

Vertiv™ CoolChip CDU – 350

Liquid-to-Air Coolant Distribution Unit



Benefits

While liquid-cooled servers afford tremendous efficiency benefits in high-density environments, it is no small task for an air-cooled data center to make the infrastructure changes needed to support liquid-cooled servers.

The liquid-to-air heat exchanger technology for direct-to-chip cooling applications allows end users to easily and cost-effectively tap into the advantages of liquid cooling with no need to redesign existing air-cooled environments.

Key Product Features

- High cooling capacity utilizing existing air-cooled infrastructure
- Hot swappable redundant pumps (N+N) for increased cooling availability
- Integrated 50-micron filter
- Top or bottom liquid connections with reserve liquid tank and integrated fill pump
- Redundant field replaceable fans (N+1)
- Designed for easy serviceability

With its liquid-to-air heat exchanger the Vertiv™ CoolChip CDU 350 Coolant Distribution Unit removes the traditional barriers to liquid cooling, giving end users a cost-effective means for deploying liquid-cooled servers to support advanced applications.

Liquid cooling solution for air-cooled environments

The Vertiv™ CoolChip CDU makes it possible for data centers to deploy liquid cooled servers without extensive updates to existing infrastructure. The row-based heat exchanger is an easy-to-deploy, fully-enclosed system that is filled at the time of installation and mounted adjacent to or nearby a rack of liquid-cooled servers.

A secondary fluid network (SFN) running from the CDU to the racks is controlled by variable speed pumps to deliver just enough cooling capacity to support the liquid cooled servers. The liquid-to-air heat exchanger then rejects the heat into the data center to match your facility's current air-cooling configuration, seamlessly integrating with existing thermal management solutions.

High quality heat rejection

Providing a high-capacity format that enables easy, cost-effective deployments in any data center, the liquid-to-air CDU design allows facilities to keep the SFN volume to a minimum and closely control the flow, pressure, and temperature for increased efficiency. Fluid quality is accurately maintained with the integrated 50-micron filters, removing contaminants and particles before the fluid is distributed to the IT equipment.

Complete visibility and control

- 7 in. color touchscreen display
- Communication via Modbus RTU (RS485) and TCP/IP
- Remote monitoring and control
- Full alarm monitoring with real-time status updates
- Unit-to-unit teamworking available for increased redundancy and control



Vertiv™ CoolChip CDU – 350

Technical Specifications

Physical Data

Unit Dimensions (H x W x D), mm (in)	2286 x 1600 x 1200 (90 x 63 x 48)
Weight (Dry), kg (lbs)	920 (2028)

Performance Data¹

Nominal Cooling Capacity	350 kW @ 15°C Approach Temperature Difference (ATD) ²
Nominal Fluid Flow	518 l/min (137 gpm)

¹ All Performance Data calculated with single pump operation

² Capacity is at 27°C Primary (ASHRAE A1 Recommended max)

Fan Data

Maximum Airflow, 7 Fan Operation (N+1)	53,000 m ³ /h (31,195 CFM)
Maximum Airflow, 8 Fan Operation (N)	75,000 m ³ /h (44,144 CFM)

Fluid Circuit Data

Fluid Type	PG-25 or particulate free deionized water
Fluid Filtration	50μ or 25μ
Piping Connection, Top or Bottom	Sanitary Flange

Electrical Data

Power Supply	380-480VAC, 3PH, 50/60Hz
Dual Power Feeds (with ATS)	Optional

Ambient Conditions

Operating Conditions	0 to 40C (0 - 104F), 10 to 90% RH (non-condensing)
Storage Conditions	-40 to 70C (-40 - 158F), 5 to 93% RH (non-condensing)

Compliance

Safety Compliance	CE (pending), cULus (pending), RoHS
-------------------	-------------------------------------