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sLiquid

Liquid Cooling Heat Exchange Unit CDU-2300W

The **CDU-2300W Cabinet-Mounted Liquid Cooling Heat Exchange Unit** delivers a purpose-built solution for the intense thermal loads of ultra-high-density cold-plate servers. Its modular, energy-efficient cabinet design makes it ideal for medium- and large-scale liquid-cooled data centers. The unit can be deployed independently in an air-conditioned room or integrated side-by-side with liquid-cooled racks to create compact liquid-cooling micro-modules.

Features

- High heat-exchange efficiency
- Standard rack dimensions
- Supports side-by-side cabinet installation
- Easy to maintain
- High reliability
- Wide load operating range
- Precise control
- Comprehensive functionality
- Ultra-low energy consumption

Overview

Supports Side-By-Side Installation with Equipment Cabinets, Front and Rear Maintenance, and Efficient Heat Exchange
Engineered for seamless integration and high efficiency, the CDU-2300W features a modular cabinet design of 2000mm (H) × 600mm (W) × 1154mm (D) that supports side-by-side installation with liquid-cooled equipment racks. Its front and rear accessible design allows effortless online maintenance, ensuring minimal downtime.
Under rated operating conditions—primary-side inlet/outlet temperatures of 35/45°C and secondary-side supply/return temperatures of 40/50°C—the unit delivers an impressive heat exchange capacity of up to 320kW. The CDU-2300W efficiently handles the heat transfer and distribution between the primary coolant and secondary refrigerant, providing reliable and high-performance liquid cooling for demanding data center applications.

Redundant Configuration of Key Components for High Reliability
The CDU is equipped with a high-efficiency plate heat exchanger, 1+1 redundant variable-frequency circulation pumps (single pump operation supported), dual power supply, dual filters, leak detection, and an intelligent control system. Key components are designed with redundancy to ensure higher system reliability.

Supports Year-Round Natural Cooling for High Energy Efficiency
With a primary-side rated inlet/outlet temperature of 35/45°C, this unit can achieve natural cooling throughout the year across all regions.

High Control Accuracy to Ensure System Stability
The steady-state control accuracy of the supply water temperature reaches ±0.5°C, while the dynamic control accuracy is ±3°C.

Comprehensive Functionality with Stepless Adjustment
Features include conductivity monitoring, a large-capacity make-up water system, and stepless load adjustment capability.

Complete Monitoring and Support for Redundant Operation
Key data from both the primary and secondary sides can be monitored and uploaded to the dynamic ring monitoring system or remote monitoring platforms. The system supports parallel operation, hot standby, and group control functions, ensuring redundancy and high reliability.

CDU performance parameters

Model	CDU-2300W
Dimension (H x W x D)	2000mm x 600mm x 1154mm
Rated Heat Transfer	260kW
Rated Voltage	380VAC-415VAC, 50HZ/60HZ
CDU Weight	Net Weight: 550kg; Operational Weight: 700kg
Rated Power	4.5kW
Human Machine Interface (HMI)	7" Touch Screen
Communication Protocol	Standard: RS485, Modbus RTU; Optional RJ45 (Ethernet), Modbus-TCP
Operating Temperature	0 - 40°C
Operating Relative Humidity	5% - 85% RH
Secondary Side Parameters	
Pump	1+1 dual pump redundancy, with optional single pump
Coolant	PG25 (Optional deionized water)
Rated Liquid Supply/ Return Temperature	40/50°C
Rated Flow Rate	28m³/h (PG25)
External Export Capacity	12m
Connection Pipe Diameter	ISO 3 Inch
Connection Method	Chuck interface
Rated System Pressure	10bar
Filter	50μm
Make Up Water Tank	20L
Primary Side Parameters	
Coolant	Softened water
Rated Liquid Supply/ Return Temperature	35/45 °C
Flow rate	28m³/h (Softened water)
Filter	270μm
Rated System Pressure	10bar
Pressure Lost	1bar
Connection Pipe Diameter	ISO 3-inch
Connection Method	Chuck interface