Uniflair Direct Expansion Air Cooled with Fixed Speed scroll compressors 60 – 140 kW

Uniflair Air Cooled Room Cooling LDAV precision air conditioners for IT and mission critical applications.

- Cooling capacity: 60 ÷ 140 kW
- Air-cooled
- Fixed speed scroll compressors
- Downflow configuration
- Refrigerant R410A
- EC fans
**System Architecture: standard features**

**Electrical panel**
- Three-phase power supply 400 V/3 Ph+N/50 Hz for all the units with a single or a double power supply
- Low voltage secondary circuit 24 Vac with isolation transformer
- Metal isolating screen for protection from live components
- General isolator with mechanical interlock
- Thermo magnetic circuit-breakers for protection
- Terminal board for no-voltage signal and control contacts

**New microprocessor controller**
- 7-inch, touch-screen LCD display interface
- Integrated management of the EEV and refrigerating circuit parameters
- Full management of the condenser status including single fan status
- Grouping logic integrated
- RS485 and TCP/IP card bus integrated targeting the main communication protocols
- Native communication with StruxureWare system, NetBotz remote sensors
- USB and Service port integrated in the display interface

**Frame**
- Self-supporting frame in galvanized steel with panels
- External panels coated with RAL9003 epoxy-polyester paint
- Internal panels with captive screws
- Internally lined with heat and sound-proofing insulation
- Refrigeration circuit inspection with unit active
- Side panels with coil inspection opening

**Cooling coil**
- Heat exchanger coils designed for high sensible heat ratio (SHR) and reduced pressure drops
- Made from copper tubes mechanically expanded on aluminum fins
- Hydrophilic coil coating

**Air filters**
- Standard high efficiency EU4-pleated air filters housed in a dedicated plenum box
- Dirty filter differential pressure switch
- Low airflow differential pressure switch

**Fixed speed scroll compressor**
- High energy efficiency in full load conditions
- Extended operating conditions
- Equipped with Intermediate Discharge Valves (IDVs)

**Electronically Commuted Radical fans**
- High-tech compound material impellers with optimized flow control
- High efficiency Green Tech EC motors
- Low power consumption
- High part-load efficiency
- Fan speed regulation by Modbus signal
- Regulate airflow based on actual thermal load
- Easy serviceability with quick removal kit

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Main configurable options

**Power supply**
- Single power supply
- Double power supply with automatic commutation to provide redundancy and ensure a constant power supply

**Construction options**
- Top air return with bottom or front discharge for downflow units (without additional floor stands)
- Standard, cleanable or low conductivity humidifier (cooling + humidification configuration)
- Condensate drain pump (cooling only and cooling + dehumidification configurations)
- Standard electrical heaters with extended fins, complete with double safety thermostat and manual resetting
- EU4 (standard) or EU5 air filters with or without motorized damper
- Power phase capacitors
- Energy meter and CO₂ emission calculator
- Automatic Floor Pressurization System through Active Floor Control (AFC)

**Air-cooled remote condensers (OCC)**
- R410A refrigerant
- Vertical or horizontal installation
- Low-speed axial fans compliant with ERP2015
- Versions with electronically commutated (EC) motor to reduce the sound pressure level (optional)
- Fan speed regulator works exclusively via Modbus commands
- Coil protection treatment for aggressive ambient (optional)
- Low temperature versions to operate down to -40°C (optional)

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Technical data – LDAV

**LDAV models**

<table>
<thead>
<tr>
<th>LDAV models</th>
<th>2422A</th>
<th>2522A</th>
<th>2722A</th>
<th>3822A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fan type</strong></td>
<td>EC backward-curved centrifugal motor fan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>V/ph/Hz</td>
<td>400 / 3ph / 50 Hz</td>
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<tr>
<td><strong>Fans</strong></td>
<td>nr.</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td><strong>Air flow</strong></td>
<td>m3/h</td>
<td>20000</td>
<td>24300</td>
<td>26000</td>
</tr>
<tr>
<td><strong>Gross total cooling capacity</strong></td>
<td>kW</td>
<td>97.5</td>
<td>106.2</td>
<td>115.8</td>
</tr>
<tr>
<td><strong>Gross sensible cooling capacity</strong></td>
<td>kW</td>
<td>97.5</td>
<td>106.2</td>
<td>115.8</td>
</tr>
<tr>
<td><strong>Fan power consumption</strong></td>
<td>kW</td>
<td>3.00</td>
<td>3.48</td>
<td>4.15</td>
</tr>
<tr>
<td><strong>Compressor Power Consumption</strong></td>
<td>kW</td>
<td>16.7</td>
<td>16.3</td>
<td>18.9</td>
</tr>
</tbody>
</table>

1: Gross cooling capacities; fans must be deducted to obtain net cooling data.
2: Data refer to nominal conditions: Room at 35 °C – 30% RH, condensing temperature 45 °C.

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**Dimensions**

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</tr>
</thead>
<tbody>
<tr>
<td><strong>Height</strong></td>
<td>mm</td>
<td>2150</td>
<td>2150</td>
<td>2150</td>
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<tr>
<td><strong>Length</strong></td>
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<td>2082</td>
<td>2650</td>
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<tr>
<td><strong>Depth</strong></td>
<td>mm</td>
<td>900</td>
<td>900</td>
<td>900</td>
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</table>