

TECHNICAL DATA

DRY COOLER (5) JVGH2490CN5/04Q4YAF(EC)(WFS)S

Number of circuits

88

PERFORMANCE (SINGLE UNIT)

Capacity 535,00 kW

TUBE SIDE

Fluid (10) PROPYLENE GLYCOL 35%

| | | | |
|-------------------|------------|--------------------|---------|
| Inlet Fluid Temp. | 34,0 °C | Outlet Fluid Temp. | 29,0 °C |
| Fluid flow rate | 97,78 m³/h | Fluid Velocity | 1,5 m/s |
| Massic Fluid Flow | 99935 kg/h | Pressure drops | 55 kPa |

AIR SIDE

| | | | |
|-----------------------------|-------------|----------------------|----------|
| Inlet Air Temp. [MAX] | 35,0 °C | Outlet Air Temp. | 29,7 °C |
| Inlet relative hum. | 35,0 % | Outlet relative hum. | 65,2 % |
| Inlet Air Temp. [SWITCHING] | 23 °C | Altitude | 0 m |
| Inlet relative hum. | 96,9 % | ESP | 0,0 Pa |
| Water flow Adiab. | 2511 l/h | Flow Direction | N/A |
| Air Flow | 234790 m³/h | Air Velocity | 3,53 m/s |

FANS TECHNICAL DATA

| | | | |
|---|----------------------------|--|------------------|
| ERP | Yes | Fan operative temp. (27) | -25,0 / 60,0 °C |
| Fan Number | 8 N° | UL | No |
| Phases-Voltage-Frequency | 3-380/480-50/60 N°/Volt/Hz | Fan Diameter | 900 mm |
| Rpm [Nominal data] | 1195 Rpm | Fan type | 34050HH91ECB1CMP |
| Power x 1 [Nominal data] | 3040,00 Watt | Link | EC |
| Rpm [Working point] (26) | 1188 Rpm | Current x 1 [Nominal data] (1) | 4,90 A |
| Power x 1 [Working point] | 2905,00 Watt | Rpm rate [working point / nominal] | 99 % |
| Total Power x n° [Working point]/ [Nominal data] | 23240,00/24320,00 Watt | Current x 1 [Working point] (1) | 4,72 A |
| Efficiency Energy Class:nominal calculation Water 40-35°C/Air 25° | E | Total Current x n° [Working point]/ [Nominal data] | 37,76/39,20 A |
| Efficiency Energy Class:calculation on the working point | E | | |

FANS NOISE DATA (7)

| | | | |
|--|----------|---|----------|
| Sound Pressure Level (4) [Working point] | 63 dB(A) | Sound Power Level (4) [Working point] | 95 dB(A) |
| At the distance of | 10 m | in accordance with EN 13487/EN ISO 3744 (7) | |

HEAT EXCHANGER DATA (3)

| | | | |
|---------------------|------------------------|------------------|--------------------------|
| Fin Material (2) | Prepainted Double Step | Tubes Material | Copper |
| Fin Spacing | 1,8 mm | Internal Volume | 389 dm³ |
| Fin Thickness | 0,15 mm | Casing material | Galvanized steel painted |
| Surface | 2658,0 m² | Number of passes | 4 |
| Inlet Connection | 2x4" | Connections | Same side |
| Outlet Connection | 2x4" | Fluid Category | Group 2 |
| Max Pressure Design | 10bar G | | |

DIMENSIONS AND WEIGHT (3)

| | | | |
|-------------|---------|------------------------|---------|
| Length | 5446 mm | Weight (3) | 2636 kg |
| Width (24) | 2230 mm | Number of fixing point | 10 |
| Height (24) | 2420 mm | LDM (Approximate data) | 5,06 m |

SOUND POWER LEVEL

| | Tot. | 63Hz | 125Hz | 250Hz | 500Hz | 1kHz | 2kHz | 4kHz | 8kHz |
|-----------|------|------|-------|-------|-------|------|------|------|------|
| Δ [dB(A)] | 82 | 78 | 79 | 75 | 79 | 77 | 74 | 75 | 67 |

Data refers to one fan. IMPORTANT: the tolerance in any single octave band is +/-5dB. The tolerance in the overall dB(A) level is +/- 2dB.

In case of AC fans working point is defined by fan supplier in nominal curve (delta or star). In case of EC fans is simulated on working point of unit.

DRY COOLER (5) JVGH2490CN5/04Q4YAF(EC)(WFS)S**ACCESSORIES**

| CODE | DESCRIPTION |
|------------------|---|
| PAPDS | Prepainted double layer finned pack |
| SAS | Special fin thickness |
| PAS | Special fin spacing |
| CBLO4Y | Wiring with electrical panel + FC400 'Q4Y' 400V(+/-10 |
| WFSSYS | WFS system |
| CAB_ADIAB_SC400A | Wiring+el panel ad. SC400 (AFS-WFS)400V 3 50Hz(+/- |
| FAI | AISI 304 flanges 'F' |
| AMM_JUMB_SPEC | Shock absorbers Jumbo 'A' |
| VENT_EC_S1_super | Fan EC 01 (EC)_Super_S1 |

WARNING

The delivery time of some fans may be long: please contact Thermokey for availability.

W002: Non-standard fin spacing. Please ask Thermokey for delivery time

W003: Non-standard fin thickness. Please ask Thermokey for delivery time.

W004: Non-standard fin material. Please ask Thermokey for delivery time.

An inverter different from the one proposed by Thermokey must have omni polar sinusoidal filters, between phase and phase and phase and ground.

(*) It is necessary that the installer (or his mandatary) verifies the conformity of the unit with the norms EN61000-3-2 and EN61000-3-12

For any support please contact our Sales Department

DRY COOLER (5) JVGH2490CN5/04Q4YAF(EC)(WFS)S

SPECIFICATIONS

| | | | |
|-------------------|-------------|--------------------------|----------------|
| Pressure line MAX | 1-6 bar | Water flow Adiab. (12) | 2511 l/h |
| | | Nozzle Tolerance | 1,87 |
| Type | Jumbo - STD | Num Modules | 4 |
| Configuration | C04 | Num Nozzles/Mod | 12 |
| Nozzle type | M250513 | Press/flow (for nozzles) | 4/52 bar A/l/h |
| Number of Nozzles | 48 | | |

WFS

The "Wet Fin System" is designed for a maximum period of use of 1,000 hours per year

The water of the spray system must comply with the requirements of the Council Directive 2020/2184 / EC on the quality of water for human consumption (drinking).

Furthermore, the following parameters are defined:

| Position | Parameter | Unit | Limits |
|----------|--|-------------------|--------------------|
| 1 | El. Conductivity | μS/cm | < 1500 |
| 2 | PH-value | | 6,5 – 8,2 |
| 3 | Total hardness | °dH | 3,5-4,0 |
| 4 | Chlorides | mg/l | < 50 |
| 5 | Sulfates | mg/l | < 90 |
| 6 | Nitrates | mg/l | < 50 |
| 7 | Iron dissolved | mg/l | < 0,1 |
| 8 | Silicon | mg/l | < 20 |
| 9 | Colony forming units | KBE/ml(22 / 37°C) | < 100/ml / < 20/ml |
| 10 | Legionella | CFU/ 100 ml | < 100 |
| 11 | SAC 254 (spectral absorption coefficient)* | 1/m | < 20 |
| 12 | Water pressure line | bar | 1-6 |

* Indicated in the case of use of UV lamp

• The installer must guarantee that the chemical substances added to respect those parameters do not provoke any corrosion and stress on the materials used on the unit or in anyway damage them

Maintenance:

Water values have to be tested during the start-up of the adiabatic system by qualified personnel and subsequently verified following in force norms, the previewed frequency for the specific application and also the measured values.

- If water values change, appropriate countermeasures must be immediately taken without any delay and spraying is prohibited in this case.
- If the notification terms are not observed, Thermokey is entitled to refuse to carry out the work under warranty.
- For any further information please examine the Installation and Maintenance Manual of the remote air-cooled unit on which the adiabatic system is installed and the Manual of the Adiabatic System.

NOTES:

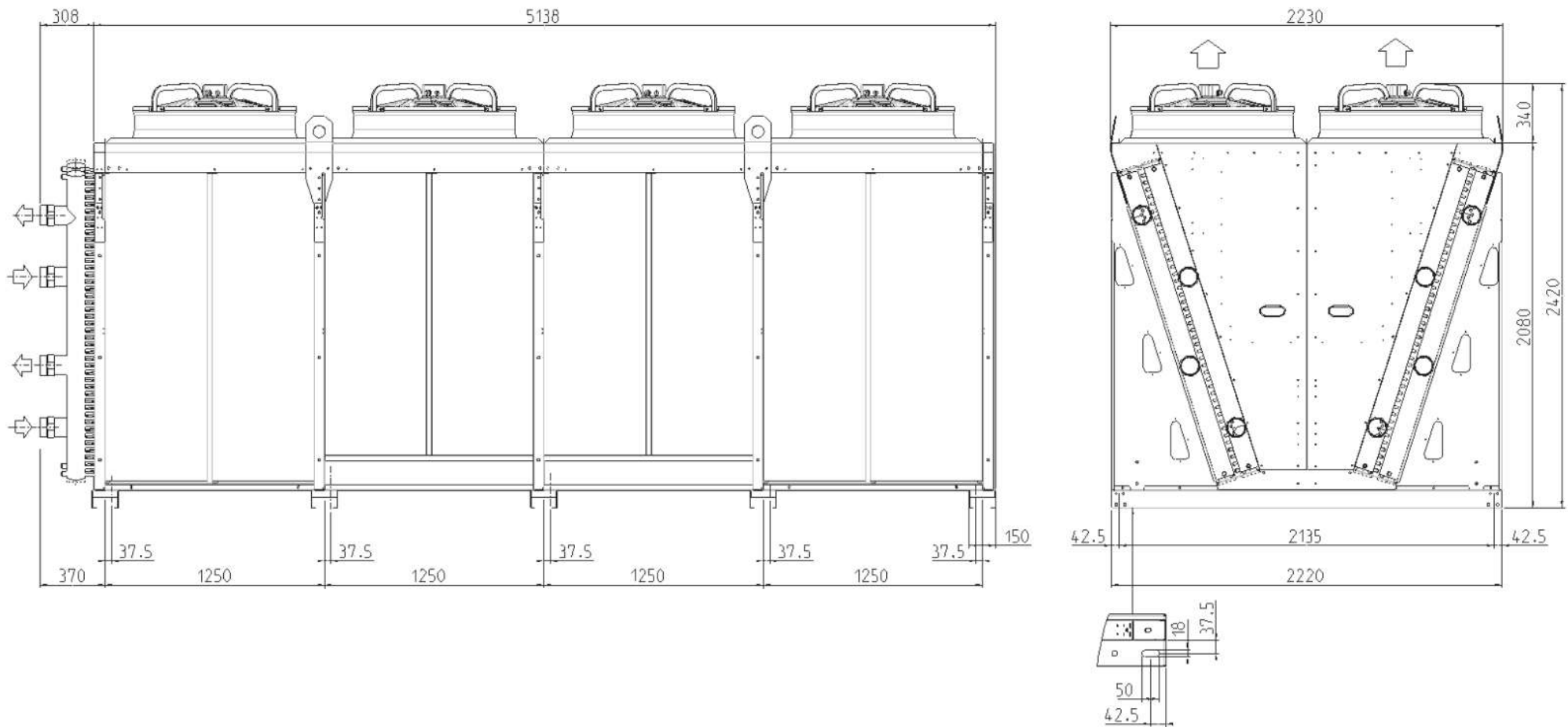
(*)Hardness conversion

- 1 °dH (°dH) German hardness: Ca and/or Mg salt, which is equivalent to 1 °dH=17.85 mg/l calcium carbonate (CaCO₃) or 1 °dH=10 mg/l calcium oxide (CaO), is dissolved in 1 litre of water.
- German Degrees (dH) =1,78 X French Degreed (°F)=1,24 X English Degreed (°E)

(**)Electrical Conductivity

- The treated water must be balanced: to prevent spontaneous corrosion and / or fouling formation the Langelier Saturation Index (LSI) and Ryznar Stability Index (RI) should be in the following range :-1<=LSI<=+ 1 ; 5.5<=RI<=6.6
- The cooling water must be in any case conditioned by the addition of suitable inhibitors of corrosion / fouling . With the appropriate conditioning it is possible to accept treated water even with characteristics not complying with the ideal ones indicated above .

Model: JVGH2490CN5/04Q4YAF(EC)(WFS)S



Attention: Drawing and dimensions not valid for all accessory options!

The overall dimensions on the datasheet refer only to the unit without regulation(For more detailed information refer to Electrical box Manual). In the units with horizontal air flow the standard position of the connections is left looking at the finned pack (right looking at the fans).

| CONNECTIONS | | <div><div>ThermoKey</div><div>Heat Exchange Solutions</div><div>Via dell'industria 1</div><div>33061 - Rivarotta-Rivignano Teor (UD) - ITALY</div><div>Tel.: +39/0432772300 Fax.: +39/0432779734</div></div> | Company | Date | 30/9/2025 |
|--------------------|-------|--|--------------|------------|-----------|
| Inlet Connections | 2x4 " | | Attention of | Sw Version | 250530 |
| Outlet Connections | 2x4 " | | City | Offer | - Rev. 00 |
| | | | Telephone | Reference | |
| | | | Fax | Position | |