NEXATHERM
ENERGY + EFFICIENCY + INTELLIGENCE

Control AI Heat.
Protect IT Performance.
Scale with Confidence.

2.5 MW In-Row Liquid-to-Liquid CDU

High-capacity heat transfer and intelligent fluid management for direct-to-chip cooling

High-Capacity Cooling at Scale

The Nexatherm 2.5 MW In-Row Liquid-to-Liquid CDU ***transfers heat efficiently between facility water and the technology cooling loop in direct-to-chip environments.*** Its integrated pumps, heat exchanger, filtration, fluid management, sensing, and intelligent controls provide the stable thermal performance required by AI and high-performance computing infrastructure.

2.5 MW Heat Transfer
High-capacity cooling for dense AI & HPC environments

Dual-Pump Operation
Two 22 kW variable-frequency circulation pumps

Precision Control
Maintains temperature control accuracy within ±0.5°C

Variable Flow
Automatically adjusts pump output from 10% to 100%

Fluid-Quality Monitoring
Tracks conductivity, pH, turbidity, & coolant concentration

Intelligent Protection
Integrated leak detection & condensation prevention

Key Specifications

Capacity	2,500 kW
Pump Configuration	2 × 22 kW
Flow Adjustment	10%–100%
Control Accuracy	±0.5°C
Approach Temp	4°C
Design Pressure	8.0 bar
Dimensions	1200×1240×2461 mm

Typical Applications

- AI & GPU data centers
- Direct-to-chip liquid cooling
- High-performance computing
- High-density environments
- Edge computing facilities
- System validation & aging tests
- Research & laboratory testing
- Facility expansions & retrofits

Protect IT Performance
Maintain stable coolant conditions for high-density computing equipment.

Simplify Integration
Connect facility & technology loops through one integrated system.

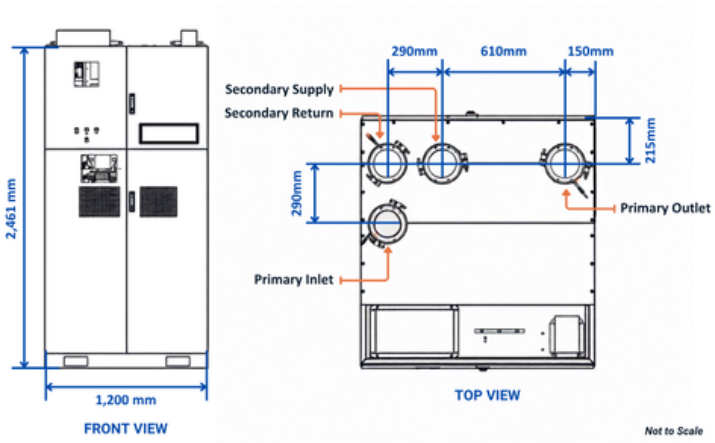
Scale Cooling Capacity
Support expanding AI & HPC thermal loads with up to 2.5 MW of heat transfer.

2.5 MW In-Row Liquid-to-Liquid CDU

TECHNICAL SPECIFICATIONS

System Overview

The ALOY2500-225C is a 2.5 MW in-row coolant distribution unit designed to transfer heat between facility water and the technology cooling loop in direct-to-chip environments. Dual variable-frequency pumps, precision temperature control, filtration, fluid-quality monitoring, and automated protection functions support stable and responsive cooling for high-density computing systems.



System Configuration

Rated Capacity	2,500 kW / 2.5 MW
System Type	Liquid-to-liquid CDU
Installation	In-row
Pump Configuration	2 x 22 kW
Flow Adjustment	10% - 100%
Design Pressure	8.0 bar

Physical Specifications

Overall Dimensions	1200 × 1240 × 2461 mm
Operating Temperature	-10°C to 50°C
Storage Temperature	-20°C to 55°C
Relative Humidity	5%–90%, non-condensing
Maximum Altitude	2,000 m

Note: Optional compliance configurations may be available for UL, CE, and RoHS requirements.

Loop Performance

Primary Medium	Pure water
Primary ΔT	10°C
Primary Pressure Drop	≤1.5 bar
Secondary Medium	PG25
Secondary ΔT	10°C
Available Head	≥3.5 bar

Liquid System

Pipe Connection	DN150 flanged
Secondary Filtration	25 µm stainless steel
Approach Temp. Difference	4°C
Test Pressure	10.0 bar
Expansion Capacity	3 × 18 L

System Controls

User Interface	Integrated touchscreen
Protocols	Modbus RTU/TCP
Flow Control	Variable frequency
System Protection	Leak & condensation detection
Data Monitoring	Temp., pressure, flow, & fluid quality

Electrical

Power Supply	400 V / 3-phase / 50 Hz
Pump Power	2 × 22 kW
Electrical Interface	Industrial plug / terminal block
Communication	RS-485

Standard Features

- Dual variable-frequency circulation pumps
- Automatic fault switchover
- Constant-pressure fluid management
- Automatic liquid replenishment
- Condensation prevention
- Integrated leak detection
- Comprehensive system monitoring
- Online filter & sensor serviceability