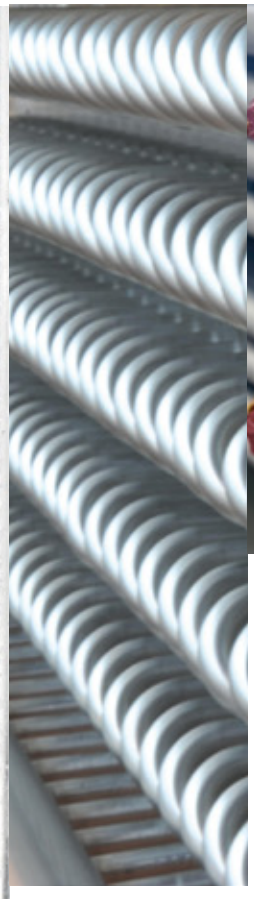

ThermoKey
Heat Exchange Solutions
At the centre
of the green transition
CHILLVENTA 2022

Our mission

It is to offer a competitive edge to our customers while making the world of HVAC/R more sustainable.

Today these two objectives and dimensions are finally overlapping and the market is asking to increase sustainable solutions from the following points of view:



ENERGY SAVING

With low consuption and higher efficiency.

REDUCTION OF EMISSIONS

With less refrigerant charge and low gas use impact.

LONGER LIFE

Durability means sustainability (long life design, certified European materials, products studied and 100% tested).

LESS USE OF RESOURCES

Smart design, less water consumption, recyclable materials.

Revolutionary heat recovery system for maximum respect of the environment

Today almost all the chillers and remote condensers that can be seen on rooftops and balconies disperse heat in the air. This heat is wasted energy indeed, impacting the global warming.

The **Multy-system Dual Flow** is the new technology conceived, patented and produced by ThermoKey. It is a **special microchannel exchanger** that is capable at the same time to:

- **Optimize the performance of the condensing unit up to +25%**
- **Recover the condensation heat (which was previously dispersed in the air)**

There are many applications for **recovered heat**, from sanitary water to defrosting in a refrigeration system.

Preview reserved for OEMs and large refrigeration installers

Optimal refrigerant distribution

The efficiency of an evaporator depends on the **correct distribution of the refrigerant** inside its heat exchanger .

ThermoKey has designed an **innovative distributor platform** conceived and enabled by **additive manufacturing technologies**. Thanks to **3D printing** it is possible to create special mixing channels (inside the distributor) that allow an increase in evaporation performance up to 10%. This technology can be used in applications with high inlet refrigerant vapor content and in applications of exchangers installed in HVAC & R units.

- **Up to 10% capacity thanks to the innovative 3D technology for the mixing channels.**

Modular plug and play solutions

Thermokey has been working alongside OEMs and chiller manufacturers for more than 30 years and, for more than 10 years now, it has been committed to the diffusion of a technology with a reduced environmental impact - the aluminum microchannel -.

With an established know-how and state-of-the-art production plants we can offer to **co-design each product with our customers** based on their **specific requirements**.

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

We are a leading company in the production of **microchannel cores** in Europe, made of **100% recycled and recyclable aluminum**. One of the main advantages of this technology is the **modular design**: it's possible to achieve the same total capacity of larger units by **dividing the capacity into aluminum modules**. They have a lower weight and do not need special transport or high cube/open top containers, allowing a **reduction of up to 40% in installation costs** and an easy increase of power if needed.

REFERENCE
– ORCAN ENERGY AG
Customized microchannel condensers

Innovative water consumption reduction system

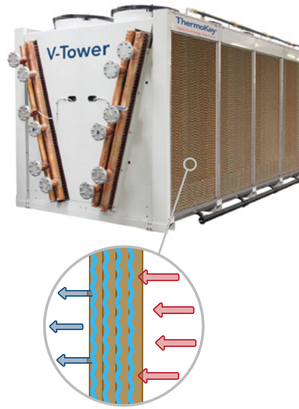
PATENT PENDING

Adiabatic panel systems (EPS) allows to cool the fluid process at a lower temperature than the ambient one. These adiabatic systems with evaporative panels require daily cleaning for their **optimal operation and durability**.

This cleaning, in systems currently on the market, is carried out at the end of each day (prescribed by the panel supplier) and simultaneously for all operating modules of the unit.

ThermoKey's new "ECO WATER PURGE" function allows a **partial and cyclical** washing of the air-cooled modules, leading to both a **reduction in the water distribution system** (less materials, less costs) and a **levelled water demand**.

Reduction of water consumption up to 30% compared to traditional evaporative systems thanks to the "ECO WATER PURGE"



Top performance in refrigeration

BROCHURE
New Industrial Cubic Unit Cooler

To assure a considerable air flow and an optimal air distribution, the **new Cubic Units** have been designed in order to be installed in **industrial refrigeration** applications for food market, medium and large cold storage rooms or refrigerated warehouses, for the preservation of fresh and frozen products, for aging process, for long time preservation and for the air conditioning of medium and large processing rooms. All units are equipped with high fan motors efficiency and all metal sheets, including the casing are in AlMg3 magnesium aluminum alloy (Peraluman 5754) to ensure **lightness**, **mechanical strength** and **corrosion resistance**.

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