



EVERIS®
CONNECTION
SOLUTIONS FOR
LIQUID
COOLING





TORTURE TESTED AGAIN AND AGAIN AND AGAIN

We want you to be absolutely confident in our liquid cooling connectors. That's why all CPC products are produced in ISO certified Class 8 or better cleanrooms. We start with Design for Quality (DFQ), then materials testing, followed by product testing and torture testing to failure. In addition to published verification reports, our connectors are designed and manufactured to meet the stringent ISO 9001 and ISO 13485 quality standards.

TESTING EXPERTISE

Testing protocols include helium, bubble, and hydrostatic leak testing as well as rigorous conditioning, pressure and mechanical testing, and more for proven reliability. CPC research lab testing capabilities also include material analysis for system-level inquiries.

EVERIS® QDs DESIGNED AND BUILT FOR THERMAL MANAGEMENT

CPC designs and manufactures Everis® quick disconnect couplings (QDs) to specifically meet the demands for high performance in liquid cooling. Everis quick release couplings from CPC are designed to optimize flow while offering excellent durability and ease of use. Everis QD's are compatible with a variety of coolants. Most importantly, Everis quick disconnects' patented non-spill design is ideal for long-term, connected use. Everis QD's rugged reliability is needed for sensitive and critical liquid cooling of electronics environments such as found in high performance computing, EV charging, data centers, 5G, and edge computing as well as medical electronics.

EVERIS® LQ SERIES

Purpose-built liquid cooling non-spill nickel plated brass, aluminum, and stainless steel couplings offer a secure, reliable connection and dripless disconnect.

EVERIS® BLQ SERIES

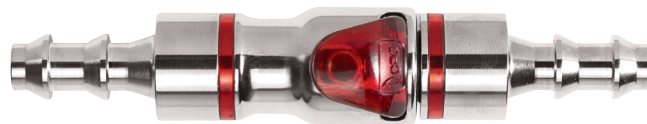
Engineered specifically for integrated mounting and external locking engagement, these QDs feature ultra-reliable dripless connections and disconnections.

LIQUID COOLING PAGES 04-25

- 04 EVERIS® LQ2:** Liquid cooling non-spill coupling for a secure, reliable connection and dripless disconnect with a nominal flow of 1/8" (3.2 mm).

MATERIAL: Plated brass

TUBING ID SIZES: 1/4" ID (6.4mm ID)



- 06 EVERIS® LQ4:** Liquid cooling non-spill coupling for a secure, reliable connection and dripless disconnect with a nominal flow of 1/4" (6.4mm).

MATERIAL: Plated brass

TUBING ID SIZES: 1/4" to 3/8" (6.4mm to 9.5mm)



- 08 EVERIS® LQ4S:** Liquid cooling non-spill coupling for a secure, reliable connection and dripless disconnect with a nominal flow of 1/4" (6.4mm).

MATERIAL: Stainless steel

TUBING ID SIZES: 1/4" to 3/8" (6.4mm to 9.5mm)



- 10 EVERIS® LQ6:** Liquid cooling non-spill coupling for a secure, reliable connection and dripless disconnect with a nominal flow of 3/8" (9.5 mm).

MATERIAL: Plated brass

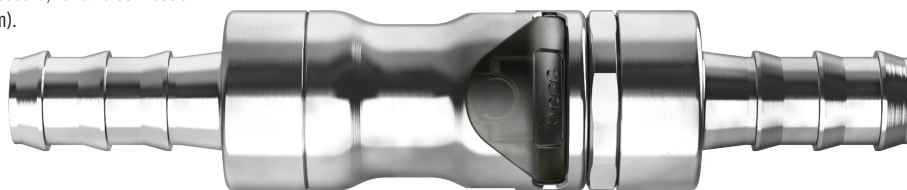
TUBING ID SIZES: 3/8" to 1/2" ID (9.5mm to 12.7mm ID)



- 12 EVERIS® LQ8:** Liquid cooling non-spill coupling for a secure, reliable connection and dripless disconnect with a nominal flow of 1/2" (12.7 mm).

MATERIAL: Plated brass

TUBING ID SIZES: 5/8" ID (15.9 mm ID)



- 14 EVERIS® BLQ2:** Ultra-reliable non-spill liquid cooling blind mate coupling for integrated mounting with a nominal flow of 1/8" (3.2 mm).

MATERIAL: Plated brass

TUBING ID SIZES: 1/4" SAE-4



LEGEND



NON-SPILL

LIQUID COOLING PAGES 04-25

- 16 EVERIS® BLQ4:** Ultra-reliable non-spill liquid cooling blind mate coupling for integrated mounting with a nominal flow of 1/4" (6.4 mm).

MATERIAL: Plated brass



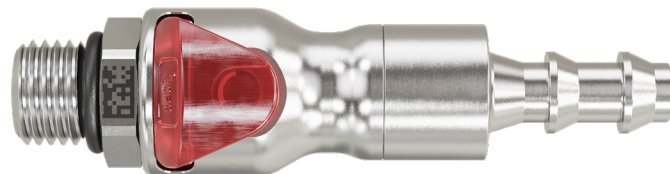
- 18 EVERIS® BLQ6:** Ultra-reliable non-spill liquid cooling blind mate coupling for integrated mounting with a nominal flow of 3/8" (9.5 mm).

MATERIAL: Anodized aluminum



- 20 EVERIS® UQD02:** Ultra-reliable non-spill liquid cooling blind mate coupling for integrated mounting with a nominal flow of 3/8" (9.5 mm).

MATERIAL: Stainless steel



- 22 EVERIS® UQD04:** Ultra-reliable non-spill liquid cooling blind mate coupling for integrated mounting with a nominal flow of 1/4" (6.4 mm).

MATERIAL: Stainless steel



- 24 EVERIS® UQDB04:** Ultra-reliable non-spill liquid cooling blind mate coupling for integrated mounting with a nominal flow of 3/8" (9.5 mm).

MATERIAL: Anodized aluminum



- 26 EVERIS® UQDB08 & UQD08:** Ultra-reliable non-spill liquid cooling blind mate coupling for integrated mounting with a nominal flow of 1/2" (12.7 mm).

MATERIAL: Stainless steel



EVERIS® LQ2 SERIES CONNECTOR

Everis® LQ2 Series quick disconnect couplings with 1/8" flow are designed for liquid cooling applications. With a small form factor for tight spaces, Everis LQ2 connectors offer a high-flow capacity to optimize system performance. The couplings' patented design offers reliable long-term connections and provides drip-free connections and disconnections to protect sensitive equipment. EPDM, FVMQ and FKM seals are standard options for compatibility with water, glycol and dielectric coolants. For other material and termination options, see your regional CPC™ sales representative.



SPECIFICATIONS

PRESSURE: Vacuum to 200 psi, 13.8 bar

TEMPERATURE:

Operating*: 0°F to 240°F (-17°C to 115°C)

Storage/Shipping:**

-40°F to 240°F (-40°C to 115°C)

MAXIMUM FLOW AT DISCONNECT:

1.00 gal/min at 0 – 100 psi

0.25 gal/min at 101 – 200 psi

MATERIALS:

Main Components: Plated brass

Valves and Thumb latch: Polysulfone

Valve Springs (wetted): Stainless steel

External spring: Stainless steel

Seals: EPDM standard (FKM, FVMQ options)

Compliance: RoHS, REACH

COLOR: Metallic with Cool Blue or Warm Red

TUBING SIZES: 1/4" ID (6.4 mm ID)

LUBRICANTS: Krytox® PFPE

SPILLAGE:

<0.015 cc per disconnect at 0 psi

<0.063 cc per disconnect rated at 200 psi

AIR INCLUSION: <0.04 cc per connect

FLOW COEFFICIENT: Cv ~0.37 (0.3 Kv)

*FVMQ seal option extends operating temperature to -40°F (-40°C)

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™ products in their own application conditions.

**The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.

FEATURES

Non-spill valve

Redundant multi-lobed seals

High flow capacity with low pressure drop

EPDM, FKM or FVMQ seals

Ergonomic body and latch design

Audible click

Color coding

Low profile

Swivel connection

Single-piece options for insert

BENEFITS

Disconnect under pressure with no spills

Extra protection from leak-causing contaminants and debris

Increased system energy efficiency

Compatibility with common coolants (e.g. glycol/water, mineral oil) and application temperatures

Simple, intuitive one-handed operation

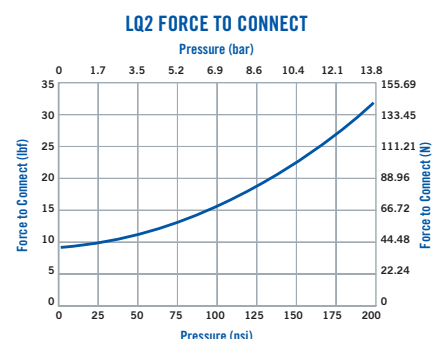
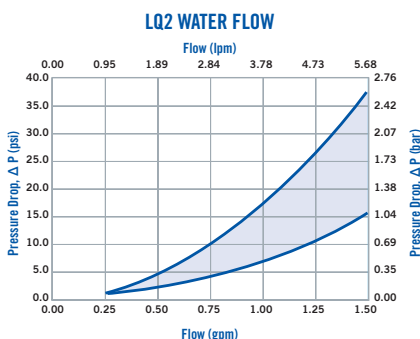
Connection assurance

Instant visual identification of cooling lines

Meets size requirements for space-constrained electronics

Allows user to orient latch or tube to facilitate installation and maintenance

Space saving



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.

EVERIS® LQ2 SERIES DIMENSIONS

COUPLING BODIES - Plated brass

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C	D
	1/4" ID	6.4 mm ID	LQ2D1704LRED		0.82 (20.9)	2.09 (53.1)	1.34 (34.0)	
			LQ2D1704LBLU		0.82 (20.9)	2.09 (53.1)	1.34 (34.0)	
	1/4 SAE-4: 7/16-20 ¹		LQ2D3004RED	9/16"	0.82 (20.9)	1.72 (43.6)	1.34 (34.0)	
			LQ2D3004BLU	9/16"	0.82 (20.9)	1.72 (43.6)	1.34 (34.0)	
	1/4" ID	6.4 mm ID	LQ2D3304LRED		0.79 (20.1)	1.64 (41.5)	1.64 (41.5)	1.03 (26.2)
			LQ2D3304LBLU		0.79 (20.1)	1.64 (41.5)	1.64 (41.5)	1.03 (26.2)
	G1/8 ²		LQ2D3102RED	15 mm	0.82 (20.9)	1.67 (42.5)	1.39 (35.3)	
			LQ2D3102BLU	15 mm	0.82 (20.9)	1.67 (42.5)	1.39 (35.3)	

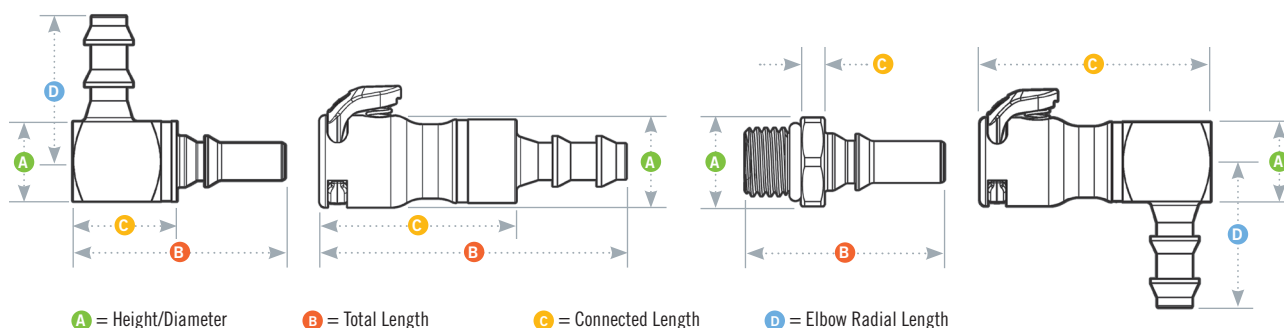
COUPLING INSERTS - Plated brass

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C	D
	1/4" ID	6.4 mm	LQ2D2204LRED		0.56 (14.3)	1.96 (49.8)	0.44 (11.2)	
		ID	LQ2D2204LBLU		0.56 (14.3)	1.96 (49.8)	0.44 (11.2)	
	1/4 SAE-4: 7/16-20 ^{1,3}		LQ2D4604RED	9/16"	0.56 (14.3)	1.28 (32.4)	0.15 (3.8)	
			LQ2D4604BLU	9/16"	0.56 (14.3)	1.28 (32.4)	0.15 (3.8)	
	1/4" ID	6.4 mm	LQ2D2304LRED		0.56 (14.3)	1.51 (38.2)	0.74 (18.7)	1.03 (26.2)
		ID	LQ2D2304LBLU		0.56 (14.3)	1.51 (38.2)	0.74 (18.7)	1.03 (26.2)
	G1/8 ^{2,3}		LQ2D4702RED	15 mm	0.59 (15.0)	1.20 (30.5)	0.15 (3.8)	
			LQ2D4702BLU	15 mm	0.59 (15.0)	1.20 (30.5)	0.15 (3.8)	

All measurements are in inches (millimeters) unless otherwise noted.
For FKM seal option, add V suffix to part number. Example: LQ2D3004REDV
For FVMQ seal option, add FLS suffix to part number. Example: LQ2D3004REDFLS

¹All SAE terminations are compatible with SAE J1926-1 ports.
²All G (BSPP) terminations are compatible with ISO 1179-1 ports.
³One-piece design

PRODUCT DIMENSIONS



cpcworldwide.com/Everis-LQ2

DID YOU KNOW

“Spillage” can be easily misconstrued. Depending upon flow size, a typical QD will emit less than 0.02 cc of fluid, which often equates to a wetted surface on the face of the connector.

EVERIS® LQ4 SERIES CONNECTOR

Everis® LQ4 Series quick disconnect couplings

with 1/4" flow offer a relative high-flow capacity to optimize system performance. The couplings' patented design offers reliable long-term connections and provides drip-free connections and disconnections to protect sensitive equipment. EPDM, FVMQ and FKM seals are standard options for compatibility with water, glycol or dielectric coolants. For other material and termination options see your regional CPC sales representative.



SPECIFICATIONS

PRESSURE: Vacuum to 120 psi, 8.3 bar

TEMPERATURE:

Operating*: 0°F to 240°F (-17°C to 115°C)

Storage/Shipping:**

-40°F to 240°F (-40°C to 115°C)

MAXIMUM FLOW AT DISCONNECT:

3.0 gal/min, 11.3L/min at 0 – 120 psi

MATERIALS:

Main Components: Plated brass

Valves and Thumb latch: Polysulfone

Valve Springs (wetted): Stainless steel

External spring: Stainless steel

Seals: EPDM standard (FKM, FVMQ options)

Compliance: RoHS, REACH

COLOR: Metallic with Cool Blue or Warm Red

TUBING SIZES:

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

LUBRICANTS: Krytox® PFPE

SPILLAGE:

0.025 cc per disconnect rated at 0 psi

0.055 cc per disconnect rated at 120 psi

AIR INCLUSION: 0.25 cc per connect

FLOW COEFFICIENT: Cv ~1.4 (1.2 Kv)

*FVMQ seal option extends operating temperature to -40°F (-40°C)

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™ products in their own application conditions.

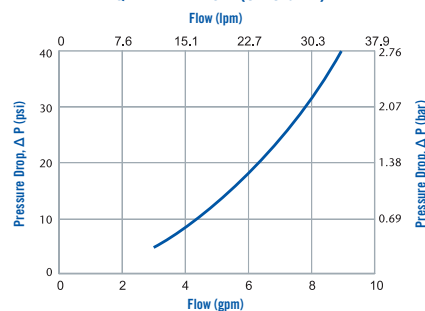
**The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.

FEATURES

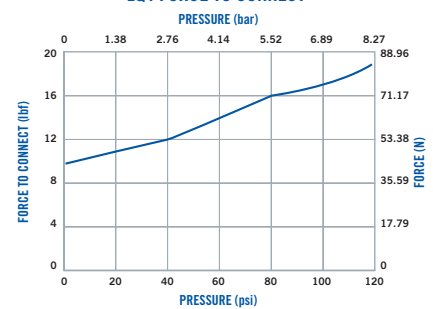
- Non-spill valve → Disconnect under pressure with no spills
- Redundant multi-lobed seals → Extra protection from leak-causing contaminants and debris
- High flow capacity with low pressure drop → Increased system energy efficiency
- EPDM, FKM or FVMQ seals → Compatibility with common coolants (e.g. glycol/water, mineral oil) and application temperatures
- Ergonomic body and latch design → Simple, intuitive one-handed operation
- Audible click → Connection assurance
- Color coding → Instant visual identification of cooling lines
- Low profile → Meets size requirements for space-constrained electronics
- Swivel connection → Allows user to orient latch or tube to facilitate installation and maintenance
- Single-piece options for insert → Space saving

BENEFITS

LQ4 WATER FLOW (0-10 GPM)

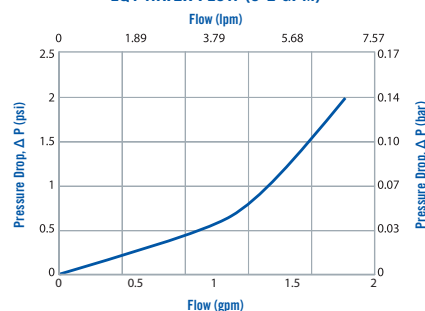


LQ4 FORCE TO CONNECT



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.

LQ4 WATER FLOW (0-2 GPM)



cpcworldwide.com/Everis-LQ4

EVERIS® LQ4 SERIES DIMENSIONS

COUPLING BODIES - Plated brass

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C
	IN-LINE LOCKING HOSE BARB	1/4" ID	6.4 mm ID	LQ4D17004LRED	0.98 (24.8)	2.60 (65.9)	1.85 (46.9)
	1/4" ID	6.4 mm ID	LQ4D17004LBLU	0.98 (24.8)	2.60 (65.9)	1.85 (46.9)	
	3/8" ID	9.5 mm ID	LQ4D17006LRED	0.98 (24.8)	2.69 (68.2)	1.81 (46.0)	
	3/8" ID	9.5 mm ID	LQ4D17006LBLU	0.98 (24.8)	2.69 (68.2)	1.81 (46.0)	
	IN-LINE HOSE BARB	1/4" ID	6.4 mm ID	LQ4D17004RED	0.98 (24.8)	2.50 (63.4)	1.85 (46.9)
	1/4" ID	6.4 mm ID	LQ4D17004BLU	0.98 (24.8)	2.50 (63.4)	1.85 (46.9)	
	3/8" ID	9.5 mm ID	LQ4D17006RED	0.98 (24.8)	2.50 (63.4)	1.85 (46.9)	
	3/8" ID	9.5 mm ID	LQ4D17006BLU	0.98 (24.8)	2.50 (63.4)	1.85 (46.9)	
	IN-LINE STRAIGHT THREAD SAE	1/4 SAE-4: 7/16-20 ¹	LQ4D30004RED	13/16"	0.98 (24.8)	2.21 (56.0)	1.85 (46.9)
	1/4 SAE-4: 7/16-20 ¹	LQ4D30004BLU	13/16"	0.98 (24.8)	2.21 (56.0)	1.85 (46.9)	
	3/8 SAE-6: 9/16-18 ¹	LQ4D30006RED	13/16"	0.98 (24.8)	2.24 (56.8)	1.85 (46.9)	
	3/8 SAE-6: 9/16-18 ¹	LQ4D30006BLU	13/16"	0.98 (24.8)	2.24 (56.8)	1.85 (46.9)	
	IN-LINE PIPE THREAD	1/4" NPT	LQ4D10004RED	13/16"	0.98 (24.8)	2.35 (59.6)	1.85 (46.9)
	1/4" NPT	LQ4D10004BLU	13/16"	0.98 (24.8)	2.35 (59.6)	1.85 (46.9)	
	3/8" NPT	LQ4D10006RED	13/16"	0.98 (24.8)	2.35 (59.6)	1.85 (46.9)	
	3/8" NPT	LQ4D10006BLU	13/16"	0.98 (24.8)	2.35 (59.6)	1.85 (46.9)	
	IN-LINE PTF	1/4" ID x 3/8" OD	LQ4D13006RED	13/16"	0.98 (24.8)	2.50 (63.4)	1.85 (46.9)
	1/4" ID x 3/8" OD	LQ4D13006BLU	13/16"	0.98 (24.8)	2.50 (63.4)	1.85 (46.9)	
	IN-LINE THREAD G / BSPP	G1/4 ²	LQ4D31004RED	20 mm	0.98 (24.8)	2.29 (58.0)	1.89 (47.9)
	G1/4 ²	LQ4D31004BLU	20 mm	0.98 (24.8)	2.29 (58.0)	1.89 (47.9)	
	G3/8 ²	LQ4D31006RED	22 mm	0.98 (24.8)	2.29 (58.0)	1.89 (47.9)	
	G3/8 ²	LQ4D31006BLU	22 mm	0.98 (24.8)	2.29 (58.0)	1.89 (47.9)	

COUPLING INSERTS - Plated brass

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C
	IN-LINE LOCKING HOSE BARB	1/4" ID	6.4 mm ID	LQ4D22004LRED	0.80 (20.3)	2.44 (62.1)	0.63 (16.0)
	1/4" ID	6.4 mm ID	LQ4D22004LBLU	0.80 (20.3)	2.44 (62.1)	0.63 (16.0)	
	3/8" ID	9.5 mm ID	LQ4D22006LRED	0.80 (20.3)	2.53 (64.4)	0.59 (15.1)	
	3/8" ID	9.5 mm ID	LQ4D22006LBLU	0.80 (20.3)	2.53 (64.4)	0.59 (15.1)	
	IN-LINE HOSE BARB	1/4" ID	6.4 mm ID	LQ4D22004RED	0.80 (20.3)	2.34 (59.5)	0.63 (16.0)
	1/4" ID	6.4 mm ID	LQ4D22004BLU	0.80 (20.3)	2.34 (59.5)	0.63 (16.0)	
	3/8" ID	9.5 mm ID	LQ4D22006RED	0.80 (20.3)	2.34 (59.5)	0.63 (16.0)	
	3/8" ID	9.5 mm ID	LQ4D22006BLU	0.80 (20.3)	2.34 (59.5)	0.63 (16.0)	
	IN-LINE STRAIGHT THREAD SAE	1/4 SAE-4: 7/16-20 ¹	LQ4D46004RED	13/16"	0.88 (22.4)	2.05 (52.2)	0.63 (16.0)
	1/4 SAE-4: 7/16-20 ¹	LQ4D46004BLU	13/16"	0.88 (22.4)	2.05 (52.2)	0.63 (16.0)	
	3/8 SAE-6: 9/16-18 ^{1,3}	LQ4D46006RED	11/16"	0.75 (19.1)	1.65 (41.8)	0.19 (4.8)	
	3/8 SAE-6: 9/16-18 ^{1,3}	LQ4D46006BLU	11/16"	0.75 (19.1)	1.65 (41.8)	0.19 (4.8)	
	IN-LINE PIPE THREAD	1/4" NPT	LQ4D24004RED	13/16"	0.88 (22.4)	2.19 (55.7)	0.63 (16.0)
	1/4" NPT	LQ4D24004BLU	13/16"	0.88 (22.4)	2.19 (55.7)	0.63 (16.0)	
	3/8" NPT	LQ4D24006RED	13/16"	0.88 (22.4)	2.19 (55.7)	0.63 (16.0)	
	3/8" NPT	LQ4D24006BLU	13/16"	0.88 (22.4)	2.19 (55.7)	0.63 (16.0)	
	IN-LINE PTF	1/4" ID x 3/8" OD	LQ4D20006RED	13/16"	0.88 (22.4)	2.34 (59.5)	0.63 (16.0)
	1/4" ID x 3/8" OD	LQ4D20006BLU	13/16"	0.88 (22.4)	2.34 (59.5)	0.63 (16.0)	
	IN-LINE STRAIGHT THREAD G / BSPP	G1/4 ²	LQ4D47004RED	20 mm	0.85 (21.6)	2.13 (54.2)	0.67 (17.0)
	G1/4 ²	LQ4D47004BLU	20 mm	0.85 (21.6)	2.13 (54.2)	0.67 (17.0)	
	G3/8 ^{2,3}	LQ4D47006RED	22 mm	0.93 (23.6)	1.66 (42.0)	0.19 (4.8)	
	G3/8 ^{2,3}	LQ4D47006BLU	22 mm	0.93 (23.6)	1.66 (42.0)	0.19 (4.8)	

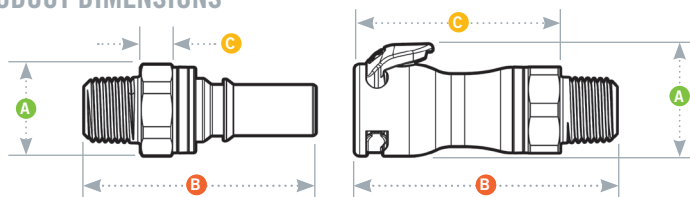
For FKM seal option, add V suffix to part number. Example: LQ4D30006BLUV
For FVMQ seal option, add FLS suffix to part number. Example: LQ4D30006BLUFLS

¹All SAE terminations are compatible with SAE J1926-1 ports.

²All G (BSPP) terminations are compatible with ISO 1179-1 ports.

³One-piece design

PRODUCT DIMENSIONS



A = Height/Diameter

B = Total Length

C = Connected Length

All measurements are in inches (millimeters) unless otherwise noted.

EVERIS® LQ4S SERIES CONNECTOR

Everis® LQ4S Series quick disconnect couplings

Offering a notable 1/4" flow relative to external dimensions, the couplings' patented design offers reliable long-term connections and dry break to protect sensitive equipment. EPDM seals are standard. For other seal options or terminations, contact CPC.



SPECIFICATIONS

PRESSURE: Vacuum to 120 psi, 8.3 bar

TEMPERATURE:

Operating: 0°F to 240°F (-17°C to 115°C)

Storage/Shipping*:

-40°F to 167°F (-40°C to 75°C)

MAXIMUM FLOW AT DISCONNECT:

3.0 gal/min, 11.3L/min at 0 – 120 psi

MATERIALS:

Main Components:

Stainless Steel 303/304

Valves and Thumb Latch: Polyphenylsulfone (PPSU)

Valve Springs (wetted): Stainless steel

External Spring: Stainless steel

Seals: EPDM

Compliance: RoHS, REACH

COLOR:

Steel with Black, Cool Blue or Warm Red

TUBING SIZES:

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

LUBRICANTS: Krytox® PFPE

SPILLAGE:

<0.025 cc per disconnect rated at 0 psi

<0.055 cc per disconnect rated at 120 psi

INCLUSION: <0.25 cc per connect

FLOW COEFFICIENT:

Cv~1.4 Max (1.210 Kv)

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™ products in their own application conditions.

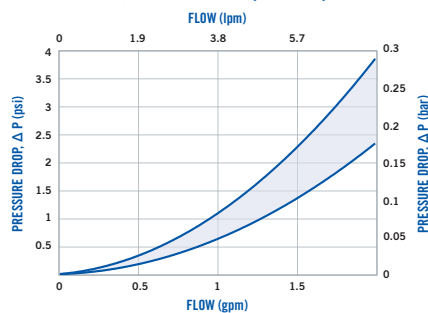
*The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.

FEATURES

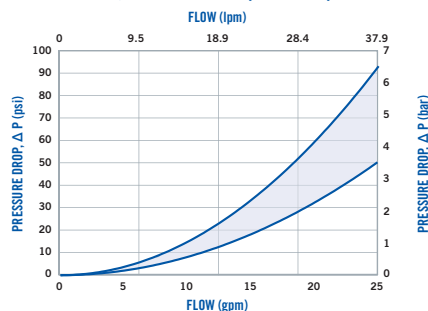
- Dry break, non-spill valves —————> Disconnect under pressure with no spills
- Redundant multi-lobed seals —————> Extra protection from leak-causing contaminants and debris
- High flow capacity with low pressure drop —————> Increased system energy efficiency
- EPDM seals —————> Compatibility with common coolants and application temperatures
- Ergonomic body and latch design —————> Simple intuitive one handed operation and audible click signals secure connection
- Color coding —————> Instant visual identification of cooling lines
- Low profile —————> Meets size requirements for space-constrained electronics
- Barbed and threaded terminations —————> System design flexibility, including providing options

BENEFITS

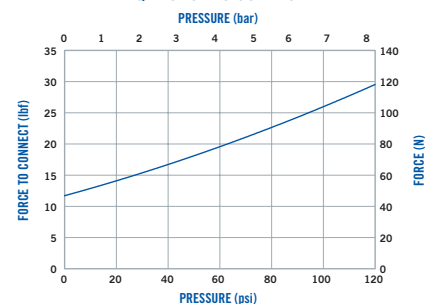
LQ4S WATER FLOW (0-2 GPM)



LQ4S WATER FLOW (0-10 GPM)



LQ4 FORCE TO CONNECT



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.

EVERIS® LQ4S SERIES DIMENSIONS

COUPLING BODIES - Stainless steel

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	A	B	C
 IN-LINE HOSE BARB	1/4" ID	6.4 mm ID	LQ4SD17004	0.97 (24.6)	2.50 (63.5)	1.85 (47.0)
	1/4" ID	6.4 mm ID	LQ4SD17004BLU	0.97 (24.6)	2.50 (63.5)	1.85 (47.0)
	1/4" ID	6.4 mm ID	LQ4SD17004RED	0.97 (24.6)	2.50 (63.5)	1.85 (47.0)
 IN-LINE LOCKING HOSE BARB	1/4" ID	6.4 mm ID	LQ4SD17004L	0.97 (24.6)	2.60 (66.0)	1.85 (47.0)
	1/4" ID	6.4 mm ID	LQ4SD17004LBLU	0.97 (24.6)	2.60 (66.0)	1.85 (47.0)
	1/4" ID	6.4 mm ID	LQ4SD17004LRED	0.97 (24.6)	2.60 (66.0)	1.85 (47.0)
	3/8" ID	9.5 mm ID	LQ4SD17006L	0.97 (24.6)	2.71 (68.8)	1.83 (46.5)
	3/8" ID	9.5 mm ID	LQ4SD17006LBLU	0.97 (24.6)	2.71 (68.8)	1.83 (46.5)
	3/8" ID	9.5 mm ID	LQ4SD17006LRED	0.97 (24.6)	2.71 (68.8)	1.83 (46.5)

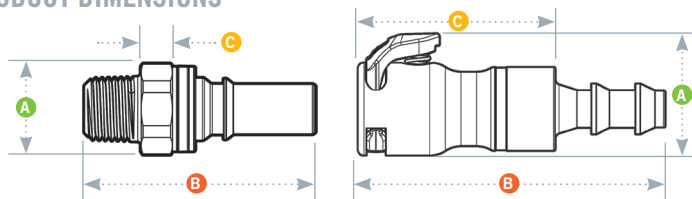
COUPLING INSERTS - Stainless steel

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	A	B	C
 IN-LINE STRAIGHT THREAD PORT SAE	3/8 SAE-6: 9/16-18 ¹	6.4 mm ID	LQ4SD46006	0.74 (18.8)	2.44 (62.0)	0.19 (4.8)
 IN-LINE G THREAD (BSPP)	G3/8	6.4 mm ID	LQ4SD47006	0.74 (18.8)	2.44 (62.0)	0.19 (4.8)

For FKM seal option, add V suffix to part number. Example: LQ4D30006BLUV

¹All SAE terminations are compatible with SAE J1926-1 ports.

PRODUCT DIMENSIONS



- A = Height/Diameter
- B = Total Length
- C = Connected Length

All measurements are in inches (millimeters) unless otherwise noted.

EVERIS® LQ6 SERIES CONNECTOR

Everis® LQ6 Series quick disconnect couplings feature 3/8" flow for liquid cooling of electronics applications. Everis LQ6 connectors offer a high-flow capacity to optimize liquid cooling system performance. The couplings' patented design offers reliable long-term connections and the non-spill valves provide drip-free connections and disconnections to protect sensitive equipment. FKM, FVMQ and EPDM seals are standard options for compatibility with dielectric or glycol/water coolants. For other material and termination options see your regional CPC sales representative.



SPECIFICATIONS

PRESSURE: Vacuum to 120 psi, 8.3 bar

TEMPERATURE:

Operating*: 0°F to 240°F (-17°C to 115°C)

Storage/Shipping**:

-40°F to 240°F (-40°C to 115°C)

MAXIMUM FLOW AT DISCONNECT:

5.0 gal/min, 18.9L/min at 0 – 120 psi

MATERIALS:

Main Components: Plated brass

Valves and Thumb latch: Polysulfone

Valve Springs (wetted): Stainless steel

External spring: Stainless steel

Seals: EPDM standard (FKM, FVMQ options)

Compliance: RoHS, REACH

COLOR: Metallic with Cool Blue or Warm Red

TUBING SIZES:

3/8" to 1/2" ID, 9.5 mm to 12.7 mm ID

LUBRICANTS: Krytox® PFPE

SPILLAGE:

0.03 cc per disconnect rated at 0 psi

0.03 cc per disconnect rated at 120 psi

AIR INCLUSION: 0.33 cc per connect

FLOW COEFFICIENT: Cv ~2.2 (1.9 Kv)

*FVMQ seal option extends operating temperature to -40°F (-40°C)

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™ products in their own application conditions.

**The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.

FEATURES

Non-spill valve

Redundant multi-lobed seals

High flow capacity with low pressure drop

EPDM, FKM or FVMQ seals

Ergonomic body and latch design

Audible click

Color coding

Low profile

Swivel connection

Single-piece options for insert

BENEFITS

Disconnect under pressure with no spills

Extra protection from leak-causing contaminants and debris

Increased system energy efficiency

Compatibility with common coolants (e.g. glycol/water, mineral oil) and application temperatures

Simple, intuitive one-handed operation

Connection assurance

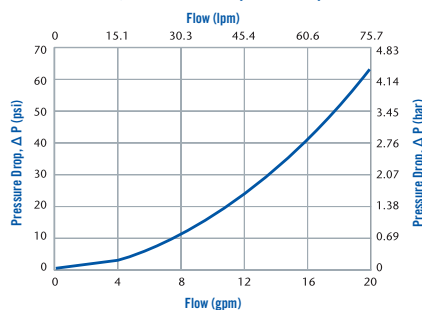
Instant visual identification of cooling lines

Meets size requirements for space-constrained electronics

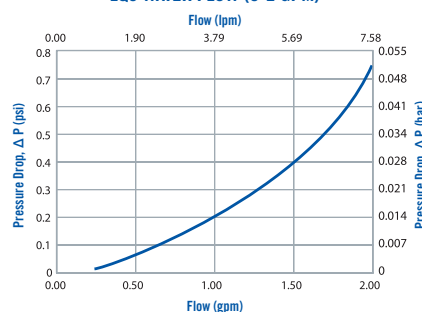
Allows user to orient latch or tube to facilitate installation and maintenance

Space saving

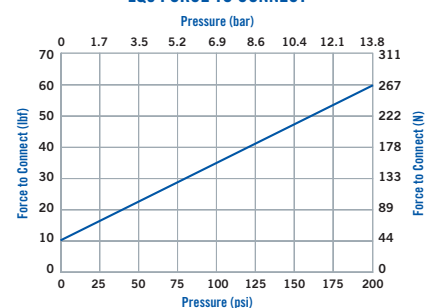
LQ6 WATER FLOW (0-20 GPM)



LQ6 WATER FLOW (0-2 GPM)



LQ6 FORCE TO CONNECT



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.



cpcworldwide.com/Everis-LQ6

EVERIS® LQ6 SERIES DIMENSIONS

COUPLING BODIES - Plated brass

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C
	IN-LINE LOCKING HOSE BARB	3/8" ID	9.5 mm ID	LQ6D17006LRED	1.19 (30.1)	2.96 (75.1)	2.08 (52.8)
		3/8" ID	9.5 mm ID	LQ6D17006LBLU	1.19 (30.1)	2.96 (75.1)	2.08 (52.8)
		1/2" ID	12.7 mm ID	LQ6D17008LRED	1.19 (30.1)	3.08 (78.2)	2.08 (52.8)
		1/2" ID	12.7 mm ID	LQ6D17008LBLU	1.19 (30.1)	3.08 (78.2)	2.08 (52.8)
	IN-LINE HOSE BARB	3/8" ID	9.5 mm ID	LQ6D17006RED	1.19 (30.1)	2.73 (69.3)	2.08 (52.8)
		3/8" ID	9.5 mm ID	LQ6D17006BLU	1.19 (30.1)	2.73 (69.3)	2.08 (52.8)
		1/2" ID	12.7 mm ID	LQ6D17008RED	1.19 (30.1)	2.73 (69.3)	2.08 (52.8)
		1/2" ID	12.7 mm ID	LQ6D17008BLU	1.19 (30.1)	2.73 (69.3)	2.08 (52.8)
	IN-LINE STRAIGHT THREAD PORT SAE	3/8 SAE-6: 9/16-18 ¹		LQ6D30006RED	1" 1.19 (30.1)	2.47 (62.7)	2.08 (52.8)
		3/8 SAE-6: 9/16-18 ¹		LQ6D30006BLU	1" 1.19 (30.1)	2.47 (62.7)	2.08 (52.8)
		1/2 SAE-8: 3/4-16 ¹		LQ6D30008RED	1" 1.19 (30.1)	2.52 (64.0)	2.08 (52.9)
		1/2 SAE-8: 3/4-16 ¹		LQ6D30008BLU	1" 1.19 (30.1)	2.52 (64.0)	2.08 (52.9)
	IN-LINE PIPE THREAD	3/8" NPT		LQ6D10006RED	1" 1.19 (30.1)	2.58 (65.5)	2.08 (52.8)
		3/8" NPT		LQ6D10006BLU	1" 1.19 (30.1)	2.58 (65.5)	2.08 (52.8)
	IN-LINE PTF	3/8" ID x 1/2" OD		LQ6D13008RED	1" 1.19 (30.1)	2.91 (73.9)	2.09 (53.0)
		3/8" ID x 1/2" OD		LQ6D13008BLU	1" 1.19 (30.1)	2.91 (73.9)	2.09 (53.0)
	IN-LINE THREAD G / BSPP	G3/8 ²		LQ6D31006RED	26 mm 1.19 (30.1)	2.59 (67.3)	2.15 (54.6)
		G3/8 ²		LQ6D31006BLU	26 mm 1.19 (30.1)	2.59 (67.3)	2.15 (54.6)
		G1/2 ²		LQ6D31008RED	26 mm 1.19 (30.1)	2.59 (67.3)	2.15 (54.6)
		G1/2 ²		LQ6D31008BLU	26 mm 1.19 (30.1)	2.59 (67.3)	2.15 (54.6)

COUPLING INSERTS - Plated brass

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C
	IN-LINE LOCKING HOSE BARB	3/8" ID	9.5 mm ID	LQ6D22006LRED	1.0 (25.3)	2.79 (70.7)	0.65 (16.4)
		3/8" ID	9.5 mm ID	LQ6D22006LBLU	1.0 (25.3)	2.79 (70.7)	0.65 (16.4)
		1/2" ID	12.7 mm ID	LQ6D22008LRED	1.0 (25.3)	2.91 (73.9)	0.65 (16.4)
		1/2" ID	12.7 mm ID	LQ6D22008LBLU	1.0 (25.3)	2.91 (73.9)	0.65 (16.4)
	IN-LINE HOSE BARB	3/8" ID	9.5 mm ID	LQ6D22006RED	1.0 (25.3)	2.56 (65.0)	0.65 (16.4)
		3/8" ID	9.5 mm ID	LQ6D22006BLU	1.0 (25.3)	2.56 (65.0)	0.65 (16.4)
		1/2" ID	12.7 mm ID	LQ6D22008RED	1.0 (25.3)	2.56 (65.0)	0.65 (16.4)
		1/2" ID	12.7 mm ID	LQ6D22008BLU	1.0 (25.3)	2.56 (65.0)	0.65 (16.4)
	IN-LINE STRAIGHT THREAD PORT SAE	3/8 SAE-6: 9/16-18 ¹		LQ6D46006RED	1" 1.10 (27.9)	2.30 (58.4)	0.65 (16.4)
		3/8 SAE-6: 9/16-18 ¹		LQ6D46006BLU	1" 1.10 (27.9)	2.30 (58.4)	0.65 (16.4)
		1/2 SAE-8: 3/4-16 ^{1,3}		LQ6D46008RED	7/8" 1.10 (27.9)	1.95 (49.6)	0.25 (6.4)
		1/2 SAE-8: 3/4-16 ^{1,3}		LQ6D46008BLU	7/8" 1.10 (27.9)	1.95 (49.6)	0.25 (6.4)
	IN-LINE PIPE THREAD	3/8" NPT		LQ6D24006RED	1" 1.10 (27.9)	2.41 (61.2)	0.65 (16.4)
		3/8" NPT		LQ6D24006BLU	1" 1.10 (27.9)	2.41 (61.2)	0.65 (16.4)
	IN-LINE PTF	3/8" ID x 1/2" OD		LQ6D20008RED	1" 1.10 (27.9)	2.74 (69.6)	0.65 (16.6)
		3/8" ID x 1/2" OD		LQ6D20008BLU	1" 1.10 (27.9)	2.74 (69.6)	0.65 (16.6)
	IN-LINE THREAD G / BSPP	G3/8 ²		LQ6D47006RED	26 mm 1.12 (28.4)	2.42 (61.5)	0.72 (18.2)
		G3/8 ²		LQ6D47006BLU	26 mm 1.12 (28.4)	2.42 (61.5)	0.72 (18.2)
		G1/2 ^{2,3}		LQ6D47008RED	26 mm 1.12 (28.4)	2.04 (51.8)	0.28 (7.0)
		G1/2 ^{2,3}		LQ6D47008BLU	26 mm 1.12 (28.4)	2.04 (51.8)	0.28 (7.0)

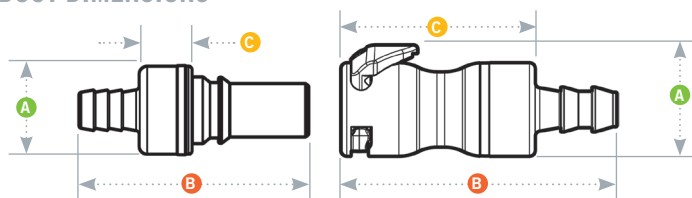
For FKM seal option, add V suffix to part number. Example: LQ6D17006BLUV
For FVMQ seal option, add FLS suffix to part number. Example: LQ6D17006BLUFLS

¹All SAE terminations are compatible with SAE J1926-1 ports.

²All G (BSPP) terminations are compatible with ISO 1179-1 ports.

³One-piece design

PRODUCT DIMENSIONS



A = Height/Diameter

B = Total Length

C = Connected Length

All measurements are in inches (millimeters) unless otherwise noted.

cpcworldwide.com/LC-Chem-Comp-Guide

EVERIS® LQ8 SERIES CONNECTOR

Everis® LQ8 Series quick disconnect couplings feature 1/2" flow for liquid cooling of electronics applications. Specifically designed for thermal management applications, Everis LQ8 connectors offer a high-flow capacity to optimize liquid cooling system performance. They provide ultra-reliable, dripless connections and disconnections for ease of use and peace of mind given proximity to sensitive or valuable equipment components. LQ8 quick disconnects (QDs) use a patented design which offers reliable long-term connections. EPDM seals are a standard for compatibility with glycol/water coolants. For other material and termination options contact CPC; sales representatives and applications engineers are available to assist with any questions you may have.



SPECIFICATIONS

PRESSURE: Vacuum to 120 psi, 8.3 bar

TEMPERATURE:

Operating: 0°F to 240°F (-17°C to 115°C)

Storage/Shipping*:

-40°F to 240°F (-40°C to 115°C)

MATERIALS:

Main Components: Plated brass

Valves and thumb latch: Polyphenylsulfone (PPSU)

Valve Springs (wetted): Stainless steel

External spring: Stainless steel

Seals: EPDM

Compliance: RoHS, REACH

COLOR: Metallic with Black

TUBING SIZES: 5/8" ID (15.9 mm ID)

LUBRICANTS: Krytox® PFPE

FORCE TO CONNECT: 21 lbs. typical at 0 psi

SPILLAGE:

0.02 cc per disconnect rated at 0 psi

0.07 cc per disconnect rated at 60 psi

AIR INCLUSION: 0.60 cc per connect

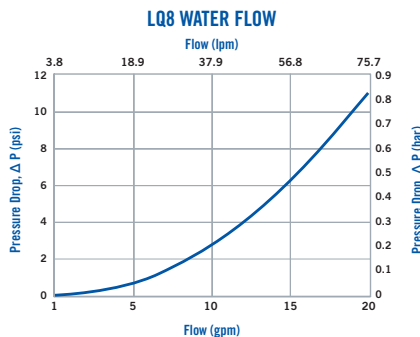
FLOW COEFFICIENT: Cv ~ 6.0 (5.2 Kv)

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™ products in their own application conditions.

*The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.

FEATURES

- | | | |
|---|---|--|
| Non-spill valve | → | Disconnect under pressure with no spills |
| Redundant, multi-lobed seals | → | Extra protection from leak-causing contaminants and debris |
| High flow capacity with low pressure drop | → | Increased system energy efficiency |
| EPDM seals | → | Compatibility with common coolants (e.g., glycol/water) |
| Ergonomic body and latch design | → | Simple, intuitive, one-handed operation |
| Audible click | → | Connection assurance |
| Low profile | → | Meets size requirements for space-constrained electronics applications |
| Single-piece options for insert and body | → | Space saving |



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.

DID YOU KNOW

Not all elastomers are compatible with all fluids used in liquid cooling. And low temperature seals may be needed for frigid environments.



cpcworldwide.com/Everis-LQ8

These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.

EVERIS® LQ8 SERIES DIMENSIONS

COUPLING BODIES - Plated brass

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C
 IN-LINE LOCKING HOSE BARB	5/8" ID	15.9 mm ID	LQ8D17010L		1.58 (40.1)	4.25 (108.0)	2.73 (69.3)
 IN-LINE STRAIGHT THREAD SAE	3/4 SAE-12: 1-1/16-12 ^{1,3}		LQ8D30012	1 - 1/4"	1.58 (40.1)	2.58 (65.6)	2.15 (54.6)
 IN-LINE STRAIGHT THREAD G / BSPP	G 3/4 ²		LQ8D31012		1.58 (40.1)	3.30 (83.8)	2.80 (71.1)

COUPLING INSERTS - Plated brass

TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C
 IN-LINE LOCKING HOSE BARB	5/8" ID	15.9 mm ID	LQ8D22010L		1.30 (33.0)	4.00 (101.6)	0.80 (20.4)
 IN-LINE STRAIGHT THREAD SAE	3/4 SAE-12: 1-1/16-12 ^{1,3}		LQ8D46012	1 - 1/4"	1.30 (33.0)	2.40 (61.0)	0.22 (5.6)
 IN-LINE STRAIGHT THREAD G / BSPP	G 3/4 ^{2,3}		LQ8D47012	34 mm	1.40 (35.6)	2.40 (61.0)	0.22 (5.6)

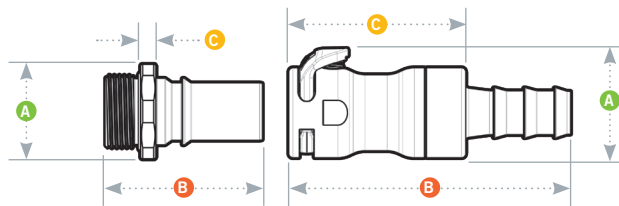
All measurements are in inches (millimeters) unless otherwise noted.

¹All SAE terminations are compatible with SAE J1926-1 ports.

²All G (BSPP) terminations are compatible with ISO 1179-1 ports.

³One-piece design

PRODUCT DIMENSIONS



- A = Height/Diameter
- B = Total Length
- C = Connected Length

The Impact of Ambient Conditions on Liquid Cooling

Download tech guide to learn about how the environment impacts liquid cooling systems and their components.



READ
TECH GUIDE



cpcworldwide.com/LC-Chem-Comp-Guide

EVERIS® BLQ2 SERIES CONNECTOR

Everis® BLQ2 Series quick disconnect couplings provide ultra-reliable, dripless connections and disconnections that protect valuable electronics. Designed specifically for rack mounted liquid cooling applications, the Everis BLQ2 utilizes patented technology that eliminates drips and is able to withstand long-term connection.



SPECIFICATIONS

PRESSURE:

Vacuum to 200 psi, 13.8 bar

TEMPERATURE:

Operating: 0°F to 240°F (-17°C to 115°C)

Storage/Shipping*:

-40°F to 240°F (-40°C to 115°C)

MAXIMUM FLOW AT DISCONNECT:

1.00 gal/min at 0 - 100 psi

.025 gal/min at 101 - 200 psi

MATERIALS:

Main Components: Plated brass

Valves: Polysulfone

Valve Springs (wetted): Stainless steel

Seals: EPDM

Compliance: RoHS, REACH

COLOR: Metallic

THREAD SIZES: 1/4" SAE-4

LUBRICANTS: Krytox® PFPE

SPILLAGE:

<0.015 cc per disconnect at 0 psi;

<0.063 cc per disconnect at 200 psi

AIR INCLUSION: <0.04 cc per connect

FLOW COEFFICIENT: Cv ~ 0.4 (0.3 Kv)

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™ products in their own application conditions.

*The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.

FEATURES

Non-spill valve

Redundant multi-lobed seals

Innovative valve design

Ruggedness

Axial engagement tolerance

Single-piece options for body & insert

BENEFITS

Disconnect under pressure with no spills

Extra protection from leak-causing contaminants and debris

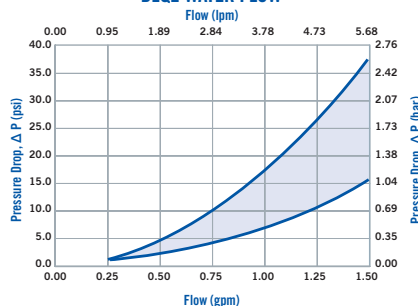
Enables extended periods in connected state

Able to withstand long-term, repeated use

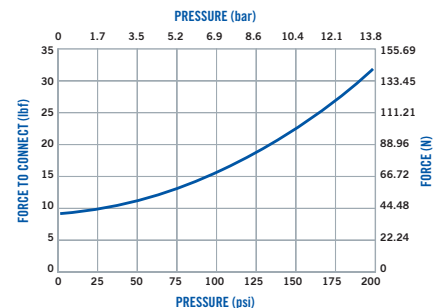
Allows full flow even when not fully engaged

Space saving

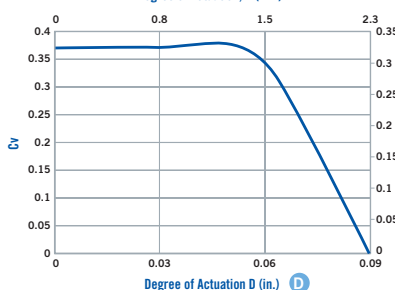
BLQ2 WATER FLOW



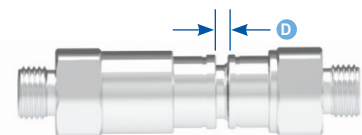
BLQ2 FORCE TO CONNECT



BLQ2 ACTUATION vs Cv



ACTUATION LENGTH



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.

EVERIS® BLQ2 SERIES DIMENSIONS

COUPLING BODIES - Plated brass



TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C
IN-LINE STRAIGHT THREAD SAE	1/4 SAE-4: 7/16-20 ^{1,2}	N/A	BLQ2D3004	9/16"	0.62 (15.7)	1.31 (33.3)	0.95 (24.1)

COUPLING INSERTS - Plated brass



TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C
IN-LINE STRAIGHT THREAD SAE	1/4 SAE-4: 7/16-20 ^{1,2}	N/A	BLQ2D4604	9/16"	0.62 (15.7)	1.32 (33.3)	0.15 (3.8)

All measurements are in inches (millimeters) unless otherwise noted.

¹All SAE terminations are compatible with SAE J1926-1 ports

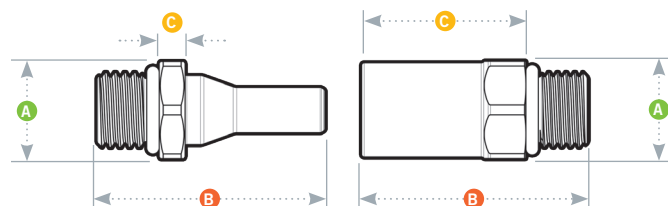
²One-piece design

PRODUCT DIMENSIONS



SCAN

cpcworldwide.com/Everis-BLQ2



A = Height/Diameter

B = Total Length

C = Connected Length

Everis® QD Reliability

QDs designed for long-term, connected use with non-spill valves for dripless connection and disconnection.



EVERIS® BLQ4 SERIES CONNECTOR

Everis® BLQ4 Series quick disconnect couplings provide ultra-reliable, dripless connections and disconnections that protect valuable electronics. Designed specifically for rack mounted liquid cooling applications, Everis BLQ4 utilizes patented technology that eliminates drips and is designed for long-term connected use.

SPECIFICATIONS

PRESSURE:

Vacuum to 120 psi, 8.3 bar

TEMPERATURE:

Operating: 0°F to 240°F (-17°C to 115°C)

Storage/Shipping*:

-40°F to 240°F (-40°C to 115°C)

MAXIMUM FLOW AT DISCONNECT:

3.0 gal/min, 11.3L/min

ENGAGEMENT TOLERANCE:

Coupling must be within 1/8" (3 mm) of fully engaged to achieve maximum flow.

MATERIALS:

Main Components: Plated brass

Valves: Polysulfone

Valve Springs (wetted): Stainless steel

Seals: EPDM

Compliance: RoHS, REACH

COLOR:

Metallic

THREAD SIZES:

Insert: G 1/4, G 3/8, SAE-4, SAE-6

Body: G 1/4, G 3/8, SAE-4, SAE-6, SAE-8

LUBRICANTS:

Krytox® PFPE

SPILLAGE:

<0.025 cc per disconnect at 0 psi;

<0.055 cc per disconnect at 120 psi

AIR INCLUSION:

0.20 cc per connect

FLOW COEFFICIENT:

Cv ~1.4 (1.2 Kv)

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™ products in their own application conditions.

*The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.



FEATURES

Non-spill valves

BENEFITS

Disconnect under pressure with no spills

Redundant seals

Extra protection from leak-causing contaminants and debris

Innovative valve design

Enables extended periods in connected state

Rugged construction

Able to withstand long-term, repeated use

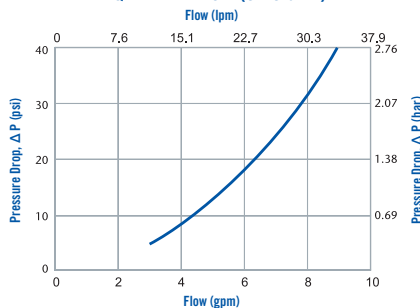
Axial engagement tolerance

Allows full flow even when not fully engaged

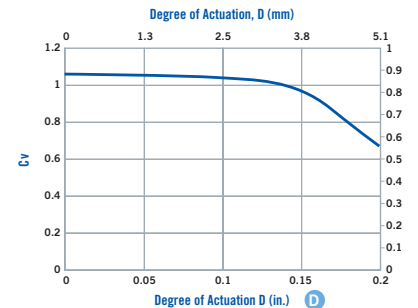
Single-piece options for body & insert

Space saving

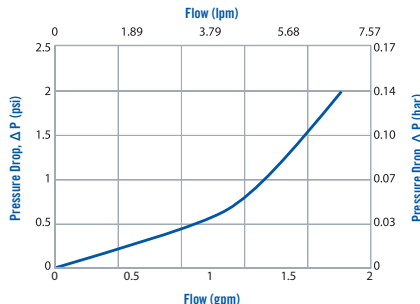
BLQ4 WATER FLOW (0-10 GPM)



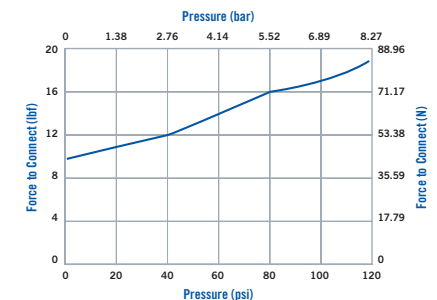
BLQ4 ACTUATION vs Cv



BLQ4 WATER FLOW (0-2 GPM)



BLQ4 FORCE TO CONNECT



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.

EVERIS® BLQ4 SERIES DIMENSIONS

COUPLING BODIES - Plated brass



TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C
IN-LINE STRAIGHT THREAD SAE	1/4 SAE-4: 7/16-20 ¹	N/A	BLQ4D30004	22 mm	0.93 (23.6)	2.05 (52.1)	1.64 (41.7)
	3/8 SAE-6: 9/16-18 ¹	N/A	BLQ4D30006	22 mm	0.93 (23.6)	2.05 (52.1)	1.64 (41.7)
	1/2 SAE-8: 3/4-16 ^{1,3}	N/A	BLQ4D30008	22 mm	0.90 (22.9)	1.60 (40.6)	1.16 (29.5)
IN-LINE STRAIGHT THREAD G / BSPP	G 1/4 (BSPP) ²	N/A	BLQ4D31004	22 mm	0.93 (23.6)	2.11 (53.6)	1.70 (43.2)
	G 3/8 (BSPP) ²	N/A	BLQ4D31006	22 mm	0.93 (23.6)	2.11 (53.6)	1.70 (43.2)

COUPLING INSERTS - Plated brass



TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	SHUTOFF	HEX	A	B	C
IN-LINE STRAIGHT THREAD SAE	1/4 SAE-4: 7/16-20 ¹	N/A	BLQ4D46004	22 mm	0.93 (23.6)	1.99 (50.5)	0.69 (17.5)
	3/8 SAE-6: 9/16-18 ^{1,3}	N/A	BLQ4D46006	22 mm	0.75 (19.1)	1.49 (37.8)	0.19 (4.8)
IN-LINE STRAIGHT THREAD G / BSPP	G 1/4 (BSPP) ²	N/A	BLQ4D47004	22 mm	0.93 (23.6)	2.05 (52.1)	0.75 (19.1)
	G 3/8 (BSPP) ^{2,3}	N/A	BLQ4D47006	22 mm	0.93 (23.6)	1.49 (37.8)	0.19 (4.8)

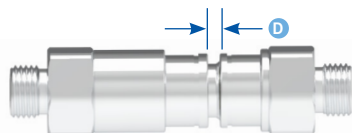
All measurements are in inches (millimeters) unless otherwise noted. Tubing must meet stated inside and outside diameters.

¹All SAE terminations are compatible with SAE J1926-1 ports.

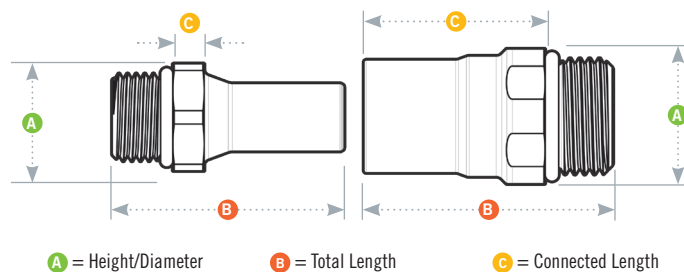
²All G (BSPP) terminations are compatible with ISO 1179-1 ports.

³One-piece design.

ACTUATION LENGTH



PRODUCT DIMENSIONS



cpcworldwide.com/
Everis-BLQ4

EVERIS® BLQ6 SERIES CONNECTOR

Everis® BLQ6 Series quick disconnect couplings Ultra-reliable, no-drip connections for thermal management to help protect valuable electronic systems. Designed specifically for blind mate liquid cooling applications, the BLQ6 Series uses patented technology that eliminates drips and is specifically designed to withstand long-term connection. An optional accessory kit is available for panel mount connections.



SPECIFICATIONS

PRESSURE: Vacuum to 120 psi, 8.3 bar

TEMPERATURE:

Operating: 0°F to 240°F (-17°C to 115°C)

Storage/Shipping*:

-40°F to 240°F (-40°C to 115°C)

MAXIMUM FLOW AT DISCONNECT:

3.0 gal/min, 11.3L/min

ENGAGEMENT TOLERANCE:

Coupling must be within 1/8" of fully engaged to achieve maximum flow.

MATERIALS:

Main Components: Anodized Aluminum

Valves: Polysulfone

Valve Springs (wetted): Stainless steel

Seals: EPDM

Panel Mount Kit: Stainless steel

Compliance: RoHS, REACH

THREAD SIZES:

Insert: SAE-6, G 1/2

Body: SAE-6, G 1/2

LUBRICANTS: Krytox® PFPE

SPILLAGE:

<0.03 cc per disconnect at 0 psi;

<0.03 cc per disconnect at 120 psi

AIR INCLUSION: <0.022 cc per connect

FLOW COEFFICIENT: Cv ~ 2.2 (1.90 Kv)

AXIAL MISALIGNMENT: 1 mm max

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.

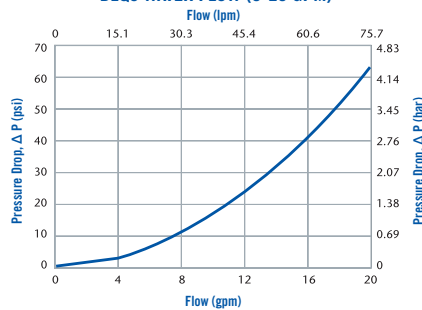
*The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.

FEATURES

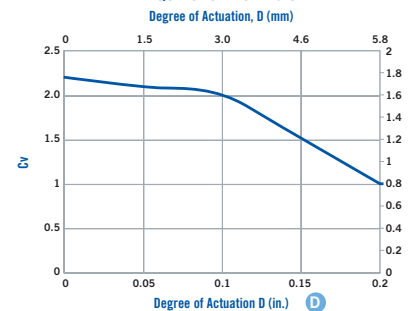
- Non-spill valve → Disconnect under pressure with no spills
- Redundant seals → Extra protection from leak-causing contaminants and debris
- Innovative valve design → Provides reliability for extended periods of operation
- Rugged anodized aluminum → Able to withstand long-term, ongoing and repeated use
- Axial engagement tolerance → Allows full flow even when not fully engaged
- Optional panel mount kit → Enables either the body, insert or both to be panel mounted

BENEFITS

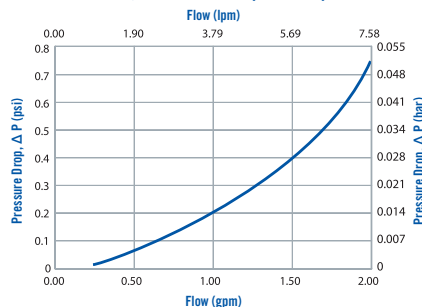
BLQ6 WATER FLOW (0-20 GPM)



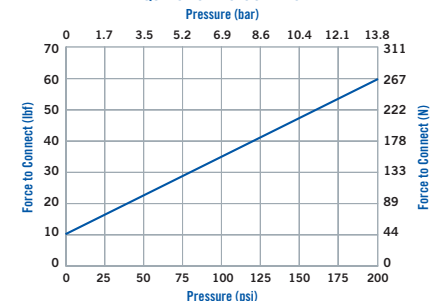
BLQ6 ACTUATION vs Cv



BLQ6 WATER FLOW (0-2 GPM)



BLQ6 FORCE TO CONNECT



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.

EVERIS® BLQ6 SERIES DIMENSIONS

COUPLING BODIES - Anodized aluminum



TERMINATION	TUBING/THREAD SIZE	METRIC EQ	SHUTOFF	HEX	A	B	C
IN-LINE STRAIGHT THREAD SAE	3/8 SAE-6: 9/16-18 ¹	N/A	BLQ6D30006	7/8"	0.96 (24.4)	2.08 (52.7)	1.68 (42.8)
IN-LINE STRAIGHT THREAD G / BSPP	G 1/2 ²	N/A	BLQ6D31008	26 mm	1.12 (28.4)	2.26 (57.5)	1.76 (44.7)

COUPLING INSERTS - Anodized aluminum



TERMINATION	TUBING/THREAD SIZE	METRIC EQ	SHUTOFF	HEX	A	B	C
IN-LINE STRAIGHT THREAD PORT SAE	3/8 SAE-6: 9/16-18 ¹	N/A	BLQ6D46006	7/8"	0.96 (24.4)	2.27 (57.7)	0.99 (25.2)
IN-LINE STRAIGHT THREAD G / BSPP	G 1/2 ^{2,3}	N/A	BLQ6D47008	26 mm	1.12 (28.4)	2.00 (50.9)	0.70 (17.8)

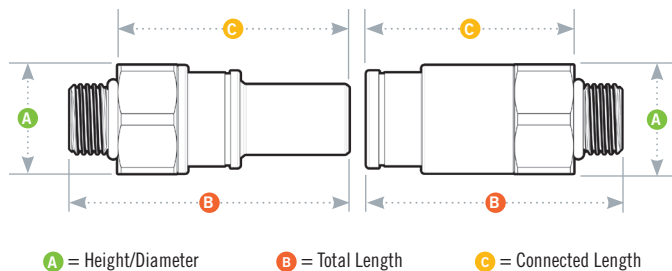
All measurements are in inches (millimeters) unless otherwise noted.

¹All SAE terminations are compatible with SAE J1926-1 ports.

²All G (BSPP) terminations are compatible with ISO 1179-1 ports.

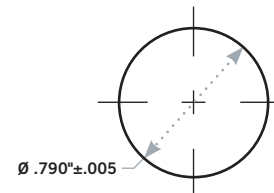
³One-piece design

PRODUCT DIMENSIONS

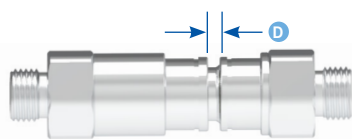


PANEL DIMENSIONS

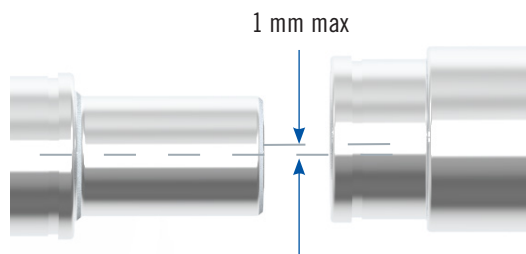
	PANEL OPENING	PANEL THICKNESS MAX.-MIN.
	see drawing	0.075 -0.175"



ACTUATION LENGTH

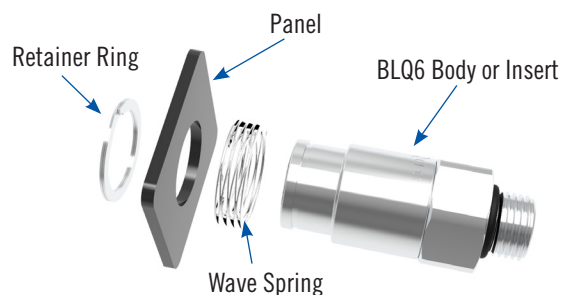


RADIAL TOLERANCE



PANEL MOUNT KIT (P/N BLQ6PMKIT)

Kit includes wave spring and retainer ring only.



cpcworldwide.com/Everis-BLQ6

EVERIS® UQD02 SERIES CONNECTOR

Everis® UQD02 Series quick disconnect couplings

with 1/8" flow are designed for liquid cooling applications. These quick disconnects offer ease of use, outstanding reliability, high performance and resistance to corrosion. The Everis UQD02 quick disconnect is a liquid cooling coupling designed to the OCP specification for server applications.



SPECIFICATIONS

PRESSURE:

Vacuum to 120 psi, 8.3 bar

TEMPERATURE:

Operating:

36°F to 167°F (2°C to 75°C)

Storage/Shipping*:

-40°F to 167°F (-40°C to 75°C)

MATERIALS:

Main Components: 303 Stainless steel

Valves and Thumb Latch: High-performance polymer

Valve Springs (wetted): Stainless steel

External Spring: Stainless steel

Seals: EPDM

Compliance: RoHS, REACH

COLOR:

Metallic with Black, Blue or Red

TUBING SIZES:

1/4" (6.4 mm ID)

THREAD SIZES:

SAE-4

LUBRICANTS:

Krytox® PFPE

SPILLAGE:

<0.015 cc per disconnect rated at 0 psi

FLOW COEFFICIENT:

Cv ~ 0.37 max (0.32 Kv)

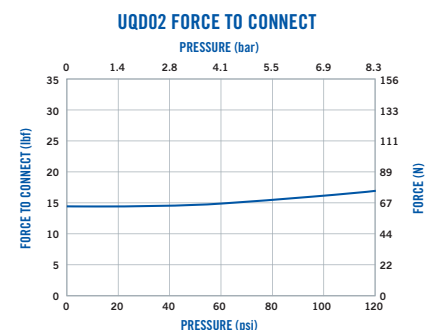
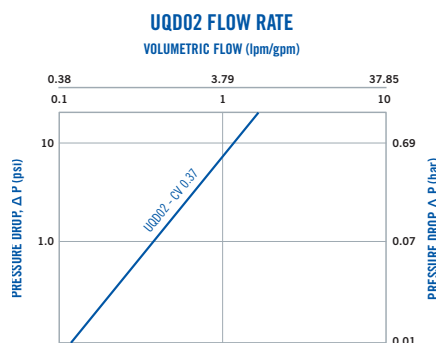
WARNING: Pressure, temperature, chemicals, and operating environment can affect the performance of couplings. It is the customer's responsibility to test the suitability of CPC™ products in their own application conditions.

*The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.

FEATURES

- Non-spill valve design → Dry break. Disconnect under pressure with no spills
- Redundant seals in connected state → Extra protection from leaks
- High flow capacity with low pressure drop → Increased system energy efficiency
- Ergonomic body and latch design → Simple intuitive one-handed operation
- Audible click → Signals secure connection
- Barbed and threaded terminations → Suited for various tubing options including clampless locking hose barb for reinforced tubing
- Designed for OCP interoperability → For seamless system integration
- Designed and manufactured for scale → Supply chain assurance

BENEFITS



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.



SCAN

cpcworldwide.com/Everis-UQD02

EVERIS® UQD02 SERIES DIMENSIONS

COUPLING SOCKETS - Stainless steel



TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	PART NUMBER	HEX	COLOR	A	B	C
IN-LINE LOCKING HOSEBARB	1/4" ID	6.4 mm ID	4238300		Black	0.88 (22.4)	2.15 (54.5)	1.40 (35.5)
	1/4" ID	6.4 mm ID	4238301		Blue	0.88 (22.4)	2.15 (54.5)	1.40 (35.5)
	1/4" ID	6.4 mm ID	4238302		Red	0.88 (22.4)	2.15 (54.5)	1.40 (35.5)

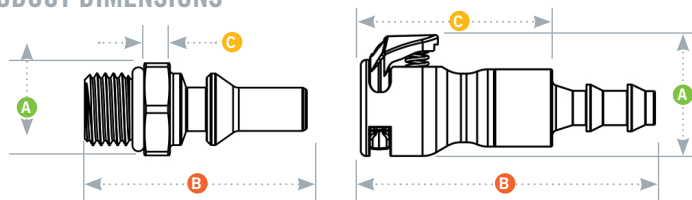
COUPLING PLUGS - Stainless steel



TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	PART NUMBER	HEX	COLOR	A	B	C
IN-LINE STRAIGHT THREAD PORT SAE	1/4 SAE-4: 7/16-20		4238400	9/16"	Black	0.62	1.35	0.158
	1/4 SAE-4: 7/16-20		4238401	9/16"	Blue	0.62	1.35	0.158
	1/4 SAE-4: 7/16-20		4238402	9/16"	Red	0.62	1.35	0.158

¹All SAE terminations are compatible with SAE J1926-1 ports.

PRODUCT DIMENSIONS



A = Height/Diameter

B = Total Length

C = Connected Length

All measurements are in inches (millimeters) unless otherwise noted.

EVERIS® UQD04 SERIES CONNECTOR

Everis® UQD04 Series quick disconnect couplings

with 1/4" flow are designed for large scale liquid cooling. These quick disconnects offer ease of use, outstanding reliability, high performance and resistance to corrosion. The Everis UQD04 quick disconnect is a liquid cooling coupling designed to the OCP specification for server applications.



SPECIFICATIONS

PRESSURE:

Vacuum to 120 psi, 8.3 bar

TEMPERATURE:

Operating:

36°F to 167°F (2°C to 75°C)

Storage/Shipping*:

-40°F to 167°F (-40°C to 75°C)

MATERIALS:

Main Components: 303 Stainless steel

Valves and Thumb Latch: High-performance polymer

Valve Springs (wetted): Stainless steel

External Spring: Stainless steel

Seals: EPDM

Compliance: RoHS, REACH

COLOR:

Metallic with Black, Blue or Red

TUBING SIZES:

3/8" ID (9.5 mm ID)

THREAD SIZES:

SAE-6

LUBRICANTS:

Krytox® PFPE

SPILLAGE:

<0.025 cc per disconnect rated at 0 psi

FLOW COEFFICIENT:

Cv ~1.3 max (1.12 Kv)

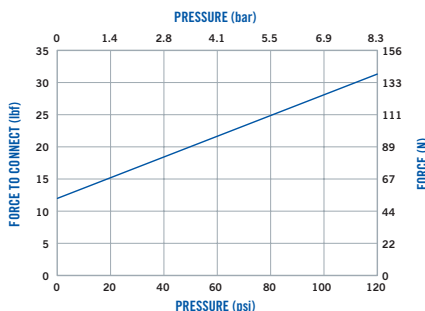
WARNING: Pressure, temperature, chemicals, and operating environment can affect the performance of couplings. It is the customer's responsibility to test the suitability of CPC™ products in their own application conditions.

*The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.

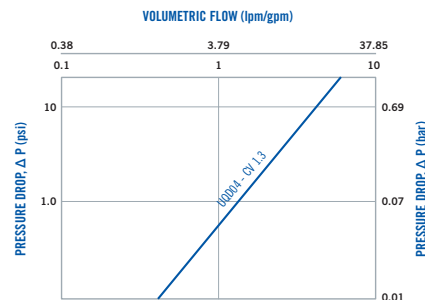
FEATURES

- Non-spill valve design → Dry break. Disconnect under pressure with no spills
- Redundant seals in connected state → Extra protection from leaks
- High flow capacity with low pressure drop → Increased system energy efficiency
- Ergonomic body and latch design → Simple intuitive one handed operation
- Audible click → Signals secure connection
- Barbed and threaded terminations → Suited for various tubing options including clampless locking hose barb for reinforced tubing
- Designed for OCP interoperability → For seamless system integration
- Designed and manufactured for scale → Supply chain assurance

UQD04 FORCE TO CONNECT



UQD04 FLOW RATE



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.



SCAN

cpcworldwide.com/Everis-UQD04

EVERIS® UQD04 SERIES DIMENSIONS

COUPLING SOCKETS - Stainless steel



TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	PART NUMBER	HEX	COLOR	A	B	C
IN-LINE LOCKING HOSEBARB	3/8" ID	9.5 mm ID	4211200		Black	1.18 (30.0)	2.81 (71.5)	1.94 (49.3)
	3/8" ID	9.5 mm ID	4211201		Blue	1.18 (30.0)	2.81 (71.5)	1.94 (49.3)
	3/8" ID	9.5 mm ID	4211202		Red	1.18 (30.0)	2.81 (71.5)	1.94 (49.3)

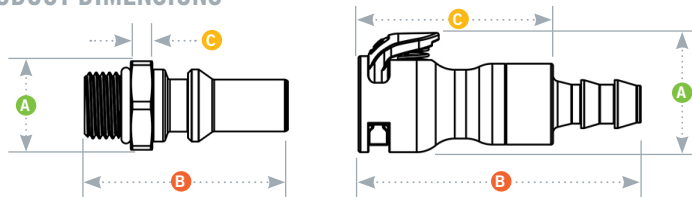
COUPLING PLUGS - Stainless steel



TERMINATION	TUBING/THREAD SIZE	METRIC EQ.	PART NUMBER	HEX	COLOR	A	B	C
IN-LINE STRAIGHT THREAD PORT SAE	3/8 SAE-6: 9/16-18		4211500	3/4"	Black	0.83	1.72	0.18
	3/8 SAE-6: 9/16-18		4211501	3/4"	Blue	0.83	1.72	0.18
	3/8 SAE-6: 9/16-18		4211502	3/4"	Red	0.83	1.72	0.18

¹All SAE terminations are compatible with SAE J1926-1 ports.

PRODUCT DIMENSIONS



- A = Height/Diameter
- B = Total Length
- C = Connected Length

All measurements are in inches (millimeters) unless otherwise noted.

EVERIS® UQDB04 SERIES CONNECTOR

Everis® UQDB04 Series quick disconnect couplings

Developed according to the OCP standard for liquid cooling, CPC Everis® UQDB04 quick disconnects (QDs) with 1/4" flow provide ultra-reliable connections and dripless disconnections. Manufactured out of stainless steel, Everis UQDB04 QDs are inherently resistant to corrosion. These blindmate connectors for rack-mounted integration feature CPC's patented valve design for high-flow capacity.



SPECIFICATIONS

PRESSURE:

Vacuum to 120 psi, 8.3 bar

TEMPERATURE:

Operating:

36°F to 167°F (2°C to 75°C)

Storage/Shipping*:

-40°F to 167°F (-40°C to 75°C)

MATERIALS:

Main Components: 303 Stainless steel

Valves: High-performance polymer

Valve Springs (wetted): Stainless steel

Seals: EPDM

Compliance: RoHS, REACH

COLOR:

Metallic

THREAD SIZES:

Socket: SAE-8

Plug: SAE-6

LUBRICANTS:

Krytox® PFPE

SPILLAGE:

<0.025 cc per disconnect rated at 0 psi

FLOW COEFFICIENT:

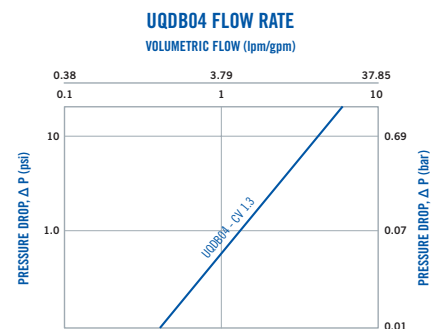
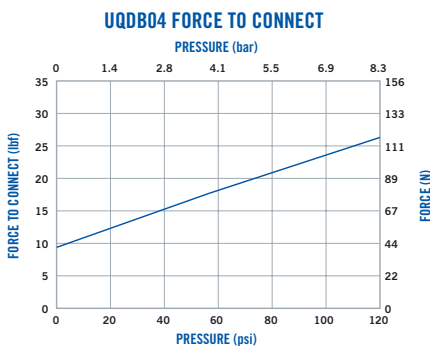
Cv ~ 1.3 max (1.12 Kv)

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™ products in their own application conditions.

*The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.

FEATURES

- Non-spill valve design → Dry break. Disconnect under pressure with no spills
- Redundant seals in connected state → Extra protection from leaks
- High flow capacity with low pressure drop → Increased system energy efficiency
- Threaded terminations → For server and rack manifold mounting
- Designed for OCP interoperability → For seamless system integration
- Designed and manufactured for scale → Supply chain assurance



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.

The Everis UQDB04 quick disconnect meets the flow requirements at the 1 mm disconnect distance per the OCP specification.

MATING CONFIGURATION TYPE	AXIAL (INSERTION) TOLERANCE	RADIAL TOLERANCE
UQDB04 SOCKET & UQDB04 PLUG	1 mm	1 mm self alignment
UQDB04 SOCKET & UQD04 PLUG	1 mm	N/A

EVERIS® UQDB04 SERIES DIMENSIONS

COUPLING SOCKET - Stainless steel



TERMINATION	TUBING/THREAD SIZE	PART NUMBER	HEX	A	B	C
IN-LINE STRAIGHT THREAD SAE	1/2 SAE-8: 3/4-16 ¹	4509800	15/16"	0.98 (24.9)	1.56 (39.6)	1.12 (28.5)

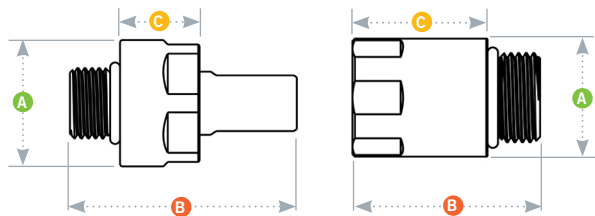
COUPLING PLUG - Stainless steel



TERMINATION	TUBING/THREAD SIZE	PART NUMBER	HEX	A	B	C
IN-LINE STRAIGHT THREAD SAE	3/8 SAE-6: 9/16-18 ¹	4509900	15/16"	0.99 (25.1)	1.78 (45.3)	0.63 (15.9)

All measurements are in inches (millimeters) unless otherwise noted.
¹All SAE terminations are compatible with SAE J1926-1 ports.

PRODUCT DIMENSIONS



- A = Height/Diameter
- B = Total Length
- C = Connected Length



cpcworldwide.com/Everis-UQDB04

EVERIS® UQDB08 & UQD08 HYBRID CONNECTOR SET

Everis® UQD(B)08 series quick disconnect (QD) blind socket and plug

with 1/2" flow are designed for large scale liquid cooling. These quick disconnects are optimized for blindmate connections in rack-mounted integrations.

Ideal product for customers seeking to not just meet OCP v2 standards but exceed them. Made with CPC's patented valve design, which has been trusted in the world's top supercomputers for years. These QDs with 304 stainless steel offer ease-of-use, reliability, high performance, and resistance to corrosion while maximizing flow for next-gen applications.

With global supply and local support for AI Data Center needs, CPC offers standard lead time of 5 days for the UQD(B)08 set and capacity potential to supply millions per month.



SPECIFICATIONS

PRESSURE:

Vacuum to 100 psi, 6.9 bar

TEMPERATURE:

Operating:

41°F to 149°F (5°C to 65°C)

Storage/Shipping*:

-40°F to 167°F (-40°C to 75°C)

MATERIALS:

Main Components: 304 Stainless steel

Valves: PEI

Valve Spring (wetted): Stainless steel

Seals: EPDM o-rings

Compliance: RoHS, REACH

COLOR: Metallic

THREAD SIZES:

SAE-10 (UQD08)

SAE-12 (UQDB08)

LUBRICANTS: Krytox® PFPE

SPILLAGE:

<0.020 cc per disconnect at 0 psi

INCLUSION: <0.37 cc per connect

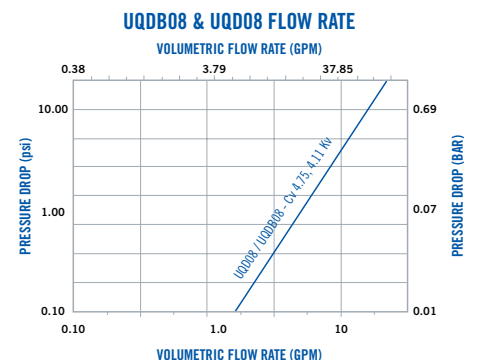
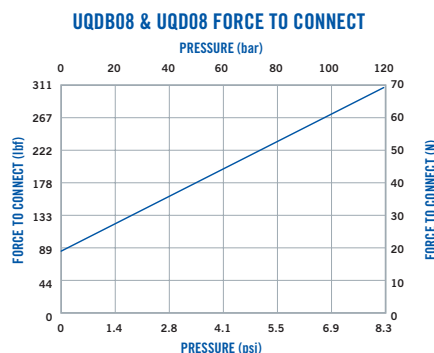
FLOW COEFFICIENT:

Cv ~ 4.75 max (4.11 Kv)

*The specified shipping and storage temperature range is specific to the CPC product and does not apply to external packaging or shipping materials.

FEATURES

- | | | |
|---|---|---|
| Non-spill valve design | → | Dry break; disconnect under pressure with no spills |
| Redundant seals in connected state | → | Extra protection from leaks |
| High flow capacity with low pressure drop | → | Increased system energy efficiency |
| Threaded terminations | → | Enables server and rack manifold mounting |
| Designed for OCP interoperability | → | Seamless system integration |
| Manufactured from 304 stainless steel | → | Inherently corrosion resistant |
| V2 design is backwards compatible with prior OCP specifications | → | Design, supply, and assembly simplicity |
| Designed and manufactured for scale | → | Supply chain assurance |
| Serialization | → | Lot Traceability |



These graphs are intended to give you a general idea of the performance capabilities of each product line. Contact CPC for flow of a particular coupling combination.

EVERIS® UQDB08 SERIES DIMENSIONS

COUPLING SOCKET - Stainless steel



TERMINATION	TUBING/THREAD SIZE	PART NUMBER	HEX	A	B	C
STRAIGHT THREAD SAE	3/4 SAE-12: 1-1/16-12 ¹	UQDB08D30012	27 mm	1.30 (33.0)	1.99 (50.5)	1.40 (35.6)

¹All SAE terminations are compatible with SAE J1926-1 ports.

EVERIS® UQD08 SERIES DIMENSIONS

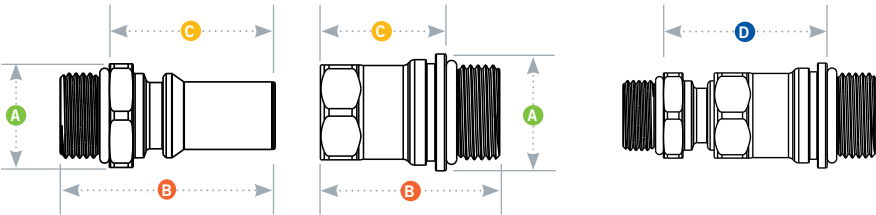
COUPLING PLUG - Stainless steel



TERMINATION	TUBING/THREAD SIZE	PART NUMBER	HEX	A	B	C
IN-LINE STRAIGHT THREAD SAE	5/8 SAE-10: 7/8-14 ¹	UQD08D46010BLK	27 mm	1.17 (29.7)	2.19 (55.6)	1.69 (42.9)

¹All SAE terminations are compatible with SAE J1926-1 ports.

PRODUCT DIMENSIONS



- A = Height/Diameter
- B = Total Length
- C = Length Excluding Termination
- D = Connected Length Hybrid: 2.03 (51.6)

All measurements are in inches (millimeters) unless otherwise noted.



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cpcworldwide.com/UQD08-UQDB08-Hybrid



Ask An Engineer

Contact CPC with your quick disconnect and liquid cooling application-related questions. CPC's dedicated engineers are happy to help.



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CPC QUICK DISCONNECT COUPLING BASICS

A CPC quick disconnect coupling (QD) consists of two parts, a socket and a plug, that when connected create a fluid flow path. Each of CPC's Everis QD couplings has a valve architecture with multi-lobed seals to provide redundant protection against leakage over extended periods of time. CPC's liquid cooling QD valves are designed to ensure the valve closes quickly and reliably when the coupling is disconnected after long periods in a connected state. Upon disconnection, the integrated non-spill shutoff valves automatically stop flow, preventing pressure loss. With non-spill functionality, spillage at disconnection consists of a wetted surface — which is not enough fluid to create or enable a drip. Once the QDs are connected, the flow of coolant fluid begins.

ALIGNMENT

In the case of blind mate liquid cooling connectors, how does the system hardware ensure alignment of the QDs? For example, will they be panel mounted with an external locking mechanism? The design of Everis® blind mate quick disconnects is such that some minor misalignment is allowable and the QD will perform accordingly.

COOLANT

What is your selected fluid? The thermal properties, viscosity and corrosiveness of the fluid going through the liquid cooling system all need to be considered. Chemical compatibility of the coolant with all system and coupling subcomponent materials is particularly important.

COMPATIBILITY

What other materials will be used in the system? It is important to be aware of potential issues derived from galvanic corrosion due to fluid and material incompatibility. Be aware that system corrosion and component erosion resulting from incompatibilities can result in particles in the system which can affect both subcomponent reliability and system performance. Use of polymer materials can help to prevent these issues.

CYCLES

How many make/break cycles will the quick disconnect need to accommodate? Some applications are such that, upon connection, the QD is rarely disconnected. Other installations may experience many disconnections. Understanding anticipated cycling can influence recommendations for seals and your specification of coolant.

DIMENSION

How much room is there for the QD? Are there access needs for installation or operation surrounding the QD? Based upon cooling load and space constraints, does the application require a high flow-to-size ratio for its quick disconnects? Specifying engineers should refer to Cv or Kv graphs for accurate flow characteristics. Orifice diameter and physical size of the QD are not good indicators of performance.

FLAMMABILITY

Does the application need to pass a particular certification? Do system components need to be composed of materials that have a specific UL94-rating?

FLOWRATE

What is your required flow and desired target range for allowable pressure drop for each liquid cooling system subcomponent? Understand configuration and multiple component impacts to flow and specify pumps accordingly. Be sure to allow for the effect of shutoff valves and tubing connections in your calculations.

FORM FACTOR

What type of connector style is desired? Will you need single-handed operation as is offered with latch-style quick disconnects or will the connectors be panel mounted or affixed to a manifold?

PRESSURE	What is the maximum pressure the liquid cooling system will experience and subsequently, the pressure that your connections will need to withstand? What is the standard operating pressure? Or are you designing a low-pressure system? Engineers can refer to Cv or Kv for accurate flow information. System designers will also be concerned with pressure drop associated with each system component.
SHUTOFF OPTIONS	Do you need automatic or integral shutoff valves in your quick disconnects? Most connectors recommended for liquid cooling applications are non-spill. Other shutoff options are single or double shutoff.
SPECIAL REQUIREMENTS	What unique scenarios must the product address or possess? Sterilization, NSF listed, USP Class VI approved materials, special packaging, color coding, assemblies and keying are some examples. Custom development is available to support these needs.
SPILLAGE	What amount of fluid loss is acceptable upon each disconnection of the quick disconnect? Is the coolant a regulated or hazardous material? Depending upon flow size, a typical non-spill QD will emit a small bit of fluid, which often equates to a wetted surface on the face of the connector.
TEMPERATURE	Know your minimum and maximum temperature range. How much will temperature fluctuate, to what degree, and how often? Also consider that operating temperature will vary from shipping/storage temperature of the liquid cooling system subassemblies.
TERMINATION	How are you connecting the coupling to the rest of the system? Common termination options include locking hose barb, hose barb, and threaded terminations. Threaded terminations are available in all applicable international standards including NPT, BSPP (or G-thread), and SAE. Alternative terminations are also available upon request.
TESTING	What tests do your component manufacturers perform? What independent, subassembly or system-level tests do liquid cooling system designers need to conduct? Prior to locking a specification, ask what tests the liquid cooling connectors have been through and request copies of testing validation reports.
TOLERANCE	What mounting method and locking systems are planned for use with blind mate quick disconnects? Understand what tolerances each quick disconnect offers and how they affect flow and system performance.
TORQUE	What tools and how much force will be applied to affix the QDs to the manifold of the liquid cooling system? Will it be measurable and consistent? Many quick release couplings feature a maximum torque measurement to preserve the integrity and reliability of the assembly of the QD.
TRANSPORTATION	Will the system be delivered over land or via air transport? Self-contained or pressurized liquid cooling cargo by air can be affected by temperature and altitude. Both methods of transportation are susceptible to fluctuating environmental conditions.
TUBING	What type, material, and size of tubing are you using? Besides inside and outside diameter of the piping or tubing used, system designers need to specify the material. For tubing, this can help direct the type of hose barb that can be used (locking vs. traditional vs. custom.)
VIBRATION	Will the liquid cooling system be installed in a location with seismic activity? Or will it experience vibration during operation, such as would be common in a transit application?



Material Chemical Compatibility in Liquid Cooling

This presentation will provide a summary of how material selection of system components and subcomponents impacts performance and reliability.



cpcworldwide.com/
Material-Chemical-Compatibility

CPC RESOURCES

Thermal engineers, specifiers and owners/operators of thermal management systems can learn about material properties, temperature, and chemical considerations for liquid cooling applications by browsing and downloading white papers, tech guides and brochures from the Resources and Support section of CPC's website. White papers and tech guides are available for immediate download. For example, the table at bottom is from Tech Guide 5012: "Liquid Cooling and the Chemical Compatibility Imperative."

FLUID SELECTION

Coolant fluid viscosity, specific gravity and freezing and boiling points impact system design and component selection. Thermal engineers specifying quick disconnects for liquid cooling applications often begin by evaluating their fluid selection options:

FLUID	SPECIFIC GRAVITY	THERMAL CONDUCTIVITY W/MK	SPECIFIC HEAT J/KGK	VISCOSITY CP	BOILING °F	FREEZING °F	COST
1,1,1,2-TETRAFLUOROETHANE (R-134A)	0.52	0.082	1440	0.20	-15°	-154°	\$\$\$
MINERAL OIL	0.92	0.106	1670	6.64	392°	-15°	\$
WATER	1.00	0.580	4181	1.00	212°	32°	\$
PROPYLENE GLYCOL, 50% SOLUTION	1.04	0.357	3559	5.20	223°	-49°	\$
2,3,3,3-TETRAFLUOROPROPENE R1234YF)	1.10	0.064	1382	0.16	-22°	-238°	\$\$\$
ETHYLENE GLYCOL, 50% SOLUTION	1.13	0.402	3283	2.51	224°	-35°	\$
HYDROFLUOROETHER (HFE)	1.61	0.075	1300	0.45	93°	-189°	\$\$\$
FLUORINERT™ FC-72	1.68	0.057	1100	0.64	133°	-130°	\$\$\$
PERFLUOROPOLYETHER (PFPE)	1.70	0.090	960	0.45	392° - 500°	23°	\$\$\$

This chart is for illustration purposes only.
Please connect with a CPC engineer to discuss the specifics of your application.

TYPES OF LIQUID COOLING

There are two types of liquid cooling: direct and immersion. Both types of liquid cooling can use either a single-phase or a two-phase method.

DIRECT SINGLE-PHASE

A liquid cooled system is considered to be “single-phase” when the fluid used to extract heat from the electronics does not undergo a phase change; the coolant remains in liquid state throughout the cooling loop. The temperature of the fluid will vary depending upon where in the cooling circuit it is. The fluid is contained within piping or tubing and it is not in direct contact with the electronics being cooled. Pure water or a Water-Glycol mix is the common fluid in this type of system. QDs are required at the server entry and exit and also inside the cooling loop (for cold plate connections or internal manifolds inside the server blade). It is the most common loop in the market due to its effectiveness, relative ease of implementation, and overall cost-effectiveness.

DIRECT TWO-PHASE

When a coolant undergoes a phase change from liquid to gas and back to liquid within the cooling loop, it is considered direct two-phase cooling. The coolant in gas or fluid state is contained within the loop and it is not in direct contact with the system components being cooled. Dielectric fluids are used in these systems and quick disconnects are required at the server entry and exit, as well as inside the cooling loop. It is the most effective way of dissipating heat.

SINGLE PHASE IMMERSION

With immersion systems, electronics are safely submerged in dielectric fluid liquid in a sealed but readily accessible enclosure. The dielectric fluid is not conductive, allowing for the safe operation of electronics while in direct contact with the fluid. The heat from electronic components is transferred to the fluid. Pumps are often used to flow the heated fluid to a heat exchanger, where it is cooled and cycled back into the enclosure. In single-phase immersion cooling, fluid remains in its liquid phase. While very effective in heat dissipation, it requires sealed structures to prevent losses, and maintenance of the equipment can be messy.

TWO PHASE IMMERSION

Similar to single phase immersion systems, the electronic components requiring cooling are directly immersed in dielectric liquid in a sealed but readily accessible enclosure or tank. In two-phase immersion cooling however, the heat from electronic components causes the fluid to boil, producing vapor that rises from the liquid. The vapor then condenses on a heat exchanger (condenser) within the tank returning it to a liquid state which is returned to the tank. There is an exponential increase in heat transfer efficiency.



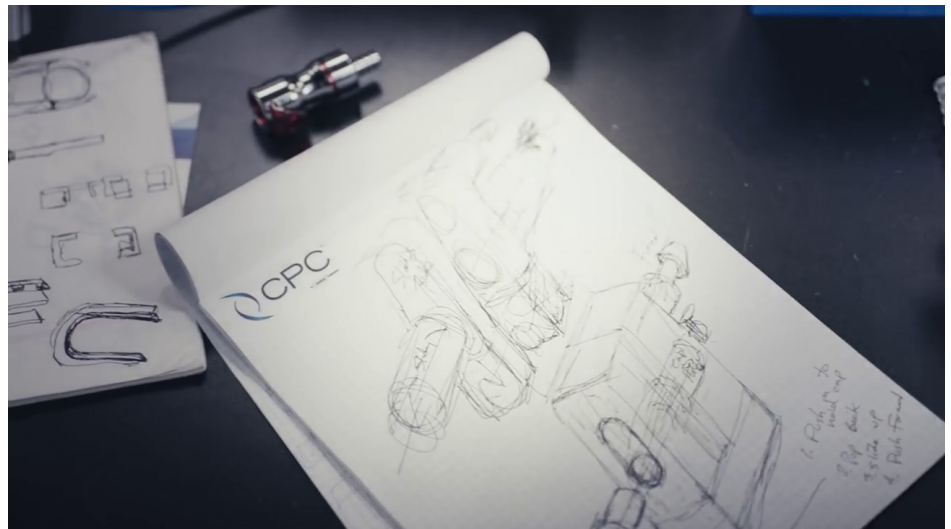
Data Center Video

See where CPC's purpose-built Everis® quick disconnects (QDs) are specified in liquid cooling for data center applications.



SCAN

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Data-Centers-Video](http://cpcworldwide.com/Data-Centers-Video)

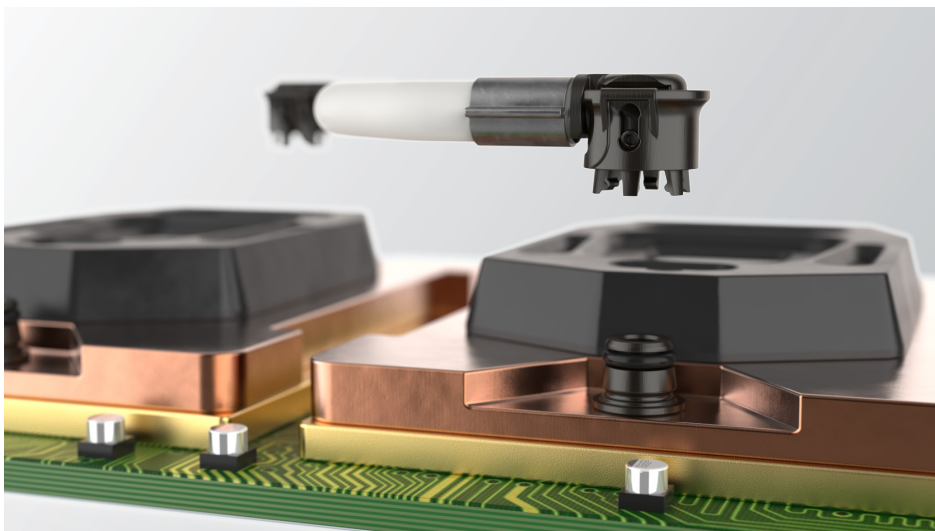


CUSTOM PROJECT CAPABILITIES

Drawing upon our established skills in innovation, we can engineer a custom-made connector for your application. Count on us to deliver the fluid handling expertise essential for your unique project requirements.

INNOVATION AND EXPERTISE PUT TO WORK FOR YOU

CPC believes in collaboration. Our engineers, working closely with your team, help solve challenging design or technical issues and help you get to market faster. Work with a company that has over 40 years' experience working with thousands of fluid management scenarios. Our highly knowledgeable experts help identify your challenges and optimize connector solutions for you to consider. Trust us to develop reliable connections for your liquid cooling application. Collaborating early in your design process empowers you to find the ideal connector perfectly suited for your needs.



CONSIDER A CUSTOM PROJECT

- When a new design would add value to a system making it easier to use, more reliable or more efficient
- When a specification cannot be met by an existing standard CPC product
- When a project has unique requirements such as space, performance, compatibility, budget, or scheduling challenges

Our Custom Engineering team supports a wide range of customer needs—from simple and minor modifications to fully customized components or assemblies. We're ready to meet your thermal management needs and fluid handling requirements.

CONTACT US

When in doubt, just ask. With such a variety of liquid cooling system types and the necessity for finely tuned thermal management performance where every component may have an impact, it can get confusing. CPC has layers of support to help solve challenging design or technical issues and help you get to market faster. Just ask. Call CPC's Customer Service at 1-800-444-2474. You can also send an email to liquidcool@colder.com.

**Call us at 1-800-444-2474 or
651-645-0091 or email us at
info@cpcworldwide.com**



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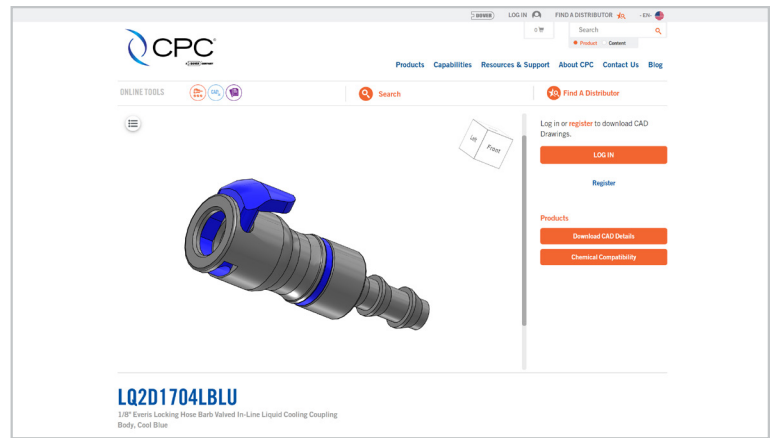
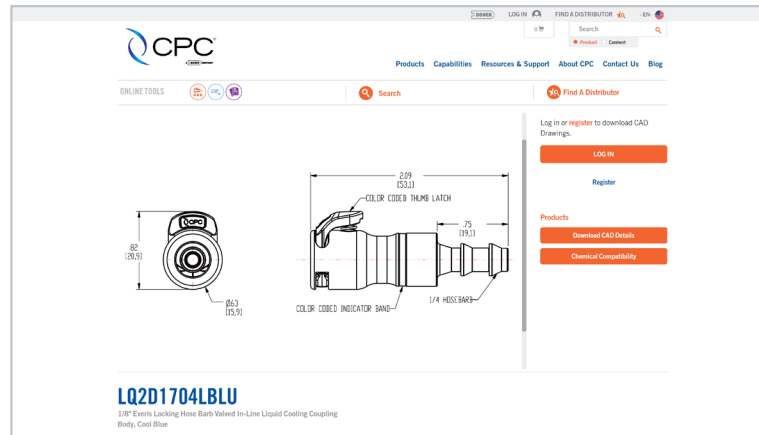


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DOWNLOAD SPEC SHEETS

You can research product characteristics, use the product specifier and find mating parts on the website. Register and login to cpcworldwide.com to download spec sheets with detailed product information.

DOWNLOAD CAD DRAWINGS

Once you've become a registered user on the CPC website, it's simple to download CAD files. Examine detail and compare products. Download CAD files instantly to drop into your assembly in your preferred file format. Downloads are available in a huge variety of file formats so you can easily design the CPC quick disconnects into your specific application even without a sample yet in hand.

ORDER PRODUCT SAMPLES

There is nothing like holding a product and seeing how smoothly and intuitively it works. Many quick disconnects are available in small quantities from the website. Purchase CPC's liquid cooling connectors conveniently and securely online using a credit card on each product page. Contact us if you need a sample for testing or prototyping.



WE'RE HERE TO HELP

FOLLOW

Learn about upcoming liquid cooling training, webinars and trade shows. Get access to complimentary event registrations where CPC engineers present their latest research or recommendations.

WATCH

CPC's YouTube channel features a liquid cooling playlist. Learn about trends from recorded interview conversations. Get information on new products from CPC experts.

CONTACT

If you need additional information about our liquid cooling quick connects or how we can help you research and identify the fluid handling connector solutions for your application, just contact us at liquidcool@colder.com or visit "Ask an Engineer" on our website. Our sales team, distributors and/or applications engineers can collaborate with you to specify, integrate, and deploy reliable thermal management QDs from CPC to meet your liquid cooling fluid management needs.

Get started by "Asking An Engineer."

Contact CPC with your quick disconnect and liquid cooling application-related questions. CPC's dedicated engineers are happy to help.



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INDEX

LIQUID COOLING COUPLINGS
AND CONNECTORS

Everis® LQ2..... 04

Everis® LQ4..... 06

Everis® LQ4S..... 08

Everis® LQ6..... 10

Everis® LQ8..... 12

Everis® BLQ2..... 14

Everis® BLQ4..... 16

Everis® BLQ6..... 18

Everis® UQD02..... 20

Everis® UQD04..... 22

Everis® UQDB04..... 24

Everis® UQDB08 & UQD08..... 26



LIQUID COOLING FLUID HANDLING
TO TAKE YOU FORWARD, FASTER

CPC (Colder Products Company) has been designing and manufacturing connectors since 1978. For more than a decade, CPC has supplied quick disconnect couplings or QDs (also known as quick release connectors) to manufacturers designing and building liquid cooling of electronics systems to address the heat density and high temperatures generated by technology such as powerful microchips and lasers. Our range of purpose-built for liquid cooling Everis® QDs are used by premier technology leaders in applications ranging from supercomputing and data centers to EV charging stations. CPC’s innovative non-spill coupling and connection technologies allow tubing to be quickly and easily connected and disconnected, instilling confidence for thermal engineers and system operators alike.







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CPC WARRANTY STATEMENT: CPC (Colder Products Company) warrants its products against defects in workmanship and materials for a period of 12 months from the date of sale by CPC to its initial customer (regardless of any subsequent sale of the products). This warranty is void if the product is misused, altered, tampered with or is installed or used in a manner that is inconsistent with CPC's written recommendations, specifications and/or instructions, or fails to perform due to normal wear and tear. CPC does not warrant the suitability of the product for any particular application. Determining product application suitability is solely the customer's responsibility. CPC is not liable for special, indirect, incidental, consequential or other damages including, but not limited to, loss, damage, personal injury, or any other expense directly or indirectly arising from the use of or inability to use its products either separately or in combination with other products. ALL OTHER WARRANTIES EXPRESS OR IMPLIED, WHETHER ORAL, WRITTEN OR IN ANY OTHER FORM, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY EXCLUDED. The sole and exclusive remedy under this warranty is limited, at the option of CPC, to replacement of the defective product or an account credit in the amount of the original selling price. All allegedly defective CPC products must be returned prepaid transportation to CPC, together with information describing the product's application and performance, unless otherwise authorized in writing by CPC.

CPC PATENT STATEMENT: CPC takes pride in its innovative quick disconnect coupling and fittings solutions, many of which have been awarded United States and international patents. CPC has a strong tradition of leadership in the quick disconnect market, and aggressively pursues and protects its proprietary information and intellectual property. In cases where it is practical and has a benefit to its customers, CPC has licensed its proprietary technology. Please contact CPC to discuss your unique needs.

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