



Uniflair IDAV-IUAV

Highly efficient Air-Cooled
Direct Expansion
with Variable Speed Drive
Compressors
20-50 kW



se.com

Life Is On

Schneider
Electric

Efficient, flexible, reliable, intelligent control

BOOSTED EFFICIENCY

Variable-speed drive (VSD) compressors have an intelligent drive system that adjusts the motor speed to match air demand, eliminating wasteful operation in an unloaded state. This innovative technology delivers substantial energy, and the energy saved can be as high as 50%



RELIABLE COOLING CONTINUITY

Our Uniflair Room Cooling units are designed to ensure continuous cooling and safe operation, even in the face of power disruptions. Our redundant power sources and advanced emergency strategies protect your critical applications, minimizing downtime and safeguarding your valuable assets.



FLEXIBLE AND ADAPTABLE

Available in upflow, downflow and underfloor versions Uniflair Room Cooling units suit for installations with or without raised floor.

Our product range extends from 20 to 50 kW, ensuring you have the optimal cooling solution for your specific requirements.



System Architecture: standard features

Air Filters

- High efficiency, EU4 or EU5 (optional), pleated air filters are contained in a metal frame
- Dirty filter differential pressure switch
- Low airflow differential pressure switch

Cooling coil

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

Electronically Commuted fans

- High-tech compound material impellers with optimized flow control
- High efficiency EC motors
- Low power consumption
- High part-load efficiency
- Fan speed regulation by Modbus signal

Brushless VSD scroll compressor

- Discharge temperature control
- High energy efficiency at partial load
- Low starting current
- No sliding contacts

New microprocessor controller

- 7-inch, touch-screen LCD display interface
- Integrated management of the EEV and refrigerating circuit parameters
- Integrated Unloading logic on VSD units
- Full management of the condenser status including single fan status
- Grouping logic integrated
- RS485 and TCP/IP card bus integrated targeting the main communication protocols
- Native communication with EcoStruxure
- USB and Service port integrated in the display interface

Frame

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



Main configurable options

Power supply options

- Single power supply with ultracapacitor
- Double power supply with ultracapacitor and automatic changeover

Unit version options

- Cooling only: cooling units operate by controlling the air temperature set point (return or supply).
- Cooling and humidification: cooling and humidification units operate by controlling the air temperature set point (return or supply) and the relative humidity set point.
- Cooling and dehumidification: cooling units operate by controlling the air temperature set point (return or supply) and the maximum humidity value.

Humidifier options

- Immersed electrodes humidifier for standard conductivity water
- Immersed electrodes humidifier with cleanable electrodes for standard conductivity water
- Immersed electrodes humidifier for low conductivity water
- Immersed electrodes humidifier with cleanable electrodes for low conductivity water

Air-cooled remote condensers (CAT)

- R410A refrigerant
- Powersupply:230V/1ph/50Hz
- Vertical or horizontal installation
- Equipped with axial fans Ac or EC type
- Fan speed of the condenser directly controlled by the indoor unit through 0-10V signal
- Copper/aluminum condensing coil
- Standard range suitable for operation with outdoor temperature range -25°C to 50°C
- Specific range for low temperature operation (down to -40°C) with LT temperature Kit (available only with AC fans).



Additional accessories

- Suction from the top and front discharge plenums
- Direct free-cooling plenum with room air suction from the front and fresh air suction from the back
- Motorized damper
- Adjustable base frame (200 – 600 mm)
- Fire and smoke sensors
- Water leak detector
- Room air temperature / humidity sensor

Uniflair Room Cooling Direct Expansion 20-50 kW

High Performance Compact Direct expansion Air Cooled Units designed to ensure the maximum flexibility for integration in your system.

Flexible and adaptable

The versatility in configurations make the Uniflair Room Cooling an excellent solution to suit different installation' requirements and site layout.

Available in upflow and downflow versions Uniflair Room Cooling units suit for installations with or without raised floor.

Perfectly adaptable to all kinds of installations even in case of long distances between indoor and outdoor units. The maximum equivalent piping length between unit and condenser can reach 100 m.



Uniflair Room Cooling units fit for extreme conditions from 50°C down to -40°C outdoor temperature.

High performance delivering boosted in compact dimension cooling capacity and efficiency in a reduced footprint.

Extensive connectivity

Suitable for connection with most common building management systems (BMS):

- Modbus RTU: integrated RS485 connector
- BMS on TCP/IP (UTP) networks: SNMP, ModBus TCP/IP, BacNet/IP.
- Compatibility with EcoStruxure™ IT Software

Reliable Cooling continuity

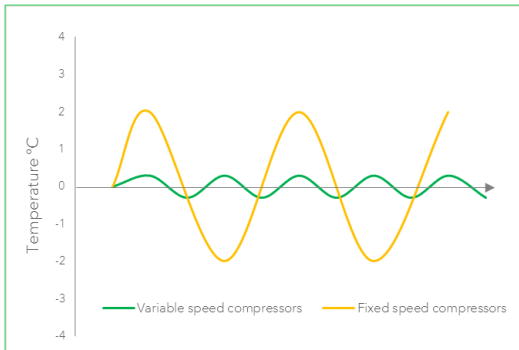
Reliable design to ensure the cooling continuity and safe operation.

Uniflair Room Cooling can manage power failures and quick restore of the normal operation thanks to the redundancy in power source and advanced emergency strategies.



Uniflair Room Cooling Direct Expansion 20-50 kW

Flexible and reliable for mission critical applications supports the customer towards a new concept of green cooling by saving energy and allowing a conscious approach to the planet.



Extreme precision

Variable capacity technology quickly adapts to required cooling demands and retains a precise set point.

IDAV IUAV units effectively manage humidity and regulate temperature to ensure protection of mission critical data.

Precise operation and control of fluctuating loads.

Redefined efficiency and energy saving

Variable speed inverter driven scroll compressors ensure an intrinsic efficiency and a **Superior seasonal efficiency**. Compressors are optimized for varying pressure ratios to deliver a high level of efficiency across a wide range of applications.

Latest generation of EC fans ensure high performance with low energy consumption.

Infinite variable speed control and continuous monitoring via ModBus-RTU are the base for combined airflow and capacity regulation.

Direct Free cooling operation to cool the IT Rooms more economically than conventional cooling systems only with compressors.

Free Cooling is automatically combined with unit's operation to suit the outside temperature and cooling needs, ensuring the maximum savings.



Uniflair Room Cooling Direct Expansion IDAV-IUAV 20-50 kW

Technical Data

IDAV / IUAV models		0511A	0611A1	0811A	0911A	1111A	1311A
EC fans		1	1	1	1	1	1
Power supply	V/ph/Hz	400 / 3ph / 50 Hz					
Air flow	m3/h	6000	7200	8900	10600	11500	12800
Gross total cooling capacity	kW	21,1	26,6	31,6	38,9	41	53
EER	-	3,4	3,3	3,4	3,3	3,4	3,0

*Data refer to nominal conditions: Room at 24 °C – 50% RH, condensing temperature 45 °C.

Technical Data

IDAV / IUAV models		0511A	0611A1	0811A	0911A	1111A	1311A
EC fans		1	1	1	1	1	1
Power supply	V/ph/Hz	400 / 3ph / 50 Hz					
Air flow	m3/h	6000	7200	8900	10600	11500	12800
Gross total cooling capacity	kW	24,1	29,6	36,2	43,6	47,2	58,6
EER	-	3,9	3,7	3,9	3,6	4,0	3,4

*Data refer to nominal conditions: Room at 30 °C – 30% RH, condensing temperature 45 °C.

Dimensions

IDAV / IUAV models		0511A	0611A1	0811A	0911A	1111A	1311A
Height	mm	1960	1960	1960	1960	1960	1960
Length	mm	850	850	1015	1015	1310	1310
Depth	mm	880	880	880	880	880	880

Life Is On



To learn more about Uniflair Room Cooling Solutions contact your Schneider Electric representative or visit se.com/cooling

Schneider Electric SE
35 rue Joseph Monier
92500 Rueil Malmaison – France
se.com