

Uniflair LE HDCV

Chilled water units with backward-curved fans
equipped with EC motor; underfloor configuration

30 - 250kW



**Perimeter cooling for
medium/large data center**

- > Refrigerant Chilled Water
- > RadiCal EC Fans

Available Versions:

- > Downflow Single Coil
- > Downflow Dual Coil

Main technical features

Underfloor Fan Module

- Unit made of two sections for installation of fan module under the raised floor and increase of coil surface for energy efficiency maximization
- Floor stand integrated in the fan module



Unit with fan plenum installed under the raised floor



Unit with fan plenum installed above the raised floor

Single / Dual Coil versions

- Single Coil: one chilled water circuit equipped with 2 or 3 way valve
- Dual Coil: unit equipped with two separate chilled water circuits equipped with 2 or 3 way valve
- Regulation logic chosen according to different strategies for energy efficiency maximization and for circuit operation

Latest Generation RadiCal composite EC Fans

- Very high reliability (brushless)
- New impeller design improves the aerodynamic of the fan, maximizing the efficiency and reducing power consumption
- Continuous fan speed regulation from the microprocessor



Last generation RadiCal EC fans

Traditional or ASHRAE TC9.9

- Range optimized for latest ASHRAE guidelines that grant higher operating temperatures in order to maximize system efficiency
- One unit on each frame optimized for traditional operating conditions



Main technical features

Microprocessor control

- Advanced microprocessor control UG50
- Integration with Uniflair Chillers for Optimized Management logics
- Free-contact for general alarm and 2 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
- Chilled water inlet temperature measurement

Cooling coil

- Elevated SHR and reduced pressure drops in the air section
- Made from copper tubes mechanically expanded on aluminum fins; hydrophilic treatment

Air filters

- High efficiency EU4-pleated air filters housed in a metal frame
- Dirty filter differential pressure switch
- Low airflow differential pressure switch



Metal frame air filter

Electrical panel

- Situated in a compartment separated from the air flow
- Complying with EC standards (2006/95/EC and EMC 2004/108/EC)

Frame

- Self-supporting frame in galvanized steel with panels.
- External panels coated with RAL9003 epoxy-polyester paint
- Internally lined with heat and sound-proofing insulation

Direct Free-cooling (optional)

- Direct Free Cooling plenum as an option with maximum and minimum humidity levels monitored.

Chilled water circuit

- Selection of two-way or three-way valve
- Actuator integrated with microprocessor
- Zinc-free chilled water circuit

Accessories

- Double power supply with automatic changeover and manual selection with integrated ultra capacitor
- Intelligent dehumidification
- Automatic floor pressurization system
- Chilled water outlet temperature measurement integrated in the microprocessor
- Energy meter and CO₂ emissions calculator integrated in the unit
- Ultra capacitor for single power supply units
- Integrated base frame
- PIBCV valves
- Flowmeter

Technical Data

HDCV Model	0800A 1300A 1400A 1700A 1800A 2500A 2900A 4100A 4600A 4800A 5100A 5300A 5500A													
Fan type	EC Backward-curved centrifugal motor fan													
Version	Single coil													
Power supply	V/ph/Hz	400/3/50Hz												
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 (1)	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 (2)	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	400/3/50Hz					
Fans	nr.	1	1	2	2	3	4
Airflow	m3/h	7900	13000	17500	24000	30000	40000
Net sensible cooling (1)(3)	kW	28,3	42,1	56,9	81,1	96,7	112,5
DIMENSIONS							
Height (2)	mm	2510	2510	2510	2510	2510	2510
Length	mm	1010	1310	1720	2170	2570	3100
Depth	mm	865	865	865	865	865	865

1. Data refer to nominal conditions: Room at 35°C- 30%RH, water temperature 18/24°C, fan module fully open installed under a 900mm raised floor, and glycol 0%.
2. Includes fan module.
3. Cooling performance refers to one running chilled water circuit.