

Fact sheet

Danfoss Hansen®

OCP ORV3 Blind Mate Quick Connector

One partner, every solution



Danfoss Hansen OCP Open Rack V3 Blind Mate Quick Connector (BMQC) 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 size 5mm and complies with OCP specification requirements. Danfoss BMQC offers a self-alignment feature to help connect in location with limited access or visibility and guarantees 100% helium-leak testing on every coupling.

Product Features

- Designed together with OCP and complies with product specifications
- "Blind-connection" thanks to self-alignment feature with angular and radial compensation:
 - +/- 5 mm of pure radial offset between the socket axis and the plug cup axis
 - +/- 2.7° of angular offset
- Push-to-connect design
- Direct connection between servers and manifolds
- Static force to connect is max. 99.3 N
- Static force to connect dry is max. 66.71 N
- Dynamic force to connect is max . 120 N max @ 40 mm/sec
- Performance validated up-to 400 mm/sec
- High flow and reduced pressure drop for an improved system efficiency
- Flat-face dry break design to avoid spillage during connection/disconnection
- High reliability and 100% helium-leak tested
- Danfoss unique patented centering mechanism. This allows end-user to use different types of hoses and a low force to connect.
- Standard material: 303 stainless steel for excellent corrosion resistance
- Standard seal material: EPDM for excellent fluid compatibility
- Terminal ends are ORB for socket part and hose tail for plug part
- Operating temperature: -40°C to +150°C
- Working pressure: 2.4 bar (OCP is checking to increase the pressure – work is in progress)

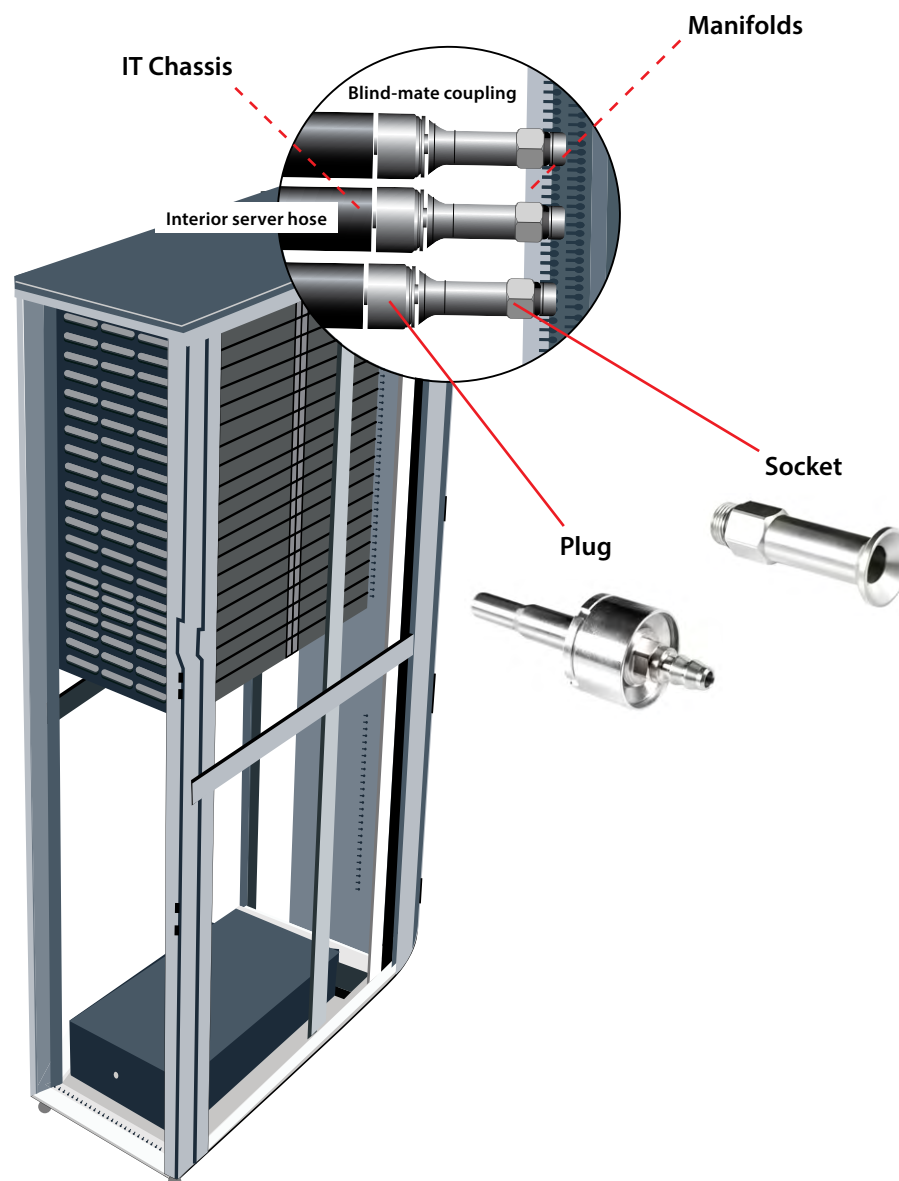


Solutions to your **liquid cooling challenges**

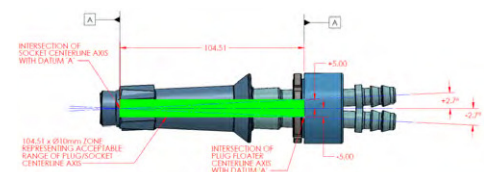
Inner Rack Solutions

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

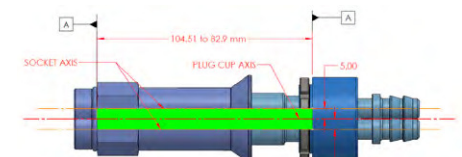
Danfoss has a **comprehensive portfolio of premium fluid conveyance products** to meet your thermal management system needs.



Angular misalignment valve capability details



Radial misalignment valve capability details



Plug mounting details

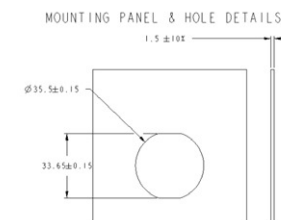
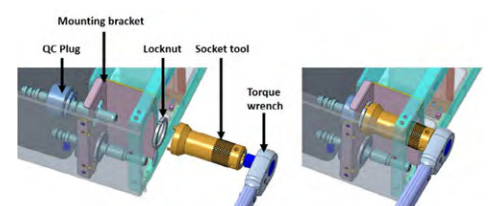


Figure 1.5.1 Plug Valve Panel Requirements



Physical characteristics

Size	Working pressure		Min burst pressure		Radial misalignment	Angular misalignment	Rated Flow		Cv Value*	Torque
mm	bar	psi	bar	psi	mm	degree	lpm	gpm	-	N/m
5	2.4	35	13.8	200	+/-5	+/-2.7	6	1.6	1.04	40 +/-5 (socket) 25 +/-5 (plug)

*Using PG25, at 40°C

Applications & Markets

- Liquid cooling application
- Data center application

Seal Elastomer Data

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

Flow Data

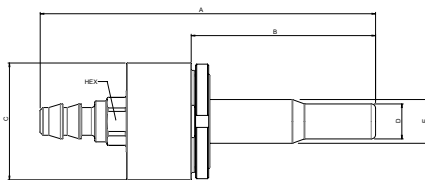
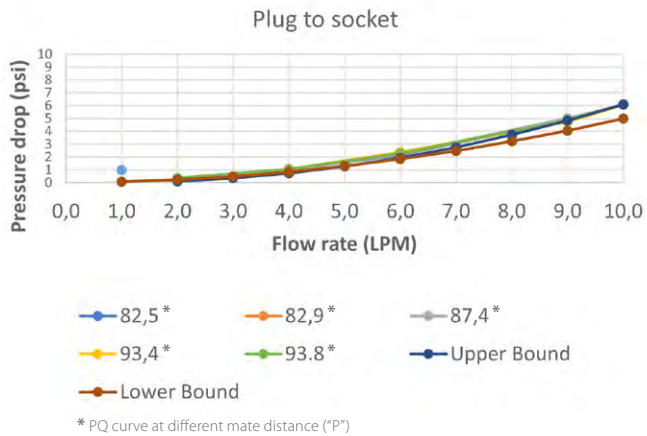


Figure 1
Plug

Flow Data

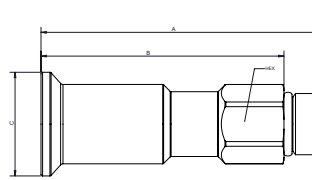
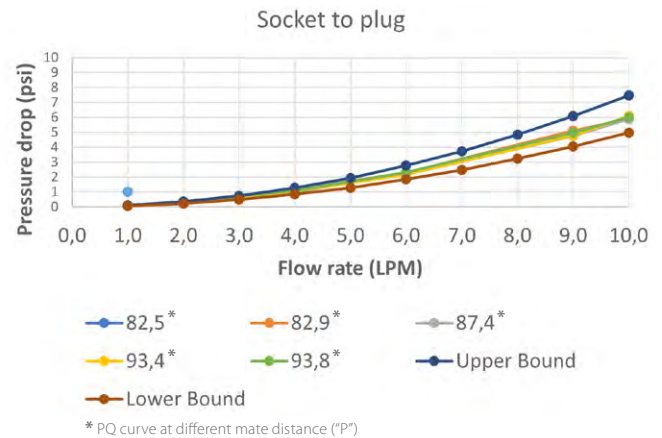


Figure 2
Socket

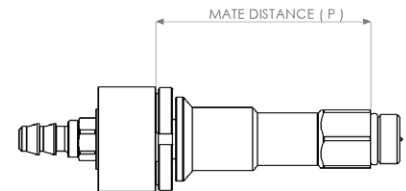


Figure 3
Connected

P = max 93.4 mm / min. 82.9 mm

Dimensions

Part number	Part	End connection			Fig. n°	Dimensions									
		End type	Thread size			A	B	C	D	E	Hex				
12001795	Plug	Hose barb	3/4 -16 UNF 2A	1		115.6	4.55	67.7	2.66	40	1.57	12	0.59	15	0.47 15
12001797	Socket	ORB	-6	2		86.1	3.39	75	2.95	32	1.25				22

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