

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

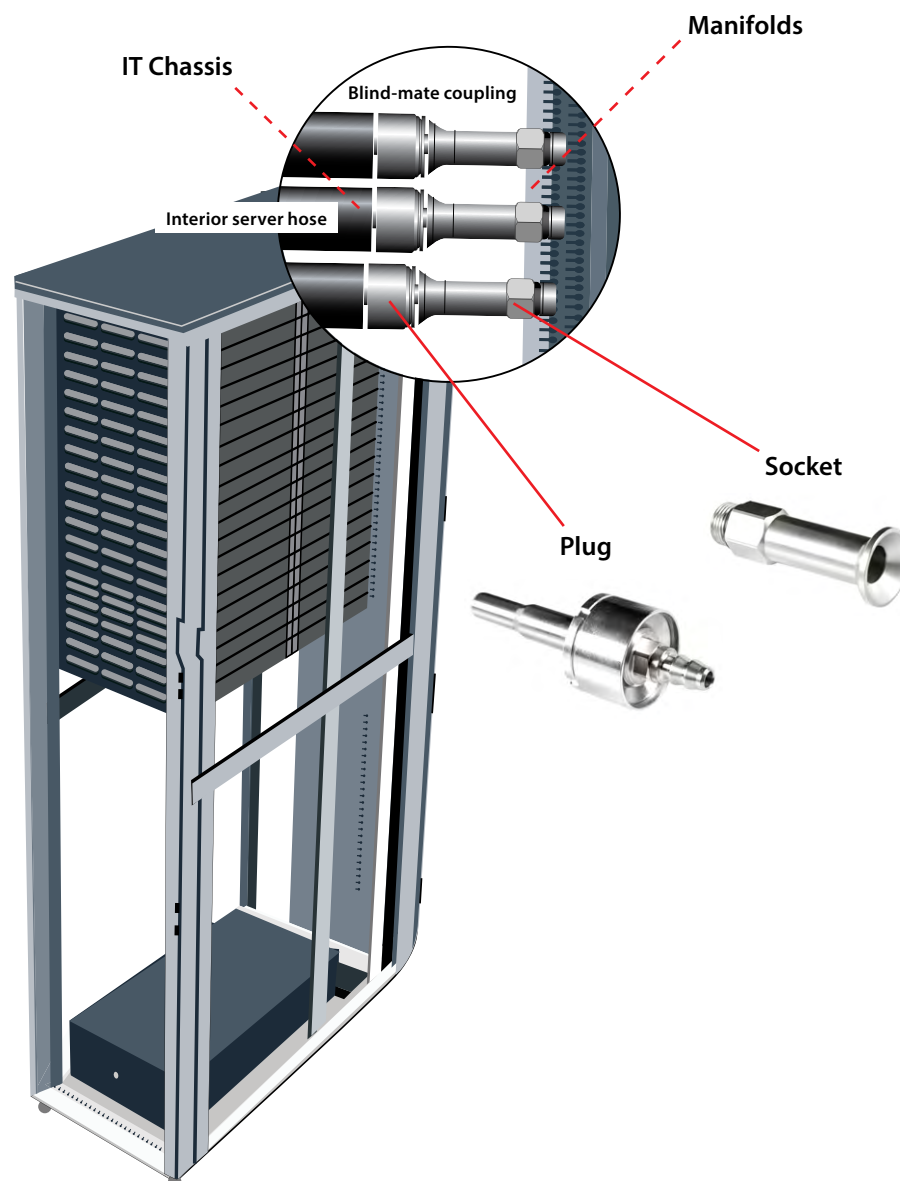
- Designed together with OCP and complies with product specifications
- "Blind-connection" thanks to self-alignment feature with angular and radial compensation:
 - +/- 5 mm of pure radial offset between the socket axis and the plug cup axis
 - +/- 2.7° of angular offset
- Push-to-connect design
- Direct 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**

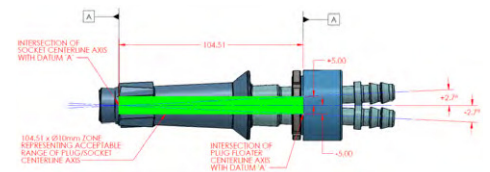
Inner Rack Solutions

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

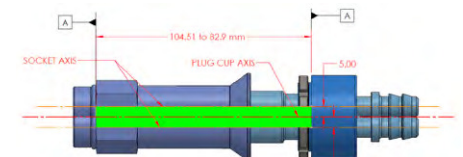
Danfoss has a **comprehensive portfolio of premium fluid conveyance products** to meet your thermal management system needs.



Angular misalignment valve capability details



Radial misalignment valve capability details



Plug mounting details

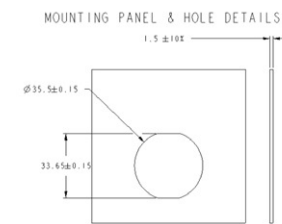
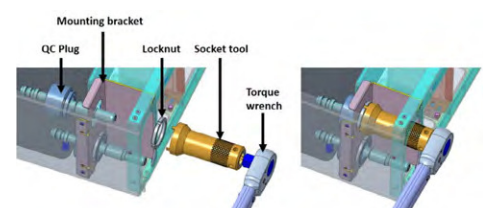


Figure 1.5.1 Plug Valve Panel Requirements



Physical characteristics

Size	Working pressure		Min burst pressure		Misalign- ment	Angular misalign- ment	Rated Flow		Cv Value*	Torque
	mm	bar	psi	bar			psi	lpm		
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

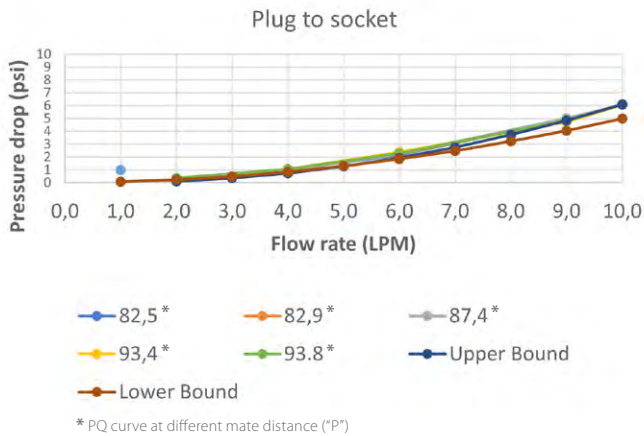
Applications & Markets

- 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



Flow Data

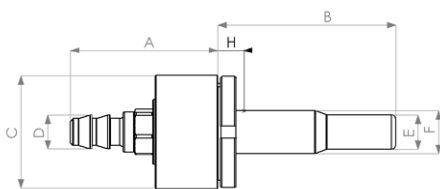
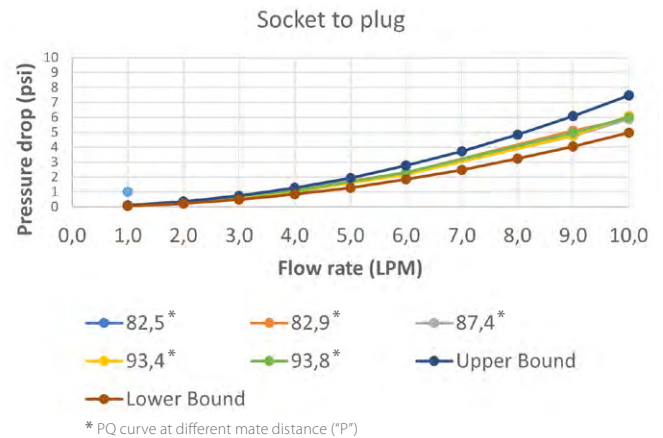


Figure 1
Plug

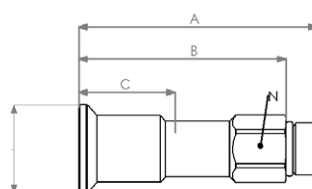
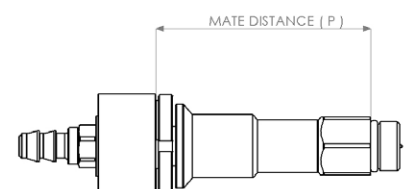


Figure 2
Socket



P = B + H
Figure 3
Connected
H = 79 mm
P = min 93.4 mm / max. 82.9 mm

Dimensions

Part number	Part	Details		Dimensions												
		End Connection	Fig. n°	A		B		C		D		E		F		G
				(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	
12001797	Socket	ORB	2	86.1	3.39	75	2.95	34.8	1.37			22	0.87	32	1.26	3/4-16 UNF 2A
12001795	Plug	Hose barb	1	52.4	2.06	63.2	2.49	40	1.57	11.9	0.47	12	0.47	15	0.59	

Danfoss can accept no responsibility for possible errors in catalogs, brochures, and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequent changes being necessary in specifications already agreed. All trademarks in this material are the property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.