

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).

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

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:

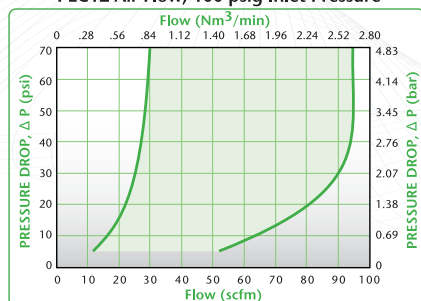
1/4" to 3/8" ID, 6.4mm to 9.5mm ID

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.

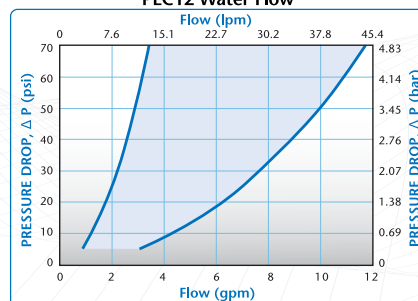
PLC12 Couplings are gamma sterilizable; see page 162 for more information on sterilization and disinfection

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.

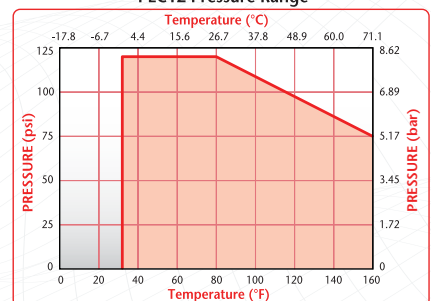
PLC12 Air Flow, 100 psig Inlet Pressure



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_v = Average coefficient across various flow rates (see chart)

ΔP = Pressure drop across coupling (psi)

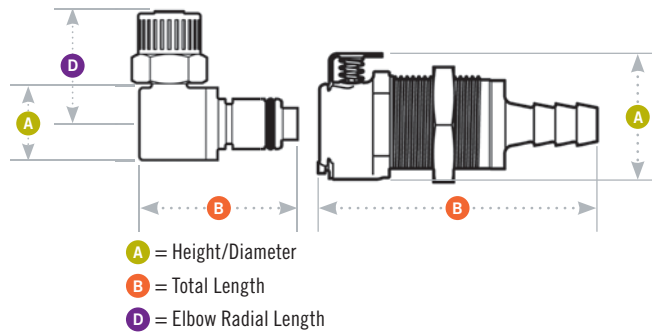
S = Specific gravity of liquid

C_v VALUES FOR 1/4" FLOW PLC12 COUPLINGS

BODIES	INSERTS	PLC	PLCD	PLC	PLCD	PLC	PLCD	PLC	PLCD	PLC	PLCD	PLC	PLCD	PLC
		2000412	2000412	2000612	2000612	2200412	2200412	2200612	2200612	2400412	2400412	2400612	2400612	2600412
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

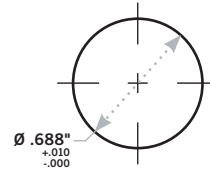
NOTES:

PLC12 DIMENSIONS



Panel Dimensions

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



Coupling Bodies • POLYPROPYLENE

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B
IN-LINE PIPE THREAD	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
PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†	3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID	PLC1200612	PLCD1200612	1.00	1.95
PANEL MOUNT HOSE BARB	1/4" ID	6.4mm ID	PLC1600412	PLCD1600412	1.00	1.95
	3/8" ID	9.5mm ID	PLC1600612	PLCD1600612	1.00	1.95
IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID	PLC1300612	PLCD1300612	1.02	1.96
IN-LINE HOSE BARB	1/4" ID	6.4mm ID	PLC1700412	PLCD1700412	1.02	1.96
	3/8" ID	9.5mm ID	PLC1700612	PLCD1700612	1.02	1.96
IN-LINE SOFTUBE™ FITTING	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	A	B
IN-LINE HOSE BARB (RS-232 Interface)	1/4" ID	6.4mm ID		iPLCDR1700400	1.39	2.78
	3/8" ID	9.5mm ID		iPLCDR1700600	1.39	2.78
IN-LINE HOSE BARB (USB Interface)	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

PANEL MOUNT HOSE BARB

IN-LINE FERRULELESS POLYTUBE FITTING, PTF†

IN-LINE HOSE BARB

IN-LINE SOFTUBE™ FITTING

ELBOW FERRULELESS POLYTUBE FITTING, PTF†

ELBOW HOSE BARB

IN-LINE HOSE BARB (RS-232 Interface)

ELBOW HOSE BARB (RS-232 Interface)

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

STRAIGHT THRU
PLC2400412

SHUTOFF
PLCD2400412

A
.72

B
1.26/1.67

D

TUBING/THREAD SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	D
1/4" ID	6.4mm ID	PLC4200412	PLCD4200412	.94	1.91/2.05	
3/8" ID	9.5mm ID	PLC4200612	PLCD4200612	.94	1.91/2.05	

3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID	PLC2000612	PLCD2000612	.72	1.68/1.82	
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1/4" ID	6.4mm ID	PLC2200412	PLCD2200412	.63	1.35/2.00	
3/8" ID	9.5mm ID	PLC2200612	PLCD2200612	.63	1.35/1.82	

3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID		PLCD22040612	.72	2.23	
1/2" OD, 3/8" ID	12.7mm OD, 9.5mm ID		PLCD22060812	.72	2.18	

3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID	PLC2100612	PLCD2100612	.61/.62	1.29/1.36	.95
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1/4" ID	6.4mm ID	PLC2300412	PLCD2300412	.63	1.22/1.36	.96
3/8" ID	9.5mm ID	PLC2300612	PLCD2300612	.63	1.28/1.42	.96

1/4" ID	6.4mm ID	iPLCT2200400	iPLCDT2200400	1.39	2.78	
3/8" ID	9.5mm ID	iPLCT2200600	iPLCDT2200600	1.39	2.78	

1/4" ID	6.4mm ID	iPLCT2300400	iPLCDT2300400	1.48	1.27/1.40	
3/8" ID	9.5mm ID	iPLCT2300600	iPLCDT2300600	1.48	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.