

Brochure

Vertiv[™] Liquid Cooling Services





Experience seamless efficiency and reliability with Vertiv's all-inclusive design, installation, and maintenance services for liquid-cooled systems.

Overview

Expert turnkey services

Enable smooth operation under high-density computing loads by providing critical infrastructure, preventing downtime, and assisting in lowering your data center's power usage effectiveness (PUE). Our services include strategic site assessment, innovative solution architecture, and system-level design.

Vertiv's thermal experts specialize in upgrading your infrastructure for Al-readiness. From deployment to lifetime maintenance, we deliver scalable solutions and enhanced operational efficiency for advanced workloads.



Consultation & assessment

Perform design consultation and assessment customized to specific site requirements:

- Site visit
- Product selection
- System planning/design
- System layout
- Integration drawings
- Computational fluid dynamic (CFD) Digital Twin modeling



Installation & integration

Manage project and perform assembly services:

- Rack assembly
- Busway installation
- Rack PDU installation
- Aisle containment
- Integration from CDU to chip via overhead and rack manifolds
- Removal of old equipment
- New Vertiv unit installation

Hassle-free design, deployment, and management for forward-looking data centers in every location.



Commissioning

OEM commissioning and startup service:

- Site Acceptance Inspection
- Startup
- Site Acceptance Testing
- Integration System Testing
- Training

(**(*)**

Recurring services

- Preventive Maintenance Visits
- Parts/Labor Coverage
- Emergency Response
- Technical Support
- Fluid management:
 - Fluid sampling and testing
 - System discharge and recharge
 - Fluid quality remediation

Global expertise and certified technicians

Vertiv's unique advantage lies in our ability to design, produce, and service liquid cooling systems, backed by a global network of certified technicians and technical support engineers. Our team undergoes rigorous certification programs, equipping them to handle the complexities of liquid cooling infrastructure. From on-site operator training to minimizing operational risks, our experts provide the guidance and support needed to keep your data centers running at peak efficiency.

End-to-end lifecycle support

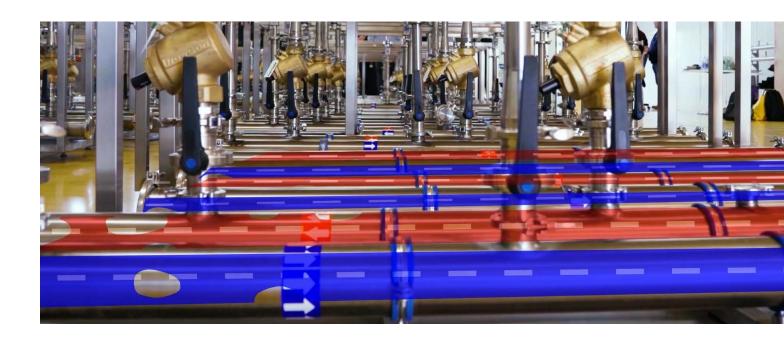
Our agile and comprehensive lifecycle services encompass the entire spectrum of your liquid cooling system's needs, from design and installation to ongoing maintenance. Utilizing Digital Twin models, we verify the efficiency and feasibility of your liquid cooling design, optimizing performance at every stage.

With ongoing lifecycle service contracts for routine maintenance visits and advanced monitoring technologies, we enhance preventive maintenance and seamlessly manage critical fluid network activities, helping your infrastructure achieve optimal performance and reliability.



Driving global standards for liquid cooling

Vertiv is at the forefront of defining and advancing global standards for liquid cooling, helping you stay ahead of regulatory requirements and industry best practices. With our full-service approach, we provide the expertise and support needed to scale and grow your Al-enabled data centers, making them future-ready and aligned with evolving technological demands.





Levels of project execution

Getting critical infrastructure up and running is a multi-step approach, and liquid cooling introduces unique challenges that demand expertise at every stage. Vertiv's Liquid Cooling Services provide a structured, end-to-end approach to navigate these complexities, delivering a system designed, installed, and maintained to support scalability and future-ready operations.



Level 0



Level 1



Level 2



Level 3





Level 5



Program & design

Factory witness test Delivery, QA/WC, installation, assembly Start-up and site acceptance test

Functional performance testing

Integrated system test support Close out & turn-over



Offering

Startup and commissioning services

Our startup and commissioning services provide white-glove support, delivering precision at every stage of the installation phase. With meticulous verification and proactive engagement, we supervise installations to minimize issues and conduct full testing—both before server installation and under full load, enabling a seamless transition from system inception to full operation

Leveraging real-time data analysis powered by Artificial Intelligence/Machine Learning, we detect component anomalies, monitor performance deviations, and calculate remaining useful life, helping you manage risks and maintain visibility into system performance.

Fluid maintenance and analyses

Proper fluid management focuses on maintaining the chemistry and quality of the coolant. Our services include coolant sampling, quality testing, and chemical adjustments, backed by partnerships with top coolant suppliers.

The Secondary Fluid Network—comprising piping, hoses, and manifolds—carries coolant from the Coolant Distribution Unit (CDU) to the cold plates, requiring precise handling to avoid leaks and contamination. With quick disconnects for easier servicing and a closed-loop design for minimal fluid loss, we deliver thorough care to maintain cleanliness and system integrity.

Secondary Fluid Network coolant is mission-critical, and the quality of the fluid is paramount to keeping IT systems running smoothly. Through regular monitoring and corrective actions, we prevent issues like blockages, corrosion, and reduced thermal performance, keeping your cooling systems efficient and reliable.

Ongoing maintenance and support

Our recurring services provide comprehensive support to keep your liquid cooling systems running smoothly, combining preventative maintenance and break-fix support. Through regular inspections, fluid management, and quality testing, we optimize system efficiency, clean filters, adjust settings, and make necessary upgrades to extend the lifespan of your equipment.

By addressing wear and tear promptly and maintaining compliance with industry standards, we reduce the risk of costly repairs or replacements. Our proactive approach helps identify and resolve potential issues before they escalate, minimizing downtime and keeping your cooling systems in optimal condition.







Spare parts

Having spare parts readily available enables quick repairs, helping maintain continuous operations. With Vertiv's global service presence and a network of over 3,500 field engineers, issues can be addressed swiftly, reducing lead times and preventing operational delays.

Maintaining a spare parts inventory reduces the need for emergency repairs or expedited shipping, supporting long-term system performance and operational continuity.



Digital services

Our Digital Services leverage data communicated by the equipment to perform remote troubleshooting, condition-based maintenance, and asset management. Vertiv™ Next Predict reduces on-site touches and plans maintenance based on equipment condition, while Vertiv™ Next Response drives optimal and fast anomaly resolution. This combination of immediate anomaly response, efficient alarm and incident management, and condition-based health-scores is essential for maintaining the reliability and performance of your cooling systems.

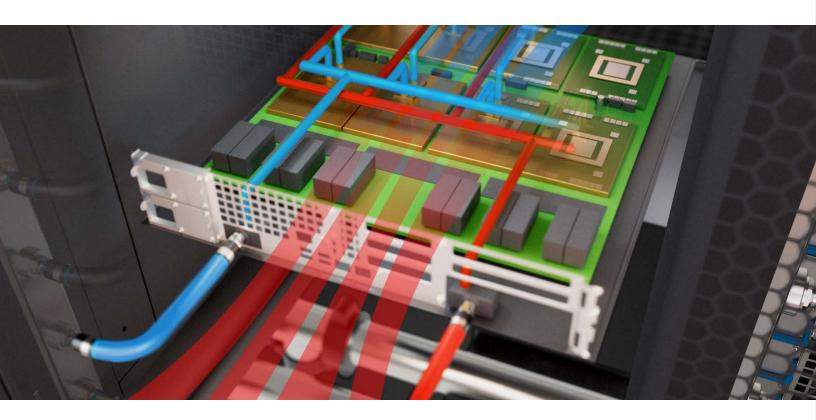


Vertiv-certified technical support

Our team of Vertiv certified technicians brings unmatched expertise in handling liquid cooling systems. They are trained to perform site assessments, installations, commissioning, and ongoing maintenance, keeping your systems in top condition. By collaborating with industry leaders and adhering to the highest standards, our technicians provide the support needed to maintain the performance and longevity of your critical infrastructure.



Getting started with Liquid Cooling Services





1. Support the design of the liquid cooling solution.

Verification and expert guidance of liquid cooling design feasibility with system performance integrity top of mind.



2. Validate installation for a smooth start-up.

Thorough validation to help guarantee a seamless start-up process.



3. Test, train, and handover.

Perform all necessary testing and training for an effective handover to the customer team.



4. Begin lifecycle maintenance services.

Ongoing services to maintain operational continuity.



Global services portfolio

	Basic	Essential	Preferred	Premier
PerformedbyVertivCertifiedTechnicians				_
GuaranteedEmergencyResponseTome				<mark>-</mark> Uni
Access to Customer Resolution Center				t Man
PreventiveMaintenanceServicesVisits				Unit Management
Labor and Travel Coverage	_			ent _
Part Coverage	_	_		_
Secondary Circuit Fluid Sampling				•
Secondary Circuit Fluid Analysis*	+	+	+	₩ I'luid N
Secondary Circuit Fluid Remediation	+	+	+	√anag
Secondary Circuit Initial Fill	+	+	+	Fluid Management
Secondary Circuit Flush and Fill	+	+	+	+ "

^{*}Inclusion of fluid analysis and remediation is predicated upon the use of DOWFROST LC25. If another manufacturer fluid is being used, pricing and offering will need be evaluated.



These items are included at this level of service coverage

 These items are not included at this level of service coverage, and they will be quoted on time and material basis + These items are available to be quoted on Time and Material basis







Our global service presence

With a global network of certified technicians and industry experts, we provide consistent support and service quality across all locations. This global reach allows you to receive the same high level of service, no matter where your data centers are located.



Worldwide

Manuf. and Assembly Locations: 22 Service Centers: 240+ Service Field Engineers: 3,500+ Technical Support/Response: 190+ Customer Experience Centers/Labs: 19

Americas

Manuf. and Assembly Locations: 8
Service Centers: 100+
Service Field Engineers: 1,600+
Technical Support/Response: 70+
Customer Experience Centers/Labs: 5

Europe, Middle East, and Africa

Manuf. and Assembly Locations: 9
Service Centers: 60+
Service Field Engineers: 600+
Technical Support/Response: 100+
Customer Experience Centers/Labs: 5

Asia Pacific

Manuf. and Assembly Locations: 5
Service Centers: 80+
Service Field Engineers: 1,300+
Technical Support/Response: 20+
Customer Experience Centers/Labs: 9





FAQs

Who installs and maintains Vertiv[™] equipment?

Expert technicians are responsible for installation and proactive maintenance and are backed by an expansive network of licensed contractors for optimal service delivery.

How flexible are Vertiv's Service Level Agreements?

Vertiv provides customizable agreements, ranging from 12 months to a proactive 5-year plan, meeting diverse customer requirements.

What types of coolant does Vertiv use?

Vertiv partners with industry leaders such as NVIDIA, Intel, and Dell to determine the most effective coolant. Additionally, Vertiv collaborates with Dow Chemical, Jeff Cool and Recochem, to provide top-tier cooling solutions.

Where can Vertiv liquid cooling solutions be deployed?

Vertiv's global footprint allows for deployment in various environments, catering to a wide spectrum of cooling needs.

Does Vertiv provide monitoring for leak detection?

Leak detection is an integral part of our product offerings, and Vertiv is dedicated to developing advanced algorithms and ensuring optimal coolant levels, which is vital for the longevity and reliability of equipment.



Ordering information

To learn more about this service and other Vertiv [™] solutions, visit **vertiv.com** or call **00800 1155 4499**



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