Patented

Actual size

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 Colder'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.

The PLC12 Series is also available with optional RFID (Radio Frequency Identification) capability.

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

Liquid Flow Rates
Liquid Flow Rate Information for Couplings

The chart below shows the flow rate for Colder 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.
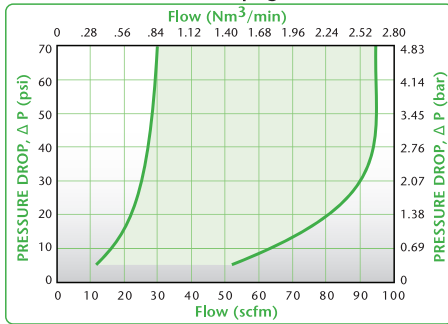
$$Q = C_V \sqrt{\frac{\Delta P}{S}}$$

Q=Flow rate in gallons per minute
C_v=Average coefficient across various flow rates (see chart)
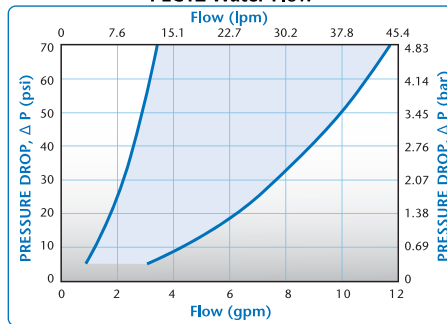ΔP=Pressure drop across coupling (psi)
S=Specific gravity of liquid

C_V Values for 1/4" Flow PLC12 Couplings

BODIES	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
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 Air Flow, 100 psig Inlet Pressure

Flow (Nm³/min)

0   .28 .56 .84 1.12 1.40 1.68 1.96 2.24 2.52 2.80

PRESSURE DROP, Δ P (psi): 0, 10, 20, 30, 40, 50, 60, 70

PRESSURE DROP, Δ P (bar): 0, 0.69, 1.38, 2.07, 2.76, 3.45, 4.14, 4.83

Flow (scfm): 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

PLC12 Water Flow

Flow (lpm)

0   7.6   15.1   22.7   30.2   37.8   45.4

PRESSURE DROP, Δ P (psi): 0, 10, 20, 30, 40, 50, 60, 70

PRESSURE DROP, Δ P (bar): 0, 0.69, 1.38, 2.07, 2.76, 3.45, 4.14, 4.83

Flow (gpm): 0, 2, 4, 6, 8, 10, 12

PLC12 Pressure Range

Temperature (°C)

-17.8   -6.7   4.4   15.6   26.7   37.8   48.9   60.0   71.1

PRESSURE, Δ P (psi): 0, 25, 50, 75, 100, 125

PRESSURE, Δ P (bar): 0, 1.72, 3.45, 5.17, 6.89, 8.62

Temperature (°F): 0, 20, 40, 60, 80, 100, 120, 140, 160

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.

SMART COUPLINGS WITH RFID

The IdentiQuik® Series of smart couplings are RFID enabled couplings used on equipment and in processes. RFID is an automatic identification method that relies on remotely writing and reading data. Smart coupling applications include: inventory level meters, medical equipment calibration, product protection, and many more.

IdentiQuik PLC Series

))) **Identify misconnections:** eliminate out-of-sequence connections or misconnections due to operator error

))) **Protect your brand:** prevent out-of-date, incorrect or misapplied products from being used

))) **Prolong equipment life:** prevent the accidental or unintentional use of harmful media

))) **Save time:** automatic documentation of package and media lot numbers, date codes and more

RFID Specifications

RF Communication Range:
Approximately 1"

Operating Voltage:
8-25V standard,
5V only available

Power Consumption:
350mW maximum

Communication:
ASCII RS-232 (DB-9)

I-Code RFID Tags:
13.56 MHz
ISO-15693 - 112 bytes programmable

NOTE: RFID tags not approved for e-beam or gamma sterilization.

Operating Temperature:
32°F to 150°F (0°C to 65°C)

Materials are listed on page 34. Customized parts (materials, voltage, termination, cable length, etc.) available. Call for more information.

Coupling Readers

POLYPROPYLENE

Product Dimensions
(See drawing on page 36)

TERMINATION	TUBING SIZE	METRIC EQ.	SHUTOFF	A	B
IN-LINE	1/4" ID	6.4mm ID	iPLC12D4HP24A00	1.39	2.78
HOSE BARB	3/8" ID	9.5mm ID	iPLC12D6HP24A00	1.39	2.78

Coupling Inserts

POLYPROPYLENE

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	C
IN-LINE	1/4" ID	6.4mm ID	iPLC124HPI	iPLC12D4HPI	1.00	1.38/2.05	5/8
HOSE BARB	3/8" ID	9.5mm ID	iPLC126HPI	iPLC12D6HPI	1.05	1.74/1.87	5/8

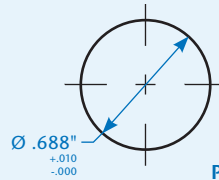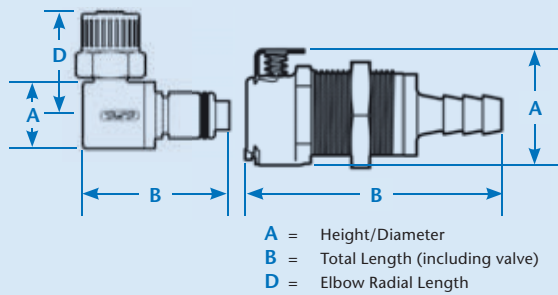| TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B
ELBOW	1/4" ID	6.4mm ID	iPLC124HEPI	iPLC12D4HEPI	1.48	1.27/1.40
HOSE BARB	3/8" ID	9.5mm ID	iPLC126HEPI	iPLC12D6HEPI	1.48	1.33/1.46

non-valved shown

All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters. NOTE: I-Code SL1 tags are available for existing applications, contact the factory for assistance.

| Call toll free 1-800-444-2474 or visit us at www.colder.com

Product Dimensions

A = Height/Diameter
B = Total Length (including valve)
D = Elbow Radial Length

Ø .688"
+.010
-.000

	PANEL OPENING	MAX. PANEL THICKNESS	MIN. PANEL THICKNESS
COUPLING BODIES	see drawing	.50	.02
COUPLING INSERTS	see drawing	.30	.02

	PANEL NUT HEX	PANEL NUT THREAD
	13/16	11/16-24UNEF

Coupling Bodies

POLYPROPYLENE

TERMINATION	THREAD SIZE		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

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B
PANEL MOUNT FERRULELESS POLYTUBE FITTING, PTF†	3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID	PLC1200612	PLCD1200612	1.00	1.95

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B
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

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B
IN-LINE FERRULELESS POLYTUBE FITTING, PTF†	3/8" OD, 1/4" ID	9.5mm OD, 6.4mm ID	PLC1300612	PLCD1300612	1.02	1.96

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B
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

TERMINATION	TUBING SIZE	METRIC EQ.		SHUTOFF	A	B
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 couplings are gamma sterilizable; see page 110 for more information on sterilization and disinfection.

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

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POLYPROPYLENE

TERMINATION	THREAD SIZE		STRAIGHT THRU	SHUTOFF	A	B	
IN-LINE PIPE THREAD	1/4" NPT		PLC2400412	PLCD2400412	.72	1.26/1.67	

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	
PANEL MOUNT HOSE BARB	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	

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	
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	

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	
IN-LINE HOSE BARB	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	

non-valved shown

TERMINATION	TUBING SIZE	METRIC EQ.		SHUTOFF	A	B	
IN-LINE SOFTUBE™ FITTING	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	

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	D
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

TERMINATION	TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	A	B	D
ELBOW HOSE BARB	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

?

DID YOU KNOW ...
Many of Colder's general purpose couplings and fittings can be used across a wide variety of markets and applications?

Quick tip: use the Chemical Compatibility Table at www.colder.com to help determine which product is best for your fluid handling application.

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: Colder'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.

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CLEANER FASTER SMARTER

PLC12 SERIES

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