

Amphenol®



Liquid Cooling Systems
Thermal Management Liquid Cooling
Solutions



OPEN
Compute Project®

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UQD/UQDB Rev 2.0 Product Introduction

The OCP UQD/UQDB Specifications Rev 2.0 is a standard within the Open Compute Project (OCP) framework, aimed at unifying and enhancing the specifications for Universal Quick Disconnect (UQD) and Universal Quick Disconnect Blind-mate (UQDB) connectors used in liquid cooling systems for data centers and other high-performance computing equipment.

Rev 2.0 Product Features:

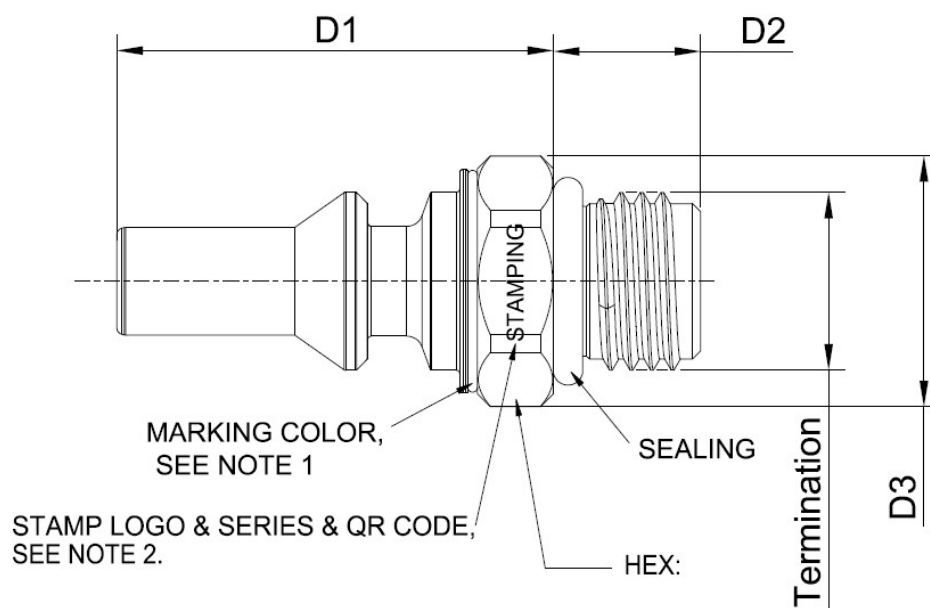
- Hybrid configuration (UQD PLUG mating with UQDB SOCKET)
- Standardized testing & fully defined geometry & improved flow performance
- Dimensional & performance requirements conform to OCP UQD/UQDB Specifications Rev 2.0



UQD Rev 2.0 Product Specifications

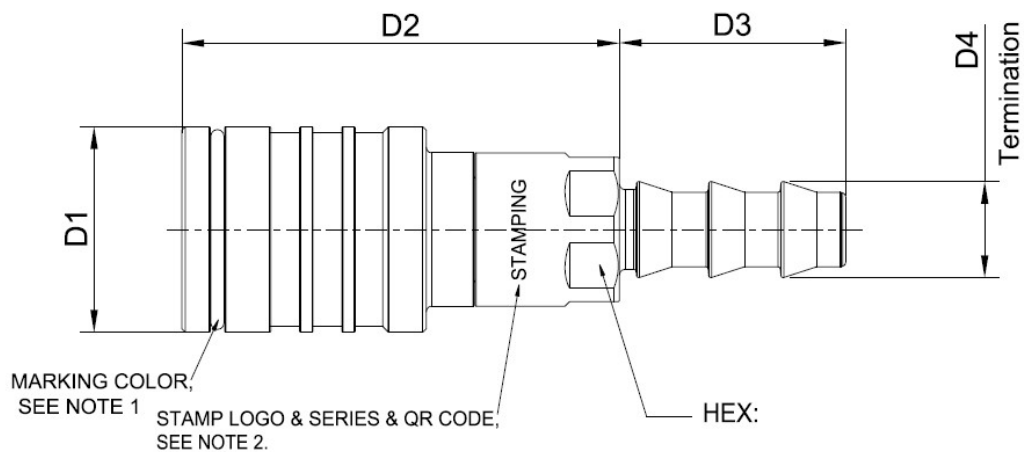
Shell material	Stainless steel
Spring (Wetted)	Corrosion-resistant stainless steel
Seal	EPDM
Pressure - Maximum Operating (PSI / BAR)	100 PSI / 6.89 BAR
Rated Flow (L/min)	02: 2.27 04: 6.44 06: 11.36 08: 17.79
Pressure - Minimum Burst (PSI / BAR)	300 PSI / 20.68 BAR
Size of fluid DIA	02: 1/8" 04: 1/4" 06: 3/8" 08: 1/2"
Temperature Range	5 °C to 65 °C
Sealing	Bidirectional dry-break sealed
Applicable coolant	Deionized water, Ethylene glycol, Propylene glycol, etc.
Minimum Cv value	02: 0.39 04: 1.35 06: 2.7 08: 5.1
Fluid Loss per Cycle	02: 0.0008 04: 0.012 06: 0.015 08: 0.024
Mating force (N) at 0 pressure	02: 51 04: 58 06: 88 08: 124
Suggested Torque for UQD plug	02: 9Nm 04: 15Nm 06: 25Nm 08: 30Nm
Coupling Cycles – Minimum	5000
Cv Value	02: 0.39, 04: 1.35, 06: 2.7, 08: 5.1

UQD Rev 2.0 Plug Dimensions



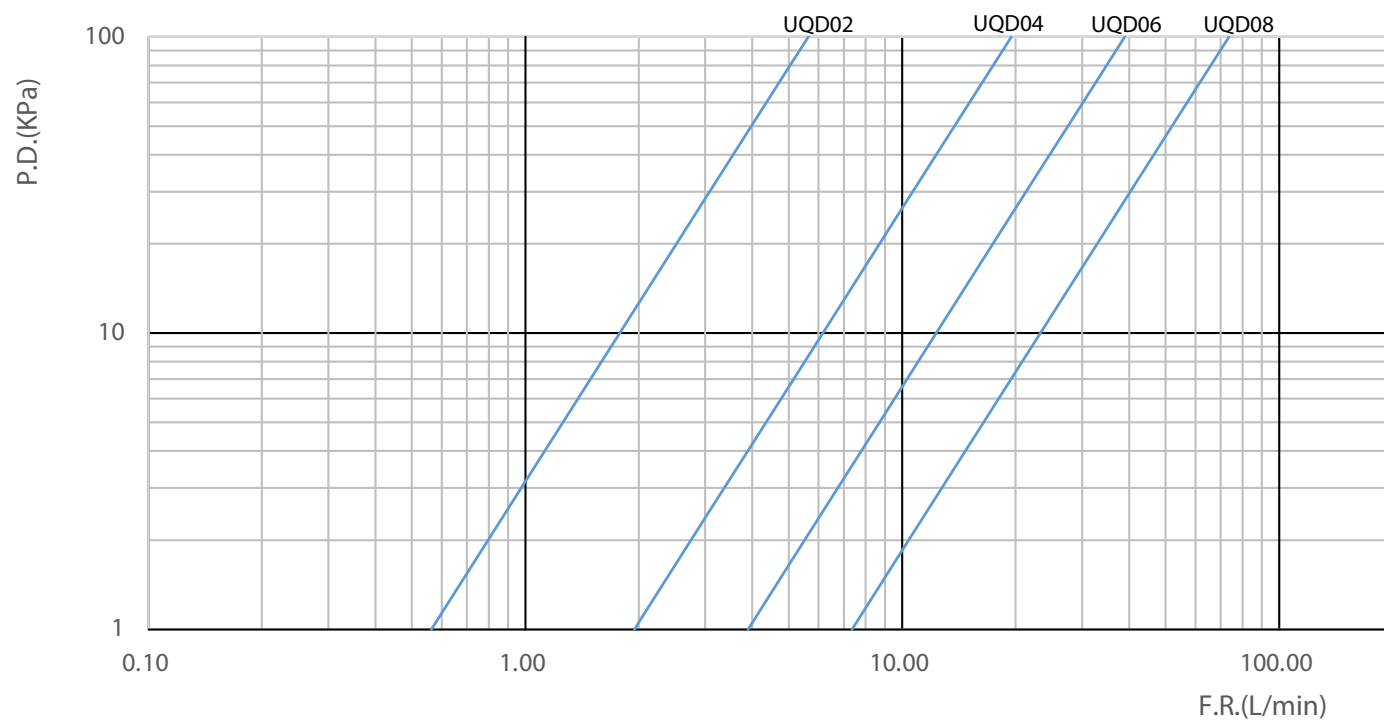
QD Size	Termination	D1	D2	D3	D4	Hex	Color	UQD Rev 2.0 Plug PN
02	Stud Size ORB-04; Thread 7/16-20 UNF	27	9.1	15.5	NA	14	Blue	UQDPV2-02TMU01-L000
							Red	UQDPV2-02TMU01-R000
04	Stud Size ORB-06; Thread 9/16-18 UNF	35.4	10	18.5	NA	17	Blue	UQDPV2-04TMU02-L000
							Red	UQDPV2-04TMU02-R000
06	Stud Size ORB-08; Thread 3/4-16 UNF	38.9	11.1	24	NA	22	Blue	UQDPV2-06TMU03-L000
							Red	UQDPV2-06TMU03-R000
08	Stud Size ORB-10; Thread 7/8-14 UNF	42.9	12.7	29	NA	27	Blue	UQDPV2-08TMU04-L000
							Red	UQDPV2-08TMU04-R000

UQD Rev 2.0 Socket Dimensions



QD Size	Termination	D1	D2	D3	D4	Hex	Color	UQD Rev 2.0 Socket PN
02	Hosebarb Size 1/4" HB	18.5	39.4	20.4	8.65	13	Blue	UQDSV2-02HSH01-L000
							Red	UQDSV2-02HSH01-R000
04	Hosebarb Size 3/8" HB	24	47.5	23.5	11.9	17	Blue	UQDSV2-04HSH02-L000
							Red	UQDSV2-04HSH02-R000
06	Hosebarb Size 1/2" HB	28	52.8	27	15.2	20	Blue	UQDSV2-06HSH03-L000
							Red	UQDSV2-06HSH03-R000
08	Hosebarb Size 5/8" HB	32.3	58.5	27	18.5	24	Blue	UQDSV2-08HSH04-L000
							Red	UQDSV2-08HSH04-R000

Rev 2.0 Flow Rate Curve: UQD



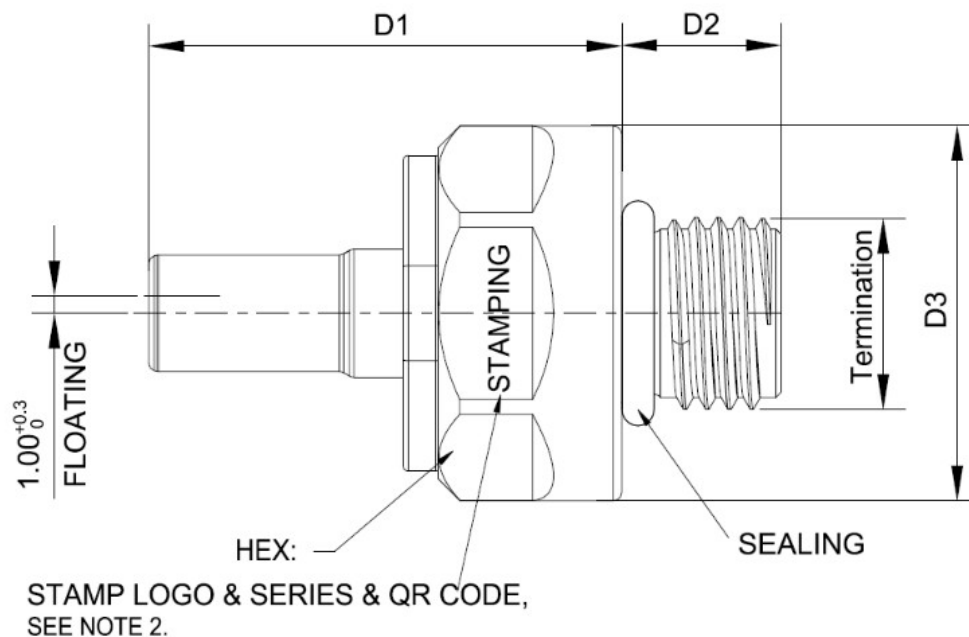
Note: Tested by water

UQDB Rev 2.0 Product Specifications



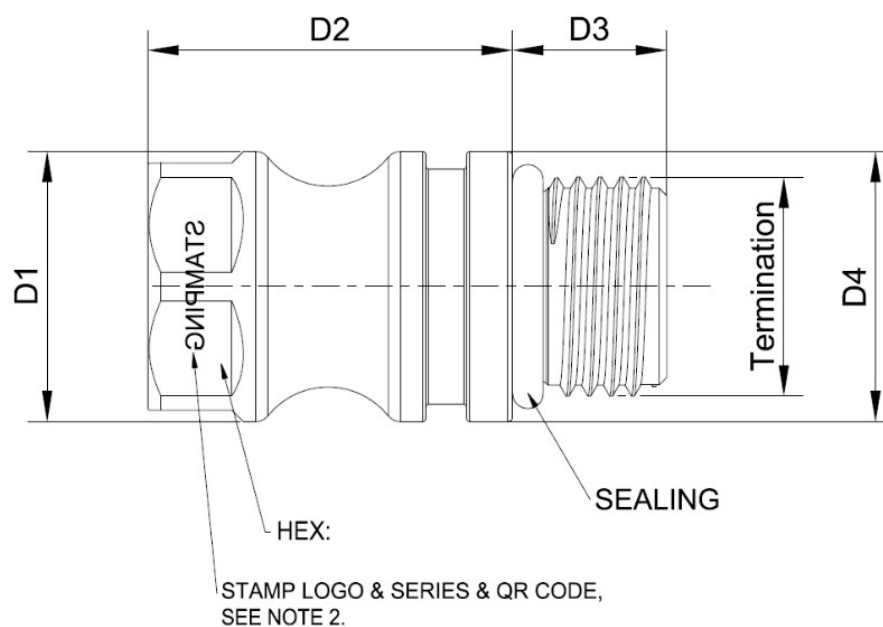
Shell material	Stainless steel
Spring (Wetted)	Corrosion-resistant stainless steel
Seal	EPDM
Pressure - Maximum Operating (PSI / BAR)	100 PSI / 6.89 BAR
Rated Flow (L/min)	02: 2.27 04: 6.44 06: 11.36 08: 17.79
Pressure - Minimum Burst (PSI / BAR)	300 PSI / 20.68 BAR
Size of fluid DIA	02: 1/8" 04: 1/4" 06: 3/8" 08: 1/2"
Temperature Range	5 °C to 65 °C
Sealing	Bidirectional dry-break sealed
Applicable coolant	Deionized water, Ethylene glycol, Propylene glycol, etc.
Minimum Cv value	02: 0.41 04: 1.5 06: 2.5 08: 4.9
Fluid Loss per Cycle	02: 0.0009 04: 0.017 06: 0.015 08: 0.024
Mating force (N) at 0 pressure	02: 48 04: 57.3 06: 86 08: 117
Suggested Torque for UQDB plug	02: 9Nm 04: 15Nm 06: 25Nm 08: 30Nm
Suggested Torque for UQDB socket	02: 15Nm 04: 25Nm 06: 30Nm 08: 48Nm
Coupling Cycles – Minimum	5000
Radial compensation tolerance (UQDB plug only)	1.0 (+0.3/0)mm

UQDB Rev 2.0 Plug Dimensions



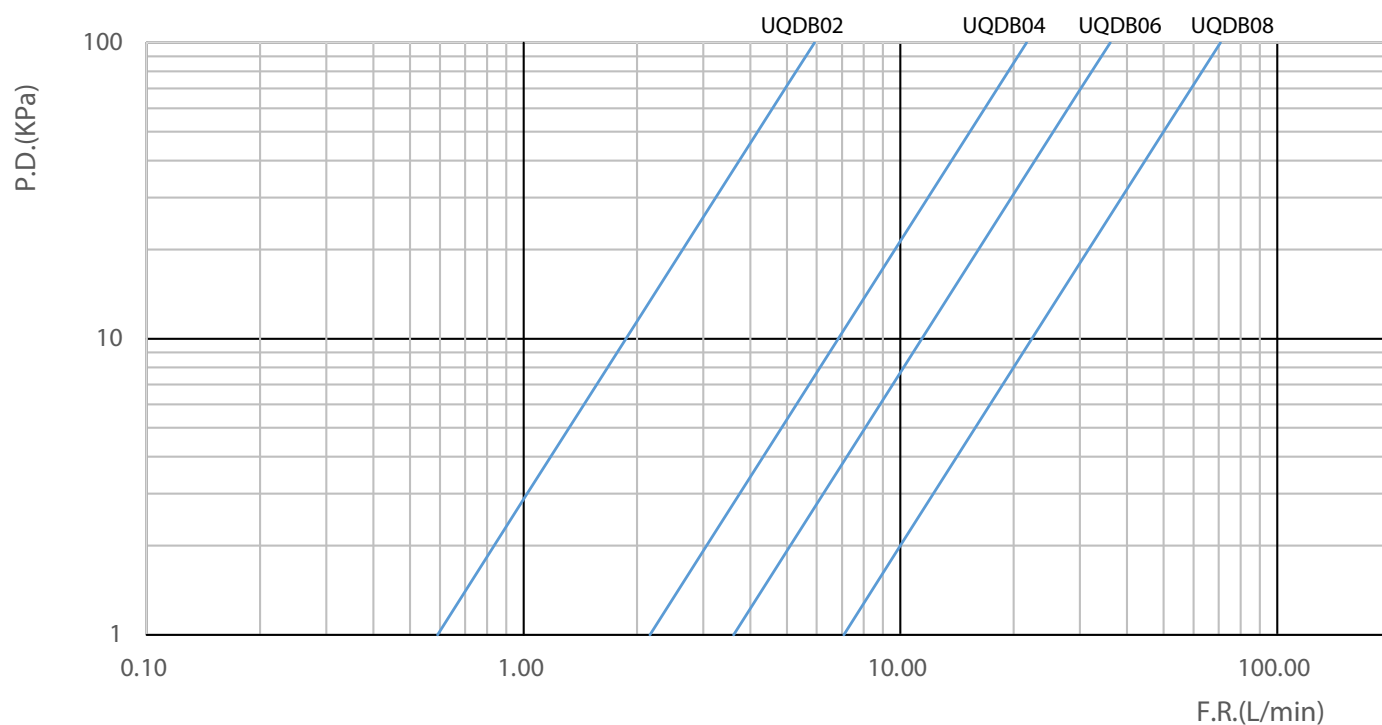
QD Size	Termination	D1	D2	D3	D4	Hex	UQDB Rev 2.0 Plug PN
02	Stud Size ORB-04; Thread 7/16-20 UNF	27	9.1	21.4	NA	19	UQDBPV2-02TMU01-N000
04	Stud Size ORB-06; Thread 9/16-18 UNF	35.4	10	25.4	NA	24	UQDBPV2-04TMU02-N000
06	Stud Size ORB-08; Thread 3/4-16 UNF	38.9	11.1	28.4	NA	27	UQDBPV2-06TMU03-N000
08	Stud Size ORB-10; Thread 7/8-14 UNF	42.9	12.7	31.4	NA	30	UQDBPV2-08TMU04-N000

UQDB Rev 2.0 Socket Dimensions



QD Size	Termination	D1	D2	D3	D4	Hex	UQDB Rev 2.0 Socket PN
02	Stud Size ORB-06; Thread 9/16-18 UNF	17.5	23.6	10	17.5	16	UQDBSV2-02TMU02-N000
04	Stud Size ORB-08; Thread 3/4-16 UNF	22.3	28.5	11.1	22.3	20	UQDBSV2-04TMU03-N000
06	Stud Size ORB-10; Thread 7/8-14 UNF	27.5	31.75	12.7	27.5	25	UQDBSV2-06TMU04-N000
08	Stud Size ORB-12; Thread 1-1/16-12 UNF	29.8	35.56	15.1	33	27	UQDBSV2-08TMU05-N000

Rev 2.0 Flow Rate Curve: UQDB



Note: Tested by water

SHQD Product Introduction

The Sourceline SHQD series is designed for AI data center and CDU industry. SHQD series incorporates dual interlock safety features that can prevent mis-operation and ensure safety. The interlock mechanism which is developed by Amphenol independently makes SHQD suitable for source line applications that require full flow rate, the interlock and bi-directional ball valve shut-off design provides excellent performance and no spillage during maintenance or service

Product Features:

- Source line application where full flow
- Two interlock features to eliminate spills and ensure maximum safety
- Bidirectional shut-off valve & dry-break
- Multiple termination options, such as sanitary flange, barb, threads, etc.
- Right angle or inline options for different application scenarios
- Low flow resistance
- QR code traceability



Product Specifications

Shell Material	Stainless Steel
Spring (Interlock Pin/Latch/Ball Valve)	Corrosion-resistant stainless steel
Seal Material	EPDM, optional according to the coolant
Rated Flow Rate	1"(189L/min) / 1.5"(550L/min) / 2"(800L/min)
Connected Operating Pressure	150 PSI / 10 BAR
Safe Pressure	300 PSI/20 BAR
Size	1"(SHQD-25) / 1.5"(SHQD-38) / 2"(SHQD-50)
Fluid Loss (ml.)	1"(5ml.) / 1.5"(8ml.) / 2"(12ml.)
Temperature	Operating Temperature: -40 °C to 120 °C
Sealing	Bidirectional dry-break sealed
Applicable Coolant	Deionized water, Ethylene glycol, Propylene glycol, etc
Interlock System	Prevent valve to be open when unmated and mis-operation
Termination Type	Male thread/Female thread/hose barb/sanitary flange (customized design upon request)
Cv Value	1": 30, 1.5": 90, 2": 136

SHQD Dimensions

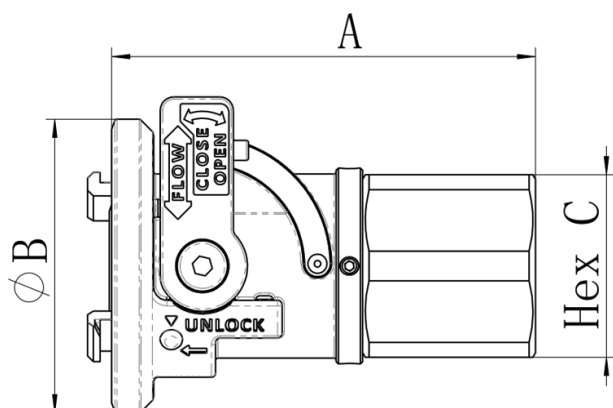


Figure 1

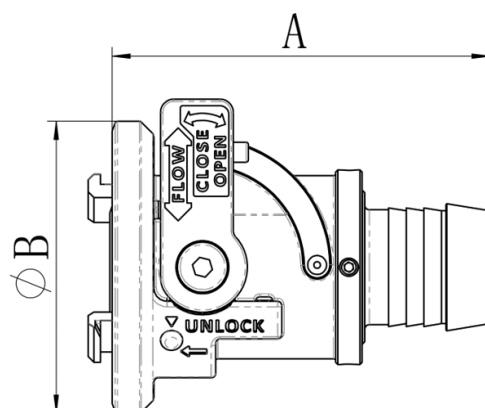


Figure 2

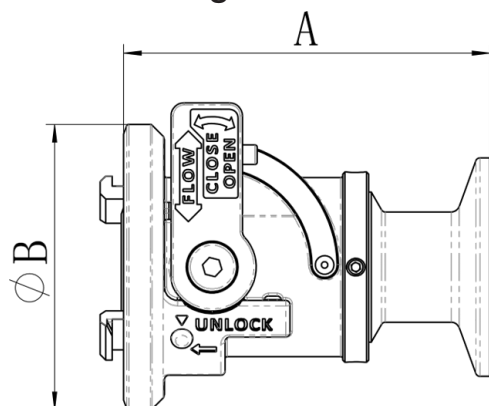


Figure 3

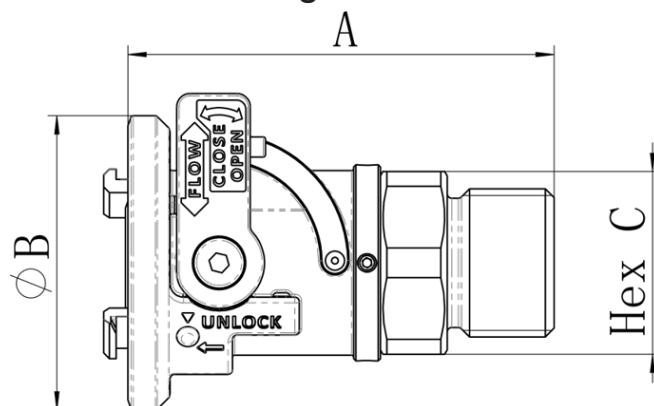
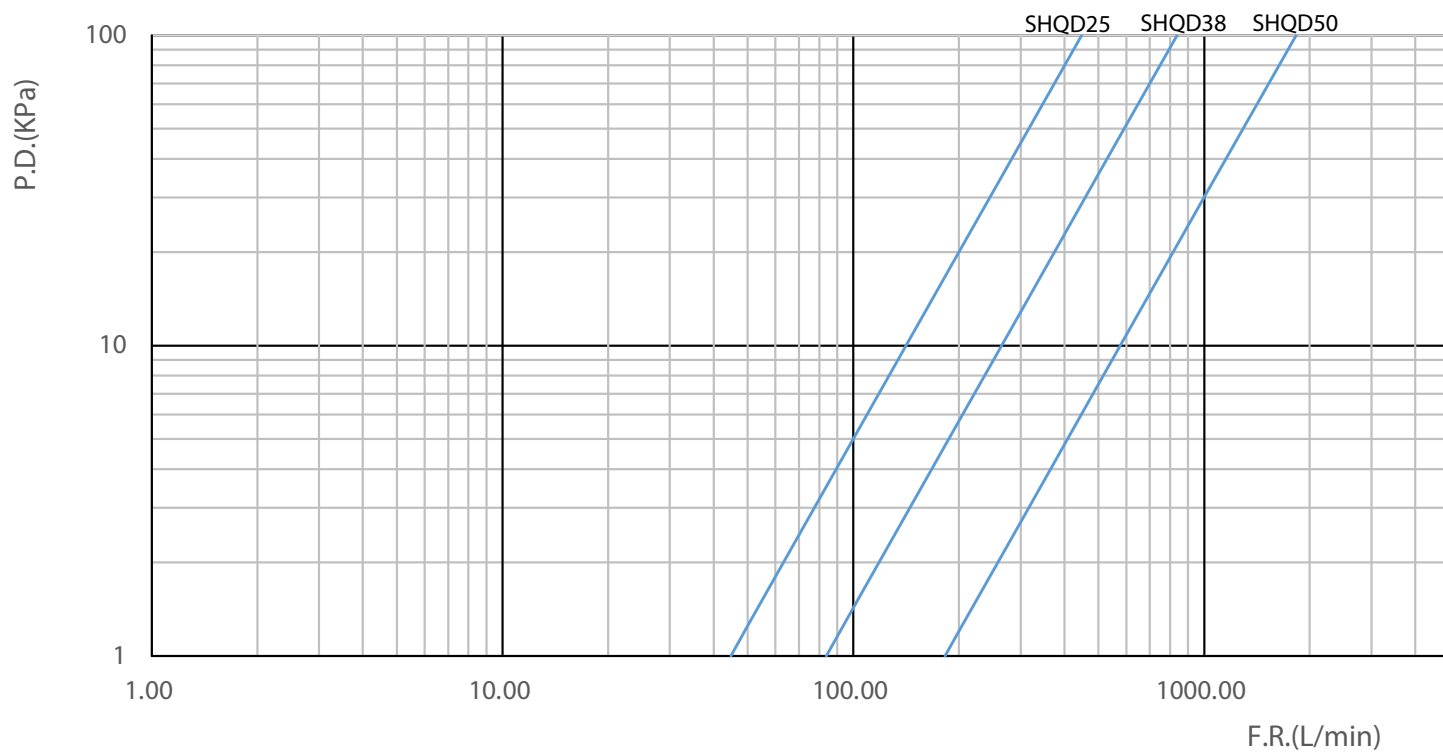


Figure 4

Sourceline PN	Size	Thread Type	Termination	Clamp Size	Figure	Dimension mm (inch)		
	Inch					A	B	C
SHQD-25TFB25-N000	1	G1-11	BSPP Female Thread	-	1	94 (3.7)	70.5 (2.77)	41 (1.61)
SHQD-25HSH25-N000	1	-	1"EPDM hose	40 ~ 44mm	2	84 (3.3)		-
SHQD-25SFF25-N000	1	-	Sanitary Flange	-	3	83 (3.26)		-
SHQD-25TMB25-N000	1	G1-11	BSPP Male Thread	-	4	100 (3.94)		41 (1.61)
SHQD-38TFB38-N000	1.5	G1 1/2-11	BSPP Female Thread	-	1	95.2 (3.75)	84 (3.3)	55 (2.16)
SHQD-38HSH38-N000	1.5	-	1.5"EPDM hose	48 ~ 52mm	2	139.2 (5.48)		-
SHQD-38SFF38-N000	1.5	-	Sanitary Flange	-	3	95.3 (3.75)		-
SHQD-38TMB38-N000	1.5	G1 1/2-11	BSPP Male Thread	-	4	103.7 (4.08)		55 (2.16)
SHQD-50TFB50-N000	2	G2-11	BSPP Female Thread	-	1	107.2 (4.22)	105 (4.13)	70 (2.76)
SHQD-50HSH50-N000	2	-	2"EPDM hose	62 ~ 66mm	2	156.8 (6.17)		-
SHQD-50SFF50-N000	2	-	Sanitary Flange	-	3	103.1 (4.06)		-
SHQD-50TMB50-N000	2	G2-11	BSPP Male Thread	-	4	111.8 (4.4)		70 (2.76)

SHQD Flow Rate Vs. Resistance



Note: Tested by water

MQD Product Introduction

The Mini Quick Disconnect (MQD), developed under the trend of compact computer tray with smaller DIA requirements. Features such as its compact design with push-pull locking mechanism, the MQD is not just a simple connector; it is a high-performance, reliable, and user-friendly solution that is fundamental to enabling the next generation of liquid-cooled AI data centers, ensuring that powerful computing infrastructure remains cool, efficient, and operational.

Product Features

- Aerospace-grade sealed for safety and reliability
- Size02/03/04 with straight & RA right angle version
- Push-pull quick disconnect
- Bidirectional shut-off valve & dry-break
- Low flow resistance
- QR code traceability
- Benefits for compact computer tray application



Product Specifications

Shell Material	Stainless Steel
Spring(wetted)/Interlock Pin/Latch/Ball Valve	Corrosion-resistant stainless steel
Seal Material	EPDM
Cv Value	02: >0.4 03: >0.7 04: >1.0
Rated Flow Rate	02=2.08L/min, 03=4.54L/min, 04=6.81L/min
Max Working Pressure	100 PSI / 6.89 BAR
Safe Pressure	300 PSI / 20.68 BAR
Size (Fluid DIA)	02=(3mm), 03=(4mm), 04=(5mm straight & RA versions available)
Fluid Loss (ml) @ 3 BAR	02: < 0.003 03: < 0.01 04: <0.005
Temperature	Operating Temperature: -40 °C to 105°C
Sealing	Bidirectional dry-break sealed
Applicable Coolant	Deionized water, Ethylene glycol, Propylene glycol, etc.
Termination Type	Hose barb & thread termination available (customized design upon request)
Mating force (N) at 0 pressure	02: <46 03: <51 04: <53
Mating Cycle	5000

MQD Dimensions



Figure1

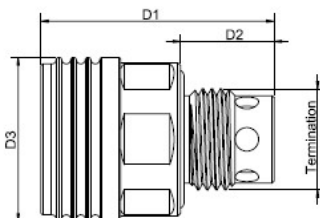


Figure2

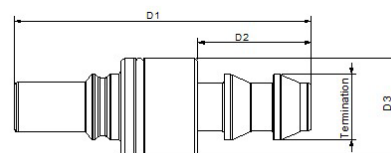


Figure3

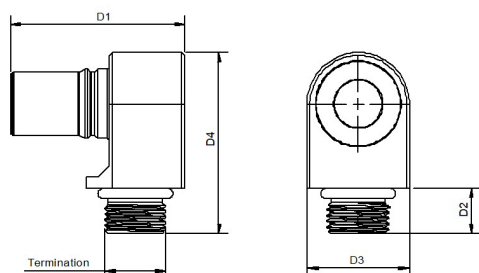


Figure4

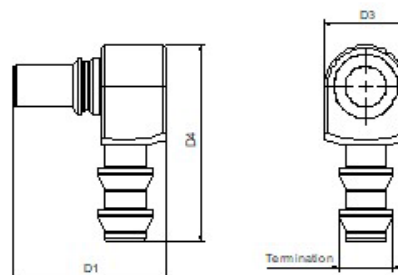
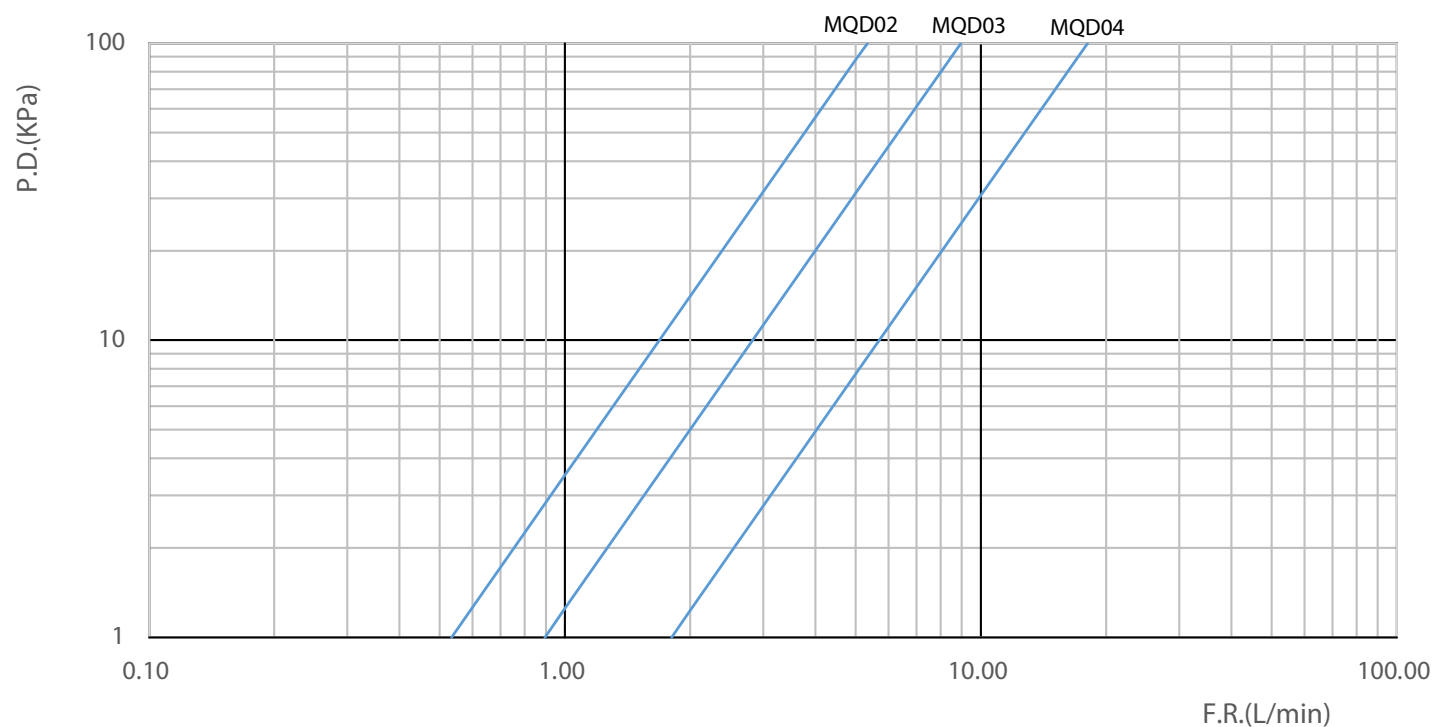


Figure5

Sourceline PN	Size	Termination	Color	Figure	Dimension mm			
					D1	D2	D3	D4
MQDP-02HSH06-L000	02	1/4" EPDM hose	BLUE	3	39.26	15.06	13	-
MQDP-02HSH06-R000	02	1/4" EPDM hose	RED					
MQDP-02HSHV06-L000	02	90° 1/4" EPDM hose	BLUE	5	24.2	-	13	31
MQDP-02HSHV06-R000	02	90° 1/4" EPDM hose	RED					
MQDS-02TMU01-L000	02	Thread 7/16-20 UNF	BLUE	2	25.7	10.3	18	-
MQDS-02TMU01-R000	02	Thread 7/16-20 UNF	RED					
MQDP-03TMU01-L000	03	Thread 7/16-20 UNF	BLUE	1	35.4	7.9	16.1	-
MQDP-03TMU01-R000	03	Thread 7/16-20 UNF	RED					
MQDP-03TMUV01-L000	03	90° Thread 7/16-20 UNF	BLUE	4	26	8	16.1	28
MQDP-03TMUV01-R000	03	90° Thread 7/16-20 UNF	RED					
MQDS-03TMB02-L000	03	Thread BSPP 1/4"	BLUE	2	25.25	10.8	18	-
MQDS-03TMB02-R000	03	Thread BSPP 1/4"	RED					
MQDP-04TMU01-L000	04	Thread 7/16-20 UNF	BLUE	1	38.5	8	18.1	-
MQDP-04TMU01-R000	04	Thread 7/16-20 UNF	RED					
MQDP-04TMUV01-L000	04	90° Thread 7/16-20 UNF	BLUE	4	30.75	8	18.1	32
MQDP-04TMUV01-R000	04	90° Thread 7/16-20 UNF	RED					
MQDS-04TMB03-L000	04	Thread BSPP 3/8"	BLUE	2	31.58	9.8	21.6	-
MQDS-04TMB03-R000	04	Thread BSPP 3/8"	RED					

Flow Rate Curve (MQD)



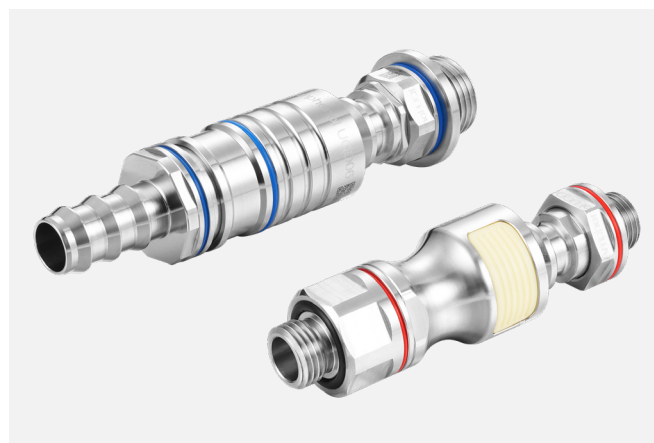
Note: Tested by water

UQD Rev1.0 Product Introduction

The Universal Quick Disconnect (UQD) is a global standard for quick disconnect couplings developed within the OCP (Open Compute Project) liquid cooling fluid connection in data centers. The products can also be used in other industries such as energy storage systems, charging equipment, military, and power equipment that require quick fluid connections. The excellent non-leakage design enables quick & safe maintenance in field.

Product Features

- Aerospace-grade sealed for safety and reliability
- Bidirectional shut-off valve & dry-break
- Multiple termination options, such as barb, threads, etc.
- Low flow resistance
- Latch socket has flat-design button
- QR code traceability
- Dimensional & performance requirements conform to OCP UQD Specifications Rev 1.0
- [OCP certified](#)



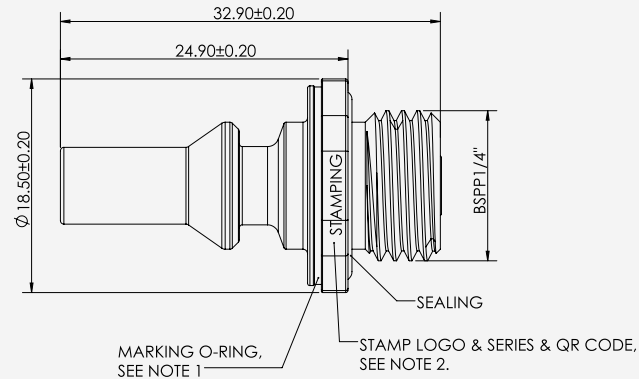
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Product Specifications

Shell Material	Stainless steel			
Spring (Wetted)	Corrosion-resistant stainless steel			
Seal	EPDM, FKM, FMVQ optional according to the coolant			
Working Pressure	0~0.6MPa			
Safe Pressure	1~2MPa			
Size	UQD02/04/06/08 (OCP Standard)			
Temperature	Operating Temperature: -40 °C to 105°C			
Sealing	Bidirectional dry-break sealed			
Applicable Coolant	Deionized water, Ethylene glycol, Propylene glycol, etc.			
Cv Value	UQD02: 0.4	UQD04: 1.29	UQD06: 2.32	UQD08: 3.7
Fluid Loss (ml)	UQD02: 0.004	UQD04: 0.006	UQD06: 0.008	UQD08: 0.01
Mating Force (N) at 0 pressure	UQD02: 2.47	UQD04: 51	UQD06: 100	UQD08: 137

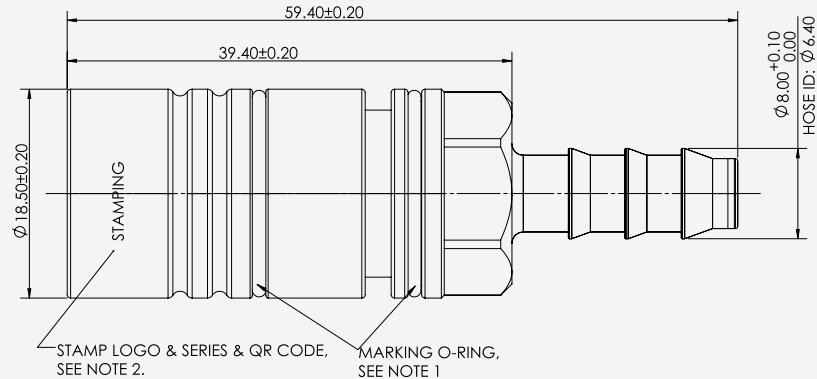
UQD02 Dimensions

UQD02 PLUG



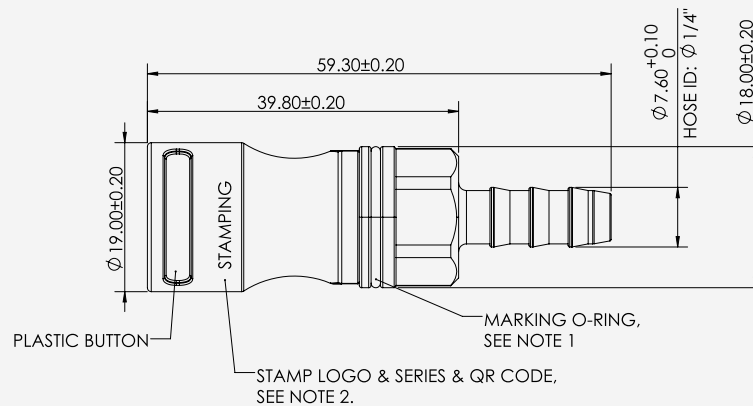
UQDP-02TMB02-L000

UQD02 SOCKET



UQDS-02HSH05-L000

UQD02 SOCKET LATCH



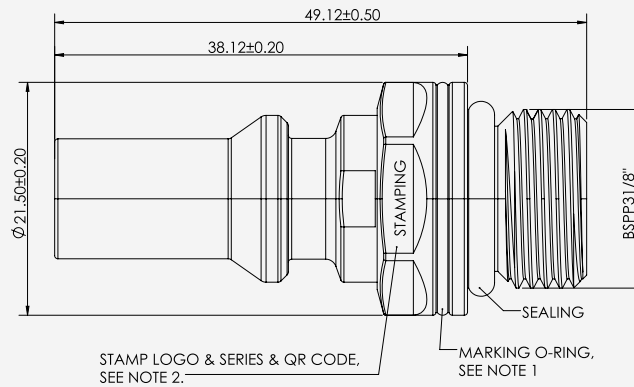
UQDLS-02HSH01-L000

Note:

1. UQD has color option, -L suffix means Blue, -R means Red.
2. For other terminations, please refer to PN list from following page, or contact the Amphenol team.

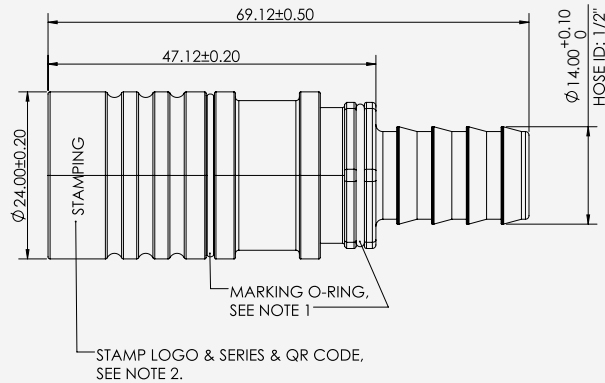
UQD04 Dimensions

UQD04 PLUG



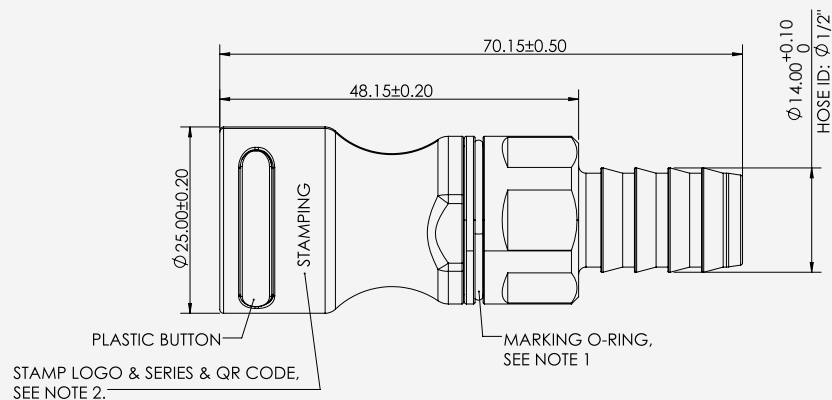
UQDP-04TMB03-L000

UQD04 SOCKET



UQDS-04HSH03-L000

UQD04 SOCKET LATCH



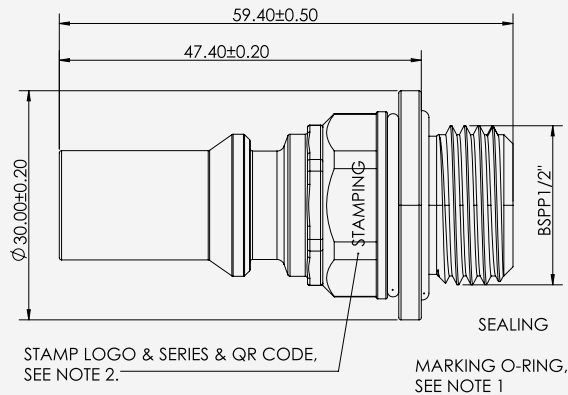
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Note:

1. UQD has color option, -L suffix means Blue, -R means Red.
2. For other terminations, please refer to PN list from following page, or contact the Amphenol team.

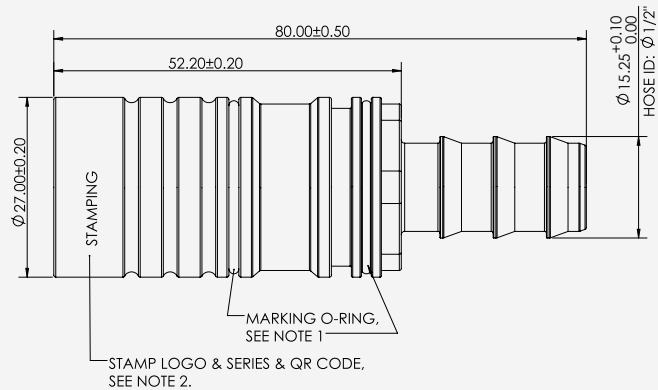
UQD06 Dimensions

UQD06 PLUG



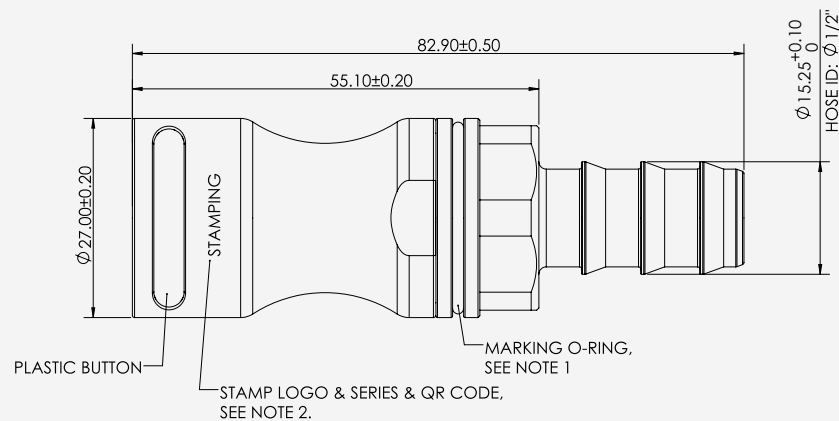
UQDP-06TMB04-L000

UQD06 SOCKET



UQDS-06HSH03-L000

UQD06 SOCKET LATCH



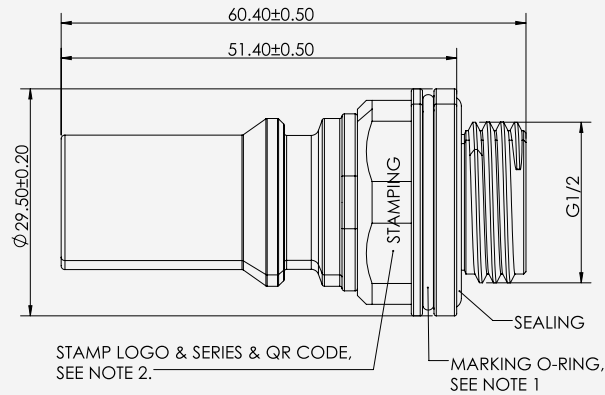
UQDLS-06HSH03-L000

Note:

1. UQD has color option, -L suffix means Blue, -R means Red.
2. For other terminations, please refer to PN list from following page, or contact the Amphenol team.

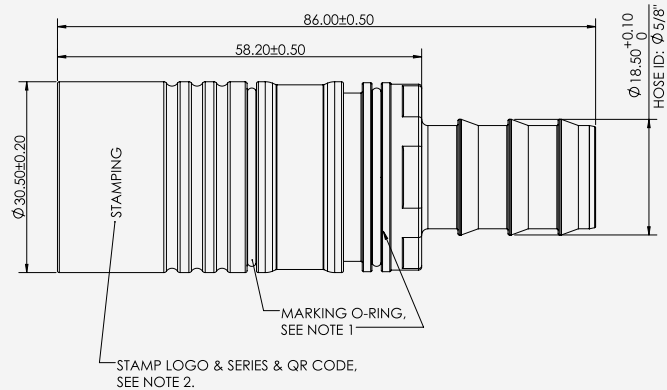
UQD08 Dimensions

UQD08 PLUG



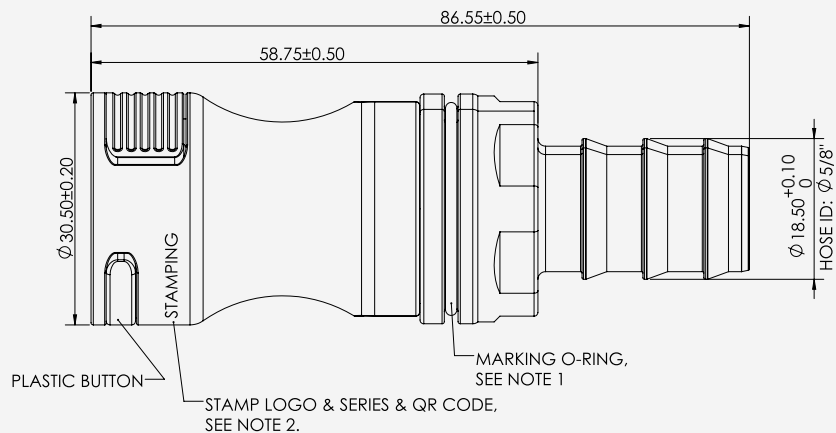
UQDP-08TMB04-L000

UQD08 SOCKET



UQDS-08HSH04-L000

UQD08 SOCKET LATCH

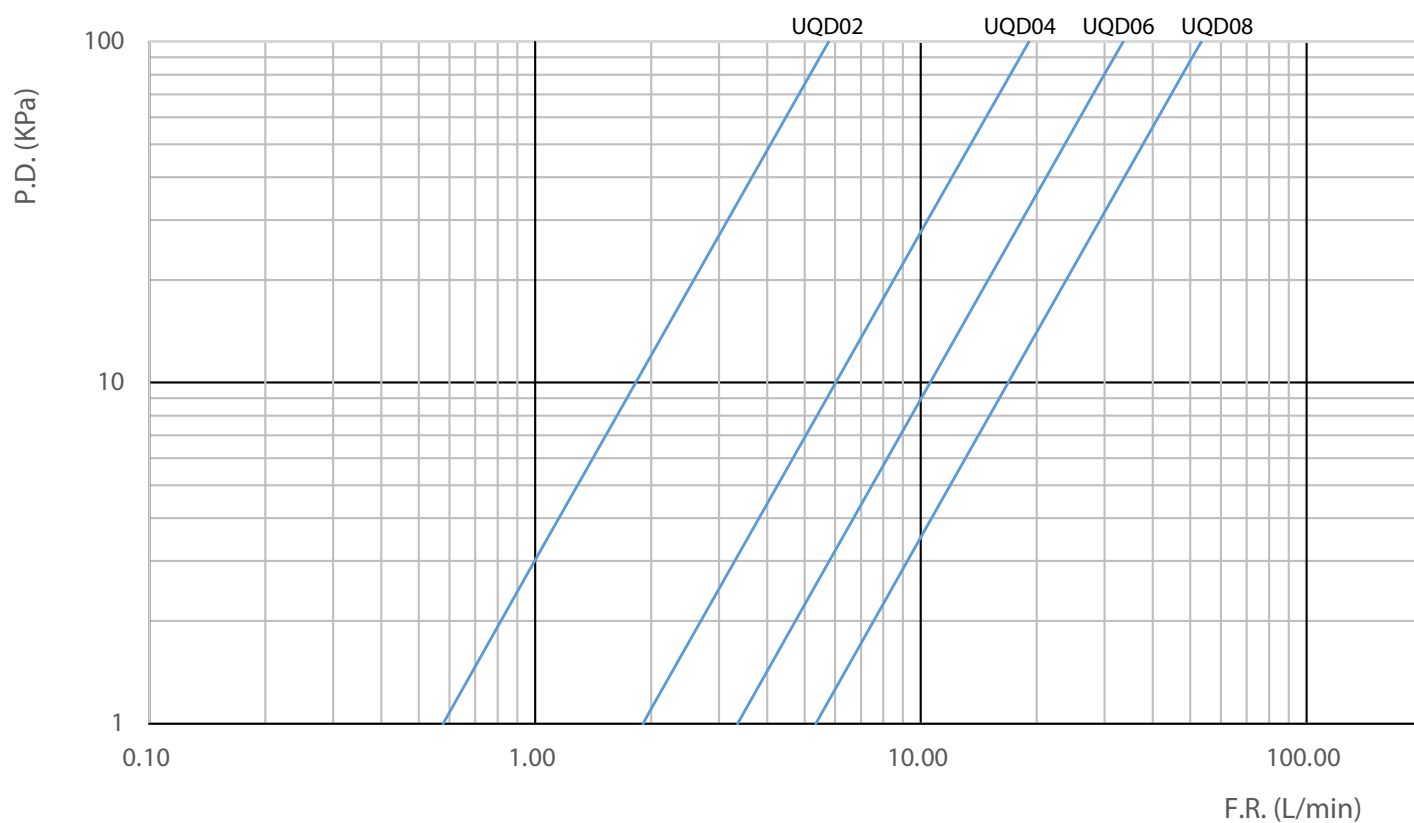


UQDLS-08HSH04-L000

Note:

1. UQD has color option, -L suffix means Blue, -R means Red.
2. For other terminations, please refer to PN list from following page, or contact the Amphenol team.

Flow Rate Curve: UQD



Note: Tested by water

UQDB Rev1.0 Product Introduction

The Universal Quick Disconnect Blind-Mate (UQDB) is a liquid cooling fluid connection for data centers developed by the Open Compute Project (OCP) based on global standards which can automatically connect and seal without visual assistance. The UQDB series products use advanced blind-mate technology and high-performance sealing materials to ensure the reliability and durability, simplified the installation and improved efficiency, reduced the difficulty of operation and the risk of mis-operation.

Product Features

- Blind-mate design, self- alignment feature with radial compensation of 1 mm
- Aerospace-grade sealed for safety and reliability
- Quick plug-in
- Bidirectional shut-off valve & dry-break
- Multiple termination options, such as barb, threads, etc.
- Low flow resistance
- QR code traceability
- Dimensional & performance requirements conform to OCP UQDB Specifications Rev 1.0
- [OCP certified](#)



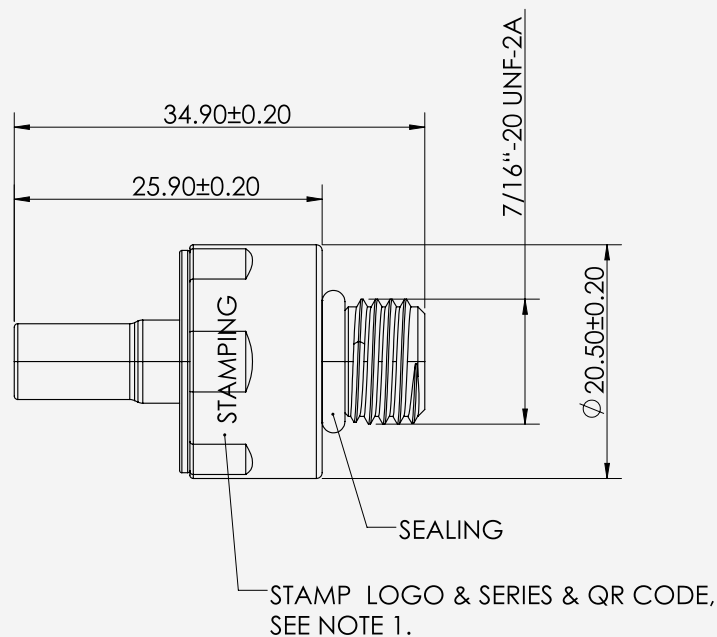
OPEN
Compute Project®

Product Specifications

Shell Material	Stainless steel			
Spring (Wetted)	Corrosion-resistant stainless steel			
Seal	EPDM, FKM, FMVQ optional according to the coolant			
Working Pressure	0~0.6MPa			
Safe Pressure	1~2MPa			
Size	UQDB02/04/06/08 (OCP Standard)			
Temperature	Operating Temperature: -40 °C to 105°C			
Sealing	Bidirectional dry-break sealed			
Applicable Coolant	Deionized water, Ethylene glycol, Propylene glycol, etc.			
Cv Value	UQDB02: 0.4	UQDB04: 1.32	UQDB06: 2.11	UQDB08: 3.83
Fluid Loss (ml)	UQDB02: 0.004	UQDB04: 0.004	UQDB06: 0.006	UQDB08: 0.01
Mating Force (N) at 0 pressure	UQDB02: 49	UQDB04: 58	UQDB06: 60	UQDB08: 68

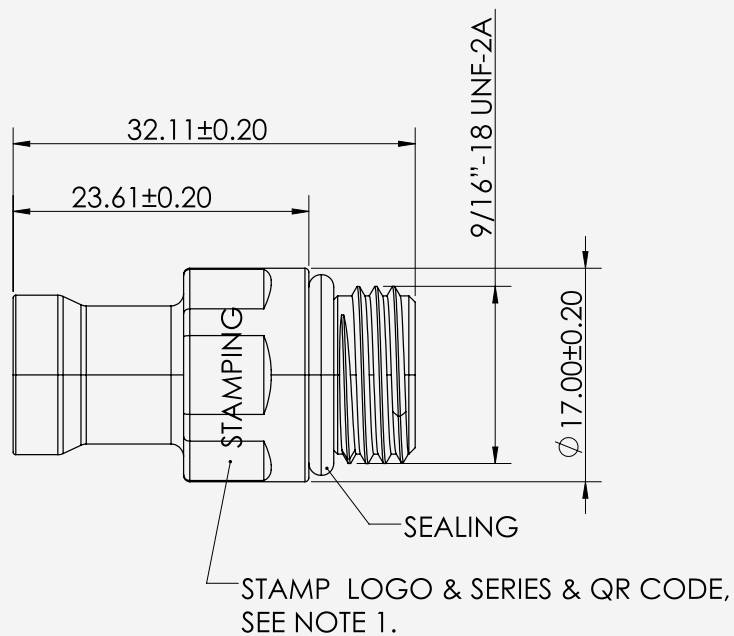
UQDB Dimensions

UQDB02 PLUG



UQDBP-02TMU01-N000

UQDB02 SOCKET



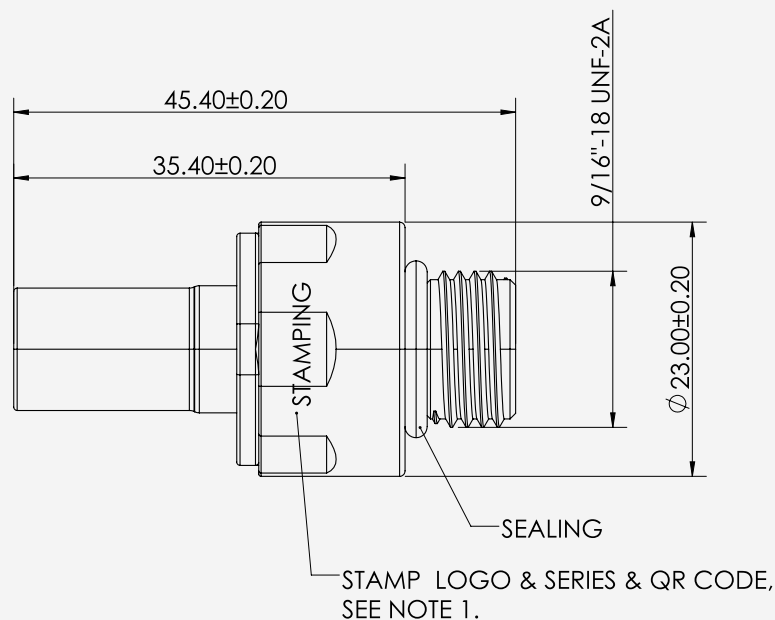
UQDBS-02TMU02-N000

Note:

1. UQDB has no color option.
2. For other terminations, please refer to PN list from following page, or contact the Amphenol team.

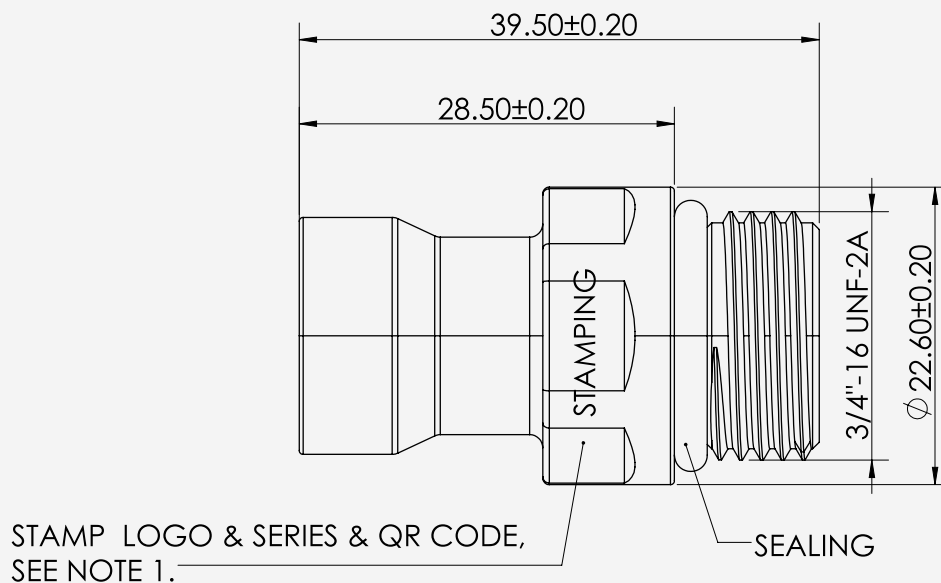
UQDB Dimensions

UQDB04 PLUG



UQDBP-04TMU02-N000

UQDB04 SOCKET



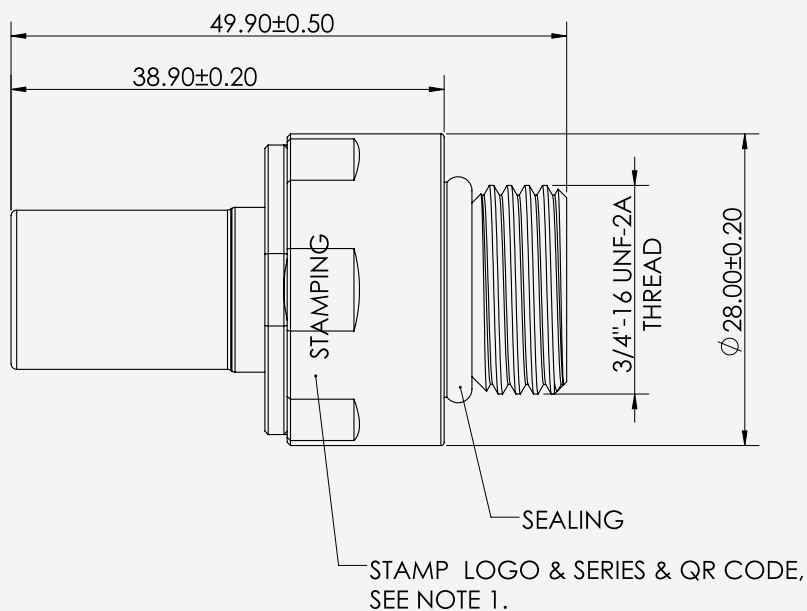
UQDBS-04TMU03-N000

Note:

1. UQDB has no color option.
2. For other terminations, please refer to PN list from following page, or contact the Amphenol team.

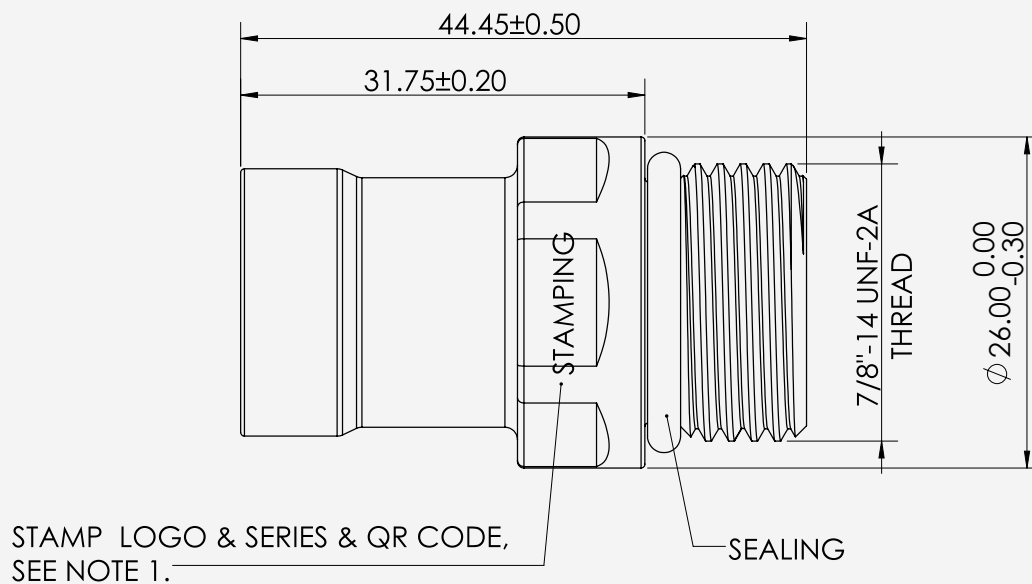
UQDB Dimensions

UQDB06 PLUG



UQDBP-06TMU03-N000

UQDB06 SOCKET



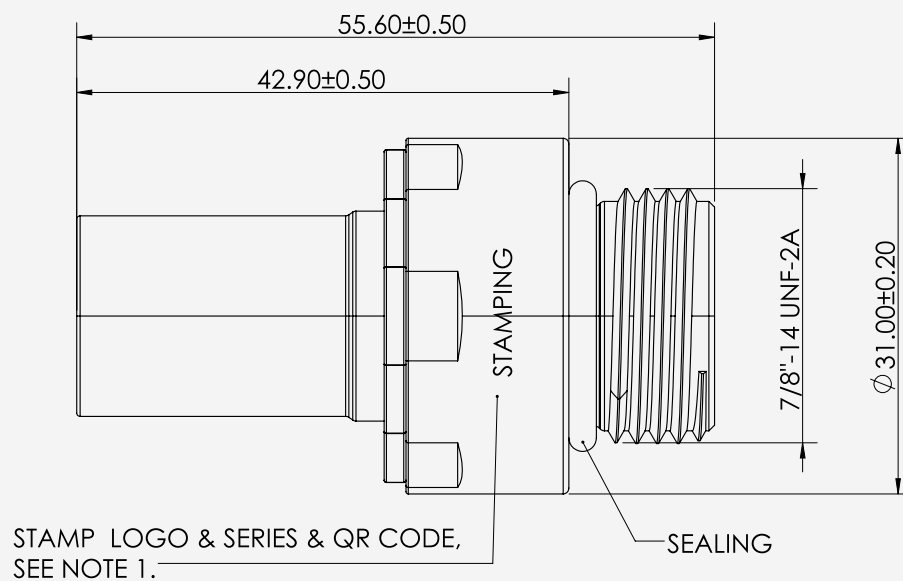
UQDBS-06TMU04-N000

Note:

1. UQDB has no color option.
2. For other terminations, please refer to PN list from following page, or contact the Amphenol team.

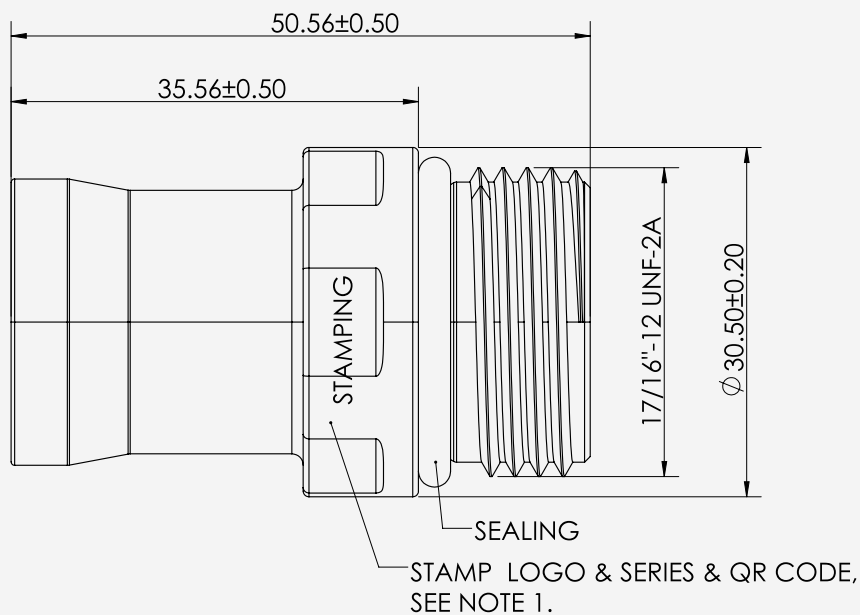
UQDB Dimensions

UQDB08 PLUG



UQDBP-08TMU04-N000

UQDB08 SOCKET

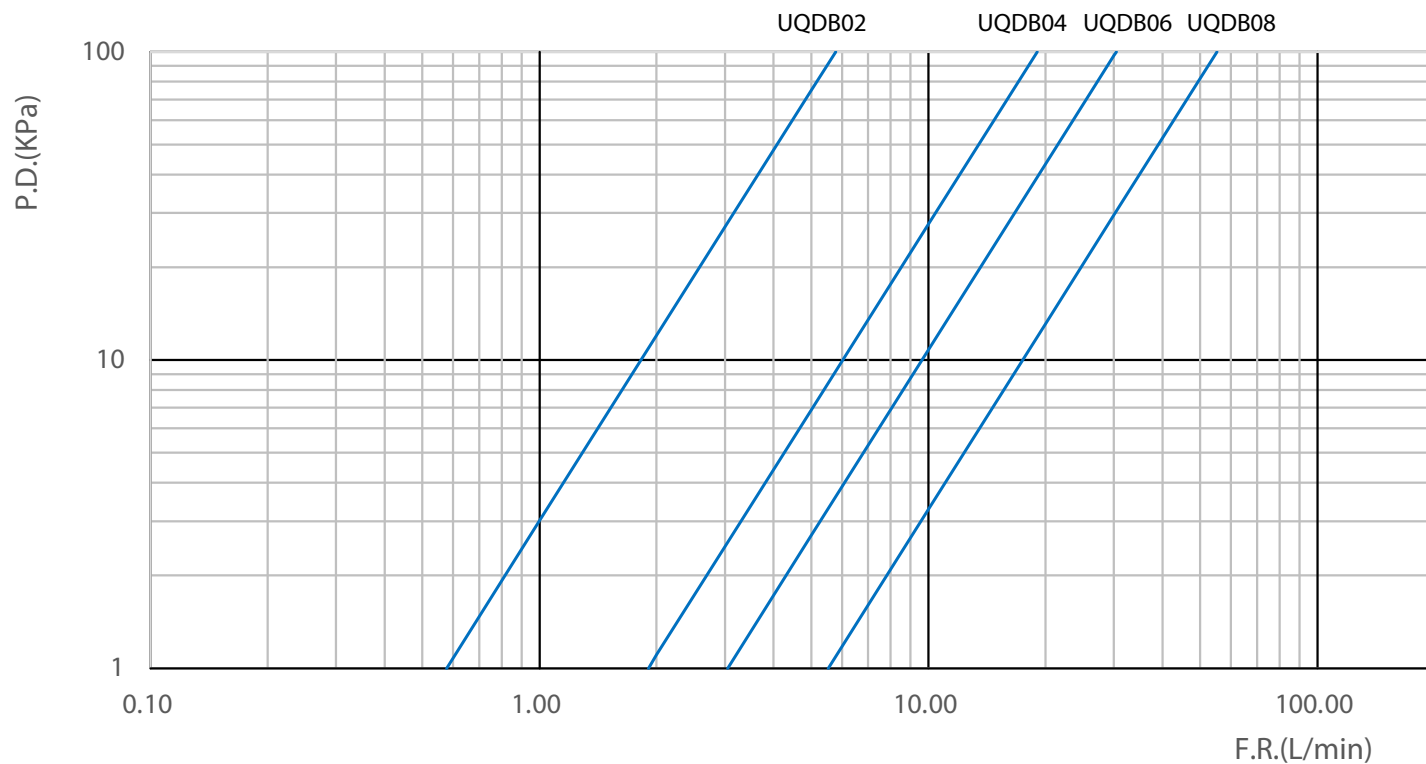


UQDBS-08TMU05-N000

Note:

1. UQDB has no color option.
2. For other terminations, please refer to PN list from following page, or contact the Amphenol team.

Flow Rate Curve: UQDB



Note: Tested by water

BMQC Product Introduction

The Blind Mate Quick Connector (BMQC) is a liquid cooling fluid connection for data centers developed by the Open Compute Project (OCP) based on Open Rack V3 that can automatically connect and seal without visual assistance. The BMQC series products use advanced blind-mate technology and high-performance sealing materials to ensure the reliability and durability, simplified the installation and improved efficiency, reduced the difficulty of operation and the risk of mis-operation.

Product Features:

- Self-alignment feature, +/- 5 mm radial and +/- 2.7° angular misalignment tolerance
- Blind-mate design, quick plug-in
- Aerospace-grade sealed for safety and reliability
- Bidirectional shut-off valve & dry-break
- Multiple termination options, such as barb, threads, etc.
- Low flow resistance
- QR code traceability
- Dimensional & performance requirements conform to OCP BMQC Specifications Rev 1.0
- [OCP certified](#)



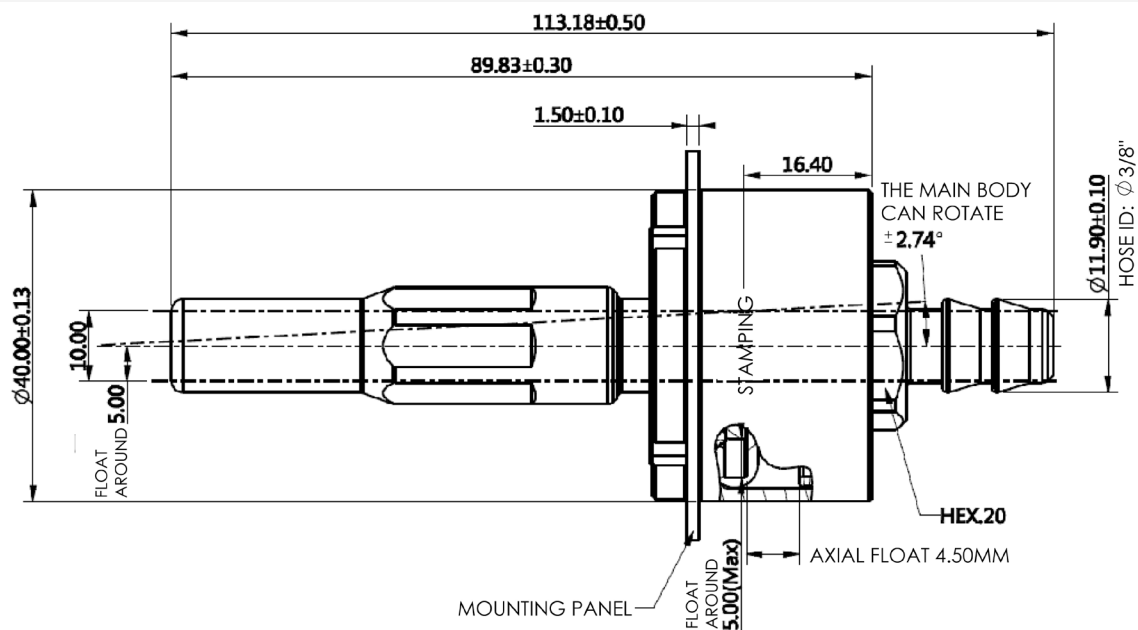
OPEN
Compute Project®

Product Specifications

Shell Material	Stainless Steel
Spring (Wetted)	Corrosion-resistant stainless steel
Seal	EPDM, FKM, FMVQ Optional according to the coolant
Working Pressure	0~0.35MPa
Safe Pressure	1.0MPa
Size	7mm
Temperature	-5 °C to 60 °C, with fluid -40 °C to 70 °C, without fluid
Sealing	Bidirectional dry-break sealed
Applicable Coolant	Deionized water, Ethylene glycol, Propylene glycol, etc.
Cv value	1.32
Fluid loss (ml)	0.025

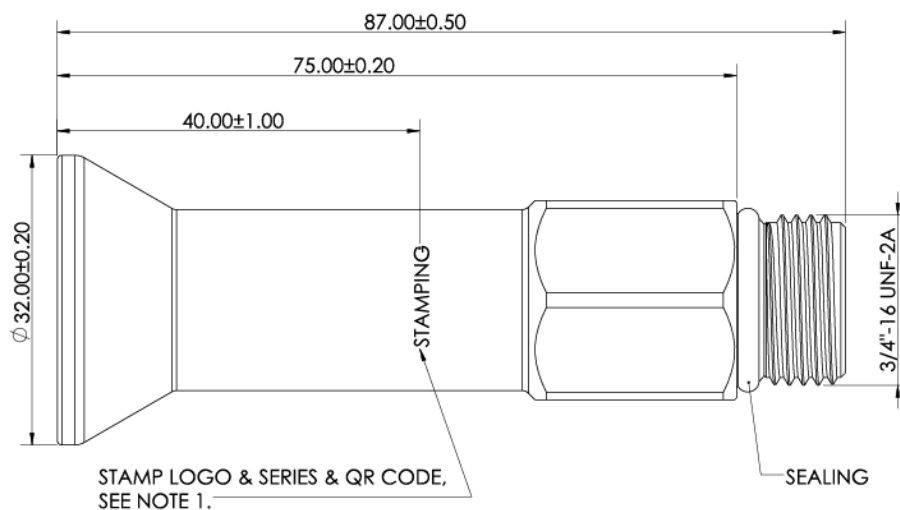
BMQC Dimensions

BMQC PLUG



BMQCP-HSH02-N000

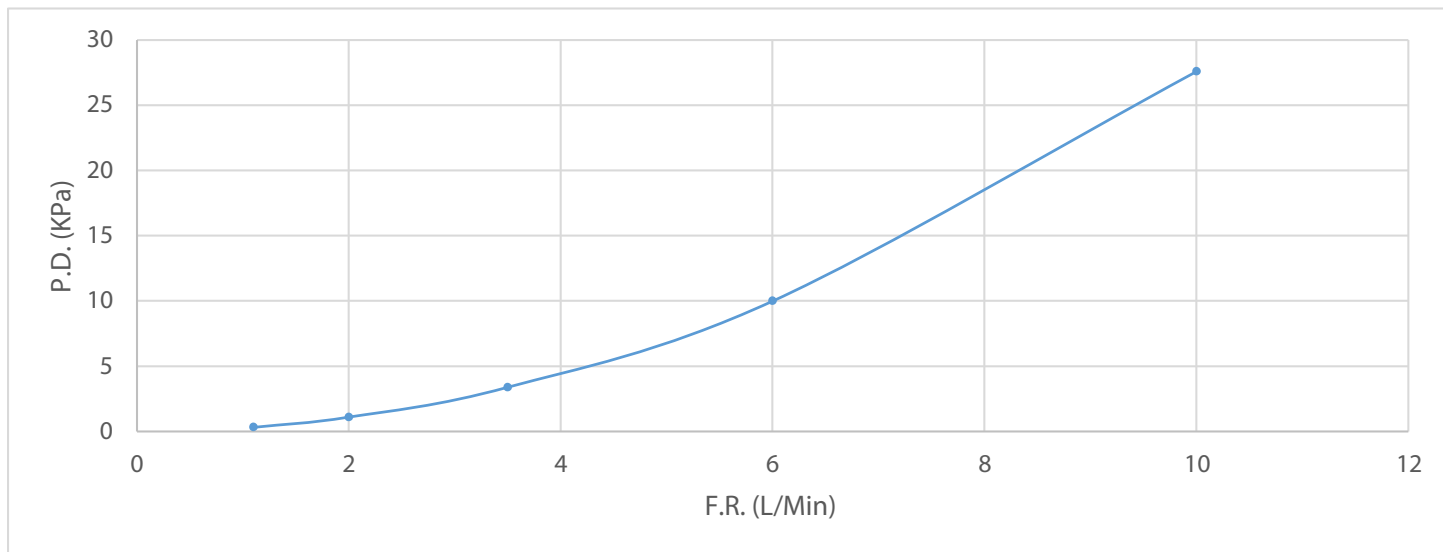
BMQC SOCKET



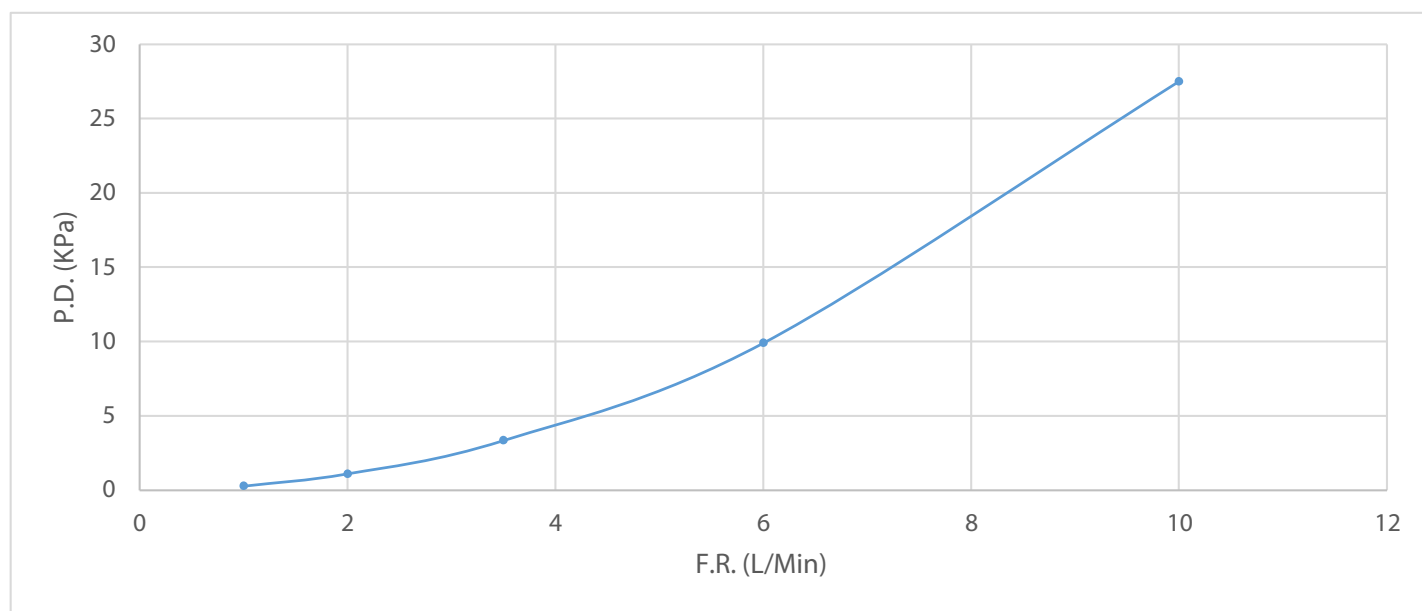
BMQCS-TMU03-N000

Flow Rate Curve: BMQC

PLUG TO SOCKET



SOCKET TO PLUG



LQC Product Introduction

The Large Quick Connector (LQC), developed under the Open Compute Project (OCP) framework, has set a new international specifications for quick-connect couplings in the data center industry. Key features such as its screw-to-connect locking mechanism, the ability to connect effortlessly under working pressures of up to 1 MPa, and a double redundant O-ring seal for enhanced leak protection make this coupling particularly suited for Coolant Distribution Units (CDUs) in data centers.

Product Features:

- Aerospace-grade sealed for safety and reliability
- Thread-to-connect quick disconnect for inlets & manifold
- Bidirectional shut-off valve & dry-break
- Low flow resistance
- QR code traceability
- Dimensional & performance requirements conform to OCP LQC Specifications Rev 1.0
- Used in Open Rack V3 Blind Mate Manifold, CDU application

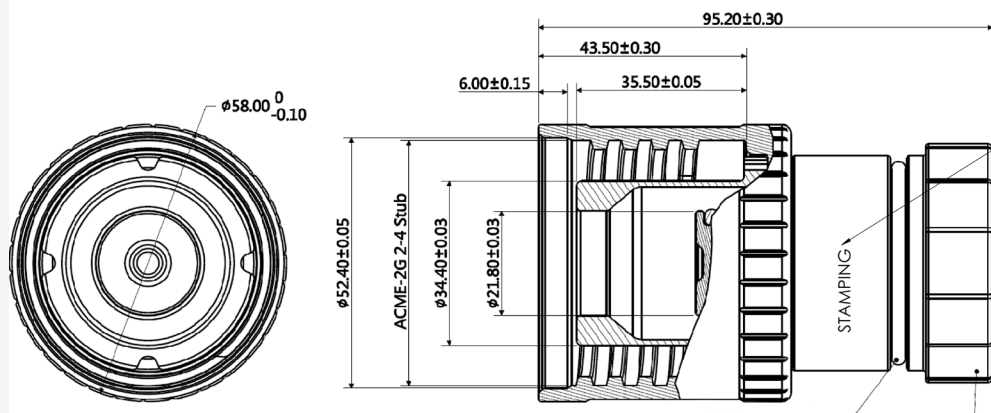


Product Specifications

Shell Material	Stainless Steel
Spring/Interlock Pin/Latch/Ball Valve	Corrosion-resistant stainless steel
Seal Material	EPDM, Optional FKM, FMVQ according to the coolant
Rated Flow Rate	Refer to flow rate curve
Working Pressure	0~1MPa
Safe Pressure	2MPa
Size	20mm
Fluid Loss (cc.)	<0.005(@0.3MPa)
Temperature	Operating Temperature: -40 °C to 105°C
Sealing	Bidirectional dry-break sealed
Applicable Coolant	Deionized water, Ethylene glycol, Propylene glycol, etc.
Termination Type	G1 "(BSPP1) (customized design upon request)

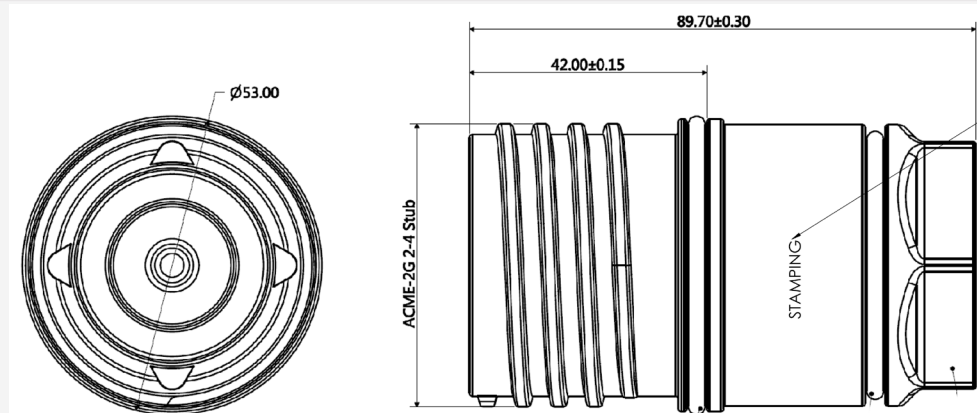
LQC Dimensions

LQC PLUG



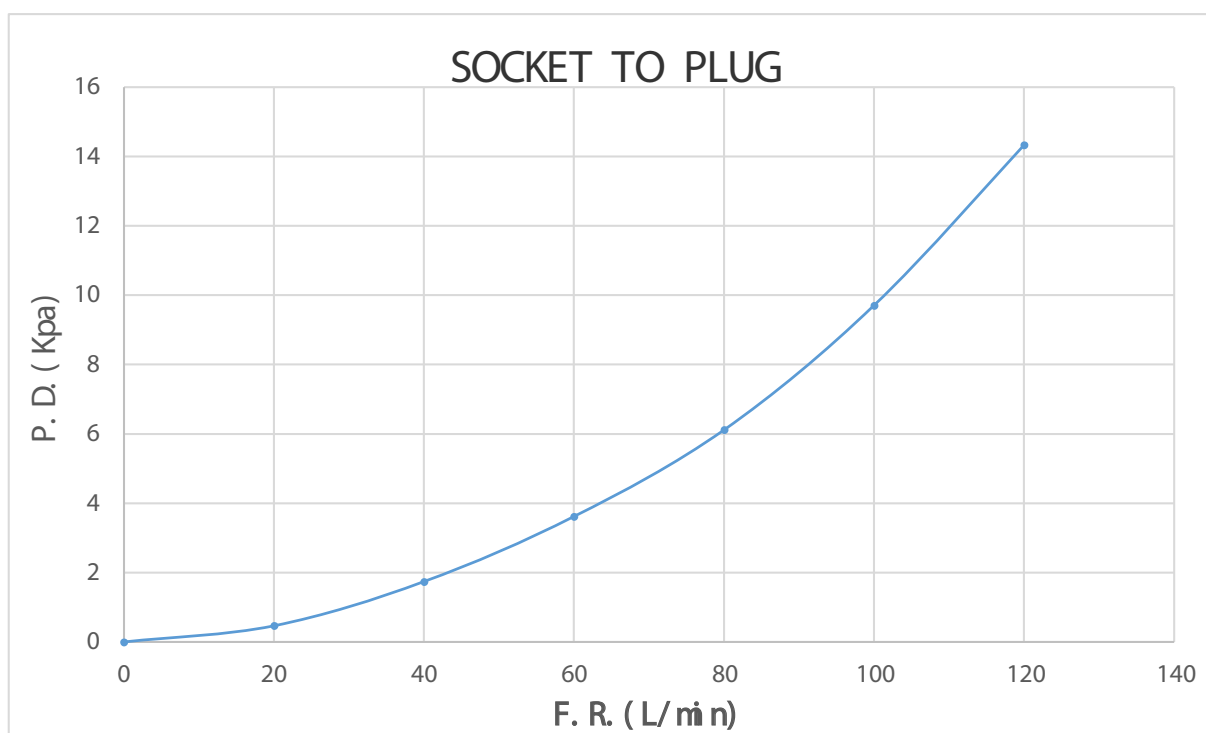
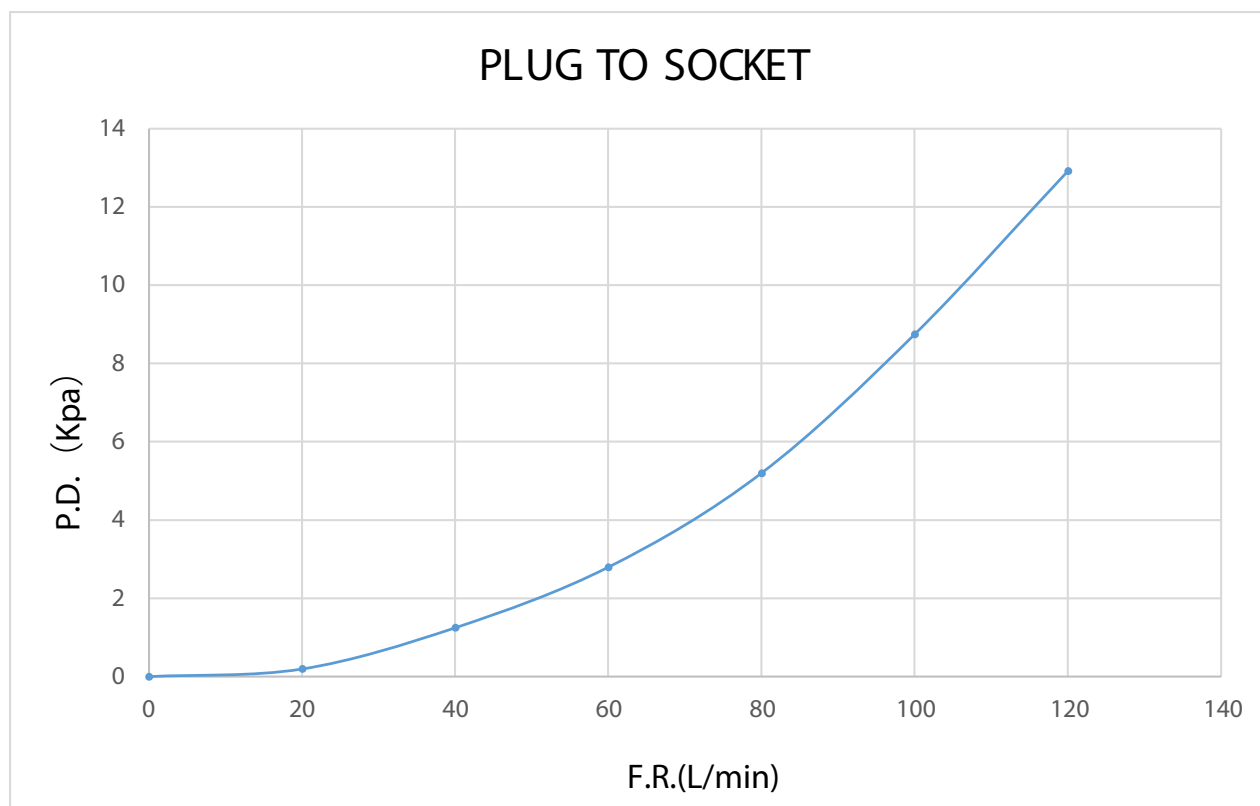
LQCP-20TFB20-L000 & LQCP-20TFB20-R000

LQC SOCKET



LQCS-20TFB20-L000 & LQCS-20TFB20-R000

Flow Rate Curve: LQC

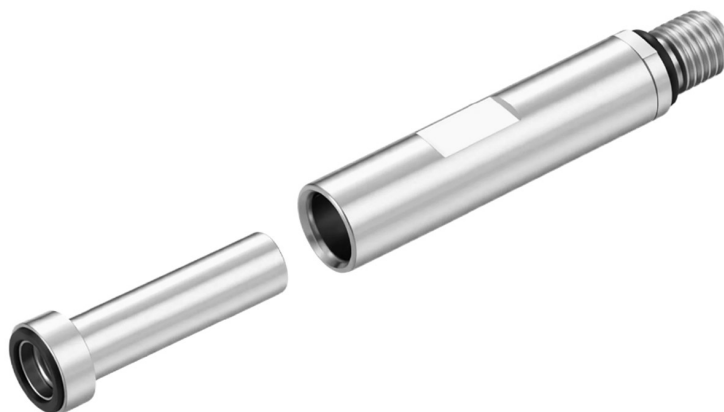


OMQD Product Introduction

As the demand for higher data rates intensifies, optical modules toward 1.6T and 3.2T capacities—power densities are increasing significantly. Conventional air cooling is approaching its thermal limits, making advanced thermal management solutions critical. The Optical Module Quick Disconnect (OMQD) liquid cooling connector emerges as an innovative solution designed to address these challenges, offering efficient, reliable, and scalable cooling for high-power pluggable transceivers.

Product Features

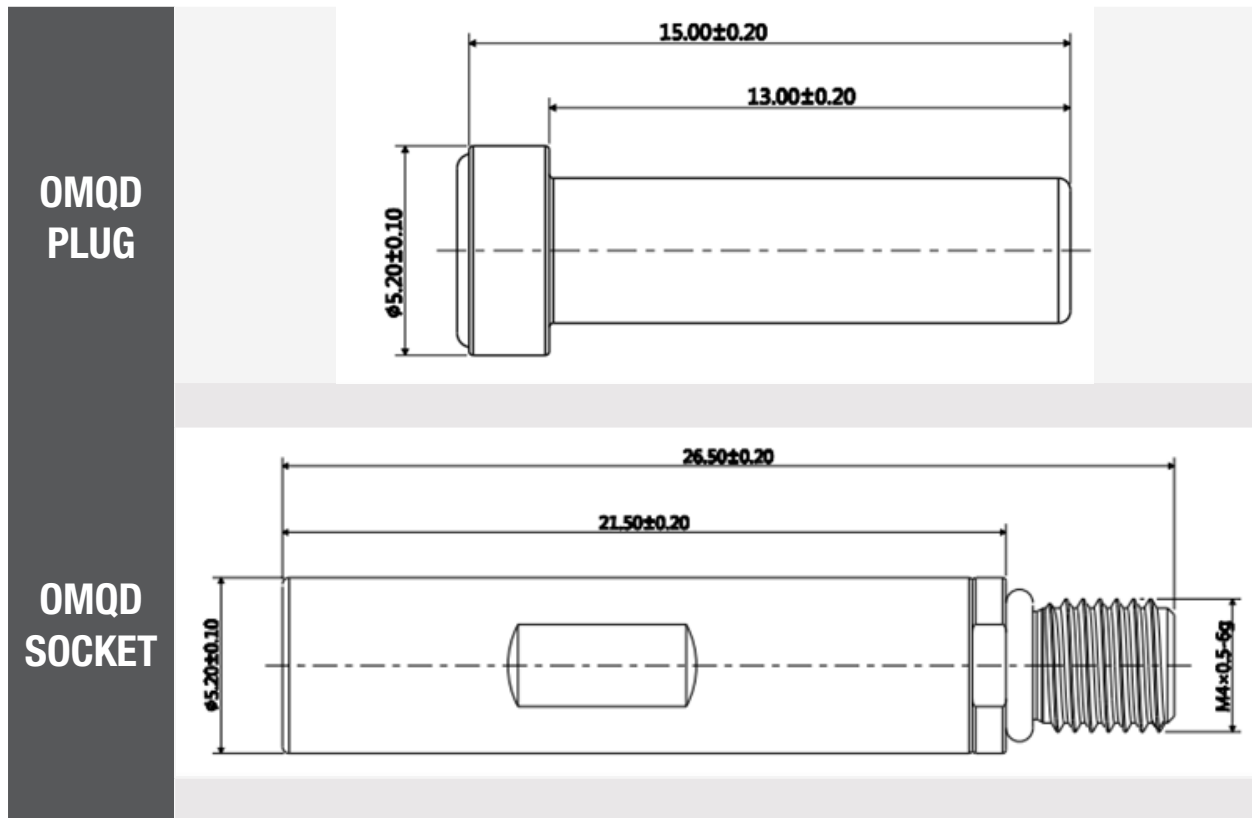
- Super tiny with 1mm fluid diameter
- Blind mate connection with 0.5mm misalignment
- Bidirectional shut-off valve & dry-break
- Low flow resistance
- Benefits for compact optical module application



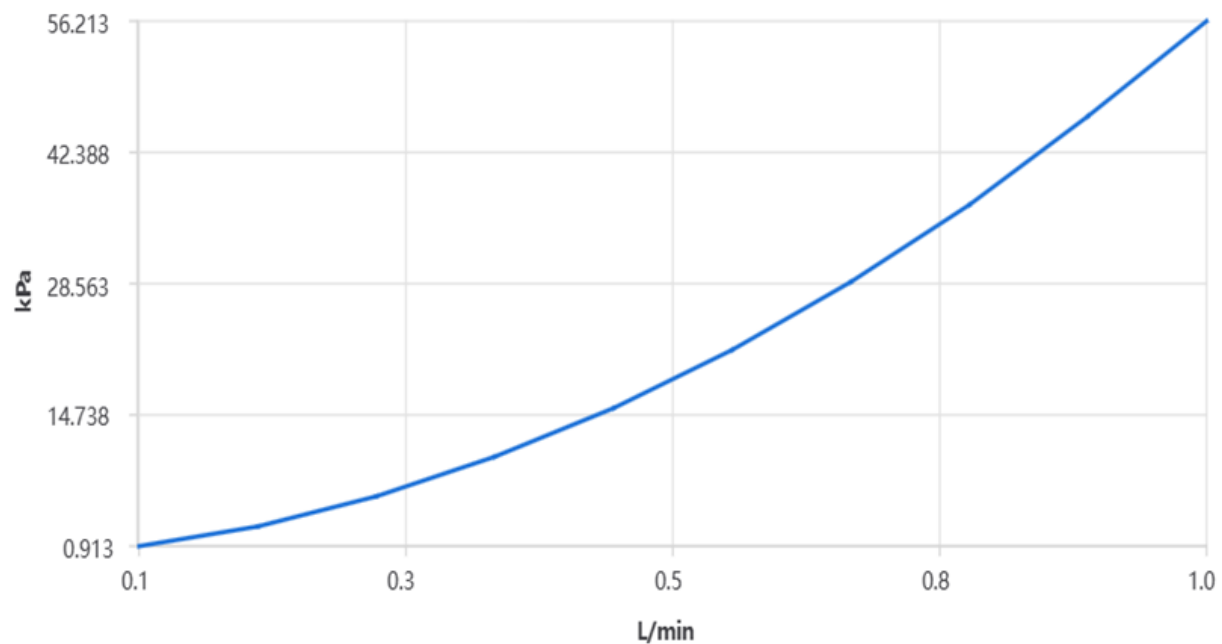
Product Specifications

Fluid Diameter	1mm
Misalignment Tolerance	0.5mm
Max. Outer Diameter	5.2mm
Shell Material	Stainless Steel
Spring/Interlock Pin/Latch/Ball Valve	Corrosion-resistant stainless steel
Seal Material	EPDM, Optional FKM, FMVQ according to the coolant
Rated Flow Rate	Refer to flow rate curve
Working Pressure	0~0.6MPa
Safe Pressure	1MPa
Cv Value	0.084
Temperature	Operating Temperature: -20 °C to 70 °C
Applicable Coolant	Deionized water, Ethylene glycol, Propylene glycol, etc.
Termination Type	Upon request
Mating Force(N) at 0 Pressure	<18N

OMQD Dimensions



OMQD Flow Rate Vs. Resistance

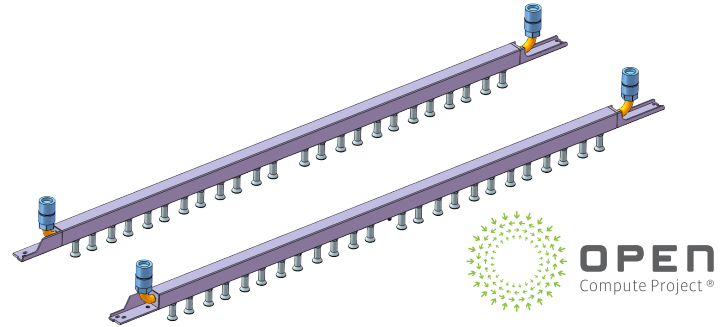


Manifold Product Introduction

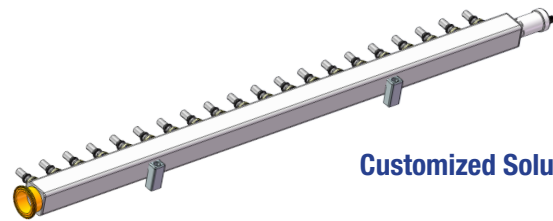
Liquid cooling manifold is a central component in liquid cooling systems designed to efficiently distribute coolant to multiple heat-generating parts (like CPUs, GPUs, or batteries). Acting like a "hub," it splits or directs the flow of coolant through a network of channels and ports, ensuring even cooling across connected components. Made from materials like stainless steel, copper, aluminum, or durable plastics, it balances heat transfer, pressure resistance, and corrosion protection. Its compact, customizable design makes it essential in applications ranging from high performance computers to electric vehicles and industrial machinery, improving thermal management while reducing overheating risks and energy use.

Product Features

- Strong corrosion resistance and high strength
- Durability
- Multi-Channel architecture
- High temperature/pressure resistance
- Leak prevention
- Customization is available
- Quick response with short LT

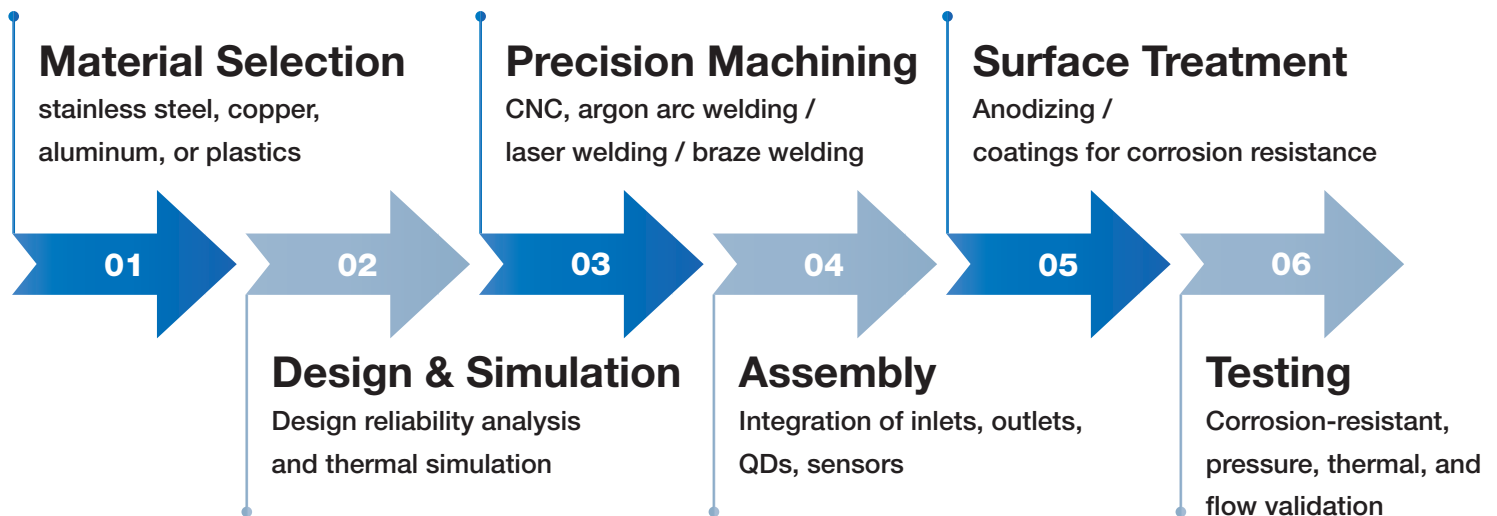


Blind-Mate Manifold, ORV3



Customized Solution

Development Process



UQDB Standard Product PN (Rev. 1.0)

CATALOG P/N	SIZE	TYPE	END-CONNECTION
UQDBP-02TMU01-N000	UQDB02	PLUG	male thread, ORB UNF 7/16"-20
UQDBP-04TMU02-N000	UQDB04	PLUG	male thread, ORB UNF 9/16"-18
UQDBP-06TMU03-N000	UQDB06	PLUG	male thread, ORB UNF 3/4"-16
UQDBP-08TMU04-N000	UQDB08	PLUG	male thread, ORB UNF 7/8"-14
UQDBS-02TMU01-N000	UQDB02	SOCKET	male thread, ORB UNF 7/16"-20
UQDBS-02TMU02-N000	UQDB02	SOCKET	male thread, ORB UNF 9/16"-18
UQDBS-04TMU03-N000	UQDB04	SOCKET	male thread, ORB UNF 3/4"-16
UQDBS-06TMU04-N000	UQDB06	SOCKET	male thread, ORB UNF 7/8"-14
UQDBS-08TMU05-N000	UQDB08	SOCKET	male thread, ORB UNF 1-1/16"-12

UQD Standard Product PN (Rev. 1.0)

CATALOG P/N BLUE COLOR	SIZE	TYPE	END-CONNECTION	CATALOG P/N RED COLOR
UQDP-02TMU01-L000	UQD02	PLUG	male thread, ORB UNF 7/16"-20	UQDP-02TMU01-R000
UQDP-02TMB01-L000	UQD02	PLUG	male thread, BSP 1/8"	UQDP-02TMB01-R000
UQDP-02TMB02-L000	UQD02	PLUG	male thread, BSP 1/4"	UQDP-02TMB02-R000
UQDP-02HSH01-L000	UQD02	PLUG	hose barb straight, 1/4" hose	UQDP-02HSH01-R000
UQDS-02TMB01-L000	UQD02	SOCKET	male thread, BSP 1/8"	UQDS-02TMB01-R000
UQDS-02TMB02-L000	UQD02	SOCKET	male thread, BSP 1/4"	UQDS-02TMB02-R000
UQDS-02HSH01-L000	UQD02	SOCKET	hose barb straight, 1/4" hose	UQDS-02HSH01-R000
UQDS-02TMU01-L000	UQD02	SOCKET	male thread, ORB UNF 7/16"-20	UQDS-02TMU01-R000
UQDS-02TFB02-L000	UQD02	SOCKET	female thread, BSP 1/4"	UQDS-02TFB02-R000
UQDLS-02TMB01-L000	UQD02	SOCKET LATCH	male thread, BSP 1/8"	UQDLS-02TMB01-R000
UQDLS-02TMB02-L000	UQD02	SOCKET LATCH	male thread, BSP 1/4"	UQDLS-02TMB02-R000
UQDLS-02HSH01-L000	UQD02	SOCKET LATCH	hose barb straight, 1/4" hose	UQDLS-02HSH01-R000
UQDLS-02TMU01-L000	UQD02	SOCKET LATCH	male thread, ORB UNF 7/16"-20	UQDLS-02TMU01-R000
UQDLS-02TFB02-L000	UQD02	SOCKET LATCH	female thread, BSP 1/4"	UQDLS-02TFB02-R000

UQD Standard Product PN (Rev. 1.0) (Cont.)

CATALOG P/N BLUE COLOR	SIZE	TYPE	END-CONNECTION	CATALOG P/N RED COLOR
UQDP-04TMU02-L000	UQD04	PLUG	male thread, ORB UNF 9/16"-18	UQDP-04TMU02-R000
UQDP-04TMB02-L000	UQD04	PLUG	male thread, BSP 1/4"	UQDP-04TMB02-R000
UQDP-04TMB03-L000	UQD04	PLUG	male thread, BSP 3/8"	UQDP-04TMB03-R000
UQDP-04HSH02-L000	UQD04	PLUG	hose barb straight, 3/8" hose	UQDP-04HSH02-R000
UQDP-04HSH01-L000	UQD04	PLUG	hose barb straight, 1/4" hose	UQDP-04HSH01-R000
UQDS-04TMU02-L000	UQD04	SOCKET	male thread, ORB UNF 9/16"-18	UQDS-04TMU02-R000
UQDS-04TMB03-L000	UQD04	SOCKET	male thread, BSP 3/8"	UQDS-04TMB03-R000
UQDS-04TMB02-L000	UQD04	SOCKET	male thread, BSP 1/4"	UQDS-04TMB02-R000
UQDS-04HSH02-L000	UQD04	SOCKET	hose barb straight, 3/8" hose	UQDS-04HSH02-R000
UQDS-04HSH01-L000	UQD04	SOCKET	hose barb straight, 1/4" hose	UQDS-04HSH01-R000
UQDS-04HSH03-L000	UQD04	SOCKET	hose barb straight, 1/2" hose	UQDS-04HSH03-R000
UQDLS-04TMU02-L000	UQD04	SOCKET LATCH	male thread, ORB UNF 9/16"-18	UQDLS-04TMU02-R000
UQDLS-04TMB03-L000	UQD04	SOCKET LATCH	male thread, BSP 3/8"	UQDLS-04TMB03-R000
UQDLS-04TMB02-L000	UQD04	SOCKET LATCH	male thread, BSP 1/4"	UQDLS-04TMB02-R000
UQDLS-04HSH02-L000	UQD04	SOCKET LATCH	hose barb straight, 3/8" hose	UQDLS-04HSH02-R000
UQDLS-04HSH01-L000	UQD04	SOCKET LATCH	hose barb straight, 1/4" hose	UQDLS-04HSH01-R000
UQDLS-04HSH03-L000	UQD04	SOCKET LATCH	hose barb straight, 1/2" hose	UQDLS-04HSH03-R000

UQD Standard Product PN (Rev. 1.0) (Cont.)

CATALOG P/N BLUE COLOR	SIZE	TYPE	END-CONNECTION	CATALOG P/N RED COLOR
UQDP-06TMB03-L000	UQD06	PLUG	male thread, BSP 3/8"	UQDP-06TMB03-R000
UQDP-06TMB04-L000	UQD06	PLUG	male thread, BSP 1/2"	UQDP-06TMB04-R000
UQDP-06TMU03-L000	UQD06	PLUG	male thread, ORB UNF 3/4"-16	UQDP-06TMU03-R000
UQDS-06TMU03-L000	UQD06	SOCKET	male thread, ORB UNF 3/4"-16	UQDS-06TMU03-R000
UQDS-06TMB02-L000	UQD06	SOCKET	male thread, BSP 1/4"	UQDS-06TMB02-R000
UQDS-06TMB03-L000	UQD06	SOCKET	male thread, BSP 3/8"	UQDS-06TMB03-R000
UQDS-06TMB04-L000	UQD06	SOCKET	male thread, BSP 1/2"	UQDS-06TMB04-R000
UQDS-06HSH03-L000	UQD06	SOCKET	hose barb straight, 1/2" hose	UQDS-06HSH03-R000
UQDLS-06TMU03-L000	UQD06	SOCKET LATCH	male thread, ORB UNF 3/4"-16	UQDLS-06TMU03-R000
UQDLS-06TMB02-L000	UQD06	SOCKET LATCH	male thread, BSP 1/4"	UQDLS-06TMB02-R000
UQDLS-06TMB03-L000	UQD06	SOCKET LATCH	male thread, BSP 3/8"	UQDLS-06TMB03-R000
UQDLS-06TMB04-L000	UQD06	SOCKET LATCH	male thread, BSP 1/2"	UQDLS-06TMB04-R000
UQDLS-06HSH03-L000	UQD06	SOCKET LATCH	hose barb straight, 1/2" hose	UQDLS-06HSH03-R000

CATALOG P/N BLUE COLOR	SIZE	TYPE	END-CONNECTION	CATALOG P/N RED COLOR
UQDP-08TMB04-L000	UQD08	PLUG	male thread, BSP 1/2"	UQDP-08TMB04-R000
UQDP-08TMU04-L000	UQD08	PLUG	male thread, ORB UNF 7/8"-14	UQDP-08TMU04-R000
UQDS-08HSH04-L000	UQD08	SOCKET	hose barb straight, 5/8" hose	UQDS-08HSH04-R000
UQDS-08TMU04-L000	UQD08	SOCKET	male thread, ORB UNF 7/8"-14	UQDS-08TMU04-R000
UQDLS-08HSH04-L000	UQD08	SOCKET LATCH	hose barb straight, 5/8" hose	UQDLS-08HSH04-R000
UQDLS-08TMU04-L000	UQD08	SOCKET LATCH	male thread, ORB UNF 7/8"-14	UQDLS-08TMU04-R000

BMQC Standard Product PN

CATALOG P/N	SIZE	TYPE	End-Connection
BMQCP-HSH02-N000	7mm	PLUG	BMQC,PLUG,hose barb straight,3/8" hose
BMQCS-TMU03-N000	7mm	SOCKET	BMQC,SOCKET,male thread,ORB UNF3/4"-16

LQC Standard Product PN

CATALOG P/N	SIZE	TYPE	End-Connection
LQCS-20TFB20-L000	20mm	SOCKET	LQC20,SOCKET,thread female G1-B,BLUE
LQCS-20TFB20-R000	20mm	SOCKET	LQC20,SOCKET,thread female G1-B,RED
LQCP-20TFB20-L000	20mm	PLUG	LQC20,PLUG,thread female G1-B,BLUE
LQCP-20TFB20-R000	20mm	PLUG	LQC20,PLUG,thread female G1-B,RED

SHQD Sourceline Standard Product PN

CATALOG P/N	SIZE	End-Connection
SHQD-50TFB50-N000	2 inch	Sourceline 2 inches ball valve,female thread,BSPP G2-11
SHQD-50HSH50-N000	2 inch	Sourceline 2 inches ball valve,hose barb straight version, for 2"EPDM
SHQD-50SFF50-N000	2 inch	Sourceline 2 inches ball valve,sanitary flange version
SHQD-50TMB50-N000	2 inch	Sourceline 2 inches ball valve,male thread,BSPP G2-11
SHQD-38TFB38-N000	1.5 inch	Sourceline 1.5 inches ball valve,female thread,BSPP G1 1/2-11
SHQD-38HSH38-N000	1.5 inch	Sourceline 1.5 inches ball valve,hose barb straight version, for 1.5"EPDM
SHQD-38SFF38-N000	1.5 inch	Sourceline 1.5 inches ball valve,sanitary flange version
SHQD-38TMB38-N000	1.5 inch	Sourceline 1.5 inches ball valve,male thread,BSPP G1 1/2-11
SHQD-25TFB25-N000	1 inch	Sourceline 1 inch ball valve,female thread,BSPP G1-11
SHQD-25HSH25-N000	1 inch	Sourceline 1 inch ball valve,hose barb straight version, for 1"EPDM
SHQD-25SFF25-N000	1 inch	Sourceline 1 inch ball valve,sanitary flange version
SHQD-25TMB25-N000	1 inch	Sourceline 1 inch ball valve,male thread,BSPP G1-11

MQD Standard Product PN

CATALOG P/N	SIZE	TYPE	End-Connection
MQDP-02HSH06-L000	2	PLUG	MQD02 PLUG HS OD 8.64mm,BU
MQDP-02HSH06-R000	2	PLUG	MQD02 PLUG HS OD 8.64mm,RD
MQDP-02HSHV06-L000	2	PLUG	MQD02 PLUG 90°HS OD 8.64mm,BU
MQDP-02HSHV06-R000	2	PLUG	MQD02 PLUG 90° HS OD 8.64mm,RD
MQDS-02TMU01-L000	2	SOCKET	MQD02 SKT TM UNF7/16"-20,BU
MQDS-02TMU01-R000	2	SOCKET	MQD02 SKT TM UNF7/16"-20,RD
MQDP-03TMU01-L000	3	PLUG	MQD03 PLUG TM UNF7/16"-20,BU
MQDP-03TMU01-R000	3	PLUG	MQD03 PLUG TM UNF7/16"-20,RD
MQDP-03TMVU01-L000	3	PLUG	MQD03 PLUG 90° TM UNF7/16"-20,BU
MQDP-03TMVU01-R000	3	PLUG	MQD03 PLUG 90° TM UNF7/16"-20,RD
MQDS-03TMB02-L000	3	SOCKET	MQD03 SKT TM BSPP1/4",BU
MQDS-03TMB02-R000	3	SOCKET	MQD03 SKT TM BSPP1/4",RD
MQDP-04TMU01-L000	4	PLUG	MQD04 PLUG TM UNF7/16"-20,BU
MQDP-04TMU01-R000	4	PLUG	MQD04 PLUG TM UNF7/16"-20,RD
MQDP-04TMVU01-L000	4	PLUG	MQD04 PLUG 90° TM UNF7/16"-20,BU
MQDP-04TMVU01-R000	4	PLUG	MQD04 PLUG 90° TM UNF7/16"-20,RD
MQDS-04TMB03-L000	4	SOCKET	MQD04 SKT TM BSPP3/8",BU
MQDS-04TMB03-R000	4	SOCKET	MQD04 SKT TM BSPP3/8",RD

UQD/UQDB Standard Product PN (Rev. 2.0)

CATALOG P/N	SIZE	TYPE	End-Connection
UQDSV2-02HSH01-L000	UQD02	SOCKET	UQD02-V2,SOCKET,hose barb straight,1/4"hose,BLUE
UQDSV2-02HSH01-R000	UQD02	SOCKET	UQD02-V2,SOCKET,hose barb straight,1/4"hose,RED
UQDPV2-02TMU01-L000	UQD02	PLUG	UQD02-V2,PLUG,male thread,UNF7/16"-20 UNF-2A,BLUE
UQDPV2-02TMU01-R000	UQD02	PLUG	UQD02-V2,PLUG,male thread,UNF7/16"-20 UNF-2A,RED
UQDBSV2-02TMU02-N000	UQDB02	SOCKET	UQDB02-V2,SOCKET,male thread,UNF9/16"-18 UNF-2A
UQDBPV2-02TMU01-N000	UQDB02	PLUG	UQDB02-V2,PLUG,male thread,UNF7/16"-20 UNF-2A
UQDSV2-04HSH02-L000	UQD04	SOCKET	UQD04-V2,SOCKET,hose barb straight,3/8"hose,BLUE
UQDSV2-04HSH02-R000	UQD04	SOCKET	UQD04-V2,SOCKET,hose barb straight,3/8"hose,RED
UQDPV2-04TMU02-L000	UQD04	PLUG	UQD04-V2,PLUG,male thread,UNF9/16"-18 UNF-2A,BLUE
UQDPV2-04TMU02-R000	UQD04	PLUG	UQD04-V2,PLUG,male thread,UNF9/16"-18 UNF-2A,RED
UQDBSV2-04TMU03-N000	UQDB04	SOCKET	UQDB04-V2,SOCKET,male thread,UNF3/4"-16 UNF-2A
UQDBPV2-04TMU02-N000	UQDB04	PLUG	UQDB04-V2,PLUG,male thread,UNF9/16"-18 UNF-2A

UQD/UQDB Standard Product PN (Rev. 2.0) (Cont.)

CATALOG P/N	SIZE	TYPE	End-Connection
UQDSV2-06HSH03-L000	UQD06	SOCKET	UQD06-V2,SOCKET,hose barb straight,1/2"hose,BLUE
UQDSV2-06HSH03-R000	UQD06	SOCKET	UQD06-V2,SOCKET,hose barb straight,1/2"hose,RED
UQDPV2-06TMU03-L000	UQD06	PLUG	UQD06-V2,PLUG,male thread,UNF3/4"-16 UNF-2A,BLUE
UQDPV2-06TMU03-R000	UQD06	PLUG	UQD06-V2,PLUG,male thread,UNF3/4"-16 UNF-2A,RED
UQDBSV2-06TMU04-N000	UQDB06	SOCKET	UQDB06-V2,SOCKET,male thread,UNF7/8"-14 UNF-2A
UQDBPV2-06TMU03-N000	UQDB06	PLUG	UQDB06-V2,PLUG,male thread,UNF3/4"-16 UNF-2A
UQDSV2-08HSH04-L000	UQD08	SOCKET	UQD08-V2,SOCKET,hose barb straight,5/8"hose,BLUE
UQDSV2-08HSH04-R000	UQD08	SOCKET	UQD08-V2,SOCKET,hose barb straight,5/8"hose,RED
UQDPV2-08TMU04-L000	UQD08	PLUG	UQD08-V2,PLUG,male thread,7/8"-14 UNF-2A,BLUE
UQDPV2-08TMU04-R000	UQD08	PLUG	UQD08-V2,PLUG,male thread,7/8"-14 UNF-2A,RED
UQDBSV2-08TMU05-N000	UQDB08	SOCKET	UQDB08-V2,SOCKET,male thread,UNF1-1/16"-12 UNF-2A
UQDBPV2-08TMU04-N000	UQDB08	PLUG	UQDB08-V2,PLUG,male thread,UNF7/8"-14 UNF-2A

**For any customized solution requests, please
contact Amphenol Industrial Operations**



AMPHENOL CORPORATION
Amphenol Industrial Operations

Phone: 888-364-9011
20 Valley Street
Endicott, NY 13760-3600
www.amphenol-industrial.com

Amphenol Technology(Zhuhai) Co., Ltd.

No.63, Xinghan Road, Sanzao Town,
Jinwan, Zhuhai, 519040
China Tel: +86-756-398 9725
Fax: +86-756-398 9768
www.amphenol-industrial.com
Email: tech@amphenol-aio.com