

Direct expansion precision air conditioners

Uniflair LE™

Direct Expansion units
with fixed or brushless
VSD scroll compressors



UNIFLAIR™

New DX Range

Cooling capacity: 50 ÷ 140 kW

Refrigerant R410A

EC fans

Available versions:

- Inverter driven range (I**V)
- Fixed speed range(LD*V)

- Upflow (**UV)
- Downflow (**DV)
- Underfloor (I*XV)

- Air-cooled (*A*V)
- Water-cooled (*W*V)
- Energy saving (*E*V)

Main components of Direct Expansion units Gen2

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



Discharge temperature control and moisture control

- Optimized for latest ASHRAE guidelines for higher operating temperatures to maximize system efficiency

Discharge temperature control

- Proportional and integral regulation on the discharge temperature of the unit, which manages the regulation of the compressor speed (I**V), fan speed and electronic expansion valve (EEV)

Moisture control

- Dedicated control function activated during dehumidification phase
- Optimization of humidification and dehumidification processes to increase energy efficiency



Fixed speed scroll compressors (LD*V)

- CAPEX reduction
- High energy efficiency in full load conditions

Brushless VSD scroll compressor (I**V models)

- Discharge temperature control
- High energy efficiency at partial load
- Low starting current
- Absence of sliding contacts

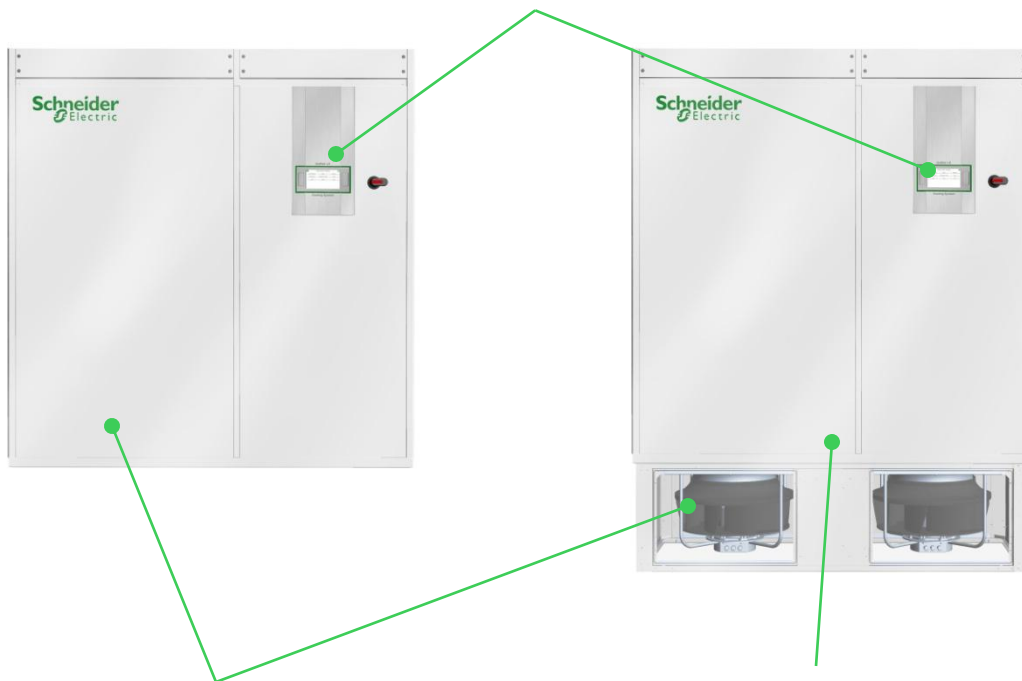
Electrical panel

- Three-phase power supply 400 V/3 Ph/50 Hz for all of the units with a single power supply.
- Three-phase power supply 400 V/3 Ph+N/50 Hz for all of the units with double power supply.
- Low voltage secondary circuit 24 Vac with isolation transformer.
- Plastic 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

Main components of Direct Expansion units Gen2

New microprocessor controller

- 7-inch, touch-screen LCD display interface
- Integrated management of the EEV and refrigerating circuit parameters
- Integrated Unloading logic on VSD units (I**V)
- Full management of the Condenser status including single fan status
- Integrated LAN card for group connection, RS485 card and TCP/IP card
- USB integrated in the display interface
- Rotation and active stand-by management
- Remote on/off
- Modbus and TCP/IP protocols direct interface
- Other external communication protocols: Bacnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare™ platform



Electronically Commuted Radical fans

- High-tech compound material impellers with optimized flow control
- Highly efficient Green Tech EC motors
- Lower power consumption
- High part-load efficiency
- Fan speed adjustment via the microprocessor control while the unit is running
- Regulate airflow based on actual thermal load
- Easy serviceability with quick removal kit
- **Underfloor fan module for IX*V units**

Frame

- Self-supporting frame in galvanized steel with panels
- External panels coated with RAL9003 epoxy-polyester paint
- Internal panels featuring captive screws
- Internally lined with heat and sound-proofing insulation

Main Configurable Options

Power supply

- Single power supply with to provide a temporary power supply to the control in the event of a power failure.
- Double power supply with automatic integrated management on the active line

Additional accessories

- Additional RS485 serial adaptor to communicate with external BMS
- Additional TCP/IP serial adaptor to communicate with external BMS managed with SNMP protocol
- LON FTT10 serial adaptor to communicate with external BMS managed with LON protocol
- PCONET card
- Motorized damper
- Suction from the top or front discharge plenums
- Back and top suction direct free-cooling plenum
- Adjustable floor stands
- Fire and smoke sensors
- Water leak detector
- Automatic Floor Pressurization System (AFPS) through Active Floor Control (AFC)

Construction options

- Immersed electrode humidifier (D/U versions)
- Low surface temperature electrical heaters with extended fans, complete with double safety thermostat and manual resetting (T/H versions)
- Energy meter and CO₂ emission calculator

Air-cooled remote condensers

- available for I*AV and LDAV models
- R410A refrigerant
- vertical or horizontal installation
- microchannel condensing coil version (optional)
- low-speed axial fans with electronically commutated (EC) motor to reduce the sound pressure level (optional)
- Fan speed regulator on both circuits separated
- coil protection treatment for aggressive ambient (optional)
- low temperature versions to operate down to - 40°C (optional)

