

Vertiv™ CoolChip CDU – 600

Liquid-to-Liquid Coolant Distribution Unit



Features & Benefits

- Delivers exceptional heat rejection capacity in a compact footprint
- Flexible deployments for in-row or perimeter placement
- Configurable top and bottom hygienic connections for quick and easy installs. Internal manifold option also available
- High cooling availability with redundant pumps and unit to unit group operating modes
- Built-in unit leak detection and available spot leak detection options
- Maintain system uptime and efficiency with integrated filtration and fluid monitoring options
- Supports ASHRAE W45 cooling, at low approach temperatures for high efficiency deployments
- Secondary fluid temperature controlled within $\pm 1^{\circ}\text{C}$ to enable cooling stability with variable heat loads
- Controlled secondary fluid circuit through differential pressure, meeting various application requirements
- Global all-in-one service offerings from design to installation and startup to fluid management and trouble shooting
- CE, cULus and RoHS Compliance

The Vertiv™ CoolChip CDU in-row coolant distribution unit provides effective separation of the facility fluid circuit and secondary fluid network while maximizing available space for high density IT. This liquid-to-liquid CDU is ideal for your next direct-to-chip high density deployment.

Ultra High-Density Cooling Availability

As AI data center infrastructure has become widely integrated and deployed, these systems are not only increasing in rack density and compute power but are being deployed as scalable rack clusters.

The Vertiv CoolChip CDU is engineered to support deployments of high-density pods for AI, High Performance Computing (HPC), and Machine Learning applications, by delivering high-performance cooling. This system offers robust secondary flow rate availability, high efficiency heat transfer, ITE protective hardware, and best in class controls. Enabling users to build, scale and maintain their AI infrastructure with confidence.

Precisely Maintained Fluid

To maximize heat transfer, server performance, and deployment uptime the ITE cooling fluid of a liquid cooling deployment needs to be properly maintained. The Vertiv CoolChip CDU provides essential separation of the facility fluid circuit, and secondary fluid circuit, additionally utilizing industry approved wetted materials, hot swappable integrated filtration, and can be outfitted with a monitoring package to provide automated fluid sampling. With integrated controls to manage flowrate, pressure, and temperature, the fluid can be precisely maintained for exceptional quality.

Local and Remote Management

- 7" color touchscreen Human-Machine Interface (HMI)
- Communication via Modbus RTU (RS485), BACnet and TCP/IP
- Full alarm monitoring, providing real-time status of the IT equipment and ambient environment
- Remote monitoring and control capabilities
- Unit-to-unit communications available for increased redundancy and controlled coordination





Technical Specifications

Physical Data

Unit Dimensions (H x W x D), m (in)	2000 x 600 x 1200 (78.7 x 23.6 x 47.2)
Shipping Dimensions (H x W x D), m (in)	2240 x 1000 x 1300 (88.2 x 39.4 x 51.1)
Weight (Dry), kg (lbs)	480 (1058)
Weight (Wet), kg (lbs)	550 (1212)
Weight (Shipping), kg (lbs)	630 (1389)

Performance Data

Cooling Capacity	Please contact Vertiv sales representative for unit performance data based on site conditions
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Fluid Circuit Data

Fluid Type	Water or PG-25 with inhibitors
Primary Fluid Filtration	≤ 500μ
Maximum Fluid Flow, Single Pump Operation	450 l/m @ 2.25 bar (119 gpm @ 33 psi)
Maximum Fluid Flow, Dual Pump Operation	900 l/m @ 1.3 bar (238 gpm @ 19 psi)
Primary Circuit Fluid Volume, l (gal)	32.9 (8.7)
Secondary Circuit Fluid Volume, l (gal)	48 (12.7)
Primary Circuit Pressure Limit, bar (psi)	10 (145)
Secondary Circuit Pressure Limit, bar (psi)	3 to 6 (43.5 to 87), depending on PRV rating
Primary Piping Connection, Top or Bottom	2-1/2" Sanitary Flange
Secondary Piping Connection, Top or Bottom	2-1/2" Sanitary Flange or 6-way manifold system with factory fitted 1" hose barb

Electrical Data

	With ATS	Without ATS	With ATS	Without ATS
Power Supply	400V, 50/60Hz		480V, 60HZ	
FLA	17A	17A	14.7A	14.7A
MCA	25A	23A	22A	21A
MOP	30A	30A	30A	25A
Nominal Power Consumption	4.5 kW Single Pump 9.0 kW Dual Pump			
Short Circuit Current Rating (SCCR)	65kA			

Ambient Conditions

Sound Power Level @ 3m	< 55dBA
Operating Conditions	5 to 40C (41 - 104F), 10 to 80% RH (non-condensing)
Storage Conditions	2 to 65C (35.6 - 149F), 5 to 95% RH (non-condensing)

Compliance

Safety Compliance	CE, cULus, RoHS
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