

# Liquid Cooling Heat Exchange Unit CDU-21200W



The Cabinet Liquid Cooling Heat Exchange Unit is engineered to handle the intense thermal loads of ultra-high-density cold-plate liquid-cooled servers. Featuring a modular rack design and excellent energy efficiency, the **CDU-21200W** is well-suited for medium to large liquid-cooled data centers. It can operate as a standalone unit within an air-conditioning room or be positioned beside liquid-cooled equipment racks to form a compact liquid-cooling micro-module. Compatible with side-by-side rack installation, featuring front and rear maintenance access and high-efficiency heat exchange performance.

## Overview

The **CDU-21200W Liquid Cooling Heat Exchange Unit** features a modular cabinet design with overall dimensions of 2200mm (H) X 1200mm (W) X 1400mm (D). It supports side-by-side installation with liquid-cooled equipment racks and allows front and rear online maintenance with 1200mm clearance.

Under rated conditions—primary-side inlet/outlet temperatures of 35/45°C and secondary-side supply/return temperatures of 40/50°C — the unit achieves a heat exchange capacity of up to 1200kW. Its primary function is to efficiently transfer and distribute heat between the primary coolant and the secondary cooling medium.

## Features

- High-efficiency heat exchange
- Standard cabinet dimensions
- Supports side-by-side rack installation
- Easy maintenance
- High reliability
- Wide load range
- Precise control
- Comprehensive functionality
- Ultra-low energy consumption
- High-density deployment
- Supports year-round free cooling
- Low noise operation

## Built With Redundant Key Components To Maximize Reliability

The CDU is equipped with a high-efficiency plate heat exchanger, variable-frequency circulation pumps, dual power supply, dual backup filters, leak detection, and an intelligent control system. Critical components are designed with redundancy, ensuring enhanced system reliability.

## Supports Year-Round Free Cooling For Maximum Energy Efficiency

With a primary-side rated inlet/outlet temperature of 35/45°C, this product enables year-round, all-region free cooling.

## High Control Precision Ensures Stable System Operation

The supply liquid temperature achieves a steady-state control accuracy of  $\pm 0.5^{\circ}\text{C}$  and a dynamic control accuracy of  $\pm 3^{\circ}\text{C}$ .

## Comprehensive Functionality With Stepless Regulation Support

Supports conductivity monitoring, a large-capacity make-up water system, and stepless load adjustment.

## Comprehensive Monitoring Functions With Support For Full-Unit Parallel Backup

Key data from both the primary and secondary sides can be monitored and uploaded to the Dynamic Ring Monitoring System and remote monitoring platforms. The unit supports group control in parallel and hot/cold standby modes, ensuring system redundancy and reliability.

## CDU performance parameters

Model	CDU-21200W
Dimension (H x W x D)	2200mm x 1200mm x 1400mm
Rated Heat Transfer	970kW
Rated Voltage	380VAC-415VAC, 50HZ/60HZ
CDU Weight	Net Weight: 1100kg; Operational Weight: 1300kg
Rated Power	16.3kw
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	108m³/h (PG25)
External Export Capacity	25m
Connection Pipe Diameter	DN125
Connection Method	Chuck interface, with optional flange interface
Rated System Pressure	10bar
Filter	50µm, with optional 25µm
Make Up Water Tank	60L

## Primary Side Parameters

Coolant	Softened water
Rated Liquid Supply/ Return Temperature	35/45 °C
Flow rate	110m³/h (Softened water)
Filter	270µm
Rated System Pressure	10bar
Pressure Lost	1.2bar
Connection Pipe Diameter	DN125
Connection Method	Chuck interface, with optional flange interface