



Connecting the data center industry

Quick coupling solutions for high-performing liquid cooling systems

THERMAL CONTROL





Quick couplings: the core of liquid cooling systems

The increasing demand for cloud, ML, AI, IoT, and edge applications drives the requirement for increased cooling capacity at a rapid development pace. More advanced and powerful thermal management liquid cooling systems are needed to maintain cooling temperatures in data center applications. Quick couplings play a vital role in that.

We are at the forefront of our industry, with experience in quick coupling technology since 1955. Our offer? Reliable quick connect coupling solutions for a high-performing liquid cooling system in data centers.



Quick coupling solutions developed within the Open Compute Project (OCP) with CEJN contributing as main developer.



Customised quick connect solutions for specific demands and requirements.



High-flow quick couplings with a screw-to-connect mechanism for Coolant Distribution Units (CDUs).



Compact blind-mate quick connectors for Direct Liquid Cooling (DLC) applications with up to +/- 5 mm radial misalignment tolerance.



Hand-mate quick connectors with hot-swap functionality and push-lock hose connection for Direct Liquid Cooling (DLC).



Focus case: Shaping the future of liquid cooling technology in data centers

CEJN and the Open Compute Project (OCP)



OPEN
Compute Project
SOLUTION PROVIDER®



With advanced technologies demanding more power and efficiency, data center thermal management systems are under greater stress. To meet the increasing cooling requirements, CEJN is actively contributing to the Open Compute Project (OCP), a collaborative community developing innovative open-standard solutions for liquid cooling systems.

Traditional air cooling systems are insufficient while more advanced technologies enter the market stage, demanding more efficient and powerful data centers. Emil Pettersson, Design Engineer at CEJN AB, highlights the fast-moving evolution driven by Artificial Intelligence (AI) and Machine Learning (ML) in today's market. "The increased integration with the internet and cloud services adds considerable stress to the thermal management systems, for which traditional air cooling is no longer enough," he says.

To address these challenges, liquid cooling has emerged as the preferred solution. "In addition to outperforming conventional air cooling, liquid cooling also stands out for being the more sustainable solution, since it requires less power," Pettersson says. Additionally, the heat generated through liquid cooling can be stored for potential use elsewhere, offering an efficient alternative to the wasteful heat dissipation of air cooling.

Shaping the IT ecosystem: the work of OCP

The Open Compute Project (OCP) has become a leader in shaping the data center infrastructure to align with current and emerging developments within the IT ecosystem, including cooling techniques. The primary goal is to create interchangeable quick connect coupling solutions, enabling companies to use a standard solution rather than relying on a single variant. CEJN is a proud member of this community. Alongside industry leaders and chassis and manifold manufacturers, CEJN actively contributes to designing and developing quick connect coupling solutions to address the growing demands of thermal

management in liquid cooling systems. "It's exciting to play a contributing role in developing unique products that set new market standards," Pettersson says.

CEJN has been involved in the project from the conceptual phase through testing to fostering collaboration among coupling manufacturers within the OCP initiative. "With our long experience and knowledge in quick coupling technology, we have confidence that our participation will move technology development forward," he says. Furthermore, he emphasizes that having all the necessary competence and resources in-house has positioned CEJN as a flexible and secure partner in this project. "With everything under one roof, we maintain full control over the complete supply chain, from designing phase, testing and production to delivery."

“ The work within OCP has widened our understanding of what customers need, as well as our capabilities to meet specific non-standard demands and requests.

Anticipating tomorrow's demands

The development of cooling techniques in the data center industry is, however, a continuous process and the quest for the optimal solution is still in progress. Dennis Ahlgren, Testing Engineer at CEJN, underscores the significance of staying alert to swift technological shifts and rapid changes in a dynamic market. "While the coupling solutions under development meet today's requirements, it's crucial to anticipate how tomorrow's demands for next-generation data racks may necessitate increased cooling capacity, higher flow and lower pressure," Ahlgren says. "The work within OCP has widened our understanding of what customers need, as well as our (CEJN) capabilities to meet specific non-standard demands and requests," he concludes.





OCP
INSPIRED™

BMQC

BMQC DNS
CEJN

+/- 5 mm radial
misalignment tolerance
and +/- 2.7° angular
misalignment tolerance

Interchangeable
with OCP BMQC

Blind-mate
function

Spill-free and
compact design

UL-IEC
62368-1
approved
EPDM seal

ISO 11926 threads as
standard connections,
possible for other
connections upon request

Interchangeable
with OCP UQDB

Blind-mate
function

Double O-ring seal
for redundancy
and extra leak
protection

O-ring Boss threads (ISO 11926-3)
as standard, other connections
available upon request

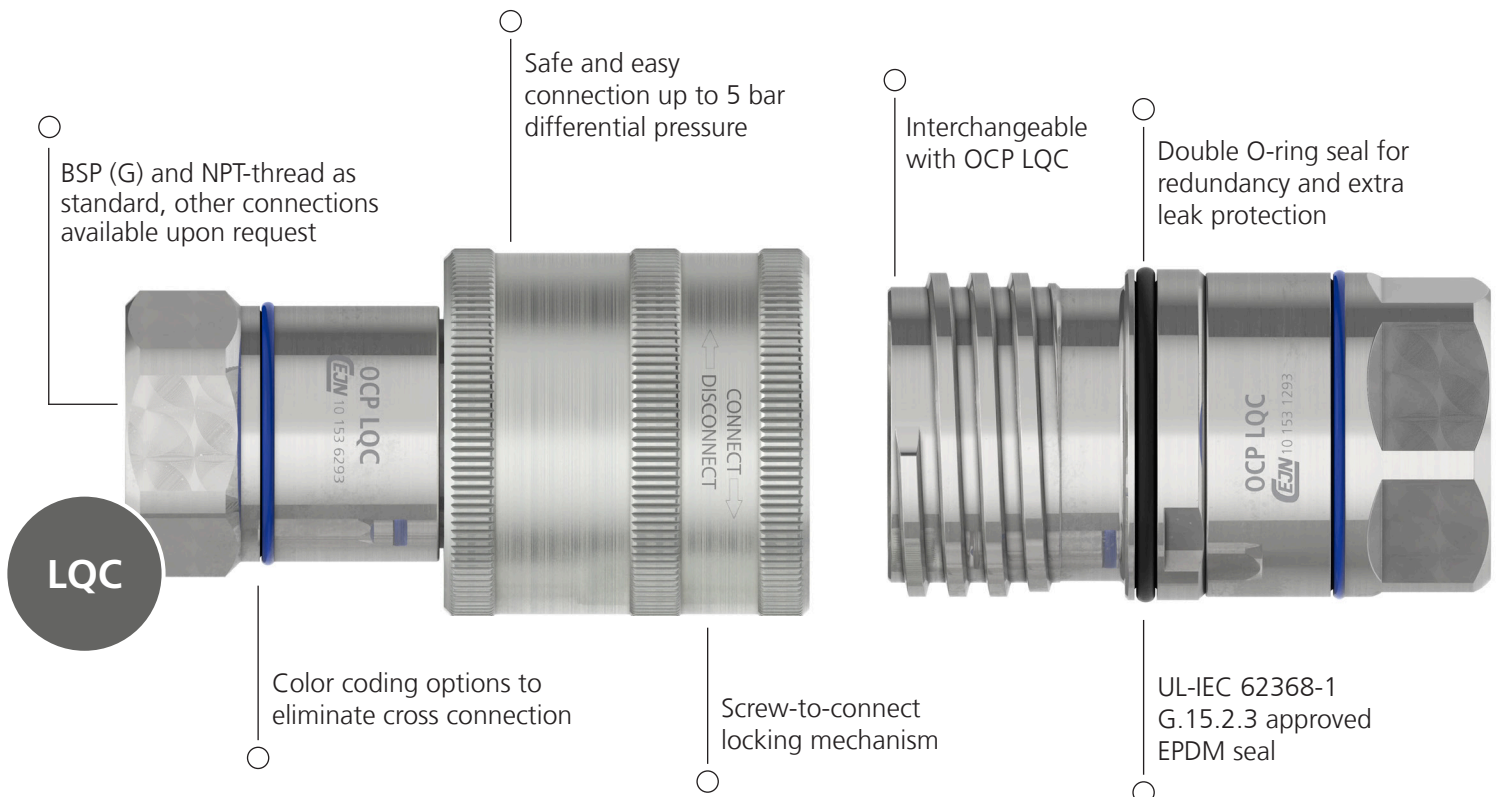
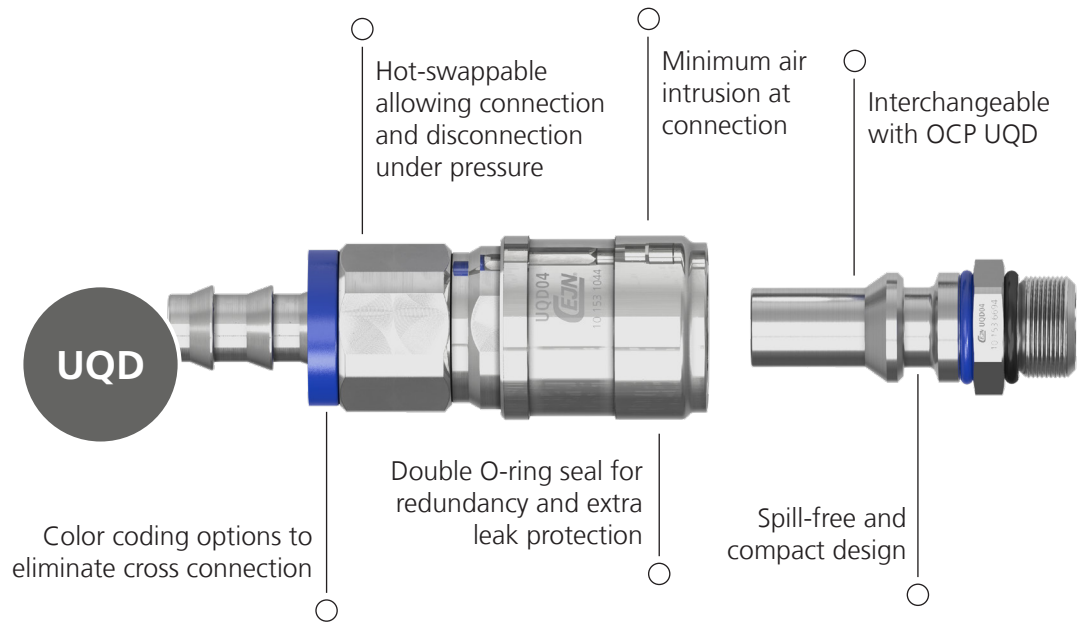
+/- 1 mm radial
misalignment
tolerance

Spill-free
and compact
design

UL-IEC 62368-1 approved
EPDM seal

UQDB

Our expertise in quick coupling technology ensures that we meet the requirements, both standard and customised. We offer various interchangeable coupling solutions developed within OCP and customised solutions for specific demands and needs.



Product data

	Part no.	Size	Category title	Material seal	Colour code	Nominal flow diameter	Connection	Max working pressure	Min. burst pressure
LQC couplings	10 153 1290		Couplings (Sockets)	EPDM		19 mm	G 1"	12 bar (174 PSI)	48 bar (696 PSI)
	10 153 1293		Couplings (Sockets)	EPDM	Blue	19 mm	G 1"	12 bar (174 PSI)	48 bar (696 PSI)
	10 153 1493		Couplings (Sockets)	EPDM	Blue	19 mm	NPT 1"	12 bar (174 PSI)	48 bar (696 PSI)
	10 153 1291		Couplings (Sockets)	EPDM	Red	19 mm	G 1"	12 bar (174 PSI)	48 bar (696 PSI)
	10 153 1490		Couplings (Sockets)	EPDM		19 mm	NPT 1"	12 bar (174 PSI)	48 bar (696 PSI)
	10 153 6493		Nipples (Plugs)	EPDM	Blue	19 mm	NPT 1"	12 bar (174 PSI)	48 bar (696 PSI)
	10 153 1491		Couplings (Sockets)	EPDM	Red	19 mm	NPT 1"	12 bar (174 PSI)	48 bar (696 PSI)
	10 153 6290		Nipples (Plugs)	EPDM		19 mm	G 1"	12 bar (174 PSI)	48 bar (696 PSI)
	10 153 6293		Nipples (Plugs)	EPDM	Blue	19 mm	G 1"	12 bar (174 PSI)	48 bar (696 PSI)
	10 153 6291		Nipples (Plugs)	EPDM	Red	19 mm	G 1"	12 bar (174 PSI)	48 bar (696 PSI)
	10 153 6490		Nipples (Plugs)	EPDM		19 mm	NPT 1"	12 bar (174 PSI)	48 bar (696 PSI)
	10 153 6491		Nipples (Plugs)	EPDM	Red	19 mm	NPT 1"	12 bar (174 PSI)	48 bar (696 PSI)
UQD couplings	10 153 1022	UQD02	Couplings (Sockets)	EPDM	Red	3.2 mm	1/4"	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 1042	UQD02	Couplings (Sockets)	EPDM	Blue	3.2 mm	1/4"	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6672	UQD02	Nipples (Plugs)	EPDM	Red	3.2 mm	UNF 7/16"-20	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6692	UQD02	Nipples (Plugs)	EPDM	Blue	3.2 mm	UNF 7/16"-20	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 1024	UQD04	Couplings (Sockets)	EPDM	Red	6.4 mm	3/8"	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 1044	UQD04	Couplings (Sockets)	EPDM	Blue	6.4 mm	3/8"	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6674	UQD04	Nipples (Plugs)	EPDM	Red	6.4 mm	UNF 9/16"-18	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6694	UQD04	Nipples (Plugs)	EPDM	Blue	6.4 mm	UNF 9/16"-18	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 1046	UQD06	Couplings (Sockets)	EPDM	Blue	9.5 mm	1/2"	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 1026	UQD06	Couplings (Sockets)	EPDM	Red	9.5 mm	1/2"	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6696	UQD06	Nipples (Plugs)	EPDM	Blue	9.5 mm	UNF 3/4"-16	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6676	UQD06	Nipples (Plugs)	EPDM	Red	9.5 mm	UNF 3/4"-16	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 1048	UQD08	Couplings (Sockets)	EPDM	Blue	12.7 mm	5/8"	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 1028	UQD08	Couplings (Sockets)	EPDM	Red	12.7 mm	5/8"	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6698	UQD08	Nipples (Plugs)	EPDM	Blue	12.7 mm	UNF 7/8-14	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6678	UQD08	Nipples (Plugs)	EPDM	Red	12.7 mm	UNF 7/8-14	10 bar (145 PSI)	40 bar (580 PSI)
UQDB couplings	10 153 1922	UQDB02	Couplings (Sockets)	EPDM		3.2 mm	UNF 9/16"-18	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6922	UQDB02	Nipples (Plugs)	EPDM		3.2 mm	UNF 7/16"-20	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 1924	UQDB04	Couplings (Sockets)	EPDM		6.4 mm	UNF 3/4"-16 SAE ORB	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6924	UQDB04	Nipples (Plugs)	EPDM		6.4 mm	UNF 9/16"-18	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 1926	UQDB06	Couplings (Sockets)	EPDM		9.5 mm	UNF 7/8"-14	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6926	UQDB06	Nipples (Plugs)	EPDM		9.5 mm	UNF 3/4"-16	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 1928	UQDB08	Couplings (Sockets)	EPDM		12.7 mm	UNF 1-1/16-16	10 bar (145 PSI)	40 bar (580 PSI)
	10 153 6928	UQDB08	Nipples (Plugs)	EPDM		12.7 mm	UNF 7/8"-14	10 bar (145 PSI)	40 bar (580 PSI)
BMQC couplings	10 153 1990		Couplings (Sockets)	EPDM		5 mm	UNF 3/4"-16 ORB	3.45 bar (50 PSI)	13.8 bar (200 PSI)
	10 153 6990		Nipples (Plugs)	EPDM		5 mm	3/8"	3.45 bar (50 PSI)	13.8 bar (200 PSI)
ultraFLOW STC couplings	10 987 1223		Couplings (Sockets)	EPDM		32 mm	G 1 1/2"	10 bar (145 PSI)	40 bar (580 PSI)
	10 987 1273		Couplings (Sockets)	EPDM		32 mm	G 1 1/2"	10 bar (145 PSI)	40 bar (580 PSI)
	10 987 6223		Nipples (Plugs)	EPDM		32 mm	G 1 1/2"	10 bar (145 PSI)	40 bar (580 PSI)
	10 987 6273		Nipples (Plugs)	EPDM		32 mm	G 1 1/2"	10 bar (145 PSI)	40 bar (580 PSI)



All our data center products are listed in one place on our website so that you easily can learn more about them anywhere, anytime.



More than just a coupling: *A solution*

At CEJN, we possess all the necessary in-house competencies and resources, allowing us to maintain complete control over the entire supply chain. We manage every step, from the initial concept phase through testing in our laboratory to production, quality assurance, final delivery, and post-delivery support and guidance. That is what we call being a solution provider.





Made in Sweden since 1955

We have been producing professional, high-quality and innovative quick connect couplings here at CEJN since our first patented coupling was launched in 1955. CEJN is an independent global niche company with its head office in the heart of Sweden. Over the years we have expanded to 22 locations worldwide and are supplying products and services to virtually every industry segment. At CEJN, we are united by our five core values: safety, environment, quality, innovation and performance. They are our cornerstones and define who we are, how we work, what we believe in and what we stand for.

Contact your local sales office or visit www.cejn.com for more information.