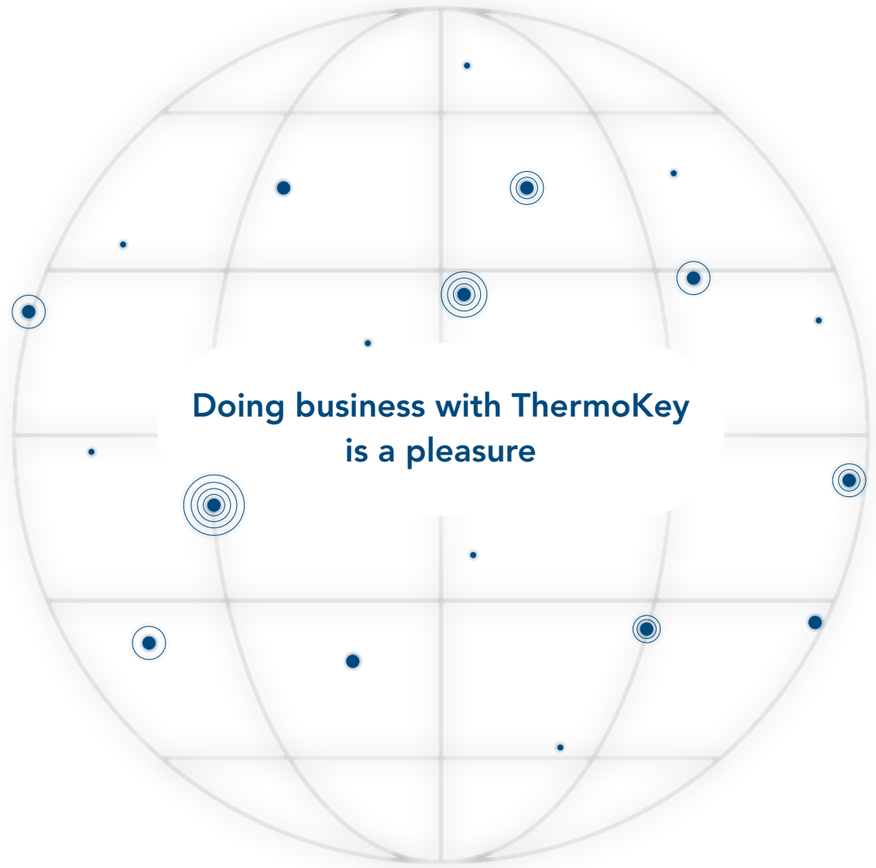
ThermoKey®

Heat Exchange Solutions

Company profile


Doing business with ThermoKey
is a pleasure

The challenges of the global market for a sustainable future

We strive every day to be one of the most innovative companies in the market, thus satisfying the needs of our customers all over the world by providing effective, customized and reliable solutions. Indeed, to be protagonists in the HVAC-R market it is necessary to focus on excellent product and service

Current challenges

RISING TEMPERATURES

The average temperature increase is partly due to high gwp (global warming potential) refrigerants. Our microchannel technology helps fighting the problem, as it allows a reduction up to 65% of the fluid refrigerant.

WATER SHORTAGE

We propose closed circuit process cooling solutions as an alternative to the widespread cooling towers.

INCREASE IN DATA CENTER POWER CONSUMPTION

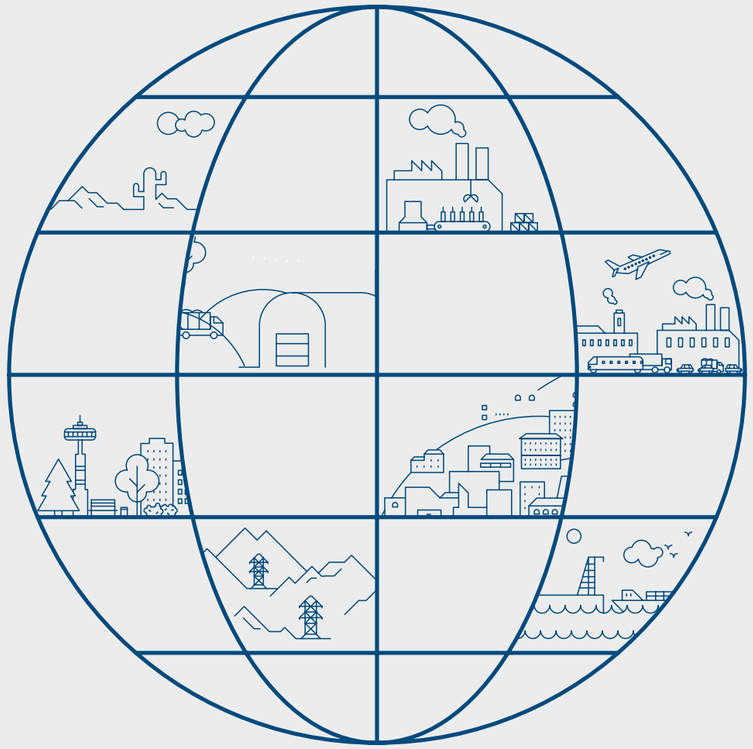
We offer heat disposal solutions in free cooling to significantly reduce cooling energy costs.

DEMOGRAPHIC INCREASE

ThermoKey is proud to be able to contribute – with its refrigeration product range – to a correct production and preservation of quality food and pharmaceutical products.

IMPROVING THE QUALITY OF LIFE

Our HVAC-R products ensure proper climate conditions in all environments, essential for everyone's daily life.



Why is ThermoKey the ideal partner?

In this scenario, for more than 30 years, ThermoKey has been developing and applying the best industrial solutions which combine a mix of expertise, market knowledge, technological development and leadership in productive district to contribute to reduce the environmental impact and achieve the customer maximum satisfaction

Drivers of our growth

DEEP KNOW-HOW

In partnering with companies, universities and research centers to develop knowledge in the HVAC-R market and find new, innovative solutions and patented products.

SUSTAINABILITY VISION

In designing high-quality and long-lasting solutions, which are made with recyclable materials, compatible with low GWP refrigerants and avoid unneccessary use of energy and water.

INLINE RESPONSE TIME

In delivery times, in technical support and in developing customized solutions, thanks to the direct management of our production plant, to our lean process and to the sound relationships with our supply chain.

CONTINUOUS INNOVATION

In our research activity and in the ability to identify the innovations which lead to real improvement for the application and for our customers.

BROAD PRODUCT MIXI

More than 30 years of experience in HVAC-R and Process Cooling market, 6300 standard solutions and 20 million possible configurations, still open to customization.

Purpose

Ensure people's wellbeing and productive performances with innovative and sustainable solutions

We aim to manufacture highest quality level products and we want them to be sustainable and reliable for the benefit of people and the environment. Granting the maintenance of the cold chain in order to avoid waste, preserving the quality of air, ensuring proper data storage and transmission, supporting industries to reach optimal heat dissipation: we work to create added value for our partners, for their communities and for society. This is why we develop heat exchangers destined to last over time and toensure maximum efficiency. Built with easily recyclable materials, they have low maintenance costs and are designed to consume less energy and water, promoting and implementing low GWP solutions.

Value proposition

We are driven by a single goal: satisfying our customers' specific needs

Our long experience, our flexible IT and productive process, our sales and technical team oriented to the Customer's needs and our location at the centre of the European's most important productive area in the heat exchangers market, make us the ideal choice for any HVAC-R project.
All projects are supported by a dedicated manager and by a team of technical experts collaborating with the best universities, research institutes and laboratories.

Each solution can be customized and provided with a wide range of accessories, special materials and surface treatments in order to meet every need.

Thanks to a fully-integrated value chain over 90% of our components are directly manufactured at our headquarters, allowing us to grant the fastest delivery times on the market.

Giuseppe Visentini
Chief Executive Officer
ThermoKey Spa

Sustainability is a value we truly believe in and we put it into practice from the very moment we start designing our products.

We are committed to using recyclable materials and improving efficiency in order to reduce emissions and avoid water or energy waste. We also aim to become carbon neutral by 2030.

This is how we make our contribution to a greener HVAC-R sector and ultimately to a greener world.

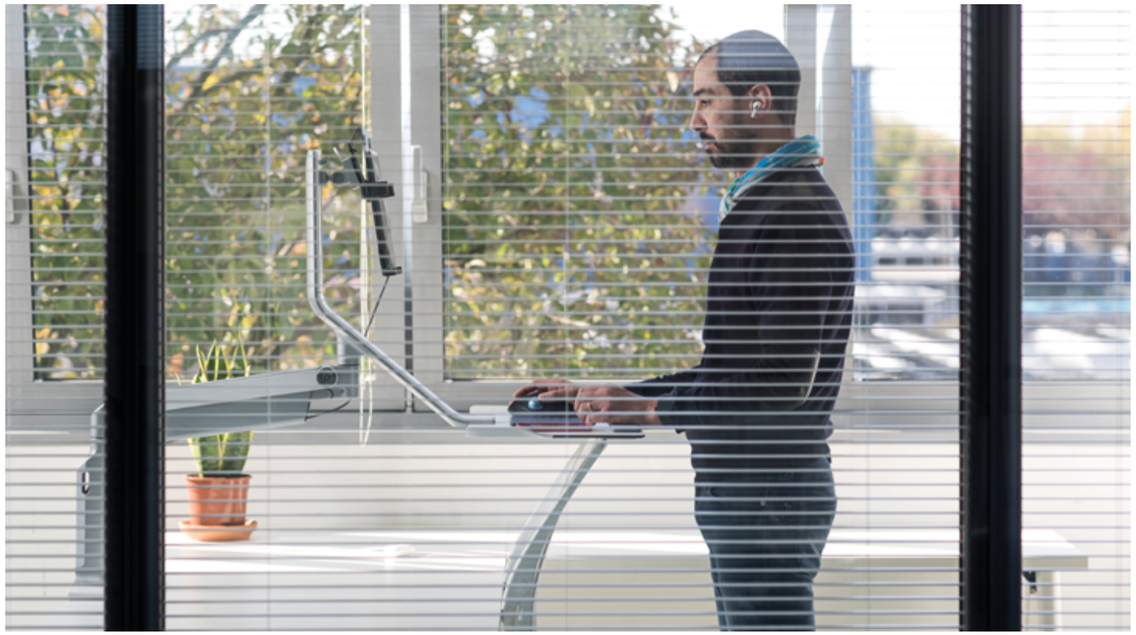
Sustainability Report

Our long-term commitment to shape a better future for people and the environment

In September 2023, ThermoKey published its first Sustainability Report, a further step in our mission of making the world of refrigeration and air conditioning more sustainable: we want to positively influence people's lives and give our customers a competitive edge thanks to solutions which grant higher performance and help reduce consumption.

We are working on several fronts:
- We design innovative, increasingly sustainable solutions, optimizing the use of resources and reducing emissions;
- We use certified and recyclable raw materials and we promote the use of 'green' refrigerants;
- We invest in technological innovation in the production process, to improve the efficiency of the entire production chain and reduce waste;
- We continue to improve our energy efficiency and we have installed a photovoltaic system to halve our electricity consumption from non-renewable sources;
- We strive to have a positive impact on the community and on our employees, with initiatives aimed at fostering employment in the area and at ensuring the best conditions inside and outside the workplace.

To find out more about our current and future projects to ensure sustainability in every aspect of our activities, read our Sustainability Report.

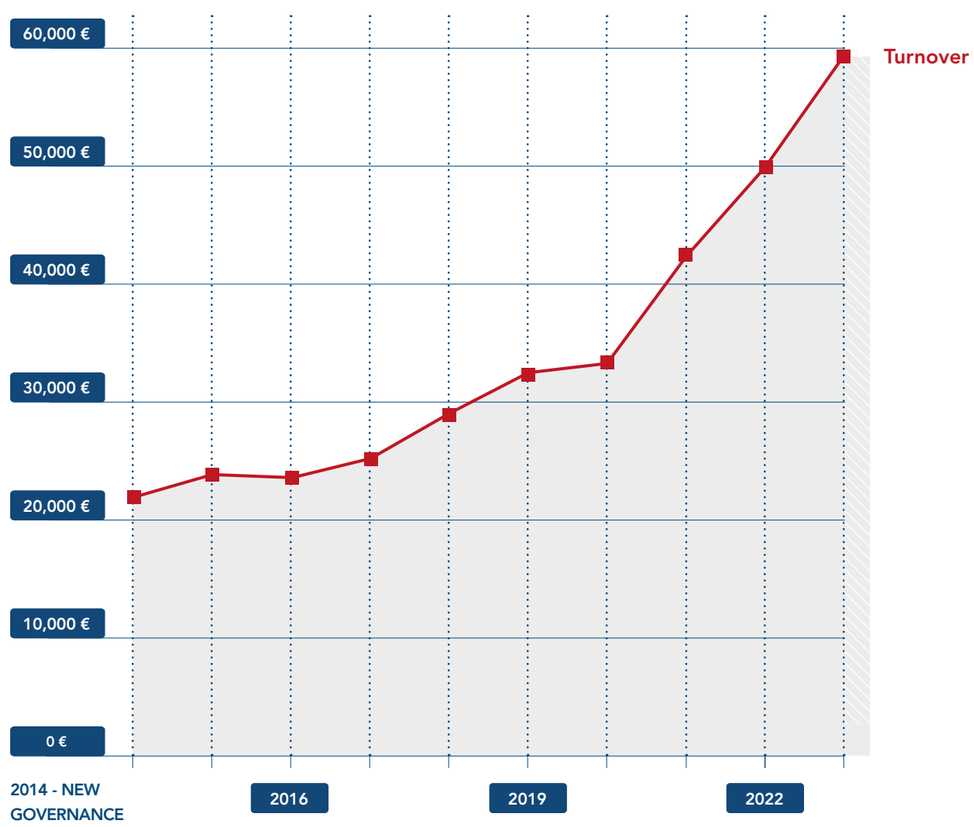


ThermoKey growth

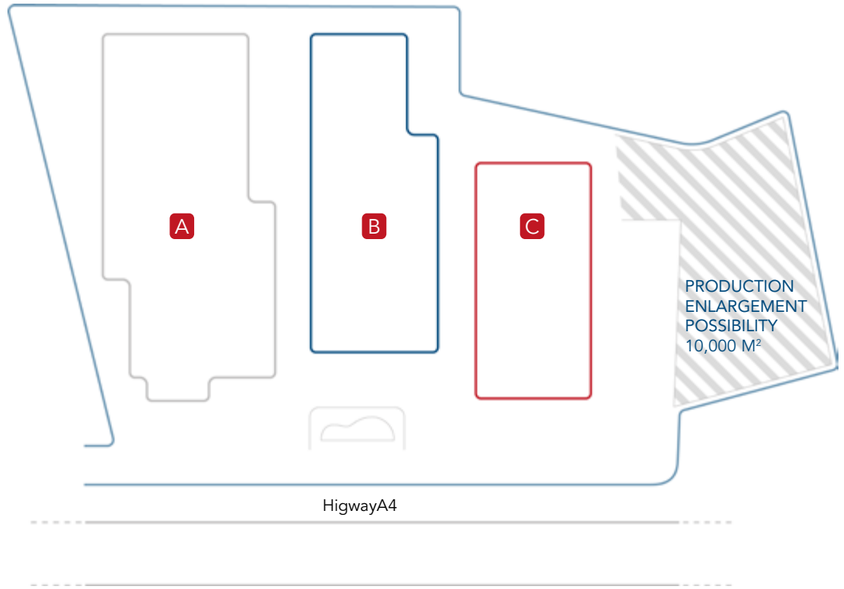
A remarkable 28% growth has been achieved over the last 12 months

The HVAC-R sector has shown a steady growth in the last two years, and ThermoKey has improved its performance by growing by +28% in the last 12 months.

An important signal confirming this positive trend is the increase in hiring at the company: currently, around 250 people work at ThermoKey, the highest number of employees ever reached, and there are several job positions available that will allow for further professional development of the company and ensure the acceleration towards ambitious goals for the future.



A plant designed to be leader in the market



81.500 M² OF COMPANY LAND
32,000 M² OF PRODUCTION SPACE

Headquarters / Production	14,000 m²
TKMicro production	10,000 m²
Unit cooler	8,000 m²

NORTH-EAST ITALY INDUSTRIAL DISTRICT

- 80% chillers
- Know-how Hub
- Logistics platform

STRATEGICAL LOCATION

1. **Corridor 5** - Lisbon →Kiev
2. **Corridor 1** - Palermo →Berlin
3. **Highway to Vienna**
4. **Port of Venice**
5. **Port of Trieste**

More than 30 years of success

1991

ESTABLISHMENT

ThermoKey was founded to produce heat exchangers for commercial and industrial use, expanding its range of products continuously over the years.

1995

COILS IN STAINLESS STEEL TUBE

ThermoKey is the first company in Italy to produce coils in stainless steel tubes with TIG orbital welding technology. The Company understood the potential of using Ammonia and the use in corrosive ambient / food processing rooms.

2005

THERMOKEY SUBSIDIARIES

ThermoKey Deutschland GmbH, the German subsidiary company was founded to face at best the most important and demanding markets in terms of performance and volumes. In the same year we opened Representative Offices in Poland and France to follow direcly the increasing demand on HVAC-R markets.

2008

"GREEN" REFRIGERANT R744

The refrigerant R744 (CO_2) was added to the range of natural refrigerants already used (amongst the others NH_3) through a new specific series of unit coolers.

2010

MICROCHANNEL HEAT EXCHANGER

The first company in the world able to braze a 6-metre long aluminium core with 32 mm MPE for HVAC-R using a controlled atmosphere brazing line furnace for microchannel heat exchanger. Development of our own thermodynamic calculation software for microchannel cores.

2013

NEW GOVERNANCE

Thanks to the entry of new investors and a renewed Governance, ThermoKey becomes independent and launches a new growth plan through the development of always more efficient and "green" products, using the well-known aluminium technology.

2014

TKMICRO25

ThermoKey starts the production of MCHX cores with 25 mm MPE. We also introduce the innovative adiabatic cooling system WFS, adding it to the previous developed system AFS (Air Fresh System).

2015

TKSMART: LIGHT REMOTE CONDENSER

TKSmart brings extreme lightness and flexibility for industrial applications. Thanks to the choice of aluminium – 100% recyclable and highly corrosion-resistant for greater durability – and the special design of TKSmart, allowing it to use 60% less refrigerant.

2016

TKMICRO H_2O

ThermoKey starts the production of the innovative TKMicro H_20, a Microchannel Core suitable for water. Introduction of a new adiabatic cooling system called Evaporative Panel System (EPS).

2017

NEW INDUSTRIAL DUAL FLOW UNIT COOLER

The new range of units feature high efficiency fans for the best air distribution, a capacity of up to 175 kW and coil frame made of aluminium magnesium alloy ensuring the maximum combination of lightness, mechanical strength and corrosion resistance.

2018

NEW POWER-J (V-TOWER) DRY COOLER

The new Dry Cooler equipped with Evaporative Panel System has been launched and presented at Chillventa, Nuremberg. The adiabatic cooling system does not generate aerosol in the air. We also expand our sales worldwide network by opening a new office in Chicago.

2020

POWERGEN RADIATOR FOR POWER STATION

To meet the needs of the electricity production, small biogas and geothermal plants, we introduce the powergen radiator (modular design 3-6 fans - diameter 1250 mm).

2021

NEW INDUSTRIAL CUBIC UNIT COOLER

ThermoKey designs the new Cubic unit cooler to meet the market needs:

- All panels are made of $AlMg_3$ magnesium aluminium alloy to ensure the maximun combination of lightness, mechanical strength and corrosion resistance;
- Ceiling fixing brackets are made of stainless steel AISI 304 ensuring more structural safety over time;
- Hinged panels for better cleaning maintenance.

2022

GAS COOLER AND PROCESS DUAL FLOW UNIT COOLER

ThermoKey presents the Gas Cooler (CO_2-green refrigerant) to meet the growing demand of the refrigeration market, which is increasingly attentive to reducing the greenhouse effect. It also designs the Process Dual Flow Unit Cooler to ensure greater comfort in the processing rooms as the upper air intake does not generate the ascending current.

2023

MULTI SYSTEM DUAL FLOW

ThermoKey introduces the TKMicro Multi System Dual Flow: its proprietary technology that enables heat recovery through microchannel coils where multiple fluids run simultaneously. It allows to reduce the number of units required or the exchanger size by 32%.

2023

FIRST SUSTAINABILITY REPORT

ThermoKey publishes its first sustainability report, defining the guidelines for future activities and investments aimed at developing increasingly sustainable solutions.

2024

NEW MODULAR DRY COOLER

ThermoKey's latest patent pending solution is designed to guarantee operational continuity. With its hot swappable component system, the Modular Dry Cooler is engineered to provide continuous, uninterrupted service at all times.

QUALITY CERTIFICATES

since 2002 UNI EN ISO 9001:2015 Quality Management System

since 2005 UNI EN ISO 14001:2015 Environmental Management System

since 2008 TÜV Certificate on Turbo-Line Condenser

since 2009 TÜV Certificate against Legionella for ThermoKey Air Fresh System

since 2015 EAC Declaration and Certificate

since 2016 Wet Fin System Hygiene Certificate

since 2018 Adiabatic Evaporative Panel System Hygiene Certificate

since 2019 Ped Cat2

since 2021 UNI ISO 45001:2018 Occupational Health and Safety Management System

Hundreds of customers have been choosing us for years for our expertise and know-how combined with the wide range of products and customization options we offer

Product range

	ENERGY & PROCESS COOLING	AIR CONDITIONING	REFRIGERATION	DATA CENTRE
POWER-LINE DRY COOLERS				
POWER-J DRY COOLERS				
SUPER POWER-J DRY COOLERS				
POWER-J (V-TOWER) DRY COOLERS				
MODULAR DRY COOLERS				
TK MICRO LIQUID COOLERS				
POWERGEN RADIATOR	■			
TURBO-LINE CONDENSERS	■	■	■	■
TURBO-J CONDENSERS	■	■	■	■
GAS COOLER	■	■	■	■
TKMICRO V-TYPE MODULAR REMOTE CONDENSER			■	
MICROCHANNEL CONDENSERS - TKSMART	■	■	■	■
INDUSTRIAL DUAL FLOW UNIT COOLERS	■	■	■	■
INDUSTRIAL UNIT COOLERS			■	■
BLAST FREEZER UNIT COOLERS			■	■
FRUIT COOLERS			■	■
RADIAL UNIT COOLERS			■	■
COMMERCIAL DUAL FLOW UNIT COOLERS			■	■
LIGHT CUBIC UNIT COOLERS			■	■
HEN UNIT COOLER			■	■
PROCESS DUAL FLOW UNIT COOLER			■	■
ROUND TUBE COILS	■	■		
MICROCHANNEL CORES		■	■	■

NEEDS

- Tailor-made products
- Reliability and easy maintenance
- High capacity

NEEDS

- People wellness
- Proper practicality of equipment by removing genera-ted heat
- High energy efficiency

NEEDS

- Preservation of food freshness and properties
- Continuous performance over time
- Sanitisable products

NEEDS

- Reliability
- Maintain a constant temperature

Dry Coolers

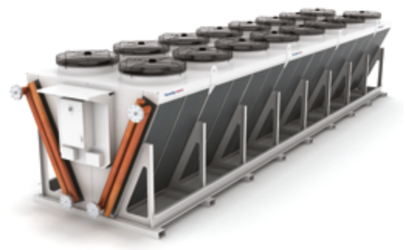
> Through the ambient air and a closed circuit –without wasting water– they dissipate the heat not usable by production processes, power plants, engines, moulds

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
BENEFITS	High efficiency geometry Modular design, 1-16 fans Many sound levels configuration, including selection with silencers if necessary 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	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 Many sound levels configuration, including selection with silencers if necessary 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

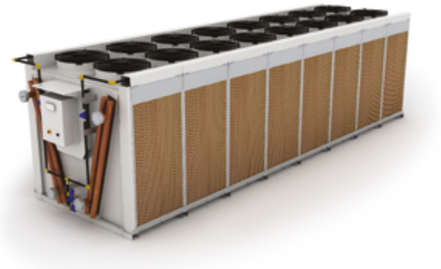


Super Power-J Dry Coolers

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)
BENEFITS	Diameter Ø 800, 900, 1000 mm, AC or EC motor
	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) or WFS (Wet Fin System),available upon request Casing in galvanized steel, powder painted

Power-J (V-Tower) Dry Coolers

PERFORMANCE RANGE	Capacity from 290 to 2219 kW
FANS	Diameter Ø 800, 900, 1000 mm, AC or EC motor
BENEFITS	EPS (Evaporative Panel System) Maximum performance, minimum footprint High efficiency geometry Modular design, 8-20 fans Many sound levels configuration, including selection with silencers if necessary 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 AlMg frame



Modular Dry Coolers

PERFORMANCE RANGE	Capacity from 200 to 1000 kW
FANS	Diameter Ø 800, 900 mm, EC motor
BENEFITS	Single module with 4 cores and 2 fans provides 200 kW Available from 1 to 5 modules (up to 1000 kW) Low installations and transportation cost (2 MW in one container) Easily increase power High reliability and high redundancy Individual module isolation valves available on request Easy and quick maintenance and core cleaning High corrosion resistance due to same tube and fin material High efficiency, minimal footprint Lower environmental impact Lower internal volume and less weight Tier3 and Tier4 design available on request Multi System Dual Flow patented solution available on request

TKMicro **Liquid Coolers**

AREA OF USE	Heat rejection
PERFORMANCE RANGE	Capacity of each module up to 120 kW (standard conditions - ΔT = 15k ethylene glycol 35%, Tw1=40°C, Tw2=35°C, T1=25°C\) Capacity from 8 to 1100 kW (Ethylene glycol 35%, Tw1= 40 °C, Tw2= 35 °C, T1= 25 °C)
FANS	Diameter Ø 800 AC and EC motor
BENEFITS	Modular design Compactness (maximum lenght 2245 mm) Low installation costs Regulation or partialisation of the whole unit Lower enviromental impact Less weight Reduced volume charge Easy-to-clean microchannel core Core coating possibility in case of aggressive ambient

(**) Standard conditions - ΔT = 15k ethylene glycol 35%, Tw1=40°C, Tw2=35°C, T1=25°C

Power plant

Cooling the Deutz TBD 620 V16 engine at the power plant on the island of Favignana in Sicily.

NEED

Specific materials and treatments for very high durability in particularly aggressive marine environments.

SOLUTION

Dry Cooler, model GH2690.DNYVQRAFS, with stainless steel 304 casing , heat exchange coils with copper pipes and fins and C5M category anti-corrosion treatment (ISO12944). Power: double circuits, LT=233 kW + HT=933 kW.

Food processing

Fluid temperature control at the requested maximum temperature is guaranteed thanks to EPS.

NEED

To mantain the fluid temperature for the perfect functioning of the production plants. Capacity: 1670 kW + 1369.30 kW.

SOLUTION

5 Super Power-j Dry Coolers model SJGH21090CN/04Q2EAF(EC)(EPS)S and 6 Super Power-j Dry Coolers model SJGH2890C1/04Q2EAF(EC)(EPS)S.

Data centre

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

NEED

Precisely control the temperature of data centre servers to improve their efficiency. Total capacity: 11.8 mW.

SOLUTION

31 Power-J Dry Coolers model jGH2390CZ2/6QIE-MAF(EC)(AFS)S and 2 V-Type model JWQ1290A3/8QIEMAF(EC)(AFS)S with electronic fans, adiabatic and self-cleaning system.

Geothermal energy

The V-shaped condensers, equipped with skids, are ideal for container shipping and installation as they simplify the loading process.

NEED

container-fit units with special flanged connections to condense innovative HFO refrigerant, enabling easy transport and installation.

SOLUTION

2 Turbo-J condensers, model JVKL2890CN5W3EEP (EC) FS. The units are equipped with 16 EC brushless fans and a fan speed controller that allows you to optimize energy consumption.

Thermal baths

The chillers and drycoolers that guarantee ecological and economic benefits to Austria's first CO_2 neutral thermal bath.

NEED

Low-noise systems equipped with an adiabatic system to respond optimally to ambient temperature peaks during the summer.

SOLUTION

3 Super Power-J Dry Cooler, model SJGQ2890C5/03QAF(EC)(WFS)S with EC fans, WFS adiabatic system, shock absorbers, flanges and customized electrical panel.

Radiators

ThermoKey air cooled Radiators have been designed for heavy industrial cooling applications to cool various process liquids, even in the most extreme conditions. Our radiators can be custom-designed for each project, offering the best possible match for every facility. Applications include: diesel and gas engine cooling, turbine cooling, oil cooling

PowerGen Radiator

AREA OF USE	Electricity production market, small biogas plants, geothermal plants
FANS	Capacity up to 3mw at ambient temperature 35°c
BENEFITS	Plug & play units for short assembly time on site Containerizable Robust construction Energy efficient – low total cost of ownership Great capacity Reliability for industrial application

Power plant

Located in Bangladesh, the radiators are equipped with high-efficiency fan motors for energy saving.

NEED

Engine cooling. Capacity required: 1665KW for HT circuit and 980KW for LT circuit.

SOLUTION

PowerGen Radiators designed as an upgrade of old pre-existing radiators, allowing a quick plug & play replacement and cost saving for shipping and installation.

Remote condensers and gas coolers

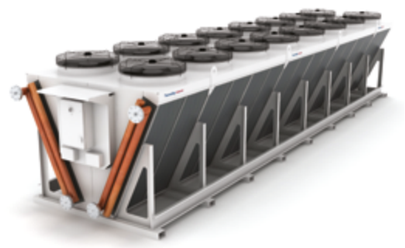
> Through the ambient air and a closed circuit – without wasting water – they dissipate the heat not usable by production processes, power plants, engines, moulds

Turbo-Line Condensers

AREA OF USE	Gas condensation
PERFORMANCE RANGE	Capacity from 10 to 1249,8 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, many sound levels configuration 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 1933 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 or AISI316L Finned pack available in a wide range of materials Complete range of accessories, many sound levels configuration AFS (Air Fresh System), WFS (Wet Fin System) and EPS (Evaporative Panel System) available upon request Casing in galvanized steel, powder painted



Gas Coolers

AREA OF USE	Commercial refrigeration (supermarkets) and industrial refrigeration (production, packaging and distribution)
PERFORMANCE RANGE	V-type double row range from 4 to 12 fans, capacity up to 1200 kW Table-type range to 10 fans, capacity up to 600 kW
FANS	Diameter Ø 500, 630, 800, 910 mm, AC or EC motor
BENEFITS	V-shaped structure allows to reduce the installation dimensions. Evaporative panel system increases capacity and efficiency of transcritical CO_2 systems Adiabatic cooling for effective operation also in regions with high ambient temperatures Management of the adiabatic system to minimize water consumption

TKMicro V-Type Modular Remote Condensers

AREA OF USE	Gas condensation
PERFORMANCE RANGE	Capacity for each module: TKMicro 25: 148 kw TKMicro 32: 160 kw
FANS	Diameter ø 800 mm, ac or ec motor
MODULES	Diameter ø 800 mm, ac or ec motor
BENEFITS	Modularity Compactness (maximum lenght of 2245 mm) Low installation costs Regulation or partialisation of the whole unit Lower enviromental impact Less weight Reduced volume charge Easy-to-clean microchannel core Core coating possibility in case of aggressive ambient

TKMicro 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) Table-type range to 10 fans, capacity up to 600 kW
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
FANS	Innovative high efficiency microchannel heat exchanger +30% Capacity vs same footprint 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

Commercial refrigeration

The evaporative panel system was developed to enhance the capacity and efficiency of transcritical CO^2 systems.

NEED

Dissipated power of 570 kW in condensation and 114 kW in evaporation for the refrigeration of a supermarket in Belgium.

SOLUTION

12 EC fan V-shape unit with auxiliary evaporative rows for energy-saving heat recovery, and a treated heat exchanger for coastal environments, complemented by an EPS adiabatic system.

Wind farm

An offshore wind farm (a wind power project) in the north of Europe.

NEED

The wind farm and substation includes 78 wind turbines with a total capacity of 312 MW. It produces green electricity for around 320,000 households every year.

SOLUTION

19 Turbo line condensers model KH1150, completely made of stainless steel (fins, tubes, casing, etc.) and equipped with C5M fans.

Wine sector

High-performance refrigeration system for Capetta Winery.

NEED

Doubling the cooling capacity for the refrigeration of the musts - about 20,000 litres/hour from 28°C to 0°C. Cooling capacity of 581kW at 50Hz.

SOLUTION

R290 (propane) TKMicro V-Type Modular Remote Condensers with high efficiency and low refrigerant charge.

Meat production facility

Food freezing and storing for a leading company in Poland.

NEED

31 Cold rooms with a total surface of 3500 m^2 for the whole meat production process. Cooling capacity of 910 kW.

SOLUTION

23 Unit Coolers and 4 Microchannel V-Type Remote Condensers.

Unit Coolers

> Used for food preservation in cold rooms, fast freezing tunnels, greenhouses temperature control and other applications

Industrial Dual Flow Unit Coolers

AREA OF USE	Medium and large cold rooms and large refrigerated warehouses to preserve fresh or frozen products. Medium and large
PERFORMANCE RANGE	**Direct Expansion operation**: capacity up to 115 kW (R404A, Te= -8° C, T1= 0° C, RH = 85%) **Brine Operation**: capacity up 160 kW (Glycol 30%, TW1= -10 °C, T1= 0 °C, RH = 85%) **Ammonia Operation**: capacity up 170 kW (NH3, Te= -8 °C, T1= 0 °C, RH = 85%)
FANS	Diameter Ø 500-560-630 mm, AC motor
BENEFITS	Modular design, 1-5 fans Piping in copper or in AISI 304 or AISI 316L stainless steel Finned pack available in a wide range of materials Fin spacing: 4.5 mm - 12 mm Various defrosting systems available

Industrial Unit Coolers

AREA OF USE	Medium and large cold rooms
PERFORMANCE RANGE	**Direct Expansion operation**: capacity from 7 to 209 kW (R404A, Te= -8° C, T1= 0° C, RH = 85%) Brine Operation: capacity from 8 to 262 kW (Glycol 30%, TW1= -10 °C, T1= 0 °C, RH = 85%) **Ammonia Operation**: capacity up 170 kW (NH3, Te= -8 °C, T1= 0 °C, RH = 85%) **ICC carbon dioxide Operation**: capacity from 6 kW to 150 kW (R744, Te= -8° C, Tr= 0°C, RH= 85%)
FANS	Diameter Ø 500-560-630 mm, AC motor
BENEFITS	Modular design, 1-5 fans Piping in copper or in AISI 304 or AISI 316L stainless steel Finned pack available in a wide range of materials Fin spacing: 4.5 mm - 12 mm Various defrosting systems available Casing available in AISI 304 or AISI 316L stainless steel or RAL 9010 painted aluminium

Blast Freezer Unit Coolers

AREA OF USE	Fast freezing applications
PERFORMANCE RANGE	Capacity from 14 to 107 kW (Te = -40 °C, T1 = -35 °C, RH = 90%)
FANS	Diameter Ø 630 mm
BENEFITS	External static pressure of 100 Pa (standard) can arrive at 400 Pa with special tubular fans Piping in copper or in stainless steel AISI 304 Finned pack available in a wide range of materials Fin spacing 12 mm Various defrosting systems available Casing: aluminium, available in stainless steel AISI 304 or painted RAL 9010 on request

Fruit Coolers

AREA OF USE	Fruit and vegetables storage
PERFORMANCE RANGE	Capacity from 21 to 50 kW (R404A, Te= -8 °C, T1= 0 °C, RH= 85%)
FANS	Diameter Ø 400 and 450 mm
BENEFITS	Modular design, 3-6 fans Fin spacing: 6.0 mm Electric defrosting system available on request Solid frame in galvanized steel painted RAL9010

Radial Unit Coolers

AREA OF USE	Air ducting
PERFORMANCE RANGE	**Direct Expansion operation**: capacity from 10 to 115 kW (R404A, Te= 2 °C, T1= 12 °C, RH= 75%) **Brine Operation**: capacity from 7 to 135 kW (Glycol 30%, Tw1= 0 °C, Tw2= 4 °C, T1= 12 °C, RH= 75%)
FANS	Radial ducted fans, Diameter Ø 630 mm EC
BENEFITS	Fin spacing: 4.5 - 7.0 mm Piping in copper or in stainless steel AISI 304 or AISI 316L External static pressure of 150 Pa Modular design, 1-4 fans Electric defrosting system available on request Casing in aluminium, available in galvanized steel painted RAL 9010 on request

Commercial Dual Flow Unit Coolers

AREA OF USE	Small and medium cold rooms
PERFORMANCE RANGE	Capacity from 1,5 to 20 kW (R404A, Te = -8 °C, T1= 0 °C, RH = 85%) RH
FANS	Single phase, Ø 350 mm
MODULES	Diameter ø 800 mm, ac or ec motor
BENEFITS	Modular design, 1-4 fans Fin spacing: 3,0 mm 6,0 mm Electric defrosting system available on request Casing in aluminium, available in stainless steel AISI 304 or painted RAL 9010 on request

Light Cubic Unit Coolers

AREA OF USE	Small and medium cold rooms
PERFORMANCE RANGE	**Direct Expansion operation**: capacity from 1,44 to 47 kW (R404A, Te= -8° C, T1= 0° C, RH= 85%) **Brine Operation**: capacity from 1 to 20 kW (Glycol 30%, TW1= -10 °C, T1= 0 °C, RH = 85%)
FANS	Diameter Ø 300, 350, 400 and 450 mm
FANS	High efficiency in compact sizes Modular design, 1-4 fans Fin spacing: 4 mm, 6 mm or 8mm Solid frame in galvanized steel, cowlings in ABS (on request complete unit in galvanised steel) RAL 9010 Electric defrosting system available on request

Hen Unit Coolers

AREA OF USE	Potato and vegetables storage
PERFORMANCE RANGE	Capacity from 40 to 143 kW (R404A, Te = -5 °C, T1= 0 °C, RH = 90%)
FANS	Diameter Ø 800 high prevalence with differents ESP value
BENEFITS	Modular design, 2-4 fans Fin spacing 7 mm Electric defrosting system available on request Solid frame in galvanized steel

Process Dual Flow Unit Cooler

AREA OF USE	Processing rooms
PERFORMANCE RANGE	Direct expansion operation: capacity up to 115 kw (R404a, te= -8° c, t1= 0° c, rh = 85%) Brine operation: capacity up 160 kw (Glycol 30%, tw1= -10 °c, t1= 0 °c, rh = 85%) Ammonia operation: capacity up 170 kw (Nh3, te= -8 °c, t1= 0 °c, rh = 85%)
FANS	Diameter ø 500-560-630 mm, ac motor
MODULES	Fans on top to improve working comfort The upper air intake does not generate the ascending current

All climate green-house

The center "World Horti Center" offers educational, research and presentation services for anyone active in the international greenhouse horticulture sector.

NEED

Precisely controlling the temperature in a greenhouse to recreate any type of cultivation condition.

SOLUTION

4 Brine Unit Coolers equipped with radial fan with External Static Pressure (ESP) and prepainted blue fins.

Sustainable fisheries

Processing and sale of fresh and chilled fish products from sustainable fisheries in Belgium - execution by Fieuw Koeltechniek.

NEED

Coldrooms around 0°C for processing fish.

SOLUTION

34 CO_2 unit coolers, 11 of which are Process dual flow unit coolers, 100% stainless steel 316L, designed for coldrooms to distribute air without drafts, enhancing worker conditions. It features passivated stainless steel welding with semi-automatic orbital TIG torches in a controlled atmosphere.

Accessories

TREATMENTS AND COATINGS

ThermoKey offers to its customers a wide range of treatments of the finned pack in order to protect the fins from corrosion (when needed) and to maintain the constant energetic efficiency.

- Cataphoresis
- Thermoguard
- Blygold
- Heresite
- Tinning treatment
- Double layer fins
- Hydrophobic fins
- Prepainted fins
- Electrofin

SCS SPRAY J CLEANING SYSTEM

ThermoKey offers the “Spray J” cleaning system for its V-type condensers and dry coolers (J) to allow the safe and easy cleaning of the finned pack thanks to a system of nozzles which guarantees a uniform cleaning.

REGULATION FOR DRYCOOLERS AND CONDENSERS - EC FANS AND AC FANS

MPE tubes allow the best heat transfer with the minimum dimensions. We provide three different types of MPE tubes to better meet the needs of our customers.

FLANGES

It is possible to select slip-on aluminium or stainless steel flanges. The unit is supplied with a nitrogen pre-charge displayed on the pre-installed manometer.

SHOCK ABSORBERS

Vibrations are generated by the rotation of the fan motors or due to the plant, from industrial or natural phenomena. The vibrations are harmful waves and may cause problems. They can also be very dangerous in the case of resonance phenomena.
The shock absorber can considerably reduce the vibratory disturbance, as well as the noise, since it is installed between the source of vibration and the mechanical anchoring.

CONTAINER VERSION

ThermoKey is able to supply units with dimensions suitable for container loading, with rails for the handling and protection during transport.

ELECTRICAL PANEL AC AND EC FANS

ThermoKey offers a wide range of electrical panels that allow to meet all needs, from the most standard to the more complete ones.

- E - Wiring in junction box
- Q - Wiring with electrical
- W - Wiring with electrical
- W1E - Electric box for EC fans with plastic casing
- W2E - Electric box for EC fans with plastic casing
- W3E - Electric box for EC fans with plastic casing
- W4E - Electric box for EC fans with plastic casing
- Q1E - Electrical panel for EC fans with paint coated metal casing
- Q2E - Electrical panel for EC fans with paint coated metal casing
- Q3E - Electrical panel for EC fans with paint coated metal casing
- Q4E - Electrical panel for EC fans with paint coated metal casing
- Q2Y - ELECTRICAL PANEL FOR 400V-3-50HZ EC FANS with paint coated metal casing
- Q3Y - THREE-PHASE ELECTRICAL PANEL FOR 400V-3-50HZ EC FANS with paint coated metal casing, with anti-condense heating element and FC400 controller mounted inside the box
- Q4Y - THREE-PHASE ELECTRICAL PANEL FOR 400V-3-50HZ EC FANS with paint coated metal casing, with repair switch on the panel door
- FC400 controller 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
- 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.

ADIABATIC SYSTEMS

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.
It is therefore essential to use the most correct system in relation to the installation needs.
ThermoKey offers three different solutions:

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.

WPS WET FIN SYSTEM

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

EPS EVAPORATIVE FIN SYSTEM

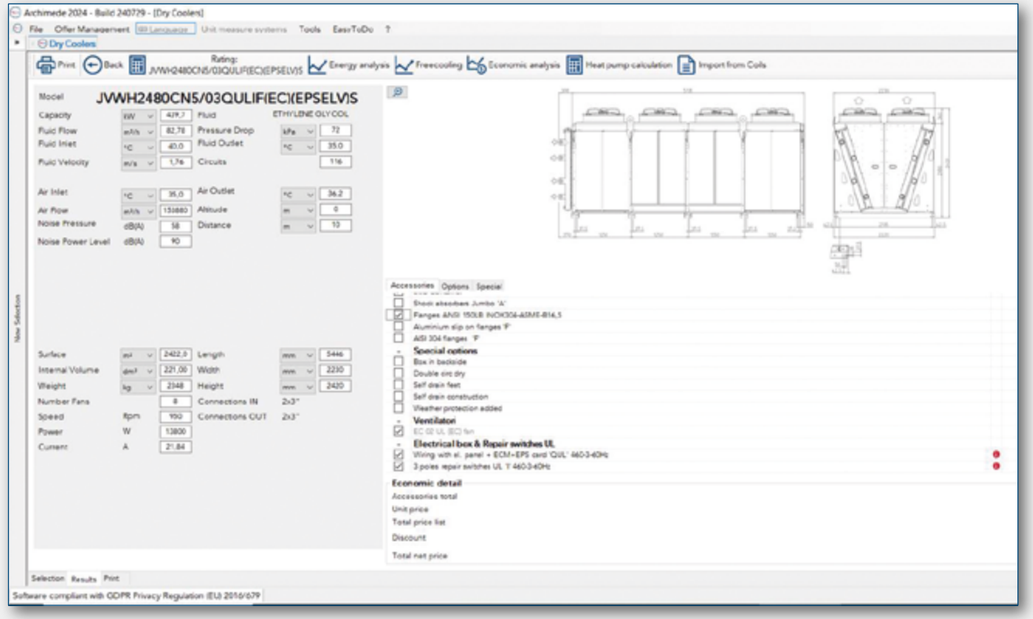
The evaporative panel system completes ThermoKey’s offer for adiabatic cooling. Thanks to an homogeneous and adjustable distribution of water on the panels this system allows to reach a high saturation level and therefore an efficient capacity increase with low water consumption (hours per year 8000).

For more details on ThermoKey accessories look at our brochure on our website.

SELECTION SOFTWARES

All ThermoKey accessories are available on our TK Archimede and TKCardano selection softwares.

You can download them for free from the site: www.thermokey.com in the Download area.



Coils

Round tube coils

> ThermoKey has been designing and manufacturing finned pack heat exchangers (coils) for more than 30 years, both for its own units and for the most important chiller manufacturers in the HVAC-R field. The latest product in which the company has invested are coils dedicated to gas coolers

GEOMETRICAL FEATURES									
STAGGERED GEOMETRY		28	20	30	32	42	46	52	56
EXTERNAL TUBE DIAMETER		5/16"	3/8"	3/8"	12 mm	12 mm	5/8"	12 mm	5/8"
TUBE SPACING [mm]		25	25	30	30	42	42	50	50
ROW SPACING [mm]		21.65	21.65	25.98	25.98	36.4	36.4	43.3	43.3
FIN SPACING	MIN [mm]	1.6	1.6	1.6	1.6	1.8	1.8	2.1	2.1
	MAX [mm]	4	4	4	4	4	4	12	12
N°OF TUBES IN HEIGHT	MAX	97	97	80	80	58	58	48	48
N°OF ROWS	N°	12	12	12	12	12	12	12	12
COPPER ROUND TUBE		ok	ok	ok	ok	ok	ok	ok	ok
STAINLESS STEEL ROUND TUBE								ok	ok

AVAILABLE SOFTWARE

TKCoil for the thermodynamic calculation of coil

AVAILABLE SURFACE TREATMENTS

- Cataphoresis
- Thermoguard
- Blygold
- Heresite
- Tinning
- Electrofin

FIN MATERIAL

- Aluminium
- Copper
- Double layer
- Hydrophobic
- Pre-painted
- Stainless steel
- AlMg 2,5

MODE

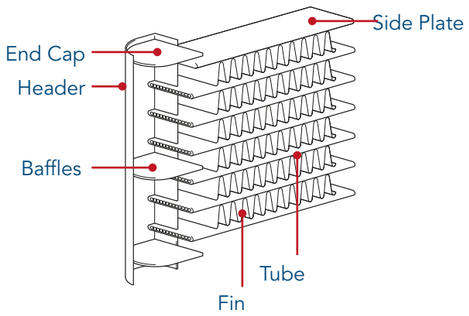
- Reversible (heat pump)
- Steam
- Water
- Direct expantion
- Condensing

Stainless steel

ThermoKey has been producing stainless steel heat exchangers since 1995. This material (both for tubes and fins) turns out to be the best choice when the refrigerant used is ammonia or CO_2

Microchnnel solutions TKMicro

TECHNOLOGY



THERMOKEY MICROCHANNEL TECHNOLOGY

ThermoKey has chosen the top class materials available to ensure the maximum quality for its TKMicro technology. All core details are developed together with the best suppliers in the market in order to answer to the specific requirements of the HVAC-R market.

MULTI PORT EXTRUDED (MPE)

MPE tubes allow the best heat transfer with the minimum dimensions. We provide three different types of MPE tubes to better meet the needs of our customers.

FIN

Using Finite Element Analysis (FEA) technique and our Wind Tunnel facility, we have optimized louvered angles, fin pitch and the number of louvers in order to achieve minimum air side pressure drops and, at the same time, maximize the air heat transfer.

We produce fins that fit both the 32mm tube and the 25mm tube. The brazing process ensures a perfect and permanent contact between tubes and fins.

For particularly aggressive environments various types of surface/treatments are available.

Production line

ThermoKey's semi-continuous line is manufactured to fit a wide range of dimensions: it can manufacture cores with length from 500mm to 5400mm and height from 350mm to 1300mm

TKMicro Microchannel Condensing core

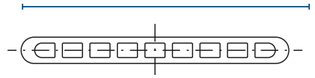
HEADER

D-shape header

- For its most demanding customers ThermoKey also provides the D-shape header with 3mm wall thicknes
- The D-shape has lower pressure drops and is specifically designed for chiller manufacturers
- Best distribution of refrigerant inside the core
- Lower pressure drops
- Best performance of the core

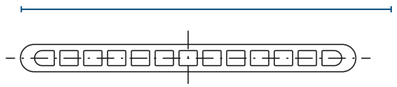
CONDENSER MULTI PORT EXTRUDED (MPE)

TKMicro25 condensers: 25mm width*
The best compromise between performance and lightness
Microchannel cores with a 25mm tube have a slightly higher capacity than a traditional tube and fin 3 Row 3/8'' tube coil



CONDENSER MULTI PORT EXTRUDED (MPE)

TKMicro32 condensers: 32mm width*
Ideal for the low pressure drops and maximum heat transfer
Particularly suitable for application with high air flow rate
Microchannel cores with a 32mm tube have clearly a higher performance than a traditional tube and fin 4 Row 3/8'' tube coil



(*) Up to 45 Bar Ps

TKMicro Microchannel Water core

HEADER

Round header

ThermoKey has developed an MPE and a header dedicated the liquid coolers with the aim of achieving very low pressure drops (liquid side).
Cores are equipped with victaulic plugs that are user-friendly.
TKMicro H_2O (% glycol ≥ 35%) with high water flow is comparable to a 4 row round tube coil

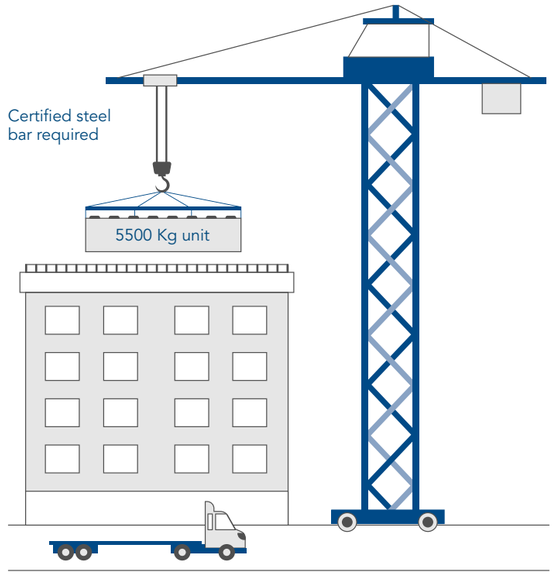
The new TKMicroH_2O, the water microchannel core, is lighter, smaller and more robust than the equivalent tube&fin traditional core. It has also low pressure drops on the air side (consequent suction energy saving).

TKMicroH_2O is equipped with flanges and diameter headers and is ready to be installed on ThermoKey Dry Coolers, whereas the Freecooling version (microchannel condenser plus TKMicroH_2O) is the ideal solution for Chiller manufacturers.

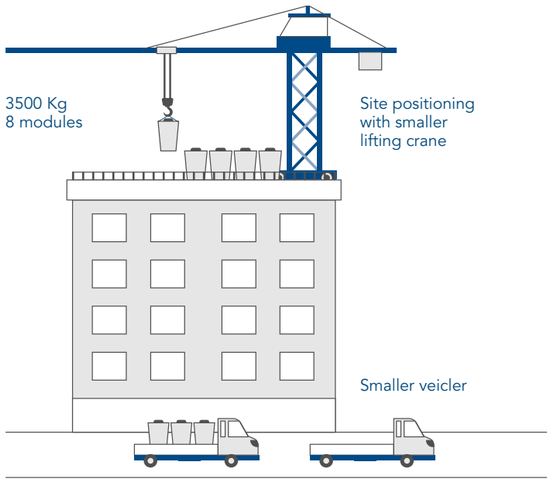
MODULAR SOLUTION

TKMicro modular remote condensers and liquid coolers allow, dividing the power into modules, to reach the same powers of larger units. The microchannel solution does not need special transport or high cube/open top containers, therefore it can also be installed in city centres where logistic operations are often more difficult.

TRADITIONAL METHOD



MODULAR METHOD



ADVANTAGES

Up to 40% less installation costs

It reduces overall costs of setup, crane renting and operations

Up to 40% less load on the roof

Aluminium modules: less weight, less load on the roof (3,500 Kwg-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

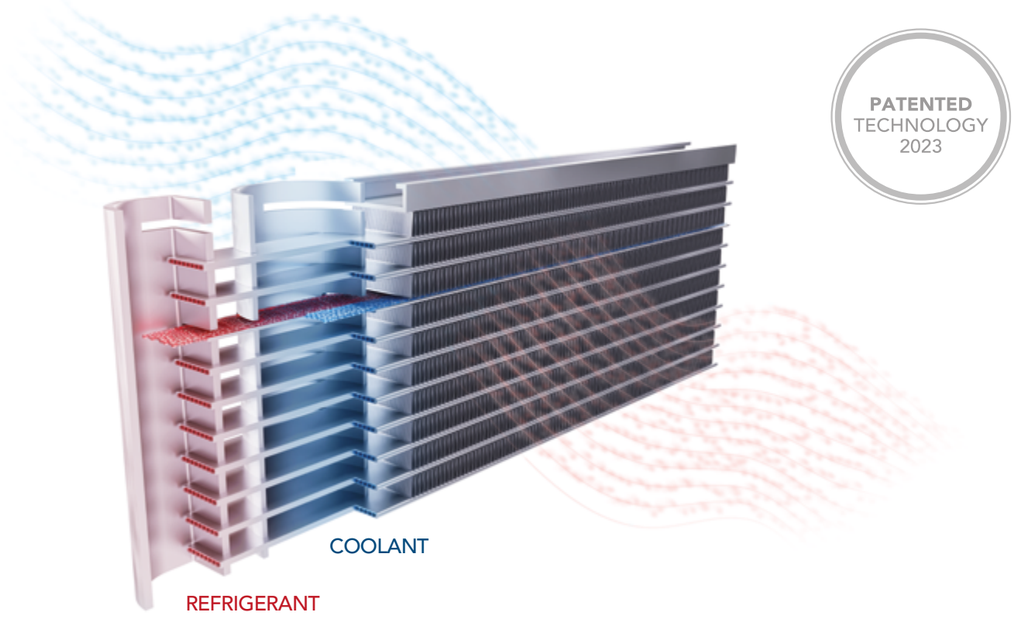
Multi System Dual flow

This new concept represents a revolution for heat recovery and is more than a valid alternative to conventional adiabatic systems. By using two circuits in micro-channel heat exchangers (MCHX), an additional cooler fluid can help to reduce the inlet air temperature and to recover part of the heat otherwise released completely into the atmosphere.

AREA OF USE

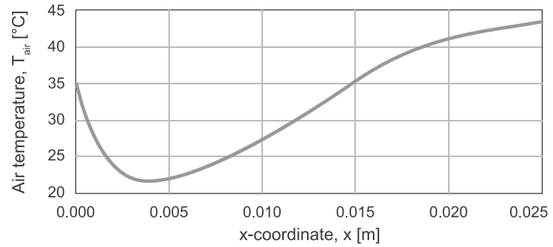
Process cooling, refrigeration and data centers always require cooling power during the year whereas chillers mainly operate during the hot seasons when simultaneous need of cold and warm is required. The technology of MSDF allows flexibility and fine tuning of the operation point depending on the requirements.

While waiting for new policies to connect these machines for heat recovery to offices and residential areas, refrigeration represents the most important application of this product. Indeed, thermal energy is needed to defrost evaporators, and MSDF condensing units are able to provide a warm coolant which is mostly free from expenses.



A VALID ALTERNATIVE TO ADIABATIC SYSTEMS

With hot weather conditions, the air that passes through the front part of the multiport is cooled down by the secondary fluid providing a heat transfer boost through the rest of the tube. Introducing water inside the tubes on a closed circuit, compared to conventional adiabatic systems, there is no water consumption and this concept is not subjected to critical hygienic conditions, water treatment, core cleaning or corrosion.



A NEW SOLUTION FOR HEAT RECOVERY, MORE COMPACT AND VERSATILE

Nowadays, only in Europe[1], 2,860 TWh/y of heat are released into the atmosphere, which is almost the same amount of thermal energy used for space heating and hot water. Across the Atlantic Ocean, the US produces 43·109 GJ (11,944 TWh) of waste heat over 30°C per year[2]. As the global chiller market is expected to grow at a 3% CAGR from 2022 to 2029[3], this number is, more likely, meant to increase in the next few years. Therefore, with the objective to tackle global warming and decarbonization, heat recovery in the field of industrial HVAC-R becomes essential.

Usually, in HVAC-R applications, plate-type heat exchangers are used upstream of condensers and coolers, introducing an additional component to the plant for heat recovery. Furthermore, in the case of condensing units, the plate heat exchanger can only extract heat in the desuperheating zone and/or it must be placed higher than the air-cooled condenser. However, these complications cease to exist with this integrated solution, more compact than air-cooled heat exchangers and more versatile than the water-cooled ones.

TECHNOLOGY AVAILABLE ON A WIDE RANGE OF REMOTE CONDENSERS AND CHILLERS

1 - D. Connolly, . B. V. Mathiesen, P. A. Østergaar, B. Möller, S. Nielsen, H. Lund, U. Persson, S. Werner, J. Grözinger, T. Boermans, M. Bosquet e D. Trier, «Heat Roadmap Europe 2: Second Pre-Study for the EU27» Department of Development and Sustainable Energy Planning Research Group, Aalborg University, 2013.
2 - A. S. Rattner e S. Garimella, «Energy harvesting, reuse and upgrade to reduce primary energy usage in the USA» Energy, vol. 36, n. 10, pp. 6172-6183, 2011.
3 - Exactitude Consultancy, «Chillers Market by Type, Power Range, and End User and Region, Global trends and forecast from 2022 to 2029» 2022.

Custom-made solutions for specific needs

> Flexibility in finding intelligent solutions and quick response time stand us out from our competitors and has allowed us to design and supply customized plants all over the world, even for the most demanding conditions

ThermoKey, in its more than 30 years of experience, has been developing and applying the best industrial custom-made solutions for chiller manufacturers and installers, combining expertise, market knowledge and innovation to deliver optimal results in terms of reliability, durability, delivery time, environmental sustainability and reduction of consumption. Every detail, even the smallest one, is designed to achieve the best result and guarantee the best performances.

OUR TECHNICAL STAFF IS AT YOUR DISPOSAL

We individually analyze your specific needs and the environment in which the heat exchanger will be installed in order to provide the best solution granting optimization of performances and reduction of consumption.

AFTER SALES

ThermoKey stays by your side throughout the product life cycle for spare parts replacement and technical assistance.

Blowing fans

Reverse forced-draught air-cooled radiators can be used to cool water or other fluids in various industrial applications.

NEED

Plant maintenance process of some refineries in Kazakhstan requires units that can operate in environments with high temperatures, up to 60°C.

SOLUTION

8 Dry coolers with blowing fans. Capacity of 1.825kW each.

Dry Coolers with single cooling circuit designed and manufactured to perform at high ambient temperatures (max 60°C) with high temperature inlet fluid (100°C). The ambient air is sucked in by the fans on the lower side of the finned pack and forced to pass through the finned heat exchanger. The air, therefore, after passing the engine, absorbs the heat from the cooling fluid preserving the fan life. This configuration prevents the fan motor from being run over by the hot air flow leaving the exchanger, which is on the contrary the most used/adopted solution for standard liquid coolers. The configuration, with the fan motors on the lower part of the frame, allows the replacement of the fans if necessary without having to intervene with crane systems, a safe, practical and fast solution, required by the specificity of the liquid cooler of the backup units.

THE CHOICE OF CUSTOM-MADE SOLUTIONS

Over the years we have tested different material combinations to meet the needs of our customers linked to specific contexts in which our units are installed.
Below you will find some examples of contexts and working processes that may be corrosive for the plants and their components, and therefore require a combination of specific materials.

THE RIGHT CHOICE FOR SUSTAINABLE AND DURABLE SOLUTIONS

Finding the right solution for the environment in which the units are installed allows you to identify technologies and materials that have a positive impact on their durability. A useful longer life of the products also affects costs in the long run.
The correct solution to the specific needs linked to the environment and the area of use also reduces the consumption of materials, refrigerants and energy sources. A more sustainable plant is a value, both for the customer, who can reduce costs, and for the environment.

ENVIRONMENTAL CONDITIONS

The air cooled units used in the market of air conditioning, refrigeration and industrial applications are usually installed outside in a remote location, and therefore are subjected to all environmental characterizations. There are several regulations that define a classification of external environments.
The main categories are:

These areas, in turn, can be further classified, as they can create specific micro-environments, which are the sum of one or more of the above mentioned.
In addition to these classifications, there are also further burdens to some situations due to the significant presence of pollutants such as e.g. SOxes typical of climatic zones with intense presence of acid rain (e.g. Northern Europe) or areas near volcanoes etc.
All these pollutants can significantly change the pH of the environment, making the deposits on the units extremely corrosive.

Another factor to take into consideration is the TOW (time of wetness), that is the amount of time when there is a constant presence of humidity above 80% with a temperature above 0° C.

These are only some examples of environmental situations that require an in-depth analysis of the installation before making a technical choice.
Moreover the instructions on the methods of maintenance and cleaning must be taken into consideration in the following cases:

- after shipment of the units by sea;
- during operation of the unit in particularly dirty places.

The correct definition of the corrosive environment directly impacts on the choice of the materials of the exchanger, of the structure and of the fans to be used.

Green hydrogen

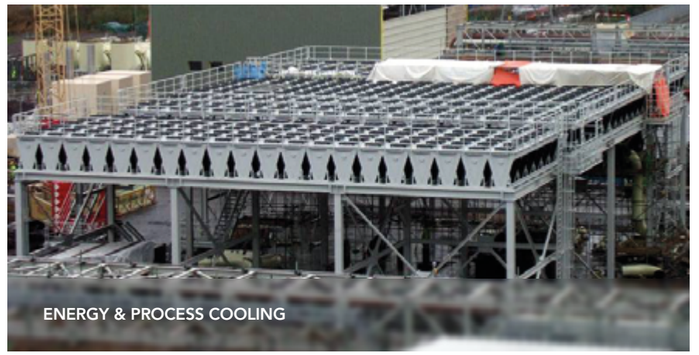
Machine cooling of the largest green hydrogen PEM electrolyzer in Europe.

NEED

The wind farm and substation includes 78 wind turbines with a total capacity of 312 MW. Itproduces green electricity for around 320,000 households every year.

SOLUTION

4 Dry Coolers, model WL2390.CND/03VIFS, with Run and Standby configurations, copper pipes and fins, 316 stainless steel casing and Axi-Top cowlings fitted on the fans.



Power plant

Severn Power is a new 824 MW gas-fired generation station at Uskmouth, near Newport, South Wales.
The contractor is Siemens.

NEED

Cooling device for cooling of the turbine bearings and other peripherals of power plants. Total capacity: 32 MW.

SOLUTION

Super Power-J Dry Cooler 40 units WJGL1690BY and Power Line Dry Cooler – 6 units WH1380BYV to cool down auxiliary circuits.

Diverse building heating

The installation site requires an innovative solution with several units for the heating of different buildings for residential installation in Switzerland.

NEED

A low noise solution for residential installation, the possibility of heating fluids in case oflow temperature and the reduction of CO_2 emissions and gas cost.

SOLUTION

Based on heat pump systems installed outdoors combined with heat pump/compressors located indoors. 4 Dry Coolers and 2 Dry Coolers. Special design allowing to incline the unit on both sides.

The advantage of co-designing with ThermoKey: technological optimization, on-demand production, high costumization

ENERGY & PROCESS COOLING

Condensing part for the Industry & Power markets

ThermoKey is proud to have been chosen as a partner by Orcan Energy, a leading European CleanTech company for energy solutions based on ORC technology, pivotal to achieve the internationally shared goal of increasing energy efficiency.
Orcan Energy offers simple and flexible second-generation ORC solutions turning unused energy from engines and industrial facilities into valuable electricity.

We collaborated in the co-engineering and production of 6 customized microchannel condensers for the Efficiency Pack dedicated to the Industry & Power markets.

Data centre

ThermoKey manufactures traditional air cooling systems for the most important European data centres, engineering advanced technologies that meet market needs with sustainable solutions.

Direction
Acrobatik
—
CP1024EN

ThermoKey®

Heat Exchange Solutions

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