


RDHx

 Energy Saving and Consumption Reduction

 High Heat Dissipation Efficiency

 Safe and Reliable



▶ RDHx

RDHx is one of the important functional components for achieving full liquid cooling design of cold plate liquid cooling system. The function of RDHx is to import the heat from the server's air cooling part into the liquid cooling system, to increase the liquid cooling ratio of the server. It reduces the energy consumption of the thermal control system.

The active RDHx comprises a passive RDHx and a wind wall. For systems utilizing a passive RDHx that may require an upgrade to an active RDHx in the future, a purchase of the wind wall component is all that's needed.

One single active RDHx achieves $20\text{kW}@AT = 3^{\circ}\text{C}$ (heat exchange temperature difference between liquid inlet and air outlet), cooling the hot air inside the cabinet and satisfying the growing cooling needs of servers.

▶ Product Characteristics

1. Energy Saving and Consumption Reduction

The RDHx is integrated behind the cabinet to save space, and get energy consumption reduction without air conditioning utility. The fully liquid cooling cabinet solution can be achieved by the combination of RDHx and embedded cooling units. The RDHx transfers heat from the air-cooling components to the coolant, thereby increasing the proportion of liquid cooling. This helps to reduce power usage efficiency (PUE). Our expertise ensures that we achieve cold plate liquid cooling systems $PUE \leq 1.04$

2. High Heat Dissipation Efficiency

The fans speed of the active RDHx are regulated based on the heat load of different servers, to reach precise control of the air outlet temperature and discharge of the heat generated by the server in a timely manner.

3. Safe and Reliable

The RDHx is integrated with dew point monitoring and alarm function, the active RDHx has the fans speed control function. Designed with condensation collection and external discharge, to prevent condensation water droplets from falling into the server due to low coolant temperature.

The RDHx provides excellent cooling service for server cabinets. We are advantaged in quality control, modular production and delivery, installation and maintenance.

▶ Product Features

- Cooling capacity 0-20kW@AT =3 °C
- Compatible with 19 inch and 21 inch standard cabinets
- The inlet and outlet interfaces are a standard chuck, which is portable for installation and maintenance
- Built-in LCD with precise flow/outlet temperature control function and flow/temperature/pressure monitoring function
- Door opening and closing angle 0-95°
- The fan module is hot swappable
- Leakproof testing
- Energy conservation and consumption reduction, $PUE < 1.1^*$
- Low noise $\leq 84.5\text{dB}$
- ROHS, CE, UL certifications

The RDHx can be customized based on the type of server cabinet, and is compatible with 19-inch and 21-inch server cabinets. Indoor air enters the cabinet, taking away the heat from the server. The hot air exchanges with the cold water coming from the RDHx which cools the hot air at the rear of the server directly to prevent local overheating. RDHx monitors the inlet and outlet air temperatures, ambient temperature and humidity, inlet water temperature (optional), and inlet water flow (optional) of different positions and can be adjusted to meet the heat dissipation needs of different loads.

► Technical Parameter

Item	A-RDHx20	A-RDHx11	P-RDHx10
Coolant	Deionized water DI-water	Deionized water DI-water	Deionized water DI-water
	Compatible with propylene glycol and ethylene glycol solution	Compatible with propylene glycol and ethylene glycol solution	Compatible with propylene glycol and ethylene glycol solution
Output Capability	20kW @AT=3°C	11kW@AT=4.5°C	10kW @AT=3°C
Noise	≤83dBA@1m	≤80dBA@1m	0dBA
Power Consumption	≤1.1KW	≤1KW	≤30W
External Dimensions of the Rear Door (W*D*H) (mm)	595×250×2250	598.5×244×2210	600×150×2000
Matching Cabinet (W*D*H) (mm)	600×1050×2250	600×1200×2300	600×1200×2200
Product Net Weight Operating Weight	105kg/115kg	140kg/180kg	71.5kg/91.5kg
Interface	Mechanical Interface: 1"Chuck, Bottom or Top	Mechanical Interface: 1"Chuck, Bottom or Top	Mechanical Interface: 1"Chuck, Bottom or Top
	Power Interface: 3pin, 32A Plug+Socket	Power Interface: 500W Switch Power Supply	Power Interface: 2pin, 5A Aviation Plug Female Head
	Communication Interface: 2×RS485	Communication Interface: 2×RS485	Communication Interface: 2×RS485
	Communication Protocol: Support Modbus RTU	Communication Protocol: Support Modbus RTU	Communication Protocol: Support Modbus RTU

ACT Advanced Cooling Technology

One-stop liquid cooling solution provider

Welcome to contact us!

- Coolant Distribution Unit(CDU)
- Rear Door Heat Exchanger (RDHx)
- Rack Manifold (MANIFOLD)
- Quick Disconnect (QD)
- Cold Plate
- Thermal Test Vehicle(TTV)
- Immersion Tank
- Coolant
- Leakage Detection Product
- Liquid Cooling Solution

Advanced Cooling Technology SDN.BHD

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