Vertiv™ CoolChip CDU – 100

In-Rack Liquid-to-Liquid Coolant Distribution Unit

Benefits

This energy and space efficient coolant distribution unit for High Performance Computing (HPC) and data center applications provides:

- Simple in-rack installation, occupying only 4U of rack space
- Localized liquid cooling loop to enable quick deployment of liquid cooling
- Essential separation of the primary (facility) water from the IT equipment to maintain high quality
- A large surface area heat exchanger to provide high cooling capacity with low approach temperatures
- Controlled secondary fluid circuit through differential pressure, meeting various application requirements
- Secondary fluid temperature controlled within ±1°C, to ensure cooling stability with variable heat loads
- 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 100 in-rack coolant distribution unit (CDU) provides effective separation of the facility fluid circuit and secondary fluid network via a liquid-to-liquid heat exchanger for single rack direct-to-chip cooling applications.

In-Rack Fluid Distribution

The CoolChip CDU delivers high-capacity cooling in a compact footprint that ensures easy, cost-effective liquid cooling deployments in any data center application for high-density processes. This in-rack CDU makes it simple to deploy additional liquid cooled racks as businesses grow or for companies looking to test AI programs before making larger investments in full-scale systems.

Since the CDU is only supporting a single rack, the smaller secondary fluid circuit ensures that the fluid used can be kept to a minimum volume, minimizing any risk in the data center. With integrated controls to manage flowrate, pressure, and temperature, the fluid can be precisely maintained for exceptional quality at all times.

Local and Remote Management

- 7” color touchscreen Human-Machine Interface (HMI)
- Communication via Modbus RTU (RS485) 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 communication available for increased redundancy and controlled coordination

Technical Specifications

Physical Data		
Unit Dimensions (H x W x D), m (in)	175 x 445 x 830 (6.89 x 17.52 x 32.66)	
Shipping Dimensions (H x W x D), m (in)	330 x 650 x 1310 (13 x 25.60 x 51.60)	
Weight (Dry), kg (lbs)	53 (117)	
Weight (Wet), kg (lbs)	59 (130)	
Weight (Shipping), kg (lbs)	87 (191)	
Performance Data [1]		
Nominal Cooling Capacity	100 kW @ 4°C Approach Temperature Difference (ATD) [2]	
Nominal Fluid Flow (Secondary)	100 l/min	
[1] All Performance Data calculated with single pump operation [2] Capacity is at 32°C Primary (Ashrae W3) Inlet Temperature		
Fluid Circuit Data		
Fluid Type	Water or PG-25 with inhibitors	
Fluid Filtration	50µ	
Primary Fluid Circuit Volume	3.4L	
Seconardy Fluid Circuit Volume	5.7L	
Piping Connection	1.5 in. Sanitary Flange	
Connection Location	Rear	
Electrical Data		
Power Supply	115V, 1PH, 60Hz	230V, 1PH, 50HZ
FLA	8.2A	3.9A
MCA	12.1A	6.1A
Nominal Power Consumption	750W	
Max Installed Load	1.116 kVA	
Dual Power Feeds	Standard Feature	
Ambient Conditions		
Operating Conditions	0 to 40°C (0 - 104°F), 10 to 90% RH (non-condensing)	
Storage Conditions	-40 to 70°C (-40 to 158°F), 5 to 93% RH (non-condensing)	
Compliance		
Safety Compliance	CE, cULus, RoHS	

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