As a new generation of compact, heat producing IT switches and servers are deployed outside the data center, IT managers are faced with the challenge of keeping their equipment up and running in these non-traditional spaces.

The Liebert XDF™ Mini Data Center (MDC) solves this challenge by providing high heat density precision cooling with integrated security, monitoring and control all in a single rack supporting from 3-9 kW of IT load.

Liebert MDC is high density cooling integrated into a secured rack enclosure, providing the benefits of big room support in a cost-effective package. Optimized horizontal air circulation cools the protected equipment preventing hotspots and equipment failures, both in standard mode and in backup ventilation mode. Control and monitoring are accomplished with the cabinet-mounted Liebert iCOM™ control system.

Optional Liebert UPS, advanced rack PDUs and remote monitoring systems are available to customize the level of support to meet your individual infrastructure needs.

**Key Features**
- Integrated high density cooling with horizontal air flow for even cooling
- Automatic back-up ventilation
- 2 Configurations:
  - Air-cooled
  - Water-cooled
- Digital scroll compressor for precise and energy efficient operation
- Quickly deployable on casters with leveling feet
- Liebert iCOM™ intelligent controls
- Remote monitoring
- Enhanced protection and functionality with Liebert online UPS and rack PDUs

**Ideal Applications**
- IT equipment in non-traditional spaces without the benefit of precision cooling
  - Warehouses
  - Closets
  - Shelters
  - SMB Data Centers
- High density equipment requiring individualized cooling and protection
  - Closets
  - Data centers
- RFID applications
- VoIP applications
- Disaster recovery operations
The Air-cooled MDC is a self-contained unit with 9kW of cooling in a 36U enclosure. XDF-S exhausts the heat from the electronic equipment through the condenser fan at the top.

The Water-cooled MDC has 9kW of cooling in a 42U enclosure. The unit exhausts the heat from the electronic equipment through the water piping circuit that is connected to a building water tower or Liebert drycooler.

All units have horizontal airflow, providing optimal cooling to your equipment while reducing hot spots and increased failures at the top of the cabinet. The two base MDC units provide the flexibility of four different methods of heat rejection.

### Liebert MDC Model Comparison Chart

<table>
<thead>
<tr>
<th>Model</th>
<th>Air-cooled</th>
<th>Air-cooled</th>
<th>Water-cooled</th>
<th>Water-cooled</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heat Rejection</strong></td>
<td>Without ducting; hot air is dissipated into the room</td>
<td>With field installed ducting; hot air is ducted to ceiling plenum or outdoors for dissipation</td>
<td>Connected to a building water tower for hot water removal</td>
<td>Split unit connected to a drycooler &amp; pump for hot water removal</td>
</tr>
<tr>
<td><strong>Capacity (Conditions)</strong></td>
<td>9kW (Air temp &lt;92.5°C; Internal setpoint ≥ 77°C)</td>
<td>9kW (Air temp &lt;92.5°C; Internal setpoint ≥ 77°C)</td>
<td>9kW (Water temp &lt;85°C; Internal setpoint ≥ 77°C)</td>
<td>9kW (Water temp &lt;85°C; Internal setpoint ≥ 77°C)</td>
</tr>
<tr>
<td>Rack Space</td>
<td>36U</td>
<td>36U</td>
<td>42U</td>
<td>42U</td>
</tr>
<tr>
<td>Sound Level</td>
<td>86dBA</td>
<td>&lt;86dBA</td>
<td>79dBA</td>
<td>79dBA</td>
</tr>
<tr>
<td>Minimum Room Size</td>
<td>1600 sq ft</td>
<td>&lt;60 sq ft</td>
<td>760 sq ft</td>
<td>760 sq ft</td>
</tr>
<tr>
<td>Dell Model Number</td>
<td>A1712604</td>
<td>A1712604</td>
<td>A1712601</td>
<td>A1714966</td>
</tr>
<tr>
<td>(Liebert Model Number)</td>
<td>(XDFS091001S6291)</td>
<td>(XDFS091001S6291)</td>
<td>(XDFW091001S6291)</td>
<td>(XDFW091001S6409)</td>
</tr>
</tbody>
</table>

All Liebert MDC units have the following requirements:
- Two power connections: 120/208V 3-phase (NEMA L21-30P; 4 wires + ground) & 120V single phase (NEMA 5-15P)
- Separate source for power distribution within the rack (i.e. via a Liebert MP Rack PDU)
- Condensate removal to a drain (condensate pump included)
- Minimum 3kW of IT load (below 3kW, you may wish to consider a Liebert MCR)
- Contractor installation of water-cooled MDCs (also recommended for ducting of the air-cooled MDC)
- Liebert Online UPS recommended to support your critical IT load
The heat from the IT equipment will need to be removed by one of four heat rejection methods.

**Heat Rejection Method #1: Air-cooled MDC without ducting**
The Air-cooled Liebert MDC without ducting utilizes the volume of air in a 1600 square foot or larger room to adequately dissipate the hot exhaust air.

**Heat Rejection Method #2: Air-cooled MDC with ducting**
The Air-cooled Liebert MDC with ducting utilizes a ceiling plenum or the outdoors to dissipate the hot exhaust air.

Appropriately sized ducting will need to be field installed to remove the hot air from the unit (a booster fan may also be required).

The integrated condenser requires 2700 CFM of makeup air to the unit.

**Heat Rejection Method #3: Water cooled MDC**
The Water-cooled Liebert MDC utilizes a building water tower for removal of the hot water.

Piping must be installed to connect the Liebert MDC to the water tower (typically a closed-loop system with water 50-85°).

**Heat Rejection Method #4: Water cooled MDC split unit with Liebert drycooler package**
The Water-cooled Liebert MDC split unit utilizes a Liebert drycooler & pump for removal of the hot water.

Piping must be installed to connect the Liebert MDC to the drycooler and pump.

The drycooler can be installed up to approximately 150 feet from the Liebert MDC and should be installed on a hard surface such as a roof or concrete pad (refer to local code).

For contractor recommendation or application questions, call 1-800-LIEBERT or contact your local Liebert sales office (rep lookup available at www.liebert.com).
### Technical Data

<table>
<thead>
<tr>
<th>Liebert MDC™</th>
<th>Air-cooled</th>
<th>Water-cooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Unit Height, With Casters</td>
<td>82.5&quot; (2095mm)</td>
<td>81&quot; (2057mm)</td>
</tr>
<tr>
<td>Overall Unit Width</td>
<td>35&quot; (890mm)</td>
<td>35&quot; (890mm)</td>
</tr>
<tr>
<td>Overall Unit Depth</td>
<td>48&quot; (1219mm)</td>
<td>48&quot; (1219mm)</td>
</tr>
<tr>
<td>Rack Width</td>
<td>19&quot; (483mm) EIA</td>
<td>19&quot; (483mm) EIA</td>
</tr>
<tr>
<td>Adjustable Rack Depth, Max</td>
<td>32.1&quot; (815mm)</td>
<td>32.1&quot; (815mm)</td>
</tr>
<tr>
<td>Adjustable Rack Depth, Min</td>
<td>24.4&quot; (620mm)</td>
<td>24.4&quot; (620mm)</td>
</tr>
<tr>
<td>Weight, Empty</td>
<td>710 lbs (322 kg)</td>
<td>668 lbs (338 kg)</td>
</tr>
<tr>
<td>Max Weight, Loaded</td>
<td>2000 lbs (907kg)</td>
<td>2000 lbs (907kg)</td>
</tr>
<tr>
<td>Nominal Air Flow, Internal</td>
<td>2100 CFM (3500 m3/h)</td>
<td>2100 CFM (3500 m3/h)</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>120V, 1ph, 60Hz* and 120/208V, 3ph, 60Hz**</td>
<td>5.0A* and 15.7A** respectively, 60Hz</td>
</tr>
</tbody>
</table>

Full Load Amps

7.7A* and 15.7A** respectively, 60Hz

5.0A* and 15.7A** respectively, 60Hz

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* For controls and evaporator and condenser fans power supply.
** For compressor power supply.

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### Local and Remote Monitoring Capabilities

Liebert iCOM allows for local or remote monitoring of the conditions in the Liebert MDC to protect critical rack components. Options are available for connecting to Liebert remote monitoring devices or for BMS (Building Management System) interface via MODbus or SNMP.

The menu driven display is organized into three main sections: User Menus, Service Menus and Advanced Menus.