

IRWU

WATER COOLED CLOSE CONTROL UNIT FOR HIGH DENSITY RACKS 30 - 60 cm



The indoor vertical air conditioning units RACK COOLER "IRUW" 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 hydronic version where the cooling is ensured by the use of an external chiller. The use of EC fan systems, featuring last-generation electronic-switching brushless motors, assures excellent performance and low consumption.

Available as standard with the dynamic management of N + 1 EC fans to optimize consumption and redundancy of the cooling system. These individual units to be positioned between the racks in the row so as to act locally in order to dissipate the load of servers.



Flexibility

Air conditioners 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 avoiding temperature stratification inside the rack using 4 integrated and independent sensors (2 on suction and 2 on discharge) to optimize ventilation and chilled water valve opening in order to maximize energy benefits.

Redundancy

The IR-WU cooling units are designed for maximum system reliability, provide the possibility of hot back-up fan replacement, and can be equipped with dual coils and their control valve and dual power supply, ensuring 100% system back-up.

Compartmentization

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.

TECHNICAL DATA

IRWU		IR30. WU 10	IR30. WU 15	IR30. WU 20	IR30. WU 25	IR30. WU 33	IR60. WU 42	IR60. WU 47	IR60. WU 56
Net Cooling capacity (Total) ⁽¹⁾	kW	11,1	17,8	25,9	30,4	42,4	50,7	56,4	68,9
Cooling capacity (Sensible) ⁽¹⁾ ESP 20 Pa	kW	11,0	17,6	23,6	29,0	40,0	48,4	56,4	64,5
Tot. absorbed power ⁽²⁾ ESP 20 Pa	kW	0,15	0,33	0,33	0,47	1,02	0,49	0,73	0,84
SHR		0,99	0,99	0,91	0,95	0,94	0,95	1,00	0,94
Air flow	m³/h	2000	3300	3300	4400	5600	7500	9000	9000
Fans	n°	2	3	3	4	4	3	4	4
ESP max.	Pa	232	139	160	115	95	90	92	66
Water flow		1,9	3,1	4,5	5,2	7,3	8,7	9,7	11,8
Maximum absorbed power	kW	0,34	0,51	0,51	0,68	1,76	1,50	2,00	2,00
Maximum absorbed current	A	3,30	4,95	4,95	6,60	8,80	7,50	10,00	10,00
Power supply	V/ph/Hz	400/3/50+N+PE							
Humidifier									
Steam production (nominal)	kg/h	1,5	2	3	3	3	5	5	5
Steam production (max.)	kg/h	3	3	3	3	3	8	8	8
Max. absorbed power	kW	2,25	2,25	2,25	2,25	2,25	3,75	3,75	3,75
Max. absorbed current	A	10,0	10,0	10,0	10,0	10,0	5,5	5,5	5,5
Specific conductivity at 20°C (min/max)	µS/cm	300/1250	300/1250	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	100/400	100/400
Electrical heaters									
Steps	n°	1	1	1	1	1	3	3	3
Power	kW	3,0	3,0	3,0	3,0	3,0	9,0	9,0	9,0
Absorbed current	A	4,3	4,3	4,3	4,3	4,3	13,0	13,0	13,0
Condensing water pump									
Nominal flow	l/h	390,0	390,0	390,0	390,0	390,0	390,0	390,0	390,0
Max. flow (prevalence = 0 m)	l/h	500	500	500	500	500	500	500	500
Max. discharge height (flow = 0 m³/h)	m	5,4	5,4	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	600	600
Max. flow (prevalence = 0 m)	l/h	900	900	900	900	900	900	900	900
Max. discharge height (flow = 0 m³/h)	m	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Dimensions and weight									
Width	mm	300	300	300	300	300	600	600	600
Depth ⁽³⁾	mm	1100	1100	1100	1100	1100	1100	1100	1100
Height	mm	2000	2000	2000	2000	2000	2000	2000	2000
Weight	Kg	150	160	165	170	180	245	250	260

(1) Ambient temperature 38°C, Water 7/12°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.