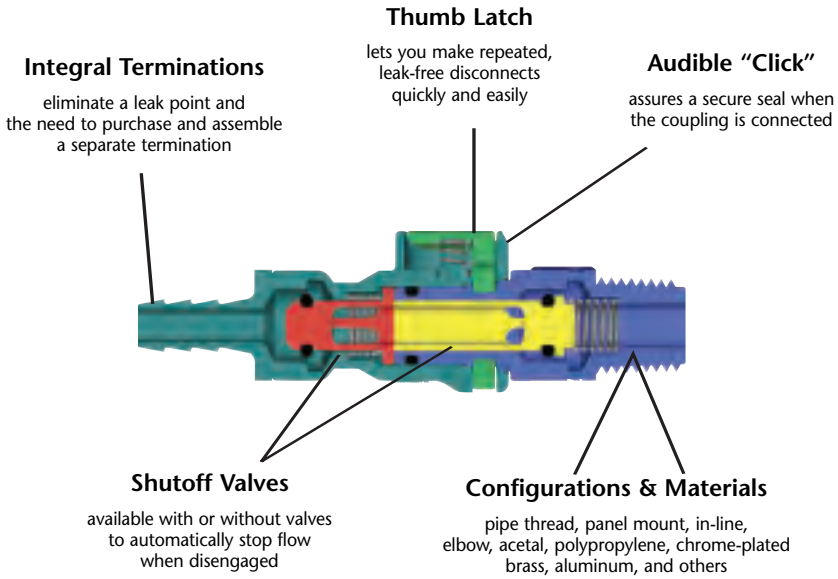
Why Use a CPC Coupling?



RELIABILITY:

For over 25 years CPC couplings have been providing leak-free connections. They are simple to operate and the audible "click" confirms the connection is secure.

MODULARITY: Attachments and Accessories

Expand product lines and increase product life-cycle and profitability by offering intuitive, tool-free attachments and accessories. CPC's patented one-hand, push-button design makes adding product accessories simple and straightforward.

CONVENIENCE: Intuitive and Economic

"Click-to-connect" couplings provide reliable, intuitive, cost-effective connections for fluid flow applications. A standard product line of over 4,000 items makes specifying and installation easy and economical.

SAFETY: Reduce Harmful and Messy Spills

Automatic shutoff valves reduce or eliminate spills and leaks. Connect and disconnect under pressure and safely transfer destructive or toxic solvents and other toxic fluid media. Increase employee and consumer safety.

FLEXIBILITY: Subassemblies and Subcontractors

Reduce assembly time on equipment designed in modules and then assembled at different times, at different locations or using assemblies from subcontractors. Connect and disconnect plastic tubing by simply clicking together versus fastening clamps over fittings and hard plumbing.

SERVICEABILITY: Maintenance and Repairs

One-handed operation makes scheduled maintenance quick and easy. Closed loop and pressurized fluid systems run better and last longer, making maintenance easier and reducing leaks or spills from plastic tubing or hose connections.

PLEASE NOTE: *Not all of the products listed in this catalog are available for immediate shipment. Some products may require a setup charge unless minimum order quantities are met. Please contact your distributor or CPC for further details or to determine availability.*

Colder Products Company
1001 Westgate Drive
St. Paul, MN 55114
Phone: 651-603-2520 see complete page at:
http://www.colder.com/asp_main/techspec/plcts.asp

Inserts: In-Line

Part Number	Description	Bag Quantity	Category
PLC20004	1/4 PTF Non-valved In-Line CPC Coupling Insert	25	MTS
PLC2006	3/8 PTF Non-valved In-Line CPC Coupling Insert	25	MTS
PLC2000612	3/8 PTF Non-valved In-Line CPC Coupling Insert	25	ATO-B
PLC200M10	10mm PTF Non-valved In-Line CPC Coupling Insert	25	ATO-B
PLC200M8	8mm PTF Non-valved In-Line CPC Coupling Insert	25	ATO-A
PLC200M812	8mm PTF Non-valved In-Line CPC Coupling Insert	25	ATO-B
PLCD20004	1/4 PTF Valved In-Line CPC Coupling Insert	25	MTS
PLCD20006	3/8 PTF Valved In-Line CPC Coupling Insert	25	MTS
PLCD200612	3/8 PTF Valved In-Line CPC Coupling Insert	25	MTS
PLCD200M10	10mm PTF Valved In-Line CPC Coupling Insert	25	ATO-A
PLCD200M8	8mm PTF Valved In-Line CPC Coupling Insert	25	ATO-A
PLCD200M812	8mm PTF Valved In-Line CPC Coupling Insert	25	ATO-B

ADVANCED THERMOELECTRIC

PO Box 7091
Nashua, NH 03060 USA

Toll Free Info Line:
1 866-665-5434
international Inquiries (603) 888-2467
email: sales@electracool.com

PLC Series

Material: Acetal

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

FEATURES	BENEFITS
CPC thumb latch	One-hand connection and disconnection
Integral terminations	Fewer leak points, shorter assemblies, faster installations
Clicks when connected	Assurance of a reliable connection
Compatible	Mates with LC Series couplings (see pages 32-33)

Applications may include:

- Deionized water filtration
- Compression therapy
- Thermoelectric cooling assemblies
- Endodermo therapy
- Hospital beds and air mattress systems

All measurements are in inches unless otherwise noted. For details of product dimension codes see page 46. Straight thru dimension is listed first when two measurements are provided. Tubing must meet stated inside and outside diameters.

Coupling Bodies

Acetal

Pipe Thread

THREAD SIZE	STRAIGHT THRU	SHUTOFF	C	G	H
1/4" NPT	PLC10004	PLCD10004	1.17	.50	5/8
1/4" BSPT	PLC10004BSPT	PLCD10004BSPT	1.15	.50	3/4
3/8" NPT	PLC10006	PLCD10006	1.15	.50	3/4
3/8" BSPT	PLC10006BSPT	PLCD10006BSPT	1.15	.50	3/4

Panel Mount *Ferruleless Polytube Fitting, PTF†*

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	C	D	F	G	H	I	J	Q
1/4" OD .17" ID	6.4mm OD 4.3mm ID	PLC12004	PLCD12004	1.87	.52	11/16-24UNEF	.70	3/4	13/16	7/16	.50
	8mm OD 6mm ID	PLC120M8	PLCD120M8	1.95	.65	11/16-24UNEF	.70	3/4	13/16	9/16	.50
3/8" OD .25" ID	9.5mm OD 6.4mm ID	PLC12006	PLCD12006	1.95	.65	11/16-24UNEF	.70	3/4	13/16	9/16	.50
	10mm OD 8mm ID	PLC120M10	PLCD120M10	1.95	.65	11/16-24UNEF	.70	3/4	13/16	9/16	.50

Hose Barb

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	C	D	F	G	H	I	Q
1/4" ID	6.4mm ID	PLC16004	PLCD16004	1.95	.65	11/16-24UNEF	.70	3/4	13/16	.50
5/16" ID	7.9mm ID	PLC16005	PLCD16005	1.95	.65	11/16-24UNEF	.70	3/4	13/16	.50
3/8" ID	9.5mm ID	PLC16006	PLCD16006	1.95	.65	11/16-24UNEF	.70	3/4	13/16	.50

JG® Push-To-Connect

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	C	F	G	H	I	Q
1/4" OD	6.4mm OD	PLC11004	PLCD11004	1.95	11/16-24UNEF	.70	3/4	.02	.50

In-Line *Ferruleless Polytube Fitting, PTF†*

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	B	C	D	J
1/4" OD .17" ID	6.4mm OD 4.3mm ID	PLC13004	PLCD13004	.93	1.82	.52	7/16
	8mm OD 6mm ID	PLC130M8	PLCD130M8	.93	1.95	.65	9/16
3/8" OD .25" ID	9.5mm OD 6.4mm ID	PLC13006	PLCD13006	.93	1.95	.65	9/16
	10mm OD 8mm ID	PLC130M10	PLCD130M10	.93	1.95	.65	9/16

Hose Barb

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	B	C	D
1/4" ID	6.4mm ID	PLC17004	PLCD17004	.93	1.95	.65
5/16" ID	7.9mm ID	PLC17005	PLCD17005	.93	1.95	.65
3/8" ID	9.5mm ID	PLC17006	PLCD17006	.93	1.95	.65

JG® Push-To-Connect

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	B	C
1/4" OD	6.4mm OD	PLC14004	PLCD14004	.93	1.95
3/8" OD	9.5mm OD	PLC14006	PLCD14006	.93	2.09

NOTE: JG is a registered trademark of John Guest USA, Inc.

†NOTE: CPC's Ferruleless PTF (polytube fitting) terminations do not require ferrules to achieve a secure connection and are therefore easier to use and reuse. PTF fittings are designed for semi-rigid tubing, i.e. polyethylene, nylon, polyurethane, etc.

PLC Series Specifications

Pressure: Vacuum to 120 psi, 8.3 bar

Temperature: -40° F to 180° F continuous
-40° C to 82° C continuous

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

JG® Tubing Specifications

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

Cool/compression therapy

JG® Tubing Specifications (cont.)

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

All measurements are in inches unless otherwise noted. For details of product dimension codes see page 46. Straight thru dimension is listed first when two measurements are provided. Couplings are pictured with valves unless otherwise noted. Tubing must meet stated inside and outside diameters.

Coupling Inserts

Acetal

Pipe Thread

THREAD SIZE	STRAIGHT THRU	SHUTOFF	C	D	H
1/4" NPT	PLC24004	PLCD24004	1.25/1.63	.50	5/8
1/4" BSPT	PLC24004BSPT	PLCD24004BSPT	1.53/1.63	.50	5/8
3/8" NPT	PLC24006	PLCD24006	1.25/1.59	.50	3/4
3/8" BSPT	PLC24006BSPT	PLCD24006BSPT	1.25/1.64	.50	3/4

Panel Mount *Ferruleless Polytube Fitting, PTF†*

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	C	D	F	G	H	I	J	Q
1/4" OD .17" ID	6.4mm OD 4.3mm ID	PLC40004	PLCD40004	1.78/1.91	.52/.62	11/16-24UNEF	.46	3/4	13/16	7/16	.70/.84
	8mm OD 6mm ID	PLC400M8	PLCD400M8	1.91/2.03	.65	11/16-24UNEF	.46	3/4	13/16	9/16	.70/.84
3/8" OD .25" ID	9.5mm OD 6.4mm ID	PLC40006	PLCD40006	1.91/2.05	.65	11/16-24UNEF	.46	3/4	13/16	9/16	.70/.84
	10mm OD 8mm ID	PLC400M10	PLCD400M10	1.91/2.05	.65	11/16-24UNEF	.46	3/4	13/16	9/16	.70/.84

Hose Barb

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	C	D	F	G	H	I	Q
1/4" ID	6.4mm ID	PLC42004	PLCD42004	1.91/2.05	.65	11/16-24UNEF	.46	3/4	13/16	.70/.84
5/16" ID	7.9mm ID	PLC42005	PLCD42005	1.91/2.05	.65	11/16-24UNEF	.46	3/4	13/16	.70/.84
3/8" ID	9.5mm ID	PLC42006	PLCD42006	1.91/2.05	.65	11/16-24UNEF	.46	3/4	13/16	.70/.84

JG® Push-To-Connect

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	C	F	G	H	I	Q
1/4" OD	6.4mm OD	PLC41004	PLCD41004	1.91/2.05	11/16-24UNEF	.46	3/4	13/16	.70/.84

In-Line *Ferruleless Polytube Fitting, PTF†*

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	C	D	H	J
1/4" OD .17" ID	6.4mm OD 4.3mm ID	PLC20004	PLCD20004	1.25/1.88	.52	5/8	7/16
	8mm OD 6mm ID	PLC200M8	PLCD200M8	1.38/1.82	.65	5/8	9/16
3/8" OD .25" ID	9.5 mm OD 6.4mm ID	PLC20006	PLCD20006	1.38/1.82	.65	5/8	9/16
	10mm OD 8mm ID	PLC200M10	PLCD200M10	1.38/1.82	.65	5/8	9/16

Hose Barb

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	B	C	D	H
1/4" ID	6.4mm ID	PLC22004	PLCD22004	.62	1.30/1.99	.65	5/8
5/16" ID	7.9mm ID	PLC22005	PLCD22005	.62	1.30/1.99	.65	5/8
3/8" ID	9.5mm ID	PLC22006	PLCD22006	.62	1.30/1.81	.65	5/8

JG® Push-To-Connect

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	B	C
1/4" OD	6.4mm OD	PLC29004	PLCD29004	.63	1.35/1.95
3/8" OD	9.5mm OD	PLC29006	PLCD29006	.78	1.51/2.11

Elbow *Ferruleless Polytube Fitting, PTF†*

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	C	D	J	R
3/8" OD .25" ID	9.5mm OD 6.4mm ID	PLC21006	PLCD21006	1.22/1.35	.65	9/16	.85/.96

Hose Barb

TUBING SIZE	METRIC EQ.	STRAIGHT THRU	SHUTOFF	C	D	R
1/4" ID	6.4mm ID	PLC23004	PLCD23004	1.10/1.28	.65	.85/.96
3/8" ID	9.5mm ID	PLC23006	PLCD23006	1.25/1.28	.65	.90/.96

non-valved

non-valved

Fittings & Manifolds

Tube Fittings

Pressure: 100 psi, 7.0 bar **Temperature:** 32° F to 230° F, 0° C to 110° C **Materials:** Polypropylene

	PART NO.	DESCRIPTION
Hose Barb Union *Straight*	HS2	1/16" x 1/16" Hose Barb
	HS3	3/32" x 3/32" Hose Barb
	HS4	1/8" x 1/8" Hose Barb

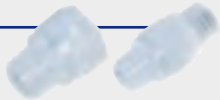
Tee	PART NO.	DESCRIPTION
	HT2	1/16" x 1/16" x 1/16" Hose Barb
	HT3	3/32" x 3/32" x 3/32" Hose Barb
	HT4	1/8" x 1/8" x 1/8" Hose Barb

Elbow	PART NO.	DESCRIPTION
	HE2	1/16" x 1/16" Hose Barb
	HE3	3/32" x 3/32" Hose Barb
	HE4	1/8" x 1/8" Hose Barb

	PART NO.	DESCRIPTION
Hose Barb x 10-32 Thread *Straight*	MS2	1/16" Hose Barb x 10-32 Thread
	MS3	3/32" Hose Barb x 10-32 Thread
	MS4	1/8" Hose Barb x 10-32 Thread

Tee	PART NO.	DESCRIPTION
	MT2	1/16" x 1/16"
	MT3	3/32" x 3/32"
	MT4	1/8" x 1/8"

Elbow	PART NO.	DESCRIPTION
	ME2	1/16" Hose Barb x 10-32 Thread
	ME3	3/32" Hose Barb x 10-32 Thread
	ME4	1/8" Hose Barb x 10-32 Thread



Miscellaneous	PART NO.	DESCRIPTION
	MP	10-32 Plug
	N32	10-32 x 10-32 Nipple

Panel Mount Unions

Materials: Acetal **Nut:** Nickel-plated brass

	TUBING	METRIC EQ.	PART NO.	PANEL OPENING
Hose Barb Union	1/8" ID x 1/8" ID	3.2 x 3.2mm	BHU2202	1/2"
	1/4" ID x 1/4" ID	6.4 x 6.4mm	BHU2204	1/2"
	3/8" ID x 3/8" ID	9.5 x 9.5mm	BHU2206	1/2"

Manifolds

Materials: Aluminum **Finish:** Black annodized

	PART NO.	SIDE PORTS	END PORTS	LENGTH
10-32 Ported Manifold with 1/8" NPT End Port	32M3	3	1	2.30"
	32M4	4	1	2.80"
	32M5	5	1	3.30"

	PART NO.	SIDE PORTS	END PORTS	LENGTH
1/8" NPT Ported Manifold with 1/8" NPT End Port	2M3	3	1	3.10"
	2M4	4	1	4.00"
	2M5	5	1	4.90"

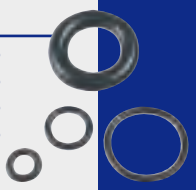
	PART NO.	SIDE PORTS	END PORTS	LENGTH
1/4" NPT Ported Manifold with 1/4" NPT End Port	4M3	3	2	3.80"
	4M4	4	2	4.80"
	4M5	5	2	5.80"

†NOTE: CPC's ferruleless PTF (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.

*Gaskets are not included with 10-32 PTF style fittings. To prevent leakage with these fittings, we recommend using LOCTITE® Removable Threadlocker 242 or Permanent Threadlocker 262.

Coupling Accessories & Replacement Parts

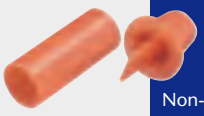
	COUPLING SERIES	BUNA-N	FLUOROCARBON	EPDM
Insert Seals	MC, PMC	730800	730804	730803
Replacement Parts	LC, PLC, APC, Twin Tube™ large o-ring (1.78mm cross section)	731100	731104	731103
	SMC, Twin Tube™ small o-ring	730600	730604	730603
	HFC	731600	731604	731603



	COUPLING SERIES NUTS	NICKEL BRASS	ACETAL	316 STAINLESS	POLYPROPYLENE (PP) POLYSULFONE (PSF)
Panel Mount Nuts	MC, PMC, PMC12	100900	664400	100901	—
	LC, PLC, PLC12, APC	120700	520300	120701	—
	HFC	—	—	—	621300 (PP)
					694300 (PSF)

	COUPLING SERIES	BODY PLUG	INSERT CAP
Dust Caps & Plugs	MC, PMC non-sealing	PMC31	PMC32
	APC, LC, PLC non-sealing	PLC310	PLC320
	PMC pressure-sealing	PMC30	—
	PLC pressure-sealing	PLC300	—
	HFC non-sealing (not shown)	HFC312 L (with leash)	
		HFC312 (no leash)	
	MPC non-sealing	see page 10	see page 10
	MPC pressure-sealing	see page 11	see page 11
	MPX pressure-sealing	see page 13	see page 13

Sealing



Non-sealing

All measurements are in inches unless otherwise noted. Tubing must meet stated inside and outside diameters. Couplings are pictured with valves unless otherwise noted. Straight thru dimension is listed first when two measurements are provided.

NOTE: CPC's threaded fittings require no gasket for a reliable seal and also allow the fitting to be directionally oriented without a gasket.

Liquid Flow Rates

Liquid Flow Rate Information for Couplings

The charts show the flow rate for CPC couplings. The tests were conducted with pipe thread bodies and hose barb inserts. Each coupling was tested in straight thru, single-end shutoff and double end shutoff models 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
Cv = Average constant of various rates. See charts below
ΔP = Pressure drop across coupling
S = Specific gravity of liquid

Example:
Coupling Body = MC1004
Coupling Insert = MC2004
Cv = .4 (see chart)
ΔP = 40
S = 1 (water)

$$Q = C_V \sqrt{\frac{\Delta P}{S}} = .4 \sqrt{\frac{40}{1}} = 2.5 \text{ gallons per minute}$$

Cv Values for Subminiature Couplings (SMC)

BODIES	SMM01	SMM02	BODIES	SMM01	SMM02
SMF01	.03	.03	SMFD02	.03	.08
SMFD01	.03	.03	SMPT02	.03	.19
SMF02	.03	.19	SMPTD02	.03	.08

Cv Values for Twin Tube™ Couplings

	PTC 22010		PTC 22020		PTC 220296	
BODIES	CENTER	SIDE	CENTER	SIDE	CENTER	SIDE
PTC16010	.03	.03	.03	.03	—	—
PTC16020	.03	.03	.08	.14	—	—
PTC1602096	—	—	—	—	.09	.06

Cv Values for 1/8" Flow Couplings (PMC & MC)

Inserts

BODIES	MC 2004	MCD 2004	MC 2006	MCD 2006	MC 2202	MCD 2202	MC 2204	MCD 2204	MC 2402	MCD 2402	MC 2404	MCD 2404	MC 2602	MC 2304	MC 2104	MCD 2304	MC 2203	MCD 2203	PMC 2201	PMCD 2201
MC1002	.40	.18	.50	.19	.25	.16	.50	.19	.50	.20	.51	.19	.50	.50	.38	.24	.30	.17	.03	.03
MCD1002	.27	.18	.31	.18	.24	.16	.28	.20	.26	.20	.29	.18	.26	.26	.27	.24	.25	.17	.03	.03
MC1004	.40	.21	.50	.24	.26	.18	.50	.24	.50	.20	.51	.24	.50	.50	.38	.26	.30	.19	.03	.03
MCD1004	.29	.19	.32	.23	.25	.17	.30	.23	.27	.21	.28	.23	.27	.28	.29	.24	.25	.18	.03	.03
MC1204	.40	.18	.50	.18	.25	.16	.40	.18	.40	.16	.36	.18	.40	.40	.38	.21	.30	.17	.03	.03
MCD1204	.21	.17	.22	.17	.20	.16	.22	.17	.21	.17	.20	.17	.21	.22	.21	.18	.21	.16	.03	.03
MC1602	.23	.15	.28	.18	.19	.14	.27	.15	.27	.15	.28	.18	.27	.27	.23	.16	.20	.14	.03	.03
MCD1602	.19	.15	.19	.15	.17	.14	.19	.15	.18	.15	.18	.15	.18	.19	.19	.15	.18	.14	.03	.03
MC1604	.33	.23	.44	.24	.24	.18	.44	.23	.44	.20	.38	.24	.38	.44	.33	.26	.26	.19	.03	.03
MCD1604	.23	.17	.26	.21	.22	.16	.26	.21	.26	.19	.25	.21	.21	.26	.23	.24	.22	.16	.03	.03
MC1703	.25	.20	.30	.20	.20	.17	.30	.20	.30	.19	.28	.20	.28	.30	.25	.18	.21	.17	.03	.03
MCD1703	.20	.17	.20	.17	.19	.15	.21	.17	.19	.17	.20	.17	.19	.20	.20	.16	.19	.16	.03	.03
PMC1701	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.02
PMCD1701	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.02	.02

Cv Values for 1/4" Flow Couplings (PLC & LC)

Inserts

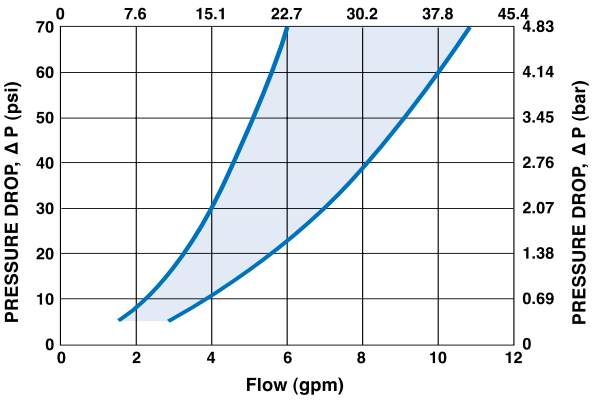
BODIES	LC 20004	LCD 20004	LC 20006	LCD 20006	LC 22004	LCD 22004	LC 22006	LCD 22006	LC 24004	LCD 24004	LC 24006	LCD 24006	LC 26004
LC10004	.40	.36	1.05	.58	.83	.56	1.40	.82	1.40	.75	1.40	.77	.83
LCD10004	.36	.31	.73	.48	.66	.41	.82	.50	.80	.45	.77	.45	.81
LC10006	.40	.36	1.05	.60	.83	.56	1.40	.81	1.40	.76	1.40	.76	.83
LCD10006	.37	.31	.81	.47	.70	.43	1.02	.51	.98	.46	.99	.48	.98
LC12006	.38	.36	.84	.63	.74	.56	1.14	.75	1.14	.70	1.14	.72	.74
LCD12006	.38	.33	.78	.49	.68	.44	.84	.49	.81	.43	.82	.44	.81
LC16004	.38	.37	.87	.54	.95	.51	1.00	.70	.95	.64	1.00	.66	.95
LCD16004	.37	.31	.61	.44	.57	.41	.78	.44	.78	.43	.75	.46	.78
LC16006	.38	.37	1.00	.57	.95	.53	1.40	.80	1.40	.71	1.40	.73	1.40
LCD16006	.38	.32	.71	.49	.63	.42	.89	.51	.96	.45	.92	.49	.97

NOTE: For metric equivalents, consult CPC Customer Service.

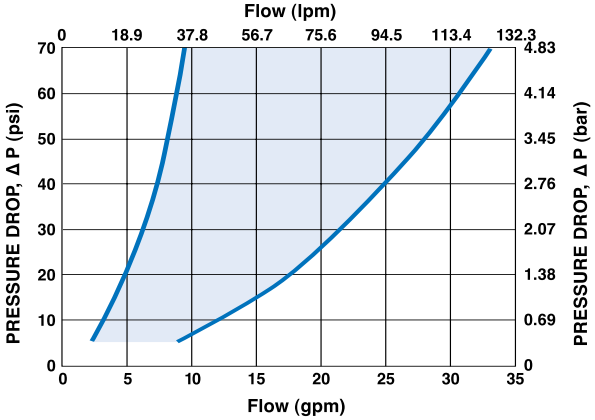
Water Flow Graphs

These graphs are intended to give you a general idea of the flow capabilities of each product line. The shaded area of each graph represents the operating range of the product family, i.e., upper and lower flow values are shown. Therefore, depending on the exact coupling configuration selected, you can reasonably expect flow values to fall within the shaded area.

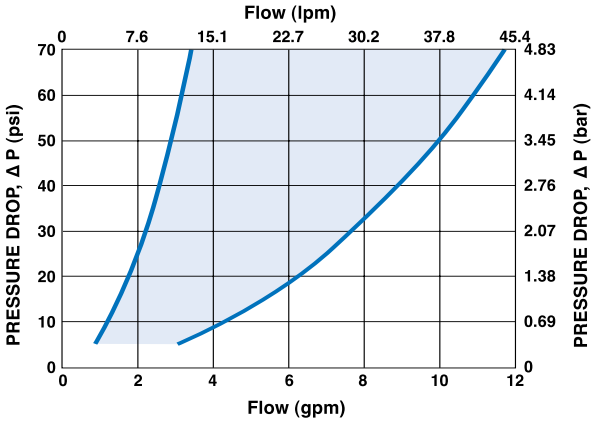
APC Water Flow



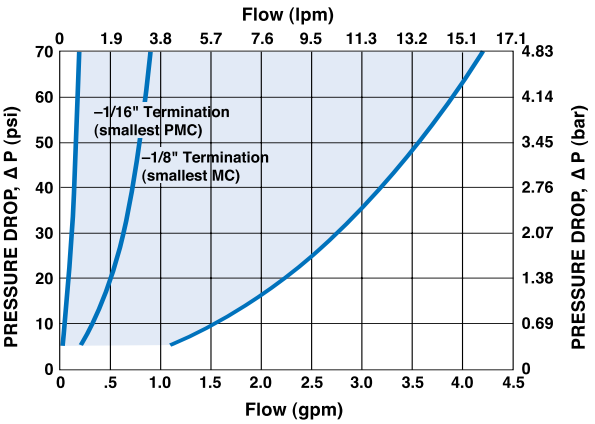
HFC Water Flow



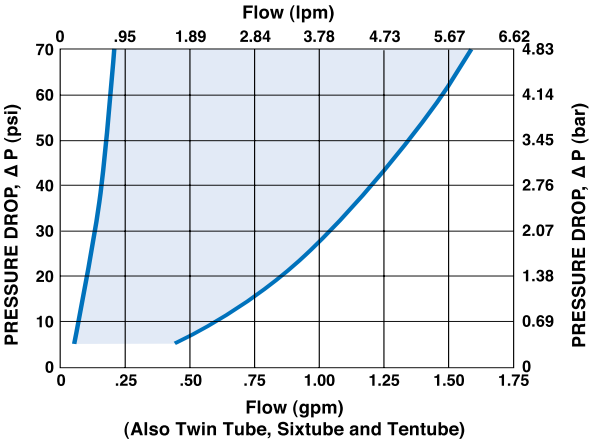
PLC, LC Water Flow



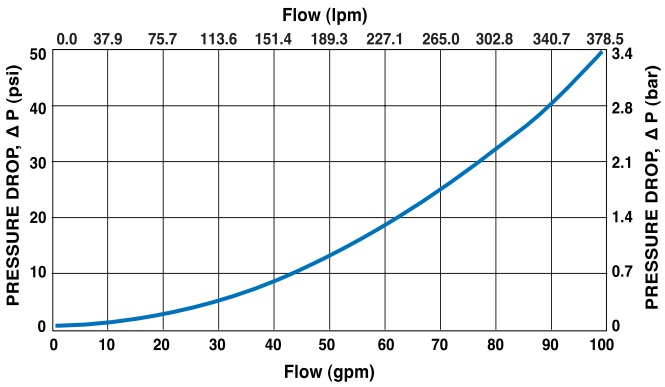
PMC, MC Water Flow



SMC, Sixtube™, Tentube® Water Flow



NS4 Water Flow



Chemical Compatibility Guide

Chemicals can affect the strength, surface appearance, color, dimensions, or weight of plastics. Therefore, CPC presents this chemical resistance chart as a basic guide only. Because many factors affect the chemical resistance of a given material, it is the customer's responsibility to test CPC products under their own application conditions. Contact CPC Customer Service with any questions about specific application conditions.

KEY

A	=	Excellent – no apparent effect
B	=	Good – little or no effect
C	=	Fair – some effect, not long term
D	=	Not recommended, severe effect
N/A	=	Not Available

CHEMICAL	MATERIAL										
	Polymers					Metals		Elastomers			
	ACETAL	ABS	POLY-PROPYLENE	POLY-SULFONE	POLY-CARBONATE	CHROME-PLATED BRASS	STAINLESS STEEL (316)	BUNA-N (NITRIL)	EPR/EPDM	CARBON (VITON®)	SILICONE
Acetic Acid	D	C	B	A	B	D	A	D	A	D	B
Acetone	A	D	A	D	D	A	A	D	A	D	C
Air	A	A	A	A	A	A	A	A	A	A	A
Ammonia, Anhydrous	D	B	A	A	D	D	A	B	A	D	C
Benzene	A	D	D	D	D	N/A	B	D	D	A	D
Carbon Dioxide	A	B	A	N/A	N/A	A	A	A	B	B	B
Chlorine Water	D	A	D	B	N/A	D	C	D	C	A	D
Ethanol (Ethyl Alcohol)	A	A	A	C	B	A	A	A	A	A	A
Ethylene Glycol	B	A	A	A	B	A	A	A	A	A	A
Gasoline, Unleaded	A	D	C	C	A	A	A	B	D	A	D
Hydrochloric Acid	C	C	B	A	D	D	D	D	C	A	D
Hydrofluoric Acid	D	C	C	D	D	D	B	D	D	B	D
Isopropyl Alcohol	A	A	A	B	A	B	B	B	B	B	A
Methyl Ethyl Ketone (MEK)	C	D	B	D	D	A	A	D	A	D	D
Methanol (Methyl Alcohol)	A	D	A	C	B	A	A	A	A	D	A
Oxygen	A	B	A	A	A	A	A	B	A	A	A
Ozone	C	B	B	A	A	N/A	A	D	A	A	A
Sodium Hypochlorite	D	N/A	B	A	N/A	D	N/A	C	B	A	B
Steam	C	N/A	A	A	A	A	A	D	A	D	C
Sulfuric Acid, Air-Free	N/A	B	C	D	D	C	B	D	D	A	D
Toluene	C	D	C	D	D	A	A	D	D	C	D
Trichloroethylene	D	D	C	C	N/A	B	B	D	D	A	D
Water, Fresh	A	A	A	A	A	C	A	A	A	B	A

Material

Acetal: Acetal thermoplastic (Polyoxymethylene) is strong, lightweight and economical, and is used for a wide variety of chemical and mechanical components.

ABS: An economical medical grade thermoplastic that withstands sterilization. It is commonly used in medical devices.

Polypropylene: Polypropylene thermoplastic has excellent chemical resistance and withstands sterilization. It is commonly used in water filtration and bioprocessing applications.

Polysulfone: Polysulfone thermoplastic has excellent strength, good chemical resistance, withstands repeated sterilization, and withstands higher temperatures than other thermoplastics.

Polycarbonate: Polycarbonate thermoplastic is resistant to chemicals, withstands sterilization and is transparent. It is commonly used in medical devices.

Chrome-Plated Brass: A rugged metallic material with an attractive appearance, chrome-plated brass is excellent for higher pressure and temperature. It is commonly used in instrumentation, air and vacuum line applications.

Notes: All ratings are based on concentration level at 100% and temperature at 73° F.

Sterilization and Disinfectant Methods

MATERIAL	DISINFECTANTS			ETHYLENE OXIDE	AUTOCLAVE	E-BEAM IRRADIATION	GAMMA IRRADIATION	DRY HEAT
	Formalin	*Isopropyl Alcohol*	*Ethyl Alcohol*			*5 Megarads*	*5 Megarads*	*250° F*
Metals								
302 Stainless Steel	Y	Y	Y	Y	Y	Y	Y	Y
316 Stainless Steel	Y	Y	Y	Y	Y	Y	Y	Y
Chrome-Plated Brass-CDA 360	N	Y	Y	Y	Y	Y	Y	Y
Polymers								
ABS	N	N/A	Y	Y	N	Y	Y	N
Acetal	Y	Y	Y	Y	Y	N	N	N
LDPE	Y	Y	Y	Y	N	Y	Y	N
Nylon	Y	N	N	Y	N	N	N	N
Polycarbonate	Y	Y	Y	Y	Y	Y	Y	Y
Polypropylene	Y	Y	Y	Y	N	Y	Y	N
Elastomers								
Nitrile/Buna-N	Y	Y	Y	N	N	Y	Y	Y
Silicone	Y	Y	Y	Y	Y	Y	Y	Y
Kalrez®	Y	Y	Y	Y	Y	N	N	Y
EPR/EPDM	Y	Y	Y	Y	Y	Y	Y	Y
FKM/Viton®	Y	Y	Y	N	N	N	N	Y

NOTE: Testing conducted at room temperature except where noted.

Sterilization Methods

Disinfectants: 70° F (20° C), Formalin, ethyl alcohol, etc. Sterilize coupled or uncoupled.

Ethylene Oxide, EtO: Four hours, 100% EtO @ 110° F (43° C), up to five repetitions, coupled or uncoupled.

Autoclave: 250° F (121° C), 30 min. max., up to 10 repetitions. Sterilize uncoupled only. Contact CPC for specific material autoclaving capabilities.

Electron Beam: Maximum cumulative exposure of 50 kilograys. Sterilize coupled or uncoupled.

Gamma: Maximum cumulative exposure of 50 kilograys. Sterilize coupled or uncoupled.

Dry Heat: 250° F (121° C), 12 hours, no pressure. Sterilize uncoupled only.

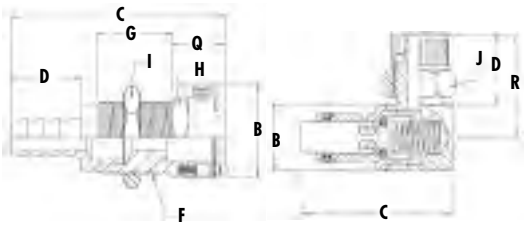
KEY

Y	YES, recommended material for this sterilization method
N	NO, not recommended
N/A	Not applicable

Product Dimension Codes/Panel Mount Dimensions and Specifications

Product Dimension Codes (specific dimensions are listed on each product page)

C = Total Length (including valve)
E = Panel Opening
G = Thread Length
I = Hex Size of Panel Nut
K = Maximum Panel Thickness
L = Minimum Panel Thickness
Q = Extension from Panel Front
R = Elbow Radial Length
B = Height/Diameter
D = Length of Termination
F = Thread Size
H = Hex Size on Main Component
J = Hex Size of PTF Nut



Panel Mount Specifications

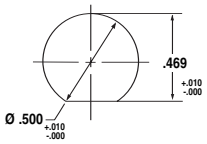
	E PANEL OPENING	K MAX. PANEL THICKNESS	L MIN. PANEL THICKNESS
APC Series			
Coupling Bodies	see sketch	.50	.02
HFC12, HFC35 and HFC57 Series			
Coupling Bodies	see sketch	.25	.03
Keyed, Color-Coded Series			
Coupling Bodies	1/2	.50	.02
LC Series			
Coupling Bodies & Inserts	11/16	.50	.05
MC Series			
Coupling Bodies *(except Male Thread)*	1/2	.50	.05
Male Thread	1/2	.21	.05
Coupling Inserts	1/2	.30	.05
Multi-Mount Series - 1/8" Flow			
Multi-Mount Bodies	1/2	.50	.05
Multi-Mount Series - 1/4" Flow			
Multi-Mount Bodies	11/16	.50	.02
NS4 Series			
Coupling Inserts	15/16	.25	.03
NS6 Series			
Coupling Inserts	1-1/4	.25	.03
NSH Series			
Adapter Kit	2	.5	.13

	E PANEL OPENING	K MAX. PANEL THICKNESS	L MIN. PANEL THICKNESS
PLC Series			
Coupling Bodies	see sketch	.50	.02
Coupling Inserts	11/16	.30	.02
PLC12 Series			
Coupling Bodies	11/16	.50	.02
Coupling Inserts	11/16	.30	.02
PMC Series			
Coupling Bodies	see sketch	.50	.05
Coupling Inserts	1/2	.30	.05
PMC12 Series			
Coupling Bodies	1/2	.50	.05
Sixtube™ Series			
Coupling Inserts	see sketch	.13	.03
SMC Series			
Coupling Bodies & Inserts	7/16	.21	.03
Tentube® Series			
Adapter	see sketch	.44	.06
Tube Fittings			
Union	1/2	.25	.05
Twin Tube™ Series			
Coupling Bodies – Acetal	.69	.50	.05
Coupling Bodies – ABS	.69	.30	.02

Panel Mount Opening Dimensions

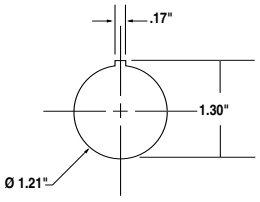
PMC Series

Greenlee® punch number 60077



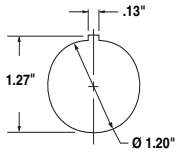
HFC/FFC Series

Gasket Thickness: .06"
Mounting Hole: 1.21" diameter
Coupling Spacing: 1.62" minimum
Panel Thickness: .25"



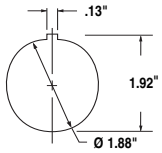
Sixtube™

Panel Thickness: 1/8"
Diameter Hole: 1.2"



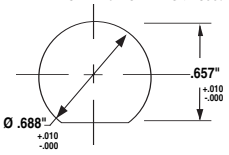
Tentube®

Panel Thickness: 7/16"
Diameter Hole: 1.875



PLC and APC Series

Maximum Panel Thickness: 1/2"
Minimum Panel Thickness: 0.02"



PLEASE NOTE: *Not all of the products listed in this catalog are available for immediate shipment. Some products may require a setup charge unless minimum order quantities are met. Please contact your distributor or CPC for further details or to determine availability.*

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