

Liquid Cooling Heat Exchange Unit – CDU-2600W



The cabinet-type liquid cooling heat exchange unit **CDU-2600W** is designed to solve the heat dissipation challenges of ultra-high-density cold-plate liquid-cooled servers.

The **CDU-2600W** features a modular cabinet design with excellent energy efficiency. It is ideal for medium and large-scale liquid-cooled data centers and can be installed independently in an air-conditioning room or deployed alongside liquid-cooling equipment racks to form a liquid-cooled micro-module.

Overview

Supports Cabinet-Integrated Installation, Front/Rear Maintenance, and High-Efficiency Heat Exchange

The CDU-2600W liquid cooling heat exchange unit adopts a cabinet-modular design with frame dimensions of 2200mm (H) × 900mm (W) × 1200mm (D). It supports integrated installation with liquid-cooled equipment cabinets and allows online maintenance from both front and rear along the 900mm direction. Under rated conditions with primary side inlet/outlet temperatures of 35/45°C and secondary side supply/return temperatures of 40/50°C, the heat exchange capacity reaches up to 500kW. Its main function is to accomplish heat exchange between the primary coolant and secondary refrigerant, along with distribution.

Redundant Configuration of Key Components for High Reliability

The CDU is equipped with an efficient plate heat exchanger, variable-frequency circulation pumps, dual power supply inputs, dual backup filters, leakage detection, and an intelligent control system. Redundant design of key components ensures high system reliability.

Supports Year-Round Free Cooling with High Energy Efficiency

With a rated primary-side inlet/outlet temperature of 35/45°C, the unit enables year-round free cooling across all geographical regions.

High Control Precision Ensures System Stability

The supply liquid temperature control features a steady-state accuracy of $\pm 0.5^{\circ}\text{C}$ and a dynamic control accuracy of $\pm 3^{\circ}\text{C}$, ensuring stable system operation.

Comprehensive Functions Support Stepless Regulation

Equipped with conductivity monitoring and a large-capacity fluid replenishment system, the unit supports stepless regulation across its full load range.

Complete Monitoring Functions Support Unit Paralleling and Backup

Key parameters from both the primary and secondary sides can be monitored and uploaded to facility monitoring systems and remote monitoring platforms. It supports unit paralleling and group control functions in cold/heat standby modes, ensuring redundancy and meeting system reliability requirements.

Features

- High-Efficiency Heat Exchange
- Standard Cabinet Dimensions
- Cabinet-Mountable Installation
- Easy Maintenance
- High Reliability
- Wide Load Range
- Precise Control
- Comprehensive Functions
- Ultra-Low Energy Consumption
- High-Density Deployment
- Year-Round Free Cooling Support
- Low Noise Operation

CDU performance parameters

Model	CDU-2600W
Dimension (H x W x D)	2200mm x 900mm x 1200mm
Rated Heat Transfer	404kW
Rated Voltage	380VAC-415VAC, 50HZ/60HZ
CDU Weight	Net Weight: 850kg; Operational Weight: 1000kg
Rated Power	6kw
Human Machine Interface (HMI)	10" 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 pump (No Redundancy)
Coolant	PG25 (Optional deionized water)
Rated Liquid Supply/ Return Temperature	40/50°C
Rated Flow Rate	46m³/h (PG25)
External Export Capacity	25m
Connection Pipe Diameter	ISO 3.5 inch
Connection Method	Chuck interface
Rated System Pressure	10bar
Filter	50µm, with optional 25µm
Make Up Water Tank	50L

Primary Side Parameters

Coolant	Softened water
Rated Liquid Supply/ Return Temperature	35/45 °C
Flow rate	48m³/h (Softened water)
Filter	270µm
Rated System Pressure	10bar
Pressure Lost	1.2bar
Connection Pipe Diameter	ISO 3.5-inch
Connection Method	Chuck interface