

Liebert XDR™ Rack Door Cooling Module

High Heat Density Cooling in a Space-Saving Design



Liebert XDR
Rack Door Cooling
Module

The Liebert XDR is a fanless heat exchanger module that installs as the rear door of an equipment rack, providing up to 20kW of room-neutral cooling. The Liebert XDR design uses the server fans within the protected rack to provide airflow through the unit. The microchannel coil heat exchanger cools the air and returns it to room at close to the same temperature as the air entering the rack.

The open design of the microchannel allows the Liebert XDR to mimic the airflow of a perforated door, a feature that literally can be seen.

The Liebert XDR is a part of the Liebert XD high heat-density cooling system that utilizes pumped refrigerant technology. The pumped refrigerant operates at low pressure in the system and becomes a gas at room conditions, making it ideal for use around electronic equipment. Since the Liebert XDR always provides 100% sensible capacity, the need for computer room air conditioners to provide humidification is significantly reduced, resulting in lower energy usage.

Flexibility:

- Replaces the existing back door on IT racks from Knurr and other major manufacturers
- Requires minimal floor space.
- Door allows for full access to the servers and equipment by opening greater than 100 degrees
- Supports both hot aisle/cold aisle configurations and irregular configurations.
- Allows adaptive and scalable expansion without interruption of cooling operations.
- Operates with the Liebert XD family as a part of a high density cooling solution.

Higher Availability:

- Uses pumped refrigerant, which is ideal for use around electronic equipment.
- Ensures continuous operation of critical IT systems under extreme heat conditions.

Lowest Total Cost Of Ownership:

- Operates with high energy efficiency – no fans or moving parts requiring electricity.
- Fanless cooling module requires no maintenance

Ideally Suited For:

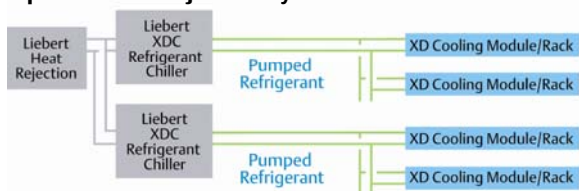
- Rack heat loads up to 20kW
- Knurr and other equipment enclosure racks
- Existing XD systems supported by Liebert XDP and Liebert XDC
- Hot spots, regardless of space configuration

Technical Data

Nominal Capacity, 60 Hz	20.5 kW / 5.8 Ton
Nominal Capacity, 50 Hz	20.5 kW / 5.8 Ton
Physical *Height without piping connections	*Height : 78.4 (1992 mm) Width 23.5" (597 mm) Depth 5.9" (150 mm) Weight, empty 130 lbs (59 kg)
Piping	Hard-piping, Quick-connect couplings (Removable and "One-Shot") for Flexible Piping
Rack Compatibility	24" x 42U (600mm x 42U) rack enclosure
Maximum modules per loop	8 (eight)

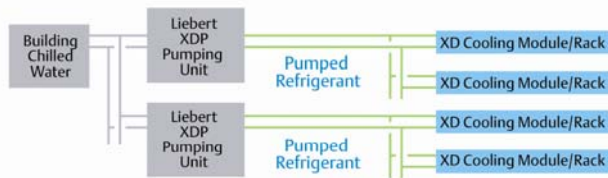
Nominal Capacity Rating is @ 55°F (13°C) Entering Fluid Temperature and 104°F (40°C) Entering Air Temperature, 2400 CFM (68 m³/min)

Separate Heat Rejection System



The indoor Liebert XDC Refrigerant Chiller is specifically designed to support Liebert XD cooling modules. Liebert connects directly to the modules through the pumped refrigerant circuit.

Building Chilled Water



When a building chilled water circuit is available, the Liebert XDP Pumping Unit is utilized as an interface between the pumped refrigerant circuit and the chilled water system. Both Liebert XDC and Liebert XDP units circulate the refrigerant to the Liebert XD modules, while maintaining the refrigerant at a temperature always above the actual dewpoint.

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