

HRCC

CHILLED WATER AIR CONDITIONING UNITS FOR HIGH POWER DENSITY RACKS

20-57 kW



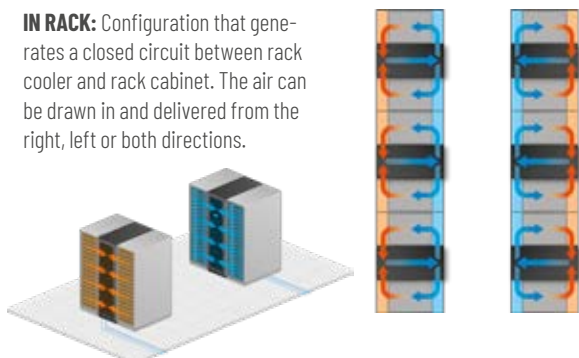
HRCC units are chilled water cooler racks. They offer an ideal solution for the cooling of Data Center racks where **precision control of hygrothermal parameters is required 24/7**. They are particularly suitable for integration into chilled water systems with Free-Cooling chillers, given the possibility of making these air conditioners work even with **higher water temperatures than the usual 7/12°C or 10/15°C values**. The internal design and the choice of components are aimed at obtaining **high levels of energy efficiency and guaranteeing service continuity**, the second being a key requirement in this type of application with **high/very high power density**.

- Advanced programmable microprocessor control with LCD display
- Humidity control through dehumidification and humidification (optional)
- Fan speed modulation based on thermal load (constant ΔT)
- Air filter class G3 as standard. Air Filters G4, M5, F7 (optional)
- Double power supply with automatic switch (optional)
- Constant-flow (airflow control) or constant available overpressure (ΔP control) ventilation modulation (optional)
- Instant reading of water flow rate, water inlet and outlet temperatures, or supplied cooling capacity (optional)

Depending on how rack cooling is done - by creating hot and cold aisles in the Data Center or via compartmentalisation and localised cooling - the HRCC range comes in two different configurations: On request Configuration that generates a closed circuit between rack cooler and rack cabinet. The air can be drawn in and delivered from the right, left or both directions.

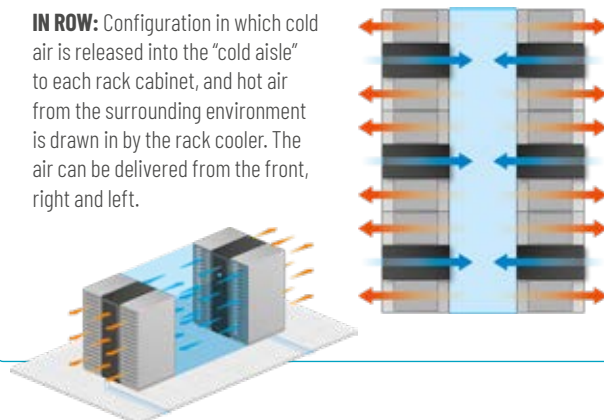
IN RACK

IN RACK: Configuration that generates a closed circuit between rack cooler and rack cabinet. The air can be drawn in and delivered from the right, left or both directions.



IN ROW

IN ROW: Configuration in which cold air is released into the "cold aisle" to each rack cabinet, and hot air from the surrounding environment is drawn in by the rack cooler. The air can be delivered from the front, right and left.





Ventilation EC

EC PLUG fans, standard throughout the range, are adjustable using different logics: flow rate, overpressure, constant ΔP and ΔT . Their accurate adjustment allows an efficient use of power for ventilation and a consequent **reduction of the system's PUE**. Extended range speed adjustment is carried out via Modbus protocol. The "emergency speed" function allows for fan operation **even in the event of microprocessor malfunctions**.



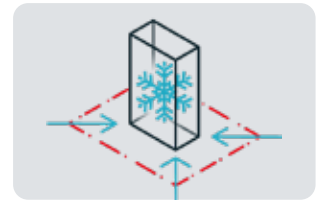
Hot swappable fans

In order to minimize machine shutdown, **a failed fan can be replaced without turning off the unit**, thanks to the use of the protective basket and connectors for the power and control section. Fan replacement thus becomes a routine maintenance operation.



Safety in the server room

All models in the range feature heat exchange coils with hydrophilic coating. This special coating - together with adequate adjustment of air through-flow speeds - **helps condensate collection during the dehumidification process, preventing any dripping on the inside and outside of the unit**.



High power density

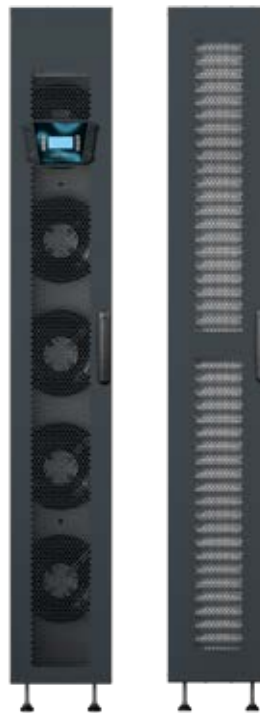
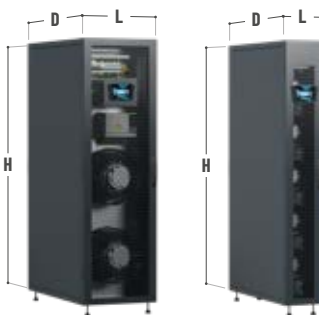
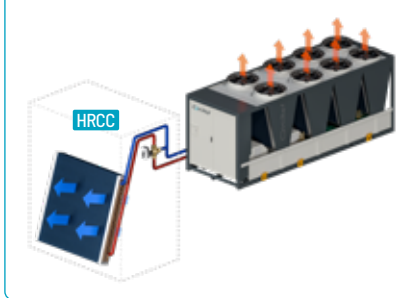
The internal design and the special component layout allows for an evaporating coil **with an extensive heat exchange surface area**. The unit footprint is still small, **ensuring optimal use of space in the server room**.



Sliding control panel

For 300 mm wide structures, the electrical panel is designed to take up **as little space as possible without interfering with air distribution over the whole working height of the unit**. A "sliding drawer" structure has been used, making access possible during commissioning and extraordinary maintenance operations. This configuration also prevents tangling of the wiring.

CHILLED WATER



HRCC		0200	0250	0450	0510
Air temperature 30°C - 35% / Water temperature In 10°C Out 15°C					
Cooling capacity	kW	20.1	27.7	46.2	57
EER		43.54	38.35	31.1	37.27
SHR		1	1	1	1
Air temperature 35°C - 30% / Water temperature In 15°C Out 20°C					
Cooling capacity	kW	20.2	27.8	46.4	57.2
EER		43.69	38.44	31.21	37.37
SHR		1	1	1	1
Rated air flow	m ³ /h	4000	5300	9000	11000
Total fan absorbed power	kW	0.5	0.7	1.5	
Power supply	V/ph/Hz	230/1/50		400/3+N/50	
Lp @ nominal rpm; dist.=2m Q=2	db(A)	62	65	70	67
Dimensions [LxHxD]	mm	300x2000x1200		600x2000x1200	

Also available with 60 Hz power supply.