



Vertiv™ XDU 450 & Vertiv™ XDU 1350

Next Generation Liquid Cooling
Distribution Technology

Confidently Manage High-Density
Thermal Loads



IT cooling challenges continue to escalate as new server and GPU technologies, machine learning, artificial intelligence, and high-performance computing drive heat densities ever higher in the data center environment. Liquid cooling is rapidly emerging as the technology of choice for efficiently handling power-dense hot spots. But introducing new cold liquid plate cooled servers into the sensitive IT environment requires innovative cooling distribution infrastructure that's ideally suited to the many challenges data center managers face.

Be ready to take the heat.

As global demand for rapid data processing continues to escalate, the new Vertiv™ XDU 450 & 1350 liquid cooling distribution units give data center managers the confidence to put liquid cooling to work in their IT environments. Designed with flexibility to manage liquid quality, and redundancy for peace of mind, the Vertiv XDU ensures a seamless transition to high-efficiency liquid cooling required in today's hard-working data centers.

Easily accommodate liquid cooling technologies in your unique environment.

As data centers adopt liquid cooling, fitting in new cooling distribution infrastructure can be a real challenge. From hyperscale and colocation environments to edge applications, the Vertiv XDU simplifies your work with the flexibility to support rear door heat exchangers or direct contact liquid cooling. The Vertiv XDU's compact footprint allows for end of row or perimeter placement. However and wherever you incorporate the Vertiv XDU, you can easily distribute coolant to efficiently manage power-dense hot spots up to 450 kW or 1,368 KW.

Count on strict water quality control to ensure optimal performance of cold plates and rear doors.

The Vertiv XDU manages the entire liquid loop with an innovative contaminant-free design that ensures the highest water quality while providing essential separation of the primary facility water from the ITE heat load. The stainless-steel unit means you will never have to worry about corrosion. A built-in 50-micron filtration unit works around the clock to keep the secondary fluid network free from debris and contaminants that could hinder performance.

Enjoy peace of mind for your mission critical applications.

Redundant pumps and power inputs ensure the Vertiv XDU is always doing its job while smart settings and teaming options ensure the precise temperature, flow rate, and pressure are continuously maintained to cool your IT environment as effectively and efficiently as possible. You enjoy complete visibility and control over your operational parameters with flexible touchscreen displays, centralized remote management and monitoring, and instant alerts about leaks or any other system problems.

Key Benefits

- Supports a seamless transition to high-efficiency liquid cooling with the flexibility to accommodate rear-door heat exchangers or direct contact liquid cooling.
- Easily and quickly installs and deploys in any data center environment with in-row or perimeter placement.
- Strictly controls water quality and maintains Secondary Fluid Network integrity.
- Ensures complete visibility and control over operational parameters.
- Allows teaming options for greater efficiency and reliability.
- Offers instant notifications and alarms for leaks or other system issues.
- Engineered for optimal redundancy to support mission critical applications.
- Industry leading service support with local installation and same-day maintenance support (where available).

Vertiv™ XDU 450 & Vertiv™ XDU 1350 Features



- **Efficient Cooling Distribution** to manage power-dense hot spots and up to 450 kW or 1,368 kW.
- **Precise Temperature Control** to eliminate thermal shock for server CPU and GPUs.
- **Redundant Pumps and Dual Power Feeds** for optimizing reliable operation.
- **Teaming Capabilities** allow for fleet control to optimize efficiency and reliability.
- **Innovative Stainless-Steel Design and Hygienic Couplings** help ensure Secondary Fluid Network integrity.
- **Integrated 50-Micron Filters** designed for concurrent maintenance without system shutdown keeps supply water contaminant-free to protect server integrity and performance.
- **Remote Monitoring** available through communications with HTTP, SNMP, RS-485 Modbus, Modbus IP
- **Intelligent Flow Monitoring with Alarm Features** to help maintain system performance and efficiency.
- **Integrated Leak Detection** and alerts to protect your data center equipment.
- **Easily Accessible Fill Port and Drain Locations** to streamline and simplify maintenance.

Technical Specifications

	Vertiv XDU 450 Specification:	Vertiv XDU 1350 Specification:
Nominal Cooling Capacity	453 kW at 7.2 °F (4.0 °C) Approach Temperature Difference (ATD)	1368 kW at 7.2°F (4°C) Approach Temperature Difference (ATD)
Maximum Cooling Capacity	975 kW at 14.4 °F (8.0 °C) Approach Temperature Difference (ATD)	2912 kW at 14.4°F (8°C) Approach Temperature Difference (ATD)
Maximum Flow – Single Pump Running	119 gpm (450 l/m) at 29 psi (2.0 bar) External Differential Pressure to CDU (DP)	317 gpm (1200 l/m) at 35.4 psi (2.44 bar) External Differential Pressure to CDU (DP)
Maximum Flow – Dual Pump Running for N+ operation	132 gpm (500 l/m) at 49.3 psi (3.4 bar) External Differential Pressure to CDU (DP)	475.5 gpm (1800 l/m) at 28.7 psi (1.98 bar) External Differential Pressure to CDU (DP)
Secondary Coolant Type	Water, water/glycol or any compatible sensible phase liquid	Water, water/glycol or any compatible sensible phase liquid
Primary Coolant Type	Water, water/glycol	Water, water/glycol
Pump Redundancy	Single pump (N), dual pumps (N+N) or dual pump run mode	Dual pump (N+1), triple pump (N) run modes
Primary Pressure Drop	11.5 psi (0.8 bar) at typical 79.2 gpm (300 l/m) with 20% glycol	12 psi (0.84 bar) at Typical 317 gpm (1200 l/m) with 20% glycol at 80.6°F (27°C)
Secondary Coolant Temperature Range	50 to 131 °F (10 to 55 °C) with dew-point control standard	50 to 131°F (10 to 55°C) dew-point control standard
Maximum Power Consumption	4.5 kW at maximum flow and external pressure drop with one pump running 7.3 kW at maximum flow and external pressure drop with 2 pumps running	13.7 kW at maximum flow and external pressure drop with 2 pumps running 20.5 kW at maximum flow and external pressure drop with 3 pumps running
Dimensions (H x W x D) and Weight	75 in. x 24 in. x 41 in. (1900 mm x 600 mm x 1043 mm) 815.71 lbs. (370 kg) - dry	81.6 in x 35.4 x 48.9 in. (2069mm x 900mm x 1243mm) 1433 lbs (650 Kg) - dry
Noise Level at 3m (10ft)	< 54 dBA	< 54 dBA
Power Supply Europe, Asia and ROW	400 v 50/60 Hz 3 phase, fused at 20 or 30 A (1 or 2 x pump op.)	400 v 50/60 Hz 3 phase, fused at 63 (80-N mode) amps
Power Supply US – 480v	480v 60 Hz 3 phase, fused at 20 or 30 A (1 or 2 x pump op.)	480 v 60 Hz 3 phase, fused at 63 (80-N mode) amps
Dual Power Feeds (ATS)	Optional feature	Optional feature
Primary Connection	2 in. hygienic flanges top or bottom	4 in. hygienic flanges top or bottom
Secondary Connection	2½ in. hygienic flanges top or bottom or optional manifolds	4 in. hygienic flanges top or bottom
Secondary Filtration	Optional - 50µ dual redundant to enable on line cleaning	Optional - 50µ triple redundant to enable on line cleaning
Communication	RS485 RTU Modbus, TCP/IP SNMP, CLI, Webserver and others	RS485 RTU Modbus, TCP/IP SNMP, CLI, Webserver and others
Agency Approvals and Certification	CE, cULus, RoHS	CE, cULus, RoHS



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