Vertiv™ LIEBERT®

PDX™ and PCW™
Compact Perimeter Cooling Solutions
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Introducing thermal management solutions that efficiently lower your operating costs and pack a lot of capacity into a small footprint.

Liebert® PDX™ and Liebert PCW™ compact perimeter cooling solutions let you achieve the highest efficiency and protection with low capital, installation and maintenance costs. They replace the highly regarded and popular Liebert Challenger™ 3000 data center cooling system, offering enhanced features including:

- Net capacity per footprint of up to 3.6kW per square foot – the industry’s highest
- Industry’s most compact footprint
- Wide capacity range of 11kW – 29kW
- Compliance with U.S. Department of Energy minimum efficiency standards for data center equipment
- High efficiency fans and compressors
- Hydrophilic slab coil

Operate More Efficiently and Effectively

Options include

- Air-cooled; water/glycol-cooled; GLYCOOL™ Free-cooling; dual cool (DX & CW); chilled water
- Upflow, downflow, front & side discharge
- Infrared and steam gen humidifiers
- Electric reheat
- All 60 Hz 3-phase voltages including 575V

Liebert iCOM-S™ thermal system control is available for optimizing the performance of multiple cooling units and providing access to operational data, system diagnostics and trending.

Flexible Configurations

Ideal Applications

- Small and medium IT spaces
- Telecommunications switching offices
- Industrial process control
- Laboratories and medical imaging suites

Higher Energy Efficiency

- 25% more efficient than the industry-standard Liebert Challenger 3000 in DX configuration and more than twice as efficient as the Liebert Challenger 3000 in chilled water configuration
- Compliant with U.S. Department of Energy minimum efficiency standards for data center equipment
- Industry-leading Liebert iCOM™ unit control with advanced algorithms for air temperature and fan speed coordination
- EC Fans reduce motor energy usage by 10-30%, compared to standard AC motors. More efficient than centrifugal blowers even when operating at 100% fan speed
- Unique, floor-level air discharge configuration reduces mix between hot and cold air, improving efficiency

Direct Expansion System

- Liebert PDX: 11kW, 18kW, 23kW, 29kW capacities (3, 5, 6.5, 8 Tons, respectively)

Chilled Water System

- Liebert PCW Downflow: 11kW, 17kW, 29kW capacities (3, 5, 8 Tons respectively)

SCOP (Sensible Coefficient of Performance) = Net Sensible Cooling Capacity / Total System Energy Consumption

**DX SYSTEM** 25% more efficient than the industry-standard Liebert Challenger 3000

**CHILLED WATER SYSTEM** Two times the efficiency of the industry-standard Liebert Challenger 3000
Greater Protection

- Self-optimizing features and advanced controls fine-tune system operations for fewer adverse events and longer equipment life providing availability approaching 100%
- Liebert® iCOM™ unit control provides access to system status, operations and event log and maintenance history
- Advanced freeze and pressure routines to prevent icing on coils and locked out compressors

Lower Capital, Installation and Maintenance Costs

- Liebert iCOM controls provide faster installation, easy event identification and self-optimization for maintaining optimal performance without manual intervention
- No fan belts to maintain and replace
- Easy access at front and side for faster servicing

More Efficient than the DOE Minimum Efficiency Standards

Direct Expansion Air-Cooled System

<table>
<thead>
<tr>
<th></th>
<th>PX011</th>
<th>PX018</th>
<th>PX023</th>
<th>PX029</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Capacity Data - Std. Airflow - Upflow</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75°F DB, 52°F DP (44.6% RH)</td>
<td>kBtuh (kW)</td>
<td>kBtuh (kW)</td>
<td>kBtuh (kW)</td>
<td>kBtuh (kW)</td>
</tr>
<tr>
<td>Total</td>
<td>37.1 (10.9)</td>
<td>63 (18.5)</td>
<td>81.2 (23.8)</td>
<td>101 (29.6)</td>
</tr>
<tr>
<td>Sensible</td>
<td>33.4 (9.8)</td>
<td>59.4 (17.4)</td>
<td>74 (21.7)</td>
<td>89.2 (26.1)</td>
</tr>
</tbody>
</table>

**Fan Data**

- Std. Airflow, CFM (CMH) | PX011 - 1800 (3060), PX018 - 2800 (4757), PX023 - 3500 (5946), PX029 - 4300 (7305)
- Std. Fan Motor, HP (kW) | PX011 - 1.3 (1), PX018 - 4.15 (3.1), PX023 - 4.15 (3.1), PX029 - 4.15 (3.1)
- External Static Pressure, in. WG (Pa) | PX011 - 0.8 (199), PX018 - 0.8 (199), PX023 - 1 (249), PX029 - 1 (249)

Chilled Water System

<table>
<thead>
<tr>
<th></th>
<th>PW011</th>
<th>PW017</th>
<th>PW029</th>
</tr>
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<tr>
<td><strong>Net Capacity Data - Std. Airflow - Upflow</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75°F DB, 52°F DP (44.6% RH), 45°F EWT, 55°F LWT</td>
<td>kBtuh (kW)</td>
<td>kBtuh (kW)</td>
<td>kBtuh (kW)</td>
</tr>
<tr>
<td>Total</td>
<td>38.6 (11.3)</td>
<td>53.8 (15.8)</td>
<td>87.4 (25.6)</td>
</tr>
<tr>
<td>Sensible</td>
<td>36.9 (10.8)</td>
<td>52.8 (15.5)</td>
<td>82.2 (24.1)</td>
</tr>
<tr>
<td>Flow Rate, GPM (l/m)</td>
<td>8.1 (30.7)</td>
<td>11.9 (45)</td>
<td>19.4 (73)</td>
</tr>
<tr>
<td>Unit Pressure Drop, ft. of water (kPa)</td>
<td>4.3 (12.8)</td>
<td>8.4 (25.1)</td>
<td>13.1 (39.3)</td>
</tr>
</tbody>
</table>

**Fan Data (3.1kW EC Blower)**

- Std. Airflow, CFM (CMH) | PW011 - 1800 (3060), PW017 - 3500 (5946), PW029 - 4300 (7305)
- Std. Fan Motor, HP (kW) | PW011 - 1.3 (1), PW017 - 4.15 (3.1), PW029 - 4.15 (3.1)
- External Static Pressure, in. WG (Pa) | PW011 - 0.8 (199), PW017 - 0.8 (199), PW029 - 1 (249)