

Vertiv™ Liebert® XD Overhead Cooling Module (XDO) GUIDE SPECIFICATIONS

1.0 GENERAL

1.1 Summary

These specifications describe requirements for an air conditioning system designed for cooling of high heat density equipment. The system shall be designed to maintain conditions within the space with heat emitting equipment. The manufacturer shall design and furnish all equipment to be fully compatible with heat dissipation requirements of the site.

1.2 Design Requirements

The air conditioning system shall be a Liebert® XDO factory-assembled unit. The unit shall be designed for draw-through air arrangement to ensure even air distribution to the entire face area of the coils.

1.3 Submittals

Submittals shall be provided with the proposal and shall include: Dimensional, Electrical and Capacity data.

1.4 Warranty

The system shall be provided with a warranty against defects in material and workmanship.

1.5 Quality Assurance

The specified system shall be factory-tested before shipment and designed to meet NRTL requirements. The system shall be designed and manufactured according to world-class quality standards. The manufacturer shall be ISO 9001 certified.

2.0 PRODUCT

2.1 Standard Features

2.1.1 Vertiv™ Liebert® XDO Module

Liebert® XDO module shall include two cooling coils and a fan housed in a cabinet.

- XDO16 (60Hz) - Nominal cooling capacity of 54,642 BTUH (16 kW) rated at 55°F (12.8°C) entering fluid temperature, 85°F (29.4°C) entering air temperature, 50°F (10°C) or lower dew point and 2,700 CFM (4,600 m³/h)
- XDO20 (60Hz) -Nominal cooling capacity of 20 kW (68,000 BTUH) rated at 55°F (12.8°C) entering fluid temperature, 92°F (36.6°C) entering air temperature, 50°F (10°C) or lower dew point and 2,700 CFM (4,600 m³/h)
- XDO16 (50Hz) - Nominal cooling capacity of 47,800 BTUH (14 kW) rated at 55°F (12.8°C) entering fluid temperature, 85°F (29.4°C) entering air temperature, 50°F (10°C) or lower dew point and 2,250 CFM (3,800 m³/h)
- XDO20 (50Hz) - Nominal cooling capacity of 17.7 kW (60,400 BTUH) rated at 55°F (12.8°C) entering fluid temperature, 92°F (36.6°C) entering air temperature, 50°F (10°C) or lower dew point and 2,700 CFM (4,600 m³/h)

2.1.2 Cooling Coil

The cooling coils shall be constructed of aluminum. Fluid shall be supplied to the Liebert® XDO from a Vertiv™ Liebert® XD Pumping Unit or a Liebert® XD Coolant Chiller to prevent coil condensation and optimize the leaving fluid temperature.

2.1.3 Fan

Each module shall consist of one (1) all-metal fan with round venturi plate and finger guard.

2.1.4 Electrical

The fan shall be powered by plugging in a circular connector into a receptacle on the XDO module.

2.1.5 Sound

The sound power rating with the fan running at maximum speed shall not exceed 85 dB(A) per XDO module.

2.1.6 Piping

Factory-installed piping shall be leak-tested and pressure-tested prior to shipment from the factory.

2.1.7 Lighting Fixtures

The XDO module shall have provisions for mounting optional lighting fixtures.

2.1.8 Drip Pan

A pan shall be factory-installed below the header in the coils.

2.2 Optional Features XDO

2.2.1 Smart Module

The Liebert® XDO is available with an optional factory-installed control board and condensate detection for the drip pan. The module shall have connection points (dry contacts) in the electrical box for connection of outgoing alarm cables.

2.2.2 Pipe Connection

The Liebert® XDO is available with optional factory-installed “one-shot” type pipe connections (for field connection of Flexible Piping).

2.3 Electrical Requirements

Each XDO module shall require 2.7 FLA at 120V-1ph-60hz or 1.44 FLA at 230V-1ph-50Hz.

3.0 EXECUTION

3.1 Installation Of XDO

3.1.1 General

Install the unit in accordance with the manufacturer's installation instructions. Maintain recommended service clearances as outlined in the installation instructions.

3.1.2 Electrical Wiring

Furnish copy of the manufacturer's electrical connection diagram submittal to the electrical contractor.

3.1.3 Piping Connections

Install and connect devices furnished by the manufacturer but not specified to be factory mounted. Furnish a copy of the manufacturer's piping connection diagram submittal to the piping contractor.

3.1.4 Supply and Return Piping

Connect supply and return connections to the XDO module.

3.2 Field Quality Control

3.2.1 Startup

Start up the air conditioning unit in accordance with the manufacturer's startup instructions. Test controls and demonstrate compliance with requirements.

NOTE: These Guide Specifications comply with the outlines of the Construction Specifications Institute per CSI MP-2-1 and MP-2-2. In correspondence, reference Liebert document SL-16667_REV03_09-21.