

# Uniflair LE

## TDWV-TUWV

Direct Expansion water-cooled units with  
backward-curved fans equipped with EC motor

20-100kW



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

- > Refrigerant R-410A
- > EC Fans

**Available Versions:**

- > Downflow (TDWV)
- > Upflow (TUWV)

# Main Technical Features

## Microprocessor control

- Local or remote user terminal
- Regulation logic of cooling capacity and airflow integration
- Integrated LAN card for group connection
- Rotation and active stand-by management
- Remote on/off
- Modbus protocol interface
- Other external communication protocols: Bacnet, Lonworks, Trend, Metasys, TCP/IP, SNMP, and StruxureWare™ platform.

## Electronic Expansion Valve

- Controlled by the microprocessor and a dedicated software
- Increased cooling precision
- Increased energy efficiency of the cooling cycle

## Fans

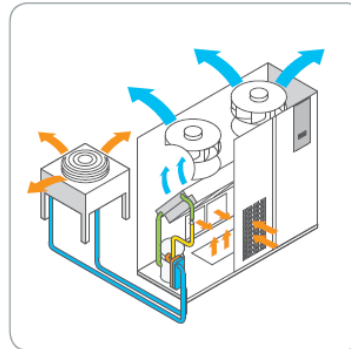
- Electronically Commuted
- Fan speed adjustment via microprocessor control
- High partial load efficiency



Backward-curved blades fan with EC motor

## Water-cooled Direct Expansion

- Heat extracted from the room is transferred to water via stainless steel brazed-plate heat exchangers
- Cooling water may be fed from the mains supply (where permitted), a cooling tower or a well (i.e. open circuit), or circulated in a closed loop cooled by external dry-coolers
- Refrigerant circuits pre-charged and sealed in the factory
- No need for site-installed refrigerant pipeworks



Note: This configuration is shown only as an example.

## Compressors

- Possibility to select units with two tandem compressors for each circuit (models with the \*\*21 or \*\*42 suffix)
- Better efficiency and regulation capacity at partial loads

# Main Technical Features

## Cooling coil

- Elevated SHR and reduced pressure drops in the air section
- Made from copper tubes mechanically expanded on aluminum fins
- Hydrophilic treatment
- Interlaced chilled water and direct expansion circuits to increase the efficiency in all running conditions

## Air filters

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



*Metal frame air filter*

## Frame

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

## Electrical panel

- Situated in a compartment separated from the air flow
- Complying with 2006/95/EC directive and related standard

## Directives compliance

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

## Construction Options

- Immersed electrode humidifier (D/U versions)
- Low surface temperature electrical heaters with extended fans, complete with double safety thermostat and manual resetting (T/H versions)
- Hot gas and hot water reheating
- Condensation control on refrigerant side with constant water flow

## External Accessories

- Remote, semi-graphic user terminal
- RS485 serial adaptor to communicate with external BMS
- LON FTT10 serial adaptor to communicate with external BMS managed with LON protocol
- TCP/IP serial adaptor to communicate with external BMS managed with SNMP protocol
- AFPS (Automatic Floor Pressurization System) to adapt its availability as a kit with installation instructions
- Motorized damper
- Condensate drain pump
- Suction from the top or front discharge plenums
- Adjustable floor stands

TDWV-TUWV		0611A	0921A	1321A	1622A	1822A
Fan Type	EC Backward –curved centrifugal motor fan					
Power supply	V/ph/Hz	1	1	2	2	2
Fans	400/3/50Hz					
Airflow	M3/h	5700	8600	12320	16000	16000
N° of compressors		1	2	2	2	2
Refrigerating Circuits		1	1	1	2	2
Gross Total Cooling Cap.(1) (2)	kW	24,1	32,5	45,6	56,7	62,3
Gross Sensible Cooling Cap.(1) (2)	kW	21,3	28,6	38,1	54,3	55,2
<b>DIMENSIONS</b>						
Height	mm	1960	1960	1960	1960	1960
Lenght	mm	1010	1310	1720	2170	2170
Depth	mm	750	865	865	865	750
<b>TDWV Model</b>		<b>2242A</b>	<b>2542A</b>	<b>2842A</b>	<b>3342A</b>	
Fans	Nr	3	3	3	3	
Airflow	m3/h	21500	21500	21500	21500	
N° of compressors		4	4	4	4	
Refrigerating Circuits		2	2	2	2	
Gross Total Cooling Cap.(1) (2)	kW	85,7	92,3	99,5	110,1	
Gross Sensible Cooling Cap.(1) (2)	kW	81,6	82,8	88,8	90,8	
<b>DIMENSIONS</b>						
Height	mm	2150	2150	2150	2150	
Lenght	mm	2580	2580	2580	2580	
Depth	mm	865	865	865	865	
<b>TUWV Model</b>		<b>2542A</b>	<b>2542A</b>	<b>2842A</b>	<b>3342A</b>	
Fans	Nr	3	3	3	3	
Airflow	m3/h	22000	22500	23500	23000	
N° of compressors		4	4	4	4	
Refrigerating Circuits		2	2	2	2	
Gross Total Cooling Cap.(1) (2)	kW	85,9	92,9	100,4	111,7	
Gross Sensible Cooling Cap.(1) (2)	kW	83,0	85,4	92,9	94,7	
<b>DIMENSIONS</b>						
Height	mm	1960	1960	1960	1960	
Lenght	mm	2580	2580	2580	2580	
Depth	mm	865	865	865	865	

1. Gross Cooling capacities; fans must be deduced to obtain net cooling data.

2. Data refers to nominal conditions : room at 24°C° -50% RH, water temperatures 30-35°C, and ESP = 20Pa.