

Uniflair Chilled Water Room Cooling LDCV – LUCV series

Chilled water units with backward-curved fans
equipped with EC motor
20 – 170kW



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

- Chilled Water
- EC Fans

Available Versions:
• Downflow (LDCV)
• Upflow (LUCV)

Life Is On



Main Technical Features

Fans

- Electronically Commuted Radical fans
- High-tech compound material impellers with optimized flow control
- Highly efficient Green Tech EC motors
- Lower power consumption
- High part-load efficiency
- Fan speed adjustment via the microprocessor control while the unit is running
- Regulate airflow based on actual thermal load
- Easy serviceability with quick removal kit



Latest generation Radical EC fans

Chilled Water Valve

- Selection of two-way or three-way valve
- Actuator integrated with microprocessor
 - Basic version
 - Premium version

Electrical panel

- Compartment separated from the air flow
- Complying with 2006/95/EC directive and related standard

Regulatory compliance

- 2006/42/EC, 2004/108/EC, 2006/95/EC, 97/23/EC, 842/2006/EC F-GAS regulation

Chilled Water system

- Chilled water is used to control room conditions
- Simple construction with outstanding reliability

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

Single / Dual Coil versions

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

Air filters

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

Frame

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

Discharge temperature control and moisture control

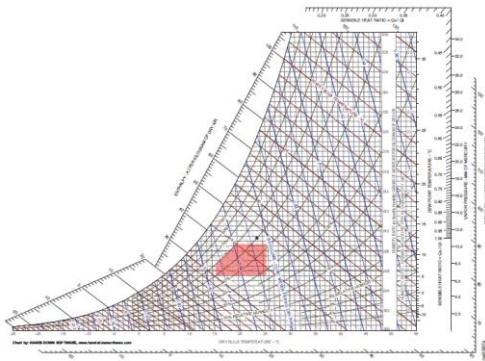
- Optimized for latest ASHRAE guidelines for higher operating temperatures to maximize system efficiency

Discharge temperature control

- Proportional and integral regulation on the discharge temperature of the unit, which manages the regulation of the on-board three-way valve

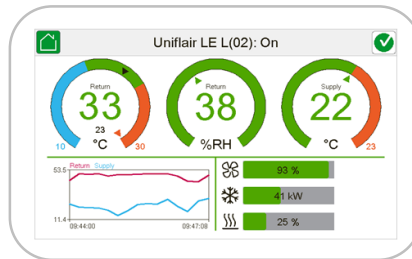
Moisture control

- Dedicated control function activated during dehumidification phase
- Maximize or minimize humidification and dehumidification processes to increase energy efficiency



Touch Screen

- Color touch screen for easy user interface
- Integrated TCP/IP and USB card for remote management and firmware upgrades



Microprocessor control

- 7-inch, touch-screen LCD display interface
- Integrated LAN card for group connection
- Integrated TCP/IP card
- Clock card integrated in the unit
- USB integrated in the display interface
- Rotation and active stand-by management
- Remote on/off
- Other external communication protocols: Modbus RTU, Modbus TCP/IP, BACnet MS/TP, BACnet Over IP, Lonworks, Trend, Metasys, TCP/IP, SNMP and StruxureWare™ platform

Construction Options

- Single power supply with Ultra-capacitor
- Dual power supply with automatic integrated management on the active line
- Immersed electrode humidifier
- 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
- Moisture control
- Energy meter and CO2 emission calculator
- Flow meter
- Pressure-independent Balancing and Control Valve (PIBCV)

External Accessories

- Additional RS485 serial adaptor to communicate with external BMS
- LON FTT10 serial adaptor to communicate with external BMS managed with LON protocol
- Additional TCP/IP serial adaptor to communicate with external BMS managed with SNMP protocol
- 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)

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	400/3/50Hz						
Fans	Nr.	1	1	1	1	1	2	2
Airflow	m3/h	8000	8000	8000	11500	11500	16000	16000
Gross Total Cooling Cap. ^{(1) (2)}	kW	28,3	32,2	44,8	44,8	62,7	59,2	86,9
Gross Sensible Cooling Cap. ^{(1) (2)}	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
LDCV-LUCV Model		2000A	2500A	2700A	3000A	3400A	4000A	4300A ⁽³⁾
Fans	Nr.	2	2	2	3	3	3	3
Airflow	m3/h	19000	19000	19000	25700	25700	25700	29500
Gross Total Cooling Cap. ^{(1) (2)}	kW	74,9	100,3	106,4	100,3	131,6	145,5	181,1
Gross Sensible Cooling Cap. ^{(1) (2)}	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	2582	2582
Depth	mm	865	865	865	865	865	865	865
LDCV-LUCV Model Dual Coil ⁽⁴⁾		0600A	1200A	1700A	2000A	3000A	4300A ⁽³⁾	
Fans	Nr.	1	1	2	2	3	3	
Airflow	m3/h	8000	11500	16000	19000	25700	29500	
Gross Total Cooling Cap. ^{(1) (2)}	kW	24,9	37,5	58,8	77,0	104,4	120,1	
Gross Sensible Cooling Cap. ^{(1) (2)}	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	

1. Data refers to nominal conditions: Room at 24°C-50% RH, water temperature 7/12°C, glycol 0%, and ESP = 20Pa
2. Gross Cooling capacities; fans must be deduced to obtain net cooling data.
3. Only Downflow version is available.
4. Cooling capacity refer to only one running CW circuit