RackChiller In Row

HEAT REJECTION UNIT

AIR-ASSIST LIQUID COOLING - LIQUID-TO-AIR HEAT EXCHANGER

The nVent RackChiller In Row Heat Rejection Unit is designed for removing heat from water-based coolants in direct liquid cooled, high density server and computing racks. The complete design is optimized towards enabling direct-to-chip liquid cooling in data centers without a facility coolant infrastructure. The chilled cold aisle air is pulled by highly efficient fans through a liquid to air heat exchanger, where it cools the water before being reintroduced into the hot aisle. The coolant is being circulated by powerful, redundant and hot-swappable pumps through the heat exchanger and the IT equipment. The entire system is integrated within a separate rack and is designed for maximum availability and serviceability.

FEATURES

- Active solution with fans and pumps to move air and coolant through the device and the IT equipment
- Focus on redundancy: redundant fan modules, pumps, redundant power supplies
- Hot-swappable fans, pumps, power supplies and controller
- Integrated manifold connectors with full flow, dripless quick disconnect (dual ball valves)
- Dual feed electrical connection
- Internal leak detection with possibility to attach external leak sensing

BENEFITS

- Enables direct-to-chip liquid cooling in installations without facility coolant infrastructure
- Modular standard design - easy to adapt to your requirements
- Minimal planning outlay, short setup time
- Ideal solution to provide air-assist liquid cooling for two or more racks
- Unrivaled fan and pump capacity

SPECIFICATIONS

MECHANICAL

- Height: 2246 mm/48RU
- Width: 598 mm
- Depth: 1198 mm
- Coolant connection: 4x dripless quick disconnects with dual ball valves

ELECTRICAL

- Power requirement: 200 - 260 VAC, 50/60 Hz
- Power consumption: 2500 W

PERFORMANCE

- Coolant: treated water with up to 30% PG
- Coolant flow: max. 7.2 m³/h
- Air flow: max. 13200 m³/h free blowing
- Cooling capacity: 80 kW (PG25, 7.2 m³/h)
- Noise emission: 92 dB(A) at 1m distance

	Operating point 1	Operating point 2	Operating point 3
Coolant supply (to servers) [°C]	44.5	48	41
Coolant return (from servers) [°C]	60	60	56
Coolant flow [lpm]	60	50	40
Air supply (from servers) [°C]	35	40	35
Air return (to hot aisle) [°C]	50.5	53.5	47
Air flow [m³/h]	11750	9500	10750
Cooling performance [kW]	62	40	40
Coolant pressure drop [kPa]	46.5	33.4	23

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