



Data Centre Cooling Solutions





The Data Centre challenge

Driven by several factors, such as the increasing demand for cloud computing services, big data analytics IoT devices and the growing application of AI, the global data centre market is expected to reach **USD 536.28 Billion by 2030** with an electricity use estimated to increase to **848 TWh**.

This rapidly expanding market is increasingly strategic for both companies and society, and it currently faces **4 essential challenges**:



Grant improved energy efficiency: data centres are extremely complex and energy-consuming infrastructures.



Ensure business continuity: it is essential, as their services are critical to many organizations and sectors.



Comply with the new EU Energy Efficiency Directive: starting from May 2024 it will be mandatory for most data centres to report on energy consumption, PUE (power usage effectiveness) and other crucial aspects.



Reduce weight and dimensions of the cooling units: to optimise transport and installation costs, save space and place less strain on the structures.

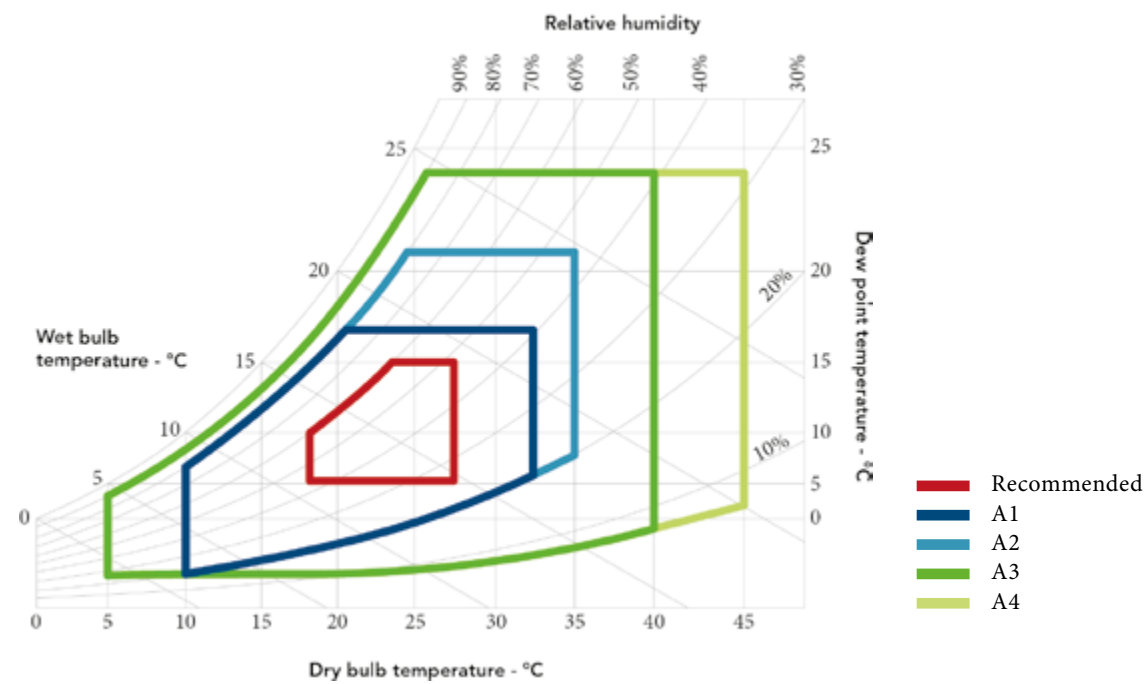
Product features

Data Centres (also referred to as server rooms or IT rooms) and Data Centre Cooling have undergone significant developments since the first introduction of the ASHRAE recommendations and “Thermal Guidelines for Data Processing Environments” in 2004.

The ASHRAE recommendations, are the de-facto standard for thermal management in the Data Centre industry. Evolution of the guidelines aims to **support a more energy efficient cooling of IT equipment, without compromising reliability.**

ASHRAE ideal working condition for any kind of informatics devices

2011 ASHRAE environmental classes for Data Centre applications.

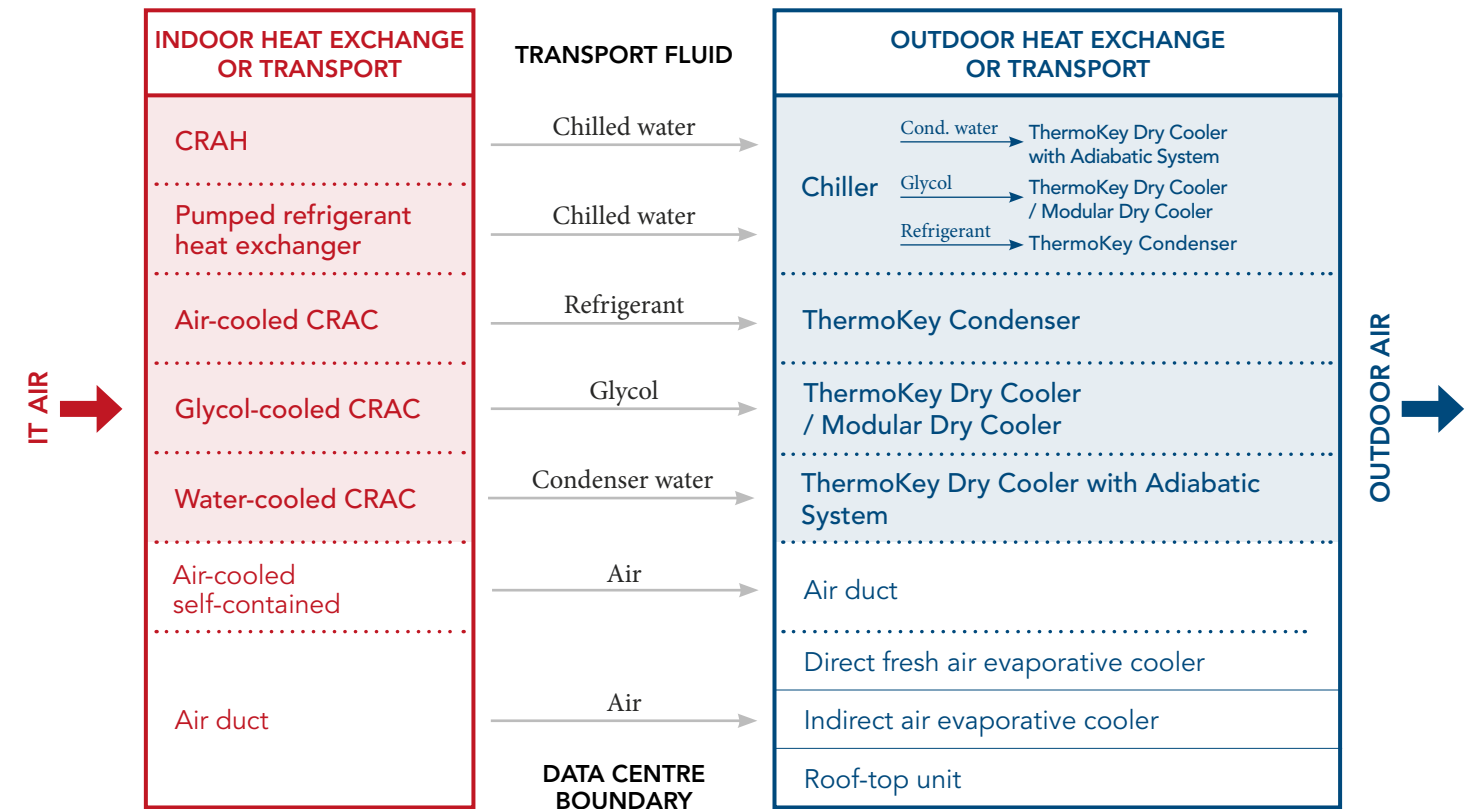


Heat removal methods in Data Centres

Every element of IT equipment that consumes power produces an equivalent amount of heat in return.

The removal of hot air could be as simple as an air duct, but it is generally achieved by using a heat exchanger to transfer heat from one state to another (e.g. from air to water).

One or more methods can be used to cool computer rooms and Data Centres.



ThermoKey Solutions

- Operational Reliability
- Low Noise Emissions
- Energy Cost Savings
- High-Quality Components
- Controlled Unit Operation
- Customized Special Needs

Remote condensers

Example: Air cooled CRAC with integrated compressor.

Heat removal from the server room using a remote condenser installed outside.

Application of use: Medium and small network racks, computer rooms and Data Centre with moderate requirements (lower than 200KW).



MICROCHANNEL CONDENSERS (MPE 25mm, 32mm)

Area of use Gas condensation

Performance range Capacity from 5 to 560 kW (R404A, Tc= 40 °C, T1= 25 °C)
TKSmart Capacity from 13 to 98 kW (R404A, Tc= 40 °C, T1= 25 °C)

Fans Diameter Ø 300, 400, 450, 500, 630, 800, 900 mm, AC or EC motor
TKSmart Diameter Ø 400, 500, 630 mm, AC or EC motor

Benefits Innovative high efficiency microchannel heat exchanger
 +30% capacity vs same foot-print traditional condenser
 Modular design, 1-8 fans (mpe 32 mm)
 Reduced dimensions and weight
 No galvanic corrosion through Long-Life-Alloy
 Reduced refrigerant charge
 Low noise and low electrical power consumption
 Complete range of accessories (mpe 32 mm)
TKSmart Modular design, 1-3 fans (mpe 25 mm)
TKSmart Accessories: wiring, shock absorber



TURBO-LINE CONDENSERS

Area of use Gas condensation

Performance range Capacity from 10 to 1200 kW (R404A, Tc= 40 °C, T1= 25 °C)

Fans Diameter Ø 500, 630, 800 mm, AC or EC motor

Benefits High efficiency geometry
 Modular design, 1-16 fans
 Piping in copper or stainless steel AISI 304
 Finned pack available in a wide range of materials
 Complete range of accessories, 8 sound levels
 Premium series available for fans Ø 500 and 630 mm
 Casing in galvanized steel, powder painted



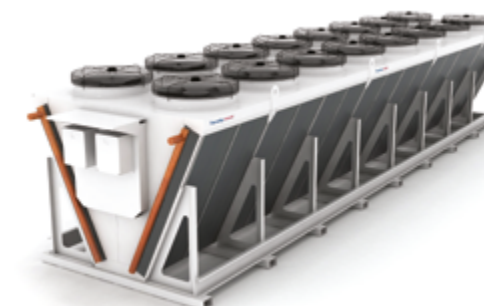
TURBO-J CONDENSERS

Area of use Gas condensation

Performance range Capacity from 100 to 1915 kW (R404A, Tc= 40 °C, T1= 25 °C)

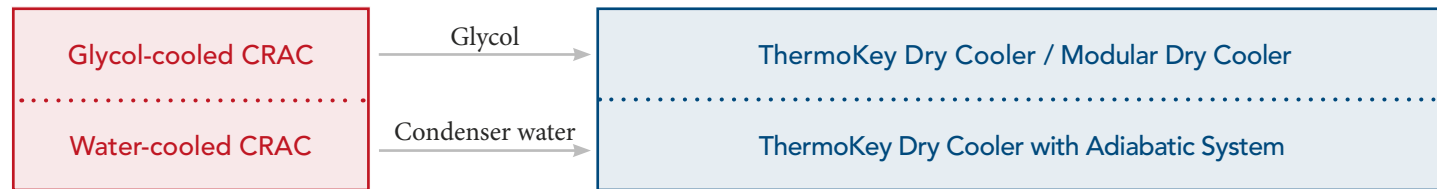
Fans Diameter Ø 900 mm, AC or EC motor

Benefits Maximum performance, minimum footprint
 High efficiency geometry
 Modular design, 2-16 fans
 Piping in copper or stainless steel AISI 304
 Finned pack available in a wide range of materials
 Complete range of accessories, 8 sound levels
 AFS (Air Fresh System), WFS (Wet Fin System) and EPS (Evaporative Panel System) available upon request
 Casing in galvanized steel, powder painted



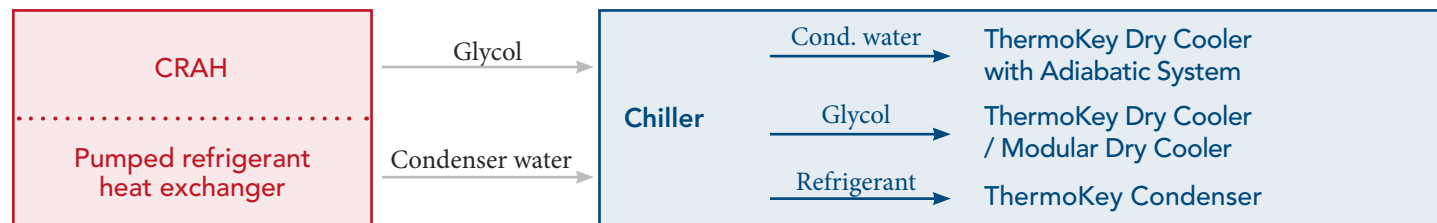
Dry Coolers without chiller

Example: Glycol (or water) cooled CRAC with a pump.
Heat removal from the server room using a drycooler installed outside.
Instead of the drycooler, an adiabatic cooler can be used when the external ambient conditions or efficiency permit it.
Application of use: In computer room and medium Data Centres (30-1000KW).



Dry Coolers with chiller

Example: Computer Air Handling Unit (CRAH) combined with a Chiller Water System that can be accordingly connected to a drycooler or a hybrid cooler or a condenser. Instead of CRAH it is also possible to use a Pumped Refrigerant System with a Cooling Unit installed in the ceiling.
Application of use: In a 200KW or larger Data Centre.



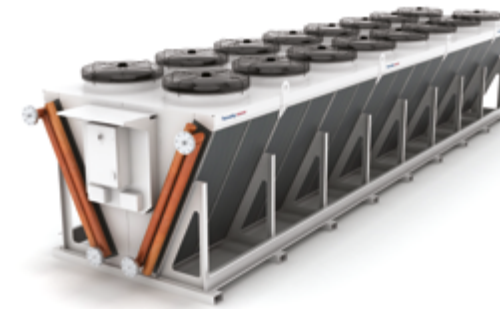
POWER-LINE DRY COOLERS

- Area of use** Heat rejection
- Performance range** Capacity from 8 to 1100 kW
(Ethylene glycol 35%, Tw1= 40 °C, Tw2= 35 °C, T1= 25 °C)
- Fans** Diameter Ø 500, 630, 800, 900, 1000 mm, AC or EC motor
- Benefits** High efficiency geometry
Modular design, 1-16 fans
8 sound levels
Piping in copper or stainless steel AISI 304 or AISI 316L
Finned pack available in a wide range of materials
Complete range of accessories
Casing in galvanized steel, powder painted



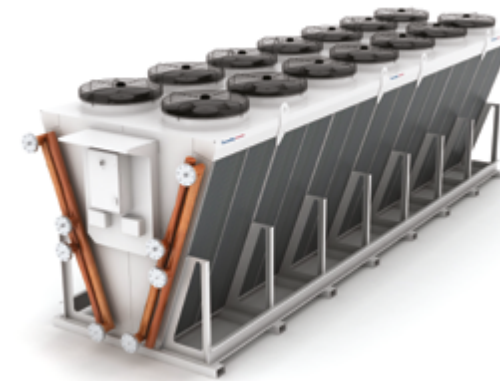
POWER-J DRY COOLERS

- Area of use** Heat rejection
- Performance range** Capacity from 70 to 1600 kW
(Ethylene glycol 35%, Tw1= 40 °C, Tw2= 35 °C, T1= 25 °C)
- Fans** Diameter Ø 800, 900, 1000 mm, AC or EC motor
- Benefits** High efficiency geometry
Modular design, 2-16 fans
8 sound levels
Piping in copper or stainless steel AISI 304 or AISI 316L
Finned pack available in a wide range of materials
Complete range of accessories
AFS (Air Fresh System), WFS (Wet Fin System) and EPS (Evaporative Panel System) available upon request
Casing in galvanized steel, powder painted



SUPER POWER-J DRY COOLERS

- Area of use** Heat rejection
- Performance range** Capacity from 290 to 2220 kW
(Ethylene glycol 35%, Tw1= 40 °C, Tw2= 35 °C, T1= 25 °C)
- Fans** Diameter Ø 800, 900, 1000 mm, AC or EC motor
- Benefits** Maximum performance, minimum footprint
High efficiency geometry
Modular design, 8-20 fans
8 sound levels
Piping in copper or stainless steel AISI 304
Finned pack available in a wide range of materials
Complete range of accessories
AFS (Air Fresh System), WFS (Wet Fin System) and EPS (Evaporative Panel System) available upon request
Casing in galvanized steel, powder painted

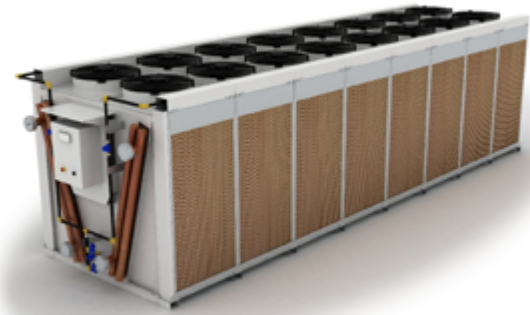


TKMICRO MODULAR LIQUID COOLER

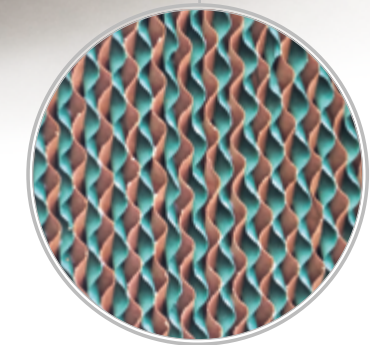
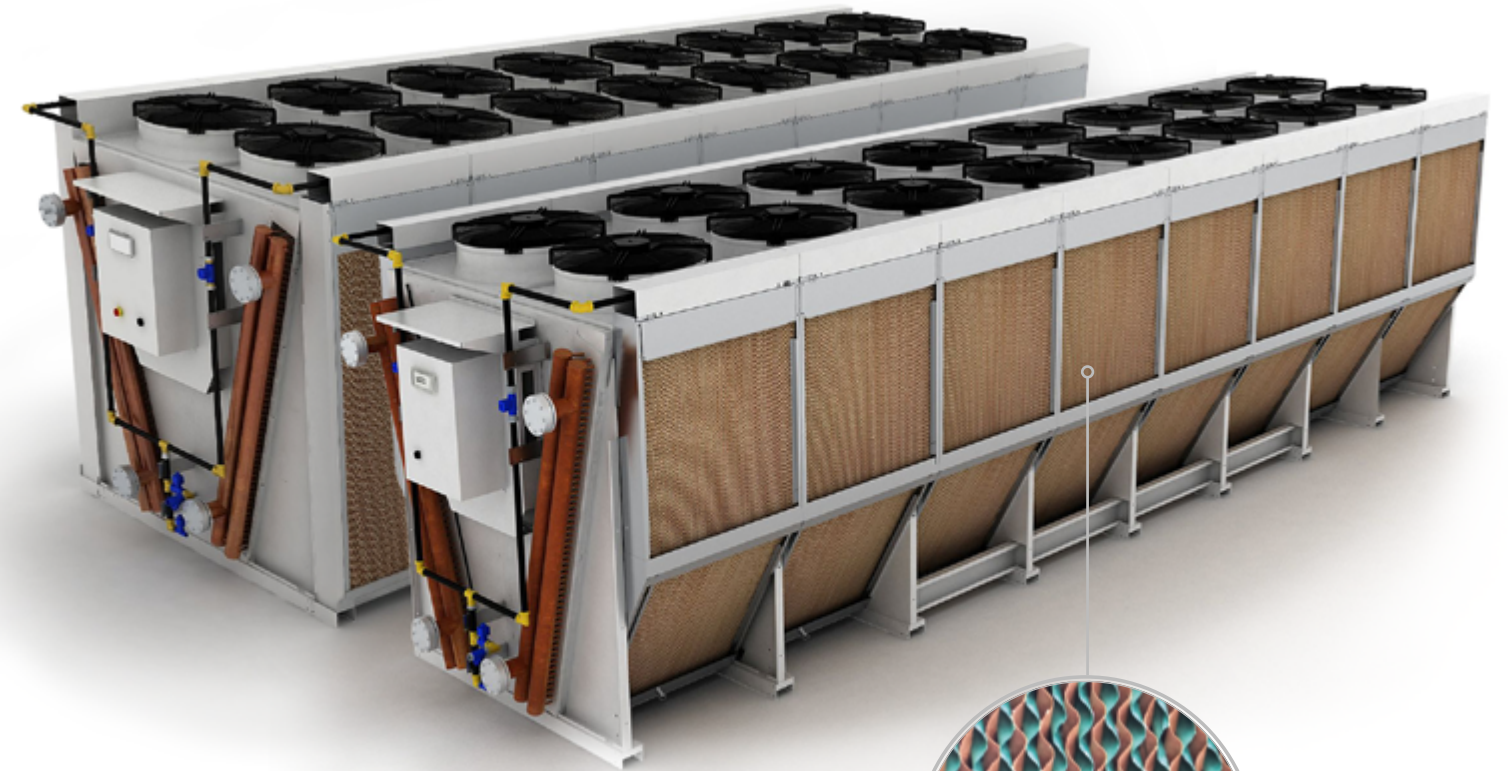
- Area of use** Heat rejection
- Performance range** Capacity for each module up to 120 kW*
- Fans** Diameter Ø 800 mm, AC or EC motor
- Modules** From 1 to n
- Benefits** Modularity
Compactness (maximum length of 2245 mm)
Low installation costs
Regulation or partialisation of the whole unit
Lower environmental impact
Less weight
Less fluid use
Easy-to-clean microchannel core
Core coating possibility in case of aggressive ambient



POWER-J (V-TOWER) DRY COOLER



- Performance range** Capacity from 290 to 2219 kW*
- Fans** Diameter Ø 800, 900, 1000 mm, AC or EC motor
- Modules** From 1 to n
- Benefits**
 - EPS (Evaporative Panel System)
 - Maximum performance, minimum footprint
 - High efficiency geometry
 - Modular design, 8-20 fans
 - 8 sound levels
 - Piping in copper or stainless steel AISI 304 or AISI 316L
 - Finned pack available in a wide range of materials
 - Complete range of accessories
 - AFS (Air Fresh System) or WFS (Wet Fin System) available upon request



Exceptional design increases savings while minimising operational costs

OTHER BENEFITS

- No corrosion
- No continuous chemical treatment
- No sludge accumulations in piping
- No organic gases
- No fouling nor contamination
- No acids for pH control
- No shut-downs to clean heat exchangers
- No constant maintenance
- No ice formation
- No sewage
- No evaporation of process water
- No process temperature variations
- No fan motor maintenance
- No pulleys & no belts
- No drift eliminator panels



No continuous water usage



No bacterial growth (Legionella-free)

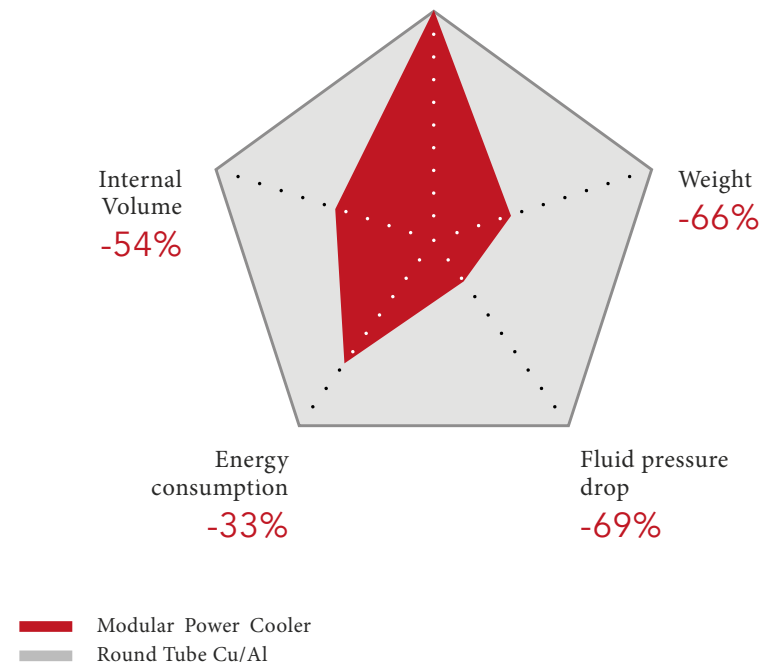
(*) **Standard conditions** - ethylene glycol 35%, Tw1=40°C, Tw2=35°C, T1=25°C



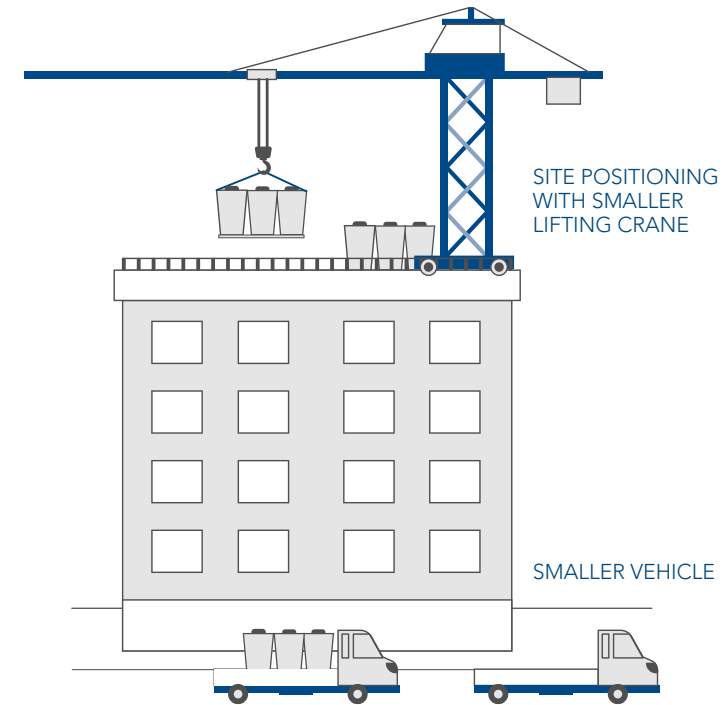
MODULAR DRY COOLER - Patent pending solution

Performance range	Capacity from 200 to 1000 kW*
Fans	Diameter Ø 800, 900 mm, EC motor
Modules	From 1 to 5
Benefits	Modules: 2 fans, 4 vertical microchannel cores Low installations and transportation cost (2 MW in one container) High reliability and high redundancy Individual module isolation valves available on request Easy and quick maintenance and core cleaning EC power absorption meter and optimization available on request Multi System Dual Flow patented solution available on request High corrosion resistance High efficiency, minimal footprint Lower environmental impact Lower internal volume Less weight

Compared to a tube & fin Fluid Cooler - Same capacity



(*) **Standard conditions** - ethylene glycol 35%, Tw1=40°C, Tw2=35°C, T1=25°C



INSTALLATION

The microchannel solution does not need special transport or high cube/open top containers, therefore it can also be installed in city centres where handling is often more difficult.

Up to 40% less installation costs

reduce overall costs of setup, crane renting and operations.

Up to 40% less load on the roof

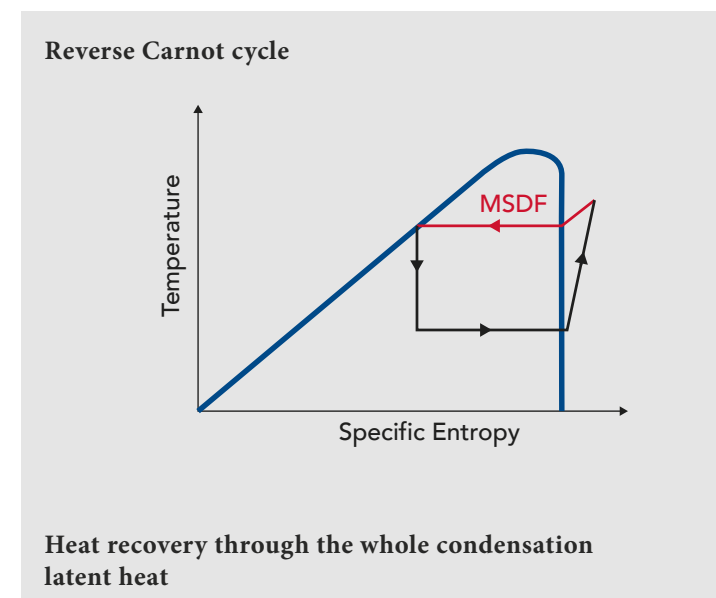
aluminium modules: less wight, less load on the roof (3.500 Kg-8 modules Vs 5.500 Kg-traditional unit).

Easily increase power when needed

in case of capacity request change, the modular system can adapt over time. Identical coils are characterised by same pressure drops, allowing simple modular expansion independently from the size.

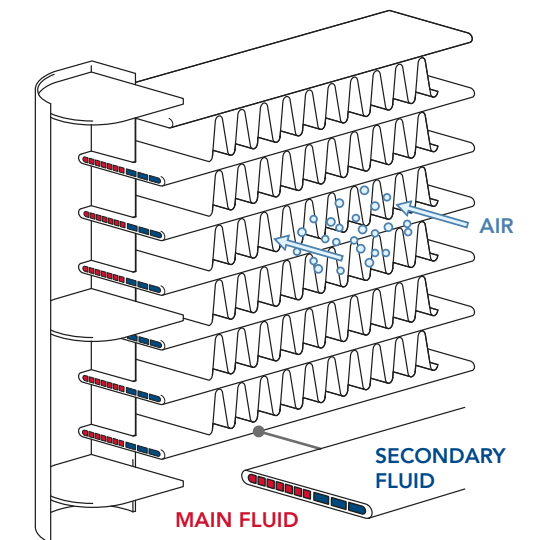
ADVANCED ENGINEERING

Patented solution for heat recovery and adiabatic systems
 Closed-loop adiabatic cooling, with zero water consumption.
 This technology does not just enhance the performance of coolers and condensers, but also provides a warm source of heat that can be used in many applications.



Multi System Dual Flow

- Option for heat recovery in condensers and coolers.
- Closed-looped booster up to +52% capacity, zero water consumption, no hygenic condition problems.



Multi System Dual Flow boosterworking principle

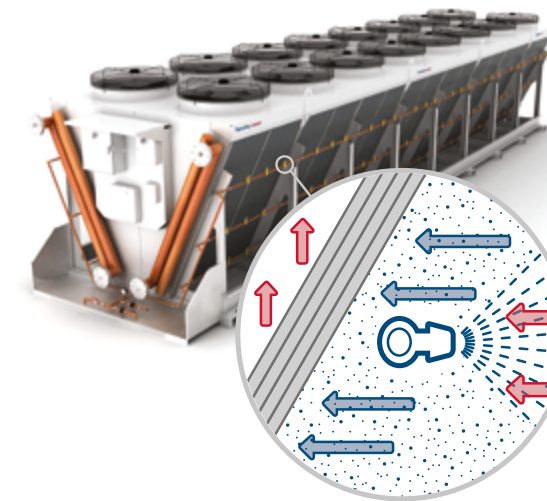
Adiabatic systems

- AFS** Air Fresh System
- WFS** Wet Fin System
- EPS** Evaporative Panel System

The adiabatic system applied to Dry Coolers and large remote condensers are activated in order to increase the air relative humidity that passes through the heat exchanger so as to reduce the temperature and increase the heat exchange.

The physical principle is namely the latent heat evaporation: by evaporating water absorbs heat from the air enters in the heat exchanger and lowers its temperature.

ThermoKey has developed different adiabatic systems to be effective and efficient under certain environmental conditions.



AFS AIR FRESH SYSTEM

ThermoKey adiabatic cooling system equipped with special high-pressure nozzles, which allows to compensate for the peaks of power to be dissipated, with minimum water consumption for a maximum of 500 hours per year.

The combination of high pressure water, the nebulization effect of nozzles (MISTING effect) and a specially designed electronic control system represent the innovative principle of AFS system.

It uses only the quantity of water necessary to obtain the desired adiabatic effect.

Tüv Certified: “No danger in correlation with the risk of legionnaires’ disease”.

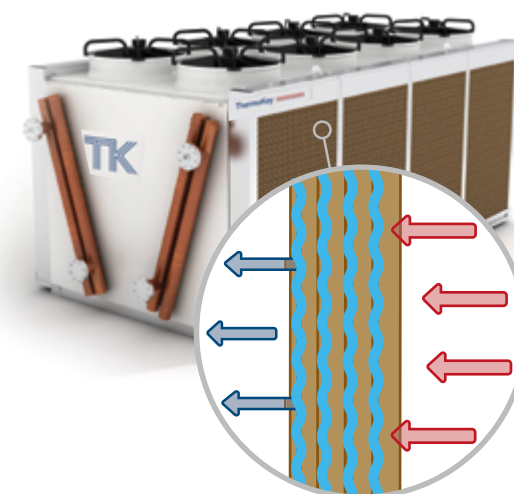
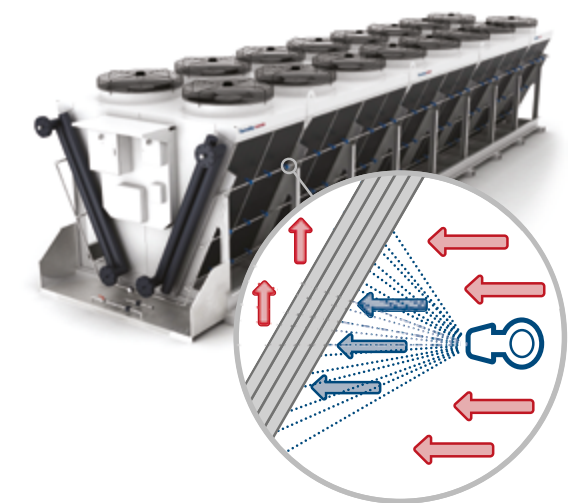
WFS WET FIN SYSTEM

It is ThermoKey hybrid cooling system which allows a complete flexibility of operation, working at low pressure (2-3 bars) and for a very high number of hours per year (up to 1000).

The user can choose whether to prioritize the consumption of water or electricity. Thanks to the misting effect and to the increased exchange efficiency, the WFS system allows to reach higher saturation levels.

Since WFS systems use water for a high number of hours per year, a black double-layer fin is provided in order to improve the protection of the finned pack.

Mainz Universitätsmedizin Laboratory certifies that the WFS meets the standard VDI 2047 part 2 securing hygienically sound operation.



EPS EVAPORATIVE PANEL SYSTEM

The evaporative panel system completes ThermoKey’s offer for adiabatic cooling. Thanks to a homogeneous and adjustable distribution of water on the panels this system allows to reach a high saturation level and therefore an efficient capacity increase with low water consumption (hours per year 8000).

EPS has been designed for seasonal working cycles without any specific time limitation and can be completely disassembled for cleaning and maintenance operations.

Thanks to the evaporation contained in the panel there is no need of any protective treatment for the heat exchanger. It is possible to use the water distributed by the common water supply network.

Mainz Universitätsmedizin Laboratory certifies that the EPS meets the standard VDI 2047 part 2 securing hygienically sound operation.

Energy efficiency of cooling

In order to optimise consumption and efficiency of the Chiller it is possible to adopt different solutions by using an external Dry Cooler.

LOWEST POSSIBLE CONDENSING TEMPERATURE

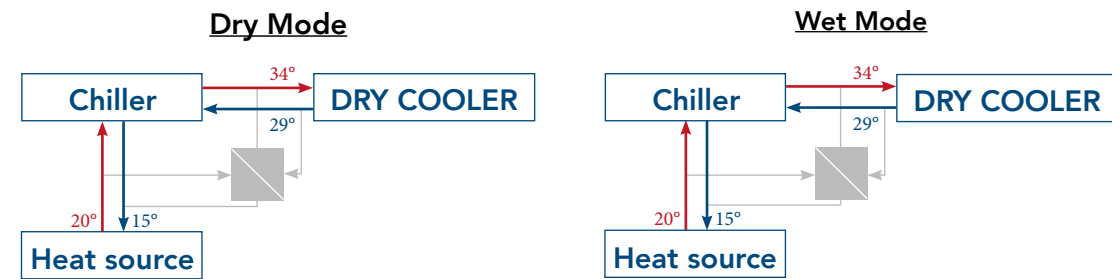
By using a high capacity or efficiency Dry Cooler it is possible to obtain a lower outside fluid temperature.

THE BENEFIT OF AMBIENT TEMPERATURES

Using a Dry Cooler with high capacity or efficiency in order to minimise or even switch off the Chiller during the free cooling mode.

CHILLER OPERATION

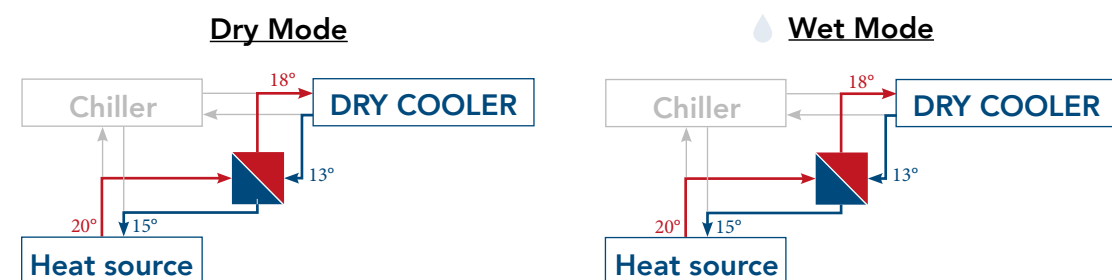
When the ambient temperature is high, the refrigeration chiller works in combination with the adiabatic system that works in dry mode.



CHILLER OPERATION
with ThermoKey adiabatic system Dry Cooler.

FREE COOLING MODE

When the ambient temperature is low, the refrigeration Chiller can be switched off and the Dry Cooler will dissipate the entire capacity.



FREE COOLING OPERATION
with ThermoKey adiabatic system Dry Cooler.
▪ **Energy saving**



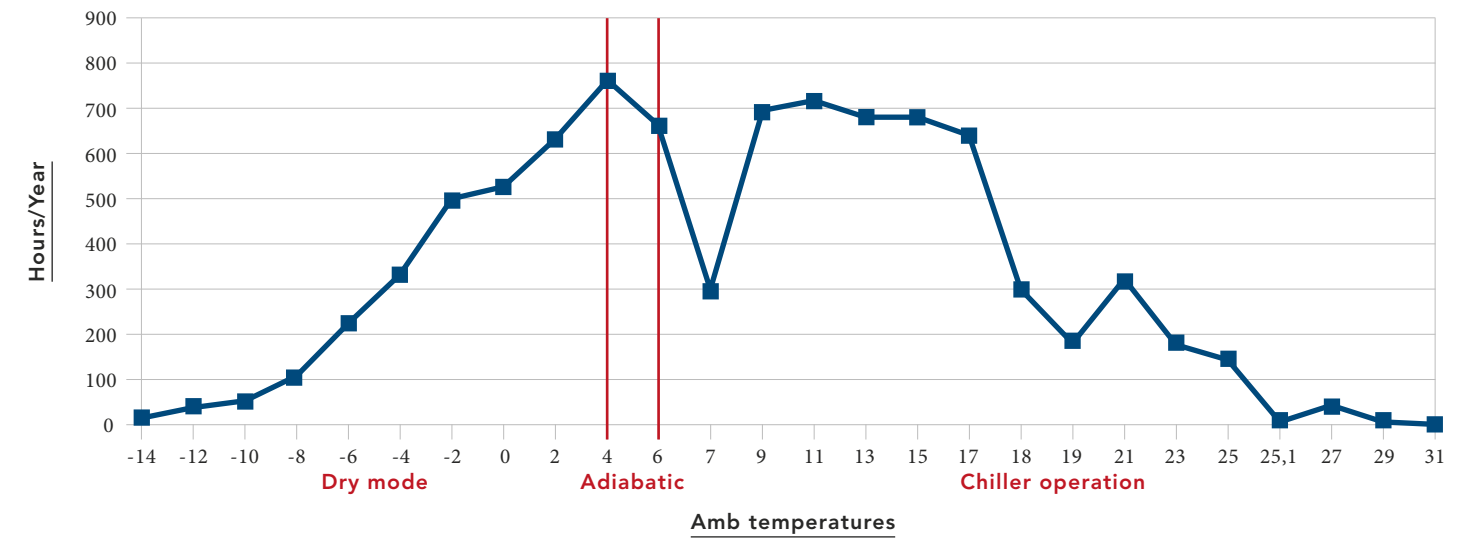
Simulation

Considering a typical range of temperatures at a **Data Centre in London** and combining a 166KW Chiller and a 1000KW Power J. Dry Cooler (our model: JGQ2790B1 with wet fin system), it is possible to distinguish the free cooling mode and chiller mode throughout the year.

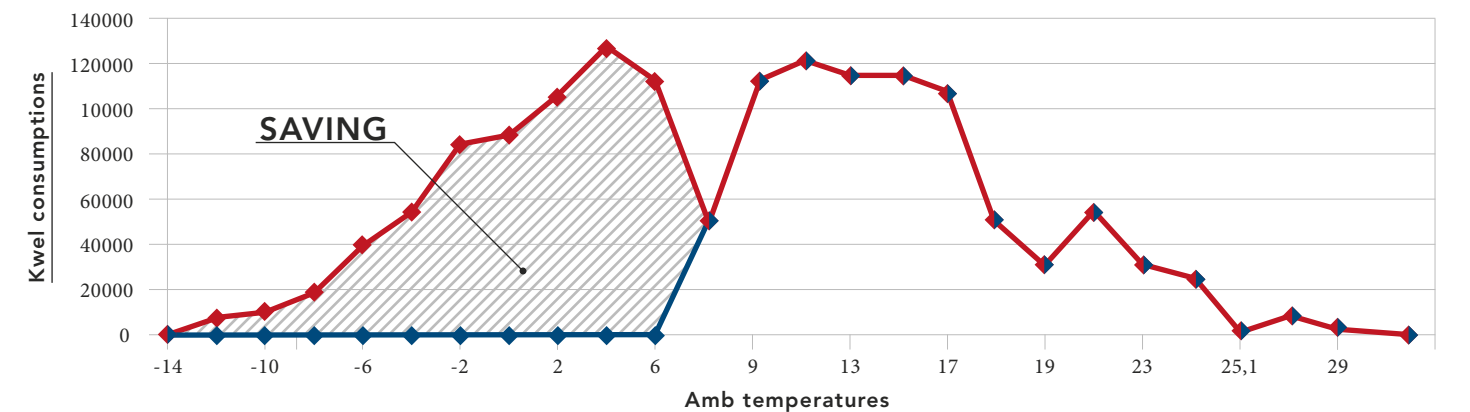
Drycooler mode	Ambient condition London	Cooling water in	Cooling water out	Hours/year	Dry Cooler			Chiller		
					Make up water	Fan velocity	Energy consumption	Energy consuption (Chiller with free cooling)	Energy consuption (Chiller without free cooling)	
JGQ2790B1 (EC)(WFS)	°C	°C	°C	h	m3	RPM%	Kwh	Kwh	Kwh	
dry	-14	18	13	14	0	31%	13	0	2324	Winter/Free Cooling period 18-13° C
dry	-12	18	13	39	0	36%	47	0	6474	
dry	-10	18	13	53	0	40%	79	0	8798	
dry	-8	18	13	105	0	44%	194	0	17430	
dry	-6	18	13	227	0	49%	522	0	37682	
dry	-4	18	13	329	0	56%	1151	0	54614	
dry	-2	18	13	500	0	65%	2700	0	83000	
dry	0	18	13	527	0	87%	4796	0	87482	
dry	2	18	13	632	0	98%	10681	0	104912	
wet	4	18	13	764	1960	65%	4126	0	126824	
wet	6	18	13	666	1709	87%	6061	0	110556	
dry	7	34	29	296	0	36%	414	49136	49136	Summer/Chiller Operation 34-29° C Dry Cooler
dry	9	34	29	695	0	42%	1181	115370	115370	
dry	11	34	29	721	0	47%	1529	119686	119686	
dry	13	34	29	682	0	54%	2182	113212	113212	
dry	15	34	29	682	0	63%	3342	113212	113212	
dry	17	34	29	643	0	76%	5337	106738	106738	
dry	18	34	29	297	0	100%	10395	49302	49302	
wet	19	34	29	180	462	40%	270	29880	29880	
wet	21	34	29	323	829	44%	610	53618	53618	
wet	23	34	29	179	459	51%	465	29714	29714	
wet	25	34	29	144	369	58%	562	23904	23904	
wet	25	34	29	4	10	59%	16	664	664	
wet	27	34	29	45	115	69%	288	7470	7470	
wet	29	34	29	10	26	84%	113	1660	1660	
wet	31	34	29	3	8	0%	0	498	498	
Year total consumption				8760	5947		57074	814064	1454160	

-20% cost reduction

Chiller consumptions in free cooling mode at standard London temperatures.



Temperatures distribution London



KWEL CONSUMPTION CHILLER YEAR

- Energy consumption (Chiller with Freecooling)
- Energy consumption (Chiller without Freecooling)
- Energy savings in free cooling model

The lower the average annual temperatures are the higher the annual savings can be.

Partial free cooling: depending on plant overall costs, ambient temperatures, desired capacity it is possible to partially use the Chiller system and Free Cooling units and therefore achieve further cost reductions.

TK Accessories

ThermoKey offers various electrical devices and control solutions to meet the customer needs in terms of energy efficiency water consumption for PUE and WUE limitation, and to facilitate the integration and the data exchange of ThermoKey units with building automation and management systems of datacentres.

ELECTRICAL PANELS



Q3Y - THREE-PHASE ELECTRICAL PANEL FOR 400V-3-50HZ EC FANS

- Electrical panels for EC fans with paint coated metal casing, with anti-condense heating element and FC400 controller mounted inside the box.
- Fans power supplies lines protected by circuit breakers (a group of fans), user friendly TFT display on the controller.
- Fans – FC400 communication via Modbus RTU to allow the fans data control and the special functions to reduce the energy consumption an the fin pack cleaning; connectable with mobile devices on App via Bluetooth, on request possibly to integrate a varius accessories scuch is Ultracapacitor – UPS to maintain the power supply of the FC400 in case of black out – Energy meter to monitorate the energy consumption.
- Possibility to manage the adiabatic systems AFS-WFS-EPS and the water saving consumption with its expansion SC400.
- Monitoring from Monitoring from BMS via Modbus RTU or Modbus TCP-IP (on request Bacnet IP – Lonwork - SNMP).

Q4Y - THREE-PHASE ELECTRICAL PANEL FOR 400V-3-50HZ EC FANS

- Electrical panels for EC fans with paint coated metal casing, with repair switch on the panel door.
- FC400 controller mounted inside the box.
- Fans power supplies lines protected by circuit breakers (a group of fans).
- RB100 user friendly TFT display mounted on the panel door.
- Fans – FC400 communication via Modbus RTU to allow the fans data control and the special functions to reduce the energy consumption an the fin pack cleaning; connectable with mobile devices on App via Bluetooth, on request possibly to integrate a varius accessories scuch is Ultracapacitor – UPS to maintain the power supply of the FC400 in case of black out – Energy meter to monitorate the energy consumption.
- Possibility to manage the adiabatic systems AFS-WFS-EPS and the water saving consumption with its expansion SC400.
- Monitoring from BMS via Modbus RTU or Modbus TCP-IP (on request Bacnet IP – Lonwork).

Q2Y - ELECTRICAL PANEL FOR 400V-3-50HZ EC FANS

- Electrical panels for EC fans with paint coated metal casing.
- FC400 controller mounted inside the box.
- Fans power supplies lines protected by circuit breakers (a group of fans).
- RB100 User friendly TFT display mounted on the panel door.
- Fans – FC400 communication via Modbus RTU to allow the fans data control and the special functions to reduce the energy consumption an the fin pack cleaning; connectable with mobile devices on App via Bluetooth, on request possibly to integrate a varius accessories scuch is Ultracapacitor – UPS to maintain the power supply of the FC400 in case of black out – Energy meter to monitorate the energy consumption.
- Possibility to manage the adiabatic systems AFS-WFS-EPS and the water saving consumption with its expansion SC400.
- Monitoring from BMS Monitoring from BMS via Modbus RTU or Modbus TCP-IP (on request Bacnet IP – Lonwork - SNMP).

CONTROLLERS



FC400 - CONTROLLER

FC400 is an advanced controller designed for the speed regulation of electronic fans mounted on drycooler or remote condensers, specifically developed for the efficient and reliable thermal management of Data Centers. FC400 extends free-cooling operation and maximized efficiency ensured by our expanding module, designed for the control of all types of adiabatic systems (AFS-WFS-EPS)

Features

- On site update of the FW thanks to the built-in USB port;
- Ethernet port with integrated MODBUS TCP/IP;
- Fans management via MODBUS, so that all operating data are available for the supervision system;
- Carefully studied control algorithms reduce water consumption of adiabatic system;
- Energy and water consumption management, thus optimizing operating costs;
- Plug & Play connection to gateways IIoT GR allowing monitoring and remoted assistance
- Five password-protected access levels;
- On request it can control system elements such as pumps or three-way valves.



SC400 - EXPANSION FOR ADIABATIC SYSTEMS

SC400 is the expansion of the FC400 controller, designed for the control and regulation of the AFS-WFS-EPS adiabatic systems mounted on finned pack heat exchangers.

5 strong points

User-friendly interface

- Backlit Graphic TFT display with 6 buttons.
- User-friendly menu navigation.

Flexibility

- Set-up and programming of analog and digital I/O from the operator panel.
- Customization of special applications.

Special functions

Night Limit - Speed Jump - Unlock – Feedback – Threshold – Boost – Cutoff - Emergency speed - Eco modality - Slave safety - Floating Setpoint - Setpoint Adjust.

Connectivity

Remote access via Bluetooth for tablets and smartphones with the associated HyCo app (iOS and Android).

ACCESSORIES ON REQUEST

- Uninterruptible power supply (UPS) or ultra-capacitor installed inside the electrical panel;
- 7” Touch screen display
- Energy meter and water meter
- Bacnet IP, SNMP and LonWorks protocol converter
- Dual power supply or automatic transfer switch (ATS) installed in separated own electrical panel (QATS)
- Temperature and humidity sensor for evironmental monitorig

ACCESSORIES FOR NORTH AMERICA AND CANADA MARKET



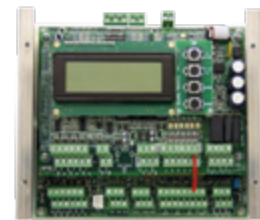
QUL - ELECTRICAL PANEL FOR 480V-3-60HZ EC FANS

Electrical panels UL LISTED for EC fans with paint coated metal casing. ECM controller mounted inside the box, Fans power supplies lines protected by fuse (each fans), fans – ECM communication via Modbus RTU to allow the fans data control and special functions to reduce the energy consumption, fin pack cleaning. Possibility to manage the adiabatic systems (AFS-WFS-EPS) with the adiabatics controllers AFS / EPS controller. Monitoring from BMS via Modbus RTU (on request Bacnet IP – Modbus TCP-IP).



ECM - CONTROLLER

ECM Controller Is a multifunction and multiple-input unit for the regulation of electronically commutated motors installed on axial fans, which is designed to regulate different EC motors in a simultaneous and coordinated way. The temperature measurement unit is in °F (for drycoolers) and the pressure measurement unit inPSI (for condensers).



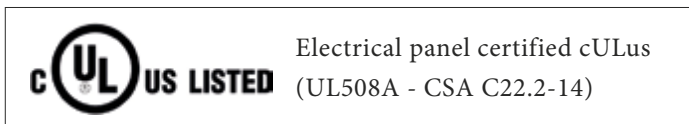
EPS - CONTROLLER

The EPS controller is a digital microprocessor unit designed to measure the amount of water supplied to the adiabatic panels (A.P.) used with the ventilated heat exchangers. It is controlled by the analog 1-10 Vdc signal proportional to the fan speed, generated by ECM. The water flow rate is regulated by two modulating valves A and B, one on each side of the exchanger, depending on the fan speed; one or two constant flow values are supplied, which can be modified by the operator. Some relay ON/OFF outputs allow you to control solenoid valves and pump for supply and drain.



AFS/WFS - CONTROLLER

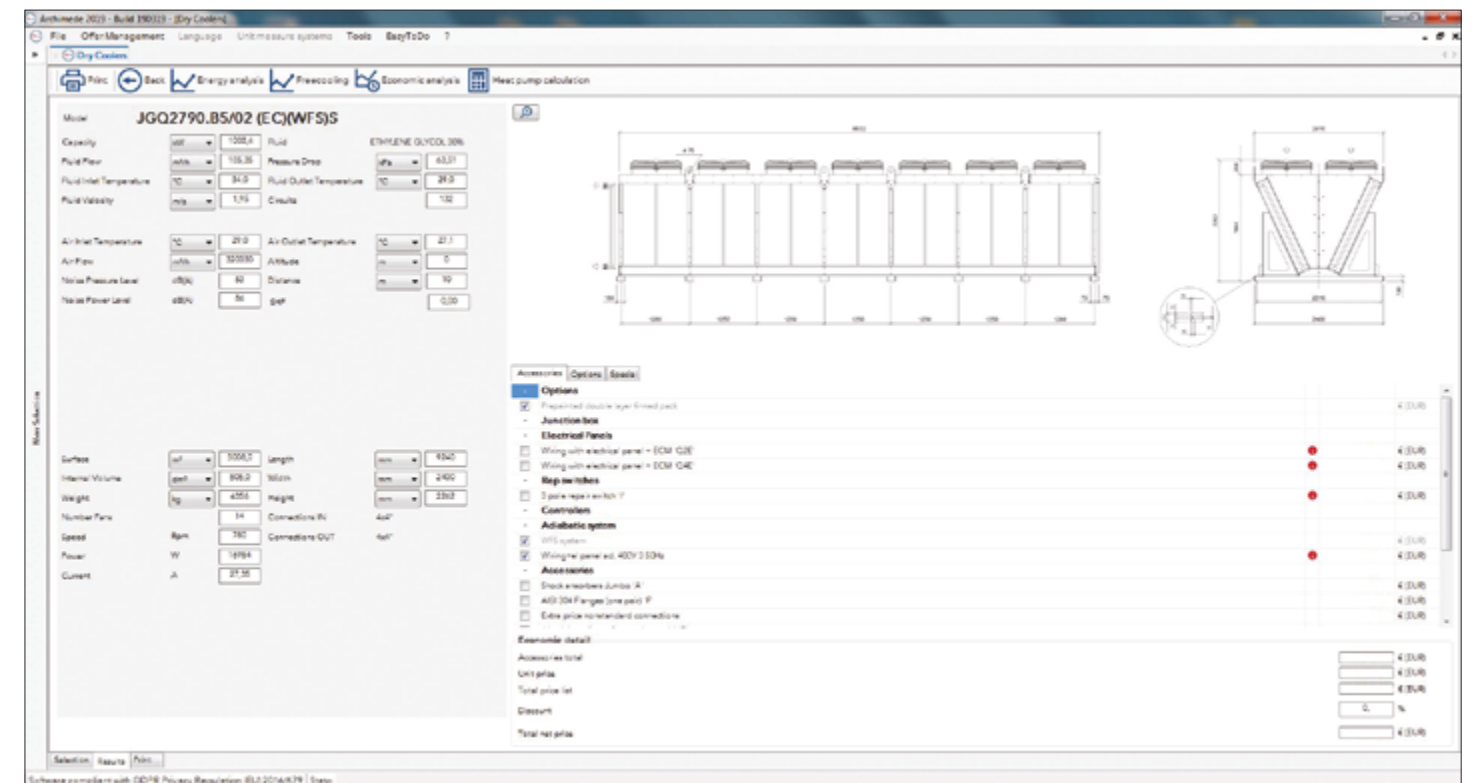
The AFS controller is a device for the control of the solenoid valve and counter of the water pump used with “AIR FRESH SYSTEM” equipment. Module for the command of a complementary solenoid valves and the power relay of the water pump, for a system of cooling to water spray AIR-Fresh System (AFS) applied on a heat exchanger air-fluid. The controller receives a 1..10Vdc control signal from a ECM controller.



TK Archimede

With integrated climate data of no less than 537 cities from around the world, ThermoKey software “Archimede” offers:

- **Economic Analysis:** calculates running costs and pay-back time on the investment.
- **Energy Analysis:** verifies Energy consumptions and noise levels.



FREE DOWNLOAD

Scan the QR code or visit the website www.thermokey.it/download/software



Echelon LCY 10 Data Centre

Echelon LCY 10 is the data centre built in London by Echelon Data Centres, an international data centre infrastructure developer.

SOLUTION

- 11 units SJGL2090DN5-02 Q4EAF(EC)(EPSELV)S
- 2870 kW of heat rejection at 40 deg C ambient design per unit
- 9 units for duty + 2 for standby
- Evaporative Panel System with recirculation tanks to minimise water consumption.



Server in Basel (Switzerland)

ThermoKey Dry Coolers have been produced to ensure durability and reduced energy consumption.

NEED

Cooling down 4.5 MW Total Capacity in a small footprint area.

SOLUTION

3 JGL2790BY AFS, V-Type Dry Coolers with AFS adiabatic system, corrosion protection of finned pack, electronic fans and electrical parts and 1 JGL2790BY, V-Type Dry Cooler with electronic fans and electrical parts.



Data Centre 6.1 MW

The Dry Coolers have been specifically designed to provide the best and most efficient solution.

NEED

Cooling down one of the largest Data Centres (6.1 MW) in a particularly aggressive environment like the coastal one.

SOLUTION

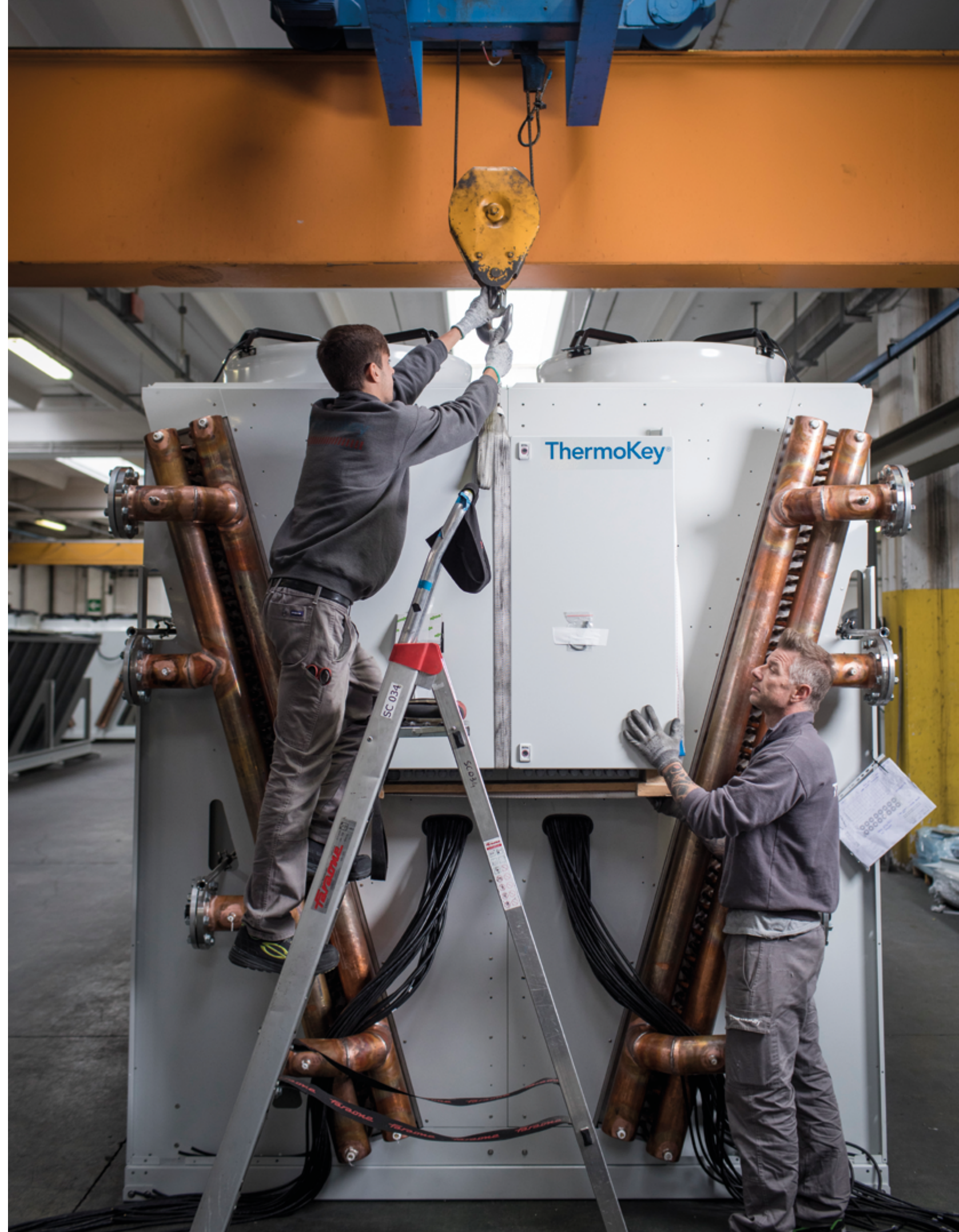
16 V-Type Dry Coolers model JGH2390CZ2/6QIEMAF(EC)(AFS)S and 2 V-Type Dry Coolers model JWQ1290A3/8QIEMAF(EC)(AFS)S with electronic fans, adiabatic and self-cleaning system.



Vantage Data Centre in Newport

SOLUTION

- 5 Units SJGH2090.CN5/02 Q2EIF(EC)S
- 4 units running + 1 standby
- 1348 kW of heat rejection each at a 35 deg C ambient



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Heat Exchange Solutions

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