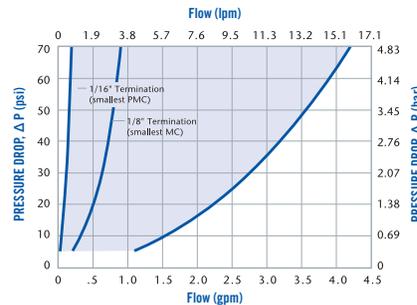
Durable and able to withstand higher pressure and temperature

Versions rated to 400°F (204°C)

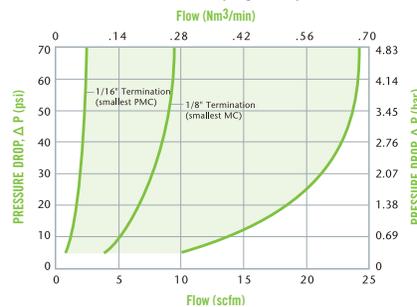
One-hand connection and disconnection

MC mates with PMC and PMC12 Series couplings

MC WATER FLOW



MC AIR FLOW - 100 psig inlet pressure



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'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.



## NOTE

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



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## KEYED BODIES - Chrome-plated brass



TERMINATION	TUBING/THREAD SIZE	METRIC EQ	COLOR KEY	STRAIGHT THRU	SHUTOFF
NPT	1/8"	3.2MM	ORANGE	MC1002K1	MCD1002K1
	1/8"	3.2MM	YELLOW	MC1002K2	MCD1002K2
	1/8"	3.2MM	BLUE	MC1002K3	MCD1002K3
	1/4"	6.4MM	ORANGE		MCD1004K1
	1/4"	6.4MM	YELLOW	MC1004K2	MCD1004K2
	1/4"	6.4MM	BLUE		MCD1004K3
PANEL MOUNT PTF	1/4"	6.4MM	ORANGE	MC1204K1	MCD1204K1
	1/4"	6.4MM	YELLOW	MC1204K2	MCD1204K2
	1/4"	6.4MM	BLUE	MC1204K3	MCD1204K3
PANEL MOUNT HB	1/8"	3.2MM	ORANGE	MC1602K1	MCD1602K1
	1/8"	3.2MM	YELLOW	MC1602K2	MCD1602K2
	1/8"	3.2MM	BLUE	MC1604K3	MCD1602K3
	1/4"	6.4MM	ORANGE	MC1604K1	MCD1604K1
	1/4"	6.4MM	YELLOW	MC1604K2	MCD1604K2
	1/4"	6.4MM	BLUE	MC1604K3	MCD1604K3

## KEYED INSERTS - Chrome-plated brass



TERMINATION	TUBING/THREAD SIZE	METRIC EQ	COLOR KEY	STRAIGHT THRU	SHUTOFF
IN-LINE PTF	1/4"	6.4MM	ORANGE	MC2004K1	
	1/4"	6.4MM	YELLOW	MC2004K2	
	1/4"	6.4MM	BLUE	MC2004K3	
IN-LINE HB	1/8"	3.2MM	ORANGE	MC2202K1	
	1/8"	3.2MM	YELLOW	MC2202K2	
	1/8"	3.2MM	BLUE	MC2202K3	
IN-LINE HB	1/4"	6.4MM	ORANGE	MC2204K1	
	1/4"	6.4MM	YELLOW	MC2204K2	
	1/4"	6.4MM	BLUE	MC2204K3	
NPT	1/8"	3.2MM	ORANGE	MC2402K1	
	1/8"	3.2MM	YELLOW	MC2402K2	
	1/8"	3.2MM	BLUE	MC2402K3	

## 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 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

### INSERTS

BODIES	MC	MCD	MC	MC	MC	MCD										
	2004	2004	2006	2006	2202	2202	2204	2204	2402	2402	2404	2304	2602	2104	2203	2203
MC1002	0.40	0.18	0.50	0.19	0.25	0.16	0.50	0.19	0.50	0.20	0.51	0.19	0.50	0.38	0.30	0.17
MCD1002	0.27	0.18	0.31	0.18	0.24	0.16	0.28	0.20	0.26	0.20	0.29	0.18	0.26	0.27	0.25	0.17
MC1004	0.40	0.21	0.50	0.24	0.26	0.18	0.50	0.24	0.50	0.20	0.51	0.24	0.50	0.38	0.30	0.19
MCD1004	0.29	0.19	0.32	0.23	0.25	0.17	0.30	0.23	0.27	0.21	0.28	0.23	0.27	0.29	0.25	0.183
MC1204	0.40	0.18	0.50	0.18	0.25	0.16	0.40	0.18	0.40	0.16	0.36	0.18	0.40	0.38	0.30	0.173
MCD1204	0.21	0.17	0.22	0.17	0.20	0.16	0.22	0.17	0.21	0.17	0.20	0.17	0.21	0.21	0.21	0.16
MC1602	0.23	0.15	0.28	0.18	0.19	0.14	0.27	0.15	0.27	0.15	0.28	0.18	0.27	0.23	0.20	0.14
MCD1602	0.19	0.15	0.19	0.15	0.17	0.14	0.19	0.15	0.18	0.15	0.18	0.15	0.18	0.19	0.18	0.14
MC1604	0.33	0.23	0.44	0.24	0.24	0.18	0.44	0.23	0.44	0.20	0.38	0.24	0.38	0.33	0.26	0.19
MCD1604	0.23	0.17	0.26	0.21	0.22	0.16	0.26	0.21	0.26	0.19	0.25	0.21	0.21	0.23	0.22	0.16
MC1703	0.25	0.20	0.30	0.20	0.20	0.17	0.30	0.20	0.30	0.19	0.28	0.20	0.28	0.25	0.21	0.17
MCD1703	0.20	0.17	0.20	0.17	0.19	0.15	0.21	0.17	0.19	0.17	0.20	0.17	0.19	0.20	0.19	0.16

# MC SERIES DIMENSIONS

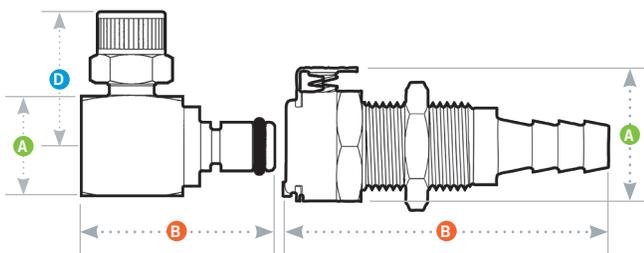
COUPLING BODIES - Chrome-plated brass

TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	SHUTOFF	A	B
IN-LINE PIPE THREAD	1/8" NPT		MC1002	MCD1002	0.76 (19.3)	1 (25.4)
	1/8" BSPT		MC1002BSPT	MCD1002BSPT	0.76 (19.3)	1 (25.4)
	1/4" NPT		MC1004	MCD1004	0.76 (19.3)	1.1 (27.9)
	1/4" BSPT			MCD1004BSPT	0.76 (19.3)	1.1 (27.9)
PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†	5/32" OD, 0.10" ID	4.0mm OD, 2.5mm ID	MC12025	MCD12025	0.76 (19.3)	1.67 (42.4)
	1/4" OD, 0.17" ID	6.4mm OD, 4.3mm ID	MC1204	MCD1204	0.76 (19.3)	1.77 (45.0)
PANEL MOUNT HOSE BARB	1/8" ID	3.2mm ID	MC1602	MCD1602	0.76 (19.3)	1.67 (42.4)
	3/16" ID	4.8mm ID	MC1603	MCD1603	0.76 (19.3)	1.89 (48.0)
	1/4" ID	6.4mm ID	MC1604	MCD1604	0.76 (19.3)	1.89 (48.0)
PANEL MOUNT FEMALE THREAD	10-32 UNF		MC181032	MCD181032	0.76 (19.3)	1.22 (31.0)
PANEL MOUNT MALE THREAD	1/8" NPT		MC1502	MCD1502	0.76 (19.3)	1.2 (30.5)
IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	1/4" OD, 0.17" ID	6.4mm OD, 4.3mm ID	MC1304	MCD1304	0.76 (19.3)	1.77 (45.0)
IN-LINE HOSE BARB	1/8" ID	3.2mm ID	MC1702	MCD1702	0.76 (19.3)	1.67 (42.4)
	3/16" ID	4.8mm ID	MC1703	MCD1703	0.76 (19.3)	1.89 (48.0)
	1/4" ID	6.4mm ID	MC1704	MCD1704	0.76 (19.3)	1.89 (48.0)

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.

## PRODUCT DIMENSIONS



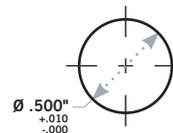
A = Height/Diameter

B = Total Length

D = Elbow Radial Length

## PANEL DIMENSIONS

	PANEL OPENING	PANEL THICKNESS MAX.-MIN.	PANEL NUT HEX	PANEL NUT THREAD
COUPLING BODIES (EXCEPT MALE THREAD)	see drawing	0.50 – 0.05	5/8	1/2-24UNS
MALE THREAD	see drawing	0.21 – 0.06	5/8	1/2-24UNS
COUPLING INSERTS	see drawing	0.30 – 0.06	5/8	1/2-24UNS



## COUPLING INSERTS - Chrome-plated brass

TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	SHUTOFF	A	B	D
 <b>IN-LINE PIPE THREAD (NON-VALVED SHOWN)</b>	1/8" NPT		MC2402	MCD2402	0.58 (14.7)	1.03/1.43 (26.2/36.3)	
	1/8" BSPT		MC2402BSPT	MCD2402BSPT	0.58/0.72 (14.7/18.3)	1.03/1.43 (26.2/36.3)	
	1/4" NPT		MC2404	MCD2404	0.65 (16.5)	1.08/1.43 (27.4/36.3)	
 <b>IN-LINE PIPE THREAD (FEMALE)</b>	1/8" NPT Female		MC2602	MCD2602	0.58 (14.7)	0.95/1.65 (24.1/41.9)	
	1/4" NPT Female		MC2604	MCD2604	0.72 (18.3)	1.15/1.82 (29.2/46.2)	
	1/4" BSPP Female		MC2604BSPP	MCD2604BSPP	0.72 (18.3)	1.23/1.91 (31.2/48.5)	
 <b>PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†</b>	1/4" OD, 0.17" ID	6.4mm OD, 4.3mm ID	MC4004	MCD4004	0.72 (18.3)	1.75/1.85 (44.5/47.0)	
 <b>PANEL MOUNT HOSE BARB</b>	1/8" ID	3.2mm ID	MC4202	MCD4202	0.72 (18.3)	1.65/1.75 (41.9/44.5)	
	3/16" ID	4.8mm ID	MC4203	MCD4203	0.72 (18.3)	1.87/1.97 (47.5/50.0)	
	1/4" ID	6.4mm ID	MC4204	MCD4204	0.72 (18.3)	1.87/1.97 (47.5/50.0)	
 <b>IN-LINE FERRULELESS POLYTUBE FITTING, PTF†</b>	5/32" OD, 0.10" ID	4.0mm OD, 2.5mm ID	MC20025	MCD20025	0.58 (14.7)	1.13/1.53 (28.7/38.9)	
	1/4" OD, 0.17" ID	6.4mm OD, 4.3mm ID	MC2004	MCD2004	0.58 (14.7)	1.15/1.55 (29.2/39.4)	
	3/8" OD, 0.25" ID	9.5mm OD, 6.4mm ID	MC2006	MCD2006	0.58 (14.7)	1.30/1.50 (33.0/38.1)	
 <b>IN-LINE HOSE BARB</b>	1/8" ID	3.2mm ID	MC2202	MCD2202	0.58 (14.7)	1.05/1.65 (26.7/41.9)	
	3/16" ID	4.8mm ID	MC2203	MCD2203	0.58 (14.7)	1.25/1.85 (31.8/47.0)	
	1/4" ID	6.4mm ID	MC2204	MCD2204	0.58 (14.7)	1.25/1.67 (31.8/42.4)	
 <b>IN-LINE FEMALE THREAD</b>	10-32 UNF		MC281032	MCD281032	0.58 (14.7)	0.63/1.30 (16.0/33.0)	
 <b>ELBOW FERRULELESS POLYTUBE FITTING, PTF†</b>	5/32" OD, 0.10" ID	4.0mm OD, 2.5mm ID	MC21025	MCD21025	0.63 (16.0)	1.18/1.28 (30.0/32.5)	0.81 (20.6)
	1/4" OD, 0.17" ID	6.4mm OD, 4.3mm ID	MC2104	MCD2104	0.63 (16.0)	1.18/1.28 (30.0/32.5)	0.83 (21.1)
 <b>ELBOW HOSE BARB</b>	1/8" ID	3.2mm ID	MC2302	MCD2302	0.62 (15.7)	1.18/1.28 (30.0/32.5)	0.76 (19.3)
	1/4" ID	6.4mm ID	MC2304	MCD2304	0.63 (16.0)	1.18/1.28 (30.0/32.5)	0.76 (19.3)

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: 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.



### NSF OPTION AVAILABLE

This product has an NSF compatible product for food applications. Our food-grade couplings are superior to general fittings for fluid control because they incorporate built-in shutoff valves, enabling tubing to be disconnected without having to turn off the water supply. Scan the QR code to be taken to the NSF specific product web page.



WARRANTY: All sales are subject to Colder Products Company's limited express warranty set forth in the CPC catalog. Contact your local distributor or CPC Customer Service for warranty provisions.

Warning: Due to the wide variety of possible fluid media and operating conditions, unintended consequences may result from the use of this product, all of which are beyond the control of CPC. It is the user's responsibility to carefully determine and test for compatibility for use with their application. All such risks shall be assumed by the buyer.

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