

Liquid-to-Liquid and Liquid-to-Air Coolant Distribution Units for High Performance Data Centers

Boyd's liquid cooling solutions include all the components required to construct a high reliability liquid cooling system. The components include high performance cold plates, rack manifolds, liquid loops, leak detectors, tubing, quick disconnects and coolant distribution units (CDUs).

Boyd's high reliability leak-free architecture combined with agile design support and high-volume global manufacturing capability make Boyd the choice for high-performance, mission-critical data centers.

Boyd is the industry leader in Coolant Distribution Units for hyperscale deployments.



40+ years of expertise in liquid cooling systems



High reliability and industry-leading performance



100% in-line testing for leak-free thermal solutions



130K+ cooling systems installed



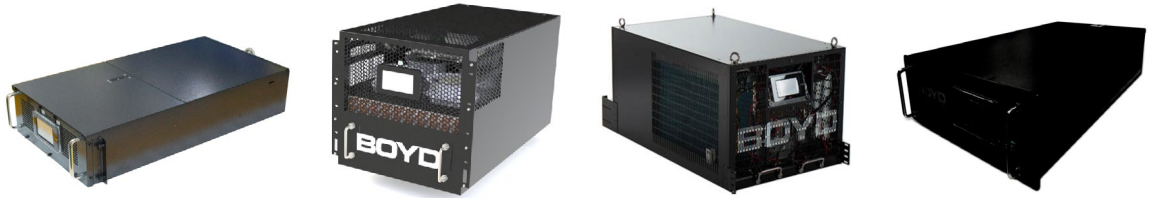
Installation, maintenance, and break/fix services



Global high-volume CDU manufacturing

Whether you are building a new datacenter or retro-fitting an existing facility, Boyd design services can help you maximize your liquid cooling investments.

In-Rack CDUs - Performance Specifications



	Liquid-to-Liquid	Liquid-to-Air	Liquid-to-Air	L2L / L2A
Specification	RAL110-04U19	RAA15-10U19	RAA32-10U21	RAXXX
Cooling Capacity (Nominal)	110 kW at 12°C approach	15 kW at 24°C approach	32 kW at 24°C approach	Higher performance models available with NDA
Secondary (TCS) Fluid Temperature Range	10-55°C	25-50°C	25-50°C	
Nominal Flow Rate (Secondary)	8-100 LPM	5-50 LPM	Up to 70 LPM	
Secondary Fluid Type	Water, EGW, PGW	Water, EGW, PGW	Water, EGW, PGW	
Environmental	5-45°C	5-45°C	5-45°C	
Inlet Outlet Connectors	1.5" Tri-clamp	1.5" Tri-clamp	1.5" Tri-clamp	
(LxWxH) Outline size	19" X 4RU 850mm x 447mm x 170mm	19" x 10RU 850mm x 445mm x 443mm	21" X 10RU 982mm x 538mm x 440mm	
Net Weight (Dry/Wet)	62 kg dry	96 kg dry	95 kg dry	
Power Input (Dual Rated)	1P/50/60Hz/100-240 VAC	1P/50/60Hz/100-240 VAC	1P/50/60Hz/100-240 VAC	
Typical Nominal Power and Installed Load	0.8 kW max	1.5 kW max	2.6 kW max	
Communication Protocols	Modbus TCP Standard, other options available	Modbus TCP Standard, other options available	Modbus TCP Standard, other options available	
Communication/Signal Output	RJ45	RJ45	RJ45	
Compliance	CE, RoHS, UL62368 (Pending)	CE, RoHS, UL62368 (Pending)	CE, RoHS, UL62368 (Pending)	

**Next-generation product information available under NDA.
To learn more, contact our team today!**

All data and statements concerning these products may be considered as being indicative of representative properties and characteristics obtainable. Since industry practices vary, we make no warranty, express or implied, concerning their use, nor do we accept responsibility for any misapplications or these products or their use under any conditions.

In-Row CDUs - Performance Specifications



	Liquid-to-Liquid	L2L / L2A
Specification	ROL1100-48U32	ROXXX
Cooling Capacity (Nominal)	550 kW at 4°C approach; 1100 kW at 8°C approach	Higher performance models available with NDA
Nominal Flow Rate (Secondary)	125 GPM (473 LPM) @ 30 psi (2.1 bar) available pressure	
Secondary Fluid Type	25% PGW; compatible with EGW & water (sized using PG25)	
Primary Fluid Type	Water; compatible with water/glycol mix (sized using Water)	
Filtration	50μ (25μ optional) dual redundant to enable online cleaning (secondary/TCS), 500μ (primary/FWS)	
Pipe Connection Location	Top and/or Bottom (Shipped as Top)	
Environmental	Designed to operate in ambient conditions 5-40°C	
Pipe Connection Type	3" Tri-Clamps (Primary/FWS & Secondary/TCS)	
Outline size (WxDxH)	815 mm x 1230 mm x 2120 mm	
Weight	1370 lbs (622 kg) dry	
Input Power	480V(+/-10%)/3PH/60Hz) or 380V(+/-10%)/3PH/50Hz	
Total Current	11.8A @ 480V / 12.8A @ 380V	
Communication Protocols	MODBUS RTU (serial), Modbus TCP/IP, BACNet/IP, SNMPv3, Redfish (optional)	
Communication Signal Output	RS-485, Ethernet/IP	
Compliance	cULus (per 62368-1), CE, RoHS (expected in Q1 '25)	

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Boyd's Complete Liquid Cooling EcoSystem for Data Centers

Liquid-to-Liquid (L2L) and Liquid-to-Air (L2A) Coolant Distribution Units (CDU) - CDUs cool, distribute, and regulate fluid within a liquid cooling system. CDUs can be designed to integrate into existing air-cooled data center or chassis configurations and new liquid cooled infrastructure.



In-Rack CDUs

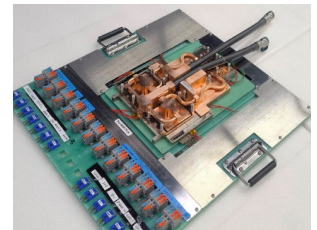
Designed to integrate into standard 19" & 21" server racks and distribute coolant to a series of high-power servers. Configurations are available for both L2A and L2L.



In-Row CDUs

Designed to manage high heat loads in hyperscale compute and data center environments cooling multiple racks. Configurations are available for both L2A (Sidecar) and L2L.

Liquid Cooling Loops with Cold Plates - Boyd develops reference design cold plates to accelerate product development, leading to rapid high-volume manufacturing deployment. Each cold plate has critical characteristics that provide precision mounting to the chip, optimized cooling geometries that provide maximum cooling at the lowest pressure drop, and the ability to manage all fluid interconnect dimensions and tolerances to achieve 99.99% reliability against leaks.



Manifolds - Delivering coolant to cold plates and loops within a server can be challenging, often slowing development. Boyd offers reference manifold solutions allowing fast customization of these standards for specific customer needs.



Fluid Interconnect – Quick Disconnect, Tubing, and Leak Detection - Boyd has 20 years of experience with testing and integrating QDs (Quick Disconnect) fittings into our products. Each fluid interconnect is meticulously assembled, tested, and measured, achieving 99.99% reliability against leaks. Our engineering services can support the overall leak sensor network requirements.



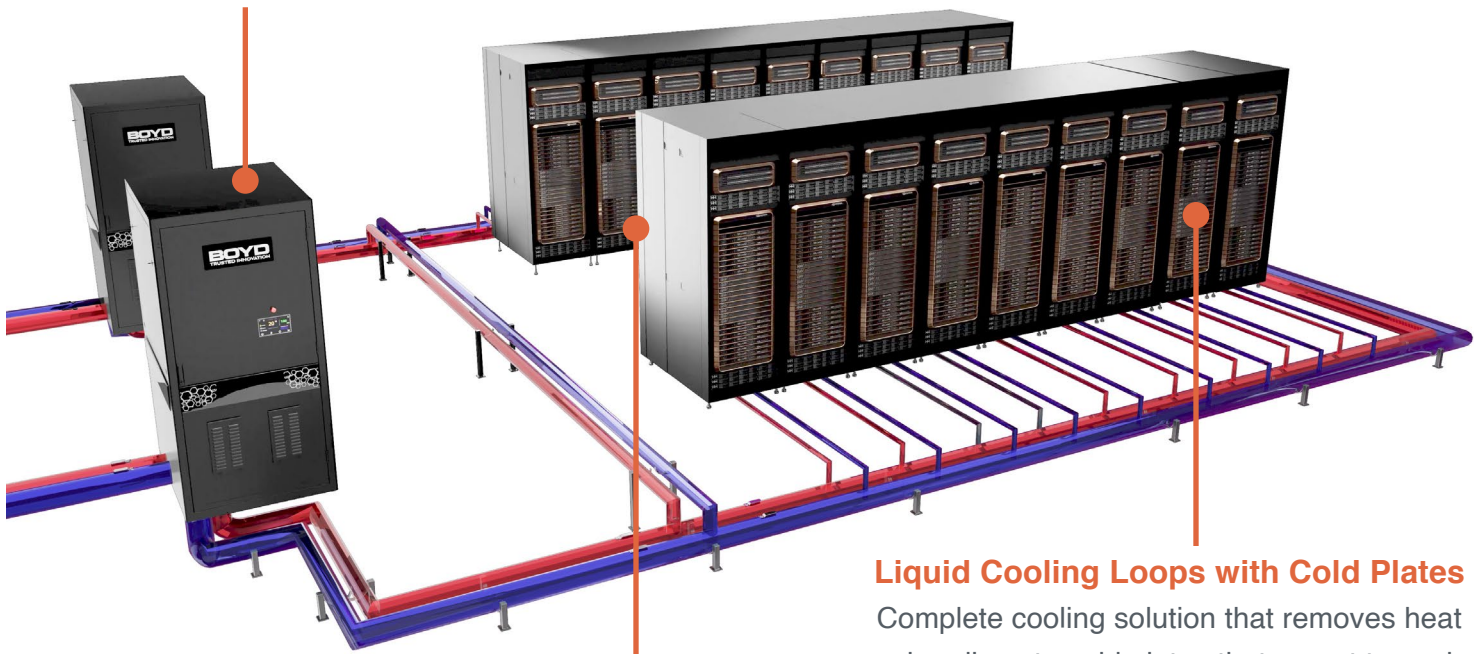
For more information on our liquid cooling solutions, visit us at www.BoydCorp.com.

Boyd's Complete Liquid Cooling EcoSystem for Data Centers

Durable, innovative AI and data center cooling systems for next-level thermal performance: CDUs, liquid loops, cold plates, and manifolds. Leverage Boyd's 100% leak-tested heritage, scalable production capacity, redundant global manufacturing, and agile design to mass production ramp.

In-row CDU

Designed to manage high heat loads in hyperscale compute and data center environments. Configurations are available for both L2A (Sidecar) and L2L.



Liquid Cooling Loops with Cold Plates

Complete cooling solution that removes heat using discrete cold plates that mount to each package to minimize the thermal interface.

Manifolds

Manifolds have ports and quick disconnects to connect all of the server's loops to the CDU. Boyd tests 100% of our manifolds for leaks.

In-rack CDU

Designed to integrate into standard 19" & 21" server racks. Configurations are available for both L2A and L2L.



For more information on our liquid cooling solutions, visit us at www.BoydCorp.com.