

RACKCHILLER CDU100 COOLANT DISTRIBUTION UNIT



INDUSTRY STANDARDS

UR/cUR Recognized

CE

APPLICATION

The nVent HOFFMAN RackChiller CDU100 is a rack-based CDU, built for the needs of today's most demanding HPC requirements. Capable of managing 100kW+ of heat load in a remarkably small 4U of space. The RackChiller CDU100 is an extremely efficient heat exchanger that uses ASHRAE W4 warm water to manage processor and component heat.

FEATURES

- Manages 100kW+ of processor load per network
- Compatible with ASHRAE W4 warm water cooling
- N+1 redundant centralized pumps
- Dry-break quick disconnects
- 5-inch LCD screen with touch functionality
- Integrated control and monitoring system (Webserver, Modbus, SNMP)
- Internal and external leak detection system
- 4U rack-mount chassis
- Warm water cooling reduces the need for chillers
- Quick and easy installation and service
- Can be located anywhere in a rack
- Servers remain hot-swappable for service
- High temperature return water can be used for heat re-use

SPECIFICATIONS

General Data

- Pump redundancy: 2 pumps for n+1 redundancy
- Power requirement: 100V – 240V 50/60 Hz
- Current consumption 10 – 15A
- Power supply 2, N+1, 2500W each
- Cooling capacity: 100 kW at 6 C Approach (100 LPM Primary)
- Minimum approach temperature: 4K
- Secondary coolant supply range ASHRAE W17 to W45 (previous W1 to W4)
- Power consumption: 820W (default mode), 1134W (max performance mode)
- Liquid Temp Range: 10 - 70 C (50 - 158 F)

Primary Rating

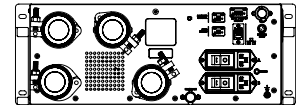
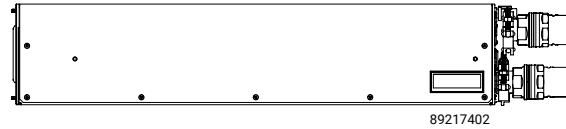
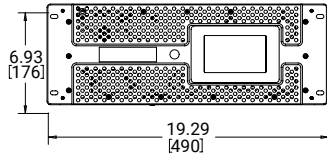
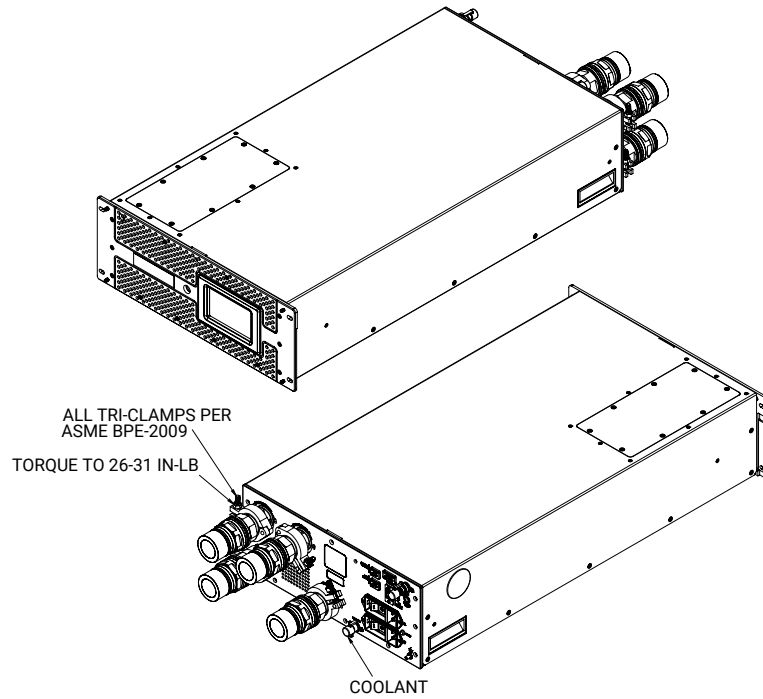
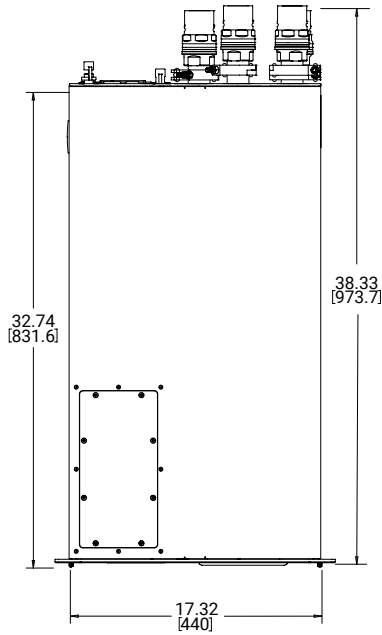
- Coolant: treated water with up to 25% PG
- Maximum Allowable Flow Rate: 100 LPM (26 GPM)
- Maximum Head Loss (at 100 LPM, PG25): 0.9 Bar (13 psi)
- Maximum System Pressure: 3.4 Bar (50 psi)

Secondary Performance

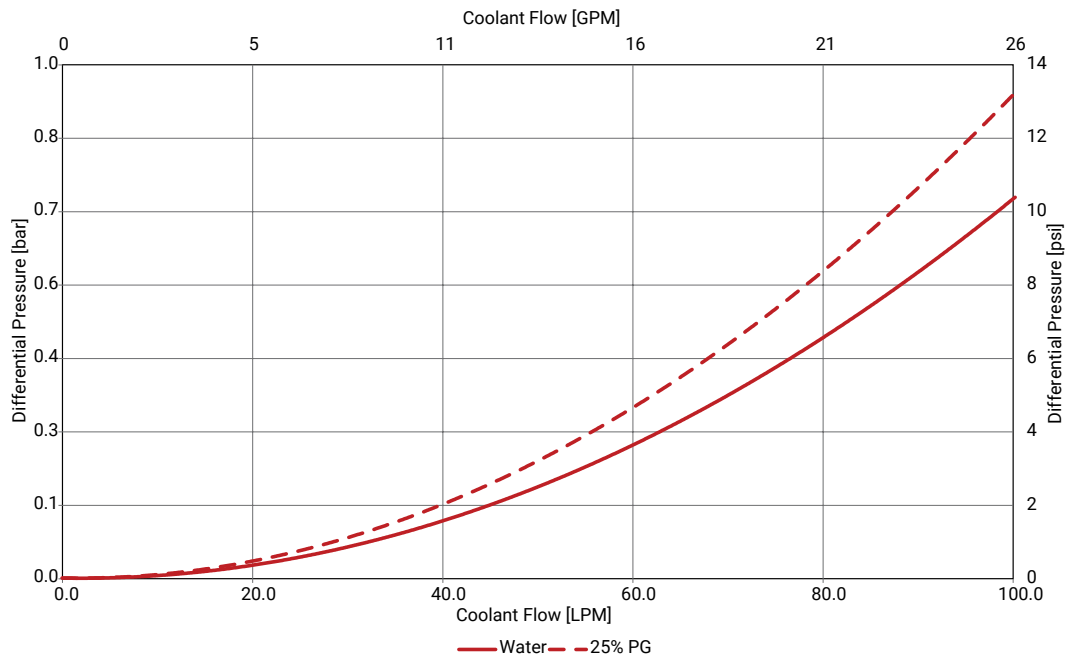
- Coolant: treated water with up to 25% PG
- Maximum Flow (single pump): 115 LPM (30 GPM) at 0.5 bar (7 psi)
- Maximum Flow (dual pumps): 130 LPM (34 GPM) at 0.5 bar (7 psi)
- Maximum System Pressure: 2.8 Bar (40 psi) - Secondary bypass opens at 40 psi, over pressure valve opens at 50 psi
- System Volume: 15.6 L (4.1 Gal)

Standard Product

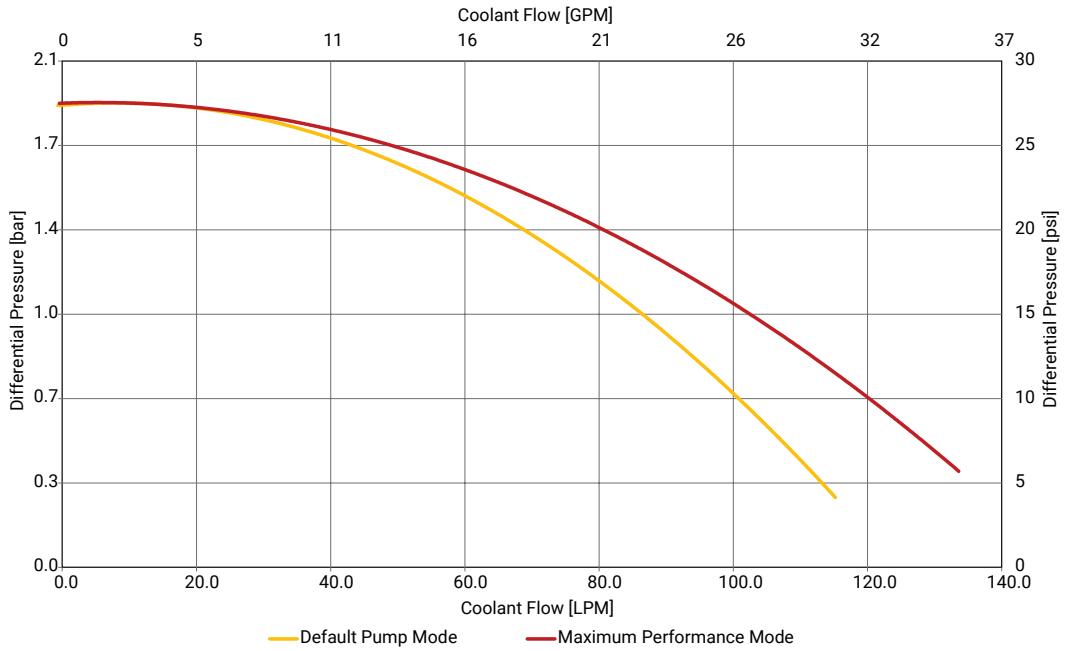
Catalog Number	Description	Height in./mm	Width in./mm	Depth in./mm	Volume (g/l)	Voltage Rating (V)	Rated Frequency (Hz)	Rated Current (A)	Cooling Capacity (kW)	Weight (lb./kg)
CDU1002R001	Dry - Without Coolant	6.97	16.93	37.40	4.12/15.6	100-240	50/60	10-15	100	137
		177	430	950						62
CDU1002R001Q	Filled - With Coolant	6.97	16.93	37.40	4.12/15.6	100-240	50/60	10-15	100	167
		177	430	950						76



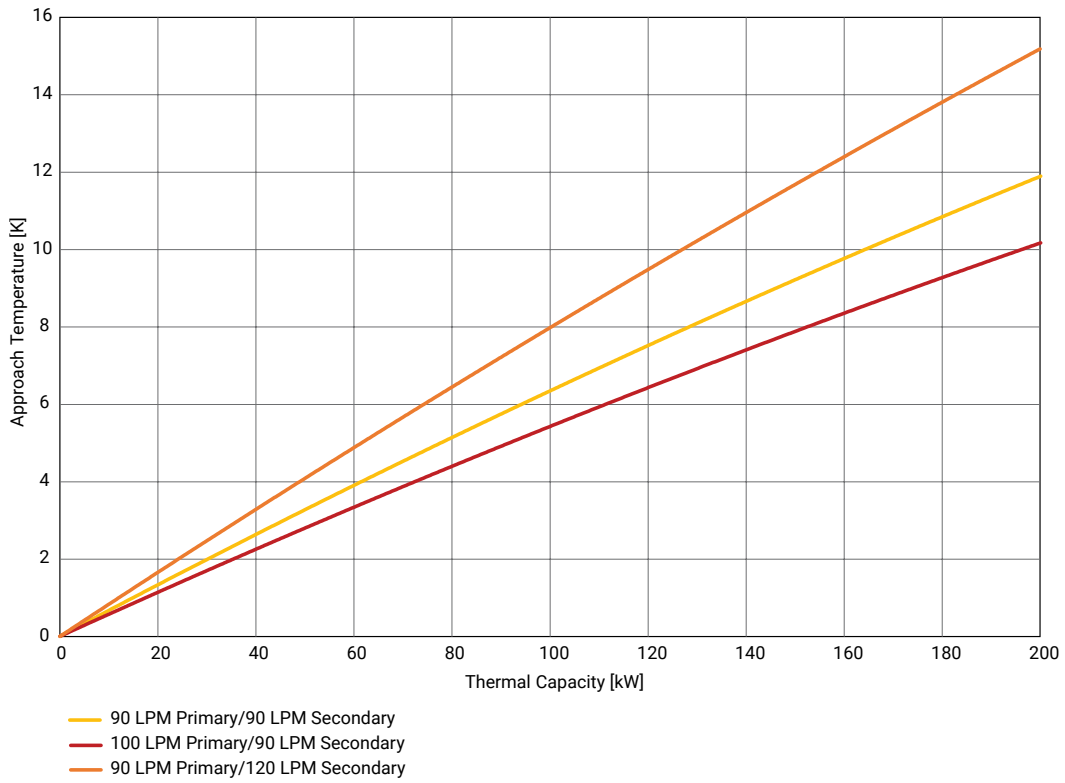
Primary P-Q Curve (Tri-Clamp)



Secondary P-Q Curve (PG25, Tri-Clamp)



Thermal Capacity vs Approach



Notes