



LU-VE
GROUP
leadership with passion



PRODUCT OVERVIEW

INDUSTRIAL REFRIGERATION

Evaporators / Gas coolers and Condensers / Fluid Coolers

NH_3 - CO_2 - HC - HFC/HFO - Glycol

Naturally, LU-VE makes it better

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). 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.

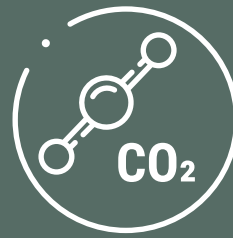
In 2019 with the acquisition of the Alfa Laval Air, LU-VE Group increased its strength in the industrial refrigeration business.

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.



LEADING THE LOW CHARGE NH_3 REVOLUTION

Thanks to the use of small diameter tubes and specifically designed circuits, LU-VE ammonia unit coolers are designed to work with low recirculation rates. In the ammonia DX applications the patented Jet-o-Matic distributor guarantees calibrated circuit feeding thus increasing the evaporator efficiency. On the high pressure side, the adiabatic technologies applied to ammonia condensers help to limit the plant ammonia charge.



PIONEERS IN CO_2 APPLICATIONS

LU-VE has had experience dealing with CO_2 for almost 20 years now. Thanks to its private CO_2 test room - the first in Europe for a private facility - the design of CO_2 evaporators and CO_2 gas coolers maximizes capacity and efficiency.

2004: first company to perform CO_2 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_2 unit coolers.

2022: Eurovent certification for the whole range of CO_2 gas coolers.



EVAPORATORS

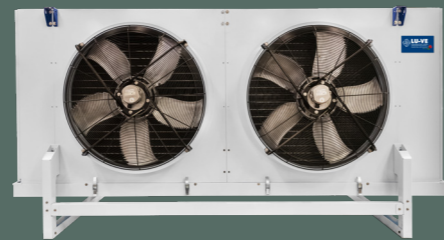
Medium profile

5.0 - 19.4 TR (UL listed units)
1 - 4 fans



High profile

1.1 - 35.0 TR (UL listed units)
1 - 5 fans



Special application evaporators



Low velocity

1.4 - 19.8 TR
1 - 4 fans



Process room cooler

2.0 - 21.7 TR
1 - 5 fans



AIR COOLED AND ADIABATIC CO₂ GAS COOLERS AND CONDENSERS

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
743 - 8,783 MBH

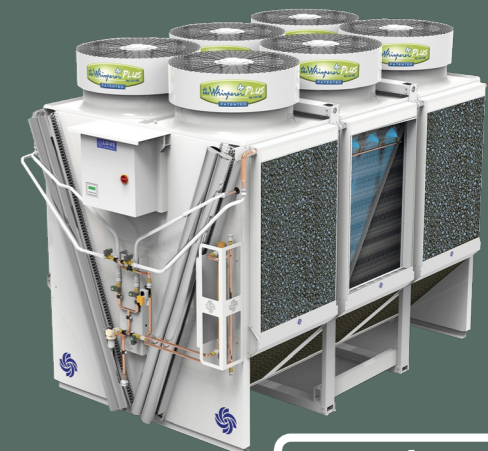


Giants

Radial-fan type
244 - 1,666 MBH



Combined adiabatic and spray system



Emeritus

FLUID COOLERS

Flatbed
41 - 4,992 MBH

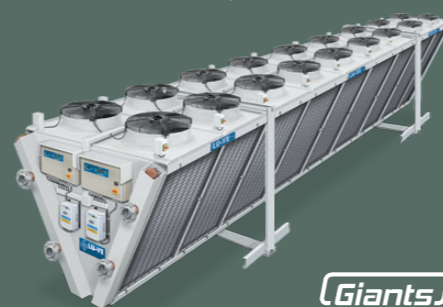


V-shape
143 - 3,040 MBH



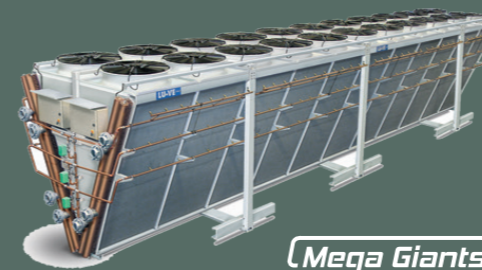
Small Giants

V-shape
597 - 7,007 MBH



Giants

V-shape
1,302 - 8,757 MBH



Mega Giants

NEW

**COMBINED SPRAY
+
ADIABATIC SYSTEM**

This new technological advance - patent pending - is the result of collaboration with the Polytechnic University of Milan and brings together the benefits of spray systems and adiabatic pre-cooling. A sophisticated control system maximizes the effects of these combined systems. The specific features of this product make it especially suitable for use in air conditioning and refrigeration.

LU-VE Group operates in several market segments:

- **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 1st 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.

EFFICIENCY

- Energy savings thanks to ECM motors
- Reduction of refrigerant charge

TIME SAVING

- Easy installation and maintenance
- High quality design
- Maximum reliability of all components
- Minimum LCC (Life Cycle Cost)

SPACE AND TRANSPORT SAVINGS

- Overall dimension and weight reduction

FANS

High efficiency ECM fan motors for easy speed control and low noise

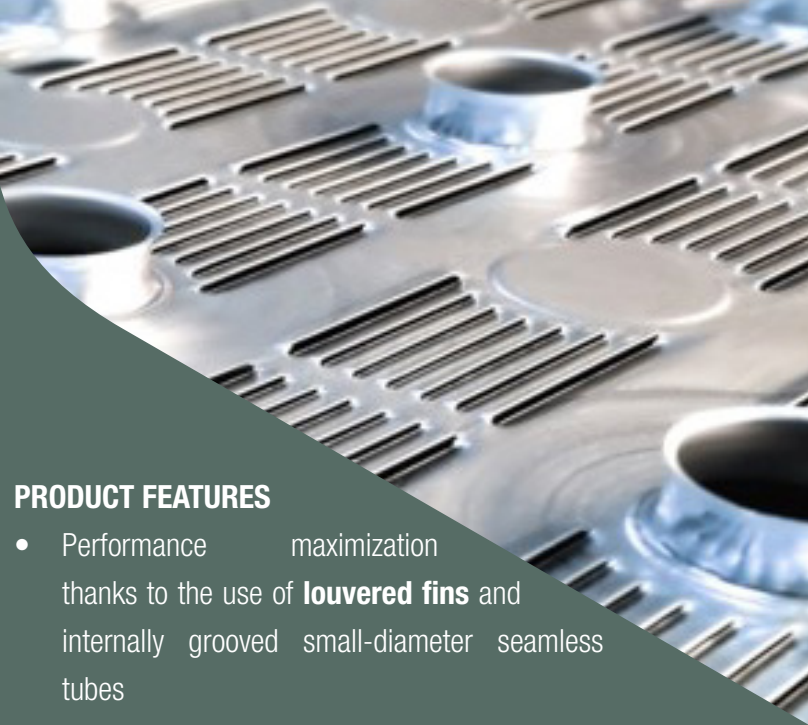


0-10V speed control

Modbus control

Ø diameters: 10", 12", 14", 18", 20", 25", 28", 35", 36", 40"

Accessories: hinged fans, radial fans



PRODUCT FEATURES

- Performance maximization thanks to the use of **louvered fins** and internally grooved small-diameter seamless tubes
- Fan shroud optimisation
- High quality white powder coated galvanized steel casing
- Stainless steel or Cu tubes
- Al, Cu or corrosion protected fins 2.0 to 10.0 FPI
- Vertical headers for air/refrigerant co-flow design
- Large plenum for optimal air distribution
- ½" INOX diameter tubes or 3/8" Cu tubes
- Seamless hairpin tubes

ACCESSORIES

- 45° and 90° down configuration
- Wiring and NEMA 4x boxes
- 304 or 316 stainless steel casing
- Defrost hoods and shutters
- Wash-down duty fan motors
- Hinged fan shrouds
- Insulated drain trays

DEFROST OPTIONS

- Air defrost
- Electrical desfrost
- Hot gas desfrost
- Glycol defrost
- Water defrost



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.

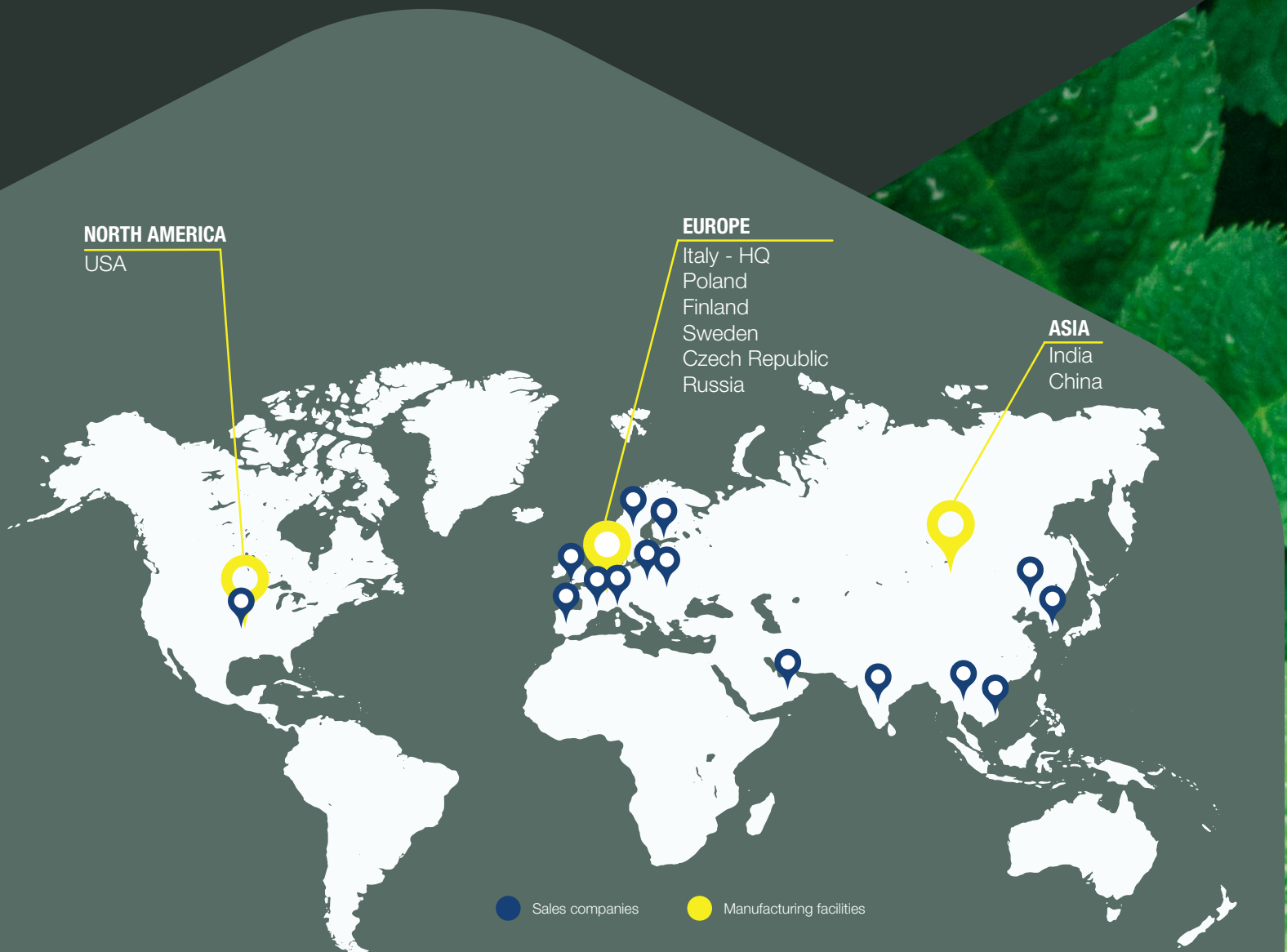
Since its foundation, investment in research and development has resulted in a considerable number of innovative products that have become benchmarks for the world's leading heat exchanger manufacturers.

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 20 years LU-VE Group has been a voluntary adopter of the certification programme issued by the European association for refrigeration, Eurovent. Specifically, the programme verifies product compliance in terms of capacity, air flow, energy consumption and noise level.

The Group believes that subjecting its products to tests and controls by a recognised third party such as Eurovent allows it to monitor product performance in a concrete and precise manner and to ensure reliable solutions and transparent communication for its business partners.

LU-VE Group is the 1st company in Europe to obtain the **Eurovent Certify All certification** for the whole range of admissible products for Freon, Glycol and natural refrigerants.



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