

210 kW Air-Liquid Hybrid Load Bank

Integrated Air and Liquid Load Simulation
for Data Center Commissioning

Built for Hybrid-Cooling Validation

The Nexatherm 210 kW Air-Liquid Hybrid Load Bank combines **liquid-cooled and air-cooled load simulation** in one modular system. Four 42 kW liquid-cooled modules and two 21 kW air-cooled modules enable controlled testing of electrical power, liquid distribution, airflow, and thermal performance before critical IT equipment is deployed.



210 kW Capacity

168 kW liquid-cooled
plus 42 kW air-cooled
loading



Modular Configuration

Four liquid-cooled and
two air-cooled modules



Precise Load Control

Adjustable in
increments of 1 kW
or less per module



Hybrid Thermal Simulation

Reproduces simultaneous
liquid and air heat-rejection
loads



Hydraulic Simulation

Proportional valves
reproduce system
flow characteristics



Integrated Monitoring

Tracks temperature,
pressure, flow, load, and
outlet air



Key Specifications

Total Capacity	210 kW
Liquid-Cooled	168 kW
Air-Cooled	42 kW
Rated Voltage	460 VAC, 3-phase, 60 Hz
Full-Load Current	295 A
Configuration	4 × 42 kW + 2 × 21 kW
User Interface	10-inch touchscreen

Typical Applications

- ◆ Hybrid-Cooling Commissioning
- ◆ CDU & Liquid-Loop Testing
- ◆ Rack-Level Load Simulation
- ◆ Airflow Performance Testing
- ◆ Power-System Testing
- ◆ Transient-Load Simulation

The Nexatherm Difference

Coordinated Multi-Unit Control

Available group-control software
synchronizes multiple load banks
for repeatable testing of dynamic
hybrid IT load profiles.



**Start/Stop
Timing**



**Load Ramp
Rate**



**Coolant Flow
Rate**

210 kW Air-Liquid Hybrid Load Bank

TECHNICAL SPECIFICATIONS

System Overview

The 210 kW Air-Liquid Hybrid Load Bank combines four liquid-cooled and two air-cooled modules in one mobile cabinet. PLC load control, proportional flow control, and integrated monitoring support steady-state and transient testing across varied operating conditions.

System Configuration

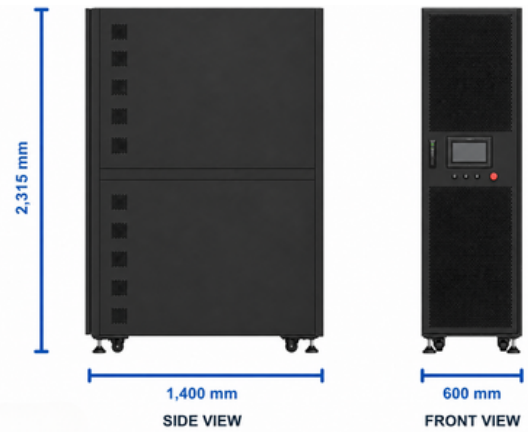
Total Capacity	210 kW
Capacity Split	168 kW liquid-cooled; 42 kW air-cooled
Configuration	4 × 42 kW liquid; 2 × 21 kW air
Load Type	Resistive heating
Cooling Modes	Liquid-cooled and forced-air-cooled

Liquid-Cooled Modules

Module Capacity	42 kW each
Load Adjustment	0–42 kW; ≤1.0 kW resolution
Rated Flow	1–1.5 L/min per kW
Coolant Temperature	5–65°C (41–149°F)
Compatible Coolants	DI water or 25% propylene glycol
Design/Test Pressure	8/10 bar (116/145 psi)
Filtration	50 µm (0.002 in.)
Hydraulic Control	Proportional control valve
External Connections	64 mm (2.52 in.), sanitary-style

Air-Cooled Modules

Module Capacity	21 kW
Load Adjustment	0–21 kW; ≤0.5 kW resolution
Air Volume	≥165 CFM/kW
Outlet-Air Temperature	≤60°C (140°F)
Noise Level	92 dB(A) at 1 m



Physical Specifications

Cabinet Dimensions	600 × 1,400 × 2,315 mm (23.62 × 55.12 × 91.14 in.)
Net Weight	670 kg (1,477 lb)
Ambient Temperature	0–50°C (32–122°F)
Relative Humidity	5–95%, non-condensing
Maximum Altitude	1,500 m (4,921 ft)

System Controls

Main System Interface	10-inch touchscreen HMI
Liquid Module Interface	5-inch touchscreen HMI on each module
Monitoring	Load, temperature, pressure, flow, and outlet-air temperature
Communications	Multiple protocols with remote operation

Electrical

Rated Voltage	460 VAC, 3-phase, 60 Hz
Full-Load Current	295 A
Power Connections	63 A, 5-pole, 6h CEEform

Standard Features

- Thermal-spike simulation
- Real-time thermal feedback
- Local and remote operation
- High-temperature protection
- High-pressure protection
- Low-flow protection
- Liquid-leak detection
- Emergency-stop protection