VERTIV.™

Liebert® DCD

Passive and Active rear door cooling, up to 50 kw

The Liebert® DCD Cooling Door from Vertiv is a passive chilled water heat exchanger and the Liebert DCD Active door adds a fan-powered module that can increase cooling capacity up to 50kW.

OVERVIEW

- Compact solution for newly constructed and existing data centers.
- Maximum energy efficiency.
- Supports flooded cold aisle configurations.
- Enables leak-proof piping through water-bearing hinges.

BENEFITS

Flexibility

- Replaces the existing back door on sealed IT cabinets
- Requires minimal floor space
- Easy access to servers and equipment — passive door opens 180 degrees; door with active fans open 135 degrees
- Door allows for full access to the servers and equipment by opening 180 degrees
- Supports both hot aisle/cold aisle configurations and irregular configurations
- Allows adaptive and scalable expansion without interruption of cooling operations
- Passive cooling module requires no maintenance

Higher Availability:

- Ensures continuous operation of critical IT systems under extreme heat conditions
- 50 kw cooling capacity

Lowest Total Cost Of Ownership:

- Passive door operates with high energy efficiency – no fans or moving parts requiring electricity

Ideally Suited For:

- Rack heat loads up to 50kW
- Racks 600mm x 2000mm (w x h)
- Adapter kits available for:
  - Other rack dimensions
  - Other rack manufacturer designs

Passive Rack Cooling Door

How It Works. The Liebert® DCD passive unit uses no power for capacity or temperature control, instead using the airflow provided by server fans within the protected rack. As the air moves across the unit's chilled water coils, it is cooled and exhausted into the data center space at a temperature close to the temperature of the air entering the rack.

Active Rack Cooling Fans

How It Works. The Liebert DCD Active fan module is installed directly onto the Liebert DCD. These powered fans provide additional rack capacity by pulling the server exhaust air through the chilled water coils.

Both the passive and active solutions provide 100% sensible capacity, greatly reducing demands on computer room air conditioners for humidification, resulting in additional energy savings.

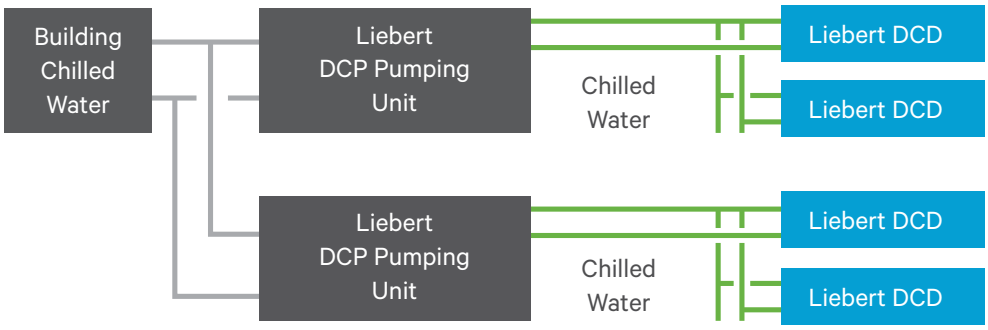
To protect against condensation, the units can be connected to the Liebert DCP™ pumping unit. The pumping unit isolates the building chilled water source and the circulating cooling water, keeping it above room dew point temperature.

The Liebert® DCW Chilled Water-based Cooling System

The Liebert DCP coolant pumping unit is a part of the Liebert DCW chilled water-based cooling system. Designed to support Liebert DCD cooling door, Liebert DCP is an isolating interface between the pumped water and the building chilled water system. The advantages of creating this isolated secondary loop include:

- Keep the secondary loop water temperatures above room dewpoint, eliminating the possibility of condensation.
- More effective water quality control because this is a closed loop.
- Minimizes the amount of water from a potential leak to the amount of water in the circuit versus the amount in the entire building chilled water system.

Building Chilled Water



The Liebert DCP coolant pumping unit creates an isolated secondary loop for the chilled water fed Liebert DCD rear door cooling units. Liebert DCP may also be used with other brands of rack cooling equipment.

Special Features

Top-of-rack water connections speed installation.

Highly reliable water-bearing hinge virtually eliminates the possibility of water leakage.

Condensation discharge supports Condensation pan.

TECHNICAL DATA — PASSIVE DOOR	
Nominal Capacity - DCD35	Up to 35kW
Nominal Capacity - DCD50	*Up to 50kW (Active Door may be recommended depending on conditions and rack model)
Physical *Depth without Rack Adapter Kit	
Height :	76 7/8" (1954mm)
Width :	DCD35" 23.5" (600 mm); DCD50: 31.5" (800 mm)
*Depth :	DCD35": 6" (151mm) DCD50: 6" (151mm)
Weight (empty) :	DCD35": 210 (95.2) DCD50: 230 (104.3)
Rack Enclosure Compatibility	DCD35": 24" x 42U (600mm x 42U); DCD50: 31.5" x 42U (800mm x 42U)

TECHNICAL DATA — ACTIVE DOOR		
Mechanical Data		**H2000**
Dimensions (L x W x H)	DCD Active DCD35	77 in (1954mm) H x 17 in (420mm) W x 9 1/8 in (232mm) D
	DCD Active DCD50	77 in (1954mm) H x 23 in (420mm) W x 9 3/8 in (238mm) D
Grid feed-in Supply A, B		**Single 110/230V**
Operating voltage		195...264 V, 47...63Hz
Rated current		5/11 A (110/230 V)
Fuses		10/12 A T
Performance Data		
Dimensions (L x W x H)	DCD Active DCD35	6300m³/h (N+1 fan redundancy) 7400m³/h (no redundancy)
	DCD Active DCD50	9000m³/h (N+1 fan redundancy) 10800m³/h (no redundancy)
Max. Power Consumption	DCD Active DCD35	980W
	DCD Active DCD50	1185W
Operational Power Consumption	DCD Active DCD35	40 to 500W
	DCD Active DCD50	50 to 570W
Ambient Conditions		
Operating temperature		+10...+40 °C
Storage temperature		-25...+80 °C
Relative humidity		0...95 %, non-condensing
Altitude above sea level		max. 2,000 m

Vertiv.com | **Vertiv Headquarters,** 1050 Dearborn Drive, Columbus, OH, 43085, USA

SL-17312 (R12/19)