



Liquid Cooling Coolant Distribution Unit (CDU)

Truwater CDU 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.



TWCDU-300



TWCDU-600



TWCDU-900 /
TWCDU-1200



TWCDU-2400

Features

- High Heat-Exchange Efficiency
- Standard Rack Dimensions
- Supports Side-By-Side Cabinet Installation
- Easy Maintenance & Precise Control
- Wide Load Operating Range
- Comprehensive Functionality
- Ultra-Low Energy Consumption
- High Reliability

Overview

Supports Side-By-Side Installation with Equipment Cabinets, Front and Rear Maintenance, and Efficient Heat Exchange

Engineered for seamless integration and high efficiency 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 the unit delivers an impressive heat exchange capacity of up to 2400kW. Our CDU efficiently handles the heat transfer and distribution between the primary loop and secondary loop coolant, providing reliable and high-performance liquid cooling for demanding data center applications.

Comprehensive Functionality with Stepless Adjustment

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

Redundant Configuration of Key Components for High Reliability

The CDU is equipped with a high-efficiency plate heat exchanger, variable-frequency circulation pumps, leak detection, and an intelligent control system. Upon request, our CDU can be customised with dual power supply, dual pumps for redundancy purpose.

Complete Monitoring and Support for Redundant Operation

Key data from both the primary and secondary sides can be monitored and uploaded to the monitoring system. The system supports parallel operation, hot standby, and group control functions, ensuring redundancy and high reliability.

TWCDU Series

Coolant Distribution Unit - Technical Specifications

GENERAL					
MODEL	TWCDU-300	TWCDU-600	TWCDU-900	TWCDU-1200	TWCDU-2400
Dimensions (HxWxD)	2000x600x1200 mm	2200x900x1200 mm	2200x1200x1400 mm	2200x1200x1400 mm	2200x1400x1600 mm
Rated Heat Transfer	300 kW	600 kW	900 kW	1200 kW	2400 kW
Rated Voltage	380-415 VAC, 50/60 Hz				
Net / Operational Weight	550/700 kg	850/1000 kg	1000/1200 kg	1100/1300 kg	1800/2000 kg
Rated Power	5.5 kW	11 kW	15 kW	18.5 kW	37 kW
HMI	7" touch	10" touch	10" touch	10" touch	10" touch
Communication	RS485 / Modbus RTU Standard • RJ45 Ethernet / Modbus-TCP optional				
Operating Temperature	10-45 °C				
Operating Humidity	5-95% RH				

PRIMARY SIDE					
MODEL	TWCDU-300	TWCDU-600	TWCDU-900	TWCDU-1200	TWCDU-2400
Coolant	Softened Water				
Supply / Return Temp	35/45 °C				
Flow Rate	26 m³/h	52 m³/h	78 m³/h	104 m³/h	207 m³/h
Filter	270 µm				
Rated System Pressure	10 bar				
Pressure Drop	1.2 bar	1.2 bar	1.2 bar	1.2 bar	1.5 bar
Connection Pipe Diameter	ISO 3"	ISO 3.5"	ISO 4.5"	DN 125	DN 150
Connection Method	Tri-clamp	Tri-clamp	Flange (ASME)	Flange (ASME)	Flange (ASME)

SECONDARY SIDE					
MODEL	TWCDU-300	TWCDU-600	TWCDU-900	TWCDU-1200	TWCDU-2400
Pump (non redundancy)	1	1	1	1	2
Coolant	PG 25 (default)				
Supply / Return Temp	40/50 °C				
Rated Flow Rate	27 m³/h	54 m³/h	81 m³/h	108 m³/h	215 m³/h
External Pump Head	25 m				
Connection Pipe Diameter	ISO 3"	ISO 3.5"	ISO 4.5"	DN 125	DN 150
Connection Method	Tri-clamp	Tri-clamp	Flange (ASME)	Flange (ASME)	Flange (ASME)
Rated System Pressure	10 bar				
Pressure Drop	1.5 bar				
Filter	50 µm				
Make-up Water Tank	30 L				