



**LU-VE**  
**GROUP**  
*leadership with passion*



# PRODUCT OVERVIEW

# COMMERCIAL REFRIGERATION

Evaporators / CO<sub>2</sub> Gas coolers / Condensers / Fluid Coolers

CO<sub>2</sub> - HC - HFC/HFO - Glycol - NH<sub>3</sub>

# EXCELLENCE MEETS INNOVATION

## TWO DECADES OF TRANSCRITICAL CO<sub>2</sub>

### THE GROUP

LU-VE Group is an international company consisting of **20 manufacturing facilities** in 9 different countries (Italy, China, Finland, India, Poland, Czech Republic, Sweden, Russia and the USA) with a network of **more than 30 sales offices** in Europe, Asia, the Middle East and the USA.

- **4,000** qualified people
- **11,600,000 sqft** total surface area
- **40,000 sqft** Research & Development laboratories
- **80%** of products exported to 100 countries
- Revenues **USD 670 million** (2023)
- Listed on the Milan Stock Exchange (STAR)

LU-VE Group is one of the three major manufacturers in the world and second largest in Europe in the **air heat exchanger** segment.

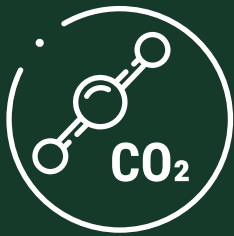
In 2018, LU-VE Group entered the **North American market** by purchasing the local manufacturer Zyklus Heat Transfer Inc. (Jacksonville, TX), now LU-VE US.

In 2020, a new state-of-the-art facility was built in the same area and has been operational since 2021.

A major expansion of this facility is scheduled for 2024.

**Respect for and protection of resources and the environment** have always been important decision criteria in the development of new products. In practice, this approach has constantly been translated over the years into rigorous design that takes into account the performance and quality of the solutions and the entire product life cycle.

## PIONEERS IN CO<sub>2</sub> APPLICATIONS



LU-VE has had experience dealing with transcritical CO<sub>2</sub> for almost 20 years now. Thanks to its private CO<sub>2</sub> test room - the first in Europe for a private facility - the design of CO<sub>2</sub> evaporators and CO<sub>2</sub> gas coolers maximizes capacity and efficiency.

*2004:* first company to perform CO<sub>2</sub> transcritical installation in Europe (Coop, Wettingen).

Evaporators: 652 PSI / 870 PSI / 1232 PSI / 1740 PSI

Gas Coolers: 1885 PSI

*2020:* among the very first companies to obtain Eurovent Certification for CO<sub>2</sub> unit coolers.

*2022:* Eurovent certification for the whole range of CO<sub>2</sub> gas coolers.

## YOUR REFRIGERANT, YOUR CHOICE



**Perfecting cooling technology for Low-GWP freons and natural refrigerants.**

LU-VE Group stands at the forefront of future-ready, eco-conscious, and safe refrigeration solutions, redefining industry standards with adaptability, sustainability, and safety as our guiding principles.

LU-VE commitment to environmental responsibility is evident in the design, featuring small diameter tubes that not only enhance efficiency but also low refrigerant charge.

Safety takes center stage with a specialized range of evaporators and condensers, meticulously designed and rigorously tested for flammable refrigerants such as the low-GWP A2L or the hydrocarbons.



# EVAPORATORS and BRINE COOLERS

Low profile  
up to 60,000 BTU/h



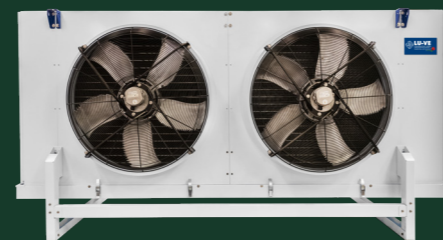
Medium and High profile  
up to 40 TR



Low velocity  
up to 40 TR



Special application evaporators



# AIR COOLED GAS COOLERS, CONDENSERS and FLUID COOLERS

Minichannel  
35 - 928 MBH



*Minichannel*

Small Flatbed  
14 - 309 MBH



Flatbed  
52 - 5,945 MBH (UL listed units)

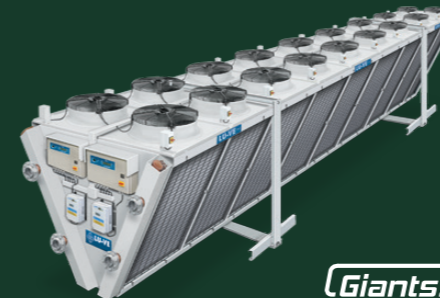


V-shape  
183 - 3,754 MBH



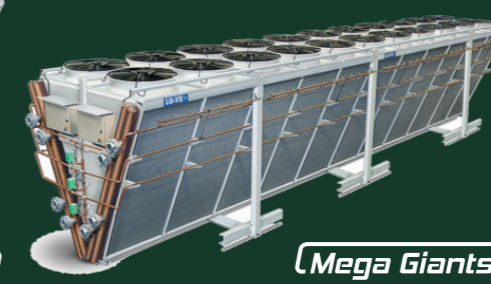
*Small Giants*

V-shape  
597 - 7,007 MBH



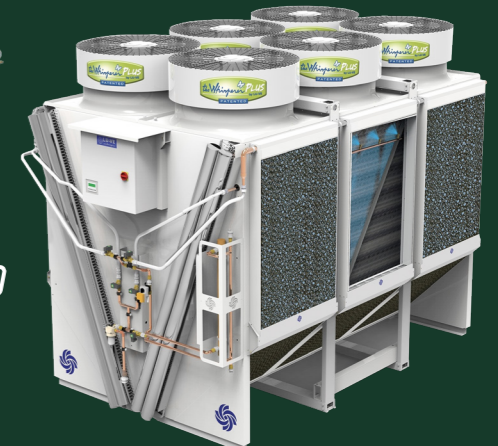
*Giants*

V-shape  
1,302 - 8,757 MBH

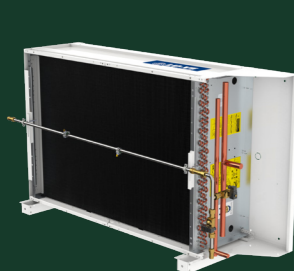


*Mega Giants*

Combined adiabatic and spray system



# ADIABATIC GAS COOLERS, CONDENSERS and FLUID COOLERS



**NEW**  
COMBINED SPRAY  
+  
ADIABATIC SYSTEM

***Emeritus***

Emeritus®, a groundbreaking collaboration between LU-VE Group and the Polytechnic University of Milan. This cutting-edge solution seamlessly integrates water evaporation onto the coil and adiabatic precooling, optimized by a sophisticated control system. Unleash the full potential of combined systems, making Emeritus the ideal choice for air conditioning and refrigeration applications.

LU-VE Group operates in several market segments:

- **Commercial and industrial refrigeration** for fresh product preservation, deep-freezing, processing, storage and logistics, etc;
- **Industrial process cooling and power generation;**
- **Air conditioning** for large civil and industrial facilities, data centres, hospitals, transportation, heat pumps, telecommunications.

The Group is placed within a highly strategic sector that aims to support and guarantee a correct cold chain in different types of contexts, applications and geographical areas.

LU-VE Group was the 1<sup>st</sup> company in the world to apply avant-garde solutions to commercial and industrial refrigeration: inner grooved tube technology; high-efficient louvered fins; certified performance; EC fan motors; innovative materials; performance-oriented design. Each solution is engineered to fit the requirements of the market with tailor made products.

#### **Setting the Standard for Efficiency and Performance.**

For years, LU-VE heat exchangers have been synonymous with industry excellence, spanning evaporators, brine coolers, condensers and fluid coolers. Our enduring commitment to innovation continues with the proven efficiency of Hitec<sup>®</sup>, LU-VE patented design for fin and tubes heat exchangers.

**Hitec<sup>®</sup> heat exchangers: louvered fins design for unparalleled efficiency.** This unique design is characterized by louvered aluminum fins, a distinctive feature that significantly increases the heat transfer coefficient. Applied to both indoor and outdoor units, LU-VE stands as the sole manufacturer pioneering this innovation in the industry.



**High-efficiency copper tubes** Whether in evaporators or outdoor units, small diameter copper tubes with helical internal grooving maximize heat transfer, reducing energy consumption.

**Safety Features.** Evaporators feature safety collars on coil end plates, ensuring longevity and preventing tube cutting. Outdoor units boast a safe tube system with the same security measures.

**Versatility.** LU-VE's commitment to versatility is evident, offering material options, surface treatments, and various fin spacings for seamless integration into diverse systems.

**Innovation.** LU-VE commitment to innovation extends to every facet of our products. In the North American market, we proudly set a new standard by incorporating Electronically Commutated (ECM) fan motors as a standard feature across our range. This decision is grounded in a vision of delivering unparalleled performance and efficiency to our customers.

**High energy efficiency.** ECM fan motors are renowned for their high energy efficiency, ensuring that LU-VE products not only meet but exceed industry standards. This translates to significant energy savings, contributing to sustainability goals and operational cost reduction.

**Low noise operation.** Experience a quieter environment with LU-VE's ECM fan motors. The advanced technology minimizes noise levels during operation, providing a more comfortable and productive space for your applications.

**Flexibility in power supply.** LU-VE recognizes the diverse power supply requirements in the North American market. Our ECM fan motors are designed with flexibility in mind, accommodating various power supply specifications without compromising performance.

**Research and innovation** are distinctive elements of LU-VE Group's philosophy and actions in order to maintain its position as a technological industry leader and offer cutting-edge solutions.

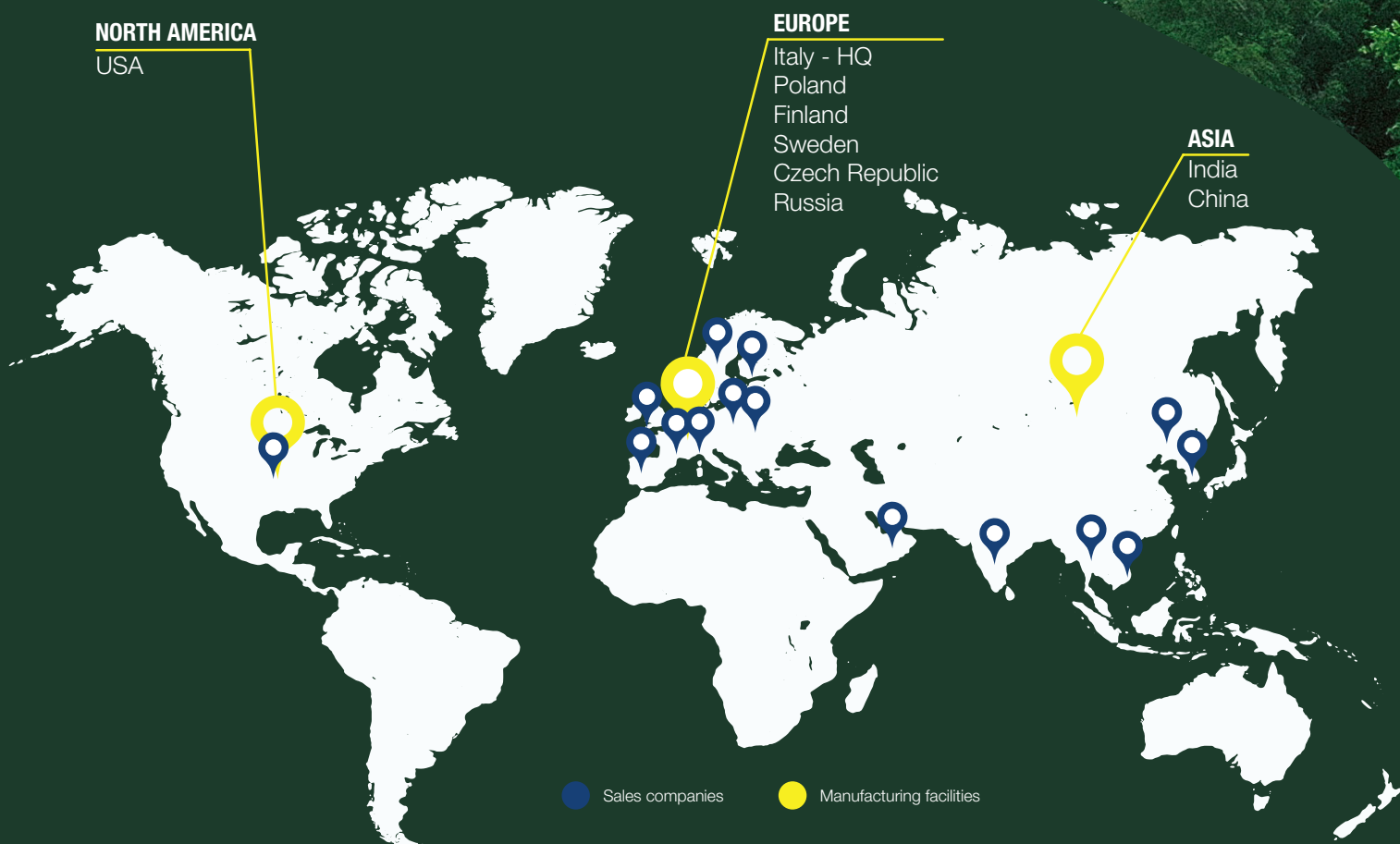
Since its foundation, investment in research and development has resulted in a considerable number of innovative products that have become benchmarks for the world's leading heat exchanger manufacturers.

LU-VE Group made its mark thanks to high standards of quality, new solutions designed in its **own private laboratories** and to the care taken with the appearance of its products.

For over twenty years, LU-VE Group has voluntarily participated in the certification program of Eurovent, the European association for heating, ventilation, air conditioning, process cooling, and food cold chain technologies.

LU-VE Group prioritizes transparency and subjects its products to tests and controls by a third party to guarantee their performance.

The "Eurovent Certified Performance" (ECP) attestation verifies the compliance of products with regard to the performance of: capacity, energy consumption, air quantity, sound levels and construction characteristics.



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