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SPECS & INFORMATION

PLC12 SERIES CONNECTOR

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.*

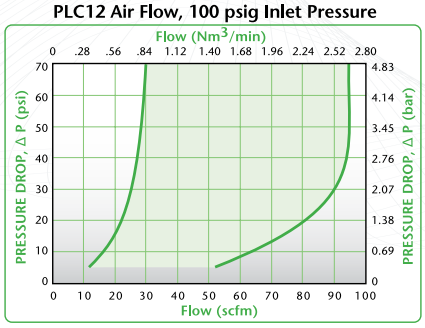
The 1/4" flow polypropylene PLC12 offers many of the same configuration options as the PLC. The polypropylene material adds greater chemical resistance for more demanding applications. PLC12 couplings are also gamma sterilizable. PLC12 coulings are also gamma sterilizable and available with optional RFID (Radio Frequency Identification) capability (see page 96).

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

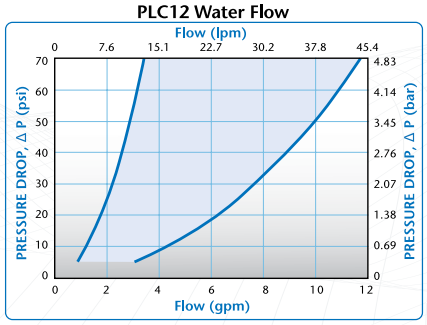
FEATURES	BENEFITS
Polypropylene material	Chemically resistant and gamma sterilizable
EPDM o-rings	Greater chemical resistance
CPC thumb latch	One-hand connection and disconnection
Integral terminations	Fewer leak points, shorter assemblies, faster installations

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.

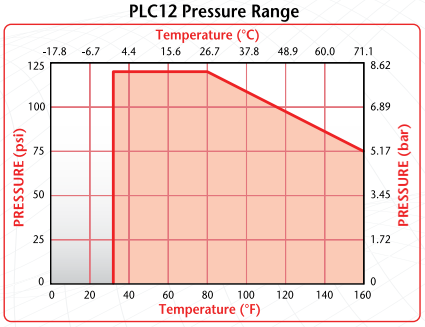
PLC12 Air Flow, 100 psig Inlet Pressure



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.

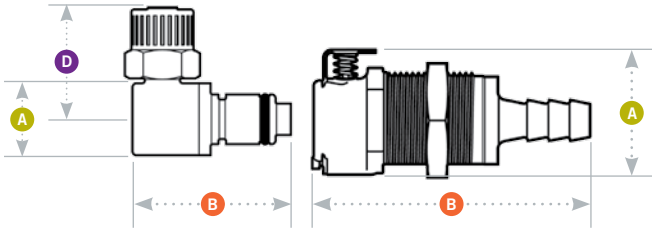
$$Q = C_v \sqrt{\frac{\Delta P}{S}}$$

Q = Flow rate in gallons per minute
C_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	PLC12 20004	PLCD12 20004	PLC12 20006	PLCD12 20006	PLC12 22004	PLCD12 22004	PLC12 22006	PLCD12 22006	PLC12 24004	PLCD12 24004	PLC12 24006	PLCD12 24006	PLC12 26004
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

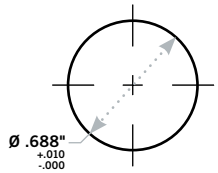
PLC12 DIMENSIONS



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	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

	TUBING/THREAD SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	D
 **IN-LINE PIPE THREAD**	1/4" NPT		PLC2400412	PLCD2400412	.72	1.26/1.67	
 **PANEL MOUNT HOSE BARB**	1/4" ID 3/8" ID	6.4mm 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 3/8" ID	6.4mm 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 1/2" OD, 3/8" ID	9.5mm OD, 6.4mm 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 3/8" ID	6.4mm 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 3/8" ID	6.4mm 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 3/8" ID	6.4mm 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.

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