



Uniflair Air Cooled Room Cooling LDAV

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

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

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

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

Fixed speed scroll compressor

- High energy efficiency in full load conditions
- Extended operating conditions
- Equipped with Intermediate Discharge Valves (IDVs)

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

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

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		2422A	2522A	2722A	3822A
Fan type		EC backward-curved centrifugal motor fan			
Power supply	V/ph/Hz	400 / 3ph / 50 Hz			
Fans	nr.	2	2	2	3
Air flow	m3/h	20000	24300	26000	27000
Gross total cooling capacity ^{1,2}	kW	97.5	106.2	115.8	156.1
Gross sensible cooling capacity ^{1,2}	kW	97.5	106.2	115.8	156.1
Fan power consumption ^{1,2}	kW	3.00	3.48	4.15	4.24
Compressor Power Consumption	kW	16.7	16.3	18.9	29.9

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.



Dimensions

LDAV models		2422A	2522A	2722A	3822A
Height	mm	2150	2150	2150	2150
Length	mm	2082	2650	2650	2650
Depth	mm	900	900	900	900

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