

WATER COOLED CLOSE CONTROL UNIT (EXTENDED VERSION)



Close control air-conditioners for vertical installation and cooling only, with optional heating by means of heating element, optional humidifier and dehumidifier for precise temperature and humidity control. Particularly suitable for precision air conditioning in servers and IT rooms and all technological applications in general.

Units consist of two modules: the first housing the heat exchanger, usually placed over the floor, the second where EC inverter fans are fitted. Downflow air supply. These units are provided with modulating 2 way valve and servomotor. Unit has to be connected with an external chiller.

Features

Unit for installing inside or outside the room to be air-conditioned. Maximum resistance to rust thanks to galvanised sheet metal structures and panels with powder-coated paint finish. The panels are lined with sound-insulating material to limit noise levels. The reliability and functionality of the all parts are guaranteed by partners who are world leaders in their sector. NEW EC INVERTER fans with electronic commutation in order to maximize the energy saving and reducing the noise emissions. The fan section includes: centrifugal fans with backward curved blades with wing profile, single suction and without scroll housings (Plug-

fans), directly coupled to external rotor EC electric motor brushless type with integrated electronic commutated system and continuous variation of the rotation speed.

Standard G4, M5 filtering section, to CEN-EN 779 with average degree of separation 90.1% ASHRAE. The filter is self-extinguishing. Switchboard to IEC 204-1/EN60204-1.

Chilled water coil with copper tube and aluminium Blue-fins with hydrophilic coating treatment surface to reduce the pressure drops on the air side. Water circuit realized with pipes entirely coated with insulated material and bronze fittings, complete temperature probe and with 2 or 3-way modulating valve.

Control

Semi-graphic display 132x64 pixel, programmable software, record storage of 200 alarms, general alarm, automatic reset after blackout, integral LAN system, standby management, automatic rotation, serious alarms, operating contemporaneousness, clock function modality.

VERSIONS

D - Downflow air supply

ACCESSORIES

- Remote user terminal
- Electric Heating coil
- Humidifier
- Vibration isolation frame with rubber mountings
- Interface electronic board
- Air distribution plenum
- Condensing pump discharge
- Interface card for TCP/IP Protocol
- Longwork, modbus, bacnet
- Touch screen graphic terminal
- Power supply different from standard



TECHNICAL DATA

WUL		900	1350	1800	2200	2500	3200
Cooling capacity (Total) ⁽¹⁾ ESP 20 Pa	kW	59,5	85	115,3	136,9	169,1	216,5
Cooling capacity (Sensible) ⁽¹⁾ ESP 20 Pa	kW	48,6	69,4	95	111,6	138,6	176,5
Tot. absorbed power ⁽²⁾ ESP 20 Pa	kW	1,6	2,5	2,9	3,8	5,2	5,4
SHR		0,82	0,82	0,82	0,82	0,82	0,82
Air flow	m ³ /h	12000	16500	22000	26000	33000	41000
N° Fans	n°	1	1	2	2	2	3
ESP max.	Pa	239	161	295	160	150	318
Pressure drop coil + 2 way valve (standard)	kPa	28	24	37	24	33	52
Water flow	m ³ /h	10,2	14,6	19,8	23,5	29,1	37,2
Power supply	V/ph/Hz	400/3/50+N+PE					
Humidifier							
Steam production (nominal)	kg/h	8	8	15	15	15	15
Steam production (max.)	kg/h	8	8	15	15	15	15
Max. absorbed power	kW	6	6	11,2	11,2	11,2	11,2
Max. absorbed current	A	8,7	8,7	16,2	16,2	16,2	16,2
Specific conductivity at 20°C (min/max)	μS/cm	300/1250	300/1250	300/1250	300/1250	300/1250	300/1250
Total hardness (min/max)	mg/l CaCO ₃	100/400	100/400	100/400	100/400	100/400	100/400
Electrical heaters							
Steps	n°	2	2	2	2	3	3
Power	kW	7,4	7,4	14,8	14,8	22,2	29,6
Absorbed current	A	10,7	10,7	21,4	21,4	32,0	42,7
Hot water coil							
Heating capacity ⁽³⁾	kW	29,7	41,37	54,98	65,62	81,32	101,37
Water flow	m ³ /h	5,18	7,21	9,58	11,43	14,2	17,66
Pressure drop (coil + 3 way valve)	kPa	51	50	71	73	61	86
Coil internal volume	dm ³	7,6	11,54	13,47	15,28	17,27	22,23
Condensing water pump							
Nominal flow	l/h	390	390	390	390	390	390
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500
Max. discharge height (flow=0 m ³ /h)	m	5,4	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier							
Nominal flow	l/h	600	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900
Max. discharge height (flow=0 m ³ /h)	m	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight							
Frame	n°	4	4,5	5	6	7	8
Width	mm	1160	1505	1860	2210	2565	3100
Depth	mm	850	850	850	850	850	850
Height	mm	1980 + 550	1980 + 550	1980 + 550	1980 + 550	1980 + 550	1980 + 550
Weight	Kg	383	485	577	646	775	959

(1) Ambient temperature 24°C, Relative humidity 50%, Water 7/12°C.
 (2) The fans electrical power has to be added to the ambient load.

(3) Water temperature 40/45°C, Ambient temperature 20°C, Relative humidity 50%.