

Nidec
All for dreams



Nidec Data Center Solution



NIDEC CORPORATION

Liquid Cooling Solution & Products

The New Flow of Innovation: Nidec Data Center Solution

Technology

- High-performance pumps and highly responsive pump control technology, leveraged by extensive experiences as a leading motor manufacturer.
- High-density product integration design with redundant functionality and robust body.
- A variety of proprietary cooling technologies for the latest processors, and a fully waterproof design proven by extensive market track record.

Quality and Reliability

- Advanced precision machining and waterproof inspection technologies cultivated through our long-established and highly reputed HDD spindle motor business.
- Thorough and rigorous 100% shipment inspections for all products to ensure stable market quality.
- A track record of shipping over 8,000 CDUs with market reputation for outstanding quality

Production Capability

- Fully automated, vertically integrated production system, covering component machining to final assembly and inspection, for highly efficient QD production
- World-class CDU production capacity, with industry-leading shipment records
- Global delivery network, supporting fast and flexible supply worldwide

Automated Line
Cleanliness class 100
No-Spill QDs

QUICK
DISCONNECT

IN RACK CDU

World Top Tier
Delivery record for CDUs
In 2024

COLD PLATE

COOLANT DISTRIBUTION
MANUFOLD

Industry-leading cooling
Performance CDU

IN ROW CDU

IN RACK CDU



Size **4U×**
Cooling Capacity **250kW**

Shipped **8,000**
units
(Total In-Rack CDU)

Energy Reduction **40%**

Monitoring API **Redfish**

Proven in automotive application
In-house Pump

After Service
Worldwide Support

Proven Performance and Reliability

Delivers compact, industry-leading, high-performance cooling in a 4U rack. Supports the Redfish API monitoring and management interface, and ensures high reliability through redundant design.

Sustainability and Cost Saving

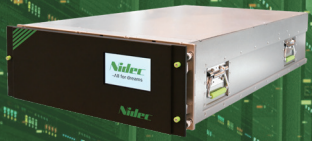
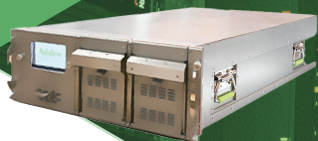
Achieves up to 40% energy savings for data center through efficient power use and stable operation , compared to air-cooled data centers.

Reliability and Risk Mitigation

Equipped with long-life, proven pumps with a track record in automotive usage, even in harsh environments. Redundant pumps, power supplies and control boards.

Expertise and Service

Global support network ensures comprehensive after-sales service for diverse customer needs.



Specifications

Model name	Gen1.0	Gen2.5
Type	AC Power Input for EIA	DC Power Input for OCP
Hight , Size	4U , 19"	4U , 19"
Cooling Capacity(kW)	200	250
Primary/Secondary(LPM)	150 / 100	200 / 160
Approach Temp (°C)	8	4
Dimension(mm)	449 x 787 x 177	480 x 900 x 177
Pump(pcs)	1+1	1+1
Filter(Sec:μm)	50	50
Input Voltage(v)	AC 200~240 single phase	DC 48 ~ 56
Notes	•Dew Point Protection •Data Logging •Internal & External Leakage Sensor •Thermal monitoring Control for "Redfish" •Monitoring (Temperature, Pressure, Flow, Level, Leak) •SNMP Trap for Abnormal State Warning	•Dew Point Protection •Data Logging •Internal & External Leakage Sensor •Thermal monitoring Control for "Redfish" •Monitoring (Temperature, Pressure, Flow, Level, Leak) •SNMP Trap for Abnormal State Warning

IN ROW CDU



Height **1.9m×**
Cooling Capacity **2.0 MW**

Adaptable to
Container Data center

Key Feature
Group - Control

Monitoring API **Redfish**

After Service
Worldwide Support

Proven Performance and Compact Design

Industry-leading cooling capacity up to 2MW in a compact form. One CDU can cool multiple AI servers simultaneously, delivering top-class performance.

Sustainability and Cost Saving

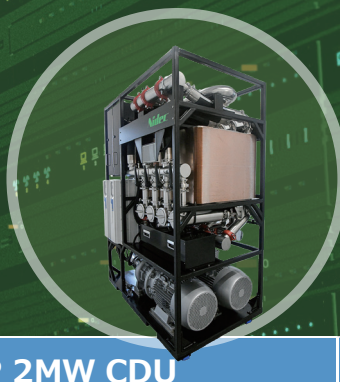
Supports container-type data centers with easy installation and optimized space usage.

Reliability and Risk Mitigation

Group control enables simultaneous monitoring of multiple CDUs, providing N+1 system control for uninterrupted data center operation.

Expertise and Service

Global support network delivers comprehensive after-sales service to meet diverse customer needs.



Specifications

Model name	NIR2.0	OCP 2MW CDU
Type	Nidec standard	Google Deschutes
Cooling Capacity (MW)	2.0	2
Primary/Secondary (LPM)	2,400 / 2,250	1,890 / 1,890
Approach Temp (°C)	5	3
Dimension (mm)	900 x 1,219 x 1,921	1,658 x 1,024 x 2,323
Pump (pcs)	1+1	1+1
Filter (Sec:μm)	25	44
Input Voltage (v)	AC 380~480 3Phase	AC 380~416 3Phase
Weight (kg)	Dry 1,300 / Wet 1,550	Dry 2,410 / Wet 3,130
Notes	•3 pumps (2 pumps + 1 redundancy) to make 2.250LPM of flow rate •Filter with a brush : Cleaning without power shutdown •Smaller size : compared with competitors •Use a magnet pump with advantage of maintenance and leakage •Variable control system for Flow rate •Variable control system for Differential Pressure	•2 pumps (1 pump + 1 redundancy) to make 1.890LPM of flow rate •4 Secondary filter : Cleaning without power shutdown •3 Heat exchanger : low pressure drop •Use a magnet pump with advantage of maintenance and leakage •PLC with HMI •VFD : Ultra low harmonic drive