

High Performance Compact Direct expansion units designed to deliver efficient and sustainable cooling

Uniflair Room Cooling Air Cooled Direct Expansion
20-50 kW
LDAV-LUAV
R454B, R410A
400V/3ph/50Hz



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Schneider
Electric

Facing Data Center Challenges

Schneider Electric room air conditioners reshape the cooling in mission critical applications supports the customer towards a new concept of green cooling by saving energy and allowing a conscious approach to the planet



SUSTAINABLE

A conscious approach to a green and sustainable cooling is the new challenge of IT cooling and precision air conditioning. Uniflair Room Cooling direct expansion is designed to accelerate the transition to a more sustainable cooling moving to efficient solutions and playing an important role in the turn down on the climate impact.



EFFICIENT

Optimized unit design to maximize the potential saving. Reduction in power consumption with latest generation of fixed speed compressors and EC fan technology and further improvement of the potential saving with precise supply air temperature control conform to ASHRAE recommendation. Direct free cooling operation to even boost the efficiency.



COMPACT

Combination of compact design and the maximization of cooling capacity makes Uniflair Direct Expansion the right solution for modern IT environments where the space for the cooling systems is more and more reduced while the cooling demand is ever increasing. Further white space saving is achieved thanks to the minimal footprint and the full-frontal component access that enable units to be installed next to each other or next to other equipment.



FLEXIBLE

The design with integrated fan available in downflow and upflow version ensures a great flexibility and easiness to find the right cooling solution among the multiple configurations and options available in the new Uniflair Room Cooling Direct Expansion range. Uniflair Direct Expansion offers a wide range of configurations and accessories to give maximum design freedom.

Uniflair Room Cooling Direct Expansion 20-50 kW

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



R454B –Low environmental impact

Environmental impact of the refrigerants used in cooling systems is measured with **GWP** (Global Warming Potential) and **ODP** (Ozone Depletion Potential) .

Sustainability of a cooling unit is generally referred to efficiency: inefficient use of energy is a waste of valuable resources and contributes to global warming.

People usually ignore the fact that considerable part of the global warming effect caused by refrigerating, comes from the release/leakage of refrigerant. LDAV-LUAV with the use of R454B represent a new generation of cooling units with the target of reducing the impact on our planet.

Refrigerant	Type	O.D.P.	GWP*
R410A	HFC	0	2088
R454B	HFO	0	466

Redefined efficiency and energy saving

Multi-refrigerant fixed speed scroll compressors for use with **R454B refrigerant** to give “ultimate flexibility” when offering alternatives to R410A. The compressors combine the intrinsic efficiency with the use of lower GWP refrigerant to support the transition to the new generation of greener refrigerant.

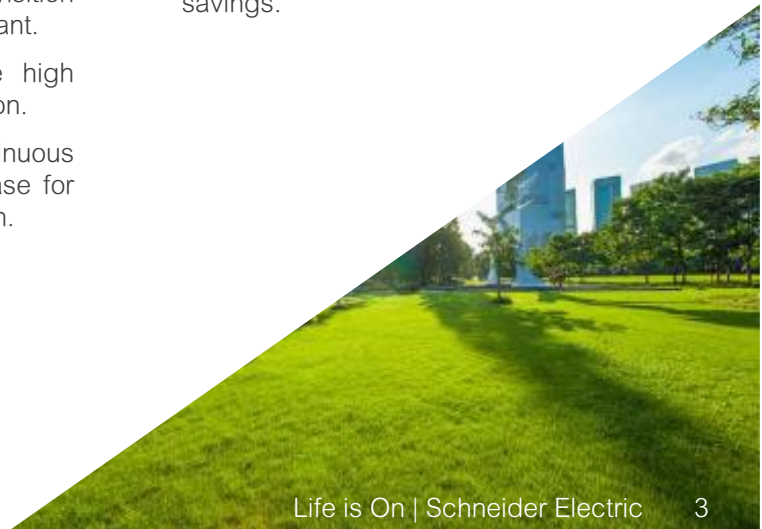
Latest generation of EC fan ensure high performance with low energy consumption.

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 20-50 kW

New High Performance Compact Direct expansion Air Cooled Units designed to deliver efficient and sustainable cooling with the best-in-class technology.



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; maximum equivalent piping length between unit and condenser can reach 100 m.

Uniflair Room Cooling units fit for extreme conditions - from 52°C down to -40°C outdoor temperature and up to 40°C Room temperature.

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



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

Main Features

- 1 Air Filters**
Large surface high efficiency synthetic fiber filters supported in a rigid frame.
Available with EU4 or EU5 filtration rate.
- 2 Evaporating Coil**
Large surface copper/aluminium evaporator coil with hydrophilic treatment to avoid water carry over.
- 3 Electronically commutated fan**
Latest Generation EC Fans for a continuous fan speed regulation and dynamic air flow management.
- 4 Touch Screen Display**
Integrated 7" touchscreen display for easy management of complex operation.
- 5 Frame**
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 soundproofing insulation.
- 6 Compressor**
Fixed speed multi-refrigerant (R454B/R410A) scroll compressor for the highest efficiency.
Extended envelope for operation at high temperatures.



- 7 Electronic expansion valve**
Fully controlled by the microprocessor of the unit, provides accurate control and ensures the maximization of COP and energy saving during all the working conditions.

Uniflair Room Cooling Direct Expansion 20-50 kW

LDAV – LUAV 20-50 kW

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

Key features

- Power supply: 400V/3ph/50Hz
- Return air temperature control
- Absolute or relative humidity precise control
- Direct control of the remote condenser
- Underfloor fan speed management (AFC)
- Ready for Teamwork of up to 30 units connected in a common network
- Group optimization based on advanced control functionalities (sharing sensor's data, standby rotation, cascade operation and rotating master function, emergency strategies)
- A single remote display can be used as a 'team display' to manage all the 30 units



Options

- Double power supply with ultracapacitor and power to remote condenser
- Direct free cooling operation
- Motorized damper to avoid air recirculation

Technical Data

R410A	MODEL	0511A	0611A	0711A	0811A	1111A	1311A
Gross total cooling capacity ¹	kW	21,4	26,5	27,3	34,9	41,4	46,4
EER (Gross)	-	3,9	3,6	3,9	3,7	3,9	3,7
COP	-	4,70	4,60	4,70	4,60	4,80	4,70
Dimensions	mm	850 x 865 x 1960		1010 x 865 x 1960		1310 x 865 x 1960	

R454B	MODEL	0511A	0611A	0711°	0811A	1111A	1311A
Gross total cooling capacity ¹	kW	-	25,3	25,9	33,7	40,1	45
EER (Gross)	-	-	3,6	4,0	3,8	4,0	3,8
COP	-	-	4,70	4,80	4,80	5,00	4,90
Dimensions	mm	850 x 865 x 1960		1010 x 865 x 1960		1310 x 865 x 1960	

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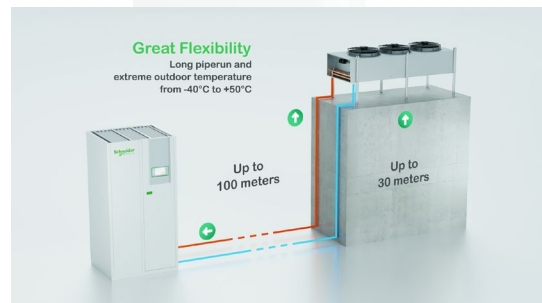
Remote air-cooled condensers

Remote air-cooled condensers (CAT) equipped with AC and EC axial fan suitable for normal climate profiles and for low external temperature applications (LT version)

Key features

Remote Air -cooled condensers CAT with AC fan

- Power supply: 230V/1ph/50Hz
- Power supply 230V/1ph/60Hz on request.
- Fan speed of the condenser directly controlled by the indoor unit through 0-10V signal
- Refrigerant: R410A/R454B
- Copper/aluminum condensing coil
- Equipped with axial fans AC or EC type
- Suitable for outdoor installation with horizontal or vertical flow
- Standard range suitable for operation with outdoor temperature range -20°C -50°C
- Specific range for low temperature operation (down to -40°C) with LT temperature Kit (available only with AC fans)



MODEL	0511	0661	0701	0801	1011	1101	1301	1501	1801	2001	3001	4001
CAT	ACB : Power supply 230V/1ph/50Hz , AC fan											
	ECB : Power supply 230V/1ph/50Hz , EC fan											
	LTB : Power supply 230V/1ph/50Hz , AC fan, Low temperature application											

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

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