

## DATATECH CW 14



### Configured unit accessories

- OVER - Upward air ejection
- HH - Cooling , heating and humidification/dehumidification
- VEC - EC fans
- SPA - Automatic control of air flow
- AF - Dirty filter alarm
- FF7 - High efficiency filters with filter grade ISO ePM1 50% (F7)
- CP - Clean operating contacts
- SERI - RS485 serial card
- SCAL - Alarm management card
- SMA - Air delivery temperature probe
- A43 - 400/3/50 power supply
- REM - Oversized electrical heaters
- CRE Modulating control of electrical heaters
- ZB - Base

### General description

Air conditioners designed specifically to create "an ideal atmosphere" for electronic systems, by removing excess heat and keeping humidity within the tolerance limits with the highest levels of reliability and safety.

### SPECIFICATIONS

#### Structure

The cabinet is made with galvanized steel sandwich panels that are epoxy powder coated. The panels are internally insulated with glass wool, to obtain fire insulation class A1 (in accordance with EN13501). This type of panel allows good thermal and acoustic insulation. Air tightness is achieved with adhesive sealing strips placed all around the edges of the panels. The uprights and infills are made of galvanized sheet-iron.

The front panel closing the electrical control panel can be opened by handle for easy inspection of the inside. Access to all the refrigerant and electrical components of the unit is from the front of the machine only; this solution makes it unnecessary to carry out any work from the side and eliminates the obligation to consider "technical spaces" around the air conditioning units. All the front panels are fixed to the structure by ¼ turn fasteners and can therefore be easily removed. All the materials forming the structure are recyclable and CFC-free.

### **Finish**

Orange peel.

### **RAL**

7016

### **FILTERS**

The filters are of filtration class ISO Coarse 75% (G4) and designed to minimize head losses and to have a high degree of filtration. The thickness of the filters can be 50 or 100 mm depending on the sizes or the set-ups. The filters are removed from the front of the unit. High efficiency filters can be supplied on request.

### **Coils**

Finned pack, copper tubes and aluminium fins, with corrugated profile and hydrophilic surface treatment. A stainless steel condensation collection basin is installed at the base of the coil, complete with fitting for drain and siphon.

### **Fans**

The units are fitted with radial fans with backward-curved blades, with high efficiency EC electronically commutated electric motor. The speed of rotation of the fan is continuously variable and entirely managed by the microprocessor control to guarantee the best efficiency and the best thermodynamic balance of the refrigerant circuit at all times. The self-adjusting nature of the electronic control of the fans allows the correct air flow to be ensured at all times. The flow of air into the fan is continuously controlled by a differential pressure switch that triggers an alarm when there is no air flow. The motors are provided with integrated electronic protection against overtemperature, overcurrent, over or under-voltage with absence of one or more phases.

The flow of air into the fan is continuously controlled by a differential pressure switch that activates an alarm when there is no air flow.

### **Electric post-heating**

Banks of electric heaters, with heating elements with low surface temperature, made of stainless material. In the event of overheating, a safety thermostat intervenes by stopping the power supply to the heaters and activating an alarm.

### **Humidification**

Immersed electrode humidifier supplied with mains water, controlled through microprocessor, for steam production with continuous modulation.

### **Hydraulic circuit**

Comprises a three-way float valve (with three point servo motor); controls environmental conditions by metering the flow of water running through the exchange coil.

### **Electrical control panel**

The circuit includes:

- Main disconnect switch
- Fuses to protect the power circuits

- Fuses to protect the auxiliary circuits
- Automatic circuit breaker to protect the auxiliary and power circuits
- Fan contactors (AC)
- Contactors for heaters
- Contactors for humidifier

### Microprocessor

To control the following functions:

- Ambient temperature
- Humidity
- Speed of the condensation fans
- Alarm signal on two levels
- Alarm log recording with "black box" function
- Connection via serial line to supervision systems
- Management of several units in local network with automatic rotation and non-interference logic
- Display of the following on the display:
  - > Ambient temperature
  - > Humidity
  - > Air flow
  - > Description of alarms
  - > Status of controlled devices

### Standard power supply [V/ph/Hz]

400/3~/50

### CONTROLS AND SAFETY DEVICES

All the units are fitted with the following control and safety components:

- Protection against overtemperature for fans;

### CONFIGURED UNIT ACCESSORIES DESCRIPTION

#### VEC - EC fans

The units can be combined with the innovative direct current EC axial fans (Electronically Commutated) with electronically commutated brushless motor. These motors with permanent magnet rotor guarantee very high efficiency levels for every operating condition and allow a 15% saving per fan to be obtained. Also, through a 0-10V analogue signal sent to each fan, the microprocessor allows condensation control by continuous control of air flow as the external air temperature changes and a consequent reduction in noise emission.

#### AF - Dirty filter alarm

The flow of air into the fan is continuously controlled by a differential pressure switch that triggers an alarm when there is no air flow.

#### FF7 - High efficiency filters

Filter grade ISO ePM1 50% (F7)

#### CP - Single clean operating contacts

For units fitted with this accessory, clean contacts from which the customer can acquire a signal that indicates when the compressor is operating are shown in the terminal board of the electrical control panel.

**SERI - RS485 serial card**

RS485 serial card

## CONFIGURED UNIT TECHNICAL DATA

Unit	DATATECH CW	
Model	14	

### Conditions

Inlet air temperature	°C	20.0
Inlet air relative humidity	%	50.0
Height asl	m	0
Fluid	Ethilene Glycol 30%	
Inlet fluid temperature	°C	6.0
Outlet fluid temperature	°C	11.0

### Performances

Total capacity	kW	5.7
Sensible capacity	kW	5.7
Net sensible cooling capacity	kW	4.95
Sensible / Total ratio		1.00
EER		7.93
NSEER		6.93
Outlet air temperature	°C	14.8
Outlet air relative humidity	%	69.5
Air flow rate	m <sup>3</sup> /h	3300
Available pressure	Pa	400
Fans absorbed power	kW	0.72
Fluid flow rate	l/s	0.296
Pressure drops (3 way valve included)	kPa	14.17

### Sound levels

Sound pressure (S4)	dB(A)	55
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(S4) at 2 meters in free filed, at nominal conditions

### Fans

Type	RADIAL-VEC	
Number	1	

### Dimensions

Length	mm	702
Width	mm	650
Height	mm	2190

### Weight

Net weight	kg	222
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### Electrical heating

Thermal capacity	kW	7.0
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Modulante

### Humidification

Capacity	kg/h	3.0
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**ELECTRICAL DATA (Theoretical calculations)**

Power supply	V/ph/Hz	400/3~/50 ±10%
Control power supply	V/ph/Hz	24V/1~/50-60 Hz
Electrical performances		
Maximum absorbed power (E1)	kW	10.25
Full load current - FLA	A	15.2
<i>(E1) Mains power supply to allow unit operation</i>		