

# High-efficiency room air conditioners

Uniflair™ air conditioners  
designed for precision environmental  
control of mission-critical applications



[schneider-electric.com](https://schneider-electric.com)

Life Is On

**Schneider**  
Electric

Schneider Electric policy is one of continuous technological innovation and the Company therefore reserves the right to amend any data herein without prior notice. The images shown in this catalog are for descriptive purposes only. They may therefore differ from specific models that are selected. Some of the features described may be available only for some models or configurations. Please refer to the specific technical literature for further details.

# Table of contents

|                                               |         |
|-----------------------------------------------|---------|
| Data center needs.....                        | Page 4  |
| Uniflair .....                                | Page 6  |
| Uniflair benefits.....                        | Page 8  |
| Uniflair AM-LE configurations.....            | Page 11 |
| Room air conditioners portfolio .....         | Page 17 |
| Uniflair AM technical data sheets.....        | Page 24 |
| Uniflair LE technical data sheets.....        | Page 36 |
| Uniflair CAP technical data sheets.....       | Page 80 |
| Uniflair OCC technical data sheets .....      | Page 82 |
| Uniflair Mobile telecom air conditioners..... | Page 84 |
| Uniflair WM technical data sheets.....        | Page 86 |
| Uniflair MB technical data sheets.....        | Page 88 |
| Uniflair SP technical data sheets.....        | Page 90 |
| Active floor technical data sheets .....      | Page 91 |

# Flexibility

Modular and tailored solutions for any application.

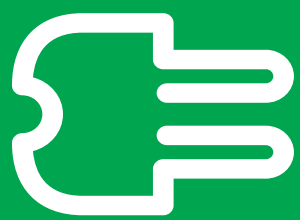
# Availability

Continuous operation to safeguard the customer's business.

# Energy saving

Technological excellence for efficient performance.

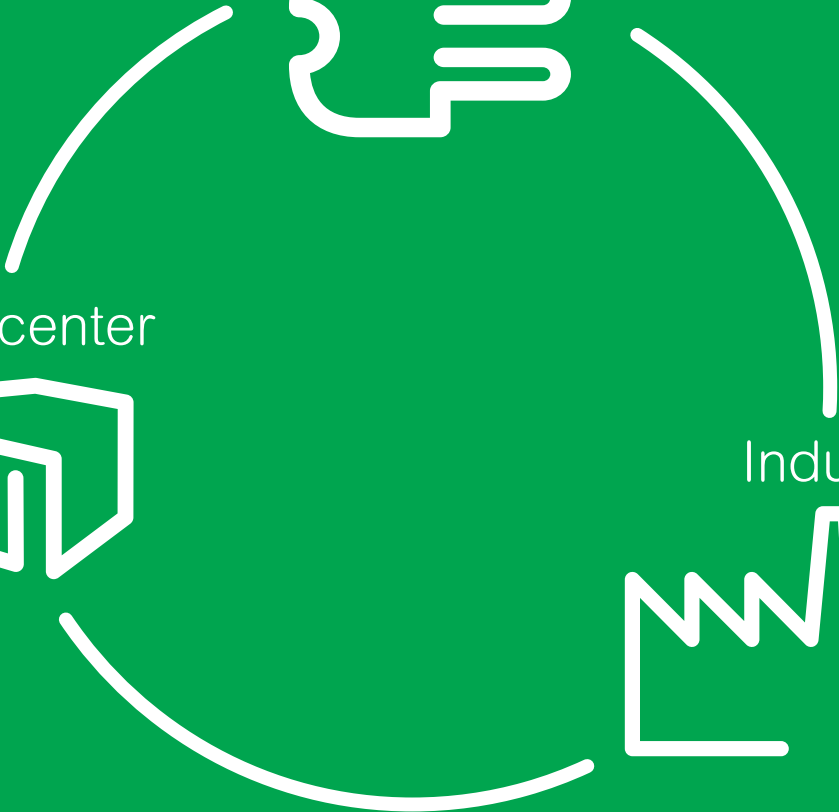
Secure power

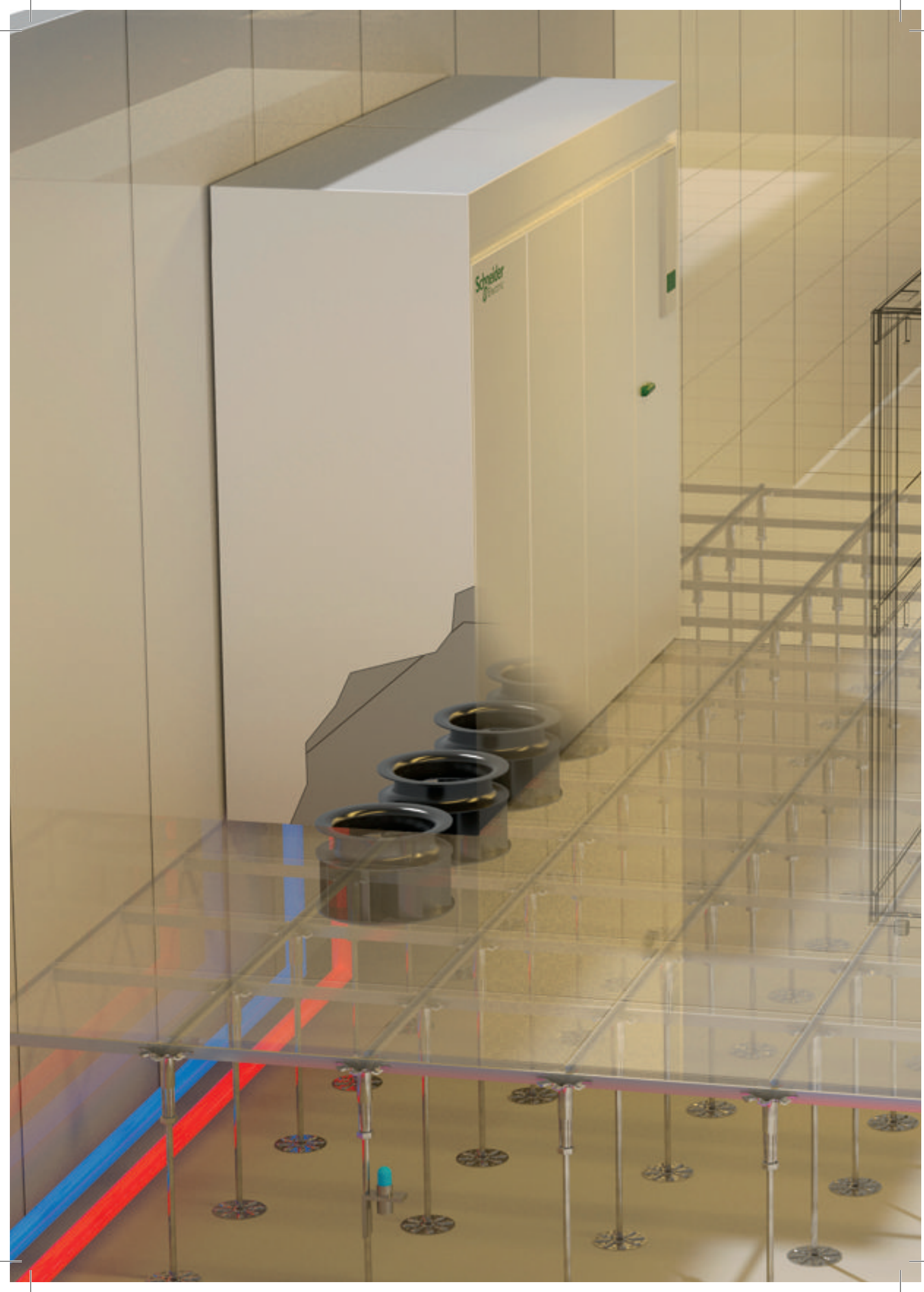


Data center



Industry







# Uniflair

Perimeter cooling for any data center environment,  
with a low cost of ownership.

Uniflair AM and Uniflair LE are leading-edge precision cooling solutions specifically designed to maintain temperature and humidity within extremely tight tolerances.

Perfect for racked and nonracked IT loads, these products meet the diverse requirements of any data center environment. These intelligent units monitor the status of components and environmental parameters to ensure correct functionality during all modes of operation. When combined with hot-or-cold-aisle containment solutions, Uniflair products can further improve efficiency and achieve higher densities.

# Facing Data Center challenges

Keeping up with growing heat densities while reducing operating costs is today's challenge. Schneider Electric room air conditioners rise to this challenge because energy efficiency, availability, and flexibility are the priorities.

## Efficiency and sustainability

Cooling accounts for up to 40% of the data center total power. This means that high energy saving is a key factor in IT cooling and in precision air conditioning.

Schneider Electric room air conditioners are designed with the awareness that low energy consumption is the result of an exhaustive analysis — from the choice of components to the constant refinement of design solutions.

Uniflair rooms air conditioners offer include

- Free-cooling solutions (direct and indirect) to reduce energy consumption leveraging on low outside air temperature.
- Variable Speed Drive technologies to save energy at partial loads thanks to the continuous adjustment to load requirements.
- Design for high temperature operation to benefit from recent increases in the ASHRAE recommended data center operation temperature ranges
- Optimum design on heat exchangers to reach SHR (sensible heat ratio) close to 1 and so to provide more useful (sensible) cooling capacity in the same footprint.
- Optimized management system to have all Schneider Electric cooling resources connected for energy maximization based on real, instantaneous load conditions.

## Modularity and flexibility

A simple and flexible infrastructure creates significant advantage in terms of management costs.

Uniflair Room air conditioners achieve this by providing

- A cooling systems that can be implemented over time and that adapts automatically to the new load conditions of the room.
- Simple maintenance. The ease of maintenance of Uniflair units is a fundamental factor in reducing operating costs and avoiding downtime.
- Compact dimensions and simple handling/ installation. The high cost of space in high-tech environments, requires precision air conditioning to have the smallest possible footprint and a full frontal component access to enable units to be installed next to each other or next to other equipment.

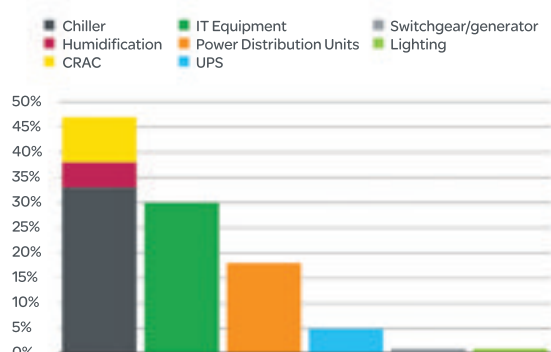
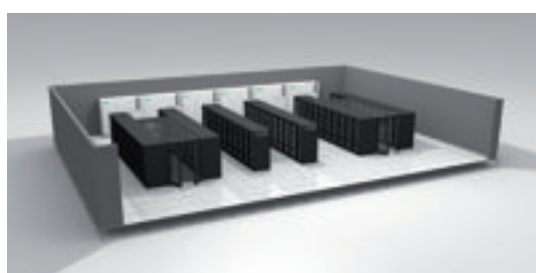
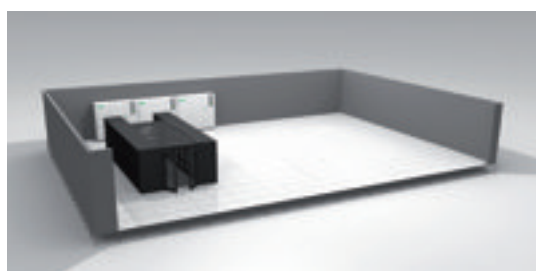
# 30%\*

of annual energy consumption is reduced thanks to innovative components like EC fans, VSD and tandem compressors, EEV valves, R-410A refrigerant, and AFPS systems.

\*Average value in a medium data center in Europe.

# CapEx

CapEx optimization can be achieved by using a cooling infrastructure that is simply implemented and adapted to changing site requirements.



Cooling accounts for up to 40% of the data center total power.

A wide range of configurations has been developed to give maximum design freedom. Versatility, for Uniflair units, means

- Different fan configurations – fans in the box or underfloor - to cover a wide range of requirements
- Versions available with one or two independent refrigerant circuits
- Minimal footprint with frontal access for all maintenance and minimal service clearance
- A control software that enables the units operation to be adapted to every type of installation and to communicate with a wide range of BMS systems

## Reliability

A fundamental requirement for each data center is to guarantee continuous operation.

Reliability is achieved thanks to the design and implementation of cooling systems that are intrinsically reliable and incorporate an appropriate level of redundancy.

System reliability is based upon several basic considerations, such as a dual source of cooling and electrical power.

Uniflair units ensure reliability also through:

- Monitoring of all components
- Precise and clear display of any malfunctions or abnormal operating conditions
- Management of emergency conditions with ability to maintain basic cooling requirements

## Infrastructure management

Data centers are complex environments; providing complete systems composed of integrated elements guarantees

- full compatibility
- a single source of responsibility
- strategic integration of a regulated system

This is a situation where all of the operating parameters can be optimized (both energy and operational) through integrated logics (internal units, distribution systems, and external units).

The cooling system must then be able to communicate with the various building management systems. Uniflair rooms air conditioners

- adapt to a wide range of supervision and network languages and protocols
- can easily interface with a wide range of BMS systems

# 99.999%

is the reliability of Tier III and Tier IV data centers according to Uptime Institute certification standards. - Uniflair units are Tier III and Tier IV ready design.

## DCIM Solutions

To learn more about Schneider Data Center Infrastructure management Solutions visit [www.apc.com/software](http://www.apc.com/software)

A photograph of a Schneider Electric Factory Test Lab. The building is white with large glass windows. A man in a green shirt and dark shorts is walking in the foreground. Inside the lab, another person is visible working at a computer. The floor has blue and green markings.

**Schneider**  
Electric

**FACTORY TEST LAB**

Technologies built for  
today's challenges

# Total Control



## Microprocessor control and display interface

Uniflair AM-LE units are equipped with sophisticated controls and management software conceived, developed, implemented, and tested by Schneider Electric.

Every component of the unit is monitored in real time, its performance optimized and kept within design parameters.

New CW and DX air conditioning units are equipped with the latest generation of graphic 7-inch. IT Touch screen display interface.



## Ultracapacitor

The Ultracapacitor module is an optional electronic device integrated in the units that provides temporary supply to the control in case of a lack of power. This function minimizes the restart time of the units, avoiding the reboot time of the microprocessor.

In case of power failure, capacitors release the stored energy until it is not exhausted, the minimum time ensured with the Ultracapacitor fully charged is two minutes. When power is reset, the capacitors start re-charging.

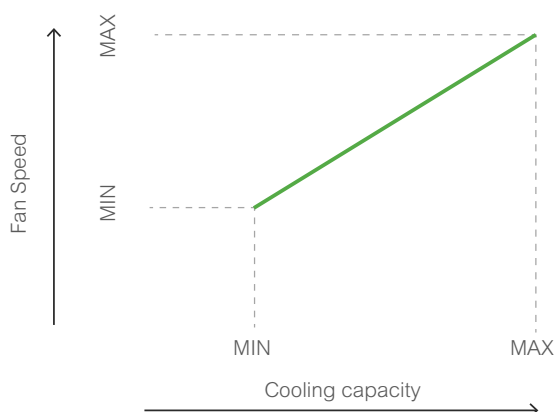
## Ultra Fan Speed Management

Uniflair LE DX units can utilize different fan speed management logics to minimize energy consumption. When combined with an Active Flow Controller (AFC), the unit will automatically set the airflow according to the pressure setpoint required under the raised floor.

Alternatively, the unit can adjust the airflow based on a combination of the heat load in the room (related to the speed of inverter driven compressor) and the airflow regulation from minimum to maximum.

## Double power supply

New CW and DX units can be equipped with double power supply with automatic commutation (upon request to provide redundancy and to ensure a continuous service. Since the power supply is equipped with an electromechanical changeover, it can be connected to two separate electrical lines: a main line and a secondary line connected to a generator or emergency line.

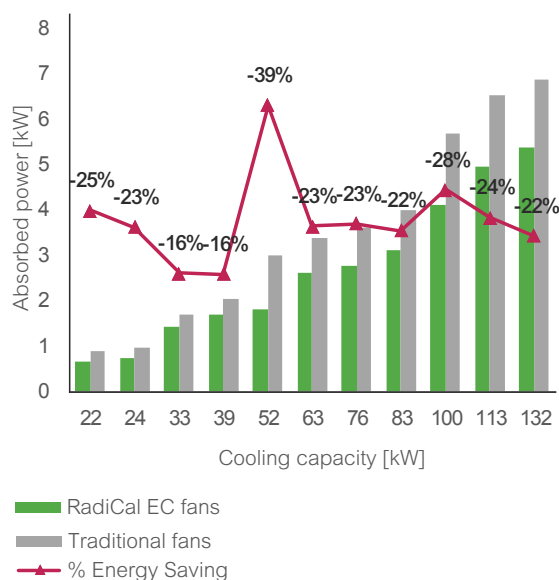


# Fans and airflow control



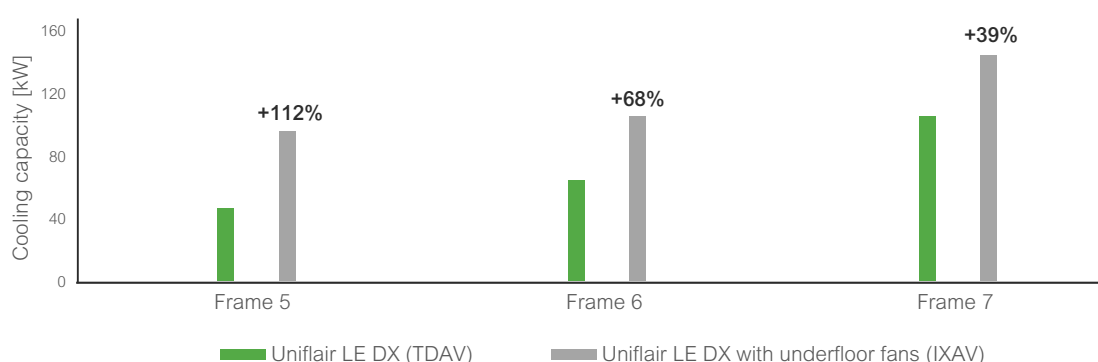
## RadiCal EC fans

- Every component of Uniflair AM and LE ranges has been chosen in accordance with the design criteria of energy saving for maximum efficiency. Just one example is the selection of fans with electronically commutated (EC) direct current motor and blades made of high tech compound material. This new type of fan-motor combination offers a number of advantages over traditional types:
- Lower power consumption on the fan side
- High part-load efficiency
- Lower noise level
- Fan speed adjustment via the microprocessor control while the unit is running
- Ability to regulate airflow depending on the actual thermal load



## Under Floor fans configuration

- Air conditioning units with fans located underneath the floor allow for more coil area in the unit and less internal air-side pressure drop. The fan module beneath the unit can be configured in many different airflow patterns as well as be placed beneath or above the raised floor for total flexibility.
- More heat exchanger coil and less pressure drop equals less power consumption and more capacity inside a compact footprint.



Data refer to nominal conditions: 45°C condensation, return air 24°C

### Cooling Categories:



Chilled Water

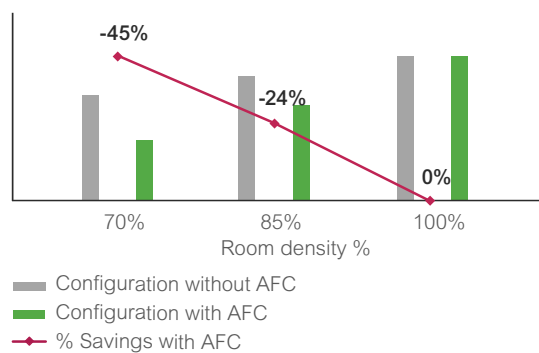
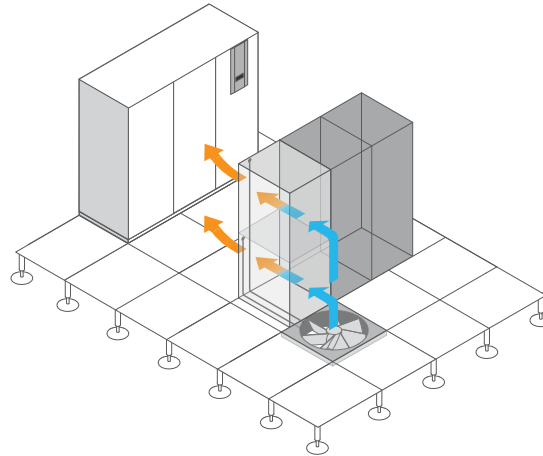


Direct Expansion

## Active Flow Controller (AFC)

Maintaining correct pressurization of the floor space is a key factor to ensure that the cooling system operates with maximum efficiency and that cool air is available where needed. This process must be guaranteed for the entire lifetime of a server room that may be upgraded and changed over time.

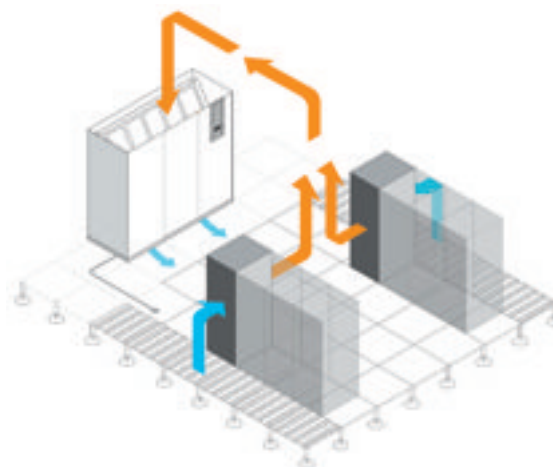
The Active Flow Controller (AFC), developed and tested by Schneider Electric, enables structural flexibility through automatic adjustment of the airflow according to the servers that have been installed. AFC automatically adjusts the airflow of the perimeter units that are fitted with EC fans during standard and emergency maintenance, maintaining a constant pressure under the raised floor and avoiding the creation of hot spots.



## Active Floor

Active Floor is a flexible and modular system for cooling data centres with medium- and high-density loads. Integrated within a modular access floor in front of the intake section of the rack, the Active Floor fits exactly into a modular access floor panel measuring 600 mm x 600 mm. The cold air produced by the Close Control perimeter units is directly channeled to the source of the thermal load thanks to the advanced adjustment of the direction of the airflow.

The Active Floor creates a high-density bubble of air, which is maintained at a constant temperature along the whole intake section of the rack, guaranteeing operation at the nominal design conditions. The airflow varies according to the actual thermal load and is detected by two sensors placed on the discharge section of the servers.



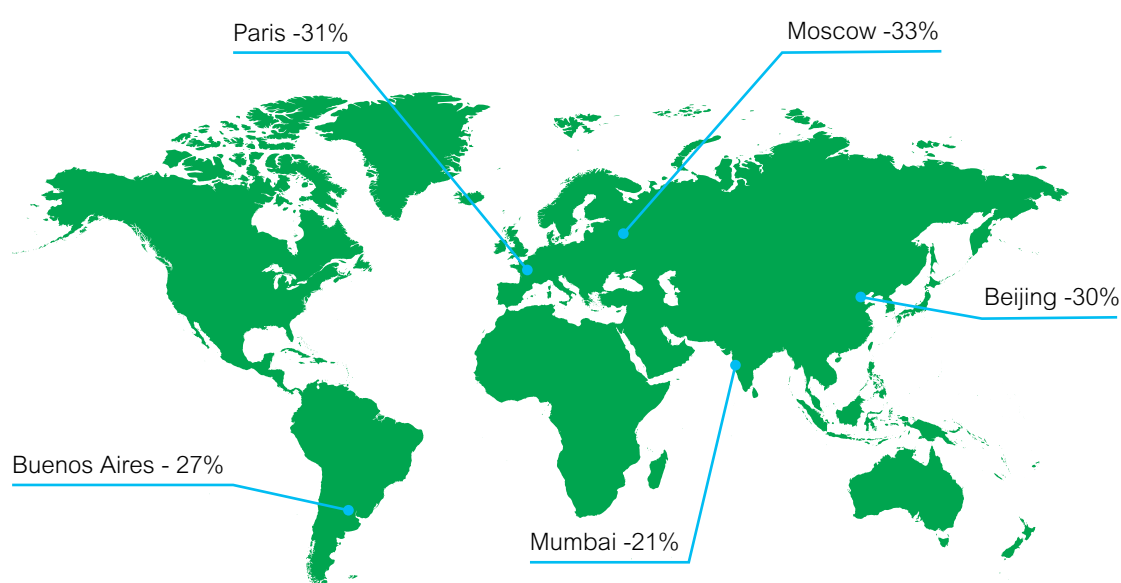
# Compressor technologies

## Variable speed brushless compressors

Uniflair LE units, series I\*\*V, are equipped with latest generation variable-speed drive scroll compressors.

These units have been developed in order to improve further energy efficiency values of brushless compressors and guarantee high efficiency level at partial load conditions, compared to units with fixed-speed or traditional variable capacity solutions.

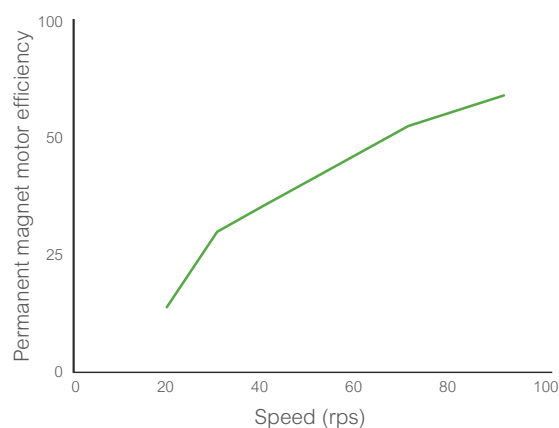
In order to minimize the operative expense, air-cooled units are naturally matched with condensers equipped with EC fans.



(\*) Data calculated comparing IDAV2922 and TDAV3342 for 100 kW net sensible 37° return air

The new generation of inverter scroll compressors are equipped with a brushless Interior Permanent Magnet (IPM) and dedicated variable speed drive designed to provide maximum efficiency across the full operating range.

High motor efficiency means less heat transferred from the motor to the refrigerant, providing better compressor efficiency.



### Fixed speed compressors

The optimum combination between Schneider Electric technology and new generation of fixed speed scroll compressors results in the following advantage for LDAH units:

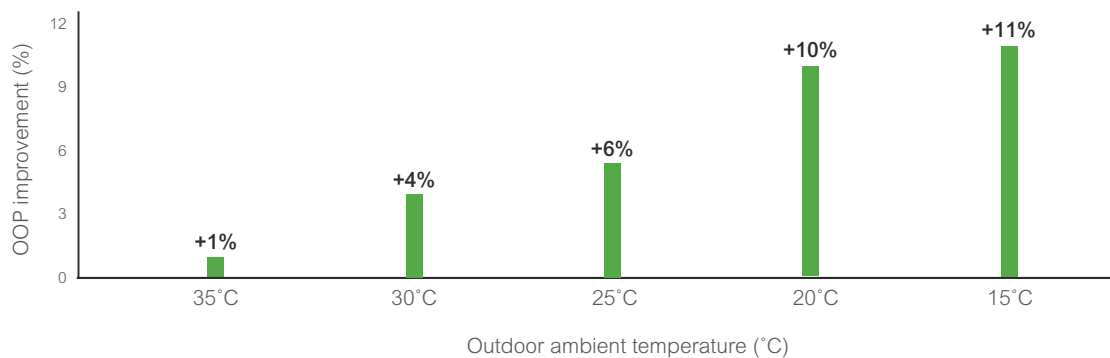
- Extended operating map that permits higher efficiency at high return air temperatures
- No over compression losses
- Energy efficiency and seasonal efficiency improvement
- Low starting current
- Low stress on mechanical parts
- Improved robustness of the complete unit
- Service costs reduction

### Intermediate Discharge Valves

The new generation of fixed speed scroll compressors is equipped with Intermediate Discharge Valves (IDVs) to mechanically reduce excessive compression of refrigerant under part-load conditions while maintaining the same cooling capacity.

The IDVs adapt the effort of the motor to the pressure conditions in the system opening when condensing pressure and pressure ratio (part-load) fall below the built-in optimization point of the scroll.

The compressors equipped with IDVs provide better COP compared to compressors without these valves and the size of this improvement depends on the outdoor air temperature.



### Non-return valve

The non-return valve is integrated in the compressors of LDAH3822 while on the other LDAH units it's installed in the refrigerant circuit. The scope of the non-return valve is to avoid the refrigerant migration from high-pressure to low-pressure side after compressor is switched off.

# Tandem operation

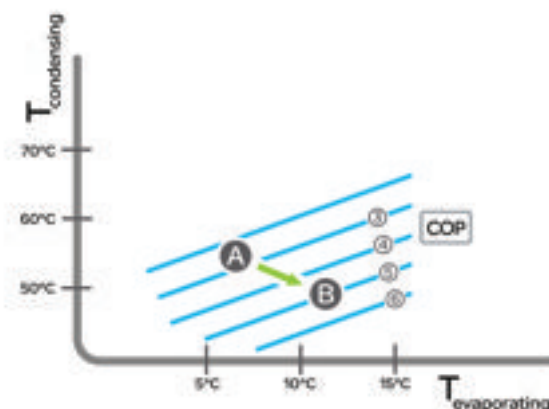


## Main features

In many applications the room load can vary enormously during the course of a single day or from season to season. This will cause wide variations in the amount of cooling required at any given moment. In these circumstances it is very important to use precision air conditioning units that are highly energy efficient at part load.

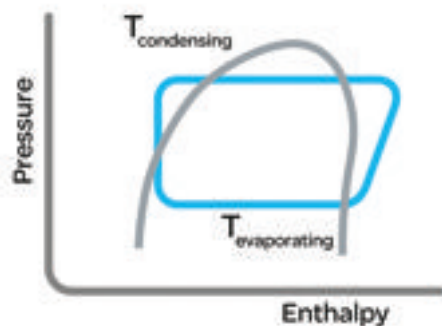
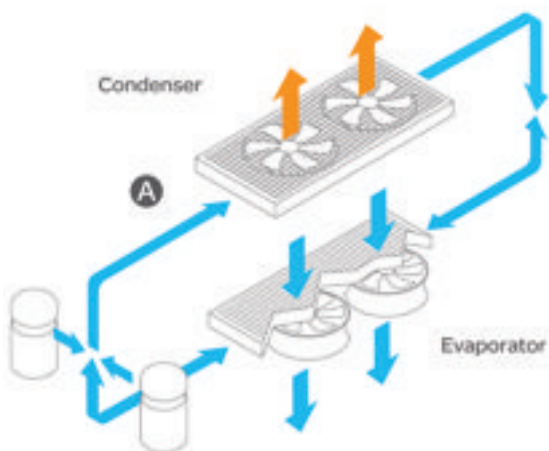
Uniflair LE models (with suffix \*\*21, \*\*42) are equipped with two compressors operating in parallel on the same circuit in order to offer two stages of cooling on a single circuit of refrigeration.

As the evaporator coil surface area (designed for the capacity of two compressors) is fixed, one single compressor in operation (Fig. B) benefits from the availability of a "double sized" evaporator coil. This maximization of the cooling effect leads to increases in part load efficiencies and a rise in the part load coefficient of performance (COP).

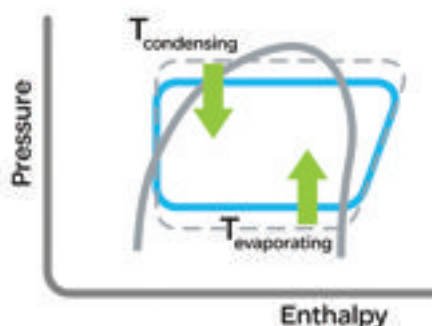
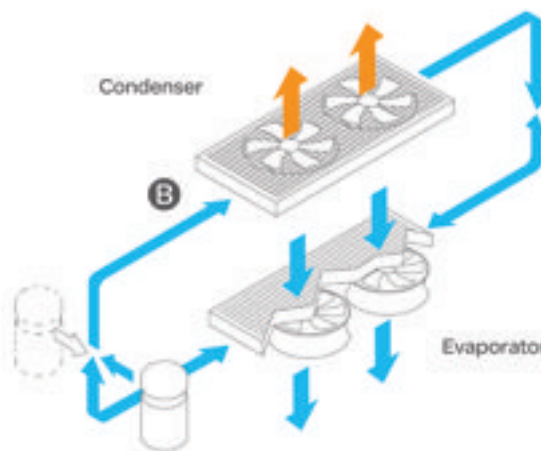


$$\frac{(W_{100\%} \times \text{COP}_{100\%}) + (W_{75\%} \times \text{COP}_{75\%}) + (W_{50\%} \times \text{COP}_{50\%}) + (W_{25\%} \times \text{COP}_{25\%})}{100}$$

100



A. 100% full load operation



B. Partial load operation

# Refrigerant circuit



## Refrigerant R-410A

R-410A is similar to a mono-component refrigerant (which is near azeotropic), as it is characterized by the absence of glide during the change of state.

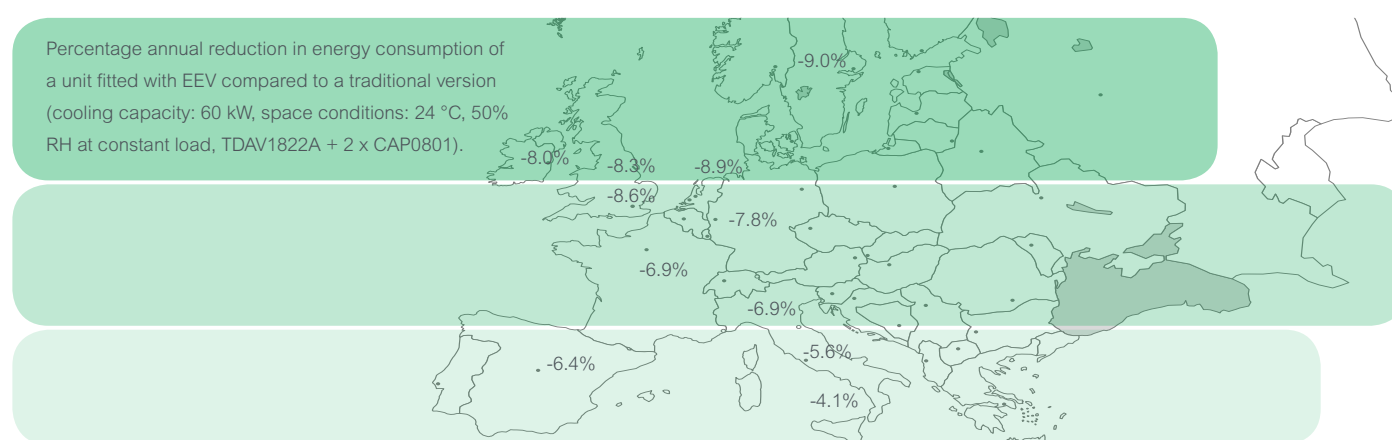
Thanks to a greater heat exchange capacity and a notable decrease in pressure drops, it is possible to maximize the size of the exchangers, while increasing efficiency.

- Summarizing the main advantages of R410A compared to R407C are:
- R410A has a lower Global Warming Potential index<sup>1</sup>.
- Units with R410A provide better energy efficiency.
- R410A is not affected by "temperature glide", featuring better performances in terms of cooling capacity and service lifetime.

## Electronic expansion valves

Electronic expansion valves (EEVs) are integrated with the microprocessor range in all Uniflair models to provide highly efficient electronic control of the flow of refrigerant.

The EEV provides accurate control of the refrigerant superheat to ensure an increase in the COP at low external temperatures; it enables the unit to operate at much lower condensing pressures than would be possible with a traditional mechanical valve. The dehumidification function is also controlled through the operation of the EEV.



1. GWP (Global Warming Potential) is an index based on CO2 equivalent tons to measure the impact of a greenhouse gas on the atmosphere

# Free-cooling choices



## Direct free-cooling

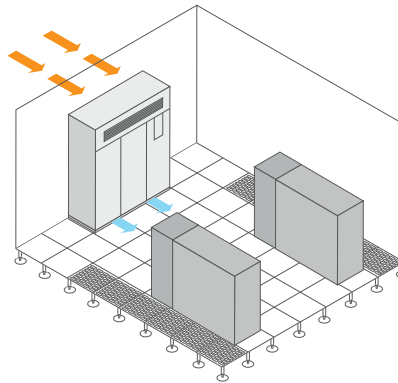
The direct free-cooling is comprised of an air conditioning unit equipped with a free-cooling plenum with dampers in order to manage the external air, the return air from the room and their blending when necessary.

Direct free-cooling mode leverages on the outdoor temperature in moderate climate areas. The external air enters directly the data center removing the thermal load provided by the IT equipment. The air must be treated before entering the data center by means filtration and humidification systems in order to guarantee the right quality level of the air.

### Direct free-cooling operating modes

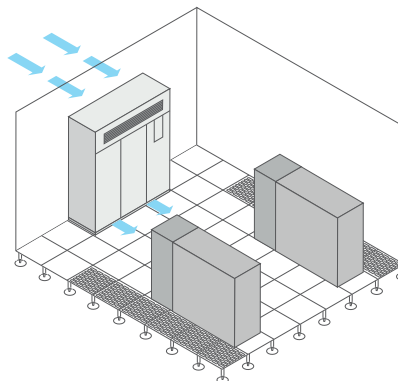
#### 1 External temperature higher than the setpoint

The damper is open and the external air enters into the unit, compressors are switched on to provide the additional cooling load necessary to reach the temperature requirement.



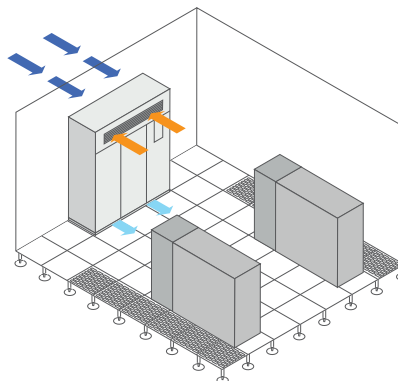
#### 2 External temperature between the setpoint and antifreeze temperature

The damper is open and compressors are switched off. The external air is cold enough to achieve the required temperature setpoint, therefore it flows through the filters and enters directly into the room.



#### 3 External temperature below the antifreeze temperature

The damper is open and compressors are switched off. Since the external air temperature is too low, it is necessary to recirculate the hot air from the Data Center. The hot air is mixed with external cold air to provide the required setpoint temperature.



## Indirect free-cooling

The indirect free-cooling operation leverage on free-cooling effect when the outdoor temperature is low enough to minimize energy consumption and it is not dependent on the quality of the outdoor air since it does not enters directly the data center.

### Energy saving units (LDEV, I\*EV)

Free-cooling is provided without the need to operate compressors and does not depend upon pulling outside air into the space (indirect free-cooling). This guarantees stable humidity and air quality in the space.

New energy saving units are design to operate in three different modes (Fig. a, b and c)

The main advantage of the new Patent Pending Solution is the use of three flow control valves to minimize the pressure drops.

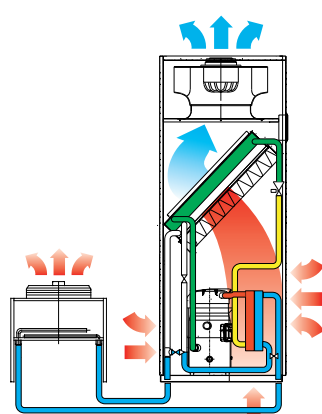


Fig. a) Mechanical mode

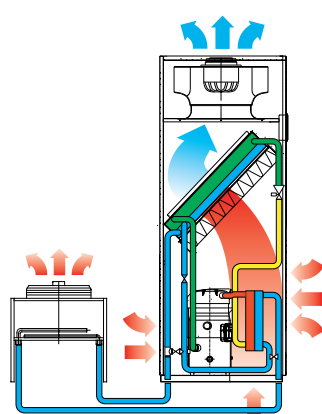


Fig. a) Hybrid mode

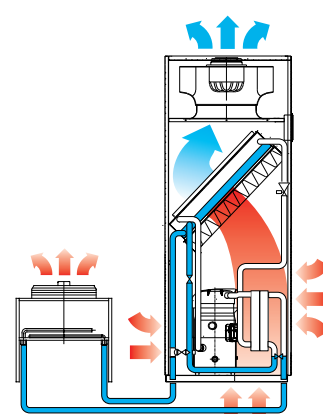
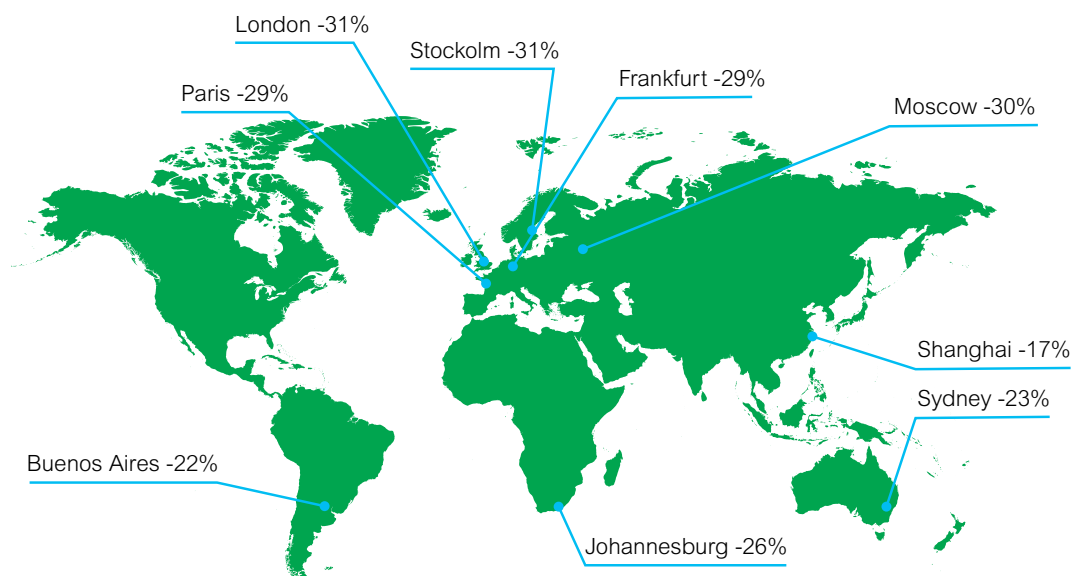


Fig. a) Free-cooling mode

### A worldwide perspective: Indirect Free-cooling

(\*) Data calculated comparing a DX air-cooled unit IXAV4022 and an energy saving unit IXEV4022, pump consumption included. 100 kW net sensible cooling capacity, 35° return air, 30% rH and 30% glycol



### Chilled water units (L\*CV, HDCV) coupled with free-cooling chillers

Chilled water systems can leverage on the outdoor temperature to reduce the energy consumption during the year. In this case the free cooling effect is provided by the free-cooling coils of chillers.

# Designed for optimum temperatures



## ASHRAE Guidelines

ASHRAE guidelines permit to operate with higher operating temperatures in order to maximize system efficiency.

Air conditioning units are designed for discharge temperature and moisture control and are optimized according to the recommended water temperature range and a higher delta T.

## Discharge temperature control

The control algorithm provides proportional and integral regulation on the discharge temperature of the CRAC unit, which manages the regulation of the on-board three-way valve (chilled water units) or of the speed of the inverter-driven compressor (VSD DX units).

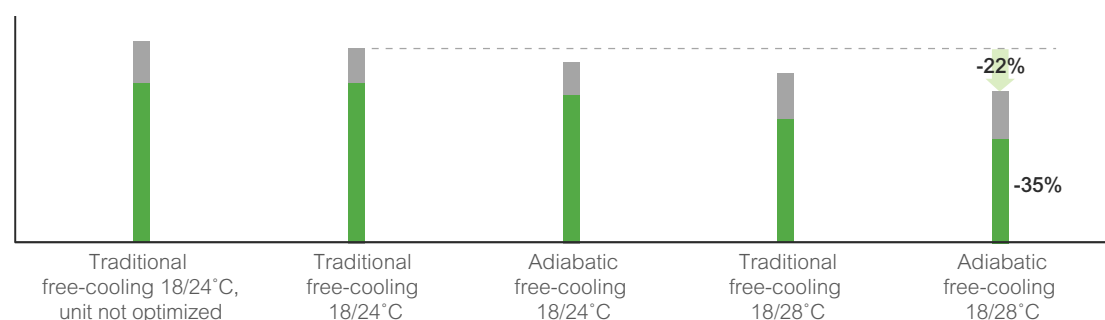
## High temperature applications

### Chilled water units

Room air conditioners offer:

- Part of the range optimized for high water temperatures and discharge temperature control.
- Part of the range optimized for traditional water temperatures.

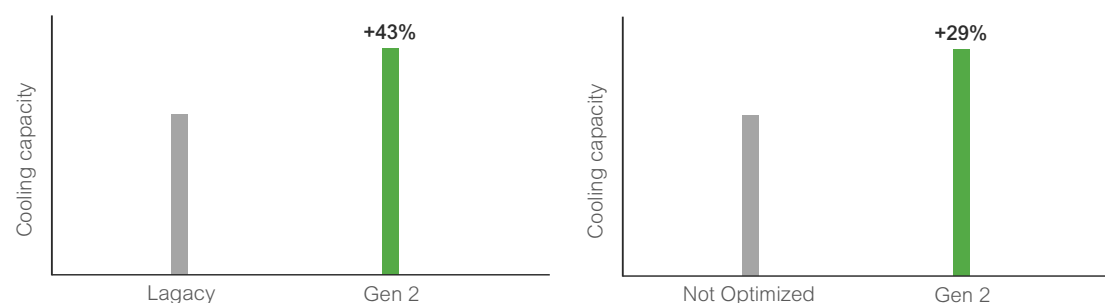
The optimized design for high Delta T enables to have less consumption on yearly base compared to a unit not optimized.



### Direct expansion units

Latest DX generation optimized for high air temperature operation allows:

- +43% cooling capacity in the box with the same power consumption compared to traditional working conditions
- +29% cooling capacity compared to traditional design at the same conditions



# Optimized management

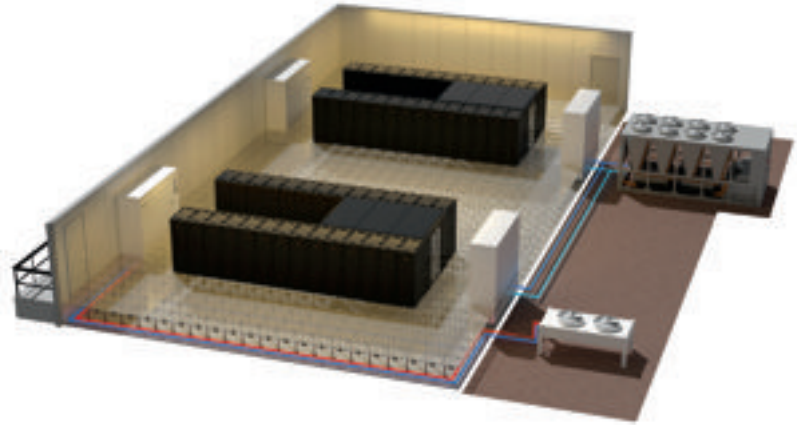


## Optimized management

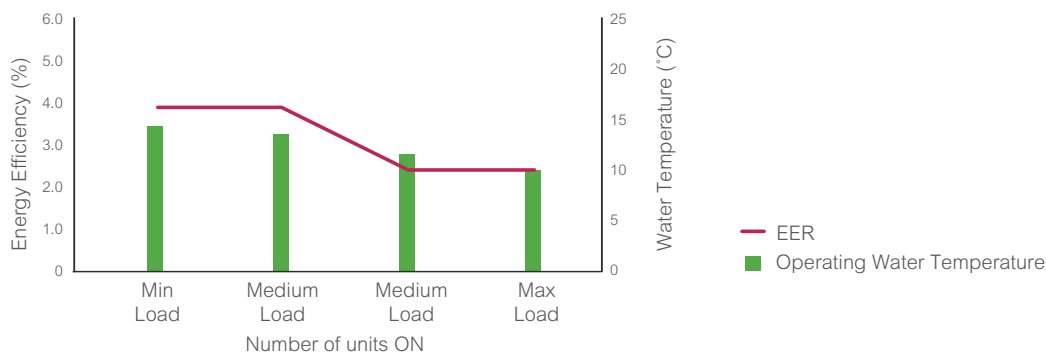
Management of the whole system allows energy consumption to be optimized and integrated control strategies to be implemented, which would otherwise not be possible.

All the Schneider Electric cooling resources can be linked together in a network to maximize the operating parameters and the current required. Row and room cooling units communicate to the chiller, reducing the energy requirement by means of a "tracking logic" for the current thermal load.

The chilled water temperature varies dynamically to minimize compressor consumption and maximize the use of free-cooling, while maintaining the optimum temperature in the data center.

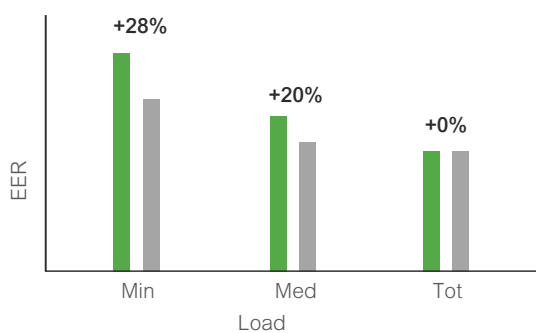


## How it works

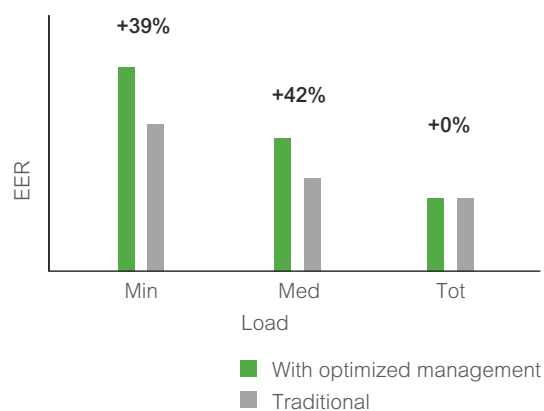


## Energy saving improvement

### Summer



### Winter



Comparison between a traditional solution and an optimized management logic:

Summer mode external temperature: 35°C

Free-cooling external temperature: 8°C

Load variation: 100 kW - 300kW

Water set point: 12°C



# External Condenser technology

## EC fans

The external condenser can be equipped with AC axial fans or electronically commutated (EC) axial fans.

The regulator works via Modbus commands that allow the controller to manage all parameters.

## Low ambient operation

Uniflair DX air-cooled units can be equipped with a kit applicable to the external condenser to allow operation down to -40°C.

The low temperature kit includes a liquid receiver and flooding valve to control the condensing temperature, both fit within the overall dimensions of the unit including leg kits.

The fan speed regulator varies the speed of the fan motor to maintain constant condensation pressure. In low temperature condensers, the regulator is installed inside the indoor cooling unit.

## Microchannel coils

The new generation of external condensers can be equipped with microchannel condensing coils to reduce the refrigerant charge and minimize air-side pressure drops.

# Room cooling offer overview

| Uniflair AM                |                                                                                                                                                                                                                                     | Uniflair LE                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                  |       |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| CHILLED WATER              | 5kW                                                                                                                                                                                                                                 | 20kW                                                                                                                                                                                                                                                                                                                                                                                                                               | 140kW                                                                                                                                                                                                                                                                                                            | 250kW |
|                            | SUCV-SUCC* (Upflow)<br>SDCV-SDCC* (Downflow)<br>                                                                                                   | LUCV (Upflow)<br>LDCV (Downflow)<br><br>HDCV (Downflow with Underfloor fans)<br>                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                  |       |
| DIRECT EXPANSION           | Uniflair AM                                                                                                                                                                                                                         | Uniflair LE                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                  |       |
|                            | 5kW                                                                                                                                                                                                                                 | 20kW                                                                                                                                                                                                                                                                                                                                                                                                                               | 60kW                                                                                                                                                                                                                                                                                                             | 160kW |
| FIXED SPEED COMPRESSORS    | <b>Air cooled</b><br>SUAV-SUAC* (Upflow)<br>SDAV-SDAC* (Downflow)<br><br><b>Water cooled</b><br>SUWV-SUWC* (Upflow)<br>SDWV-SDWC* (Downflow)<br> | <b>Air cooled</b><br>TUAR-TUAV** (Upflow)<br>TDAR-TDAV* (Downflow)<br><br><b>Water cooled</b><br>TUWR-TUWV* (Upflow)<br>TDWR-TD WV* (Downflow)<br><br><b>Energy saving</b><br>TUER-TUEV** (Upflow)<br>TDER-TDEV* (Downflow)<br><br><b>Twin cool air-cooled</b><br>TUTR-TUTV* (Upflow)<br>TDDR-TDDV* (Downflow)<br><br><b>Twin cool water-cooled</b><br>TUDR-TUDV* (Upflow)<br>TDDR-TDDV* (Downflow)                                | <b>Air cooled</b><br>LDAV (Downflow)<br><br><b>Water cooled</b><br>LDWV (Downflow)<br><br><b>Energy saving</b><br>LDEV (Downflow)<br>  |       |
|                            | 5kW                                                                                                                                                                                                                                 | 50kW                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                  |       |
| VARIABLE SPEED COMPRESSORS | <b>Air cooled</b><br>IDAV (Downflow)<br>                      | <b>Air Cooled</b><br>IUAV (Upflow)<br>IDAV (Downflow)<br>IXAV (Underfloor)<br><br><b>Water cooled</b><br>IUWV (Upflow)<br>IDWV (Downflow)<br>IXWV (Underfloor)<br><br><b>Energy Saving</b><br>IUEV (Upflow)<br>IDEV (Downflow)<br>IXEV (Underfloor)<br>  |                                                                                                                                                                                                                                                                                                                  |       |

\*V suffix = Electronically Commuted (EC) motor fans; C/ R suffix = backward-curved fans with asynchronous motor;

Direct-expansion air-cooled units with asynchronous motor fans

# Uniflair AM

SDAC – SUAC



## Range

Cooling capacity: 5 ÷ 20 kW

Refrigerant R-410A

## Available versions

- Downflow (SDAC)
- Upflow (SUAC) with bottom, front, and rear suction

## Standard features

- Advanced microprocessor control system is included with local or remote user terminal.
- The units are equipped with forward-curved fans and directly coupled asynchronous motor.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- Uniflair AM units are in conformity with the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- Total front access is available for unit maintenance.
- Electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general alarm and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet™, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare™ platform

| TECHNICAL DATA                                 |         |                                      |       |       |       |          |       |       |       |
|------------------------------------------------|---------|--------------------------------------|-------|-------|-------|----------|-------|-------|-------|
| SDAC – SUAC MODEL                              |         | 0151B                                | 0251B | 0151A | 0251A | 0331A    | 0351A | 0501A | 0601A |
| Fan type                                       |         | Forward-curved centrifugal motor fan |       |       |       |          |       |       |       |
| Power supply                                   | V/ph/Hz | 230/1/50                             |       |       |       | 400/3/50 |       |       |       |
| Fans                                           | nr.     | 1                                    | 1     | 1     | 1     | 2        | 2     | 2     | 2     |
| Airflow                                        | m³/h    | 1600                                 | 1750  | 1600  | 1750  | 3000     | 3300  | 4500  | 4500  |
| N° of compressors                              |         | 1                                    | 1     | 1     | 1     | 1        | 1     | 1     | 1     |
| Refrigerating circuits                         |         | 1                                    | 1     | 1     | 1     | 1        | 1     | 1     | 1     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 6,6                                  | 8,0   | 6,4   | 7,9   | 10,0     | 13,3  | 16,9  | 18,8  |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 5,3                                  | 6,1   | 5,2   | 6,0   | 9,1      | 10,6  | 14,4  | 15,4  |
| DIMENSIONS                                     |         |                                      |       |       |       |          |       |       |       |
| Height                                         | mm      | 1740                                 | 1740  | 1740  | 1740  | 1740     | 1740  | 1740  | 1740  |
| Length                                         | mm      | 550                                  | 550   | 550   | 550   | 850      | 850   | 1200  | 1200  |
| Depth                                          | mm      | 450                                  | 450   | 450   | 450   | 450      | 450   | 450   | 450   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, 45 °C condensing temperature, and ESP = 20 Pa.

## Construction options

- Immersed electrode humidifier (D/U versions)
- Low surface temperature electrical heaters with extended fans, complete with safety thermostat and manual resetting (T/H versions)
- Hot gas and hot water reheating
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the precision of the cooling and the energy efficiency of the cooling cycle

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

Direct-expansion air-cooled units with EC motor fans

# Uniflair AM

SDAV – SUAV



## Range

Cooling capacity: 5 ÷ 20 kW

Refrigerant R-410A

EC fans

## Available versions

- Downflow (SDAV)
- Upflow (SUAV) with bottom, front, and rear suction

## Standard features

- Advanced microprocessor control system is included with local or remote user terminal.
- The units are equipped with EC fans for efficiency maximization.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- Uniflair AM units are in conformity with the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- Total front access is available for unit maintenance.
- Electrical panel is situated in a compartment separate from the airflow and in compliance with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general alarm and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

| TECHNICAL DATA                                 |                   |                                          |       |       |       |          |       |       |       |
|------------------------------------------------|-------------------|------------------------------------------|-------|-------|-------|----------|-------|-------|-------|
| SDAV – SUAV MODEL                              |                   | 0151B                                    | 0251B | 0151A | 0251A | 0331A    | 0351A | 0501A | 0601A |
| Fan type                                       |                   | EC backward-curved centrifugal motor fan |       |       |       |          |       |       |       |
| Power supply                                   | V/ph/Hz           | 230/1/50                                 |       |       |       | 400/3/50 |       |       |       |
| Fans                                           | nr.               | 1                                        | 1     | 1     | 1     | 2        | 2     | 2     | 2     |
| Airflow                                        | m <sup>3</sup> /h | 1600                                     | 1750  | 1600  | 1750  | 3000     | 3300  | 4500  | 4500  |
| N° of compressors                              |                   | 1                                        | 1     | 1     | 1     | 1        | 1     | 1     | 1     |
| Refrigerating circuits                         |                   | 1                                        | 1     | 1     | 1     | 1        | 1     | 1     | 1     |
| Gross total cooling capacity <sup>1,2</sup>    | kW                | 6,4                                      | 8,0   | 6,4   | 7,9   | 10,0     | 13,3  | 16,9  | 18,8  |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                | 5,2                                      | 6,1   | 5,2   | 6,0   | 9,1      | 10,6  | 14,4  | 15,4  |
| DIMENSIONS                                     |                   |                                          |       |       |       |          |       |       |       |
| Height                                         | mm                | 1740                                     | 1740  | 1740  | 1740  | 1740     | 1740  | 1740  | 1740  |
| Length                                         | mm                | 550                                      | 550   | 550   | 550   | 850      | 850   | 1200  | 1200  |
| Depth                                          | mm                | 450                                      | 450   | 450   | 450   | 450      | 450   | 450   | 450   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, 45 °C condensing temperature, and ESP = 20 Pa.

## Construction options

- Immersed electrode humidifier (D/U versions)
- Low surface temperature electrical heaters with extended fans, complete with safety thermostat and manual resetting (T/H versions)
- Hot gas and hot water reheating
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the precision of the cooling and the energy efficiency of the cooling cycle

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

Direct-expansion water-cooled units with asynchronous motor fans

# Uniflair AM

SDWC – SUWC



## Range

Cooling capacity: 5 ÷ 20 kW

Refrigerant R-410A

## Available versions

- Downflow (SDWC)
- Upflow (SUWC) with bottom, front, and rear suction

## Standard features

- Advanced microprocessor control system is included with local or remote user terminal.
- The units are equipped with forward-curved fans and directly coupled asynchronous motor.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- Uniflair AM units are in conformity with the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- Total front access is available for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

| TECHNICAL DATA                                 |         |                                      |       |       |       |          |       |       |       |
|------------------------------------------------|---------|--------------------------------------|-------|-------|-------|----------|-------|-------|-------|
| SDWC – SUWC MODEL                              |         | 0151B                                | 0251B | 0151A | 0251A | 0331A    | 0351A | 0501A | 0601A |
| Fan type                                       |         | Forward-curved centrifugal motor fan |       |       |       |          |       |       |       |
| Power supply                                   | V/ph/Hz | 230/1/50                             |       |       |       | 400/3/50 |       |       |       |
| Fans                                           | nr.     | 1                                    | 1     | 1     | 1     | 2        | 2     | 2     | 2     |
| Airflow                                        | m³/h    | 1600                                 | 1750  | 1600  | 1750  | 3000     | 3300  | 4500  | 4500  |
| N° of compressors                              |         | 1                                    | 1     | 1     | 1     | 1        | 1     | 1     | 1     |
| Refrigerating circuits                         |         | 1                                    | 1     | 1     | 1     | 1        | 1     | 1     | 1     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 6,9                                  | 8,3   | 6,9   | 8,3   | 9,8      | 13,6  | 17,7  | 19,4  |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 5,4                                  | 6,2   | 5,4   | 6,2   | 8,7      | 10,6  | 14,7  | 15,6  |
| DIMENSIONS                                     |         |                                      |       |       |       |          |       |       |       |
| Height                                         | mm      | 1740                                 | 1740  | 1740  | 1740  | 1740     | 1740  | 1740  | 1740  |
| Length                                         | mm      | 550                                  | 550   | 550   | 550   | 850      | 850   | 1200  | 1200  |
| Depth                                          | mm      | 450                                  | 450   | 450   | 450   | 450      | 450   | 450   | 450   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperatures 30 – 35 °C, and ESP = 20 Pa.

## Construction options

- Immersed electrode humidifier (D/U versions)
- Low surface temperature electrical heaters with extended fans, complete with safety thermostat and manual resetting (T/H versions)
- Hot gas and hot water reheating
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the precision of the cooling and the energy efficiency of the cooling cycle

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

Direct-expansion water-cooled units with EC motor fans

# Uniflair AM

SDWV – SUWV



## Range

Cooling capacity: 5 ÷ 20 kW

Refrigerant R-410A

EC fans

## Available versions

- Downflow (SDWV)
- Upflow (SUWV) with bottom, front, and rear suction

## Standard features

- Advanced microprocessor control system is included with local or remote user terminal.
- The units are equipped with EC fans for efficiency maximization.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- Uniflair AM units are in conformity with the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- Total front access is available for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

| TECHNICAL DATA                                 |         |                                          |       |       |       |          |       |       |       |
|------------------------------------------------|---------|------------------------------------------|-------|-------|-------|----------|-------|-------|-------|
| SDWV – SUWV MODEL                              |         | 0151B                                    | 0251B | 0151A | 0251A | 0331A    | 0351A | 0501A | 0601A |
| Fan type                                       |         | EC backward-curved centrifugal motor fan |       |       |       |          |       |       |       |
| Power supply                                   | V/ph/Hz | 230/1/50                                 |       |       |       | 400/3/50 |       |       |       |
| Fans                                           | nr.     | 1                                        | 1     | 1     | 1     | 2        | 2     | 2     | 2     |
| Airflow                                        | m³/h    | 1600                                     | 1750  | 1600  | 1750  | 3000     | 3300  | 4500  | 4500  |
| N° of compressors                              |         | 1                                        | 1     | 1     | 1     | 1        | 1     | 1     | 1     |
| Refrigerating circuits                         |         | 1                                        | 1     | 1     | 1     | 1        | 1     | 1     | 1     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 6,9                                      | 8,4   | 6,9   | 8,3   | 9,8      | 13,6  | 17,7  | 19,4  |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 5,4                                      | 6,2   | 5,4   | 6,2   | 8,7      | 10,6  | 14,7  | 15,6  |
| DIMENSIONS                                     |         |                                          |       |       |       |          |       |       |       |
| Height                                         | mm      | 1740                                     | 1740  | 1740  | 1740  | 1740     | 1740  | 1740  | 1740  |
| Length                                         | mm      | 550                                      | 550   | 550   | 550   | 850      | 850   | 1200  | 1200  |
| Depth                                          | mm      | 450                                      | 450   | 450   | 450   | 450      | 450   | 450   | 450   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperatures 30 – 35 °C, and ESP = 20 Pa.

## Construction options

- Immersed electrode humidifier (D/U versions)
- Low surface temperature electrical heaters with extended fans, complete with safety thermostat and manual resetting (T/H versions)
- Hot gas and hot water reheating
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the precision of the cooling and the energy efficiency of the cooling cycle

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

CW units with asynchronous motor fans

# Uniflair AM

SDCC – SUCC



## Range

Cooling capacity: 5 ÷ 20 kW

## Refrigerant CW

## Available versions

- Downflow (SDCC)
- Upflow (SUCC) with bottom, front, and rear suction

## Standard features

- Advanced microprocessor control system is available with local or remote user terminal.
- The units are equipped with forward-curved fans with directly coupled asynchronous motor.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- The unit can be selected with a two-way or three-way valve and an actuator integrated with the microprocessor.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- Total front access is available for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

| TECHNICAL DATA                                 |                   |                                      |                    |                    |                    |                    |
|------------------------------------------------|-------------------|--------------------------------------|--------------------|--------------------|--------------------|--------------------|
| SDCC – SUCC MODEL                              |                   | 0200A <sup>3</sup>                   | 0250A <sup>3</sup> | 0300A <sup>3</sup> | 0400A <sup>3</sup> | 0600A <sup>3</sup> |
| Fan type                                       |                   | Forward-curved centrifugal motor fan |                    |                    |                    |                    |
| Power supply                                   | V/ph/Hz           | 400/3/50                             |                    |                    |                    |                    |
| Fans                                           | nr.               | 1                                    | 1                  | 1                  | 2                  | 2                  |
| Airflow                                        | m <sup>3</sup> /h | 1600                                 | 2300               | 2300               | 3350               | 4500               |
| Gross total cooling capacity <sup>1,2</sup>    | kW                | 7,2                                  | 10,0               | 11,3               | 14,1               | 20,6               |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                | 6,4                                  | 8,9                | 9,9                | 12,9               | 18,2               |
| DIMENSIONS                                     |                   |                                      |                    |                    |                    |                    |
| Height                                         | mm                | 1740                                 | 1740               | 1740               | 1740               | 1740               |
| Length                                         | mm                | 550                                  | 850                | 850                | 850                | 1200               |
| Depth                                          | mm                | 450                                  | 450                | 450                | 450                | 450                |
| SDCC – SUCC MODEL                              |                   | 0200B                                | 0250B              | 0300B              | 0400B              | 0600B              |
| Fan type                                       |                   | Forward-curved centrifugal motor fan |                    |                    |                    |                    |
| Power supply                                   | V/ph/Hz           | 230/1/50                             |                    |                    |                    |                    |
| Fans                                           |                   | 1                                    | 1                  | 1                  | 2                  | 2                  |
| Airflow                                        | m <sup>3</sup> /h | 1600                                 | 2300               | 2300               | 3350               | 4500               |
| Gross total cooling capacity <sup>1,2</sup>    | kW                | 7,2                                  | 10,0               | 11,3               | 14,1               | 20,6               |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                | 6,4                                  | 8,9                | 9,9                | 12,9               | 18,2               |
| DIMENSIONS                                     |                   |                                      |                    |                    |                    |                    |
| Height                                         | mm                | 1740                                 | 1740               | 1740               | 1740               | 1740               |
| Length                                         | mm                | 550                                  | 850                | 850                | 850                | 1200               |
| Depth                                          | mm                | 450                                  | 450                | 450                | 450                | 450                |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperature 7/12 °C, glycol 0%, and ESP = 20 Pa.

<sup>3</sup> Equipped with standard electrical heaters.

## Construction options

- Double power supply with automatic, integrated management on the active line
- 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)
- Discharge temperature sensor integrated with the microprocessor to grant discharge temperature control; in combination with D and U version, moisture control can be selected

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- Motorized damper
- Suction from the top or front discharge plenums
- Adjustable floor stands

CW units with EC motor fans

# Uniflair AM

SDCV – SUCV



## Range

Cooling capacity: 5 ÷ 20 kW

Refrigerant CW

EC fans

## Available versions

- Downflow (SDCV)
- Upflow (SUCV) with bottom, front, and rear suction

## Standard features

- Advanced microprocessor control system is available with local or remote user terminal.
- The units are equipped with EC fans for efficiency maximization.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- The unit can be selected with a two-way or three-way valve and an actuator integrated with the microprocessor.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- Total front access is included for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

| TECHNICAL DATA                                 |                   |                                          |                    |                    |                    |                    |
|------------------------------------------------|-------------------|------------------------------------------|--------------------|--------------------|--------------------|--------------------|
| SDCV – SUCV MODEL                              |                   | 0200A <sup>3</sup>                       | 0250A <sup>3</sup> | 0300A <sup>3</sup> | 0400A <sup>3</sup> | 0600A <sup>3</sup> |
| Fan type                                       |                   | EC backward-curved centrifugal motor fan |                    |                    |                    |                    |
| Power supply                                   | V/ph/Hz           | 400/3/50                                 |                    |                    |                    |                    |
| Fans                                           | nr.               | 1                                        | 1                  | 1                  | 2                  | 2                  |
| Airflow                                        | m <sup>3</sup> /h | 1600                                     | 2100               | 2100               | 3350               | 5000               |
| Gross total cooling capacity <sup>1,2</sup>    | kW                | 7,2                                      | 9,4                | 10,6               | 14,1               | 22,1               |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                | 6,4                                      | 8,3                | 9,2                | 12,9               | 19,7               |
| DIMENSIONS                                     |                   |                                          |                    |                    |                    |                    |
| Height                                         | mm                | 1740                                     | 1740               | 1740               | 1740               | 1740               |
| Length                                         | mm                | 550                                      | 850                | 850                | 850                | 1200               |
| Depth                                          | mm                | 450                                      | 450                | 450                | 450                | 450                |
| SDCV – SUCV MODEL                              |                   | 0200B                                    | 0250B              | 0300B              | 0400B              | 0600B              |
| Fan type                                       |                   | EC backward-curved centrifugal motor fan |                    |                    |                    |                    |
| Power supply                                   | V/ph/Hz           | 230/1/50                                 |                    |                    |                    |                    |
| Fans                                           |                   | 1                                        | 1                  | 1                  | 2                  | 2                  |
| Airflow                                        | m <sup>3</sup> /h | 1600                                     | 2100               | 2100               | 3350               | 5000               |
| Gross total cooling capacity <sup>1,2</sup>    | kW                | 7,2                                      | 9,4                | 10,6               | 14,1               | 22,1               |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                | 6,4                                      | 8,3                | 9,2                | 12,9               | 19,7               |
| DIMENSIONS                                     |                   |                                          |                    |                    |                    |                    |
| Height                                         | mm                | 1740                                     | 1740               | 1740               | 1740               | 1740               |
| Length                                         | mm                | 550                                      | 850                | 850                | 850                | 1200               |
| Depth                                          | mm                | 450                                      | 450                | 450                | 450                | 450                |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling datas.

<sup>2</sup> Data refer to nominal conditions: Room at 24 °C-50% RH, water temperature 7/12 °C, glycol 0%, and ESP = 20 Pa.

<sup>3</sup> Equipped with standard electrical heaters.

## Construction options

- Double power supply with automatic, integrated management on the active line
- 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)
- Discharge temperature sensor integrated with the microprocessor to allow discharge temperature control; in combination with D and U version can be selected moisture control

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Suction from the top or front discharge plenums
- Adjustable floor stands

CW units with backward-curved fans equipped with EC motor

# Uniflair LE

LDCV – LUCV



## Range

Cooling capacity: 20 ÷ 170 kW

## Refrigerant CW

## EC fans

## Available versions

- Downflow (LDCV)
- Upflow (LUCV)

## Standard features

- Advanced microprocessor control system UG50 with touch-screen human interface is included.
- The units are equipped with the latest generation Radical EC fans for efficiency maximization. Impellers are made of high-tech compound material with optimized flow control, combined with highly efficient GreenTech EC motors. These fans are designed to have easier serviceability with quick removal kit.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation. The internal panels are featured by captive screws.
- The unit can be selected with a two-way or three-way valve and an actuator integrated with the microprocessor. The actuator is available in two versions: basic and premium.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- A low airflow differential pressure alarm switch is included.
- Single coil version with one chilled water circuit.
- CW inlet temperature measurement is integrated in the microprocessor.
- Integrated discharge temperature control and room moisture control.
- Zinc-free CW circuit.
- Full frontal accessibility is available for maintenance.
- Electric panel conforms to EC standards (2006/95/EC and EMC 2004/108/EC directives).
- Phase sequence control.
- Microprocessor control system includes:
  - Adjustable fan speed meets energy-saving and load-sharing logics
  - 7-inch, touch-screen LCD display interface
  - Integration with Uniflair Chillers for optimized management logics
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Integrated RS485 serial card for direct connection to external BMS (modbus)
  - Integrated TCP/IP serial card for BMS connection
  - Clock card integrated in the unit
  - USB integrated in the display interface
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

| TECHNICAL DATA                                 |                                          |          |       |       |       |       |                    |                      |
|------------------------------------------------|------------------------------------------|----------|-------|-------|-------|-------|--------------------|----------------------|
| LDCV – LUCV MODEL                              |                                          | 0600A    | 0700A | 0800A | 1200A | 1400A | 1700A              | 1800A                |
| Fan type                                       | EC backward-curved centrifugal motor fan |          |       |       |       |       |                    |                      |
| Power supply                                   | V/ph/Hz                                  | 400/3/50 |       |       |       |       |                    |                      |
| Fans                                           | nr.                                      | 1        | 1     | 1     | 1     | 1     | 2                  | 2                    |
| Airflow                                        | m³/h                                     | 8000     | 8000  | 8000  | 11500 | 11500 | 16000              | 16000                |
| Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 28,3     | 32,2  | 44,8  | 44,8  | 62,7  | 59,2               | 86,9                 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 25,5     | 28,1  | 35,2  | 39,5  | 49,8  | 52,1               | 69,1                 |
| DIMENSIONS                                     |                                          |          |       |       |       |       |                    |                      |
| Height                                         | mm                                       | 1960     | 1960  | 1960  | 1960  | 1960  | 1960               | 1960                 |
| Length                                         | mm                                       | 1010     | 1010  | 1010  | 1310  | 1310  | 1720               | 1720                 |
| Depth                                          | mm                                       | 865      | 865   | 865   | 865   | 865   | 865                | 865                  |
| TDCV – TUCV MODEL                              |                                          | 2000A    | 2500A | 2700A | 3000A | 3400A | 4000A              | 4300A <sup>(3)</sup> |
| Fans                                           | nr.                                      | 2        | 2     | 2     | 3     | 3     | 3                  | 3                    |
| Airflow                                        | m³/h                                     | 19000    | 19000 | 19000 | 25700 | 25700 | 25700              | 29500                |
| Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 74,9     | 100,3 | 106,4 | 100,3 | 131,6 | 145,5              | 181,1                |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 64,6     | 80,6  | 83,7  | 86,4  | 106,8 | 114,3              | 138,6                |
| DIMENSIONS                                     |                                          |          |       |       |       |       |                    |                      |
| Height                                         | mm                                       | 1960     | 1960  | 1960  | 1960  | 1960  | 1960               | 2170                 |
| Length                                         | mm                                       | 2170     | 2170  | 2170  | 2582  | 2582  | 2852               | 2852                 |
| Depth                                          | mm                                       | 865      | 865   | 865   | 865   | 865   | 865                | 865                  |
| LDCV/LUCV MODEL DUAL COIL <sup>(4)</sup>       |                                          | 0600A    | 1200A | 1700A | 2000A | 3000A | 4300A <sup>3</sup> |                      |
| Fans                                           | nr.                                      | 1        | 1     | 2     | 2     | 3     | 3                  |                      |
| Airflow                                        | m³/h                                     | 8000     | 11500 | 16000 | 19000 | 25700 | 29500              |                      |
| Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 24,9     | 37,5  | 58,8  | 77,0  | 104,4 | 120,1              |                      |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 24,9     | 37,5  | 56,4  | 71,1  | 96,0  | 110,4              |                      |
| DIMENSIONS                                     |                                          |          |       |       |       |       |                    |                      |
| Height                                         | mm                                       | 1960     | 1960  | 1960  | 1960  | 1960  | 2170               |                      |
| Length                                         | mm                                       | 1010     | 1310  | 1720  | 2170  | 2582  | 2582               |                      |
| Depth                                          | mm                                       | 865      | 865   | 865   | 865   | 865   | 865                |                      |

<sup>1</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperature 7/12°C, glycol 0%, and ESP = 20Pa

<sup>2</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>3</sup> Only downflow version is available.

<sup>4</sup> Cooling capacity refer to only one running CW circuit.

## Construction options

- Single power supply with ultracapacitor
- Double power supply with automatic integrated management on the active line
- 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)
- Dual coil version equipped with two separate chilled water circuits equipped with 2 or 3 way valve
- CW outlet temperature measurement integrated in the microprocessor
- Intelligent dehumidification with cooling capacity limiting device
- Energy meter and CO<sub>2</sub> emission calculator
- Flow meter
- Pressure-independent balancing and control valve (PIBCV)

## Accessories

The units can be supplied with the following external accessories:

- Additional RS485 serial adapter to communicate with external BMS.
- Additional TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- RS232 modem card
- PCONET card
- Motorized damper
- Suction from the top or front discharge plenums
- Adjustable floor stands
- Fire and smoke sensors
- Water leak detector
- Automatic floor pressurization system (AFPS) through active floor control (AFC)

CW units with backward-curved fans equipped with EC motor; fan module can be installed under or above raised floor

# Uniflair LE

HDCV



## Range

Cooling capacity: 30 ÷ 250 kW

Refrigerant CW

EC fans

Available versions

- Downflow Single Coil
- Downflow Dual Coil

## Standard features

- Unit is made of two sections for installation of fan module under the raised floor and increase the coil surface for energy efficiency maximization.
- Advanced microprocessor control system UG50 is included.
- The units are equipped with the latest generation Radical EC fans for efficiency maximization. Impellers are made of high-tech compound material with optimized flow control, combined with highly efficient GreenTech EC motors.
- Large surface copper and aluminum cooling coil is provided for pressure drop minimization.
- EC fan module is equipped with a circular plug in connectors for quick and failure-free installation; the module is supplied with safety protection grills on the sides in case of underfloor installation.
- Adjustable fan speed meets energy-saving and load-sharing logics.
- Electric panel conforms to EC standards (2006/95/EC and EMC 2004/108/EC directives).
- High-efficiency, pleated air filters are housed in a metal frame and filter differential pressure switch.
- A low airflow differential pressure alarm switch is included.
- Full frontal accessibility is available for maintenance.
- CW inlet temperature measurement is integrated in the microprocessor.
- Integrated Discharge Temperature Control and Room Moisture Control.
- Zinc-free CW circuit.
- Immersed electrode humidifier is included.
- Electrical heaters included with aluminum finned heating elements.
- Phase sequence control.
- Microprocessor control system in addition allows:
  - Integration with Uniflair Chillers for optimized management logics
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Integrated RS485 serial card for direct connection to external BMS (modbus)
  - Second slot for additional serial card for BMS connection (optional)
  - Clock card integrated in the unit

## Accessories

The units can be supplied with the following accessories:

- Double power supply with automatic changeover and manual selection with integrated ultracapacitor
- Intelligent dehumidification with cooling capacity limiting device
- Automatic floor pressurization system
- CW outlet temperature measurement integrated in the microprocessor
- Energy meter and CO<sub>2</sub> emissions calculator integrated in the unit
- Ultracapacitor for single power supply units
- Direct free-cooling
- Integrated base frame
- PIBCV valves
- Flowmeter

| TECHNICAL DATA                    |         |                                          |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------------------------|---------|------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| HDCV MODEL                        |         | 0800A1                                   | 1300A1 | 1400A1 | 1700A1 | 1800A1 | 2500A1 | 2900A1 | 4100A1 | 4600A1 | 4800A1 | 5100A1 | 5300A1 | 5500A1 |
| Fan type                          |         | EC backward-curved centrifugal motor fan |        |        |        |        |        |        |        |        |        |        |        |        |
| Version                           |         | Single coil                              |        |        |        |        |        |        |        |        |        |        |        |        |
| Power supply                      | V/ph/Hz | 400/3/50                                 |        |        |        |        |        |        |        |        |        |        |        |        |
| Fans                              | nr      | 1                                        | 1      | 1      | 2      | 2      | 2      | 2      | 3      | 3      | 3      | 3      | 4      | 4      |
| Airflow                           | m³/h    | 10000                                    | 10000  | 13000  | 19000  | 19000  | 24000  | 24000  | 32000  | 31000  | 35000  | 35000  | 40000  | 45000  |
| Net sensible cooling <sup>1</sup> | kW      | 34,3                                     | 40,5   | 53,8   | 59,4   | 78,4   | 75,8   | 98,7   | 99     | 136    | 106    | 155.8  | 172.6  | 191    |
| DIMENSIONS                        |         |                                          |        |        |        |        |        |        |        |        |        |        |        |        |
| Height <sup>2</sup>               | mm      | 2510                                     | 2510   | 2510   | 2510   | 2510   | 2510   | 2510   | 2510   | 2510   | 2510   | 2510   | 2510   | 2510   |
| Length                            | mm      | 1010                                     | 1310   | 1310   | 1720   | 1720   | 2170   | 2170   | 2570   | 2570   | 3100   | 3100   | 3100   | 3405   |
| Depth                             | mm      | 865                                      | 865    | 865    | 865    | 865    | 865    | 865    | 865    | 865    | 865    | 865    | 865    | 865    |

| HDCV MODEL                          |         | 0800A                                    | 1400A | 1800A | 2500A | 4500A | 5000A |
|-------------------------------------|---------|------------------------------------------|-------|-------|-------|-------|-------|
| Fan type                            |         | EC backward-curved centrifugal motor fan |       |       |       |       |       |
| Version                             |         | Dual coil                                |       |       |       |       |       |
| Power supply                        | V/ph/Hz | 400/3/50                                 |       |       |       |       |       |
| Fans                                | nr      | 1                                        | 1     | 2     | 2     | 3     | 4     |
| Airflow                             | m³/h    | 7900                                     | 13000 | 17500 | 24000 | 30000 | 40000 |
| Net sensible cooling <sup>1,3</sup> | kW      | 28.3                                     | 42.1  | 56.9  | 81.1  | 96.7  | 112.5 |
| DIMENSIONS                          |         |                                          |       |       |       |       |       |
| Height <sup>2</sup>                 | mm      | 2510                                     | 2510  | 2510  | 2510  | 2510  | 2510  |
| Length                              | mm      | 1010                                     | 1310  | 1720  | 2170  | 2570  | 3100  |
| Depth                               | mm      | 865                                      | 865   | 865   | 865   | 865   | 865   |

<sup>1</sup> Data refer to nominal conditions: Room at 35 °C-30% RH water temperature 18/24 °C, fan module installed under a 900 mm raised floor, and glycol 0%.

<sup>2</sup> Includes fan module.

<sup>3</sup> Cooling performance refers to one running CW circuit.

| HDCV MODEL                                 |         | 0800A1 HT                                | 1400A1 HT | 1800A1 HT | 2900A1 HT | 4600A1 HT | 5300A1 HT | 5500A1 HT |
|--------------------------------------------|---------|------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Fan type                                   |         | EC Backward-curved centrifugal motor fan |           |           |           |           |           |           |
| Version                                    |         | High temperature                         |           |           |           |           |           |           |
| Power supply                               | V/ph/Hz | 400/3/50Hz                               |           |           |           |           |           |           |
| Fans                                       | Nr.     | 1                                        | 1         | 2         | 2         | 3         | 4         | 4         |
| Airflow                                    | m³/h    | 7400                                     | 11000     | 17000     | 25500     | 28200     | 33700     | 36400     |
| Net sensible cooling capacity <sup>4</sup> | kW      | 28.4                                     | 42.0      | 64.0      | 97.7      | 109.5     | 130.7     | 143.2     |
| DIMENSIONS                                 |         |                                          |           |           |           |           |           |           |
| Height <sup>5</sup>                        | mm      | 2510                                     | 2510      | 2510      | 2510      | 2510      | 2510      | 2510      |
| Length                                     | mm      | 1010                                     | 1310      | 1720      | 2170      | 2570      | 3100      | 3405      |
| Depth                                      | mm      | 865                                      | 865       | 865       | 865       | 865       | 865       | 865       |

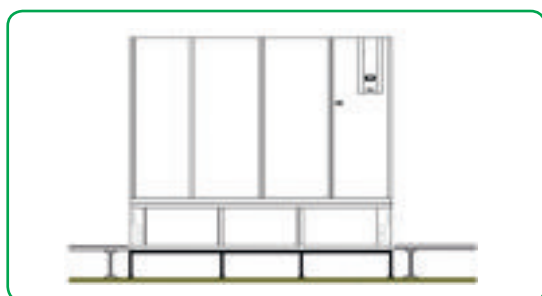
<sup>4</sup> 1 Data refer to nominal conditions: Room at 36 °C-30% RH water temperature 20/30 °C, fan module installed under a 900 mm raised floor, and glycol 20%.

<sup>5</sup> Includes fan module.

## Construction options



Unit with fan plenum installed under the raised floor.



Unit with fan plenum installed above the raised floor.

Direct-expansion air-cooled units with backward-curved fans

# Uniflair LE

TDAR – TUAR



## Range

Cooling capacity: 20 ÷ 100 kW

Refrigerant R-410A

## Available versions

- Downflow (TDAR)
- Upflow (TUAR)

## Standard features

- Advanced microprocessor control system is included with local or remote user terminal.
- The units are equipped with backward-curved fans with directly coupled asynchronous motor.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- Electronic expansion valve is controlled by the microprocessor with a dedicated software that increases the precision of the cooling and the energy efficiency of the cooling cycle.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- Total front access is included for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Regulation logic of cooling capacity and airflow integration
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card (adding this option)
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

## 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)
- Hot gas and hot water reheating

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Suction from the top or front discharge plenums
- Adjustable floor stands

| TECHNICAL DATA                                 |         |                                       |                    |                    |                    |                    |                    |                    |
|------------------------------------------------|---------|---------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| TDAR – TUAR MODEL                              |         | 0511A                                 | 0611A              | 0721A              | 0722A              | 0921A              | 0922A              | 1021A              |
| Fan type                                       |         | Backward-curved centrifugal motor fan |                    |                    |                    |                    |                    |                    |
| Power supply                                   | V/ph/Hz | 400/3/50                              |                    |                    |                    |                    |                    |                    |
| Fans                                           | nr.     | 1                                     | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  |
| Airflow                                        | m³/h    | 5833                                  | 5833               | 7933               | 7933               | 7933               | 7933               | 7933               |
| N° of compressors                              |         | 1                                     | 1                  | 2                  | 2                  | 2                  | 2                  | 2                  |
| Refrigerating circuits                         |         | 1                                     | 1                  | 1                  | 2                  | 1                  | 2                  | 1                  |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 20,4                                  | 25,0               | 25,8               | 25,6               | 34,1               | 33,9               | 37,1               |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 19,8                                  | 22,2               | 25,2               | 23,9               | 28,1               | 27,2               | 28,7               |
| DIMENSIONS                                     |         |                                       |                    |                    |                    |                    |                    |                    |
| Height                                         | mm      | 1960                                  | 1960               | 1960               | 1960               | 1960               | 1960               | 1960               |
| Length                                         | mm      | 1010                                  | 1010               | 1310               | 1310               | 1310               | 1310               | 1310               |
| Depth                                          | mm      | 750                                   | 750                | 865                | 865                | 865                | 865                | 865                |
| TDAR – TUAR MODEL                              |         | 1022A                                 | 1121A              | 1122A              | 1321A              | 1322A              | 1422A              | 1622A              |
| Fans                                           | nr.     | 1                                     | 1                  | 2                  | 2                  | 2                  | 2                  | 2                  |
| Airflow                                        | m³/h    | 7933                                  | 12267              | 12267              | 12267              | 12267              | 16406              | 16406              |
| N° of compressors                              |         | 2                                     | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  |
| Refrigerating circuits                         |         | 2                                     | 1                  | 2                  | 1                  | 2                  | 2                  | 2                  |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 36,9                                  | 37,8               | 37,9               | 48,0               | 47,7               | 51,6               | 57,5               |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 28,0                                  | 36,8               | 36,2               | 39,3               | 38,0               | 51,0               | 56,8               |
| DIMENSIONS                                     |         |                                       |                    |                    |                    |                    |                    |                    |
| Height                                         | mm      | 1960                                  | 1960               | 1960               | 1960               | 1960               | 1960               | 1960               |
| Length                                         | mm      | 1010                                  | 1720               | 1720               | 1720               | 1720               | 2170               | 2170               |
| Depth                                          | mm      | 865                                   | 865                | 865                | 865                | 865                | 865                | 865                |
| TDAR – TUAR MODEL                              |         | 1822A                                 | 2222A <sup>3</sup> | 2242A <sup>3</sup> | 2522A <sup>3</sup> | 2542A <sup>3</sup> | 2842A <sup>3</sup> | 3342A <sup>3</sup> |
| Fans                                           | nr.     | 2                                     | 3                  | 3                  | 3                  | 3                  | 3                  | 3                  |
| Airflow                                        | m³/h    | 16406                                 | 21656              | 21656              | 21656              | 22046              | 22055              | 22055              |
| N° of compressors                              |         | 2                                     | 2                  | 4                  | 2                  | 4                  | 4                  | 4                  |
| Refrigerating circuits                         |         | 2                                     | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 63,9                                  | 75,1               | 81,2               | 86,7               | 88,1               | 97,4               | 107,6              |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 57,3                                  | 75,1               | 80,3               | 83,3               | 84,5               | 90,8               | 92,9               |
| DIMENSIONS                                     |         |                                       |                    |                    |                    |                    |                    |                    |
| Height                                         | mm      | 1960                                  | 2150               | 2150               | 2150               | 2150               | 2150               | 2150               |
| Length                                         | mm      | 2170                                  | 2580               | 2580               | 2580               | 2580               | 2580               | 2580               |
| Depth                                          | mm      | 865                                   | 865                | 865                | 865                | 865                | 865                | 865                |
| TUAR MODEL                                     |         | 2222A                                 | 2242A              | 2522A              | 2542A              | 2842A              | 3342A              |                    |
| Fans                                           | nr.     | 3                                     | 3                  | 3                  | 3                  | 3                  | 3                  |                    |
| Airflow                                        | m³/h    | 22154                                 | 22154              | 23467              | 23467              | 23068              | 23068              |                    |
| N° of compressors                              |         | 2                                     | 4                  | 2                  | 4                  | 4                  | 4                  |                    |
| Refrigerating circuits                         |         | 2                                     | 2                  | 2                  | 2                  | 2                  | 2                  |                    |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 75,4                                  | 82,7               | 86,5               | 87,5               | 97,9               | 108,2              |                    |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 75,4                                  | 81,8               | 85,5               | 86,4               | 93,8               | 95,6               |                    |
| DIMENSIONS                                     |         |                                       |                    |                    |                    |                    |                    |                    |
| Height                                         | mm      | 1960                                  | 1960               | 1960               | 1960               | 1960               | 1960               |                    |
| Length                                         | mm      | 2580                                  | 2580               | 2580               | 2580               | 2580               | 2580               |                    |
| Depth                                          | mm      | 865                                   | 865                | 865                | 865                | 865                | 865                |                    |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, 45 °C condensing temperature, and ESP = 20 Pa.

<sup>3</sup> Data refers to downflow unit.

Direct-expansion air-cooled units with backward-curved fans equipped with EC motor

# Uniflair LE

TDAV – TUAV



## Range

Cooling capacity: 20 ÷ 100 kW

Refrigerant R-410A

EC fans

Available versions

- Downflow (TDAV)
- Upflow (TUAV)

## Standard features

- Advanced microprocessor control system is available with local or remote user terminal.
- The units are equipped with EC fans for efficiency maximization.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the cooling precision and the energy efficiency of the cooling cycle.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- Uniflair LE units meet the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- The Uniflair LE range offers the possibility to select units equipped with two compressors (tandem) for each circuit, granting better efficiency and regulation capacity at partial loads (models with the \*\*21 or \*\*42 suffix).
- Total front access is available for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Integrated management of the EEV and refrigerating circuit parameters
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

## 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)
- Hot gas and hot water reheating

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

| TECHNICAL DATA                                 |         |                                          |                    |                    |                    |                    |                    |                    |
|------------------------------------------------|---------|------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| TDAV – TUAU MODEL                              |         | 0511A                                    | 0611A              | 0721A              | 0722A              | 0921A              | 0922A              | 1021A              |
| Fan type                                       |         | EC backward-curved centrifugal motor fan |                    |                    |                    |                    |                    |                    |
| Power supply                                   | V/ph/Hz | 400/3/50                                 |                    |                    |                    |                    |                    |                    |
| Fans                                           | nr.     | 1                                        | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  |
| Airflow                                        | m³/h    | 5700                                     | 5700               | 8600               | 8600               | 8600               | 8600               | 8600               |
| N° of compressors                              |         | 1                                        | 1                  | 2                  | 2                  | 2                  | 2                  | 2                  |
| Refrigerating circuits                         |         | 1                                        | 1                  | 1                  | 2                  | 1                  | 2                  | 1                  |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 20,3                                     | 24,9               | 25,6               | 25,8               | 34,5               | 34,2               | 37,6               |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 19,7                                     | 21,9               | 25,4               | 25,3               | 29,6               | 28,4               | 30,1               |
| DIMENSIONS                                     |         |                                          |                    |                    |                    |                    |                    |                    |
| Height                                         | mm      | 1960                                     | 1960               | 1960               | 1960               | 1960               | 1960               | 1960               |
| Length                                         | mm      | 1010                                     | 1010               | 1310               | 1310               | 1310               | 1310               | 1310               |
| Depth                                          | mm      | 750                                      | 750                | 865                | 865                | 865                | 865                | 865                |
| TDAV – TUAU MODEL                              |         | 1022A                                    | 1121A              | 1122A              | 1321A              | 1322A              | 1422A              | 1622A              |
| Fans                                           | nr.     | 1                                        | 1                  | 2                  | 2                  | 2                  | 2                  | 2                  |
| Airflow                                        | m³/h    | 8600                                     | 12320              | 12320              | 12320              | 12320              | 16300              | 16500              |
| N° of compressors                              |         | 2                                        | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  |
| Refrigerating circuits                         |         | 2                                        | 1                  | 2                  | 1                  | 2                  | 2                  | 2                  |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 37,3                                     | 37,6               | 37,9               | 48,1               | 47,7               | 51,5               | 56,5               |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 29,2                                     | 36,7               | 36,3               | 39,4               | 38,0               | 50,9               | 55,8               |
| DIMENSIONS                                     |         |                                          |                    |                    |                    |                    |                    |                    |
| Height                                         | mm      | 1960                                     | 1960               | 1960               | 1960               | 1960               | 1960               | 1960               |
| Length                                         | mm      | 1010                                     | 1720               | 1720               | 1720               | 1720               | 2170               | 2170               |
| Depth                                          | mm      | 865                                      | 865                | 865                | 865                | 865                | 865                | 865                |
| TDAV – TUAU MODEL                              |         | 1822A                                    | 2222A <sup>3</sup> | 2242A <sup>3</sup> | 2522A <sup>3</sup> | 2542A <sup>3</sup> | 2842A <sup>3</sup> | 3342A <sup>3</sup> |
| Fans                                           | nr.     | 2                                        | 3                  | 3                  | 3                  | 3                  | 3                  | 3                  |
| Airflow                                        | m³/h    | 16500                                    | 21500              | 21500              | 21500              | 21500              | 21500              | 21500              |
| N° of compressors                              |         | 2                                        | 2                  | 4                  | 2                  | 4                  | 4                  | 4                  |
| Refrigerating circuits                         |         | 2                                        | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 64,0                                     | 75,0               | 82,7               | 86,6               | 87,8               | 94,8               | 104,8              |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 57,5                                     | 75,0               | 81,8               | 82,8               | 83,0               | 87,5               | 89,6               |
| DIMENSIONS                                     |         |                                          |                    |                    |                    |                    |                    |                    |
| Height                                         | mm      | 1960                                     | 2175               | 2175               | 2175               | 2175               | 2175               | 2175               |
| Length                                         | mm      | 2170                                     | 2580               | 2580               | 2580               | 2580               | 2580               | 2580               |
| Depth                                          | mm      | 865                                      | 865                | 865                | 865                | 865                | 865                | 865                |
| TUAU MODEL                                     |         | 2222A                                    | 2242A              | 2522A              | 2542A              | 2842A              | 3342A              |                    |
| Fans                                           | nr.     | 3                                        | 3                  | 3                  | 3                  | 3                  | 3                  |                    |
| Airflow                                        | m³/h    | 22000                                    | 22000              | 22500              | 22500              | 23000              | 23000              |                    |
| N° of compressors                              |         | 2                                        | 4                  | 2                  | 4                  | 4                  | 4                  |                    |
| Refrigerating circuits                         |         | 2                                        | 2                  | 2                  | 2                  | 2                  | 2                  |                    |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 75,3                                     | 82,6               | 86,8               | 88,3               | 95,6               | 105,6              |                    |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 75,3                                     | 81,7               | 85,8               | 85,7               | 91,8               | 93,6               |                    |
| DIMENSIONS                                     |         |                                          |                    |                    |                    |                    |                    |                    |
| Height                                         | mm      | 1960                                     | 1960               | 1960               | 1960               | 1960               | 1960               |                    |
| Length                                         | mm      | 2580                                     | 2580               | 2580               | 2580               | 2580               | 2580               |                    |
| Depth                                          | mm      | 865                                      | 865                | 865                | 865                | 865                | 865                |                    |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, 45 °C condensing temperature, and ESP = 20 Pa.

<sup>3</sup> Data refers to downflow unit.

Direct-expansion air-cooled units with backward-curved fans equipped with EC motor

# Uniflair LE

LDAV



## Range

Cooling capacity: 60 ÷ 140 kW

Fixed speed compressors

Refrigerant R-410A

EC fans

Available versions

- Downflow (LDAV)

## Standard features

- Downflow configuration with bottom or front discharge and suction from the top.
- Metal structural frame and inside part made with hot-dip zinc-plated sheet steel
- External panels coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation to class 1 according to Class B1 according to DIN 4102, BS 476 part 7, VO according to UL94, ASTM E84, class M1 according to NFP92-501
- Internal panels for shutting-off the compartments affected by the airflow, made with hot-dip zinc-plated sheet steel and captive screws
- High efficiency EU4 pleated air filters are contained in a metal frame and equipped with a dirty filter differential pressure switch and a low airflow differential pressure switch. The filters are housed in a dedicated plenum box.
- The units are equipped with the latest generation Radical EC Fans for efficiency maximization. Impellers are made of high-tech compound material with optimized flow control, combined with highly efficient GreenTech EC motors. These fans are designed to have easier serviceability with quick removability kit.
- Low airflow differential pressure switch
- Cooling coil, mounted upstream of the fans, constructed of copper tubes expanded into hydrophilic aluminum fins, complete with stainless steel tray and a flexible condensate drain hose
- Double refrigerant circuit each equipped with a fixed-speed scroll compressor.
- Refrigerant circuits complying with EC recommendations (PED 97/23/EC) including: liquid refrigerant receiver, filter-dryer and liquid sight glass, electronic expansion valve, high-pressure pressostats with manual reset.
- New generation of hermetic scroll compressor with Intermediate Discharge Valves (IDVs), built-in thermal protection and anti-vibration feet
- Refrigerant R410A
- Electronic Expansion Valve (EEV) to provide accurate control of the refrigerant superheat ensuring high energy efficiency also at low external temperatures.
- Electrical panel complying with EC recommendations (2006/95/CE, 2004/108/CE and related standards), housed- in a compartment isolated from the airflow and including 24V control circuit transformer, metal isolating screen for protection from live components, mains switch, thermomagnetic circuit-breakers, terminal board for no-voltage signal and control contacts.
- 7-inch. IT Touch Screen display interface that allows to set operating parameters, monitor the trend of the main working parameters, and read any alarm messages.
- Schneider Electric IT J-Controller (J5 18 DIN), complying with EC recommendations (2006/95/CE, 2004/108/CE), where are connected analogical and digital inputs necessary for control of the unit.
- Control software design to provide a highly accurate real-time control of room conditions and the complete unit management such as:
  - electronic expansion valve complete management
  - advanced interactivity with the installation environment
  - dehumidification operating mode managed by means of EEV with devised algorithm which maintains constant air flow
  - double set-point with digital input selection
  - emergency operation

| TECHNICAL DATA                                 |         |                                          |       |       |       |
|------------------------------------------------|---------|------------------------------------------|-------|-------|-------|
| LDVV MODEL                                     |         | 2422A                                    | 2522A | 2722A | 3822A |
| Fan Type                                       |         | EC Backward-curved centrifugal motor fan |       |       |       |
| Power supply                                   | V/ph/Hz | 400/3/50Hz                               |       |       |       |
| Fans                                           | Nr.     | 2                                        | 2     | 2     | 3     |
| Airflow                                        | m3/h    | 20000                                    | 24300 | 26000 | 27000 |
| N° of fixed speed compressors                  |         | 2                                        | 2     | 2     | 2     |
| Refrigerating circuits                         |         | 2                                        | 2     | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 79,0                                     | 83,0  | 93,1  | 132,0 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 74,1                                     | 83,0  | 90,1  | 110,0 |
| DIMENSIONS                                     |         |                                          |       |       |       |
| Height                                         | mm      | 2150                                     | 2150  | 2150  | 2150  |
| Length                                         | mm      | 2082                                     | 2650  | 2650  | 2650  |
| Depth                                          | mm      | 900                                      | 900   | 900   | 900   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, 45 °C condensing temperature and ESP = 20 Pa..

- The design of the IT J-Controller allows to physically isolate the internal connections from the external connections. The external connections on the upper level offer a wide variety of accessibility options:
  - External CAN and Group CAN
  - Isolated 2-wire and 4-wire RS485 ports
  - NetBotz universal sensor ports
  - Alarm/Shutdown Contacts
  - USB ports (Host, Device)
  - Ethernet
  - HDMI display interface
  - Modbus
  - Remote shutdown input
- Ability to interface with most common external BMS on communication protocols and boosting on connection towards Schneider monitoring systems:
  - Modbus/RTU RS485
  - SNMP
  - Modbus Over IP
  - StruxureWare
  - StruxureON
  - Cooling Tuner as service diagnostic tool
- Condensate drain pump
- Electrical heaters with aluminum-finned heating elements complete with safety thermostat (for manual resetting) to cut off the power supply in the event of overheating
- High efficiency EU5 pleated air filters housed in a dedicated plenum box
- Power phase correction capacitors for compressors
- Active Flow Control to improve the balance of airflow between the cooling structure and IT equipment.
- Energy meter and CO2 emission calculator
- Motorized damper on the air return side

### Accessories

The units can be supplied with the following external accessories:

- Suction / discharge plenums
- Direct free-cooling plenums
- Floor stands with or without motorized damper
- Height adjustable base frame
- Room temperature and humidity sensor
- Smoke and fire sensors
- Water leak detectors

### Construction options

- Double power supply with automatic integrated management on the active line to provide redundancy and ensure a constant power supply
- Standard, cleanable or low conductivity humidifier with immersed-electrodes for modulating steam production available as an option for units equipped with cooling and humidification configuration

Direct-expansion water-cooled units with backward-curved fans

# Uniflair LE

TDWR – TUWR



## Range

Cooling capacity: 20 ÷ 100 kW

Refrigerant R-410A

## Available versions

- Downflow (TDWR)
- Upflow (TUWR)

## Standard features

- Advanced microprocessor control system is available with local or remote user terminal.
- The units are equipped with backward-curved fans and directly coupled asynchronous motor.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the precision of the cooling and the energy efficiency of the cooling cycle.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- Internal water-cooled condenser braze is welded and made of AISI 304 stainless steel.
- Uniflair LE units meet the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- The Uniflair LE range offers the possibility to select units equipped with two compressors (tandem) for each circuit, which grants better efficiency and regulation capacity at partial loads (models with the \*\*21 or \*\*42 suffix).
- Total front access is available for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Integrated management of the EEV and refrigerating circuit parameters
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/ IP, SNMP, and StruxureWare platform

| TECHNICAL DATA                                 |                   |                                       |       |       |       |       |
|------------------------------------------------|-------------------|---------------------------------------|-------|-------|-------|-------|
| TDWR – TUWR MODEL                              |                   | 0611A                                 | 0921A | 1321A | 1622A | 1822A |
| Fan type                                       |                   | Backward-curved centrifugal motor fan |       |       |       |       |
| Power supply                                   | V/ph/Hz           | 400/3/50                              |       |       |       |       |
| Fans                                           | nr.               | 1                                     | 1     | 2     | 2     | 2     |
| Airflow                                        | m <sup>3</sup> /h | 5833                                  | 7933  | 12267 | 16406 | 16406 |
| N° of compressors                              |                   | 1                                     | 2     | 2     | 2     | 2     |
| Refrigerating circuits                         |                   | 1                                     | 1     | 1     | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW                | 24,1                                  | 32,1  | 45,5  | 56,8  | 62,5  |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                | 21,7                                  | 27,2  | 38,0  | 55,2  | 56,1  |
| DIMENSIONS                                     |                   |                                       |       |       |       |       |
| Height                                         | mm                | 1960                                  | 1960  | 1960  | 1960  | 1960  |
| Length                                         | mm                | 1010                                  | 1310  | 1720  | 2170  | 2170  |
| Depth                                          | mm                | 750                                   | 865   | 865   | 865   | 750   |
| TDWR MODEL                                     |                   | 2242A                                 | 2542A | 2842A | 3342A |       |
| Fans                                           | nr.               | 3                                     | 3     | 3     | 3     |       |
| Airflow                                        | m <sup>3</sup> /h | 21656                                 | 22046 | 22055 | 22055 |       |
| N° of compressors                              |                   | 4                                     | 4     | 4     | 4     |       |
| Refrigerating circuits                         |                   | 2                                     | 2     | 2     | 2     |       |
| Gross total cooling capacity <sup>1,2</sup>    | kW                | 85,7                                  | 92,6  | 99,9  | 111,1 |       |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                | 82,1                                  | 84,2  | 90,3  | 92,2  |       |
| DIMENSIONS                                     |                   |                                       |       |       |       |       |
| Height                                         | mm                | 2150                                  | 2150  | 2150  | 2150  |       |
| Length                                         | mm                | 2580                                  | 2580  | 2580  | 2580  |       |
| Depth                                          | mm                | 865                                   | 865   | 865   | 865   |       |
| TUWR MODEL                                     |                   | 2242A                                 | 2542A | 2842A | 3342A |       |
| Fans                                           | nr.               | 3                                     | 3     | 3     | 3     |       |
| Airflow                                        | m <sup>3</sup> /h | 22154                                 | 23467 | 23068 | 23069 |       |
| N° of compressors                              |                   | 4                                     | 4     | 4     | 4     |       |
| Refrigerating circuits                         |                   | 2                                     | 2     | 2     | 2     |       |
| Gross total cooling capacity <sup>1,2</sup>    | kW                | 86,0                                  | 93,4  | 100,5 | 111,7 |       |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                | 83,4                                  | 87,9  | 93,1  | 94,7  |       |
| DIMENSIONS                                     |                   |                                       |       |       |       |       |
| Height                                         | mm                | 1960                                  | 1960  | 1960  | 1960  |       |
| Length                                         | mm                | 2580                                  | 2580  | 2580  | 2580  |       |
| Depth                                          | mm                | 865                                   | 865   | 865   | 865   |       |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperatures 30 – 35 °C, and ESP = 20 Pa.

## 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)
- Hot gas and hot water reheating
- Condensation control on refrigerant side with constant water flow

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions.
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

Direct-expansion water-cooled units with backward-curved fans equipped with EC motor

# Uniflair LE

TDWV – TUWV



## Range

Cooling capacity: 20 ÷ 100 kW

Refrigerant R-410A

EC fans

Available versions

- Downflow (TDWV)
- Upflow (TUWV)

## Standard features

- Advanced microprocessor control system with a local or remote user terminal.
- The units are equipped with EC fans for efficiency maximization.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the precision of the cooling and the energy efficiency of the cooling cycle.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- Internal water-cooled condenser braze is welded and made of AISI 304 stainless steel.
- Uniflair LE units meet the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- The Uniflair LE range offers the possibility to select units equipped with two compressors (tandem) for each circuit, which grants better efficiency and regulation capacity at partial loads (models with the \*\*21 or \*\*42 suffix).
- Total front access is available for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Integrated management of the EEV and refrigerating circuit parameters
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

| TECHNICAL DATA                                 |         |                                          |       |       |       |       |
|------------------------------------------------|---------|------------------------------------------|-------|-------|-------|-------|
| TDWV – TUWV MODEL                              |         | 0611A                                    | 0921A | 1321A | 1622A | 1822A |
| Fan type                                       |         | EC backward-curved centrifugal motor fan |       |       |       |       |
| Power supply                                   | V/ph/Hz | 400/3/50                                 |       |       |       |       |
| Fans                                           | nr.     | 1                                        | 1     | 2     | 2     | 2     |
| Airflow                                        | m³/h    | 5700                                     | 8600  | 12320 | 16000 | 16000 |
| N° of compressors                              |         | 1                                        | 2     | 2     | 2     | 2     |
| Refrigerating circuits                         |         | 1                                        | 1     | 1     | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 24,0                                     | 32,5  | 45,6  | 56,7  | 62,3  |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 21,3                                     | 28,6  | 38,1  | 54,3  | 55,2  |
| DIMENSIONS                                     |         |                                          |       |       |       |       |
| Height                                         | mm      | 1960                                     | 1960  | 1960  | 1960  | 1960  |
| Length                                         | mm      | 1010                                     | 1310  | 1720  | 2170  | 2170  |
| Depth                                          | mm      | 750                                      | 865   | 865   | 865   | 750   |
| TDWV MODEL                                     |         | 2242A                                    | 2542A | 2842A | 3342A |       |
| Fans                                           | nr.     | 3                                        | 3     | 3     | 3     |       |
| Airflow                                        | m³/h    | 21500                                    | 21500 | 21500 | 21500 |       |
| N° of compressors                              |         | 4                                        | 4     | 4     | 4     |       |
| Refrigerating circuits                         |         | 2                                        | 2     | 2     | 2     |       |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 85,7                                     | 92,3  | 99,5  | 110,7 |       |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 81,6                                     | 82,8  | 88,8  | 90,8  |       |
| DIMENSIONS                                     |         |                                          |       |       |       |       |
| Height                                         | mm      | 1960                                     | 2150  | 2150  | 2150  |       |
| Length                                         | mm      | 2580                                     | 2580  | 2580  | 2580  |       |
| Depth                                          | mm      | 865                                      | 865   | 865   | 865   |       |
| TUWV MODEL                                     |         | 2242A                                    | 2542A | 2842A | 3342A |       |
| Fans                                           | nr.     | 3                                        | 3     | 3     | 3     |       |
| Airflow                                        | m³/h    | 22000                                    | 22500 | 23000 | 23000 |       |
| N° of compressors                              |         | 4                                        | 4     | 4     | 4     |       |
| Refrigerating circuits                         |         | 2                                        | 2     | 2     | 2     |       |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 85,9                                     | 92,9  | 100,4 | 111,7 |       |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 83,0                                     | 85,4  | 92,9  | 94,6  |       |
| DIMENSIONS                                     |         |                                          |       |       |       |       |
| Height                                         | mm      | 1960                                     | 1960  | 1960  | 1960  |       |
| Length                                         | mm      | 2580                                     | 2580  | 2580  | 2580  |       |
| Depth                                          | mm      | 865                                      | 865   | 865   | 865   |       |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C -50% RH, water temperatures 30 – 35 °C, and ESP = 20 Pa.

## 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)
- Hot gas and hot water reheating
- Condensation control on refrigerant side with constant water flow

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

Direct-expansion water-cooled units with backward-curved fans equipped with EC motor

# Uniflair LE

LDWV



## Range

Cooling capacity: 60 ÷ 140 kW

Fixed speed compressors

Refrigerant R-410A

EC fans

Available versions

- Downflow (LDWV)

## Standard features

- Downflow configuration with bottom or front discharge and suction from the top.
- Metal structural frame and inside part made with hot-dip zinc-plated sheet steel
- External panels coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation to class 1 according to Class B1 according to DIN 4102, BS 476 part 7, VO according to UL94, ASTM E84, class M1 according to NFP92-501
- Internal panels for shutting-off the compartments affected by the airflow, made with hot-dip zinc-plated sheet steel and captive screws
- High efficiency EU4 pleated air filters are contained in a metal frame and equipped with a dirty filter differential pressure switch and a low airflow differential pressure switch. The filters are housed in a dedicated plenum box.
- The units are equipped with the latest generation Radical EC Fans for efficiency maximization. Impellers are made of high-tech compound material with optimized flow control, combined with highly efficient GreenTech EC motors. These fans are designed to have easier serviceability with quick removability kit.
- Low airflow differential pressure switch
- Cooling coil, mounted upstream of the fans, constructed of copper tubes expanded into hydrophilic aluminum fins, complete with stainless steel tray and a flexible condensate drain hose
- Brazed plate water-cooled condenser made from stainless steel.
- Double refrigerant circuit each equipped with a fixed-speed scroll compressor.
- Refrigerant circuits complying with EC recommendations (PED 97/23/EC) including: liquid refrigerant receiver, filter-dryer and liquid sight glass, electronic expansion valve, high-pressure pressostats with manual reset.
- New generation of hermetic scroll compressor with Intermediate Discharge Valves (IDVs), built-in thermal protection and anti-vibration feet
- Refrigerant R410A
- Electronic Expansion Valve (EEV) to provide accurate control of the refrigerant superheat ensuring high energy efficiency also at low external temperatures.
- Electrical panel complying with EC recommendations (2006/95/CE, 2004/108/CE and related standards), housed- in a compartment isolated from the airflow and including 24V control circuit transformer, metal isolating screen for protection from live components, mains switch, thermomagnetic circuit-breakers, terminal board for no-voltage signal and control contacts.
- 7-inch. IT Touch Screen display interface that allows to set operating parameters, monitor the trend of the main working parameters, and read any alarm messages.
- Schneider Electric IT J-Controller (J5 18 DIN), complying with EC recommendations (2006/95/CE, 2004/108/CE), where are connected analogical and digital inputs necessary for control of the unit.
- Control software design to provide a highly accurate real-time control of room conditions and the complete unit management such as:
  - electronic expansion valve complete management

| TECHNICAL DATA                                 |                                          |            |       |       |       |
|------------------------------------------------|------------------------------------------|------------|-------|-------|-------|
| LDVV MODEL                                     |                                          | 2422A      | 2522A | 2722A | 3822A |
| Fan Type                                       | EC Backward-curved centrifugal motor fan |            |       |       |       |
| Power supply                                   | V/ph/Hz                                  | 400/3/50Hz |       |       |       |
| Fans                                           | Nr.                                      | 2          | 2     | 2     | 3     |
| Airflow                                        | m3/h                                     | 20000      | 24300 | 26000 | 27000 |
| N° of fixed speed compressors                  |                                          | 2          | 2     | 2     | 2     |
| Refrigerating circuits                         |                                          | 2          | 2     | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 83,2       | 86,8  | 97,2  | 137,7 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 75,1       | 86,8  | 90,9  | 111,7 |
| DIMENSIONS                                     |                                          |            |       |       |       |
| Height                                         | mm                                       | 2150       | 2150  | 2150  | 2150  |
| Length                                         | mm                                       | 2082       | 2650  | 2650  | 2650  |
| Depth                                          | mm                                       | 900        | 900   | 900   | 900   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, inlet/outlet water temperatures 30/35°C, 0% glycol and ESP = 20 Pa.

- advanced interactivity with the installation environment
- dehumidification operating mode managed by means of EEV with devised algorithm which maintains constant air flow
- double set-point with digital input selection
- emergency operation
- The design of the IT J-Controller allows to physically isolate the internal connections from the external connections. The external connections on the upper level offer a wide variety of accessibility options:
  - External CAN and Group CAN
  - Isolated 2-wire and 4-wire RS485 ports
  - NetBotz universal sensor ports
  - Alarm/Shutdown Contacts
  - USB ports (Host, Device)
  - Ethernet
  - HDMI display interface
  - Modbus
  - Remote shutdown input
- Ability to interface with most common external BMS on communication protocols and boosting on connection towards Schneider monitoring systems:
  - Modbus/RTU RS485
  - SNMP
  - Modbus Over IP
  - StruxureWare
  - StruxureON
  - Cooling Tuner as service diagnostic tool
- 2-way pressostatic valve to modulate the water flow through the braze plate condenser
- Condensing Pressure Regulation Valve (Flooding Valve) to maintain a minimum condensing pressure even with low water inlet temperature
- Standard, cleanable or low conductivity humidifier with immersed-electrodes for modulating steam production available as an option for units equipped with cooling and humidification configuration
- Condensate drain pump
- Electrical heaters with aluminum-finned heating elements complete with safety thermostat (for manual resetting) to cut off the power supply in the event of overheating
- High efficiency EU5 pleated air filters housed in a dedicated plenum box
- Power phase correction capacitors for compressors
- Active Flow Control to improve the balance of airflow between the cooling structure and IT equipment.
- Energy meter and CO2 emission calculator
- Motorized damper on the air return side

## Accessories

The units can be supplied with the following external accessories:

- Suction / discharge plenums
- Direct free-cooling plenums
- Floor stands with or without motorized damper
- Height adjustable base frame
- Room temperature and humidity sensor
- Smoke and fire sensors
- Water leak detectors

## Construction options

- Double power supply with automatic integrated management on the active line to provide redundancy and ensure a constant power supply

Energy-saving units with backward-curved fans

# Uniflair LE

TDER – TUER



## Range

Cooling capacity: 20 ÷ 100 kW

Refrigerant R-410A

## Available versions

- Downflow (TDER)
- Upflow (TUER)

## Standard features

- Advanced microprocessor control system is available with local or remote user terminal.
- The units are equipped with backward-curved fans with directly coupled asynchronous motor.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the precision of the cooling and the energy efficiency of the cooling cycle.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- The cooling coil is characterized by CW and direct expansion circuits interlaced to increase the efficiency of the unit in all running conditions.
- Unit is equipped with an indirect free cooling system that provides the required cooling capacity when the external temperature is lower than the internal ambient. Compressor power consumption is minimized while internal and external environments are kept separate.
- Internal water-cooled condenser braze is welded and made of AISI 304 stainless steel.
- Uniflair LE units meet the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- The Uniflair LE range offers the possibility to select units equipped with two compressors (tandem) for each circuit, which grants better efficiency and regulation capacity at partial loads (models with the \*\*21 or \*\*42 suffix).
- Total front access is available for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Integrated management of the EEV and refrigerating circuit parameters
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms

- Remote on/off switch
- Ability to interface with modbus protocol directly on RS485 serial card
- Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

## 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)
- Hot gas and hot water reheating
- Condensation control on refrigerant side with constant water flow

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

| TECHNICAL DATA         |                                                |                                       |                    |                    |                    |                    |                    |       |
|------------------------|------------------------------------------------|---------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------|
| TDER – TUEP MODEL      |                                                | 0511A                                 | 0611A              | 0721A              | 0722A              | 0921A              | 0922A              | 1021A |
| Fan type               |                                                | Backward-curved centrifugal motor fan |                    |                    |                    |                    |                    |       |
| Power supply           | V/ph/Hz                                        | 400/3/50                              |                    |                    |                    |                    |                    |       |
| Fans                   | nr.                                            | 1                                     | 1                  | 1                  | 1                  | 1                  | 1                  | 1     |
| Airflow                | m³/h                                           | 5827                                  | 5827               | 8541               | 8541               | 8541               | 8541               | 8541  |
| N° of compressors      |                                                | 1                                     | 1                  | 2                  | 2                  | 2                  | 2                  | 2     |
| Refrigerating circuits |                                                | 1                                     | 1                  | 1                  | 2                  | 1                  | 2                  | 1     |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                    | 19,2               | 23,8               | 27,0               | 28,5               | 30,4               | 34,6  |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                    | 19,2               | 21,1               | 27,0               | 28,5               | 27,9               | 30,3  |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                    | 20,5               | 20,5               | 28,3               | 28,3               | 28,3               | 28,3  |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                    | 20,4               | 20,4               | 28,2               | 28,2               | 28,2               | 28,2  |
| DIMENSIONS             |                                                |                                       |                    |                    |                    |                    |                    |       |
| Height                 | mm                                             | 1960                                  | 1960               | 1960               | 1960               | 1960               | 1960               | 1960  |
| Length                 | mm                                             | 1010                                  | 1010               | 1310               | 1310               | 1310               | 1310               | 1310  |
| Depth                  | mm                                             | 750                                   | 750                | 865                | 865                | 865                | 865                | 865   |
| TDER – TUEP MODEL      |                                                | 1022A                                 | 1121A              | 1122A              | 1321A              | 1322A              | 1422A              | 1622A |
| Fans                   | nr.                                            | 1                                     | 1                  | 2                  | 2                  | 2                  | 2                  | 2     |
| Airflow                | m³/h                                           | 8541                                  | 13277              | 13277              | 13277              | 13277              | 15906              | 15906 |
| N° of compressors      |                                                | 2                                     | 2                  | 2                  | 2                  | 2                  | 2                  | 2     |
| Refrigerating circuits |                                                | 2                                     | 1                  | 2                  | 1                  | 2                  | 2                  | 2     |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                    | 37,1               | 37,3               | 39,3               | 47,0               | 50,2               | 55,9  |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                    | 30,3               | 37,3               | 39,3               | 42,3               | 41,5               | 55,9  |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                    | 28,3               | 41,9               | 41,9               | 41,9               | 41,9               | 54,0  |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                    | 28,2               | 41,7               | 41,7               | 41,7               | 41,7               | 53,7  |
| DIMENSIONS             |                                                |                                       |                    |                    |                    |                    |                    |       |
| Height                 | mm                                             | 1960                                  | 1960               | 1960               | 1960               | 1960               | 1960               | 1960  |
| Length                 | mm                                             | 1010                                  | 1720               | 1720               | 1720               | 1720               | 2170               | 2170  |
| Depth                  | mm                                             | 750                                   | 750                | 865                | 865                | 865                | 865                | 865   |
| TDER MODEL             |                                                | 1822A                                 | 2222A <sup>4</sup> | 2242A <sup>4</sup> | 2522A <sup>4</sup> | 2542A <sup>4</sup> | 2842A <sup>4</sup> |       |
| Fans                   | nr.                                            | 2                                     | 3                  | 3                  | 3                  | 3                  | 3                  |       |
| Airflow                | m³/h                                           | 15906                                 | 21809              | 21809              | 21809              | 21809              | 21809              |       |
| N° of compressors      |                                                | 2                                     | 2                  | 4                  | 2                  | 4                  | 4                  |       |
| Refrigerating circuits |                                                | 2                                     | 2                  | 2                  | 2                  | 2                  | 2                  |       |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                    | 60,5               | 78,4               | 83,6               | 86,2               | 87,9               | 96,0  |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                    | 55,8               | 72,0               | 78,3               | 75,0               | 75,5               | 77,7  |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                    | 54,0               | 97,6               | 97,6               | 97,6               | 97,6               |       |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                    | 53,7               | 96,7               | 96,7               | 96,7               | 96,7               |       |
| DIMENSIONS             |                                                |                                       |                    |                    |                    |                    |                    |       |
| Height                 | mm                                             | 1960                                  | 2150               | 2150               | 2150               | 2150               | 2150               |       |
| Length                 | mm                                             | 2170                                  | 2580               | 2580               | 2580               | 2580               | 2580               |       |
| Depth                  | mm                                             | 750                                   | 750                | 865                | 865                | 865                | 865                |       |
| TUEP MODEL             |                                                | 2222A                                 | 2242A              | 2522A              | 2542A              | 2842A              |                    |       |
| Fans                   | nr.                                            | 3                                     | 3                  | 3                  | 3                  | 3                  |                    |       |
| Airflow                | m³/h                                           | 22160                                 | 22160              | 23194              | 23194              | 23194              |                    |       |
| N° of compressors      |                                                | 2                                     | 4                  | 2                  | 4                  | 4                  |                    |       |
| Refrigerating circuits |                                                | 2                                     | 2                  | 2                  | 2                  | 2                  |                    |       |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                    | 78,5               | 83,8               | 86,8               | 88,7               | 96,8               |       |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                    | 72,7               | 79,2               | 77,8               | 78,3               | 80,4               |       |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                    | 98,8               | 98,8               | 102,3              | 102,3              | 102,3              |       |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                    | 97,9               | 97,9               | 101,3              | 101,3              | 101,3              |       |
| DIMENSIONS             |                                                |                                       |                    |                    |                    |                    |                    |       |
| Height                 | mm                                             | 1960                                  | 1960               | 1960               | 1960               | 1960               |                    |       |
| Length                 | mm                                             | 2580                                  | 2580               | 2580               | 2580               | 2580               |                    |       |
| Depth                  | mm                                             | 750                                   | 865                | 865                | 865                | 865                |                    |       |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperatures 30 – 35 °C, and ESP = 20 Pa.

<sup>3</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperature 7/12 °C; glycol 0%, and ESP = 20 Pa.

<sup>4</sup> Data refers to downflow unit.

Energy-saving units with backward-curved fans equipped with EC motor

# Uniflair LE

TDEV – TUEV



## Range

Cooling capacity: 20 ÷ 100 kW

Refrigerant R-410A

EC fans

Available versions

- Downflow (TDEV)
- Upflow (TUEV)

## Standard features

- Advanced microprocessor control system is available with local or remote user terminal.
- The units are equipped with EC fans for efficiency maximization.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the precision of the cooling and the energy efficiency of the cooling cycle.
- Unit is equipped with an indirect free cooling system that provides the required cooling capacity when the external temperature is lower than the internal ambient. Compressor power consumption is minimized while internal and external environments are kept separate.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- The cooling coil is characterized by CW and direct expansion circuits interlaced to increase the efficiency of the unit in all running conditions.
- Internal water-cooled condenser braze is welded and made of AISI 304 stainless steel.
- Uniflair LE units meet the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- The Uniflair LE range offers the possibility to select units equipped with two compressors (tandem) for each circuit, which grants better efficiency and regulation capacity at partial loads (models with the \*\*21 or \*\*42 suffix).
- Total front access is available for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Integrated management of the cooling modes monitoring room temperature, external temperature, and glycol circuit temperature
  - Integrated management of the EEV and refrigerating circuit parameters
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
- Free contact for general and two for addressable alarms
- Remote on/off switch
- Ability to interface with modbus protocol directly on RS485 serial card
- Ability to interface with main external communication Protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

## 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)
- Hot gas and hot water reheating

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

| TECHNICAL DATA         |                                                |                                          |                    |                    |                    |                    |                    |       |
|------------------------|------------------------------------------------|------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------|
| TDEV – TUEV MODEL      |                                                | 0511A                                    | 0611A              | 0721A              | 0722A              | 0921A              | 0922A              | 1021A |
| Fan type               |                                                | EC backward-curved centrifugal motor fan |                    |                    |                    |                    |                    |       |
| Power supply           | V/ph/Hz                                        | 400/3/50                                 |                    |                    |                    |                    |                    |       |
| Fans                   | nr.                                            | 1                                        | 1                  | 1                  | 1                  | 1                  | 1                  | 1     |
| Airflow                | m³/h                                           | 5700                                     | 5700               | 8600               | 8600               | 8600               | 8600               | 8600  |
| N° of compressors      |                                                | 1                                        | 1                  | 2                  | 2                  | 2                  | 2                  | 2     |
| Refrigerating circuits |                                                | 1                                        | 1                  | 1                  | 2                  | 1                  | 2                  | 1     |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 19,1               | 23,7               | 27,0               | 28,4               | 30,4               | 34,6  |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 19,1               | 20,8               | 27,0               | 28,4               | 28,7               | 30,5  |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                       | 20,2               | 20,2               | 28,5               | 28,5               | 28,5               | 28,5  |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                       | 20,1               | 20,1               | 28,3               | 28,3               | 28,3               | 28,3  |
| DIMENSIONS             |                                                |                                          |                    |                    |                    |                    |                    |       |
| Height                 | mm                                             | 1960                                     | 1960               | 1960               | 1960               | 1960               | 1960               | 1960  |
| Length                 | mm                                             | 1010                                     | 1010               | 1310               | 1310               | 1310               | 1310               | 1310  |
| Depth                  | mm                                             | 750                                      | 750                | 865                | 865                | 865                | 865                | 865   |
| TDEV – TUEV MODEL      |                                                | 1022A                                    | 1121A              | 1122A              | 1321A              | 1322A              | 1422A              | 1622A |
| Fans                   | nr.                                            | 1                                        | 1                  | 2                  | 2                  | 2                  | 2                  | 2     |
| Airflow                | m³/h                                           | 8600                                     | 12320              | 12320              | 12320              | 12320              | 16000              | 16000 |
| N° of compressors      |                                                | 2                                        | 2                  | 2                  | 2                  | 2                  | 2                  | 2     |
| Refrigerating circuits |                                                | 2                                        | 1                  | 2                  | 1                  | 2                  | 2                  | 2     |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 37,1               | 36,9               | 39,2               | 46,6               | 49,7               | 55,9  |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 30,4               | 36,9               | 37,4               | 40,3               | 39,9               | 55,9  |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                       | 28,5               | 40,1               | 40,1               | 40,1               | 40,1               | 54,1  |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                       | 28,3               | 39,9               | 39,9               | 39,9               | 39,9               | 53,9  |
| DIMENSIONS             |                                                |                                          |                    |                    |                    |                    |                    |       |
| Height                 | mm                                             | 1960                                     | 1960               | 1960               | 1960               | 1960               | 1960               | 1960  |
| Length                 | mm                                             | 1010                                     | 1720               | 1720               | 1720               | 1720               | 2170               | 2170  |
| Depth                  | mm                                             | 750                                      | 750                | 865                | 865                | 865                | 865                | 865   |
| TDEV MODEL             |                                                | 1822A                                    | 2222A <sup>4</sup> | 2242A <sup>4</sup> | 2522A <sup>4</sup> | 2542A <sup>4</sup> | 2842A <sup>4</sup> |       |
| Fans                   | nr.                                            | 2                                        | 3                  | 3                  | 3                  | 3                  | 3                  |       |
| Airflow                | m³/h                                           | 16000                                    | 21500              | 21500              | 21500              | 21500              | 21500              |       |
| N° of compressors      |                                                | 2                                        | 2                  | 4                  | 2                  | 4                  | 4                  |       |
| Refrigerating circuits |                                                | 2                                        | 2                  | 2                  | 2                  | 2                  | 2                  |       |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 60,5               | 78,2               | 83,5               | 86,1               | 87,7               | 95,8  |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 56,0               | 71,3               | 77,6               | 74,4               | 74,9               | 77,1  |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                       | 54,1               | 96,6               | 96,6               | 96,6               | 96,6               |       |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                       | 53,9               | 95,7               | 95,7               | 95,7               | 95,7               |       |
| DIMENSIONS             |                                                |                                          |                    |                    |                    |                    |                    |       |
| Height                 | mm                                             | 1960                                     | 2150               | 2150               | 2150               | 2150               | 2150               |       |
| Length                 | mm                                             | 2170                                     | 2580               | 2580               | 2580               | 2580               | 2580               |       |
| Depth                  | mm                                             | 750                                      | 750                | 865                | 865                | 865                | 865                |       |
| TUEV MODEL             |                                                | 2222A                                    | 2242A              | 2522A              | 2542A              | 2842A              |                    |       |
| Fans                   | nr.                                            | 3                                        | 3                  | 3                  | 3                  | 3                  |                    |       |
| Airflow                | m³/h                                           | 22000                                    | 22000              | 22000              | 22500              | 22500              |                    |       |
| N° of compressors      |                                                | 2                                        | 4                  | 2                  | 4                  | 4                  |                    |       |
| Refrigerating circuits |                                                | 2                                        | 2                  | 2                  | 2                  | 2                  |                    |       |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 78,4               | 83,7               | 86,3               | 88,3               | 96,4               |       |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 72,4               | 78,8               | 75,4               | 76,9               | 79,0               |       |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                       | 98,3               | 98,3               | 98,3               | 100,0              | 100,0              |       |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                       | 97,4               | 97,4               | 97,4               | 99,0               | 99,0               |       |
| DIMENSIONS             |                                                |                                          |                    |                    |                    |                    |                    |       |
| Height                 | mm                                             | 1960                                     | 1960               | 1960               | 1960               | 1960               |                    |       |
| Length                 | mm                                             | 2580                                     | 2580               | 2580               | 2580               | 2580               |                    |       |
| Depth                  | mm                                             | 750                                      | 865                | 865                | 865                | 865                |                    |       |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperatures 30 – 35 °C, and ESP = 20 Pa.

<sup>3</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperature 7/12 °C; glycol 0%, and ESP = 20 Pa.

<sup>4</sup> Data refers to downflow unit.

Direct-expansion energy-saving units with backward-curved fans equipped with EC motor

# Uniflair LE

LDEV



## Range

Cooling capacity: 70 ÷ 100 kW

Fixed speed compressors

Refrigerant R-410A

EC fans

Available versions

- Downflow (LDEV)

## Standard features

- Downflow configuration with bottom or front discharge and suction from the top.
- Metal structural frame and inside part made with hot-dip zinc-plated sheet steel
- External panels coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation to class 1 according to Class B1 according to DIN 4102, BS 476 part 7, VO according to UL94, ASTM E84, class M1 according to NFP92-501
- Internal panels for shutting-off the compartments affected by the airflow, made with hot-dip zinc-plated sheet steel and captive screws
- High efficiency EU4 pleated air filters are contained in a metal frame and equipped with a dirty filter differential pressure switch and a low airflow differential pressure switch. The filters are housed in a dedicated plenum box.
- The units are equipped with the latest generation Radical EC Fans for efficiency maximization. Impellers are made of high-tech compound material with optimized flow control, combined with highly efficient GreenTech EC motors. These fans are designed to have easier serviceability with quick removability kit.
- Low airflow differential pressure switch
- Cooling coil, mounted upstream of the fans, constructed of copper tubes expanded into hydrophilic aluminum fins, complete with stainless steel tray and a flexible condensate drain hose
- Brazed plate water-cooled condenser made from stainless steel.
- Double refrigerant circuit each equipped with a fixed-speed scroll compressor.
- Refrigerant circuits complying with EC recommendations (PED 97/23/EC) including: liquid refrigerant receiver, filter-dryer and liquid sight glass, electronic expansion valve, high-pressure pressostats with manual reset.
- New generation of hermetic scroll compressor with Intermediate Discharge Valves (IDVs), built-in thermal protection and anti-vibration feet
- Refrigerant R410A
- Electronic Expansion Valve (EEV) to provide accurate control of the refrigerant superheat ensuring high energy efficiency also at low external temperatures.
- Energy saving units are equipped with a new patent pending solution. The 3-way valve is replaced by three flow control devices designed to maximize efficiency and minimize water side pressure drops.
- Electrical panel complying with EC recommendations (2006/95/CE, 2004/108/CE and related standards), housed- in a compartment isolated from the airflow and including 24V control circuit transformer, metal isolating screen for protection from live components, mains switch, thermomagnetic circuit-breakers, terminal board for no-voltage signal and control contacts.
- 7-inch. IT Touch Screen display interface that allows to set operating parameters, monitor the trend of the main working parameters, and read any alarm messages.
- Schneider Electric IT J-Controller (J5 18 DIN), complying with EC recommendations (2006/95/CE, 2004/108/CE), where are connected analogical and digital inputs necessary for control of the unit.

| TECHNICAL DATA                                 |                                          |            |       |
|------------------------------------------------|------------------------------------------|------------|-------|
| LDEV MODEL                                     |                                          | 2422A      | 2722A |
| Fan Type                                       | EC Backward-curved centrifugal motor fan |            |       |
| Power supply                                   | V/ph/Hz                                  | 400/3/50Hz |       |
| Fans                                           | Nr.                                      | 2          | 2     |
| Airflow                                        | m3/h                                     | 20000      | 26000 |
| N° of fixed speed compressors                  |                                          | 2          | 2     |
| Refrigerating circuits                         |                                          | 2          | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 79,1       | 94,5  |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 66,1       | 82,1  |
| DIMENSIONS                                     |                                          |            |       |
| Height                                         | mm                                       | 2150       | 2150  |
| Length                                         | mm                                       | 2082       | 2650  |
| Depth                                          | mm                                       | 900        | 900   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, inlet/outlet water temperatures 30/36°C, 0% glycol and ESP = 20 Pa.

- Control software design to provide a highly accurate real-time control of room conditions and the complete unit management such as:
  - electronic expansion valve complete management
  - advanced interactivity with the installation environment
  - dehumidification operating mode managed by means of EEV with devised algorithm which maintains constant air flow
  - double set-point with digital input selection
  - emergency operation
- The design of the IT J-Controller allows to physically isolate the internal connections from the external connections. The external connections on the upper level offer a wide variety of accessibility options:
  - External CAN and Group CAN
  - Isolated 2-wire and 4-wire RS485 ports
  - NetBotz universal sensor ports
  - Alarm/Shutdown Contacts
  - USB ports (Host, Device)
  - Ethernet
  - HDMI display interface
  - Modbus
  - Remote shutdown input
- Ability to interface with most common external BMS on communication protocols and boosting on connection towards Schneider monitoring systems:
  - Modbus/RTU RS485
  - SNMP
  - Modbus Over IP
  - StruxureWare
  - StruxureON
  - Cooling Tuner as service diagnostic tool

## Construction options

- Double power supply with automatic integrated management on the active line to provide redundancy and ensure a constant power supply
- Standard, cleanable or low conductivity humidifier with immersed-electrodes for modulating steam production available as an option for units equipped with cooling and humidification configuration
- Condensate drain pump
- Electrical heaters with aluminum-finned heating elements complete with safety thermostat (for manual resetting) to cut off the power supply in the event of overheating
- High efficiency EU5 pleated air filters housed in a dedicated plenum box
- Power phase correction capacitors for compressors
- Active Flow Control to improve the balance of airflow between the cooling structure and IT equipment.
- Energy meter and CO2 emission calculator
- Motorized damper on the air return side

## Accessories

The units can be supplied with the following external accessories:

- Suction / discharge plenums
- Direct free-cooling plenums
- Floor stands with or without motorized damper
- Height adjustable base frame
- Room temperature and humidity sensor
- Smoke and fire sensors
- Water leak detectors

Twin-cool air-cooled units with backward-curved fans

# Uniflair LE

TDTR – TUTR



## Range

Cooling capacity: 20 ÷ 100 kW

Refrigerant R-410A

## Available versions

- Downflow (TDTR)
- Upflow (TUTR)

## Standard features

- Advanced microprocessor control system is available with local or remote user terminal.
- The units are equipped with backward-curved fans and directly coupled asynchronous motor.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- Unit is characterized by two independent cooling sources — one CW with related circuit and one direct expansion air cooled.
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the cooling precision and the energy efficiency of the cooling cycle.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- Uniflair LE units meet the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- The Uniflair LE range offers the possibility to select units equipped with two compressors (tandem) for each circuit, which grants better efficiency and regulation capacity at partial loads (models with the \*\*21 or \*\*42 suffix).
- Total front access is included for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Integrated management of the EEV and refrigerating circuit parameters
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

| TECHNICAL DATA         |                                                |                                       |          |       |       |       |                    |                    |                    |
|------------------------|------------------------------------------------|---------------------------------------|----------|-------|-------|-------|--------------------|--------------------|--------------------|
| TDTR MODEL             |                                                | 0611A                                 | 0921A    | 1321A | 1622A | 1822A | 2242A <sup>1</sup> | 2542A <sup>1</sup> | 2842A <sup>1</sup> |
| Fan type               |                                                | Backward-curved centrifugal motor fan |          |       |       |       |                    |                    |                    |
| Power supply           |                                                | V/ph/Hz                               | 400/3/50 |       |       |       |                    |                    |                    |
| Fans                   |                                                | nr.                                   | 1        | 1     | 2     | 2     | 3                  | 3                  | 3                  |
| Airflow                |                                                | m <sup>3</sup> /h                     | 5827     | 8541  | 11574 | 15905 | 15905              | 21809              | 21709              |
| N° of compressors      |                                                |                                       | 1        | 2     | 2     | 2     | 4                  | 4                  | 4                  |
| Refrigerating circuits |                                                |                                       | 1        | 1     | 1     | 2     | 2                  | 2                  | 2                  |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                    | 23,6     | 30,3  | 46,1  | 58,5  | 63,4               | 82,5               | 81,7               |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                    | 20,9     | 28,5  | 38,3  | 55,3  | 55,3               | 78,1               | 73,8               |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                    | 20,5     | 28,3  | 38,6  | 53,9  | 53,9               | 97,6               | 97,3               |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                    | 20,4     | 28,2  | 38,4  | 53,7  | 53,7               | 96,7               | 96,7               |
| DIMENSIONS             |                                                |                                       |          |       |       |       |                    |                    |                    |
| Height                 |                                                | mm                                    | 1960     | 1960  | 1960  | 1960  | 2150               | 2150               | 2150               |
| Length                 |                                                | mm                                    | 1010     | 1310  | 1720  | 2170  | 2170               | 2580               | 2580               |
| Depth                  |                                                | mm                                    | 750      | 865   | 865   | 865   | 750                | 865                | 865                |
| TUTR MODEL             |                                                |                                       | 2242A    | 2542A | 2842A |       |                    |                    |                    |
| Fans                   |                                                | nr.                                   | 3        | 3     | 3     |       |                    |                    |                    |
| Airflow                |                                                | m <sup>3</sup> /h                     | 22160    | 23194 | 23194 |       |                    |                    |                    |
| N° of compressors      |                                                |                                       | 4        | 4     | 4     |       |                    |                    |                    |
| Refrigerating circuits |                                                |                                       | 2        | 2     | 2     |       |                    |                    |                    |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                    | 82,7     | 82,5  | 91,9  |       |                    |                    |                    |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                    | 79,0     | 77,1  | 79,0  |       |                    |                    |                    |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                    | 98,8     | 102,3 | 102,3 |       |                    |                    |                    |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                    | 97,9     | 101,3 | 101,3 |       |                    |                    |                    |
| DIMENSIONS             |                                                |                                       |          |       |       |       |                    |                    |                    |
| Height                 |                                                | mm                                    | 1960     | 1960  | 1960  |       |                    |                    |                    |
| Length                 |                                                | mm                                    | 2580     | 2580  | 2580  |       |                    |                    |                    |
| Depth                  |                                                | mm                                    | 865      | 865   | 865   |       |                    |                    |                    |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions : Room at 24 °C-50% RH, water temperatures 30 – 35 °C, and ESP = 20 Pa.

<sup>3</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperature 7/12 °C; glycol 0%, and ESP = 20 Pa.

<sup>4</sup> Data refers to downflow unit.

## 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)
- Hot gas and hot water reheating

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

Twin-cool air-cooled units with backward-curved fans equipped with EC motor

# Uniflair LE

TDTV – TUTV



## Range

Cooling capacity: 20 ÷ 100 kW

Refrigerant R-410A

EC fans

Available versions

- Downflow (TDTV)
- Upflow (TUTV)

## Standard features

- Advanced microprocessor control system is available with local or remote user terminal.
- The units are equipped with EC fans for efficiency maximization.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the cooling precision and the energy efficiency of the cooling cycle.
- Unit is characterized by two independent cooling sources — one CW with related circuit and one direct expansion air cooled.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- The cooling coil is characterized by CW and direct expansion circuits interlaced to increase the efficiency of the unit in all running conditions.
- The CW circuit is equipped with a three-way valve and an actuator integrated with the microprocessor.
- Uniflair LE units meet the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- The Uniflair LE range offers the possibility to select units equipped with two compressors (tandem) for each circuit, which grants better efficiency and regulation capacity at partial loads (models with the \*\*21 or \*\*42 suffix).
- Total front access is included for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Integrated management of the EEV and refrigerating circuit parameters
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

| TECHNICAL DATA         |                                                |                                          |          |       |       |       |       |       |       |
|------------------------|------------------------------------------------|------------------------------------------|----------|-------|-------|-------|-------|-------|-------|
| TDTV MODEL             |                                                | 0611A                                    | 0921A    | 1321A | 1622A | 1822A | 2242A | 2542A | 2842A |
| Fan type               |                                                | EC backward-curved centrifugal motor fan |          |       |       |       |       |       |       |
| Power supply           |                                                | V/ph/Hz                                  | 400/3/50 |       |       |       |       |       |       |
| Fans                   |                                                | nr.                                      | 1        | 1     | 2     | 2     | 3     | 3     | 3     |
| Airflow                |                                                | m³/h                                     | 5700     | 8600  | 12320 | 16000 | 16000 | 21500 | 21500 |
| N° of compressors      |                                                |                                          | 1        | 2     | 2     | 2     | 4     | 4     | 4     |
| Refrigerating circuits |                                                |                                          | 1        | 1     | 1     | 2     | 2     | 2     | 2     |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 23,5     | 30,3  | 46,5  | 58,5  | 63,4  | 82,4  | 91,0  |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 20,6     | 28,7  | 39,8  | 55,6  | 55,5  | 77,4  | 73,4  |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                       | 20,2     | 28,5  | 40,1  | 54,1  | 54,1  | 96,6  | 96,6  |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                       | 20,1     | 28,3  | 39,9  | 53,9  | 53,9  | 95,7  | 95,7  |
| DIMENSIONS             |                                                |                                          |          |       |       |       |       |       |       |
| Height                 |                                                | mm                                       | 1960     | 1960  | 1960  | 1960  | 1960  | 2150  | 2150  |
| Length                 |                                                | mm                                       | 1010     | 1310  | 1720  | 2170  | 2170  | 2580  | 2580  |
| Depth                  |                                                | mm                                       | 750      | 865   | 865   | 865   | 750   | 865   | 865   |
| TUTV MODEL             |                                                |                                          | 2242A    | 2542A | 2842A |       |       |       |       |
| Fans                   |                                                | nr.                                      | 3        | 3     | 3     |       |       |       |       |
| Airflow                |                                                | m³/h                                     | 22000    | 22500 | 22500 |       |       |       |       |
| N° of compressors      |                                                |                                          | 4        | 4     | 4     |       |       |       |       |
| Refrigerating circuits |                                                |                                          | 2        | 2     | 2     |       |       |       |       |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 82,6     | 82,1  | 91,5  |       |       |       |       |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 78,6     | 75,5  | 77,6  |       |       |       |       |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                       | 98,3     | 100,0 | 100,0 |       |       |       |       |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                       | 97,4     | 99,0  | 99,0  |       |       |       |       |
| DIMENSIONS             |                                                |                                          |          |       |       |       |       |       |       |
| Height                 |                                                | mm                                       | 1960     | 1960  | 1960  |       |       |       |       |
| Length                 |                                                | mm                                       | 2580     | 2580  | 2580  |       |       |       |       |
| Depth                  |                                                | mm                                       | 865      | 865   | 865   |       |       |       |       |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, 45 °C condensing temperature, and ESP = 20 Pa.

<sup>3</sup> Data refer to nominal conditions: Room at 24 °C-50% RH, water temperature 7/12 °C; glycol 0%, and ESP = 20 Pa.

## 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)
- Hot gas and hot water reheating

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

Twin-cool water-cooled units with backward-curved fans

# Uniflair LE

TDDR – TUDR



## Range

Cooling capacity: 20 ÷ 100 kW

Refrigerant R-410A

## Available versions

- Downflow (TDDR)
- Upflow (TUDR)

## Standard features

- Advanced microprocessor control system is available with local or remote user terminal.
- The units are equipped with Backward-curved fans and directly coupled asynchronous motor.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the precision of the cooling and the energy efficiency of the cooling cycle.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- Internal water-cooled condenser braze is welded and made of AISI 304 stainless steel.
- Uniflair LE units meet the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- The Uniflair LE range offers the possibility to select units equipped with two compressors (tandem) for each circuit, which grants better efficiency and regulation capacity at partial loads (models with the \*\*21 or \*\*42 suffix).
- Total front access is included for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Integrated management of the EEV and refrigerating circuit parameters
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

| TECHNICAL DATA         |                                                |                                       |          |       |       |       |                   |                   |                   |
|------------------------|------------------------------------------------|---------------------------------------|----------|-------|-------|-------|-------------------|-------------------|-------------------|
| TDDR MODELS            |                                                | 611                                   | 921      | 1321  | 1622  | 1822  | 2242 <sup>1</sup> | 2542 <sup>1</sup> | 2842 <sup>1</sup> |
| Fan type               |                                                | Backward-curved centrifugal motor fan |          |       |       |       |                   |                   |                   |
| Power supply           |                                                | V/ph/Hz                               | 400/3/50 |       |       |       |                   |                   |                   |
| Fans                   |                                                | nr.                                   | 1        | 1     | 2     | 2     | 3                 | 3                 | 3                 |
| Airflow                |                                                | m <sup>3</sup> /h                     | 5827     | 8541  | 11574 | 15905 | 15905             | 21809             | 21809             |
| N° of compressors      |                                                |                                       | 1        | 2     | 2     | 2     | 4                 | 4                 | 4                 |
| Refrigerating circuits |                                                |                                       | 1        | 1     | 1     | 2     | 2                 | 2                 | 2                 |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                    | 23,8     | 30,4  | 46,2  | 55,9  | 60,5              | 90,5              | 96,0              |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                    | 21,1     | 28,5  | 38,8  | 55,9  | 55,8              | 79,7              | 77,7              |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                    | 20,5     | 28,3  | 38,6  | 53,9  | 53,9              | 97,6              | 97,6              |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                    | 20,4     | 28,2  | 38,4  | 53,7  | 53,7              | 96,7              | 96,7              |
| DIMENSIONS             |                                                |                                       |          |       |       |       |                   |                   |                   |
| Height                 |                                                | mm                                    | 1960     | 1960  | 1960  | 1960  | 1960              | 2150              | 2150              |
| Length                 |                                                | mm                                    | 1010     | 1310  | 1720  | 2170  | 2170              | 2580              | 2580              |
| Depth                  |                                                | mm                                    | 750      | 865   | 865   | 865   | 750               | 865               | 865               |
| TUDR MODELS            |                                                |                                       | 2242A    | 2542A | 2842A |       |                   |                   |                   |
| Fans                   |                                                | nr.                                   | 3        | 3     | 3     |       |                   |                   |                   |
| Airflow                |                                                | m <sup>3</sup> /h                     | 22160    | 23194 | 23194 |       |                   |                   |                   |
| N° of compressors      |                                                |                                       | 4        | 4     | 4     |       |                   |                   |                   |
| Refrigerating circuits |                                                |                                       | 2        | 2     | 2     |       |                   |                   |                   |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                    | 90,6     | 88,7  | 96,8  |       |                   |                   |                   |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                    | 80,5     | 78,3  | 80,4  |       |                   |                   |                   |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                    | 98,8     | 102,3 | 102,3 |       |                   |                   |                   |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                    | 97,9     | 101,3 | 101,3 |       |                   |                   |                   |
| DIMENSIONS             |                                                |                                       |          |       |       |       |                   |                   |                   |
| Height                 |                                                | mm                                    | 1960     | 1960  | 1960  |       |                   |                   |                   |
| Length                 |                                                | mm                                    | 2580     | 2580  | 2580  |       |                   |                   |                   |
| Depth                  |                                                | mm                                    | 865      | 865   | 865   |       |                   |                   |                   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperatures 30 – 35 °C, and ESP = 20 Pa.

<sup>3</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperature 7/12 °C; glycol 0%, and ESP = 20 Pa.

<sup>4</sup> Data refers to downflow unit.

## 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)
- Hot gas and hot water reheating
- Condensation control on refrigerant side with constant water flow

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

Twin-cool water-cooled units with backward-curved fans equipped with EC motor

# Uniflair LE

TDDV – TUDV



## Range

Cooling capacity: 20 ÷ 100 kW

Refrigerant R-410A

EC fans

## Available versions

- Downflow (TDDV)
- Upflow (TUDV)

## Standard features

- Advanced microprocessor control system is available with local or remote user terminal.
- The units are equipped with EC fans for efficiency maximization.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the precision of the cooling and the energy efficiency of the cooling cycle.
- Unit is characterized by two independent cooling sources — one CW with related circuit and one direct expansion water cooled.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section. The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- The cooling coil is characterized by CW and direct expansion circuits interlaced to increase the efficiency of the unit in all running conditions.
- Internal water-cooled condenser braze is welded and made of AISI 304 stainless steel.
- The CW circuit is equipped with a three-way valve and an actuator integrated with the microprocessor.
- Uniflair LE units meet the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- The Uniflair LE range offers the possibility to select units equipped with two compressors (tandem) for each circuit, which grants better efficiency and regulation capacity at partial loads (models with the \*\*21 or \*\*42 suffix).
- Total front access is included for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Microprocessor control system includes:
  - Integrated management of the EEV and refrigerating circuit parameters
  - Local user terminal with external accessibility
  - Integrated LAN card for local network connection of a group of CRACs
  - Rotation and active stand-by management
  - Free contact for general and two for addressable alarms
  - Remote on/off switch
  - Ability to interface with modbus protocol directly on RS485 serial card
  - Ability to interface with main external communication protocols: BACnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare platform

| TECHNICAL DATA         |                                                |                                          |          |       |       |       |                    |                    |                    |
|------------------------|------------------------------------------------|------------------------------------------|----------|-------|-------|-------|--------------------|--------------------|--------------------|
| TDDV MODEL             |                                                | 0611A                                    | 0921A    | 1321A | 1622A | 1822A | 2242A <sup>1</sup> | 2542A <sup>1</sup> | 2842A <sup>1</sup> |
| Fan type               |                                                | EC backward-curved centrifugal motor fan |          |       |       |       |                    |                    |                    |
| Power supply           |                                                | V/ph/Hz                                  | 400/3/50 |       |       |       |                    |                    |                    |
| Fans                   |                                                | nr.                                      | 1        | 1     | 2     | 2     | 3                  | 3                  | 3                  |
| Airflow                |                                                | m <sup>3</sup> /h                        | 5700     | 8600  | 12320 | 16000 | 16000              | 21500              | 21500              |
| N° of compressors      |                                                |                                          | 1        | 2     | 2     | 2     | 4                  | 4                  | 4                  |
| Refrigerating circuits |                                                |                                          | 1        | 1     | 1     | 2     | 2                  | 2                  | 2                  |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 23,7     | 30,4  | 46,6  | 55,9  | 60,5               | 90,3               | 87,7               |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 20,8     | 28,7  | 40,3  | 55,9  | 56,0               | 79,0               | 74,9               |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                       | 20,2     | 28,5  | 40,1  | 54,1  | 54,1               | 96,6               | 96,6               |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                       | 20,1     | 28,3  | 39,9  | 53,9  | 53,9               | 95,7               | 95,7               |
| DIMENSIONS             |                                                |                                          |          |       |       |       |                    |                    |                    |
| Height                 |                                                | mm                                       | 1960     | 1960  | 1960  | 1960  | 1960               | 2150               | 2150               |
| Length                 |                                                | mm                                       | 1010     | 1310  | 1720  | 2170  | 2170               | 2580               | 2580               |
| Depth                  |                                                | mm                                       | 750      | 865   | 865   | 865   | 750                | 865                | 865                |
| TUDV MODEL             |                                                |                                          | 2242A    | 2542A | 2842A |       |                    |                    |                    |
| Fans                   |                                                | nr.                                      | 3        | 3     | 3     |       |                    |                    |                    |
| Airflow                |                                                | m <sup>3</sup> /h                        | 22000    | 22500 | 22500 |       |                    |                    |                    |
| N° of compressors      |                                                |                                          | 4        | 4     | 4     |       |                    |                    |                    |
| Refrigerating circuits |                                                |                                          | 2        | 2     | 2     |       |                    |                    |                    |
| DX MODE                | Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 90,6     | 88,3  | 96,4  |       |                    |                    |                    |
|                        | Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 80,1     | 76,9  | 79,0  |       |                    |                    |                    |
| CW MODE                | Gross total cooling capacity <sup>1,3</sup>    | kW                                       | 98,3     | 100,0 | 100,0 |       |                    |                    |                    |
|                        | Gross sensible cooling capacity <sup>1,3</sup> | kW                                       | 97,4     | 99,0  | 99,0  |       |                    |                    |                    |
| DIMENSIONS             |                                                |                                          |          |       |       |       |                    |                    |                    |
| Height                 |                                                | mm                                       | 1960     | 1960  | 1960  |       |                    |                    |                    |
| Length                 |                                                | mm                                       | 2580     | 2580  | 2580  |       |                    |                    |                    |
| Depth                  |                                                | mm                                       | 865      | 865   | 865   |       |                    |                    |                    |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperatures 30 – 35 °C, and ESP = 20 Pa.

<sup>3</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, water temperature 7/12 °C; glycol 0%, and ESP = 20 Pa.

<sup>4</sup> Data refers to downflow unit.

## 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)
- Hot gas and hot water reheating
- Condensation control on refrigerant side with constant water flow

## Accessories

The units can be supplied with the following external accessories:

- Remote, semi-graphic user terminal
- RS485 serial adapter to communicate with external BMS
- LON FTT10 serial adapter to communicate with external BMS managed with LON protocol
- TCP/IP serial adapter to communicate with external BMS managed with SNMP protocol
- AFPS that can be adapted as a kit with installation instructions
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

Direct-expansion air-cooled units with backward-curved fans equipped with EC motor and variable speed brushless compressors

# Uniflair LE

IDAV



## Range

Cooling capacity: 20 ÷ 100 kW

Refrigerant R-410A

Brushless compressors

EC fans

Available versions

- Downflow air cooled

## Standard features

- Brushless variable speed scroll DC compressor.
- Units in tandem version (models \*\*21) equipped with one brushless compressor and one fixed speed compressor.
- Advanced microprocessor control system with a local or remote user terminal.
- The units are equipped with EC fans for efficiency maximization.
- The structure of the unit is characterized by a self-supporting frame in galvanized steel with panels. The external panels are coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation.
- Electronic expansion valve is controlled by the microprocessor and a dedicated software that increases the cooling precision and the energy efficiency of the cooling cycle.
- The cooling coil is designed for an elevated SHR and reduced pressure drops in the air section.
- The coil is made from copper tubes mechanically expanded on aluminum fins, complete with a hydrophilic treatment.
- Internal water-cooled condenser braze is welded and made of AISI 304 stainless steel.
- Uniflair LE units meet the following directives: 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006 EC F-Gas regulation.
- High-efficiency, EU4-pleated air filters are housed in a metal frame and equipped with a dirty filter differential pressure switch and low airflow differential pressure switch.
- Total front access is available for unit maintenance.
- The electrical panel is situated in a compartment separated from the airflow and complies with the 2006/95/EC directive and related standards.
- Advanced microprocessor control UG50.
- Free-contact for general alarm and 2 for addressable alarms.
- Remote on/off switch.
- Integrated RS485 serial card for direct connection external BMS (modbus).
- Second slot for additional serial card for BMS connection (optional).
- Clock card integrated in the unit.
- Discharge temperature control (option).

| TECHNICAL DATA                                 |                   |                                          |       |       |       |       |
|------------------------------------------------|-------------------|------------------------------------------|-------|-------|-------|-------|
| IDAV                                           |                   | 0601A                                    | 0611A | 1021A | 1321A | 1421A |
| Fan type                                       |                   | EC backward-curved centrifugal motor fan |       |       |       |       |
| Power supply                                   | V/ph/Hz           | 400/3/50 Hz                              |       |       |       |       |
| Fans                                           | nr.               | 2                                        | 1     | 1     | 2     | 2     |
| Airflow                                        | m <sup>3</sup> /h | 4500                                     | 5700  | 8600  | 12320 | 16500 |
| Compressors                                    |                   | 1                                        | 1     | 1+1   | 1+1   | 1+1   |
| Refrigerating circuits                         |                   | 1                                        | 1     | 1     | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW                | 23,1                                     | 23,4  | 31,4  | 39,3  | 53,4  |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                | 16,6                                     | 20,2  | 26,3  | 35,3  | 53,4  |
| DIMENSIONS                                     |                   |                                          |       |       |       |       |
| Height                                         | mm                | 1740                                     | 1960  | 1960  | 1960  | 1960  |
| Length                                         | mm                | 1200                                     | 1010  | 1310  | 1710  | 2170  |
| Depth                                          | mm                | 450                                      | 750   | 865   | 865   | 865   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, 45 °C condensing temperature, and ESP = 20 Pa.

## Construction options

- Intelligent dehumidification integrated in the unit
- Advanced microprocessor control system UG50 is included
- Integrated discharge temperature control and room moisture control

## Accessories

The units can be supplied with the following external accessories:

- Double power supply with automatic changeover and manual selection with integrated ultracapacitor (ETO)
- Automatic floor pressurization system
- Energy meter and CO<sub>2</sub> emissions calculator integrated in the unit (ETO)
- Ultracapacitor for single power supply units.
- Direct free-cooling (on demand)
- Air-cooled condensers equipped with EC fans

Direct-expansion air-cooled units with backward-curved fans equipped with EC motor

# Uniflair LE

IDAV - IUAV



## Range

Cooling capacity: 50 ÷ 140 kW

1 VSD compressor and 1 fixed speed compressor

Refrigerant R-410A

EC fans

## Available versions

- Downflow (IDAV)
- Upflow (IUAV)

## Standard features

- Air flow configuration:
  - Downflow configuration with bottom or front discharge and suction from the top
  - Upflow configuration with top discharge and bottom or front return
- Metal structural frame and inside part made with hot-dip zinc-plated sheet steel
- External panels coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation to class 1 according to Class B1 according to DIN 4102, BS 476 part 7, VO according to UL94, ASTM E84, class M1 according to NFP92-501
- Internal panels for shutting-off the compartments affected by the airflow, made with hot-dip zinc-plated sheet steel and captive screws
- High efficiency EU4 pleated air filters are contained in a metal frame and equipped with a dirty filter differential pressure switch and a low airflow differential pressure switch. Downflow units have filters housed in a dedicated plenum box.
- The units are equipped with the latest generation Radical EC Fans for efficiency maximization. Impellers are made of high-tech compound material with optimized flow control, combined with highly efficient GreenTech EC motors. These fans are designed to have easier serviceability with quick removability kit.
- Low airflow differential pressure switch
- Cooling coil, mounted upstream of the fans, constructed of copper tubes expanded into hydrophilic aluminum fins, complete with stainless steel tray and a flexible condensate drain hose
- Single (\*\*11A models) or double (\*\*22A models) refrigerant circuit each equipped with a scroll compressor (one fixed-speed and one brushless inverter driven, except the 1511A model that is equipped with only one brushless inverter driven scroll compressor)
- Refrigerant circuits complying with EC recommendations (PED 97/23/EC) including: liquid refrigerant receiver, filter-dryer and liquid sight glass, electronic expansion valve, high-pressure pressostats with manual reset.
- New generation of hermetic scroll compressor:
  - Fixed-speed compressors with Intermediate Discharge Valves (IDVs), built-in thermal protection and anti-vibration feet
  - Variable speed scroll compressors with a brushless Interior Permanent Magnet (IPM) and dedicated variable speed drive designed to provide maximum efficiency across the full operating range
- Refrigerant R410A
- Electronic Expansion Valve (EEV) to provide accurate control of the refrigerant superheat ensuring high energy efficiency also at low external temperatures.
- Electrical panel complying with EC recommendations (2006/95/CE, 2004/108/CE and related standards), housed- in a compartment isolated from the airflow and including 24V control circuit transformer, metal isolating screen for protection from live components, mains switch, thermomagnetic circuit-breakers, terminal board for no-voltage signal and control contacts.
- 7 inch. IT Touch Screen display interface that allows to set operating parameters, monitor the trend of the main working parameters, and read any alarm messages.
- Schneider Electric IT J-Controller (J5 18 DIN), complying with EC recommendations (2006/95/CE, 2004/108/CE), where are connected analogical and digital inputs necessary for control of the unit.
- Control software design to provide a highly accurate real-time control of room conditions and the complete unit management such as:

| TECHNICAL DATA                                 |         |                                          |       |       |       |       |       |
|------------------------------------------------|---------|------------------------------------------|-------|-------|-------|-------|-------|
| IDAV MODEL                                     |         | 1511A                                    | 1922A | 2022A | 2422A | 2922A | 3822A |
| Fan Type                                       |         | EC Backward-curved centrifugal motor fan |       |       |       |       |       |
| Power supply                                   | V/ph/Hz | 400/3/50Hz                               |       |       |       |       |       |
| Fans                                           | Nr.     | 2                                        | 2     | 2     | 2     | 2     | 3     |
| Airflow                                        | m3/h    | 16800                                    | 16800 | 17000 | 20000 | 26000 | 27000 |
| N° of fixed speed compressors                  |         | -                                        | 1     | 1     | 1     | 1     | 1     |
| N° of variable speed compressors               |         | 1                                        | 1     | 1     | 1     | 1     | 1     |
| Refrigerating circuits                         |         | 2                                        | 2     | 2     | 2     | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 56,0                                     | 61,7  | 63,8  | 91,3  | 101,4 | 133,2 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 54,9                                     | 57,2  | 60,9  | 75,8  | 92,4  | 108,9 |
| DIMENSIONS                                     |         |                                          |       |       |       |       |       |
| Height                                         | mm      | 2150                                     | 2150  | 2150  | 2150  | 2150  | 2150  |
| Length                                         | mm      | 1777                                     | 1777  | 2082  | 2082  | 2650  | 2650  |
| Depth                                          | mm      | 900                                      | 900   | 900   | 900   | 900   | 900   |
| IUWV MODEL                                     |         | 1511A                                    | 1922A | 2022A | 2422A | 2922A | 3822A |
| Fan type                                       |         | EC Backward-curved centrifugal motor fan |       |       |       |       |       |
| Power supply                                   | V/ph/Hz | 400/3/50Hz                               |       |       |       |       |       |
| Fans                                           | Nr.     | 2                                        | 2     | 2     | 2     | 2     | 3     |
| Airflow                                        | m3/h    | 16800                                    | 16800 | 17000 | 20000 | 26000 | 27000 |
| N° of fixed speed compressors                  |         | -                                        | 1     | 1     | 1     | 1     | 1     |
| N° of variable speed compressors               |         | 1                                        | 1     | 1     | 1     | 1     | 1     |
| Refrigerating circuits                         |         | 2                                        | 2     | 2     | 2     | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 56,0                                     | 61,7  | 63,8  | 91,3  | 101,4 | 133,2 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 54,9                                     | 57,2  | 60,9  | 75,8  | 92,4  | 108,9 |
| DIMENSIONS                                     |         |                                          |       |       |       |       |       |
| Height                                         | mm      | 1950                                     | 1950  | 1950  | 1950  | 1950  | 1950  |
| Length                                         | mm      | 1777                                     | 1777  | 2082  | 2082  | 2650  | 2650  |
| Depth                                          | mm      | 900                                      | 900   | 900   | 900   | 900   | 900   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, inlet/outlet water temperatures 30/35°C, 0% glycol and ESP = 20 Pa.

- electronic expansion valve complete management
- advanced interactivity with the installation environment
- dehumidification operating mode managed by means of EEV with devised algorithm which maintains constant air flow
- double set-point with digital input selection
- emergency operation
- The design of the IT J-Controller allows to physically isolate the internal connections from the external connections. The external connections on the upper level offer a wide variety of accessibility options:
  - External CAN and Group CAN
  - Isolated 2-wire and 4-wire RS485 ports
  - NetBotz universal sensor ports
  - Alarm/Shutdown Contacts
  - USB ports (Host, Device)
  - Ethernet
  - HDMI display interface
  - Modbus
  - Remote shutdown input
- Ability to interface with most common external BMS on communication protocols and boosting on connection towards Schneider monitoring systems:
  - Modbus/RTU RS485
  - SNMP
  - Modbus Over IP
  - StruxureWare
  - StruxureON
  - Cooling Tuner as service diagnostic tool

## Construction options

- Double power supply with automatic integrated management on the active line to provide redundancy and ensure a constant power supply
- Standard, cleanable or low conductivity humidifier with immersed-electrodes for modulating steam production available as an option for units equipped with cooling and humidification configuration
- Condensate drain pump
- Electrical heaters with aluminum-finned heating elements complete with safety thermostat (for manual resetting) to cut off the power supply in the event of overheating
- High efficiency EU5 pleated air filters. Downflow units have filters housed in a dedicated plenum box.
- Power phase correction capacitors for compressors
- Active Flow Control to improve the balance of airflow between the cooling structure and IT equipment.
- Energy meter and CO2 emission calculator
- Motorized damper on the air return side

## Accessories

The units can be supplied with the following external accessories:

- Suction / discharge plenums
- Direct free-cooling plenums
- Floor stands with or without motorized damper
- Height adjustable base frame
- Room temperature and humidity sensor
- Smoke and fire sensors
- Water leak detectors
- Check and by-pass valves kit

Direct-expansion air-cooled units with backward-curved fans equipped with EC motor

# Uniflair LE

IXAV



## Range

Cooling capacity: 70 ÷ 150 kW

1 VSD compressor and 1 fixed speed compressor

Refrigerant R-410A

EC fans

Available versions

- Underfloor (IXAV)

## Standard features

- Underfloor configuration with top return and multiple fan module configurations:
  - bottom discharge
  - rear discharge
  - front discharge
  - front and side discharge
  - fully open discharge
- Metal structural frame and inside part made with hot-dip zinc-plated sheet steel
- External panels coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation to class 1 according to Class B1 according to DIN 4102, BS 476 part 7, VO according to UL94, ASTM E84, class M1 according to NFP92-501
- Internal panels for shutting-off the compartments affected by the airflow, made with hot-dip zinc-plated sheet steel and captive screws
- High efficiency EU4 pleated air filters are contained in a metal frame and equipped with a dirty filter differential pressure switch and a low airflow differential pressure switch. Air filters are housed in a dedicated plenum box.
- The units are equipped with the latest generation Radical EC Fans for efficiency maximization. Impellers are made of high-tech compound material with optimized flow control, combined with highly efficient GreenTech EC motors. These fans are designed to have easier serviceability with quick removability kit.
- Low airflow differential pressure switch
- Cooling coil, mounted upstream of the fans, constructed of copper tubes expanded into hydrophilic aluminum fins, complete with stainless steel tray and a flexible condensate drain hose
- Double (\*\*22A models) refrigerant circuit each equipped with a scroll compressor (one fixed-speed and one brushless inverter driven)
- Refrigerant circuits complying with EC recommendations (PED 97/23/EC) including: liquid refrigerant receiver, filter-dryer and liquid sight glass, electronic expansion valve, high-pressure pressostats with manual reset.
- New generation of hermetic scroll compressor:
  - Fixed-speed compressors with Intermediate Discharge Valves (IDVs), built-in thermal protection and anti-vibration feet
  - Variable speed scroll compressors with a brushless Interior Permanent Magnet (IPM) and dedicated variable speed drive designed to provide maximum efficiency across the full operating range
- Refrigerant R410A
- Electronic Expansion Valve (EEV) to provide accurate control of the refrigerant superheat ensuring high energy efficiency also at low external temperatures.
- Electrical panel complying with EC recommendations (2006/95/CE, 2004/108/CE and related standards), housed- in a compartment isolated from the airflow and including 24V control circuit transformer, metal isolating screen for protection from live components, mains switch, thermomagnetic circuit-breakers, terminal board for no-voltage signal and control contacts.
- 7 inch. IT Touch Screen display interface that allows to set operating parameters, monitor the trend of the main working parameters, and read any alarm messages.
- Schneider Electric IT J-Controller (J5 18 DIN), complying with EC recommendations (2006/95/CE, 2004/108/CE), where are connected analogical and digital inputs necessary for control of the unit.
- Control software design to provide a highly accurate real-time control of room conditions and the complete unit management such as:

| TECHNICAL DATA                                 |         |                                          |       |       |
|------------------------------------------------|---------|------------------------------------------|-------|-------|
| IXAV MODEL                                     |         | 2322A                                    | 2622A | 4022A |
| Fan type                                       |         | EC Backward-curved centrifugal motor fan |       |       |
| Power supply                                   | V/ph/Hz | 400/3/50Hz                               |       |       |
| Fans                                           | Nr.     | 2                                        | 2     | 3     |
| Airflow                                        | m3/h    | 18800                                    | 23400 | 30000 |
| N° of fixed speed compressors                  |         | 1                                        | 1     | 1     |
| N° of variable speed compressors               |         | 1                                        | 1     | 1     |
| Refrigerating circuits                         |         | 2                                        | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 90,8                                     | 100,8 | 139,5 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 74,6                                     | 88,9  | 119,5 |
| DIMENSIONS                                     |         |                                          |       |       |
| Height                                         | mm      | 1950                                     | 1950  | 1950  |
| Fan module height                              | mm      | 565                                      | 565   | 565   |
| Length                                         | mm      | 1777                                     | 2082  | 2650  |
| Depth                                          | mm      | 900                                      | 900   | 900   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, 45 °C condensing temperature and ESP = 20 Pa.

- electronic expansion valve complete management
- advanced interactivity with the installation environment
- dehumidification operating mode managed by means of EEV with devised algorithm which maintains constant air flow
- double set-point with digital input selection
- emergency operation
- The design of the IT J-Controller allows to physically isolate the internal connections from the external connections. The external connections on the upper level offer a wide variety of accessibility options:
  - External CAN and Group CAN
  - Isolated 2-wire and 4-wire RS485 ports
  - NetBotz universal sensor ports
  - Alarm/Shutdown Contacts
  - USB ports (Host, Device)
  - Ethernet
  - HDMI display interface
  - Modbus
  - Remote shutdown input
- Ability to interface with most common external BMS on communication protocols and boosting on connection towards Schneider monitoring systems:
  - Modbus/RTU RS485
  - SNMP
  - Modbus Over IP
  - StruxureWare
  - StruxureON
  - Cooling Tuner as service diagnostic tool

## Construction options

- Double power supply with automatic integrated management on the active line to provide redundancy and ensure a constant power supply
- Standard, cleanable or low conductivity humidifier with immersed-electrodes for modulating steam production available as an option for units equipped with cooling and humidification configuration
- Condensate drain pump
- Electrical heaters with aluminum-finned heating elements complete with safety thermostat (for manual resetting) to cut off the power supply in the event of overheating
- High efficiency EU5 pleated air filters. Air filters are housed in a dedicated plenum box.
- Power phase correction capacitors for compressors
- Active Flow Control to improve the balance of airflow between the cooling structure and IT equipment.
- Energy meter and CO2 emission calculator
- Motorized damper on the air return side

## Accessories

The units can be supplied with the following external accessories:

- Suction / discharge plenums
- Direct free-cooling plenums
- Fan module shipped separately from the upper unit
- Height adjustable legs kit
- Room temperature and humidity sensor
- Smoke and fire sensors
- Water leak detectors
- Check and by-pass valves kit

Direct-expansion energy-saving units with backward-curved fans equipped with EC motor

# Uniflair LE

IDWV - IUWV



## Range

Cooling capacity: 50 ÷ 140 kW

1 VSD compressor and 1 fixed speed compressor

Refrigerant R-410A

EC fans

## Available versions

- Downflow (IDWV)
- Upflow (IUWV)

## Standard features

- Air flow configuration:
  - Downflow configuration with bottom or front discharge and suction from the top
  - Upflow configuration with top discharge and bottom or front return
- Metal structural frame and inside part made with hot-dip zinc-plated sheet steel
- External panels coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation to class 1 according to Class B1 according to DIN 4102, BS 476 part 7, VO according to UL94, ASTM E84, class M1 according to NFP92-501
- Internal panels for shutting-off the compartments affected by the airflow, made with hot-dip zinc-plated sheet steel and captive screws
- High efficiency EU4 pleated air filters are contained in a metal frame and equipped with a dirty filter differential pressure switch and a low airflow differential pressure switch. Downflow units have filters housed in a dedicated plenum box.
- The units are equipped with the latest generation Radical EC Fans for efficiency maximization. Impellers are made of high-tech compound material with optimized flow control, combined with highly efficient GreenTech EC motors. These fans are designed to have easier serviceability with quick removability kit.
- Low airflow differential pressure switch
- Cooling coil, mounted upstream of the fans, constructed of copper tubes expanded into hydrophilic aluminum fins, complete with stainless steel tray and a flexible condensate drain hose
- Brazed plate water-cooled condenser made from stainless steel.
- Single (\*\*11A models) or double (\*\*22A models) refrigerant circuit each equipped with a scroll compressor (one fixed-speed and one brushless inverter driven, except the 1511A model that is equipped with only one brushless inverter driven scroll compressor)
- Refrigerant circuits complying with EC recommendations (PED 97/23/EC) including: liquid refrigerant receiver, filter-dryer and liquid sight glass, electronic expansion valve, high-pressure pressostats with manual reset.
- New generation of hermetic scroll compressor:
  - Fixed-speed compressors with Intermediate Discharge Valves (IDVs), built-in thermal protection and anti-vibration feet
  - Variable speed scroll compressors with a brushless Interior Permanent Magnet (IPM) and dedicated variable speed drive designed to provide maximum efficiency across the full operating range
- Refrigerant R410A
- Electronic Expansion Valve (EEV) to provide accurate control of the refrigerant superheat ensuring high energy efficiency also at low external temperatures.
- Electrical panel complying with EC recommendations (2006/95/CE, 2004/108/CE and related standards), housed- in a compartment isolated from the airflow and including 24V control circuit transformer, metal isolating screen for protection from live components, mains switch, thermomagnetic circuit-breakers, terminal board for no-voltage signal and control contacts.
- 7-inch. IT Touch Screen display interface that allows to set operating parameters, monitor the trend of the main working parameters, and read any alarm messages.
- Schneider Electric IT J-Controller (J5 18 DIN), complying with EC recommendations (2006/95/CE, 2004/108/CE), where are connected analogical and digital inputs necessary for control of the unit.
- Control software design to provide a highly accurate real-time control of room conditions and the complete unit management such as:

| TECHNICAL DATA                                 |         |                                          |       |       |       |       |       |
|------------------------------------------------|---------|------------------------------------------|-------|-------|-------|-------|-------|
| IDWV MODEL                                     |         | 1511A                                    | 1922A | 2022A | 2422A | 2922A | 3822A |
| Fan type                                       |         | EC Backward-curved centrifugal motor fan |       |       |       |       |       |
| Power supply                                   | V/ph/Hz | 400/3/50Hz                               |       |       |       |       |       |
| Fans                                           | Nr.     | 2                                        | 2     | 2     | 2     | 2     | 3     |
| Airflow                                        | m3/h    | 16800                                    | 16800 | 17000 | 20000 | 26000 | 27000 |
| N° of fixed speed compressors                  |         | -                                        | 1     | 1     | 1     | 1     | 1     |
| N° of variable speed compressors               |         | 1                                        | 1     | 1     | 1     | 1     | 1     |
| Refrigerating circuits                         |         | 2                                        | 2     | 2     | 2     | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 58                                       | 65,1  | 67,1  | 93,3  | 104,1 | 137,9 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 55,4                                     | 58,1  | 63,8  | 76,5  | 93,1  | 110,5 |
| DIMENSIONS                                     |         |                                          |       |       |       |       |       |
| Height                                         | mm      | 2150                                     | 2150  | 2150  | 2150  | 2150  | 2150  |
| Length                                         | mm      | 1777                                     | 1777  | 2082  | 2082  | 2650  | 2650  |
| Depth                                          | mm      | 900                                      | 900   | 900   | 900   | 900   | 900   |
| IUVV MODEL                                     |         | 1511A                                    | 1922A | 2022A | 2422A | 2922A | 3822A |
| Fan type                                       |         | EC Backward-curved centrifugal motor fan |       |       |       |       |       |
| Power supply                                   | V/ph/Hz | 400/3/50Hz                               |       |       |       |       |       |
| Fans                                           | Nr.     | 2                                        | 2     | 2     | 2     | 2     | 3     |
| Airflow                                        | m3/h    | 16800                                    | 16800 | 17000 | 20000 | 26000 | 27000 |
| N° of fixed speed compressors                  |         | -                                        | 1     | 1     | 1     | 1     | 1     |
| N° of variable speed compressors               |         | 1                                        | 1     | 1     | 1     | 1     | 1     |
| Refrigerating circuits                         |         | 2                                        | 2     | 2     | 2     | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 58                                       | 65,1  | 67,1  | 93,3  | 104,1 | 137,9 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 55,4                                     | 58,1  | 63,8  | 76,5  | 93,1  | 110,5 |
| DIMENSIONS                                     |         |                                          |       |       |       |       |       |
| Height                                         | mm      | 1950                                     | 1950  | 1950  | 1950  | 1950  | 1950  |
| Length                                         | mm      | 1777                                     | 1777  | 2082  | 2082  | 2650  | 2650  |
| Depth                                          | mm      | 900                                      | 900   | 900   | 900   | 900   | 900   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, inlet/outlet water temperatures 30/35°C, 0% glycol and ESP = 20 Pa.

- electronic expansion valve complete management
- advanced interactivity with the installation environment
- dehumidification operating mode managed by means of EEV with devised algorithm which maintains constant air flow
- double set-point with digital input selection
- emergency operation
- The design of the IT J-Controller allows to physically isolate the internal connections from the external connections. The external connections on the upper level offer a wide variety of accessibility options:
  - External CAN and Group CAN
  - Isolated 2-wire and 4-wire RS485 ports
  - NetBotz universal sensor ports
  - Alarm/Shutdown Contacts
  - USB ports (Host, Device)
  - Ethernet
  - HDMI display interface
  - Modbus
  - Remote shutdown input
- Ability to interface with most common external BMS on communication protocols and boosting on connection towards Schneider monitoring systems:
  - Modbus/RTU RS485
  - SNMP
  - Modbus Over IP
  - StruxureWare
  - StruxureON
  - Cooling Tuner as service diagnostic tool

## Construction options

- Double power supply with automatic integrated management on the active line to provide redundancy and ensure a constant power supply
- 2-way pressostatic valve to modulate the water flow through the braze plate condenser
- Condensing Pressure Regulation Valve (Flooding Valve) to maintain a minimum condensing pressure even with low water inlet temperature
- Standard, cleanable or low conductivity humidifier with immersed-electrodes for modulating steam production available as an option for units equipped with cooling and humidification configuration
- Condensate drain pump
- Electrical heaters with aluminum-finned heating elements complete with safety thermostat (for manual resetting) to cut off the power supply in the event of overheating
- High efficiency EU5 pleated air filters. Downflow units have filters housed in a dedicated plenum box.
- Power phase correction capacitors for compressors
- Active Flow Control to improve the balance of airflow between the cooling structure and IT equipment.
- Energy meter and CO2 emission calculator
- Motorized damper on the air return side

## Accessories

The units can be supplied with the following external accessories:

- Suction / discharge plenums
- Direct free-cooling plenums
- Floor stands with or without motorized damper
- Height adjustable base frame
- Room temperature and humidity sensor
- Smoke and fire sensors
- Water leak detectors

Direct-expansion water-cooled units with backward-curved fans equipped with EC motor

# Uniflair LE

IXWV



## Range

Cooling capacity: 70 ÷ 150 kW

1 VSD compressor and 1 fixed speed compressor

Refrigerant R-410A

EC fans

Available versions

- Underfloor (IXWV)

## Standard features

- Underfloor configuration with top return and multiple fan module configurations:
  - bottom discharge
  - rear discharge
  - front discharge
  - front and side discharge
  - fully open discharge
- Metal structural frame and inside part made with hot-dip zinc-plated sheet steel
- External panels coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation to class 1 according to Class B1 according to DIN 4102, BS 476 part 7, VO according to UL94, ASTM E84, class M1 according to NFP92-501
- Internal panels for shutting-off the compartments affected by the airflow, made with hot-dip zinc-plated sheet steel and captive screws
- High efficiency EU4 pleated air filters are contained in a metal frame and equipped with a dirty filter differential pressure switch and a low airflow differential pressure switch. Air filters are housed in a dedicated plenum box.
- The units are equipped with the latest generation Radical EC Fans for efficiency maximization. Impellers are made of high-tech compound material with optimized flow control, combined with highly efficient GreenTech EC motors. These fans are designed to have easier serviceability with quick removability kit.
- Low airflow differential pressure switch
- Cooling coil, mounted upstream of the fans, constructed of copper tubes expanded into hydrophilic aluminum fins, complete with stainless steel tray and a flexible condensate drain hose
- Brazed plate water-cooled condenser made from stainless steel.
- Double (\*\*22A models) refrigerant circuit each equipped with a scroll compressor (one fixed-speed and one brushless inverter driven)
- Refrigerant circuits complying with EC recommendations (PED 97/23/EC) including: liquid refrigerant receiver, filter-dryer and liquid sight glass, electronic expansion valve, high-pressure pressostats with manual reset.
- New generation of hermetic scroll compressor:
  - Fixed-speed compressors with Intermediate Discharge Valves (IDVs), built-in thermal protection and anti-vibration feet
  - Variable speed scroll compressors with a brushless Interior Permanent Magnet (IPM) and dedicated variable speed drive designed to provide maximum efficiency across the full operating range
- Refrigerant R410A
- Electronic Expansion Valve (EEV) to provide accurate control of the refrigerant superheat ensuring high energy efficiency also at low external temperatures.
- Electrical panel complying with EC recommendations (2006/95/CE, 2004/108/CE and related standards), housed in a compartment isolated from the airflow and including 24V control circuit transformer, metal isolating screen for protection from live components, mains switch, thermomagnetic circuit-breakers, terminal board for no-voltage signal and control contacts.
- 7 inch. IT Touch Screen display interface that allows to set operating parameters, monitor the trend of the main working parameters, and read any alarm messages.

| TECHNICAL DATA                                 |                                          |            |       |       |
|------------------------------------------------|------------------------------------------|------------|-------|-------|
| IXWV MODEL                                     |                                          | 2322A      | 2622A | 4022A |
| Fan type                                       | EC Backward-curved centrifugal motor fan |            |       |       |
| Power supply                                   | V/ph/Hz                                  | 400/3/50Hz |       |       |
| Fans                                           | Nr.                                      | 2          | 2     | 3     |
| Airflow                                        | m3/h                                     | 18800      | 23400 | 30000 |
| N° of fixed speed compressors                  |                                          | 1          | 1     | 1     |
| N° of variable speed compressors               |                                          | 1          | 1     | 1     |
| Refrigerating circuits                         |                                          | 2          | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW                                       | 92,9       | 103,4 | 144,4 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW                                       | 75,4       | 89,7  | 121,1 |
| DIMENSIONS                                     |                                          |            |       |       |
| Height                                         | mm                                       | 1950       | 1950  | 1950  |
| Fan module height                              | mm                                       | 565        | 565   | 565   |
| Length                                         | mm                                       | 1777       | 2082  | 2650  |
| Depth                                          | mm                                       | 900        | 900   | 900   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, inlet/outlet water temperatures 30/35°C, 0% glycol and ESP = 20 Pa.

- Schneider Electric IT J-Controller (J5 18 DIN), complying with EC recommendations (2006/95/CE, 2004/108/CE), where are connected analogical and digital inputs necessary for control of the unit.
- Control software design to provide a highly accurate real-time control of room conditions and the complete unit management such as:
  - electronic expansion valve complete management
  - advanced interactivity with the installation environment
  - dehumidification operating mode managed by means of EEV with devised algorithm which maintains constant air flow
  - double set-point with digital input selection
  - emergency operation
- The design of the IT J-Controller allows to physically isolate the internal connections from the external connections. The external connections on the upper level offer a wide variety of accessibility options:
  - External CAN and Group CAN
  - Isolated 2-wire and 4-wire RS485 ports
  - NetBotz universal sensor ports
  - Alarm/Shutdown Contacts
  - USB ports (Host, Device)
  - Ethernet
  - HDMI display interface
  - Modbus
  - Remote shutdown input
- Ability to interface with most common external BMS on communication protocols and boosting on connection towards Schneider monitoring systems:
  - Modbus/RTU RS485
  - SNMP
  - Modbus Over IP
  - StruxureWare
  - StruxureON
  - Cooling Tuner as service diagnostic tool

## Construction options

- Double power supply with automatic integrated management on the active line to provide redundancy and ensure a constant power supply
- 2-way pressostatic valve to modulate the water flow through the braze plate condenser
- Condensing Pressure Regulation Valve (Flooding Valve) to maintain a minimum condensing pressure even with low water inlet temperature
- Standard, cleanable or low conductivity humidifier with immersed-electrodes for modulating steam production available as an option for units equipped with cooling and humidification configuration
- Condensate drain pump
- Electrical heaters with aluminum-finned heating elements complete with safety thermostat (for manual resetting) to cut off the power supply in the event of overheating
- High efficiency EU5 pleated air filters. Air filters are housed in a dedicated plenum box.
- Power phase correction capacitors for compressors
- Active Flow Control to improve the balance of airflow between the cooling structure and IT equipment.
- Energy meter and CO2 emission calculator
- Motorized damper on the air return side

## Accessories

The units can be supplied with the following external accessories:

- Suction / discharge plenums
- Direct free-cooling plenums
- Fan module shipped separately from the upper unit
- Height adjustable legs kit
- Room temperature and humidity sensor
- Smoke and fire sensors
- Water leak detectors

Direct-expansion energy-saving units with backward-curved fans equipped with EC motor

# Uniflair LE

IDEV - IUEV



## Range

Cooling capacity: 50 ÷ 100 kW

1 VSD compressor and 1 fixed speed compressor

Refrigerant R-410A

EC fans

## Available versions

- Downflow (IDEV)
- Upflow (IUEV)

## Standard features

- Air flow configuration:
  - Downflow configuration with bottom or front discharge and suction from the top
  - Upflow configuration with top discharge and bottom or front return
- Metal structural frame and inside part made with hot-dip zinc-plated sheet steel
- External panels coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation to class 1 according to Class B1 according to DIN 4102, BS 476 part 7, VO according to UL94, ASTM E84, class M1 according to NFP92-501
- Internal panels for shutting-off the compartments affected by the airflow, made with hot-dip zinc-plated sheet steel and captive screws
- High efficiency EU4 pleated air filters are contained in a metal frame and equipped with a dirty filter differential pressure switch and a low airflow differential pressure switch. Downflow units have filters housed in a dedicated plenum box.
- The units are equipped with the latest generation Radical EC Fans for efficiency maximization. Impellers are made of high-tech compound material with optimized flow control, combined with highly efficient GreenTech EC motors. These fans are designed to have easier serviceability with quick removability kit.
- Low airflow differential pressure switch
- Cooling coil, mounted upstream of the fans, constructed of copper tubes expanded into hydrophilic aluminum fins, complete with stainless steel tray and a flexible condensate drain hose
- Brazed plate water-cooled condenser made from stainless steel.
- Single (\*\*11A models) or double (\*\*22A models) refrigerant circuit each equipped with a scroll compressor (one fixed-speed and one brushless inverter driven, except the 1511A model that is equipped with only one brushless inverter driven scroll compressor)
- Refrigerant circuits complying with EC recommendations (PED 97/23/EC) including: liquid refrigerant receiver, filter-dryer and liquid sight glass, electronic expansion valve, high-pressure pressostats with manual reset.
- New generation of hermetic scroll compressor:
  - Fixed-speed compressors with Intermediate Discharge Valves (IDVs), built-in thermal protection and anti-vibration feet
  - Variable speed scroll compressors with a brushless Interior Permanent Magnet (IPM) and dedicated variable speed drive designed to provide maximum efficiency across the full operating range
- Refrigerant R410A
- Electronic Expansion Valve (EEV) to provide accurate control of the refrigerant superheat ensuring high energy efficiency also at low external temperatures.
- Energy saving units are equipped with a new patent pending solution. The 3-way valve is replaced by three flow control devices designed to maximize efficiency and minimize water side pressure drops.
- Electrical panel complying with EC recommendations (2006/95/CE, 2004/108/CE and related standards), housed- in a compartment isolated from the airflow and including 24V control circuit transformer, metal isolating screen for protection from live components, mains switch, thermomagnetic circuit-breakers, terminal board for no-voltage signal and control contacts.
- 7-inch. IT Touch Screen display interface that allows to set operating parameters, monitor the trend of the main working parameters, and read any alarm messages.
- Schneider Electric IT J-Controller (J5 18 DIN), complying with EC recommendations (2006/95/CE, 2004/108/CE), where are connected analogical and digital inputs necessary for control of the unit.

| TECHNICAL DATA                                 |         |                                          |       |       |
|------------------------------------------------|---------|------------------------------------------|-------|-------|
| IDEV MODEL                                     |         | 1511A                                    | 2022A | 2922A |
| Fan type                                       |         | EC Backward-curved centrifugal motor fan |       |       |
| Power supply                                   | V/ph/Hz | 400/3/50Hz                               |       |       |
| Fans                                           | Nr.     | 2                                        | 2     | 3     |
| Airflow                                        | m3/h    | 16800                                    | 17000 | 26000 |
| N° of fixed speed compressors                  |         | -                                        | 1     | 1     |
| N° of variable speed compressors               |         | 1                                        | 1     | 1     |
| Refrigerant circuits                           |         | 2                                        | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 55,4                                     | 64,1  | 100,3 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 51,1                                     | 55,9  | 85,0  |
| DIMENSIONS                                     |         |                                          |       |       |
| Height                                         | mm      | 2150                                     | 2150  | 2150  |
| Length                                         | mm      | 1777                                     | 2082  | 2650  |
| Depth                                          | mm      | 900                                      | 900   | 900   |
| IUEV MODEL                                     |         | 1511A                                    | 2022A | 2922A |
| Fan type                                       |         | EC Backward-curved centrifugal motor fan |       |       |
| Power supply                                   | V/ph/Hz | 400/3/50Hz                               |       |       |
| Fans                                           | Nr.     | 2                                        | 2     | 2     |
| Airflow                                        | m3/h    | 16800                                    | 17000 | 26000 |
| N° of fixed speed compressors                  |         | -                                        | 1     | 1     |
| N° of variable speed compressors               |         | 1                                        | 1     | 1     |
| Refrigerating circuits                         |         | 2                                        | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 55,4                                     | 64,1  | 100,3 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 51,1                                     | 55,9  | 85,0  |
| DIMENSIONS                                     |         |                                          |       |       |
| Height                                         | mm      | 1950                                     | 1950  | 1950  |
| Length                                         | mm      | 1777                                     | 2082  | 2650  |
| Depth                                          | mm      | 900                                      | 900   | 900   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, inlet/outlet water temperatures 30/36°C, 0% glycol and ESP = 20 Pa

- Control software design to provide a highly accurate real-time control of room conditions and the complete unit management such as:
  - electronic expansion valve complete management
  - advanced interactivity with the installation environment
  - dehumidification operating mode managed by means of EEV with devised algorithm which maintains constant air flow
  - double set-point with digital input selection
  - emergency operation
- The design of the IT J-Controller allows to physically isolate the internal connections from the external connections. The external connections on the upper level offer a wide variety of accessibility options:
  - External CAN and Group CAN
  - Isolated 2-wire and 4-wire RS485 ports
  - NetBotz universal sensor ports
  - Alarm/Shutdown Contacts
  - USB ports (Host, Device)
  - Ethernet
  - HDMI display interface
  - Modbus
  - Remote shutdown input
- Ability to interface with most common external BMS on communication protocols and boosting on connection towards Schneider monitoring systems:
  - Modbus/RTU RS485
  - SNMP
  - Modbus Over IP
  - StruxureWare
  - StruxureON
  - Cooling Tuner as service diagnostic tool

## Construction options

- Double power supply with automatic integrated management on the active line to provide redundancy and ensure a constant power supply
- Standard, cleanable or low conductivity humidifier with immersed-electrodes for modulating steam production available as an option for units equipped with cooling and humidification configuration
- Condensate drain pump
- Electrical heaters with aluminum-finned heating elements complete with safety thermostat (for manual resetting) to cut off the power supply in the event of overheating
- High efficiency EU5 pleated air filters. Downflow units have filters housed in a dedicated plenum box.
- Power phase correction capacitors for compressors
- Active Flow Control to improve the balance of airflow between the cooling structure and IT equipment.
- Energy meter and CO2 emission calculator
- Motorized damper on the air return side

## Accessories

The units can be supplied with the following external accessories:

- Suction / discharge plenums
- Direct free-cooling plenums
- Floor stands with or without motorized damper
- Height adjustable base frame
- Room temperature and humidity sensor
- Smoke and fire sensors
- Water leak detectors

Direct-expansion energy-saving units with backward-curved fans equipped with EC motor

# Uniflair LE

IXEV



## Range

Cooling capacity: 60 ÷ 150 kW

1 VSD compressor and 1 fixed speed compressor

Refrigerant R-410A

EC fans

Available versions

- Underfloor (IXEV)

## Standard features

- Underfloor configuration with top return and multiple fan module configurations:
  - bottom discharge
  - rear discharge
  - front discharge
  - front and side discharge
  - fully open discharge
- Metal structural frame and inside part made with hot-dip zinc-plated sheet steel
- External panels coated with RAL9003 epoxy-polyester paint and internally lined with heat- and sound-proofing insulation to class 1 according to Class B1 according to DIN 4102, BS 476 part 7, VO according to UL94, ASTM E84, class M1 according to NFP92-501
- Internal panels for shutting-off the compartments affected by the airflow, made with hot-dip zinc-plated sheet steel and captive screws
- High efficiency EU4 pleated air filters are contained in a metal frame and equipped with a dirty filter differential pressure switch and a low airflow differential pressure switch. Air filters are housed in a dedicated plenum box.
- The units are equipped with the latest generation Radical EC Fans for efficiency maximization. Impellers are made of high-tech compound material with optimized flow control, combined with highly efficient GreenTech EC motors. These fans are designed to have easier serviceability with quick removability kit.
- Low airflow differential pressure switch
- Cooling coil, mounted upstream of the fans, constructed of copper tubes expanded into hydrophilic aluminum fins, complete with stainless steel tray and a flexible condensate drain hose
- Brazed plate water-cooled condenser made from stainless steel
- Single (\*\*11A models) or double (\*\*22A models) refrigerant circuit each equipped with a scroll compressor (one fixed-speed and one brushless inverter driven, except the 2311A model that is equipped with only one brushless inverter driven scroll compressor)
- Refrigerant circuits complying with EC recommendations (PED 97/23/EC) including: liquid refrigerant receiver, filter-dryer and liquid sight glass, electronic expansion valve, high-pressure pressostats with manual reset.
- New generation of hermetic scroll compressor:
  - Fixed-speed compressors with Intermediate Discharge Valves (IDVs), built-in thermal protection and anti-vibration feet
  - Variable speed scroll compressors with a brushless Interior Permanent Magnet (IPM) and dedicated variable speed drive designed to provide maximum efficiency across the full operating range
- Refrigerant R410A
- Electronic Expansion Valve (EEV) to provide accurate control of the refrigerant superheat ensuring high energy efficiency also at low external temperatures.
- Energy saving units are equipped with a new patent pending solution. The 3-way valve is replaced by three flow control devices designed to maximize efficiency and minimize water side pressure drops.
- Electrical panel complying with EC recommendations (2006/95/CE, 2004/108/CE and related standards), housed in a compartment isolated from the airflow and including 24V control circuit transformer, metal isolating screen for protection from live components, mains switch, thermomagnetic circuit-breakers, terminal board for no-voltage signal and control contacts.

| TECHNICAL DATA                                 |         |                                          |       |       |
|------------------------------------------------|---------|------------------------------------------|-------|-------|
| IXEV MODEL                                     |         | 2322A                                    | 2622A | 4022A |
| Fan type                                       |         | EC Backward-curved centrifugal motor fan |       |       |
| Power supply                                   | V/ph/Hz | 400/3/50Hz                               |       |       |
| Fans                                           | Nr.     | 2                                        | 2     | 3     |
| Airflow                                        | m3/h    | 18800                                    | 23400 | 30000 |
| N° of fixed speed compressors                  |         | 1                                        | 1     | 1     |
| N° of variable speed compressors               |         | 1                                        | 1     | 1     |
| Refrigerating circuits                         |         | 2                                        | 2     | 2     |
| Gross total cooling capacity <sup>1,2</sup>    | kW      | 57,8                                     | 98,3  | 135,1 |
| Gross sensible cooling capacity <sup>1,2</sup> | kW      | 56,5                                     | 80,9  | 108,4 |
| DIMENSIONS                                     |         |                                          |       |       |
| Height                                         | mm      | 1950                                     | 1950  | 1950  |
| Fan module height                              | mm      | 565                                      | 565   | 565   |
| Length                                         | mm      | 1777                                     | 2082  | 2650  |
| Depth                                          | mm      | 900                                      | 900   | 900   |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Data refers to nominal conditions: Room at 24 °C-50% RH, inlet/outlet water temperatures 30/36°C, 0% glycol and ESP = 20 Pa.

- 7 inch. IT Touch Screen display interface that allows to set operating parameters, monitor the trend of the main working parameters, and read any alarm messages.
- Schneider Electric IT J-Controller (J5 18 DIN), complying with EC recommendations (2006/95/CE, 2004/108/CE), where are connected analogical and digital inputs necessary for control of the unit.
- Control software design to provide a highly accurate real-time control of room conditions and the complete unit management such as:
  - electronic expansion valve complete management
  - advanced interactivity with the installation environment
  - dehumidification operating mode managed by means of EEV with devised algorithm which maintains constant air flow
  - double set-point with digital input selection
  - emergency operation
- The design of the IT J-Controller allows to physically isolate the internal connections from the external connections. The external connections on the upper level offer a wide variety of accessibility options:
  - External CAN and Group CAN
  - Isolated 2-wire and 4-wire RS485 ports
  - NetBotz universal sensor ports
  - Alarm/Shutdown Contacts
  - USB ports (Host, Device)
  - Ethernet
  - HDMI display interface
  - Modbus
  - Remote shutdown input
- Ability to interface with most common external BMS on communication protocols and boosting on connection towards Schneider monitoring systems:
  - Modbus/RTU RS485
  - SNMP
  - Modbus Over IP
  - StruxureWare
  - StruxureON
  - Cooling Tuner as service diagnostic tool

## Construction options

- Double power supply with automatic integrated management on the active line to provide redundancy and ensure a constant power supply
- Standard, cleanable or low conductivity humidifier with immersed-electrodes for modulating steam production available as an option for units equipped with cooling and humidification configuration
- Condensate drain pump
- Electrical heaters with aluminum-finned heating elements complete with safety thermostat (for manual resetting) to cut off the power supply in the event of overheating
- High efficiency EU5 pleated air filters. Air filters are housed in a dedicated plenum box.
- Power phase correction capacitors for compressors
- Active Flow Control to improve the balance of airflow between the cooling structure and IT equipment.
- Energy meter and CO2 emission calculator
- Motorized damper on the air return side

## Accessories

The units can be supplied with the following external accessories:

- Suction / discharge plenums
- Direct free-cooling plenums
- Fan module shipped separately from the upper unit
- Height adjustable legs kit
- Room temperature and humidity sensor
- Smoke and fire sensors
- Water leak detectors

Air-cooled remote condensers

# Uniflair CAP



## Range

Cooling capacity: 7 ÷ 160 kW

Refrigerant R-410A

## Standard features

- R-410A refrigerant.
- Low noise axial fans with IP54 class F electric motor.
- Fan speed pressure switch regulator with protection grade IP55.
- Safety protection grills.
- Copper and aluminum condensing coil.
- Low noise levels.
- Outdoor installation.
- High-efficiency, EU4-pleated air filter housed in a metal frame and filter differential pressure switch.
- Vertical or horizontal installation.
- Welded refrigeration connections for rapid and safe connection.
- Condensers are powered by the internal unit to grant operation at 208 – 230 V with a tolerance of +/-10%.

## Accessories

- Shut off valves
- Leg support kit
- Manifold kit to make the unit single circuit
- Coil protection treatment for use in aggressive environments
- Low temperature versions down to -40 °C with high-resilience steel liquid receiver and flooding valve to control the condensing temperature

| TECHNICAL DATA                    |         |                |       |       |       |       |       |       |       |
|-----------------------------------|---------|----------------|-------|-------|-------|-------|-------|-------|-------|
| CAP MODEL                         |         | 251            | 331   | 361   | 511   | 611   | 801   | 1011  | 1301  |
| Fan type                          |         | Axial          |       |       |       |       |       |       |       |
| Power supply                      | V/ph/Hz | 208 – 230/1/50 |       |       |       |       |       |       |       |
| Performance capacity <sup>1</sup> | kW      | 8,2            | 9,8   | 12,8  | 16,6  | 20,2  | 27,6  | 33,7  | 44,5  |
| Airflow rate at 0.08 in.w (20 Pa) | m³/h    | 3050           | 2750  | 3300  | 6100  | 9150  | 9150  | 8250  | 10980 |
| Number of circuits                |         | 1              | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| Noise level <sup>2</sup>          | dB(A)   | 51             | 50,5  | 51,5  | 53,2  | 52,6  | 54,6  | 54,1  | 54,6  |
| DIMENSIONS                        |         |                |       |       |       |       |       |       |       |
| Height                            | mm      | 732            | 732   | 1067  | 1227  | 1227  | 1877  | 1877  | 2277  |
| Width                             | mm      | 350            | 350   | 350   | 350   | 350   | 350   | 350   | 350   |
| Depth                             | mm      | 700            | 700   | 700   | 700   | 700   | 700   | 700   | 700   |
| CAP MODEL                         |         | 1802           | 2002  | 3002  | 4002  | 5002  | 6002  | 7002  |       |
| Fan type                          |         | Axial          |       |       |       |       |       |       |       |
| Power supply                      | V/ph/Hz | 208 – 230/1/50 |       |       |       |       |       |       |       |
| Performance capacity <sup>1</sup> | kW      | 61,3           | 67    | 88,7  | 96,4  | 127,9 | 145,8 | 166,7 |       |
| Airflow rate at 0.08 in.w (20 Pa) | m³/h    | 17500          | 16900 | 27500 | 26250 | 35000 | 45000 | 42250 |       |
| Number of circuits                |         | 2              | 2     | 2     | 2     | 2     | 2     | 2     |       |
| Noise level <sup>2</sup>          | dB(A)   | 61             | 61    | 63    | 63    | 64    | 65    | 65    |       |
| DIMENSIONS                        |         |                |       |       |       |       |       |       |       |
| Height                            | mm      | 2217           | 2217  | 3217  | 3217  | 4217  | 5217  | 5217  |       |
| Width                             | mm      | 400            | 400   | 400   | 400   | 400   | 400   | 400   |       |
| Depth                             | mm      | 700            | 700   | 700   | 700   | 700   | 700   | 700   |       |

<sup>1</sup> With external temperature 35 °C and 50 °C R-410A condensing temperature.

<sup>2</sup> Measured in free field conditions at 5 meters from the unit.

# Uniflair OCC

## Range

Heat dissipation: 40 ÷ 200 kW

Refrigerant R-410A

AC or EC fans

## Standard features

- R-410A refrigerant
- Low-speed axial fans compliant with ERP2015
- Fan speed regulator works exclusively via Modbus commands
- Copper and aluminum condensing coil
- Outdoor installation
- Vertical or horizontal installation
- High-efficiency, EU4-pleated air filter housed in a metal frame and filter differential pressure switch.

## Construction options and accessories

- Versions with electronically commutated (EC) motor to reduce the sound pressure level
- Shut-off valves
- Leg support kit
- Coil protection treatment for use in aggressive environments (optional)
- Low temperature versions down to -40 °C with high-resilience steel liquid receiver and flooding valve to control the condensing temperature. The kit is shipped separately from the OCC LT condenser, and must be installed on site.

| TECHNICAL DATA                |         |                    |          |          |          |          |          |          |
|-------------------------------|---------|--------------------|----------|----------|----------|----------|----------|----------|
| OCC - ONE CIRCUIT             |         | 1701               | 2101     | 2401     | 2601     | 3101     | 3301     | 3901     |
| Fan Type                      |         | AC / EC axial fans |          |          |          |          |          |          |
| Power supply                  | V/ph/Hz | 230/1/50           | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 | 400/3/50 | 400/3/50 |
| Fans                          | Nr.     | 2                  | 2        | 2        | 2        | 3        | 2        | 3        |
| Airflow                       | Nr.     | 2                  | 2        | 2        | 3        | 3        | 2        | 2        |
| Heat dissipation <sup>1</sup> | m3/h    | 17227              | 16313    | 15216    | 22275    | 23372    | 32700    | 29525    |
| Noise level <sup>2</sup>      | kW      | 45,8               | 55,5     | 62,1     | 69,7     | 81,9     | 87,9     | 102      |
| Refrigerating circuits        | dB(A)   | 45                 | 45       | 45       | 47       | 47       | 51       | 51       |
| DIMENSIONS                    |         |                    |          |          |          |          |          |          |
| Height                        | mm      | 1150               | 1150     | 1150     | 1150     | 1150     | 1250     | 1250     |
| Length                        | mm      | 2380               | 2380     | 2380     | 2660     | 2660     | 2660     | 2660     |
| Depth                         | mm      | 800                | 800      | 800      | 800      | 800      | 800      | 800      |
| IUAV MODEL                    |         | 3502               | 4202     | 4702     | 5302     | 6202     | 6702     | 7702     |
| Fan type                      |         | AC / EC axial fans |          |          |          |          |          |          |
| Power supply                  | V/ph/Hz | 230/1/50           | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 | 400/3/50 | 400/3/50 |
| Fans                          | Nr.     | 4                  | 4        | 4        | 6        | 6        | 4        | 4        |
| Airflow                       | m3/h    | 34453              | 32625    | 30431    | 44550    | 46744    | 65400    | 59050    |
| Heat dissipation <sup>1</sup> | kW      | 91,6               | 111,0    | 124,2    | 139,4    | 163,8    | 175,8    | 204,0    |
| Noise level <sup>2</sup>      | dB(A)   | 48                 | 48       | 48       | 50       | 50       | 54       | 54       |
| DIMENSIONS                    |         |                    |          |          |          |          |          |          |
| Height                        | mm      | 2253               | 2253     | 2253     | 2253     | 2253     | 2453     | 2453     |
| Length                        | mm      | 2380               | 2380     | 2380     | 2660     | 2660     | 2660     | 2660     |
| Depth                         | mm      | 800                | 800      | 800      | 800      | 800      | 800      | 800      |

<sup>1</sup> Gross cooling capacities; fans must be deduced to obtain net cooling data.

<sup>2</sup> Measured in free field conditions at 10 meters from the unit.

High-density cooling solutions

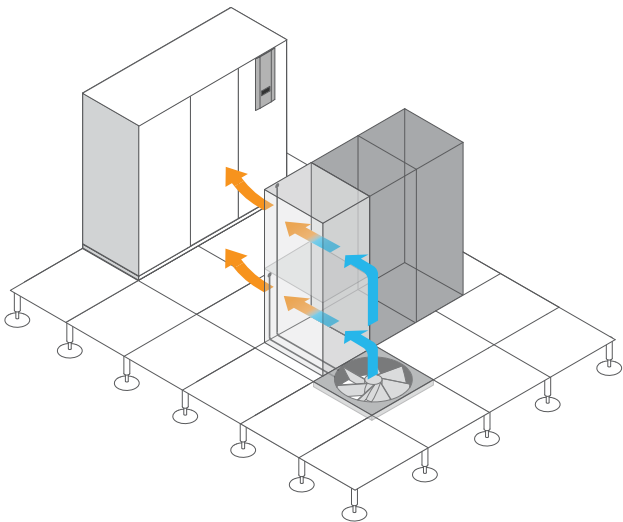
# Active floor



Range  
Cooling capacity: 6 ÷ 15 kW

Standard features

- Active floor is a flexible and modular system for cooling data centers with medium- and high-density loads. Integrated within a modular access floor in front of the intake section of the rack, the Active Floor fits exactly into a modular access floor panel measuring 600 mm x 600 mm. The cold air produced by the close control perimeter units is directly channeled to the source of the thermal load thanks to the advanced adjustment of the direction of the airflow. The active floor creates a high-density bubble of air, which is maintained at a constant temperature along the whole intake section of the rack, guaranteeing operation at the nominal design conditions. The airflow varies according to the actual thermal load and is detected by two sensors placed on the discharge section of the servers.
- Active floor employs variable speed EC, motor-driven fans to minimize energy consumption.
- This solution may be used in stand-alone applications as well as with perimeter close control units equipped with underfloor pressure control.
- The active floor guarantees optimum operation of high-density equipment for loads installed in each module of 25 kW and 40 kW with solutions featuring the two modules certified by TUV.



| TECHNICAL DATA   |          |            |
|------------------|----------|------------|
| ACTIVE FLOOR     |          |            |
| Power supply     | V/ph/Hz  | 220/1+N/60 |
| N° of fans/motor |          | 1/E.C      |
| Max airflow      | m³/h/CFM | 4988/2936  |
| Nominal airflow  | m³/h/CFM | 2880/1650  |
| Min airflow      | m³/h/CFM | 1698/999   |
| DIMENSIONS       |          |            |
| Height           | mm/inch  | 230/9.1    |
| Width            | mm/inch  | 600/23.6   |
| Depth            | mm/inch  | 600/23.6   |

# Mobile telecom air conditioners

Modern telephone technology uses equipment that is usually housed in shelters or in small- to medium-sized rooms. These sites form effective technological rooms with common needs from which a series of particular requirements arise.

## Around-the-clock operation every day of the year

- Highly reliable equipment
- Reduced running costs

## High breakdown costs

- Rapid intervention
- Avoidance of critical conditions

## Expensive equipment

- Guaranteed control of environmental conditions
- Management of critical situations
- Long life for the system

## Unmanned sites

- Autonomous control of emergencies
- Elimination only of the sensible heat

## Reduced space

- High density of thermal loads
- Protection of the space dedicated to the instruments

## Applications in various environments

- Easy installation
- Adaptable for any site

To satisfy these needs, Schneider Electric has designed various product families to ensure:

- Operational accuracy
- Continuous service
- Flexibility
- Low running costs

Uniflair Mobile telecom air conditioners provide the features of the most advanced cooling units.

## Connection to supervision systems

All the units can be connected to a RS485 serial line by using an additional card, ensuring complete monitoring of the system. This allows for:

- Control through the Uniflair Netvisor supervision system
- Connection to a centralized supervision system

Furthermore, all the units are fitted with digital alarm outputs (between three and six depending on the model), which make it easier to control the status of the cooling unit and the connection to the external control PLC.

## Intelligent free-cooling

The microprocessor control continuously monitors the room temperature and the outside environmental conditions: if these conditions allow the dissipation of the thermal load, free-cooling is then activated.

Unlike traditional systems, the free-cooling start-up temperature varies as the thermal load in the conditioned room varies.

| COOLING        | MECHANICAL | FREE-COOLING | MIXED      |
|----------------|------------|--------------|------------|
| Compressor     | ON         | OFF          | OFF        |
| Evaporator fan | ON         | ON           | ON         |
| Condenser fan  | ON         | OFF          | ON         |
| Damper         | Closed     | Open         | Modulating |

Minimal discharge air temperature with modulating damper.



### Continuous operation during emergencies

Telephone shelters are constructed to guarantee continuous operation even during power failures. The free-cooling damper, microprocessor control, and evaporator fan can also be powered by the UPS in the shelter. During power failures the room is cooled by the outside air through the free-cooling damper. Without air conditioning, the temperature in the racks rises from 45 °C to 70 °C in less than 15 minutes.

### Stand-by control

Up to 10 units can be installed in each shelter, which are linked to each other through the local LAN network, offering the following benefits:

- Equal wear to the units that are rotated on a timed basis
- The stand-by unit turns on if there is an alarm in the working unit
- Automatic power turns on if there is an exceptional thermal load
- Control of the combined operating phases with excellent energy savings

### Mobile telecom offer overview

| Monoblock wall-mounted external installation units                                  |                                                                                     | Monoblock internal installation units                                               |                                                                                      | Splitted units                                                                        |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Upflow                                                                              | Downflow                                                                            | Upflow                                                                              | Downflow                                                                             | Ceiling mounted                                                                       | Wall mounted                                                                          |
|  |  |  |  |  |  |
| Uniflair WM<br>WMA-WMF                                                              | Uniflair WM<br>WDA-WDF                                                              | Uniflair MB<br>XMA-XMF                                                              | Uniflair MB<br>XDA-XDF                                                               | Uniflair SP<br>UCA-UCF                                                                | Uniflair SP<br>UWA-UWF                                                                |

Monoblock wall-mounted units for external installation with downflow air discharge

# Uniflair WM

WDA – WDF



### Range

Cooling capacity: 6 ÷ 15 kW

Refrigerant R407C

### Available versions

- Without direct free-cooling (WDA)
- With direct free-cooling (WDF)

## Standard features

- Monoblock conditioning units can be installed on the outside wall of the air conditioned room.
- Built-in air condenser is included. The units can be supplied completely assembled and filled with refrigerant; all the components are set in the factory for normal working conditions and the electrical and cooling functions are tested. Installation only requires simple electrical wiring and mechanical fixing to the shelter, even by nonspecialized personnel.
- The direct free-cooling units (WMF) are supplied with a motorized damper. During free-cooling the excess air is expelled from the room through the condenser section without using any extra overpressure dampers.
- Complete access to all the components allows servicing entirely from the outside, without having to enter the room which is normally protected by controlled access.
- The external screws are stainless steel, antitamper and can only be removed using special tools.
- The double external paneling is available in galvanized, painted sheet steel and gives separate access to the fan compartment and electric board compartments. This enables maintenance and regulation to be carried out without having to turn the unit off.
- Power supply:
  - 400 V/3+N/50 Hz standard on request
  - 230 V/1/50 Hz on 221 and 341 models
  - Main power supply + UPS 48 VDC (evaporator DC fan/s)
- Microprocessor control.
- Scroll compressor.
- EU4 filter (optional).
- Modulating condenser fan/s speed control.
- Free-cooling metal pre-filter.

| TECHNICAL DATA                            |         |            |          |           |           |
|-------------------------------------------|---------|------------|----------|-----------|-----------|
| WDA – WDF MODEL                           |         | WDF0221A   | WDF0341A | WDF0481A  | WDF0501A  |
| Power supply                              | V/ph/Hz | 400/3+N/50 |          |           |           |
| Mechanical cooling <sup>1</sup>           |         |            |          |           |           |
| Sensible cooling capacity                 | kW      | 6,0/6,0    | 9,0/9,0  | 12,0/12,0 | 15,0/15,0 |
| Airflow                                   | m³/h    | 1650       | 2350     | 2900      | 4200      |
| COMPONENT FEATURES                        |         |            |          |           |           |
| N° of evaporator fans                     |         | 1          | 2        | 2         | 2         |
| N° of condenser fans                      |         | 1          | 1        | 1         | 1         |
| Compressor power consumption <sup>1</sup> | kW      | 1,25       | 1,94     | 3,56      | 3,78      |
| DIMENSIONS                                |         |            |          |           |           |
| Height                                    | mm      | 1800       | 1800     | 1800      | 1800      |
| Width                                     | mm      | 950        | 950      | 950       | 1120      |
| Depth                                     | mm      | 650        | 650      | 650       | 650       |

<sup>1</sup> Data refers to mechanical operation:  
Ambient temperature:  
27 °C/40% RH,  
external temperature  
35 °C/R407C  
(data consider inlet and outlet evaporating coil),  
and Maximum external temperature 45 °C.

Monoblock wall-mounted units for external installation with upflow air discharge

# Uniflair WM

WMA – WMF



## Range

Cooling capacity: 3.9 ÷ 16.9 kW

Refrigerant R407C

Available versions

- Without direct free-cooling (WMA)
- With direct free-cooling (WMF)

## Standard features

- Monoblock conditioning units are installed on the outside wall of the air conditioned room.
- Air condenser is built in. The units can be supplied completely assembled and filled with refrigerant.
- All the components are set in the factory for normal working conditions. Electrical and cooling functions are all tested. Installation only requires simple electrical wiring and mechanical fixing to the shelter, even by nonspecialized personnel.
- The direct free-cooling units (WMF) are supplied with a motorized damper. During free-cooling the excess of air is expelled from the room through the condenser section without using extra overpressure dampers.
- Complete access to all the components so that servicing can be entirely done from the outside, without having to enter the room which is normally protected by controlled access.
- The external screws are stainless steel, antitamper and can only be removed using special tools.
- The double external paneling is available in galvanized, painted sheet steel and gives separate access to the fan compartment and electric board compartments. This enables maintenance and regulation to be carried out without having to turn the unit off.
- Power supply:
  - 230 V/1/50 Hz or 400 V/3+N/50 Hz (standard, according to the model)
  - Main power supply + UPS 230 V
  - Main power supply + UPS
  - 48 VDC (evaporator DC-fan/s)
- Microprocessor control.
- Scroll compressor (rotary for 0121 model) housed in compartment isolated from the airflow.
- EU4 filter (optional).
- Modulating condenser fan/s speed control.
- Free-cooling metal pre-filter.

| TECHNICAL DATA                        |         |          |         |         |         |            |           |           |
|---------------------------------------|---------|----------|---------|---------|---------|------------|-----------|-----------|
| WMA – WMF MODELS                      |         | 0121     | 0181    | 0251    | 0281    | 0331       | 0551      | 0661      |
| Power supply                          | V/ph/Hz | 230/1/50 |         |         |         | 400/3+N/50 |           |           |
| Mechanical cooling <sup>1</sup>       |         |          |         |         |         |            |           |           |
| Sensible cooling capacity             | kW      | 3,9/3,9  | 5,4/5,4 | 7,4/7,4 | 8,2/8,2 | 9,6/9,6    | 15,2/15,2 | 16,9/16,9 |
| Airflow                               | m³ / h  | 1240     | 1460    | 2240    | 2240    | 2670       | 4580      | 4580      |
| WMF MODEL                             |         |          |         |         |         |            |           |           |
| Free-cooling <sup>2</sup>             |         |          |         |         |         |            |           |           |
| Sensible cooling capacity             | kW      | 5,0      | 5,8     | 8,5     | 8,5     | 9,2        | 17,4      | 17,4      |
| Airflow                               | m³/h    | 1230     | 1430    | 2100    | 2100    | 2280       | 4310      | 4310      |
| COMPONENT FEATURES                    |         |          |         |         |         |            |           |           |
| N° of evaporator fans                 |         | 1        | 1       | 2       | 2       | 2          | 1         | 1         |
| N° of condenser fans                  |         | 1        | 1       | 1       | 1       | 2          | 1         | 1         |
| Air filter efficiency                 |         | EU2      | EU2     | EU2     | EU2     | EU2        | EU2       | EU2       |
| Nominal compressor power <sup>3</sup> | kW      | 1,2      | 1,8     | 2,2     | 2,5     | 3,0        | 4,4       | 5,2       |
| Electric heating <sup>4</sup>         | kW      | 2,6      | 4,0     | 4,0     | 4,0     | 6,0        | 6,0       | 6,0       |
| Noise pressure level <sup>5</sup>     | dB(A)   | 40,5     | 44,0    | 45,5    | 45,5    | 49,0       | 50,0      | 54,0      |
| DIMENSIONS                            |         |          |         |         |         |            |           |           |
| Height                                | mm      | 1790     | 1790    | 1940    | 1940    | 1940       | 2250      | 2250      |
| Width                                 | mm      | 650      | 650     | 930     | 930     | 930        | 1050      | 1050      |
| Depth                                 | mm      | 400      | 400     | 450     | 450     | 450        | 625       | 625       |

<sup>1</sup> Room: 26 °C/40% RH; external temperature: 35 °C; R407C.

<sup>2</sup> Room: 26 °C; external temperature: 14 °C; R407C.

<sup>3</sup> ARI standard.

<sup>4</sup> Optional.

<sup>5</sup> Measurements taken at 1 meter above the floor and at a distance of 5 meters from the unit in free field, mechanical cooling.

Monoblock units for internal installations

# Uniflair MB

XMA – XMF – XDA – XDF



## Range

Cooling capacity: XM\* 5.7 ÷ 12.3 kW XD\* 6.3-15.0 kW

Refrigerant R407C

## Available versions

- Upflow (XMA)
- Upflow with free-cooling (XMF)
- Downflow (XDA)
- Downflow with free-cooling (XDF)

## Standard features

- Monoblock conditioning units are installed inside the installation. These units are ideal when the required solution is easy to install with all the refrigerant components already installed.
- The unit has a self-supporting steel structure finished in epoxy powder and external panels in steel finished in epoxy powder; it's lined internally with abrasion-resistant, self-extinguishing material for noise and heat insulation.
- Units are supplied ready for installation, completely assembled and filled with refrigerant in the factory, where they are calibrated and the electric and cooling systems are tested.
- Easy installation and connection to the outside is provided using rigid or flexible pipes that are fitted to the window.
- The air filtration is provided with an EU2-efficiency air filter in self-extinguishing material and a rigid metal frame; the free-cooling version is available with an additional free-cooling metal pre-filter. EU4 filters are available as an option.
- The evaporating and condensing fans are made of in galvanized steel. Double-inlet centrifugal fan(s) with forward-curved blower are keyed directly to motor shaft.
- The electrical panel is housed in a compartment isolated from the airflow, complying with 73/23/CEE Norm. Separate power supply for fans and microprocessor is available as an option.
- Cooling circuit includes:
  - Filter and flow sight glass
  - Thermostatic expansion valve
  - High- and low-pressure pressostats
  - Scroll compressor with thermal protection
  - Ecological refrigerant R407C
  - Modulating condenser fan speed regulation.
- The microprocessor control manages the unit autonomously and the free-cooling function and can be integrated with the most common BMSs. The control includes:
  - Microprocessor control board and user terminal
  - Room temperature sensor
  - Mixed air temperature sensor (X\*F version only)
  - External temperature sensor (X\*F version only)
- Power supply:
  - 230 V/ 1/ 50 Hz or 400 V/3+N/50 Hz (Standard, according to the model)
  - Main power supply + UPS 230 V
  - Main power supply + UPS 48 VDC (evaporator DC fan/s, available only for XMF)
- Microprocessor control.
- Scroll compressor with low noise level.
- EU4 filter (optional).
- Modulating condenser fan/s speed control.
- Free-cooling metal pre-filter.

| TECHNICAL DATA                  |         |          |         |            |            |           |           |
|---------------------------------|---------|----------|---------|------------|------------|-----------|-----------|
| XDA – XDF MODELS                |         | 0221     | 0281    | 0341       | 0481       | 0501      |           |
| Power supply                    | V/ph/Hz | 230/1/50 |         | 400/3+N/50 |            |           |           |
| Mechanical cooling <sup>1</sup> |         |          |         |            |            |           |           |
| Total/sensible cooling capacity | 1.058   | 6,3/5,8  | 7,0/6,4 | 9,0/9,0    | 12,0/12,0  | 14,9/14,9 |           |
| Airflow                         | m³/h    | 2230     | 2230    | 2900       | 3920       | 3920      |           |
| Free-cooling <sup>2</sup>       |         |          |         |            |            |           |           |
| Sensible cooling capacity       | kW      | 9        | 9       | 11,7       | 15,8       | 15,8      |           |
| COMPONENT FEATURES              |         |          |         |            |            |           |           |
| N° of evaporator fans           |         | 1        | 1       | 1          | 1          | 1         |           |
| N° of condenser fans            |         | 1        | 1       | 2          | 2          | 2         |           |
| Air filter efficiency           |         | EU2      | EU2     | EU2        | EU2        | EU2       |           |
| Electric heating <sup>3</sup>   | kW      | 2        | 2       | 4          | 4          | 4         |           |
| DIMENSIONS                      |         |          |         |            |            |           |           |
| Height                          | mm      | 1970     | 1970    | 2130       | 2130       | 2130      |           |
| Width                           | mm      | 850      | 850     | 1160       | 1160       | 1160      |           |
| Depth                           | mm      | 450      | 450     | 650        | 650        | 650       |           |
| XMF MODELS                      |         | 0221     | 0281    | 0341       | 0401       | 0491      | 0555      |
| Power supply                    | V/ph/Hz | 230/1/50 |         |            | 400/3+N/50 |           |           |
| Mechanical cooling <sup>1</sup> |         |          |         |            |            |           |           |
| Total/sensible cooling capacity | kW      | 5,7/5,7  | 7,1/7,1 | 8,4/8,4    | 10,8/10,8  | 12,3/12,3 | 16,5/16,5 |
| Airflow                         | m³/h    | 1500     | 2000    | 2200       | 3700       | 3700      | 3710      |
| Free-cooling <sup>2</sup>       |         |          |         |            |            |           |           |
| Sensible cooling capacity       | kW      | 6,1      | 8,1     | 8,9        | 15         | 15        | 15        |
| COMPONENT FEATURES              |         |          |         |            |            |           |           |
| N° of evaporator fans           |         | 1        | 1       | 1          | 2          | 2         | 2         |
| N° of condenser fans            |         | 1        | 1       | 1          | 2          | 2         | 2         |
| Air filter efficiency           |         | EU2      | EU2     | EU2        | EU2        | EU2       | EU2       |
| Electric heating <sup>3</sup>   | kW      | 2        | 2       | 4          | 4          | 4         | 4         |
| DIMENSIONS                      |         |          |         |            |            |           |           |
| Height                          | mm      | 1960     | 1960    | 1960       | 1960       | 1960      | 1960      |
| Width                           | mm      | 1200     | 1200    | 1200       | 1200       | 1200      | 1200      |
| Depth                           | mm      | 600      | 600     | 600        | 600        | 600       | 600       |

<sup>1</sup> Room: 26 °C/40% RH;  
external temperature:  
35 °C; R407C.

<sup>2</sup> Room: 26 °C;  
external temperature:  
14 °C; R407C.

<sup>3</sup> Optional.

Split units for internal installations

# Uniflair SP

UCA – UCF – UWA – UWF



## Range

Cooling capacity: 5,9 ÷ 14,5 kW

Refrigerant R407C

## Available versions

- Ceiling mounted (UCA)
- Ceiling mounted with direct free-cooling (UCF)
- Wall mounted (UWA)
- Wall mounted with direct free-cooling (UWF)

## Standard features

- Units are made of two separate sections: the evaporation section, which is installed inside the conditioned room (UCA – UCF – UWA – UWF), and the condensation section (MRA), which is installed on the outside.
- The evaporator is designed to be fixed to the ceiling or a wall and, with advanced microprocessor control, it is very precise in maintaining the set parameters inside the conditioned room.
- Servicing is very simple as different access is given to the electrical board, the technical compartment, and the servomotor for the free-cooling damper.
- There is a special panel for the fan compartment, which means calibration and servicing can be carried out safely without having to turn the unit off.
- UCF units have free-cooling that intakes air from the back of the unit through a connection that can be made using either rigged ducting or flexible piping.
- The user terminal (on request) is fitted to the wall for the ceiling units and onboard for the wall fitted units, and gives complete control for the unit regarding changing and displaying the operating parameters.
- Internal and external units are powered separately.
- Power supply:
  - 230 V/1/0 Hz or 400 V/3+N/50 Hz (Standard, according to the model)
- Main power supply + UPS
  - 48 VDC (evaporator DC-fan/s)
- Evaporator sections are equipped with:
  - Microprocessor control
  - EU4 filter (optional)
  - Scroll compressor
  - Modulating condenser fan/s speed control

| TECHNICAL DATA                        |         |                   |         |         |           |            |                |          |         |           |            |  |
|---------------------------------------|---------|-------------------|---------|---------|-----------|------------|----------------|----------|---------|-----------|------------|--|
| MODELS                                |         | CEILING UCA – UCF |         |         |           |            | WALL UWA – UWF |          |         |           |            |  |
|                                       |         | 0341              |         |         | 0401      | 0481       | 0341           |          |         | 0401      | 0481       |  |
| Power supply                          | V/ph/Hz | 230/1/50          |         |         |           |            | 230/1/50       |          |         |           |            |  |
| Mechanical cooling <sup>1</sup>       |         |                   |         |         |           |            |                |          |         |           |            |  |
| Sensible cooling cap.                 | kW      | 5,9/5,9           | 7,1/7,1 | 8,1/8,1 | 10,4/10,4 | 14,5/14,5  | 5,9/5,9        | 7,1/7,1  | 8,1/8,1 | 10,4/10,4 | 14,5/14,5  |  |
| Airflow                               | m³/h    | 1850              | 1850    | 220     | 2600      | 3900       | 1850           | 1850     | 2200    | 2600      | 3900       |  |
| UCF-UWF                               |         | 0341              |         |         | 0401      | 0481       | 0341           |          |         | 0401      | 0481       |  |
| Free-cooling <sup>2</sup>             |         |                   |         |         |           |            |                |          |         |           |            |  |
| Sensible cooling cap.                 | kW      | 6,7               | 6,7     | 6,9     | 9,5       | 14         | 6,7            | 6,7      | 6,9     | 9,5       | 14         |  |
| Airflow                               | m³/h    | 1850              | 1850    | 220     | 2600      | 3900       | 1850           | 1850     | 2200    | 2600      | 3900       |  |
| DIMENSIONS                            |         |                   |         |         |           |            |                |          |         |           |            |  |
| Height                                | mm      | 330               | 330     | 330     | 410       | 410        | 1200           | 1200     | 1200    | 1300      | 1300       |  |
| Width                                 | mm      | 950               | 950     | 950     | 1150      | 1150       | 980            | 980      | 980     | 1150      | 1150       |  |
| Depth                                 | mm      | 1050              | 1050    | 1050    | 1300      | 1300       | 330            | 330      | 330     | 410       | 410        |  |
| EXTERNAL UNIT MRA                     |         | 0221              | 0281    | 0341    | 0401      | 0611       | 0211           | 0281     | 0341    | 0401      | 0611       |  |
| Power supply                          | V/ph/Hz | 230/1/50          |         |         |           | 400/3+N/50 |                | 230/1/50 |         |           | 400/3+N/50 |  |
| Nominal compressor power <sup>3</sup> | kW      | 1,7               | 2,1     | 2,6     | 3,1       | 4,6        | 1,7            | 2,1      | 2,6     | 3,1       | 4,6        |  |
| Airflow                               | m³/h    | 1800              | 2990    | 2990    | 6290      | 6290       | 1800           | 2990     | 2990    | 6290      | 6290       |  |
| DIMENSIONS                            |         |                   |         |         |           |            |                |          |         |           |            |  |
| Height                                | mm      | 610               | 610     | 610     | 1230      | 1230       | 610            | 610      | 610     | 1230      | 1230       |  |
| Width                                 | mm      | 850               | 850     | 850     | 1200      | 1200       | 850            | 850      | 850     | 1200      | 1200       |  |
| Depth                                 | mm      | 345               | 345     | 345     | 80        | 80         | 345            | 345      | 345     | 480       | 480        |  |

<sup>1</sup> Room: 26 °C/45% RH; external temperature: 35 °C; R407C.

<sup>2</sup> Room: 26 °C; external temperature: 14 °C; R407C.

<sup>3</sup> ARI standard.



Life Is On



Schneider Electric Industries SAS

35 rue Joseph Monier  
92500 Rueil-Malmaison, France

[schneider-electric.com](http://schneider-electric.com).

August 2017

©2017 Schneider Electric. All Rights Reserved. Schneider Electric | Life Is On is a trademark and the property of Schneider Electric SE, its subsidiaries, and affiliated companies.  
998\_20086951\_GMA-US