

## OVER 80 YEARS IN **REFRIGERATION** AND **AIR CONDITIONING SOLUTIONS**





## frascold - company profile

About the Company - Frascold Today

Company Timeline - More than 80 years together

Our Values - We are Proud

Customer requirements - Segments & Solutions Product Range

Excellent performance and reliability - Certifications and Standards

Around the World - Global Footprint

## about the company

## OUR COMPANY

Since its foundation, Frascold has always manufactured refrigeration and air conditioning solutions for a wide range of applications, all over the world.

Based in Milan, the Company has built its global reputation and recognition on an outstanding capacity to improve its products and technologies to satisfy all customer needs.



"More than 80 years ago, Frascold was established as a small family-owned company, developing solutions in the refrigeration and conditioning industry. Today we are making increasing investments people, products, technologies and services with a view to becoming the best partner for our Customers and the benchmark for the market."

**GIUSEPPE GALLI** - Frascold Executive Managing Director

#### about the company

## FRASCOLD TODAY

Having been established throughout Europe for years, the brand now enjoys success all over the world, thanks to its proven excellence in the pursuit of quality and innovation.

Over 70,000 screw and reciprocating compressors manufactured every year.

**53,000 sqm of factory space** outside Milan (Italy) accommodate our advanced engineering, manufacturing and testing facilities.

More than **200 employees** working at the Company Headquarters and at our subsidiaries based in China, India and the United States.

Distribution partners and service centers in 86 countries.

### company timeline

## **MORE THAN 80 YEARS TOGETHER**

**'30s** Giuseppe Fraschini founded Officina Costruzioni Meccaniche in Milan in 1936, launching the artisanal production of open-type compressors, drawing inspiration from small-scale refrigerator manufacturers.

**'40s** War and bombings destroyed Milan and Fraschini transferred its manufacturing facility to Legnano. Immediately after the war, the company began to expand, involving every member of the family. The market at the time covered the whole region.

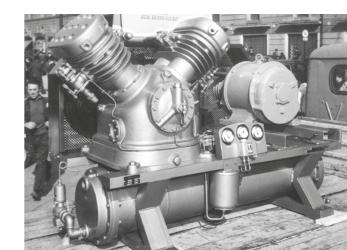
**'50 and '60s** During the "Italian economic miracle" the Company concentrated its energy and investments on expanding the product portfolio and cooling capacities. We moved from 3hp in the early 1950s to the introduction of 120 hp in 1968.

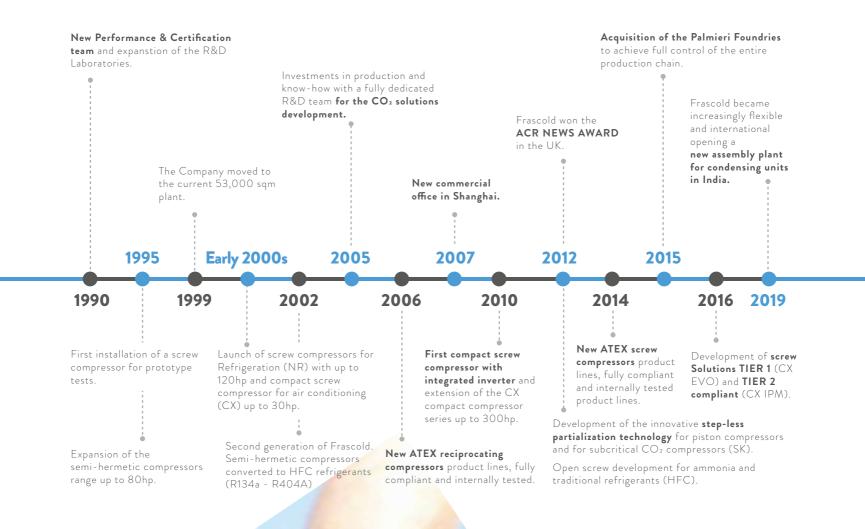
**'70s** During the "oil shock" and in response to inflation and the reduced demand for industrial goods, the company decided to focus on diversification, developing the FIRST GENERATION of semi-hermetic compressors. Growth during the decade led Fraschini & Figli to go public: Frascold Spa was born.

**\*80s** The Company invested in automated machines and work centers, further expanding the product range.



## 1936





## our values

## WE ARE PROUD

We are passionate about creating great experiences, incorporating innovation into everything we do.



Passionate people

Reliable

Outstanding

Unique

Driven



## P for Passionate People

We, at Frascold, encourage our talents to develop new skills and achieve their full potential. We value our employees.

Designers, technicians, engineers, turners, mechanics: passionate people who create value and work in synergy to meet customer targets.

Enthusiasm is what makes the difference in our business.



## R for Reliable

We monitor every step of production, from the choice of raw materials in our company-owned foundry to the final assembly of the components.

Complete control of every detail of production is the key to innovation and optimization.

Reliable means that 100% of our products are tested on the premises highest in compliance with international standards.

In recent years, thanks to investments in technology, we have increased production flexibility and the optimization of today's highly automated production processes.







## O for Outstanding

# Research and Development are paramount to Frascold's mission.

Our talented technicians and designers focus constantly on innovation, working on research projects in laboratories and universities.

We have been working with the most important Italian technical universities, such as the Politecnico di Milano and the University of Padua, internationally recognized as among the most authoritative in terms of engineering, technology and design.

This combination of unique skills and particularities interact with and complement each other to achieve the highest quality standard required by the market.

## U for Unique

## We accompany our Customers through the entire development process, offering pre- and after-sales services.

We stand by our customers, providing a range of courses and tutoring services, installation manuals, declarations of conformity and all the documentation necessary for technical support.

Our sophisticated product selection and configuration software for CO<sub>2</sub> systems provides a thorough preliminary analysis to immediately identify the best solution available for the customer's cooling requirements and optimize the refrigeration and air conditioning systems.

Our spare parts program is an ally when you need to quickly and easily identify the components and accessories of each compressor.

In addition to our full range of 200 compressor models, we develop custom solutions to meet all the needs of our customers.



## D for Driver

# Setting trends is in our DNA

Our solid partnerships, built up over several years along with our ability to identify our customer's needs and find the most suitable solutions, mean that we are always one step ahead in terms of innovation and capable of guiding our customers through their cooling challenges.



# OUR MISSION

why we do the things we do

Our mission is to offer innovative solutions to become the best partner for our Customers and the benchmark for the market

innovation business partner efficiency improvement system and product solutions

### customer requirements

## **SEGMENTS AND SOLUTIONS**

We support our customers during their development journey, providing refrigeration and air conditioning solutions for the specific cooling challenge.



#### AFTERMARKET

We are developing a strong network of distributors and service centers to provide original spare parts and replacements.

## COMMERCIAL & TRANSPORT REFRIGERATION



#### Food and Beverages

Supermarkets, Service Stations, Butcher's Shops Ice Cream Applications, Ice Makers, Restaurants and Fast Food, Bars, Hospitality, Wine Applications



#### Shipping, road and rail transport

Food, Flower and Medical Transportation Trucks, Trains, Containers, Fishing Vessels, Ships for Food Transport



#### Product solutions



### Screw compressor

NR and the New FVR series designed for refrigeration Displ. 115 - 538 m³/h



Standard series from 2 to 8 pistons Displ. 3.95 - 240 m<sup>3</sup>/h Special ATEX series CO<sub>2</sub> subcritical (from 1.6 to 20 m<sup>3</sup>/h) CO<sub>2</sub> transcritical (from 1.9 to 26 m<sup>3</sup>/h)

#### Transport

Standard series from 2 to 4 pistons Displ. 3:95 - 36.86 m<sup>3</sup>/h Open series suitable for ammonia CO<sub>2</sub> subcritical (from 1.6 to 20 m<sup>3</sup>/h) CO<sub>2</sub> transcritical (from 1.9 to 26 m<sup>3</sup>/h)

## **PROCESS COOLING**



#### **Food industry**

Wine making, distilling and brewing processes Bakery processes and interruption of leavening Interruption of cooking process for pre-cooked food Food preservation and ripening processes Indoor production processes for flowers, plants and vegetables Blasting temperature processes (meat, fish, vegetables)



#### **Metal industry**

Testing for automotive industries Test benches and testing of automotive engines and components Electric and electronic component testing

#### **Chemical industry**

Petrochemical industry Plastic and thermoplastic industry Glass melting and metal fusion

### **Medical industry**



Pharmaceutical processes Heat treatment in the production of scalpels and medical equipment Preservation of blood and organs awaiting transplants



#### Product solutions



Frame: from 0 to 9 Displ. 199 - 1085 m³/h



#### Reciprocating compressor

Standard series from 4 to 8 pistons Displ. 20 - 240 m<sup>3</sup>/h Special ATEX series CO<sub>2</sub> subcritical (from 1.6 to 20 m<sup>3</sup>/h) CO<sub>2</sub> transcritical (from 1.9 to 26 m<sup>3</sup>/h)

## COMFORT



### **Conditioning and Heat pumps**

Museums, Theaters, Cinema Sports Structures Hotels, Resorts, Entertainment Centers Hospitals and Clinics Exhibition Centers Naval, Rail, Airports Military Business Centers Shops



#### Product solutions



Screw compressor CX series

Frame: from 0 to 9 Displ. 199 - 1085 m³/h



Standard series from 2 to 8 pistons Suitable for medium and high temperature

## INDUSTRIAL REFRIGERATION



#### Food industry

Dairy industry Raw meat processing industry Milk processing industry Bottling operations



## Others

Refrigerated warehouses and distribution centers Skating Rinks Data Centers





#### Product solutions



#### Screw compressor

NR6 models designed for refrigeration Displ. 316 - 538 m³/h CX9 models designed for conditioning Displacement: from 545 to 1085 m³/h

# Reciprocating compressor

Standard series from 4 to 8 pistons Displ. 58.48 - 240 m³/h CO2 subcritical (from 15 to 20 m³/h) CO2 transcritical (from 4 to 26 m³/h)

## development and solutions

## **PRODUCT RANGE**

Accurate research and development, 100% of products made in Italy and the strictest quality. Control methods guarantee excellent performance and reliability.

RECIPROCATING COMPRESSORS

SCREW COMPRESSORS

**CONDENSING UNITS** 

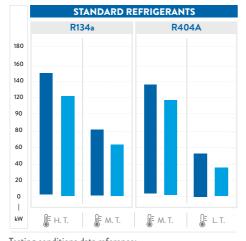


## product range

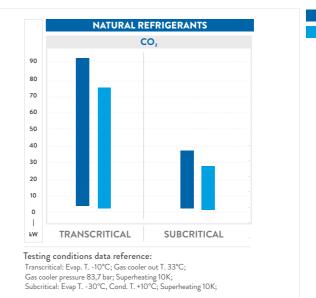
## **RECIPROCATING COMPRESSORS**

Full product range for standard refrigerants.

8 Series, 86 models designed to guarantee high performances, reliability and efficiency. In addition to standard models we offer ECOinside models optimized for R134a, R1234ze and R1234yf, explosion-proof ATEX models in two-stage version.



**Testing conditions data reference:** H.T.: evap. T. +5°C; cond. T. +50°C M.T.: evap. T. +10°C; cond. T. +45°C L.T.: evap. T. -35°C; cond. T. +40°C Our solutions for  $\rm CO_2$  applications include semi-hermetic reciprocating compressors for use in both subcritical and transcritical conditions, in single-cycle, cascade and booster versions. Broad operating limits, excellent performances and high levels of safety.



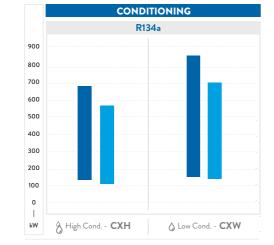


60Hz

50Hz



Our screw compressor series are developed for universal applications for medium and low temperature refrigeration systems, and are suitable for operation in parallel multi-compressor systems.

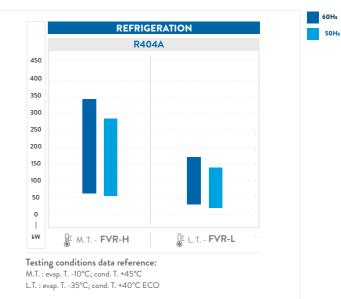


Testing conditions data reference:

H. Cond.: evap. T. +2°C; cond. T. +50°C; superheating 10K; subcooling 5K L. Cond.: evap. T. +3°C; cond. T. +38°C; superheating 1K; subcooling 5K

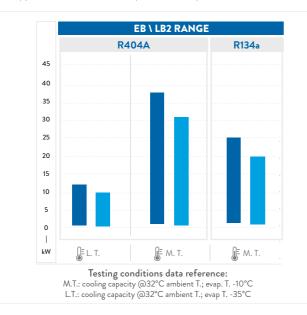


Designed to function continuously for long periods, without stoppages and intensive maintenance operations, they guarantee excellent performance coefficients and implement technical solutions to reduce noise and pulsations.





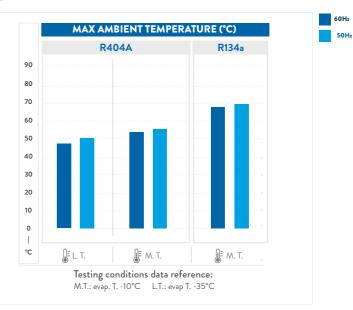
A wide range of commercial and industrial air-cooled condensing units for medium and low temperature applications. Their compact design is ideal for installations where it is important to occupy a minimal amount of space and keep noise levels down.





The EB and EBT series are 100% Ecodesign compliant, to reach the highest level of efficiency.

The EBT and LBT2 tropicalized series are suitable for operation at very high ambient temperatures.



## excellent performance and reliability

## **CERTIFICATIONS AND STANDARDS**

## 150 9001:2015

#### ISO 9001:2015

We are certified for "Design, development, manufacture and servicing of refrigerating compressors and condensing units for refrigeration and air conditioning".



#### **ASERCOM Performance Certification**



### ATEX - Directive 2014/34/UE

The Atex directive is a certification for equipment and protective systems intended for use in potentially explosive atmospheres, caused by the presence of gases or solid dust.

Our complete CX range of reciprocating compressors and screw compressors is **100% certified in cathegory 3G** (devices or protection systems that guarantee a very high level of protection) – **Zone 2** (an area where explosive atmospheres may be present, but only in rare cases or for short periods).



## ECODesign - Directive 2009/125/EC and Regulation 2015/1095/EU

Our full range of EB and EBT condensing unit is **100% ECODesign compliant**.

We have been members of ASERCOM since its foundation in 1992. This independent Association ensures the accuracy and reliability of the performance of compressors and condensing units. This certification guarantees that the performance published corresponds to that actually measured with reference to European standard **EN12900** for compressors and **EN13215** for condensing units. Check all our certified products at www.asercom.org.

	RECIPROCATING	CO <sub>2</sub>	SCREW	
ᆘ		$\checkmark$	$\checkmark$	All our
<b>((()</b> ccc				A-B-C
SASO		✓	✓	All our

All our reciprocating and screw compressors product lines are UL certified

A-B-D series are certified

All our products (spare parts included) are pre-registered to obtain SASO certification

## around the world

## **GLOBAL FOOTPRINT**

## HEADQUARTERS & PRODUCTION PLANT FRASCOLD SPA - ITALY, MILAN

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