

DATA CENTER

INDUSTRIAL

# JREF CW

## Radial

CHILLED WATER  
PERIMETER MOUNTED UNITS  
FOR DATA CENTERS

14.6–32.9 kW



MULTI-PROTOCOL COMMUNICATION INTERFACE	EC RADIAL FANS	MODBUS CONTROLLED FANS
FAST RESTART	ON-BOARD HUMIDIFIER	DOUBLE CIRCUIT

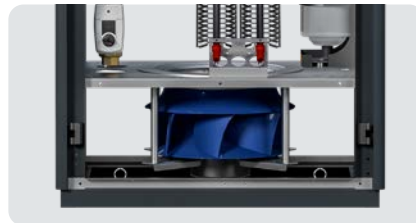
The JREF CW Radial series perimeter mounted units are chilled water units with EC radial fans for small-sized premises such as server rooms and labs or for applications where **accurate control of thermo-hygro-metric parameters and round-the-clock operation are required**. In-depth CFD (computational fluid dynamics) analysis has allowed for the meticulous design of every last constructive detail to **minimise air pressure drops and, therefore, fan power consumption**. Air through-flow sections have been expanded to make **installation and maintenance operations faster and easier**.

- Temperature control through heating and post-heating systems using electric heating elements, additional hot water coil, or both (optional)
- Humidity control through dehumidification and humidification (optional)
- Fan speed modulation based on thermal load (constant  $\Delta T$ )
- Broad choice of accessories, including base modules and plenums for ducting
- 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 ( $\Delta P$  control) ventilation modulation (optional)
- Instant reading of water flow rate, water inlet and outlet temperatures, or supplied cooling capacity (optional)



### Extended filter section

Air filters, located on the entire surface of the coil, **maximize the filtering section and minimize the unit's air pressure drops**.



### Ventilation adjustment

Depending on the air distribution logic in the server room, it is possible to adjust the machine on-board ventilation system to ensure **a constant air flow rate** (airflow control) or **a constant available overpressure ( $\Delta P$  control)**. The latter is particularly useful if a floating floor is used.

### AIRFLOW CONFIGURATIONS



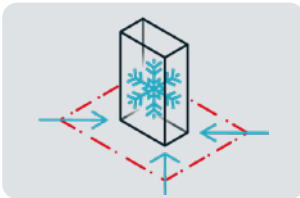
Upflow



Downflow



Displacement

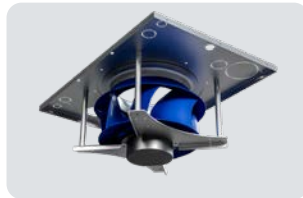


### High power density

The reduced footprint and high efficiency **offer higher cooling capacity**. In this way **the space dedicated to the units in the Data Center is minimized, making the most of available spaces**.

### Double circuit

Chilled water units are also available with a double circuit. In this version the supply is **via two different hydraulic circuits** that can offer the **utmost operational continuity if one of the two circuits malfunctions**. Each circuit is equipped with a regulating valve



### Ventilation EC

EC PLUG fans, standard throughout the range, are adjustable using different logics: flow rate, overpressure, constant  $\Delta P$  and  $\Delta T$ . 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**.



### Finned pack coil with hydrophilic coating

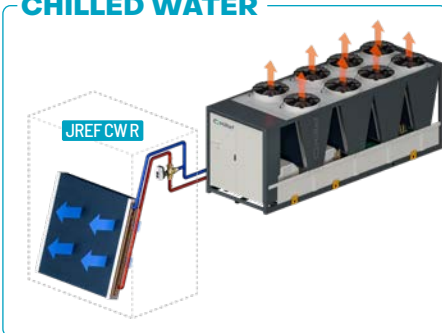
All models in the JREF CW Radial range feature heat exchange coils with hydrophilic coating. This special coating - together with adequate adjustment of air through-flow speeds - **helps condensate collection and outflow during the dehumidification process, preventing any dripping on the inside and outside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



### Accurate regulation with multiple types of valves

All units in the JREF CW Radial range have as standard regulating valves fitted with 0-10V servo motor, selectable in 2-way execution, with variable or 3-way flow system or with servo motor with spring return. Pressure-independent valves can also be fitted on request. All these types of valves ensure **the utmost adjustment accuracy while maintaining the system's hydronic balance**.

### CHILLED WATER



### Easier scheduled maintenance

The unit has been painstakingly designed to ensure frontal access to components. This makes **routine maintenance easier in full compliance with safety standards**.



JREF CW R		0150	0170	0210	0250	0270	0320
<b>Air temperature 24°C - Relative humidity 50% / Water temperature In 7°C Out 12°C</b>							
Cooling capacity	kW	14.6	17	21.2	24.8	27.2	31.7
SHR		0.9	0.88	0.8	0.84	0.86	0.8
EER		19.55	21.34	23.96	20.79	23.17	27.54
<b>Air temperature 30°C - Relative humidity 35% / Water temperature In 10°C Out 15°C</b>							
Cooling capacity	kW	17.7	20.2	21.9	27.4	31.4	32.9
SHR		1	1	1	1	1	0.99
EER		23.62	25.33	24.83	22.98	26.72	28.56
<b>Air temperature 35°C - Relative humidity 30% / Water temperature In 15°C Out 20°C</b>							
Cooling capacity	kW	17.8	20.3	22	27.6	31.5	32.9
SHR		1	1	1	1	1	1
EER		23.84	25.46	24.86	23.14	26.83	28.59
Rated air flow	m <sup>3</sup> /h	4130	4130	4130	6130	6060	5930
Total fan absorbed power	kW	0.8	0.8	0.9	1.2	1.2	1.1
Lp @ Nominal rpm ; dist.= 2 m Q=2	dB(A)	59	60	61		62	
Dimensions [LxHxD]	mm	600x2000x600			900x2000x600		
Power supply	V/ph/Hz				400/3+N/50		

Performance data relating to Downflow versions. | Also available with 60 Hz power supply. | Height of model Displacement 2100 mm.

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