

IRDXi

DIRECT EXPANSION CLOSE CONTROL UNIT

AIR CONDENSED FOR HIGH DENSITY RACKS

30 - 60 cm

R410a

The indoor vertical air conditioning unit RACK COOLER is an effective management system of the Hot Spots in the data center, ensuring low energy consumption and usage possibilities even under extremely high loads for HIGH DENSITY rack 'up and over 40 kW/m² rack.



In the air cooled direct expansion version, the indoor unit is equipped with a hermetic inverter scroll compressor optimized for R410A refrigerant, EC fans with last generation electronically commutated brushless motors, to be matched to external condensers in standard or silenced version.

AIR



EC



Efficiency

The unit combines the efficiency of use of last EC fans generation and a direct expansion system with inverter compressor allowing a great EER value. (Energy Efficiency Ratio). Thanks to the adoption of inverter DC brushless compressors, these units can reduce consumptions at part load, if compared to a traditional ON/OFF compressor.

Flexibility

The IR-DXi unit are both equipped with predisposition for passing refrigerant connections and power supply from both above and below, so as to allow a quick and easy installation in any condition, whether or not foreseen the presence of access floor.

Control management

The units are supplied with a new management algorithm capable of modulating the air flow and compressor capacity according to the effective environment heating load requirements. This system provides considerable benefits in terms of system management costs.

Compartization

Perfect integration with systems that minimize the mixing hot and cold air between the aisles and that emphasize the efficiency of such systems.

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.

SPECIAL SERIES

IRDXi HF : Free-cooling water units

IRDXi AF : Free-cooling air units

IRDXi XF : DUAL FLUID version units
(Details on request c/o Emicon Ac Spa)

TECHNICAL DATA

IRDXi		IR30.DXi 12	IR30.DXi 22	IR30.DXi 27	IR60.DXi 40	IR60.DXi 50
Net Cooling capacity (Total) ⁽¹⁾	kW	12,9	20,6	27,8	40,0	52,7
Cooling capacity (Sensible) ⁽¹⁾ ESP 20 Pa	kW	12,9	20,6	27,8	40,0	52,7
Tot. absorbed power ⁽²⁾ ESP 20 Pa	kW	3,88	5,21	7,59	9,65	13,10
SHR		1,00	1,00	1,00	1,00	1,00
Air flow	m ³ /h	3000	4000	5000	8000	9000
Fans	n°	3	4	4	4	4
ESP max.	Pa	194	179	218	142	72
Unit EER without remote condenser to max. frequency	W/W	3,6	4,3	4,1	4,5	4,4
Maximum absorbed power	kW	5,1	8,2	10,7	14,8	21,1
Maximum absorbed current	A	21,0	22,6	25,8	30,0	38,5
Power supply	V/ph/Hz	400/3/50+N+PE				
Humidifier						
Steam production (nominal)	kg/h	3	3	3	5	5
Steam production (max.)	kg/h	3	3	3	8	8
Max. absorbed power	kW	2,25	2,25	2,25	3,75	3,75
Max. absorbed current	A	10,0	10,0	10,0	5,5	5,5
Specific conductivity at 20°C (min/max)	µS/cm	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
Electrical heaters						
Steps	n°	1	1	1	3	3
Power	kW	3,0	3,0	3,0	9,0	9,0
Absorbed current	A	4,3	4,3	4,3	13,0	13,0
Condensing water pump						
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500
Max. discharge height (flow = 0 m ³ /h)	m	5,4	5,4	5,4	5,4	5,4
Condensing water pump + humidifier						
Nominal flow	l/h	600	600	600	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900
Max. discharge height (flow = 0 m ³ /h)	m	6,0	6,0	6,0	6,0	6,0
Dimensions and weight						
Width	mm	300	300	300	600	600
Depth	mm	1100	1100	1100	1100	1100
Height	mm	2000	2000	2000	2000	2000
Weight	Kg	175	185	200	270	280

(1) Ambient temperature 24°C, Relative humidity 50%, Condensing temperature 50°C

(2) The fans electrical power has to be added to the ambient load.

(3) In the LL, LR and CL versions, the depth is 1200 mm.