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UQD / UQDB Full Series Engineering Datasheet

Neutral Technical Data for Liquid Cooling Quick Disconnects

1 Product Family Overview

UQD General Quick Disconnect Series

- Flat-face design for spill-free connection and disconnection
- Steel-pin locking design
- Compact structure, push-to-lock operation
- Corrosion-resistant body material and plating
- Color identification: inlet blue (B), return red (R)

UQDB Blind-Mate Quick Disconnect Series

- Flat-face design for spill-free connection and disconnection
- No internal locking mechanism; locking relies on external structure
- Maximum compensation for misalignment: ±1.3 mm
- Corrosion-resistant body material and plating

Typical applications: data centers, supercomputers, electronics, servers, and thermal management systems.

2 Technical Performance Summary

Parameter	UQD Series	UQDB Series
Working Temperature	-55°C to +125°C	-55°C to +125°C
Mechanical Life	5000 mate/unmate cycles	5000 mate/unmate cycles
Seal Material	EPDM / fluorosilicone rubber	EPDM / fluorosilicone rubber
Body Material	SUS304 stainless steel	SUS304 stainless steel
Working Pressure	0 to 100 psi	0 to 100 psi
Working Media	deionized water, ethylene glycol aqueous solution, propylene glycol aqueous solution, etc.	deionized water, ethylene glycol aqueous solution, propylene glycol aqueous solution, etc.
Salt Spray Resistance	96 h	96 h
Special Note	Color identification: blue / red	Blind-mate misalignment compensation: ±1.3 mm

3 UQD Full Series Specifications

Size	Max Recommended Flow (L/min)	Socket w/ Valve: Thread Options	Socket Dimensions (φD1 × L1, mm) / H	Hose-Barb Option	Plug w/ Valve: Thread Options	Plug Dimensions (φD1 × L1 × L2, mm) / H
UQD02	2.1	G1/8, UNF7/16-20, G1/4	20 × 47.2 / H=8	1/4 in	G1/8, UNF7/16-20	15.7 × 24.8 × 9.1 / H=14
UQD04	7.3	UNF9/16-18, G1/4	24.7 × 48.1 / H=12	3/8 in	G1/4, UNF9/16-18	21.0 × 33.5 × 10.0 / H=19
UQD06	13.9	UNF3/4-16, G3/8	28.0 × 51.6 / H=12	1/2 in	G3/8, UNF3/4-16	24.2 × 37.5 × 11.1 / H=22
UQD08	23.5	UNF7/8-14, G1/2	32.0 × 58.6 / H=11	5/8 in	G1/2, UNF7/8-14	28.0 × 42.0 × 12.7 / H=25

Brochure test note for flow/pressure-drop curve: flow direction plug to socket; medium temperature 20°C.

4 UQDB Full Series Specifications

Size	Max Recommended Flow (L/min)	Socket w/ Valve: Thread Option	Socket Dimensions (φD × L1 × L2, mm)	Plug w/ Valve: Thread Option	Plug Dimensions (φD × L1 × L2, mm) / H
UQDB02	2.1	G1/4	17.0 × 23.6 × 14.1	G1/8	21.0 × 27.5 × 11.7 / H=19
UQDB04	7.3	G1/2	24.0 × 28.5 × 15.3	G3/8	25.4 × 35.5 × 14.3 / H=24
UQDB06	13.9	G5/8	26.0 × 31.7 × 21.5	G1/2	28.0 × 38.9 × 15.7 / H=26.4
UQDB08	23.5	G3/4	30.0 × 35.5 × 22.9	G1/2	31.0 × 42.9 × 16.7 / H=29

Brochure test note: medium 20°C; pure water density 998 kg/m³; viscosity 1.08 cSt; maximum recommended flow velocity 5 m/s.

Engineering Notes

- Values shown are brochure-based technical reference data.
- Final validation should be completed under the user's actual operating conditions.
- For engineering evaluation only.

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