

GUYSON

Danfoss



Danfoss Hansen® Universal Quick Disconnect Blind-Mate (UQDB)

One partner, every solution

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Danfoss Hansen **Universal Quick Disconnect Blind-Mate (UQDB)** has been designed with OCP (Open Compute Project) community to set industry standard for thermal management application in data centers.

This quick disconnect coupling is available in 4 different sizes (as the UQD: -02/-04/-06/-08) and complies with OCP specification requirements.

Danfoss UQDB offers a self-alignment feature to help connect in location with limited access or visibility and guarantees 100% helium-leak testing on every coupling.



Features and Benefits

- Designed per OCP UQDB specifications
- "Blind-connection" thanks to self-alignment feature with radial compensation of 1 mm
- Push-to-connect design
- Direct connection between servers and manifolds
- High flow and reduced pressure drop for an improved system efficiency
- Flat-face dry break design to avoid spillage during connection/ disconnection
- Sizes available: -02/-04/-06/-08
- High reliability and 100% helium-leak tested
- Standard material: 303/304 stainless steel for excellent corrosion resistance
- Standard seal material: EPDM-P (Peroxide cured) for excellent fluid compatibility
- Terminal ends are ORB
- Operating temperature range: 5°C (41°F) to 65°C (149°F)
- Typical working pressure: 6.9 bar
- QR code marking to help identify and track production parts
- All EPDM peroxide-cured seals and O-rings used in our products are certified in accordance with IEC 62368-1 G.15.2.3 under file MH67791, Volume 1.

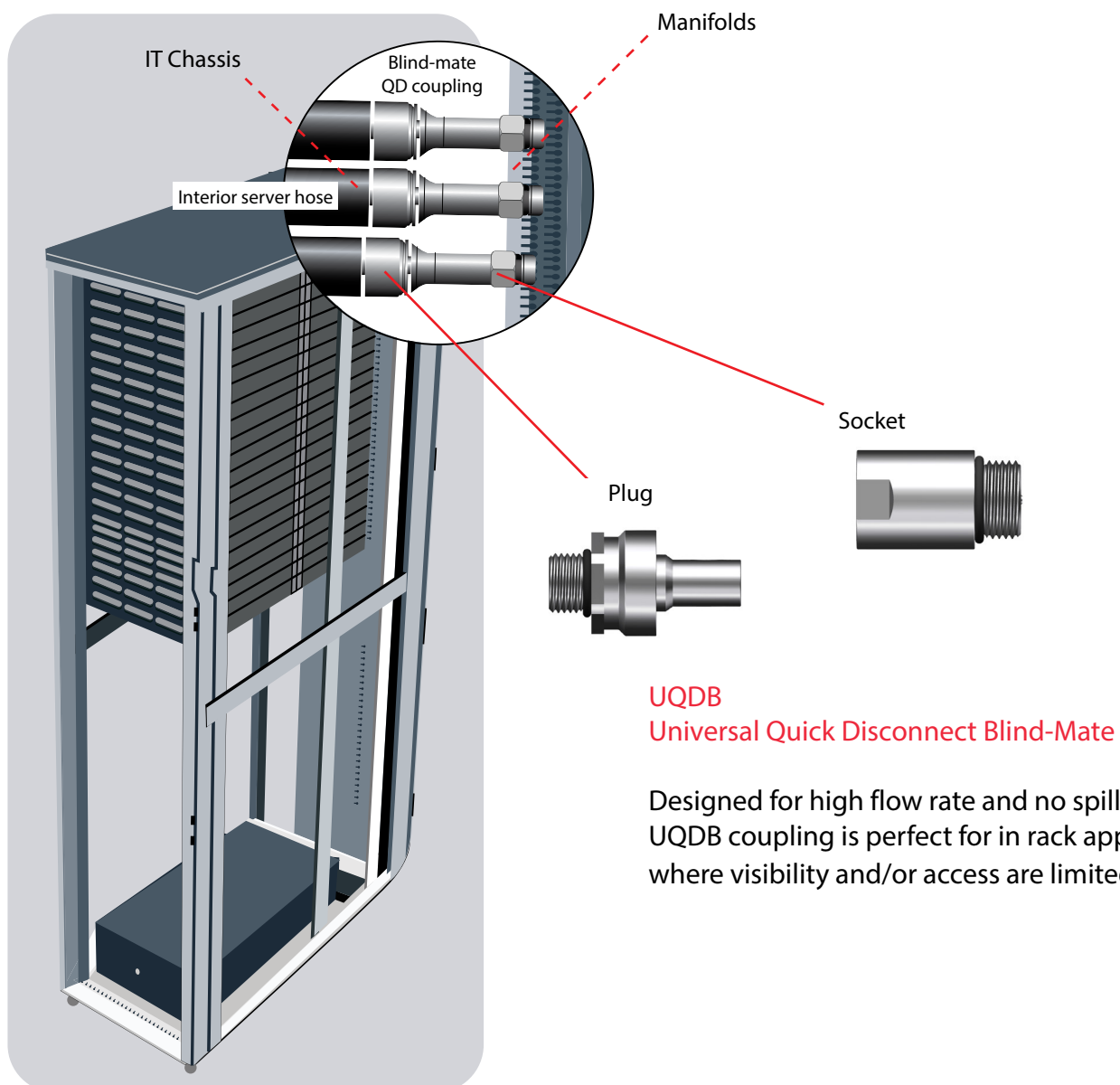


Solutions to your liquid cooling challenges

Inner Rack Solutions

Danfoss' direct-to-chip cooling solutions extend into the racks through efficient routing of flexible, kink-free hoses, and leak free, helium-tested couplings.

Danfoss has a **comprehensive portfolio of premium fluid conveyance products** to meet your thermal management system needs.





Physical characteristics

Size	Body Size	Nominal Flow Dia-meter	Max operating pressure						Min burst pressure						Rated Flow*		Cv Value	Air Inclusion	Fluid Loss	Mis-alignment (radial)
			Connected		Socket / Female Half		Plug / Male Half		Connected		Socket / Female Half		Plug / Male Half							
	(in)	(mm)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(lpm)	(gpm)	-	cc. max.	cc. max.	(mm)
UQDB02	1/8	3.15	20	290	20	290	20	290	60	870	60	870	60	870	2.1	0.55	0.31	0.04	0.02	1
UQDB04	1/4	5.7	16	232	16	232	16	232	48	696	48	696	48	696	6.4	1.7	1.22	0.04	0.025	1
UQDB06	3/8	7.9	10	145	10	145	10	145	30	435	30	435	30	435	11.36	3.0	2.23	0.093	0.035	1
UQDB08	1/2	9.3	6.89	100	6.89	100	6.89	100	20.68	300	20.68	300	20.68	300	17.8	4.7	3.76	0.096	0.044	1

* Defined per OCP specifications, Rated Flow is the reference flow rate used to measure pressure drop and determine the published Cv (flow coefficient)

Applications & Markets

- Direct-to-chip liquid cooling
- Thermal management

Seal Elastomer Data

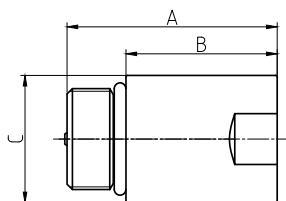
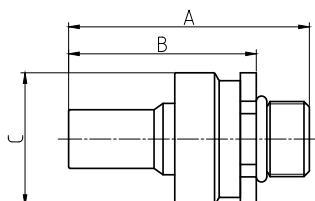
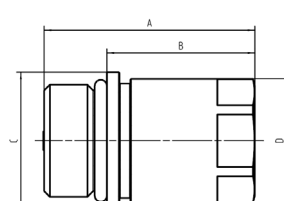
Seal Elastomer	Operation Temperature Range	
	°C	°F
EPDM-P	-40°C +150°C	-40°F +302°F

Size	Performance Parameters					
	Force to Connect		Plug	Recommended Torque		Socket
	N	lb		N.m		
UQDB02	53	12	7/16-20 UNF-2A	9-10		9/16-18 UNF-2A
UQDB04	62	14	9/16-18 UNF-2A	15-17		3/4-16 UNF-2A
UQDB06	67	15	3/4-16 UNF-2A	25-28		7/8-14 UNF-2A
UQDB08	71	16	7/8-14 UNF-2A	30-33		1 1/16-12 UN-2A

Flow Data

Size	Flow at 5m/s (lpm)	Flow at 5 m/s (gpm)
UQBD02	2,3	0,60
UQDB04	7,8	2,0
UQDB06	14,7	3,9
UQDB08	20,6	5,4

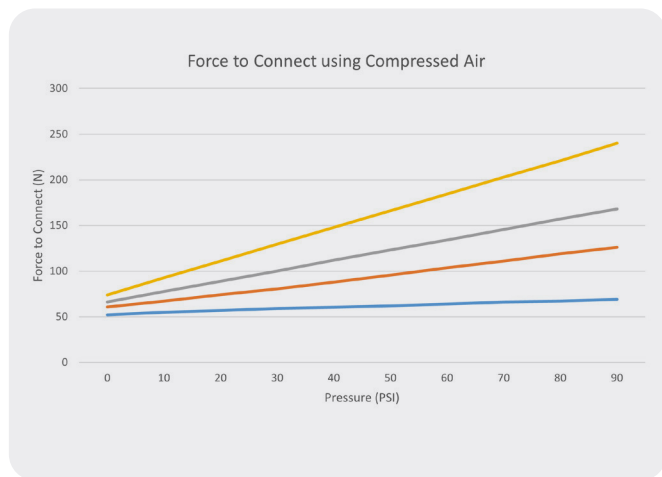
A reference flow rate corresponding to 5 m/s is widely adopted in industry to balance pressure drop and flow stability. While not the maximum allowable flow, it offers an optimal balance between system performance and component sizing.

Figure 1
SocketFigure 2
PlugFigure 3
Socket

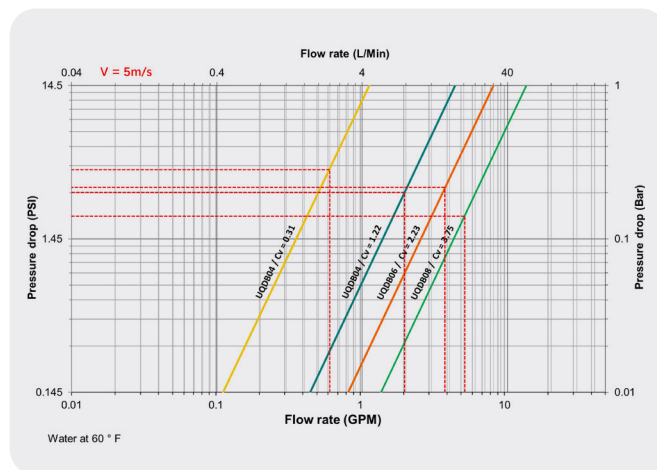
Dimensions

OCP UQDB size	Part number	Order number	Part	Material	Details		Dimensions										E2E length	
					Thread/size	Fig.	A		B		C		D					
					ORB	n°	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
UQDB02	2UQBS56ORM	2UQBS56ORM	Socket	SS303	9/16"-18	1	33.60	1.32	23.6	0.93	20	0.79			35.8 - 37.2	1.41 - 1.47		
UQDB02	2UQBP44ORM	2UQBP44ORM	Plug	SS303	7/16"-20	2	36.10	1.42	27	1.06	20	0.79						
UQDB04	4UQBS75ORM	4UQBS75ORM	Socket	SS303	3/4"-16	1	39.60	1.55	28.5	1.12	23.6	0.92			44.0 - 45.4	1.73 - 1.79		
UQDB04	4UQBP56ORM	4UQBP56ORM	Plug	SS303	9/16"-18	2	45.32	1.78	35.3	1.39	25	0.98						
UQDB06	6UQBS87ORM	6UQBS87ORM	Socket	SS303	7/8"-14	1	44.40	1.74	31.7	1.24	28.4	1.11			47.5 - 48.9	1.87 - 1.93		
UQDB06	6UQBP75ORM	6UQBP75ORM	Plug	SS303	3/4" -16	2	49.90	1.96	38.9	1.53	28.4	1.11						
UQDB08 v2	8UQBS106ORMV2	11367197	Socket	SS303	1 1/16"-12	3	50.66	2.00	35.56	1.40	33	1.30	29.8	1.17	50.9-51.9	2.00-2.04		
UQDB08 v2	8UQBS106ORMV2	11368123	Socket	SS304	1 1/16"-12	3	50.66	2.00	35.56	1.40	33	1.30	29.8	1.17	50.9-51.9	2.00-2.04		
UQDB08	8UQBP87ORM	8UQBP87ORM	Plug	SS303	7/8"-14	2	55.60	2.19	42.9	1.69	31.3	1.23			51.8 – 53.2	2.04 - 2.09		

Force to Connect vs Pressure



Flow Data



Any information, including, but not limited to information on selection of product, its application or use, product design, weight, dimensions, capacity or any other technical data in product manuals, catalogues descriptions, advertisements, etc. and whether made available in writing, orally, electronically, online or via download, shall be considered informative, and is only binding if and to the extent, explicit reference is made in a quotation or order confirmation. Danfoss cannot accept any responsibility for possible errors in catalogues, brochures, videos and other material. Danfoss reserves the right to alter its products without notice. This also applies to products ordered but not delivered provided that such alterations can be made without changes to form, fit or function of the product. All trademarks in this material are property of Danfoss A/S or Danfoss group companies. Danfoss and the Danfoss logo are trademarks of Danfoss A/S. All rights reserved.



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