Fact sheet

Danfoss Hansen® Universal Quick Disconnect (UQD)

One partner, every solution

Danfoss Hansen® Universal Quick Disconnect (UQD)

Danfoss Hansen UQD is designed for thermal management applications, available in 4 sizes and has 2 color options. It complies with OCP (Open Compute Project) and exceeds requirements of specified performance characteristics.

Danfoss UQD offers color identification (red and blue) and guarantees 100% helium-leak testing.

Product Features

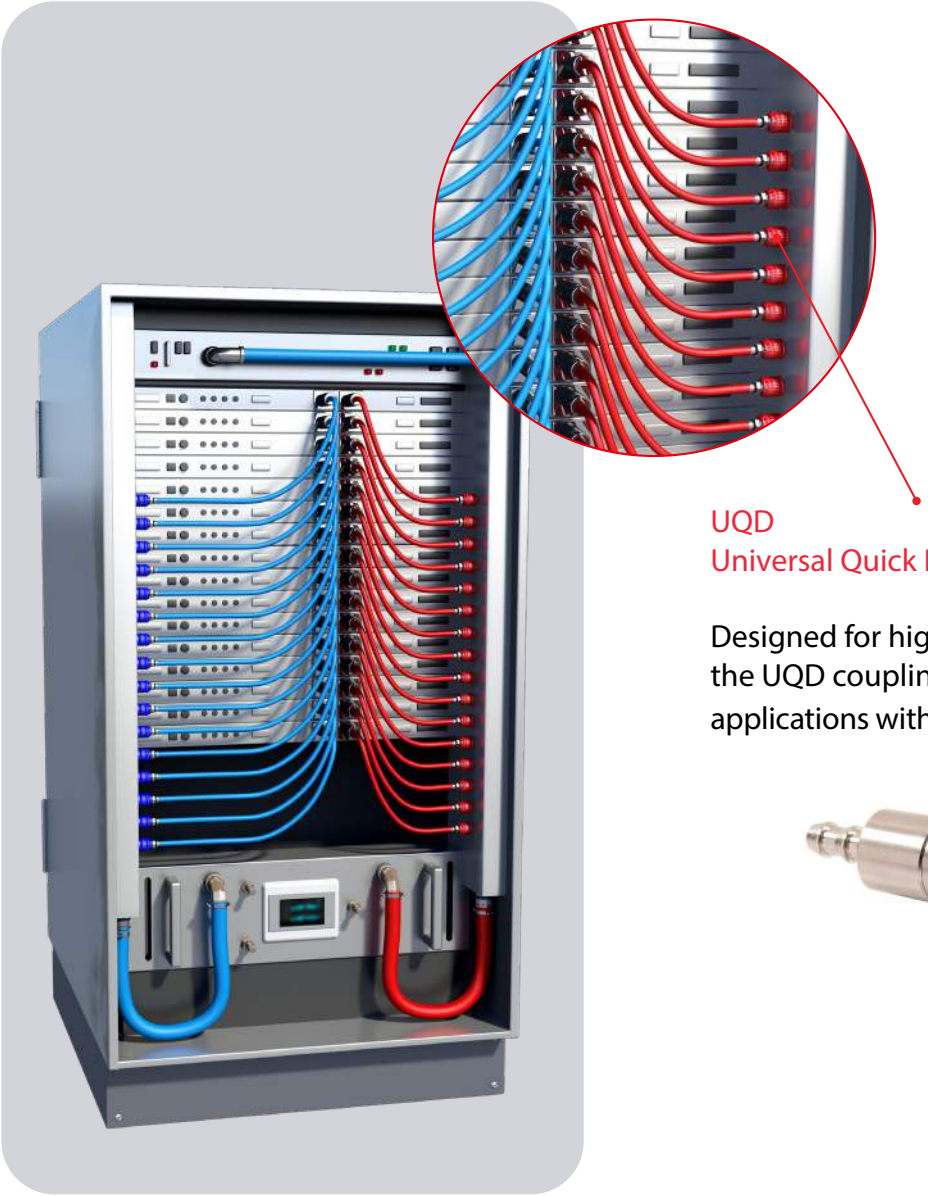
- Designed per OCP (Open Compute Project) UQD specification
- Push-to-connect design
- High flow and no spillage
- Double shut off - flat face valves
- Exceeds OCP flow ratings at least by 25% resulting in reduction in overall energy consumption
- Best in class force to connect
- Standard seal material: EPDM-P (Peroxide cured)
- Standard material: 303/304 stainless steel provides broad fluid compatibility
- Color anodized aluminum sleeves
- Color coded (red/blue) sleeves on socket and O-rings on plug
- Compact socket versions for sizes -02, -04, -06 to better fit in data center applications
- QR code identification to help track parts
- Wide range of terminal end options: ORB, BSPP on plug and push on hose on socket. Additional configurations available upon request
- Operating temperature range: 5°C (41°F) to 65°C (149°F)
- Typical working pressure: 6.9 bar, up to 20 bar for smaller sizes
- 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.



UQD
Universal Quick Disconnect Coupling

Designed for high flow rate and no spillage, the UQD coupling is perfect for in-rack applications with smaller hose lines.

Physical characteristics

Size	Body Size	Nominal Flow Dia-meter	Max operating pressure Connected		Socket / Female Half		Plug / Male Half		Min burst pressure Connected		Socket / Female Half		Plug / Male Half		Rated Flow*		Cv Value	Air Inclu-sion	Fluid Loss
	(in)	(mm)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(lpm)	(gpm)	-	cc. max.	cc. max.
UQD02	1/8	3.16	20	290	20	290	20	290	60	870	60	870	60	870	2.1	0.6	0.33	0.004	0.007
UQD04	1/4	6.3	16	232	16	232	16	232	48	696	48	696	48	696	6.4	1.7	1.37	0.024	0.01
UQD06	3/8	7.9	6.9	100	6.9	100	6.9	100	20.7	300	20.7	300	20.7	300	11.4	3.0	2.37	0.027	0.022
UQD08	1/2	10	8.9	129	6.9	100	6.9	100	20.7	300	20.7	300	20.7	300	17.8	4.7	5.32	0.029	0.03

* 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

- Liquid cooling application
- Data center application

Seal Elastomer Data

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

Performance Parameters						
Size	Force to Connect		Recommended Torque			
	N	lb	ORB size	N-m	BSP Size	N-m
UQD02	48	10.79	7/16-20	9-10	1/8"	8-9
UQD04	50	11.24	9/16-18	15-17	3/8"	18-20
UQD06	73	16.41	3/4-16	25-28	3/8"	18-20
UQD08	87	19.56	7/8-14	30-33	1/2"	34-37

Force to Connect vs Pressure

Flow Data

Size	Flow at 5m/s (lpm)	Flow at 5 m/s (gpm)
UQD02	2.4	0.62
UQD04	9.4	2.5
UQD06	14.7	3.9
UQD08	23.6	6.2

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.

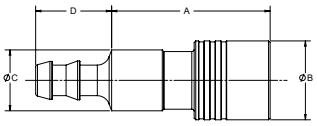


Figure 1
Push on socketless fitting

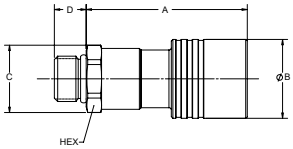


Figure 2
Male ORB

Socket (Female) part

OCP UQD size	Part number	Order number	Material	Details			Dimensions									
				Thread / end size		Fig.	A		B		C		D		Hex	
				Hose Tail	ORB	n°		(in)		(in)		(in)		(in)		(in)
UQD02	2UQS25HABLS11 2UQS25HARDS11	2UQS25HABLS11 2UQS25HARDS11	SS303	1/4	-	1	38.4	1.51	18.5	0.73	14.0	0.55	19.1	0.75	-	-
UQD04	4UQS37HABLS11 4UQS37HARDS11	4UQS37HABLS11 4UQS37HARDS11	SS303	3/8	-	1	49.5	1.95	24.6	0.97	19.0	0.75	23.7	0.93	-	-
	4UQS25HABLS11 4UQS25HARDS11	4UQS25HABLS11 4UQS25HARDS11	SS303	1/4	-	1	51.2	2.01	24.6	0.97	19.0	0.75	22	0.87	-	-
	4UQS56ORMBLS11 4UQS56ORMRDS11	4UQS56ORMBLS11 4UQS56ORMRDS11	SS303	-	9/16	2	50.3	1.98	24.6	0.97	21	0.83	9.9	0.39	19	0.75
UQD06	6UQS50HABLS11 6UQS50HARDS11	6UQS50HABLS11 6UQS50HARDS11	SS303	1/2	-	1	52.3	2.06	27.8	1.10	23	0.9	25.8	1.01	-	-
	6UQS75ORMBLS11 6UQS75ORMRDS11	11348377 11348376	SS303	-	3/4	2	52.5	2.06	27.9	1.09	22	0.87	11.1	0.44	22	0.86
UQD08 V2	ML8UQS50MBSRDS11 ML8UQS50MBSBLS11	11421782 11421783	SS304	-	1/2	2	61.7	2.43	31.5	1.24	33	1.30	14.5	0.57	-	-
	ML8UQS62HARDS11 ML8UQS62HABLS11	11368473 11368468	SS304	5/8	-	1	62.05	2.44	31.5	1.24	28	1.1	39	1.54	-	-

Note 1: To obtain connected length of coupling, add dimensions A (Fig. 1) and D (Fig. 2) together
Note 2: For color options, RD suffix corresponds to RED and BL suffix to BLUE

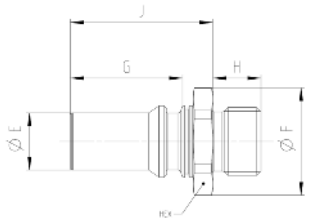


Figure 3
Male ORB ISO 11926-3

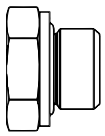


Figure 4
ISO 1179-3

Plug (Male) part

OCP UQD size	Part number	Order number	Material	Details			Dimensions											
				Thread / end size		Fig.	E		F		G		H		J		Hex	
				BSP	ORB	n°	(mm)	(in)	(mm)	(in)		(in)		(in)		(in)		(in)
UQD02	2UQP43ORMBL 2UQP43ORMRD	2UQP43ORMBL 2UQP43ORMRD	SS303	-	7/16-20	3	6.65	0.26	16.17	0.64	8.7	0.34	9.1	0.36	29.3	1.15	14	0.55
	2UQP12MBSBL 2UQP12MBSRD	2UQP12MBSBL 2UQP12MBSRD	SS303	1/8	-	4	6.65	0.26	17.32	0.68	8.7	0.34	8	0.31	30.4	1.20	15	0.59
UQD04	4UQP56ORMBL 4UQP56ORMRD	4UQP56ORMBL 4UQP56ORMRD	SS303	-	9/16-18	3	11.07	0.44	19.63	0.77	9.8	0.39	9.9	0.39	37.9	1.49	17	0.67
	4UQP37MBSBL 4UQP37MBSRD	4UQP37MBSBL 4UQP37MBSRD	SS303	3/8	-	4	11.07	0.44	25	0.98	9.8	0.39	11.2	0.44	37.9	1.49	22	0.87
UQD06	6UQP75ORMBL 6UQP75ORMRD	6UQP75ORMBL 6UQP75ORMRD	SS303	-	3/4-16	3	14.3	0.56	25	0.98	10	0.39	11.1	0.44	41.6	1.64	22	0.87
	6UQP37MBSBL 6UQP37MBSRD	6UQP37MBSBL 6UQP37MBSRD	SS303	3/8	-	4	14.3	0.56	25	0.98	10	0.39	11.2	0.44	41.6	1.64	22	0.87
UQD08 V2	ML8UQP87ORMRDS11 ML8UQP87ORMBLS11	11368458 11368440	SS304	-	7/8-14	3	17.48	0.69	30	1.18	33.8	1.33	12.7	0.50	42.9	1.69	27	1.06
	ML8UQP5OMBSRDS11 ML8UQP5OMBSBLS11	11358746 11358734	SS304	1/2	-	4	17.48	0.69	33	1.30	33.8	1.33	14.5	0.57	42.9	1.69	30	1.18

Note 1: For color options, RD suffix corresponds to RED and BL suffix to BLUE

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