

PLC[®] SERIES CONNECTOR

The 1/4" flow PLC[®] Series is proven worldwide in thousands of applications and offers the widest selection of sizes and configurations. PLC couplings are injection molded from acetal thermoplastic and are resistant to most mild chemical solutions. One-hand connection/disconnection, plus integral terminations make the PLC Series the choice for ease of use and manufacture.



SPECIFICATIONS

PRESSURE:

Vacuum to 120 psi, 8.3 bar

TEMPERATURE:

-40°F to 180° F (-40°C to 82°C)

MATERIALS:

Main components and valves: Acetal

Thumb latch: Stainless steel

Valve spring: 316 stainless steel

External springs and pin: Stainless steel

O-rings: Buna-N

COLOR: Natural white, others available

TUBING SIZES:

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

JG[®] Tubing Specifications:

Tube tolerances: 1/4" OD, +0.001/-0.004 | 3/8" OD, +0.001/-0.004

Tube Types: Plastic tube: Polyethylene, nylon, polyurethane. For soft or thin wall tubing with JG[®] terminations, tube supports are recommended.

Metal tube: Brass, copper and mild steel

FEATURES

CPC thumb latch

Integral terminations

Clicks when connected

Compatible

BENEFITS

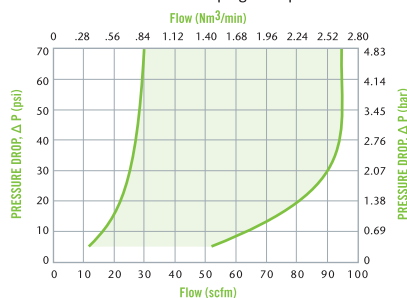
One-hand connection and disconnection

Fewer leak points, shorter assemblies, faster installations

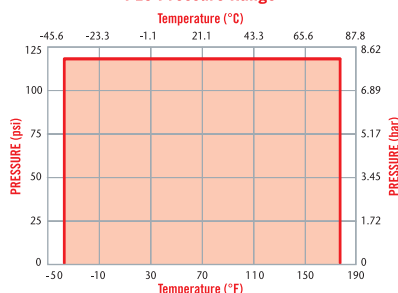
Assurance of a reliable connection

Mates with LC and PLC12 Series couplings

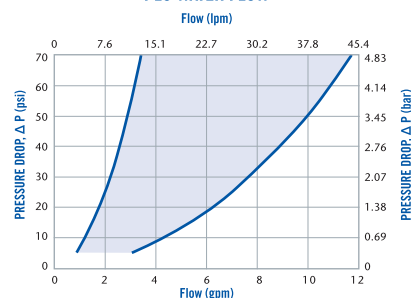
PLC AIR FLOW • 100 psig inlet pressure



PLC Pressure Range



PLC 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.



cpcworldwide.com/PLC



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.



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_v = Average coefficient across various flow rates (see chart)
- ΔP= Pressure drop across coupling (psi)
- S = Specific gravity of liquid

C_v VALUES

BODIES

INSERTS

	PLC 20004	PLCD 20004	PLC 20006	PLCD 20006	PLC 22004	PLCD 22004	PLC 22006	PLCD 22006	PLC 24004	PLCD 24004	PLC 24006	PLCD 24006	PLC 26004
PLC10004	0.40	0.36	1.05	0.58	0.83	0.56	1.40	0.82	1.40	0.75	1.40	0.77	0.83
PLCD10004	0.36	0.31	0.73	0.48	0.66	0.41	0.82	0.50	0.80	0.45	0.77	0.45	0.81
PLC10006	0.40	0.36	1.05	0.60	0.83	0.56	1.40	0.81	1.40	0.76	1.40	0.76	0.83
PLCD10006	0.37	0.31	0.81	0.47	0.70	0.43	1.02	0.51	0.98	0.46	0.99	0.48	0.98
PLC12006	0.38	0.36	0.84	0.63	0.74	0.56	1.14	0.75	1.14	0.70	1.14	0.72	0.74
PLCD12006	0.38	0.33	0.78	0.49	0.68	0.44	0.84	0.49	0.81	0.43	0.82	0.44	0.81
PLC16004	0.38	0.37	0.87	0.54	0.95	0.51	1.00	0.70	0.95	0.64	1.00	0.66	0.95
PLCD16004	0.37	0.31	0.61	0.44	0.57	0.41	0.78	0.44	0.78	0.43	0.75	0.46	0.78
PLC16006	0.38	0.37	1.00	0.57	0.95	0.53	1.40	0.80	1.40	0.71	1.40	0.73	1.40
PLCD16006	0.38	0.32	0.71	0.49	0.63	0.42	0.89	0.51	0.96	0.45	0.92	0.49	0.97



PLC® SERIES DIMENSIONS

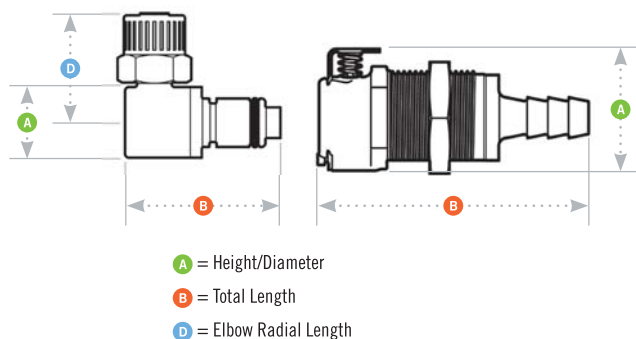
COUPLING BODIES - Acetal

	TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	SHUTOFF	A	B
	IN-LINE PIPE THREAD	1/4" NPT		PLC10004	PLCD10004	0.9 (22.9)	1.17 (29.7)
		1/4" BSPT		PLC10004BSPT	PLCD10004BSPT	0.9 (22.9)	1.15 (29.2)
		3/8" NPT		PLC10006	PLCD10006	0.9 (22.9)	1.15 (29.2)
		3/8" BSPT		PLC10006BSPT	PLCD10006BSPT	0.9 (22.9)	1.15 (29.2)
	PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†	1/4" OD, 0.17" ID	6.4mm OD, 4.3mm ID	PLC12004	PLCD12004	0.88 (22.4)	1.87 (47.5)
		—	8.0mm OD, 6.0mm ID	PLC120M8	PLCD120M8	0.88 (22.4)	1.95 (49.5)
		3/8" OD, 0.25" ID	9.5mm OD, 6.4mm ID	PLC12006	PLCD12006	0.88 (22.4)	1.95 (49.5)
		—	10.0mm OD, 8.0mm ID	PLC120M10	PLCD120M10	0.88 (22.4)	1.95 (49.5)
	PANEL MOUNT HOSE BARB	1/4" ID	6.4mm ID	PLC16004	PLCD16004	0.88 (22.4)	1.95 (49.5)
		5/16" ID	7.9mm ID	PLC16005	PLCD16005	0.88 (22.4)	1.95 (49.5)
		3/8" ID	9.5mm ID	PLC16006	PLCD16006	0.88 (22.4)	1.95 (49.5)
	PANEL MOUNT JG® PUSH-TO- CONNECT	1/4" OD	6.4mm OD	PLC11004	PLCD11004	0.88 (22.4)	1.95 (49.5)
	IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	1/4" OD, 0.17" ID	6.4mm OD, 4.3mm ID	PLC13004	PLCD13004	0.94 (23.9)	1.82 (46.2)
		—	8.0mm OD, 6.0mm ID	PLC130M8	PLCD130M8	0.94 (23.9)	1.95 (49.5)
		3/8" OD, 0.25" ID	9.5mm OD, 6.4mm ID	PLC13006	PLCD13006	0.94 (23.9)	1.95 (49.5)
		—	10.0mm OD, 8.0mm ID	PLC130M10	PLCD130M10	0.94 (23.9)	1.95 (49.5)
	IN-LINE HOSE BARB	1/4" ID	6.4mm ID	PLC17004	PLCD17004	0.94 (23.9)	1.80/1.95 (45.7/49.5)
		5/16" ID	7.9mm ID	PLC17005	PLCD17005	0.94 (23.9)	1.95 (49.5)
		3/8" ID	9.5mm ID	PLC17006	PLCD17006	0.94 (23.9)	1.80/1.95 (45.7/49.5)
	IN-LINE JG® PUSH-TO- CONNECT	1/4" OD	6.4mm OD	PLC14004	PLCD14004	0.94 (23.9)	1.95 (49.5)
		3/8" OD	9.5mm OD	PLC14006	PLCD14006	0.94 (23.9)	2.09 (53.1)
		(See page 167 for JG accessories)					

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.

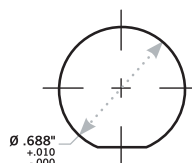
†NOTE: CPC's Ferruleless Polytube Fitting terminations do not require ferrules to achieve a secure connection, which makes them easier to use and reuse. PTF fittings are designed for semi-rigid tubing, i.e., polyethylene, nylon, polyurethane, etc. NOTE: JG is a registered trademark of John Guest USA, Inc.

PRODUCT DIMENSIONS



PANEL DIMENSIONS

	PANEL OPENING	PANEL THICKNESS MAX.-MIN.	PANEL NUT HEX	PANEL NUT THREAD
COUPLING BODIES	see drawing	0.50 – 0.05	13/16	11/16-24UNEF
COUPLING INSERTS	see drawing	0.30 – 0.05	13/16	11/16-24UNEF



COUPLING INSERTS - Acetal

	TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	SHUTOFF	A	B	D
	IN-LINE PIPE THREAD	1/4" NPT		PLC24004	PLCD24004	0.72 (18.3)	1.25/1.66 (31.8/42.2)	
		1/4" BSPT		PLC24004BSPT	PLCD24004BSPT	0.72 (18.3)	1.53/1.66 (38.9/42.2)	
		3/8" NPT		PLC24006	PLCD24006	0.87 (22.1)	1.25/1.63 (31.8/41.4)	
		3/8" BSPT		PLC24006BSPT	PLCD24006BSPT	0.87 (22.1)	1.51/1.63 (38.4/41.4)	
	PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†	1/4" OD, 0.17" ID	6.4mm OD, 4.3mm ID	PLC40004	PLCD40004	0.94 (23.9)	1.78/1.91 (45.2/48.5)	
		—	8.0mm OD, 6.0mm ID	PLC400M8	PLCD400M8	0.94 (23.9)	1.91/2.03 (48.5/51.6)	
		3/8" OD, 0.25" ID	9.5mm OD, 6.4mm ID	PLC40006	PLCD40006	0.94 (23.9)	1.91/2.05 (48.5/52.1)	
		—	10.0mm OD, 8.0mm ID	PLC400M10	PLCD400M10	0.94 (23.9)	1.91/2.05 (48.5/52.1)	
	PANEL MOUNT HOSE BARB	1/4" ID	6.4mm ID	PLC42004	PLCD42004	0.94 (23.9)	1.91/2.05 (48.5/52.1)	
		5/16" ID	7.9mm ID	PLC42005	PLCD42005	0.94 (23.9)	1.91/2.05 (48.5/52.1)	
		3/8" ID	9.5mm ID	PLC42006	PLCD42006	0.94 (23.9)	1.91/2.05 (48.5/52.1)	
	PANEL MOUNT JG® PUSH-TO- CONNECT	1/4" OD	6.4mm OD	PLC41004	PLCD41004	0.94 (23.9)	1.91/2.05 (48.5/52.1)	
		1/4" OD, 0.17" ID	6.4mm OD, 4.3mm ID	PLC20004	PLCD20004	0.72 (18.3)	1.25/1.88 (31.8/73.2)	
		—	8.0mm OD, 6.0mm ID	PLC200M8	PLCD200M8	0.72 (18.3)	1.38/1.82 (35.1/46.2)	
		3/8" OD, 0.25" ID	9.5mm OD, 6.4mm ID	PLC20006	PLCD20006	0.72 (18.3)	1.38/1.82 (35.1/46.2)	
	IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	—	10.0mm OD, 8.0mm ID	PLC200M10	PLCD200M10	0.72 (18.3)	1.38/1.82 (35.1/46.2)	
		1/4" ID	6.4mm ID	PLC22004	PLCD22004	0.62 (15.7)	1.35/1.99 (34.3/50.6)	
		5/16" ID	7.9mm ID	PLC22005	PLCD22005	0.62 (15.7)	1.35/1.99 (34.3/50.6)	
		3/8" ID	9.5mm ID	PLC22006	PLCD22006	0.62 (15.7)	1.36/1.81 (34.5/46.0)	
	IN-LINE JG® PUSH-TO- CONNECT	1/4" OD	6.4mm OD	PLC29004	PLCD29004	0.62 (15.7)	1.35/1.95 (34.3/49.5)	
		3/8" OD	9.5mm OD	PLC29006	PLCD29006	0.78 (19.8)	1.51/2.11 (38.4/53.6)	
	ELBOW FERRULELESS POLYTUBE FITTING, PTF†	3/8" OD, 0.25" ID	9.5mm OD, 6.4mm ID	PLC21006	PLCD21006	.61/.62 (15.45/15.8)	1.22/1.35 (31.0/34.3)	0.85/0.96 (21.6/24.4)
	ELBOW HOSE BARB	1/4" ID	6.4mm ID	PLC23004	PLCD23004	.67/.63 (17.0/16.0)	1.10/1.28 (27.9/32.5)	0.85/0.96 (21.6/24.4)
		3/8" ID	9.5mm ID	PLC23006	PLCD23006	.67/.63 (17.0/16.0)	1.25/1.28 (31.8/32.5)	0.90/0.96 (22.9/24.4)

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.

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 118).



SPECIFICATIONS

PPRESSURE:

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.



cpcworldwide.com/PLC12

FEATURES

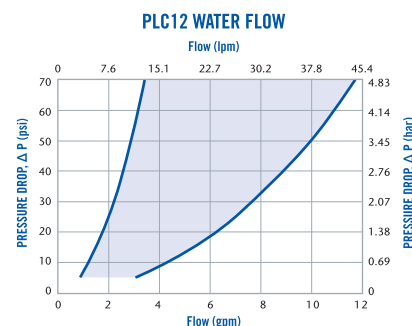
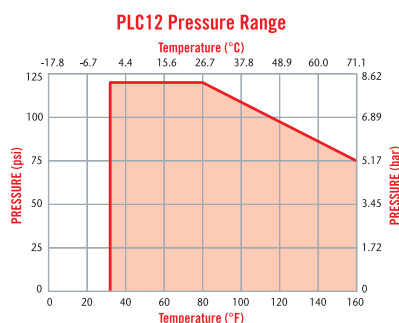
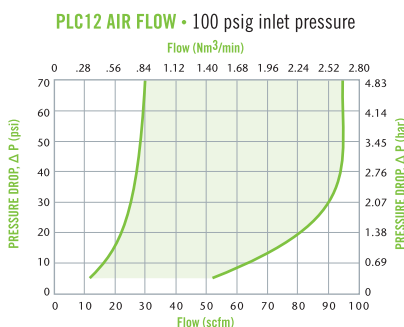
- Polypropylene material → Chemically resistant and gamma sterilizable
- EPDM o-rings → Greater chemical resistance
- CPC thumb latch → One-hand connection and disconnection
- Integral terminations → Fewer leak points, shorter assemblies, faster installations

BENEFITS



DID YOU KNOW

PLC12 Couplings are gamma sterilizable; see page 168 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.



WHEN TO CONSIDER A CUSTOM PROJECT:

- A quick disconnect will add value to product, make it easier to use and more reliable
- Your specification cannot be met by an existing standard CPC product
- Unique requirements, budgets or timing warrant a conversation with CPC

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_v = Average coefficient across various flow rates (see chart)
 ΔP = Pressure drop across coupling (psi)
 S = Specific gravity of liquid

C_v VALUES

INSERTS

BODIES

	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
PLC1000412	0.40	0.36	1.05	0.58	0.83	0.56	1.40	0.82	1.40	0.75	1.40	0.77	0.83
PLCD1000412	0.36	0.31	0.73	0.48	0.66	0.41	0.82	0.50	.80	0.45	0.77	0.45	0.81
PLC1000612	0.40	0.36	1.05	0.60	0.83	0.56	1.40	0.81	1.40	0.76	1.40	0.76	0.83
PLCD1000612	0.37	0.31	0.81	0.47	0.70	0.43	1.02	0.51	0.98	0.46	0.99	0.48	0.98
PLC1200612	0.38	0.36	0.84	0.63	0.74	0.56	1.14	0.75	1.14	0.70	1.14	0.72	0.74
PLCD1200612	0.38	0.33	0.78	0.49	0.68	0.44	0.84	0.49	0.81	0.43	0.82	0.44	0.81
PLC1600412	0.38	0.37	0.87	0.54	0.95	0.51	1.00	0.70	0.95	0.64	1.00	0.66	0.95
PLCD1600412	0.37	0.31	0.61	0.44	0.57	0.41	0.78	0.44	0.78	0.43	0.75	0.46	0.78
PLC1600612	0.38	0.37	1.00	0.57	0.95	0.53	1.40	0.80	1.40	0.71	1.40	0.73	1.40
PLCD1600612	0.38	0.32	0.71	0.49	0.63	0.42	0.89	0.51	0.96	0.45	0.92	0.49	0.97



PLC12 SERIES DIMENSIONS

COUPLING BODIES - Polypropylene

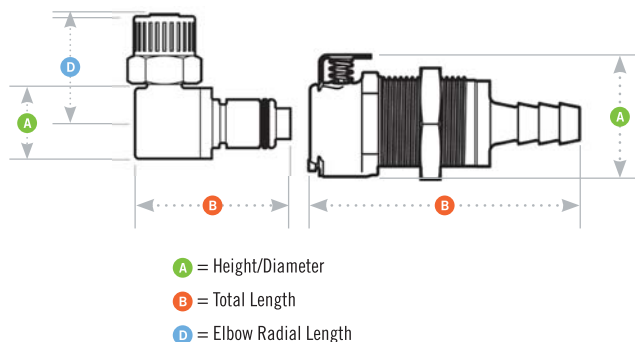
TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	SHUTOFF	A	B
 IN-LINE PIPE THREAD	1/4" NPT		PLC1000412	PLCD1000412	1 (25.4)	1.15 (29.2)
	1/4" BSPT		PLC1000412BSPT	PLCD1000412BSPT	1 (25.4)	1.15 (29.2)
	3/8" NPT		PLC1000612	PLCD1000612	1 (25.4)	1.15 (29.2)
	3/8" BSPT		PLC1000612BSPT	PLCD1000612BSPT	1 (25.4)	1.15 (29.2)
 PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†	3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID	PLC1200612	PLCD1200612	1 (25.4)	1.95 (49.5)
 PANEL MOUNT HOSE BARB	1/4" ID	6.4mm ID	PLC1600412	PLCD1600412	1 (25.4)	1.95 (49.5)
	3/8" ID	9.5mm ID	PLC1600612	PLCD1600612	1 (25.4)	1.95 (49.5)
 IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID	PLC1300612	PLCD1300612	1.02 (25.9)	1.96 (49.8)
 IN-LINE HOSE BARB	1/4" ID	6.4mm ID	PLC1700412	PLCD1700412	1.02 (25.9)	1.96 (49.8)
	3/8" ID	9.5mm ID	PLC1700612	PLCD1700612	1.02 (25.9)	1.96 (49.8)

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 (35.3)	2.78 (70.6)
	3/8" ID	9.5mm ID		iPLCDR1700600	1.39 (35.3)	2.78 (70.6)
IN-LINE HOSE BARB (USB INTERFACE)	3/8" ID	9.5mm ID		iPLCDR1700601	1.05 (26.7)	1.74/1.87 (44.2/47.5)

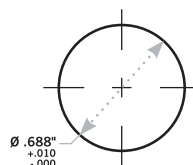
All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. †NOTE: CPC's Ferruleless Polytube Fitting terminations do not require ferrules to achieve a secure connection, which makes them easier to use and reuse. PTF fittings are designed for semi-rigid tubing, i.e., polyethylene, nylon, polyurethane, etc. NOTE: JG is a registered trademark of John Guest USA, Inc.

PRODUCT DIMENSIONS



PANEL DIMENSIONS

	PANEL OPENING	PANEL THICKNESS MAX.-MIN.	PANEL NUT HEX	PANEL NUT THREAD
COUPLING BODIES	see drawing	0.30 - 0.02	13/16	11/16-24UNEF
COUPLING INSERTS	see drawing	0.30 - 0.02	13/16	11/16-24UNEF



COUPLING INSERTS - Acetal

	TERMINATION	TUBING/THREAD SIZE	METRIC EQ	STRAIGHT THRU	SHUTOFF	A	B	D
	IN-LINE PIPE THREAD	1/4" NPT		PLC2400412	PLCD2400412	0.72 (18.3)	1.26/1.67 (32.0/42.4)	
	PANEL MOUNT HOSE BARB	1/4" ID 3/8" ID	6.4mm ID 9.5mm ID	PLC4200412 PLC4200612	PLCD4200412 PLCD4200612	0.94 (23.9) 0.94 (23.9)	1.91/2.05 (48.5/52.1) 1.91/2.05 (48.5/52.1)	
	IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	3/8" OD, 1/4" ID -	9.5mm OD, 6.4mm ID 8.0mm ID	PLC2000612	PLCD2000612 PLCD200M812	0.72 (18.3) 0.72 (18.3)	1.68/1.82 942.7/46.2) 1.82 (46.2)	
	IN-LINE HOSE BARB	1/4" ID 3/8" ID	6.4mm ID 9.5mm ID	PLC2200412 PLC2200612	PLCD2200412 PLCD2200612	0.63 (16.0) 0.63 (16.0)	1.35/2.00 (34.3/50.8) 1.35/1.82 (34.3/46.2)	
	ELBOW FERRULELESS POLYTUBE FITTING, PTF†	3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID	PLC2100612	PLCD2100612	0.61/0.62 (15.5/15.8)	1.29/1.36 (32.8/34.5)	0.96 (24.4)
	ELBOW HOSE BARB	(RS-232 Interface) 3/8" ID	6.4mm ID 9.5mm ID	PLC2300412 PLC2300612	PLCD2300412 PLCD2300612	0.63 (16.0) 0.63 (16.0)	1.22/1.36 (31.0/34.5) 1.28/1.42 (32.5/36.1)	0.96 (24.4) 0.96 (24.4)
	IN-LINE HOSE BARB	1/4" ID	6.4mm ID	iPLCT2200400	iPLCDT2200400	1.39 (35.3)	2.78 (70.6)	
	ELBOW HOSE BARB (RS-232 INTERFACE)	1/4" ID 3/8" ID	6.4mm ID 9.5mm ID		iPLCDT2300400 iPLCDT2300600	1.48 (37.6) 1.48 (37.6)	1.27/1.40 (32.3/35.6) 1.33/1.46 (33.8/37.1)	

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.