

# PLC12 SERIES CONNECTOR



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. PLC12 couplings are also gamma sterilizable and available with optional RFID (Radio Frequency Identification) capability (see page 96).

## 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

### STERILIZATION:

**Gamma:** Up to 50 kGy irradiation

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

*PLC12 Couplings are gamma sterilizable; see page 162 for more information on sterilization and disinfection*

## FEATURES

Polypropylene material

EPDM o-rings

CPC thumb latch

Integral terminations

## BENEFITS

Chemically resistant and gamma sterilizable

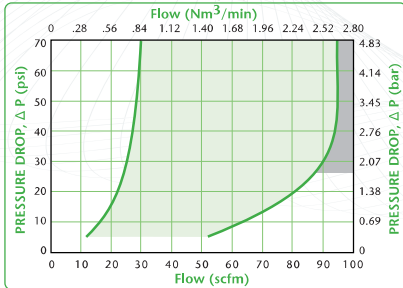
Greater chemical resistance

One-hand connection and disconnection

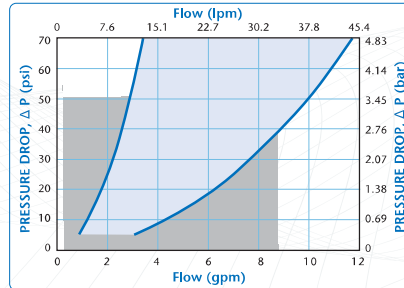
Fewer leak points, shorter assemblies, faster installations

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.

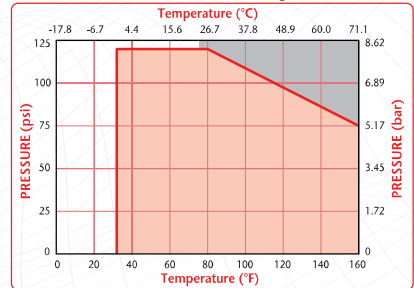
PLC12 Air Flow, 100 psig Inlet Pressure



PLC12 Water Flow



PLC12 Pressure Range



## 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

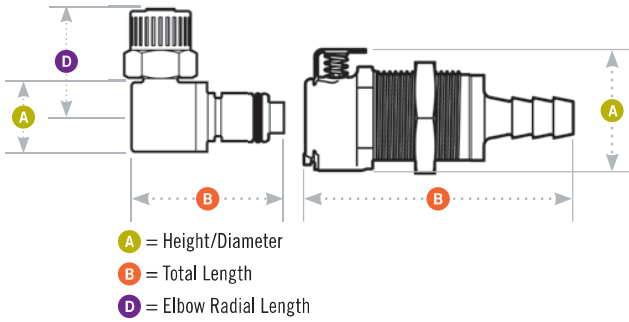
### C<sub>v</sub> VALUES FOR 1/4" FLOW PLC12 COUPLINGS

BODIES	INSERTS													
	PLC 2000412	PLCD 2000412	PLC 2000612	PLCD 2000612	PLC 2200412	PLCD 2200412	PLC 2200612	PLCD 2200612	PLC 2400412	PLCD 2400412	PLC 2400612	PLCD 2400612	PLC 2600412	PLCD 2600412
PLC1000412	.40	.36	1.05	.58	.83	.56	1.40	.82	1.40	.75	1.40	.77	.83	.81
PLCD1000412	.36	.31	.73	.48	.66	.41	.82	.50	.80	.45	.77	.45	.81	.83
PLC1000612	.40	.36	1.05	.60	.83	.56	1.40	.81	1.40	.76	1.40	.76	.83	.98
PLCD1000612	.37	.31	.81	.47	.70	.43	1.02	.51	.98	.46	.99	.48	.98	.74
PLC1200612	.38	.36	.84	.63	.74	.56	1.14	.75	1.14	.70	1.14	.72	.74	.81
PLCD1200612	.38	.33	.78	.49	.68	.44	.84	.49	.81	.43	.82	.44	.81	.95
PLC1600412	.38	.37	.87	.54	.95	.51	1.00	.70	.95	.64	1.00	.66	.95	.78
PLCD1600412	.37	.31	.61	.44	.57	.41	.78	.44	.78	.43	.75	.46	.78	1.40
PLC1600612	.38	.37	1.00	.57	.95	.53	1.40	.80	1.40	.71	1.40	.73	1.40	.97
PLCD1600612	.38	.32	.71	.49	.63	.42	.89	.51	.96	.45	.92	.49	.97	

### NOTES:

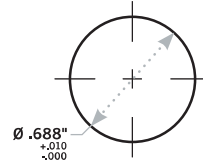
Grid area for notes.

# PLC12 DIMENSIONS



## Panel Dimensions

	PANEL OPENING	PANEL THICKNESS MAX.-MIN.	PANEL NUT HEX	PANEL NUT THREAD
<b>COUPLING BODIES</b>	see drawing	.30 - .02	13/16	11/16-24UNEF
<b>COUPLING INSERTS</b>	see drawing	.30 - .02	13/16	11/16-24UNEF



## Coupling Bodies • POLYPROPYLENE



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>	1/4" NPT		PLC1000412	PLCD1000412	1.00	1.15
	1/4" BSPT		PLC1000412BSPT	PLCD1000412BSPT	1.00	1.15
	3/8" NPT		PLC1000612	PLCD1000612	1.00	1.15
	3/8" BSPT		PLC1000612BSPT	PLCD1000612BSPT	1.00	1.15
<b>PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†</b>	3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID	PLC1200612	PLCD1200612	1.00	1.95
<b>PANEL MOUNT HOSE BARB</b>	1/4" ID	6.4mm ID	PLC1600412	PLCD1600412	1.00	1.95
	3/8" ID	9.5mm ID	PLC1600612	PLCD1600612	1.00	1.95
<b>IN-LINE FERRULELESS POLYTUBE FITTING, PTF†</b>	3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID	PLC1300612	PLCD1300612	1.02	1.96
<b>IN-LINE HOSE BARB</b>	1/4" ID	6.4mm ID	PLC1700412	PLCD1700412	1.02	1.96
	3/8" ID	9.5mm ID	PLC1700612	PLCD1700612	1.02	1.96
<b>IN-LINE SOFTUBE™ FITTING</b>	3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID		PLCD17040612	1.02	2.20
	1/2" OD, 3/8" ID	12.7mm OD, 9.5mm ID		PLCD17060812	1.02	2.36

## PLC12 Coupling Readers • POLYPROPYLENE



TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	<span style="color: green;">A</span>	<span style="color: red;">B</span>
<b>IN-LINE HOSE BARB (RS-232 Interface)</b>	1/4" ID	6.4mm ID		iPLCDR1700400	1.39	2.78
	3/8" ID	9.5mm ID		iPLCDR1700600	1.39	2.78
<b>IN-LINE HOSE BARB (USB Interface)</b>	1/4" ID	6.4mm ID		iPLCDR1700401	1.00	1.38/2.05
	3/8" ID	9.5mm ID		iPLCDR1700601	1.05	1.74/1.87

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



### TERMINATION IN-LINE PIPE THREAD

TUBING/THREAD SIZE METRIC EQ.  
1/4" NPT

STRAIGHT THRU  
PLC2400412

SHUTOFF  
PLCD2400412

**A**  
.72

**B**  
1.26/1.67

**D**

### PANEL MOUNT HOSE BARB

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

PLC4200412  
PLC4200612

PLCD4200412  
PLCD4200612

.94  
.94

1.91/2.05  
1.91/2.05

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

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

PLC2000612

PLCD2000612

.72

1.68/1.82

### IN-LINE HOSE BARB

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

PLC2200412  
PLC2200612

PLCD2200412  
PLCD2200612

.63  
.63

1.35/2.00  
1.35/1.82

### IN-LINE SOFTUBE™ FITTING

3/8" OD, 1/4" ID 9.5mm OD, 6.4mm ID  
1/2" OD, 3/8" ID 12.7mm OD, 9.5mm ID

PLCD22040612  
PLCD22060812

.72  
.72

2.23  
2.18

### ELBOW FERRULELESS POLYTUBE FITTING, PTF†

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

PLC2100612

PLCD2100612

.61/.62

1.29/1.36

.95

### ELBOW HOSE BARB

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

PLC2300412  
PLC2300612

PLCD2300412  
PLCD2300612

.63  
.63

1.22/1.36  
1.28/1.42

.96  
.96

### IN-LINE HOSE BARB (RS-232 Interface)

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

iPLCT2200400  
iPLCT2200600

iPLCDT2200400  
iPLCDT2200600

1.39  
1.39

2.78  
2.78

### ELBOW HOSE BARB (RS-232 Interface)

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

iPLCT2300400  
iPLCT2300600

iPLCDT2300400  
iPLCDT2300600

1.48  
1.48

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. Couplings are pictured with valves unless otherwise noted.

†NOTE: CPC'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.