

Vertiv™ CoolLoop RDHx

The active and passive rear-door heat exchanger
Energy efficient cooling for high density applications



Features

Scalable cooling capacity

- 0-100% scalability, seamlessly adapting to the system's changing demands, ensuring optimal cooling availability at all times.

Multiple chilled water connections

- Enhanced installation flexibility, allowing Vertiv CoolLoop RDHx to be installed in both raised floor and non-raised floor environments.

Room-neutral cooling

- By eliminating heat directly at the rack and supplying room-temperature air, the Vertiv CoolLoop RDHx prevents hot spots and reduces strain on the entire system.

Flow control valve

- Install a flow control valve to precisely adjust the chilled water flow rate, enhancing efficiency and lowering operational costs.

Monitoring & control

- The active module features integrated monitoring and control capabilities, improving system reliability, efficiency, and longevity, while enhancing security and operational confidence.

Low maintenance

- With few moving parts, the Vertiv CoolLoop RDHx requires minimal maintenance, reducing total cost of ownership and boosting reliability.

Eliminate heat at the source with space-saving, efficient, and reliable cooling with the Vertiv™ CoolLoop RDHx, purpose-engineered for compatibility with the Open Compute ORv3 rack to support advanced power architectures at 48VDC, from 5kW to 85kW per rack.



Vertiv™ CoolLoop RDHx Active



Vertiv™ CoolLoop RDHx Passive

Data center managers are constantly tasked with the challenge of reducing energy consumption while enhancing processing capabilities, all without disrupting daily business operations. The Vertiv CoolLoop RDHx, rear door heat exchanger, provides a simple, cost-effective solution for high-density applications, offering scalability, modularity, and precise control. Its patented control logic optimizes fan speed, enhancing both cooling capacity and energy efficiency. When paired with products like Vertiv™ Liebert® AFC free cooling chiller, the Vertiv CoolLoop RDHx can deliver a substantial reduction in operational costs compared to traditional cooling methods. By leveraging the IT equipment for airflow and targeting heat directly at the source, the Vertiv CoolLoop RDHx provides maximum cooling efficiency at the most cost-effective price.

Efficient solutions need to be flexible and scalable.

As your business expands and cooling requirements increase, Vertiv CoolLoop RDHx can be easily added to each rack, offering a simple and efficient way to scale and meet your needs.

When heat loads fluctuate throughout the day, it can be challenging to deliver efficient cooling that aligns with the varying demand. The Vertiv CoolLoop RDHx's wide modulation range enables your facility to swiftly adapt to changing conditions, regardless of how often they fluctuate throughout the day, ensuring consistent performance and peace of mind for the end user.



Technical specifications

Vertiv™ CoolLoop RDHx	DCD35	DCD47*	DCD50	DCD65*	DCD80*
Nominal cooling capacity [kW]	35	47	50	65	80
Width [mm]	600 / 800	600 / 800	800 (750)	800 (750)	800 (750)
Height [mm]	2000 / 2200	2000 / 2200	2000 / 2200	2000 / 2200	2000 / 2200
Max. air flow rate [m³/h/cfm]	11200	11200	14500	14500	15300
Max cooling capacity @ 100cfm/kW	66	66	85	85	90
Pipe diameter	1"	1 1/4"	1"	1 1/4"	1 1/4"
Max. water flow rate [m³/h/cfm]	5.3	8.7	5.3	8.7	8.7
Power consumption at nominal cooling capacity	550W	1150W	700W	1300W	2900W

Dimensions, mm (in)

Dimensions passive unit, W x D x H	600 x 120** x 1954 (23.62 x 4.72 x 76.93)	Only with active module 600 x 310 x 1954 (23.62 x 12.20 x 76.93)	800 x 120** x 1954 (31.50 x 4.72 x 76.93)	Only with active module 800 x 310 x 1954 (31.50 x 12.20 x 76.93)	Only with active module 800 x 310 x 2398 (31.50 x 12.20 x 76.93)
Dimensions active unit, W x D x H	420 x 125 x 1954 (16.54 x 4.92 x 76.93)		580 x 125 x 1954 (22.83 x 4.91 x 76.93)		
Compatible nominal rack heights [mm]	2000 / 2200	2000 / 2200	2000 / 2200	2000 / 2200	2400
Compatible rack widths [mm]	600 / 800	600 / 800	800	800	800

Weight, kg (lbs)

Passive unit, dry	73 (160)	106 (233)	93 (205)	122 (267)	131 (289)
Passive unit, wet	88 (194)	128 (282)	111 (245)	152 (335)	165 (364)
Active module	40 (88)	40 (88)	45 (99)	45 (99)	65 (143)

Environmental requirements

Operating air inlet temperature °C (F)	10°C to +40°C (-50 to 104)				
Storage temperatures, °C (F)	-30°C to +50°C (-22 to 122)				
Audible noise [dB(A)] @ nominal capacity	74	81	76	82	87
Operating pressure (Max), bar (psi)	10 (145)				

Electrical requirements

Operating voltage	208/230VAC
Rated current	16 A
Fuses	16 A T
Supplied connection type	IEC60320 C20

* Only available as an active module

** 151 mm incl. swivel joint