



# Uniflair Indirect Free Cooling Room Cooling IDEV – IUEV – IXEV

Uniflair Indirect Free Cooling Room Cooling with  
Variable Speed Drive compressors  
50 – 150 kW



**Uniflair Indirect Free Cooling Room Cooling  
IDEV/IUEV/IXEV precision air conditioners for  
IT and mission critical applications.**

- Cooling capacity: 50 ÷ 150 kW
- Energy Saving
- Variable Speed Drive scroll compressors
- Downflow, Upflow and Underfloor configurations
- Refrigerant R410A
- EC fans

# System Architecture: standard features

## Air filters

- Standard high efficiency EU4-pleated air filters housed in a dedicated plenum box (IDEV, IXEV models)
- Dirty filter differential pressure switch
- Low airflow differential pressure switch

## Cooling coil

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

## New microprocessor controller

- 7-inch, touch-screen LCD display interface
- Integrated management of the EEV and refrigerating circuit parameters
- 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 StruxureWare system, NetBotz remote sensors
- USB and Service port integrated in the display interface



## Frame

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

## Brushless VSD scroll compressor

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

## Electrical panel

- Three-phase power supply 400 V/3 Ph+N/50 Hz for all the units with a single or a double power supply
- Low voltage secondary circuit 24 Vac with isolation transformer
- Metal isolating screen for protection from live components
- General isolator with mechanical interlock
- Thermo magnetic circuit-breakers for protection
- Terminal board for no-voltage signal and control contacts

## Electronically Commuted Radical fans

- High-tech compound material impellers with optimized flow control
- High efficiency Green Tech EC motors
- Low power consumption
- High part-load efficiency
- Fan speed regulation by Modbus signal
- Regulate airflow based on actual thermal load
- Easy serviceability with quick removal kit
- Underfloor fan module (IXEV units)

# Main configurable options

## Power supply

- Single power supply
- Double power supply with automatic commutation to provide redundancy and ensure a constant power supply

## Construction options

- Downflow units (IDEV): top air return with bottom or front discharge (without additional floor stands)
- Upflow units (IUEV): front or bottom air return with top discharge
- Underfloor units (IXEV): top air return with bottom supply with multiple fan module configurations
- Standard, cleanable or low conductivity humidifier (cooling + humidification configuration)
- Condensate drain pump (cooling only and cooling + dehumidification configurations)
- Standard electrical heaters with extended fins, complete with double safety thermostat and manual resetting
- EU4 (standard) or EU5 air filters with or without motorized damper
- Power phase capacitors (not available for I\*EV1511A models)
- Energy meter and CO<sub>2</sub> emission calculator
- Automatic Floor Pressurization System through Active Floor Control (AFC)

## Fan module configurations (only IXEV models)

- Fan module with bottom supply
- Fan module with rear supply
- Fan module with front supply
- Fan module with front and side supply
- Fan module with fully open supply

## Additional accessories

- Suction from the top and front discharge plenums: they can be equipped with soundproofed insulation or with high efficiency air filters
- Back and top suction direct free-cooling plenum
- Floor stands (200mm height)
- Floor stands with motorized damper (500mm height)
- Motorized damper
- Adjustable baseframe (200 – 600 mm)
- Fire and smoke sensors
- Water leak detector
- Room air temperature / humidity sensor

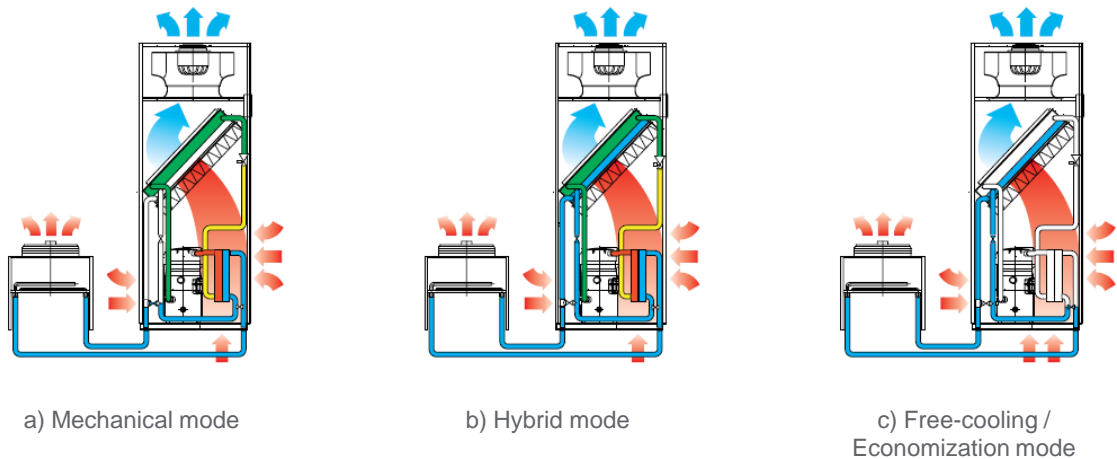
# Indirect Free Cooling system

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.

The patented system is composed by three flow control valves (that replace a 3-way valve) to stabilize the pressure of heat transfer fluid between different operating modes (only mechanical, hybrid, total free-cooling) and minimize pressure drops

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.

Uniflair Indirect Free Cooling Room Cooling IDEV, IUEV and IXEV units are designed to operate in three different modes (Fig. a, b and c)



# Technical data – IDEV / IUEV

IDEV models		1511A	2022A	2922A
Fan type		EC backward-curved centrifugal motor fan		
Power supply	V/ph/Hz	400 / 3ph / 50 Hz		
Fans	nr.	2	2	2
Air flow	m3/h	16800	17000	26000
Gross total cooling capacity <sup>1,2</sup>	kW	74.2	90.9	139.9
Gross sensible cooling capacity <sup>1,2</sup>	kW	74.2	90.9	139.9
Fan power consumption <sup>1,2</sup>	kW	3.3	2.5	4.9
Compressor Power Consumption	kW	11.7	12.2	20.1

IUEV models		1511A	2022A	2922A
Fan type		EC backward-curved centrifugal motor fan		
Power supply	V/ph/Hz	400 / 3ph / 50 Hz		
Fans	nr.	2	2	2
Air flow	m3/h	16800	17000	26000
Gross total cooling capacity <sup>1,2</sup>	kW	74.2	90.9	139.9
Gross sensible cooling capacity <sup>1,2</sup>	kW	74.2	90.9	139.9
Fan power consumption <sup>1,2</sup>	kW	3.0	2.3	4.5
Compressor Power Consumption	kW	11.7	12.2	20.1

1: Gross cooling capacities; fans must be deducted to obtain net cooling data.

2: Data refer to nominal conditions: Room at 35 °C – 30% RH, outlet/inlet water temperature 35/30 °C, 20% glycol, cooling capacities in Hybrid mode (DX+FC)



## Dimensions

IDEV / IUEV models		1511A	2022A	2922A
Height (downflow units)	mm	2150	2150	2150
Height (upflow units)	mm	1950	1950	1950
Length	mm	1777	2082	2650
Depth	mm	900	900	900

# Technical data – IXEV

IXEV models		2311A	2622A	4022A
Fan type		EC backward-curved centrifugal motor fan		
Power supply	V/ph/Hz	400 / 3ph / 50 Hz		
Fans	nr.	2	2	3
Air flow	m3/h	18800	23400	30000
Gross total cooling capacity <sup>1,2</sup>	kW	81.4	134.4	181.4
Gross sensible cooling capacity <sup>1,2</sup>	kW	81.4	134.4	181.4
Fan power consumption <sup>1,2</sup>	kW	3.2	4.4	5.3
Compressor Power Consumption	kW	11.8	20.2	28.6

1: Gross cooling capacities; fans must be deducted to obtain net cooling data

2: Data refer to nominal conditions: Room at 35 °C – 30% RH, outlet/inlet water temperature 35/30 °C, 20% glycol, cooling capacities in Hybrid mode (DX+FC)



## Dimensions

IXEV models		2311A	2622A	4022A
Height (without fan module)	mm	2150	2150	2150
Fan module height	mm	565	565	565
Length	mm	1777	2082	2650
Depth	mm	900	900	900

December 2019

[se.com/cooling](http://se.com/cooling)

Life Is On

**Schneider**  
Electric