RackChiller Rear Door

HEAT REJECTION UNIT

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

The nVent HOFFMAN RackChiller Rear Door 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 entire system is integrated within an aesthetically framed perforated door with protective covers to isolate the liquid source and cooling loop from the rack-mounted equipment. The cooler installs on equipment racks as a separate rear door, mounted to an additional frame.

FEATURES

- Active solution with fans to support the air flow and compensate the heat exchanger pressure drop
- Frame solution allows separation of coil and piping from the rack mount equipment
- Rear space inside the cabinet freely available for cabling, power distribution and coolant manifolds
- Available in 600 mm width/2200 mm (48 RU) height; other dimensions upon request
- Easily adapts to OpenRack v2.0 cabinets; retrofit kits available for third party cabinets

BENEFITS

- Enables directs 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

SPECIFICATIONS

MECHANICAL

- Height: 2246 mm/48RU
- Width: 598 mm
- Depth: 242 mm
- Pipe connection: 11/4" BSPP male threads

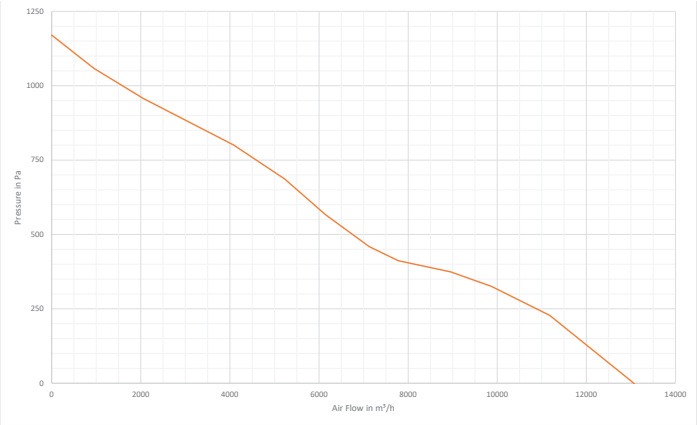
ELECTRICAL

- Power requirement: 48 VDC, 50/60 Hz
- Power consumption: 3200 W
- Current draw: 67 A

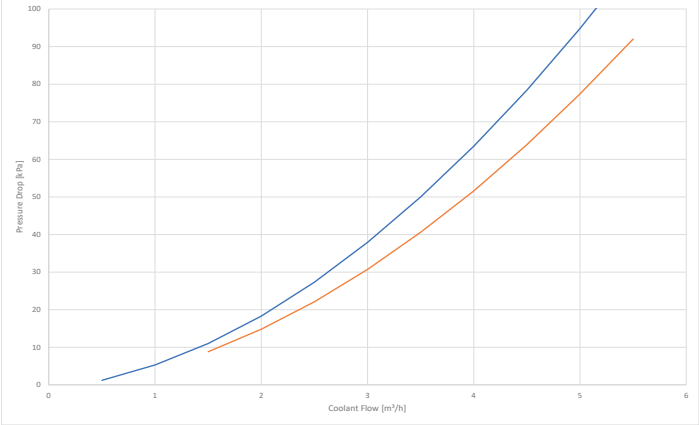
PERFORMANCE

- Coolant: treated water with up to 30% PG
- Coolant flow: max. 4.5 m³/h
- Coolant head loss: 100 kPa @ max. flow
- Air flow: max. 12500 m³/h free blowing
- Cooling capacity: 62 kW (PG25, 3.6 m³/h)
- Noise emission: 92 dB(A) at 1m distance

P-Q curve air side



Coolant heat loss



red: clean water blue: clean water with 25% PG

	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

North America
Minneapolis, MN
Tel: +1.763.421.2240
Mexico City, Mexico
Tel: +52.55.5280.1449
Toronto, Canada
Tel: +1.416.289.2770

South America
Sao Paulo, Brazil
Tel: +55.11.5184.2100
Boituva, Brazil
Tel: +55.15.3363.9148

Europe
Betschdorf, France
Tel: +33.3.88.90.64.90
Straubenhardt, Germany
Tel: +49.7082.794.0
Dzierzoniow, Poland
Tel: +48.74.64.63.900
Lainate, Italy
Tel: +39.02.932.7141

Middle East & Africa
Dubai, United Arab Emirates
Tel: +971.4.378.1700
Bangalore, India
Tel: +91.80.6715.2001

Asia
Shanghai, P.R. China
Tel: +86.21.2412.6943
Singapore
Tel: +65.6768.5800
Shin-Yokohama, Japan
Tel: +81.45.476.0271
Seoul, Korea
Tel: +82.2.2129.7755
Qingdao
Tel: +86.532.8771.6101

nVent

nVent.com

Our powerful portfolio of brands:

CADDY ERICO HOFFMAN RAYCHEM SCHROFF TRACER

©2021 nVent. All nVent marks and logos are owned or licensed by nVent Services GmbH or its affiliates. All other trademarks are the property of their respective owners.
nVent reserves the right to change specifications without notice.