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**New Industrial Refrigeration Network in Europe.
The most important news and insights of the industry.**

Introducing the magazine “Refrigeration Industry”



Welcome to the third issue of our magazine!

In today's fast-paced world, staying abreast of the latest developments in the refrigeration industry can be challenging. Our mission is to streamline this process by bringing you the most critical news and insights from the past quarter. This issue features the top news items from our website, along with essential materials, interviews, and research published on refindustry.com.

We are also preparing a special review of the Chillventa event for our next issue and our website. Please feel free to email us if you would like to know more, have any feedback, or suggestions. You can also reach out to me directly on [LinkedIn](#).

Warm regards, Editor-in-chief

Sergei Mukminov.

The concept of the new magazine:

1. Our magazine is exclusively published in a digital format. Our magazine pages are in landscape orientation, making them easier to read on screen.
2. The magazine is interactive - you can follow internal links in the content, as well as external links to read articles on the site and advertisements.
3. You can find any news from the magazine on our website by title.
4. The magazine is published once a quarter.

The magazine issue plan

- N 2024 / 4 — October
- N 2025 / 1 — January
- N 2025 / 2 — March

[Learn more](#) about the opportunities for refrigeration equipment suppliers in this magazine and on refindustry.com.



Frascold: Embracing the Future Through Sustainable Innovation



New Industrial Refrigeration Network Promotes Natural Refrigerants in Europe



Cooling as a Service: a Revolution in Industrial Refrigeration



Industry News

Table of contents

The magazine "Refrigeration Industry", 2024/3.

- ⇒ [New Products](#)
- ⇒ [Product Showcase](#)
- ⇒ [Market News](#)
- ⇒ [Market Research](#)
- ⇒ [Sustainability](#)
- ⇒ [Interviews](#)
- ⇒ [Events](#)

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News Products

The new Vitocal 150-A and Vitocal 151-A heat pumps



The new Vitocal 150-A and Vitocal 151-A heat pumps are characterized by their excellent value for money. The Vitocal 150-A's internal unit is designed as a space-saving wall-mounted unit. Vitocal 151-A is the floorstanding model with an integrated 190-liter DHW cylinder with CeraProtect enamel coating. Both models are available with outputs ranging from 2.1 to 13.4 kW (for A7/W35).

Vitocal 150-A and Vitocal 151-A, in combination with the compact A4, A6 and A8 external components, have been specially designed for new buildings. More powerful models equipped with an A10 or A13 external component are suitable for modernization projects. All devices achieve flow tem-

peratures of up to 70 °C (at outdoor temperatures as low as -10 °C) due to their cooling circuit and the use of the refrigerant R290. They are highly efficient and reach a COP (coefficient of performance) value of up to 5.0 (based on EN 14511, for A7/W35).

Heat pumps can also be used as cooling systems on hot summer days upon request. The active cooling function ensures comfortable temperatures indoors.

YORK Launches 575 Volt, High-efficiency Air-to-Water Heat Pump



Johnson Controls announced the launch of the YORK YMAE 575 V Air-to-Water Inverter Scroll Modular Heat Pump for use in Canada. The high-efficiency heat pump is now available in a 575-volt model, and is compliant with the Canadian Registration Number (CRN) requirements for pressurized

equipment in certain provinces.

Building upon the award-winning YORK Amichi platform, the YMAE 575 V features innovative, variable speed electronic vapor injection (EVI) scroll technology to significantly expand heating capacities. Available in two- and four-pipe configurations, the YMAE 575 V can deliver 60 C (140 F) water in heating capacities up to 443 MBH while in heating-only mode, and 546 MBH during simultaneous heating and cooling using recovered energy. The YMAE 575 V also utilizes the low-GWP refrigerant R-454B to help reduce emissions.

G&D Chillers presented its trail-blazing Elite 290 line of propane chillers

As the leading chilling manufacturer to bring innovative propane technology to the United States, G&D Chillers sets a new standard for sustainability, efficiency and tomorrow-proof chilling solutions. The Elite 290 series is designed to propel businesses

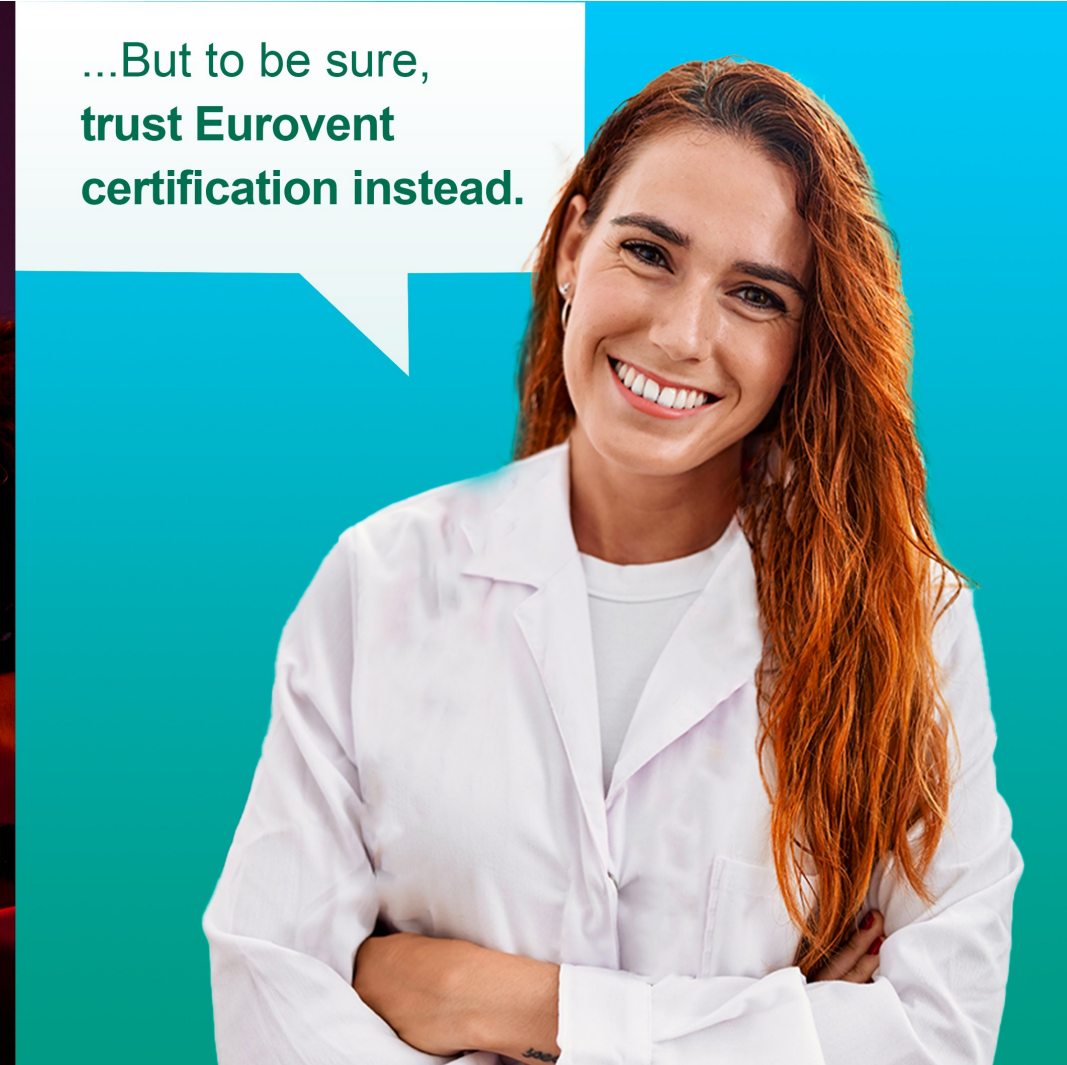
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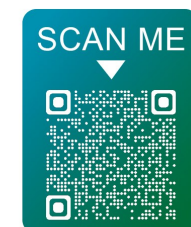


When it comes to
product performance,
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a clairvoyant...**

...But to be sure,
**trust Eurovent
certification instead.**

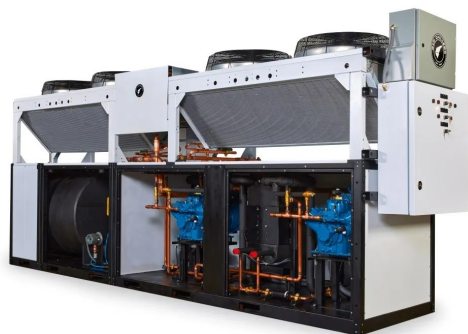


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toward a better future, with chillers that boast near-zero Global Warming Potential (GWP) and significantly lower energy costs.

G&D Chillers' Elite 290 series, utilizing propane as a natural refrigerant, stands out as a game changer. This technology not only lowers a customer's GWP, benefiting a wide range of customers from commercial breweries, wineries and distilleries to food processing customers like dairies and other manufacturers, but also enhances overall efficiency. G&D Chillers takes pride in being the first in the commercial chilling industry to reintroduce propane as a natural refrigerant – offering a safer, more effective and efficient chilling technology.

MIRAI Intex Completes Stress Testing of World's First Propane Turbo Compressor

MIRAI Intex has announced the successful completion of all stress tests on its new



turbo compressor on propane. The company is introducing two models from this line: the MT230 and MT350.

Features

- **Durability:** Designed to last 20 years without maintenance or intervention.
- **Oil-Free Operation:** Eliminates the risk of system pollution, improving energy efficiency, reducing capital costs, and minimizing service requirements.
- **Advanced Technology:** Compact, durable, and sustainable compressors providing consistent performance with minimal noise and low operating costs.
- **Energy Efficiency:** Modern technology reduces energy consumption and operating costs.
- **No Vibration and Low Noise Operation:** Turbo compressor ensures vibration-free operation and low noise lev-

els compared to competitive technologies.

- **Environmentally Friendly Refrigerant:** Propane is a sustainable refrigerant, offering high energy efficiency, environmental safety, and stable operation.
- **Controlled Operation:** Designed for effective gas pressure and flow rate management.
- **Emergency Stability:** Gas dynamic bearings developed by MIRAI Intex ensure stability during power outages or other disturbances.

Carrier Introduces Revolutionary Bus Stop Concept: The Carrier Cool Spot



Carrier has launched an exciting and groundbreaking addition to Bonifacio Glob-

al City (BGC): the Carrier Cool Spot. Situated at the bustling intersection of Crescent Park West, 31st Street, and 1st Avenue in Manila, Philippines, this cutting-edge bus stop is quickly emerging as a must-visit destination.

The Carrier Cool Spot transcends the traditional notion of a bus stop, aiming to provide commuters with a one-of-a-kind experience. Boasting an advanced, oversized air conditioning system from Carrier, it serves as a rejuvenating sanctuary capable of reducing ambient temperatures by up to 10 degrees Celsius.

A key highlight of the Carrier Cool Spot is its emphasis on energy efficiency. By harnessing the power of solar panels, the bus stop minimizes its reliance on conventional electricity sources.

ECOLTEC presented all-electric TM182 transport refrigeration system

ECOLTEC Grosskopf GmbH offers a transport refrigeration unit that uses only natural refrigerants with a negligible environmental impact. "Natural refrigerants, i.e. substances that occur in nature such as carbon dioxide (CO₂, R744) and hydrocarbons (propene, R1270), were already being used successfully at the beginning of refrig-



eration. However, with the invention of Fgases, it was thought that a non-flammable and non-toxic alternative had been found, replacing the natural refrigerants. It was only later that the dangers of synthetic refrigerants for the environment and health were recognised. The F-Gas Regulation is now driving the return of natural refrigerants," explains Dr Jürgen Süß.

The ECOLTEC TM182 transport refrigeration unit offers operators of refrigerated vehicles reliability, durability, cost-effectiveness, operational safety and safeguarding of the future. With units now in daily operation ECOLTEC has proven that systems with natural refrigerants are practical and future-proof solutions for refrigerated road freight transport.

Daikin Launches New Polyvalent Unit EWYS-4Z for Efficient Heating and Cooling



Daikin introduces the new EWYS-4Z polyvalent unit, featuring Daikin's inverter-driven, single-screw compressors, designed to efficiently provide simultaneous cooling and heating for commercial and industrial applications. Utilizing R-513A refrigerant, which has a 55% lower Global Warming Potential (GWP) compared to R-134a, the unit maintains the same safety classification (A1).

Key Features and Performance:

- Capacity Range: 400 to 800 kW in both cooling and heating modes.
- Total Energy Efficiency Ratio (TER): Up to 7.89.
- Operating Temperatures: From -18°C to +50°C.
- Chilled Water Temperature Range: From -8°C to +20°C.
- Heating Water Temperature Range: From +30°C to +60°C.

SECOPI TOOLKIT APP WITH TOOL4COOL®

SECOPI



Variable-Speed
Efficiency



Premium
Controllers



Tool4Cool



Mobile Cooling



Sustainability



Energy Saving

KAORI Launches Advanced Liquid Cooling System



In response to the growing demand for low-power cooling solutions in data centers, KAORI will be showcasing its latest advanced liquid cooling systems at Computex 2024. These innovations meet the demanding computing demands of artificial intelligence and cooling technologies, offering efficient and sustainable solutions for modern data centers.

Among these, the In-Row 800kW CDU large-scale liquid cooling system stands out, boasting a heat dissipation capacity exceeding 800 kW. It features a single liquid pump with a delivery pressure over 4 bar and a total flow rate exceeding 800 LPM, making it suitable for various fluid applications.

Founded in 1970, KAORI has been actively focusing on server liquid cooling technology

since 2016. The company was a pioneer in completing verification with international server manufacturers and successfully shipped immersion liquid cooling systems to renowned hyperscale data centers in 2018.

Fujitsu adds Eco+ wall mount to split systems range



Fujitsu General Air Conditioning UK has extended its AIRSTAGE split systems line-up with the launch of the compact and efficient Eco+ wall mount unit. Operating on lower GWP R32 refrigerant, it is designed to provide extended functionality at a competitive price point.

Sitting alongside the standard split and Eco ranges, the Eco+ (models: ASEH**KNCA; **05, 07, 09, 12) includes integrated Wi-Fi for simple connection to Fujitsu's AIRSTAGE mobile app.

The compact indoor unit is just 784mm wide, with a large louver design for maximum air distribution, while soft lines and colour tones mean it is suitable for a wide range of interiors.

Heating is available down to -15°C ambient temperature and Eco+ is able to hold a room at 10°C for energy saving frost protection of the building fabric. Blue Fin anti-corrosion heat exchangers on the outdoor unit allow for installation in harsh environments.

High performance silver Ion air filtration to deodorize the air in a room is available as an option.

Ideal Heating introduces the HP290 Heat Pump



Ideal Heating has launched the HP290, a monobloc heat pump designed to provide efficient, low-carbon heating and hot water throughout the year. This new product is a notable addition to the company's range of eco-friendly heating solutions.

The HP290 is Ideal Heating's first domestic air source heat pump to use R290 refrigerant, which has a low environmental impact and minimal global warming potential. By incorporating this advanced refrigerant, Ideal Heating is taking significant steps to reduce the carbon footprint of home heating systems.

The HP290 offers several benefits for homeowners seeking sustainable alternatives to traditional heating systems:

- **High Efficiency:** The HP290 boasts a seasonal coefficient of performance (SCOP) rating of over 500%, ensuring optimal performance in various weather conditions, from sunshine to snow.
- **Easy Installation and Maintenance:** Designed for simplicity, the HP290 is easy to install and maintain. When paired with Ideal Heating's pre-plumbed hot water cylinder and Halo Lite RF thermostat, it forms a comprehensive low-carbon heating package.
- **User-Friendly Control:** The HP290 control box consolidates all electrical components, streamlining the installation process and allowing homeowners to monitor the system's performance easily.

Sanhua's Range of Environmentally Conscious Brazen Plate Heat Exchangers



Sanhua brazen plate heat exchangers have been thoroughly designed with great consideration for our environment and raw material resources. The heat exchangers are designed and adapted to give the best possible heat transfer efficiency and are among the best in the class. This results in an efficient utilization of materials, and reduction of raw material use.

Sanhua new range of Brazen Plate Heat Exchangers offers a wide range of solutions for the refrigeration and heat pump industry. Right from the design stage of the heat exchanger, these important points have been considered.

The future together with Sanhua has a lot to offer:

- Environmental Considerations in Design
- Efficient Heat Transfer and Material Utilization
- Reduced Energy Consumption and Lightweight Design
- Unique Distribution System for Higher Efficiency
- Application in Reversible Heat Pumps
- Energy-Efficient Performance

For system builders, the benefits are evident: lighter machinery with enhanced efficiency, resulting in lower energy consumption for end consumers. The design of the heat exchanger also takes into account pressure losses on the hydraulic side, which is why asymmetric design is used. This means that the system builders can use less energy-demanding pumps and the end users get a more energy-efficient product. The heat exchangers are designed with a unique distribution system which also contributes to less use of material and higher efficient performance.

The heat exchangers are used both as Evaporator and Condenser offering savings and simplification for system builders.

AKO

The power to control gas leaks is in your hands

Refrigerant gas leaks pose a key challenge in industrial and commercial refrigeration. Control and detect these gases to ensure efficiency, safety, and sustainability in your refrigeration facilities.

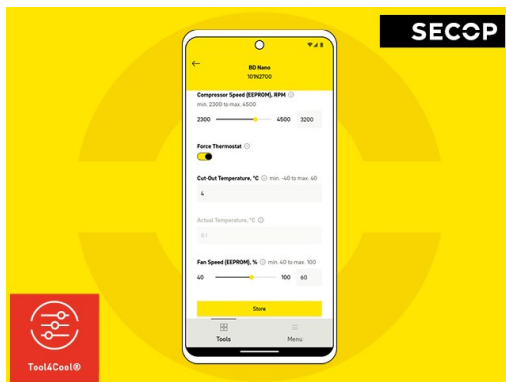
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Product Showcase

The partner's materials

Secop "Tool4Cool" now in the Toolkit App for Android users for the DC range



Secop just launched a new free feature for its Secop Toolkit Mobile App, allowing users to set DC compressor parameters via their mobile device. The new feature provides an exceptional user experience with a simplified layout and intuitive design. Setting the DC range compressors is now simple and can be done in just four easy steps. This first version is available for BD Nano, BD Micro and BD-P.

1. Download or update the Secop Toolkit app from the Google Play Store
2. Connect your phone or tablet to the Secop gateway using the USB-C cable

3. The app will automatically connect to the controller

4. Start setting parameters

The Secop Toolkit app offers the possibility to set up the most used settings in the laboratories when testing an application:

- Compressor speed
- Cut out temperature
- Fan speed

Compared to the desktop version, which is still in use and available, the new mobile app feature reduces the user's effort. Indeed, the Product Key and the Parameter Definition files are no longer necessary. The new solution will automatically read the data from the electronic controller and let the user change the settings and save them. The app communicates the parameters change to the controller, and the compressor starts operating with the new settings. This feature is available for Android. Secop is working to extend it to iOS operative system.

[Read more](#)

Sanhua introduced RFKH Series with Optimized Design

Sanhua is pleased to announce the introduction of the optimized RFKH series ther-



mostatic expansion valves. These valves are designed to regulate the mass flow of refrigerant into the evaporator while controlling the refrigerant's superheat at the evaporator outlet.

Suitable for various refrigerants under all working conditions, the RFKH series is ideal for refrigeration systems such as freezers, ice makers, dehumidifiers, air conditioners, and heat pumps across a wide range of evaporation temperatures.

[Read more](#)

The bonus for our Platinum and Gold partners includes the free publication of press releases, subject to space availability in the Product Showcase section.

[Learn more](#) about opportunities for our partners.

Market News

European Commission clears acquisition of Carrier Refrigeration by Haier



The European Commission has approved, under the EU Merger Regulation, the acquisition of sole control of Carrier Refrigeration Benelux B.V. ('Carrier Refrigeration') by Haier Europe Appliances Holding B.V. ('Haier'), both of the Netherlands.

The transaction relates primarily to the manufacturing and supply of commercial and industrial refrigeration solutions.

The Commission concluded that the notified transaction would not raise competition concerns, given the companies' limited combined market position resulting from the proposed transaction. The notified transaction was examined under the simplified merger review procedure.

Carrier announced an agreement to sell Carrier commercial refrigeration equip-

ment to Haier in December 2023.

Carrier Commercial Refrigeration has more than 4,000 global employees and a sales and service network spanning Europe and the Asia Pacific region. Its brands include Profroid, Celsior and Green & Cool. Carrier Transicold transport refrigeration, Sensitech and its Lynx digital cold chain platform are not included in the transaction.

Copeland Appoints Patrick Forsythe as Chief Technology Officer



Copeland is excited to announce the appointment of Patrick Forsythe as the new Chief Technology Officer (CTO). With a rich background in technology leadership, Patrick is poised to bring a wealth of expertise and innovation to Copeland's global operations.

As CTO, Patrick will take charge of directing and advancing Copeland's engineering teams across the world. His responsibilities will center on accelerating the company's research and development initiatives and enhancing the integration and application of emerging technologies.

Danfoss launches new aftersales service for BOCK compressors



Danfoss BOCK introduces RefCare, a new aftersales service for BOCK compressors, aimed at enhancing technical expertise in local markets. RefCare enables the creation of centers of excellence, providing best-in-class service support through trained and certified RefCare partners. These partners can perform warranty inspections, repair compressors, train customers, and offer local language support to service technicians.

Discover Our Cold Storage System Evaporators

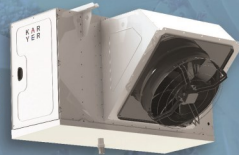
Store Perishable Food Products for a Longer Period of Time



**Horizontal
Coolers**



**Cold Store
Evaporators**



**After
Harvesting
Precoolers**



**Banana
Unit Coolers**



**Dehumidification
Unit Coolers**



**Fruit and
Vegetable
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TURKEY'S
SECOND TOP 500 INDUSTRIAL
ENTERPRISES
2023

inn
2023 TOP 1000 EXPORTERS OF TURKEY
TÜRKİYE'NİN İLK 1000 İHRACATÇI FİRMASI

ISIB TURKISH
HVAC-R
2023 TOP HEAT EXCHANGERS
COILS EXPORTER

**KAR
YER**

Boosting technical knowledge and service in the local markets

Having a local point of contact will enable service technicians to get the support they need in their local language. "Service technicians in the field might not always be comfortable explaining their situation in a foreign language," according to Benjamin Straub, Head of Business Development After Sales & Service. "Our RefCare Partners speak the local language, know the culture and the market, and they have the necessary technical knowledge to assist technicians in their area."

The first RefCare partners are already in place. The RefCare team will establish RefCare Hubs – Danfoss owned and operated service centers that would perform inspections, train RefCare Partners, and remanufacture compressors – at existing Danfoss' facilities in the United States, Latin America, and China.

CAREL and SECO working together to develop an innovative solution in the conditioning and refrigeration industry

CAREL Industries S.p.A., world leader in control solutions for conditioning and refrigeration, and SECO S.p.A., leading provider of end-to-end technological solutions



for industrial digitalization, have signed an agreement to develop a new solution to support the digital transformation of the infrastructures in the segments where CAREL operates.

CAREL and SECO have started the design of an innovative and powerful supervision system, a fundamental device for controlling refrigeration and air conditioning processes, allowing real-time data collection and remote monitoring. Among the aims of the collaboration will be operational streamlining and safety improvement through process optimization and prompt identification of potential issues or malfunctions.

The new supervision system will also enable the implementation of advanced digital solutions based not only on live monitoring but also on intelligent control of field devices to enhance product efficiency by maximizing performance and improving overall reliability.

Leveraging on SECO's portfolio and know-how, through the combination of the most advanced technologies and customised services, this new solution will help to build additional functionalities for CAREL's equipment, while promoting energy savings and reducing environmental impact.

Danfoss Opens New Turbocor Factory in Tallahassee, Florida



Danfoss has officially opened its new 145,000 square foot factory in Tallahassee, Florida, marking a significant milestone in the company's expansion. This new facility doubles Danfoss' production capacity for oil-free compressor technology, meeting the growing demand across North America, Europe, and Asia.

As leaders in oil-free compressor technology, Danfoss aims to support global efforts

to decarbonize HVAC systems. The new factory aligns with Danfoss' ESG ambition of achieving carbon neutrality by 2030. The facility utilizes solar power, Turbocor compressors, and a heat recovery system to ensure environmentally responsible manufacturing processes.

Emergent Cold LatAm Opens Chile's Largest Frozen Food Warehouse



Emergent Cold Latin America, the region's largest provider of temperature-controlled storage and logistics solutions, announced the opening of the largest frozen food warehouse in Chile, located in Talcahuano. This facility also marks the company's most significant expansion in Latin America. Situated in a region renowned globally for its seafood and fruit production and exports, the warehouse represents a strategic en-

hancement of the local cold chain infrastructure.

The facility has a storage capacity of 294,000 m³ and 37,000 pallets. This development is expected to generate 150 direct and approximately 500 indirect jobs, bolstering the local economy.

The Company is already planning an expansion phase for this new warehouse, which should be completed by early 2025. Total storage capacity following this future expansion will be 389,000 m³, representing a 50% increase in total capacity in the country and double the current availability in the Concepción region.

Samsung and Lennox Form Joint Venture for HVAC Systems in North America



Lennox International Inc. and Samsung have announced the establishment of a joint venture named Samsung Lennox HVAC North America to sell ductless mini split, air conditioning (AC), heat pump, and variable refrigerant flow (VRF) products in

the United States and Canada.

Samsung will hold a 50.1% ownership stake in the joint venture, while Lennox will own the remaining 49.9%. The collaboration aims to leverage Samsung's 40 years of innovative HVAC technology and Lennox's strong market position as a leading North American HVAC original equipment manufacturer (OEM) and direct distribution leader.

The joint venture will combine ducted and ductless AC and heat pump systems, enhancing the synergies for customers by offering a comprehensive range of HVAC solutions. Lennox will sell "Lennox powered by Samsung" branded products through its stores and direct-to-dealer network, while continuing to supply Samsung-branded products to existing Samsung HVAC distributors and representatives in the United States and Canada.

The joint venture is expected to become operational in the second half of 2024, pending customary closing conditions. Following this, Lennox will purchase VRF and low-GWP mini-split and multi-split products from the joint venture. Samsung and Lennox will appoint the Chief Executive Officer and Chief Financial Officer for the joint venture, with business headquarters and operations based in Roanoke, Texas.



Braze Plate Heat Exchangers – series S40/S60

- Innovative and highly efficient fluid distribution system
- Designed and optimized for Heat Pump application
- Anti-freezing design
- Maximum working pressure up to 50 bar
- EU PED certification for flammable refrigerants, including R290
- Patented asymmetric plate design has in average 25% lower pressure drop on secondary side compared to other available heat exchangers



Our wide range of SANHUA BPHEs include many different sizes and models. They can be used as evaporators, condensers, de-superheaters or fluid to fluid exchangers. Our design is easy to install, and gasket free technology makes them fully hermetic.

Daikin Europe investing €140 million in the development of a new R&D centre



Daikin Europe N.V., a leading Heating, Ventilation, Air Conditioning & Refrigeration (HVAC&R) manufacturer in Europe, the Middle East and Africa (EMEA), announces its Chairman of the Board of Daikin Europe, Masatsugu Minaka, joined fellow Japanese business leaders to bolster Belgian-Japanese cooperation at a special event with King Philippe of Belgium, in partnership with the Belgium-Japan Association and Chamber of Commerce.

For nearly 160 years, Belgium and Japan have shared a fruitful partnership with countless Japanese companies, including Daikin Europe. In a testament to that longstanding solidarity, Daikin Europe recently celebrated 50 years of production in

Ostend. Now, the Japan-based HVAC manufacturer now goes one step further by investing €140 million in the development of a new R&D centre, which will further shape Belgium's sustainable energy transition.

With the goal of furthering already significant ties, Minaka and other Japanese officials attended a high level meeting focused on how the two nations could unlock new areas of collaboration, while strengthening existing efforts.

Increased production of refrigerated bodies leads to the creation of new jobs at the Schmitz Cargobull Vreden plant



Schmitz Cargobull, a leading supplier of semi-trailers for temperature-controlled transport, is pleased to announce that it has filled a number of permanent roles

and plans to hire more new starters due to a significant increase in orders in recent months.

Schmitz Cargobull has promoted 25 temporary workers into permanent positions at the refrigerated box body production site in Vreden, alongside announcing a recruitment drive for more new employees.

In a period characterised by economic challenges, Schmitz Cargobull has been able to successfully maintain its position and is now experiencing an increase in demand. This positive development has enabled the company to expand its operating capacity and create further jobs at the refrigerated box body plant in Vreden, North Rhine-Westphalia.

Making Use of Natural Refrigerants in Vietnam

In September 2019, Vietnam ratified the Kigali Amendment to the Montreal Protocol, committing to phasing down HFCs by 80% by 2045, starting in 2024. To support Vietnam in this transition of promoting the use of natural refrigerants and energy efficiency, the Green Cooling Initiative (GCI) III project has implemented different interventions centered around three main areas: policy advice, technology transfer and capacity building. GCI III is funded by the



German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) under the International Climate Initiative (IKI).

From October 2023 to March 2024, four practical training courses were conducted at the Hanoi College of Electronics and Electro-refrigeratory Technics (HCEET) and the Hanoi Industrial Vocational College. Each course enrolled 15 students, including vocational trainers, trainees, and practitioners in the cooling sector. The training aimed to provide professionals with the opportunity to enhance their expertise in green cooling technologies. Given the inevitable trend towards green transformation, there has been a significant demand for skilled workforce in sustainability practices, particularly in urban areas.

Furthermore, the cooling sector has traditionally been perceived as male-

dominated. To promote greater participation of women in this field, the organizers of the training are keen to tailor vocational programs to better accommodate female participants. The inclusion of female professionals in the Training of Trainers (ToT) course held in March was widely acknowledged and valued. Moving forward, the GCI III project aims to actively promote gender mainstreaming across all its interventions and activities.

The training received positive feedback and high ratings from all participants. The program covered key areas such as environmental issues, standards, and safety measures for the use of hydrocarbons, leak detection, and the application of propane (R290) as a refrigerant, aligning well with their expectations and career aspirations. Many recommendations for expanding similar training programs to other vocational colleges and universities were made by both trainees and trainers.

KARYER Invests in Renewable Energy for Sustainable Production

KARYER has significantly transformed its plant by investing in renewable energy, emphasizing its commitment to environmental sustainability. The company has installed a solar panel system at its 32,000



m² Akhisar plant in the Aegean region of Turkey, generating an average of 3.75 MW of energy.

The solar panel system now meets almost all of the plant's energy needs, demonstrating the effectiveness of KARYER's sustainability initiatives. This investment supports the company's efforts to combat climate change by using clean energy sources, while also enhancing its competitiveness through reduced energy costs.

KARYER highlights the importance of adopting renewable energy within the air conditioning sector. The company is dedicated to continuing its efforts to minimize environmental impact and promote a greener future through innovative projects.

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Artisan soul,
innovative personality



Daniele
Refrigeration system assembly worker



*We take the time we need
to find new solutions*

YOU CAN RELAX IN THE KNOWLEDGE
THAT YOU CAN COOL AND HEAT
WITH THE SAME SYSTEM.



BOOSTER and **BOOSTER XL** are the creations of Arneg's R&D department. These refrigeration systems use CO₂, a natural refrigerant, and combine normal and low temperature refrigeration in the same unit. They even recover heat for hot water production or store heating.



arneg

arneg.com

Market Research

Cold Storage Market size is set to grow by USD 145.71 billion from 2024-2028



The cold storage market is estimated to grow at a CAGR of 13.47% between 2022 and 2027. The size of the market is forecast to increase by USD 118.3 billion. The growth of the market depends on several factors, including the rising awareness about reducing wastage of food, the growing consumption of frozen food, and compliance with regulations.

The rising awareness about reducing the wastage of food is the key factor driving the global chilled storage market. Food waste is a major problem worldwide. Most of the food waste is due to the lack of proper storage facilities. In addition, more than 700 million people worldwide do not have enough food to eat. Typically, perishable foods move through the supply chain at

different temperatures, which sometimes leads to food spoilage and waste. To solve this problem, the Chinese government is focusing on solutions to reduce food waste and extend the shelf life of perishable foods.

The report also includes detailed analyses of the competitive landscape of the market and information about 15 market vendors, including: Beijing Howcool Refrigeration Technology Co. Ltd., Burris Logistics, Changzhou Yuyan Refrigeration Equipment Co. Ltd., Coldman Logistics Pvt.Ltd., Commercial Cold Storage Group Ltd., Congebec Logistics Inc., Holt Logistics Corp., Interstate Cold Storage Inc., John Swire and Sons Ltd., Lineage Logistics Holdings LLC, NewCold Cooperatief UA, Nichirei Corp., Nilkamal Ltd., Nor AM Cold Storage Inc., RSA Global DWC LLC

Commercial Refrigeration Equipment Market, Size and Forecast 2024-2028



The commercial refrigeration equipment market size is forecast to increase by USD

14.85 billion with a growth at a CAGR of 6.66% between 2024 and 2028. The need to increase the storage life of food products is driving demand for refrigeration solutions that can maintain optimal storage conditions. Market expansion by end-users, such as supermarkets, convenience stores, and restaurants, is also fueling growth in the market. Additionally, the growing focus on merchandising refrigerated food and beverages is creating opportunities for innovative refrigeration solutions that can enhance product visibility and appeal to customers. The increasing demand for fresh and healthy food options is also driving the growth of the market, as consumers seek out products that are properly stored and maintained. Additionally, advancements in technology, such as energy-efficient systems and smart monitoring capabilities, are enabling businesses to reduce operating costs and improve overall efficiency.

Companies: Ali Group S.r.l. a Socio Unico, Dover Corp., Electrolux AB, Felix Storch Inc., FUJIMAK Corp., HOSHIZAKI Corp., Illinois Tool Works Inc., Imbera, Lennox International Inc., Panasonic Holdings Corp., Standex International Corp., Tecumseh Products Co. LLC, TEFCOLD AS, The Middleby Corp., TURBO AIR Inc., UAB FREOR LT, Valpro Refrigeration, and WELBILT INC.



Dawie Kriel (M. Eng. Pr. Eng.), General Manager: Energy Partners, Refrigeration, in Cape Town, South Africa

The partner's materials.

Cooling as a Service: a revolution in industrial refrigeration

Cooling as a Service (CaaS) is increasingly popular in industrial refrigeration. By exchanging ownership for usership, companies can focus on their core business and at the same time profit from the latest innovations in refrigeration technology. This article is a summary of Dawie Kriel's talk at the Industrial Refrigeration Network Conference in Rottenburg-Ergenzingen, Germany.

Impact of CaaS

Servitisation fundamentally redefines the relationship between suppliers and customers by offering outcomes rather than products. Customers enter into partnerships where suppliers own and operate cooling or heating systems, assuming all associated risks and responsibilities during

the life cycle of the system. Such a shift from ownership to usership inherently leads to reduced life cycle costs, enhanced operational efficiency and sustainable practices.

CaaS is driven by operational efficiency, while ensuring environmental sustainability. Customers can focus on core activities, while suppliers ensure optimal system performance, uptime and compliance. Moreover, the CaaS income model incentivises the supplier to ensure efficiency improvements, reduces energy consumption, and promotes the adoption of sustainable technologies.

CaaS suppliers are driven to lead in technological innovation and smart energy asset management. They manage the complex challenges of addressing diverse equipment needs, ensuring compatibility, and meeting stringent regulatory requirements. Suppliers are prompted to enhance their



CaaS ammonia refrigeration system at a poultry producing plant of Sovereign Foods, South Africa

Image source: Energy Partners

service through comprehensive data management, real-time performance monitoring, and centralised asset management.

With its high-quality data, CaaS also aligns with ESG reporting requirements. It is

therefore a win-win-win situation: for the customer, the supplier and the environment. As the industry continues to evolve, the integration of heat pump technologies and continued collaboration between

stakeholders will further enhance the value proposition of CaaS.

CaaS in Africa

Africa offers good examples of the benefits of CaaS: Even small companies and projects can invest in cold rooms, storage and transport, and are less affected by power outages. Food and other perishable items stay fresh for a much longer time, which reduces post-harvest losses, waste of energy and land, and promotes economic development. By providing efficient and affordable cooling solutions, CaaS has the potential to transform the agricultural sector and improve livelihoods across the continent.

[*Find out more*](#)

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Interview

Frascold: Embracing the Future Through Sustainable Innovation

By Ilana Koegelenberg

With updated branding and an ever-expanding temperature-control product range that covers the full spectrum of cold to hot (including a new high-temperature

solution), Frascold is strategically readying itself for a more sustainable future.

In an exclusive interview, Refrigeration Industry speaks to Frascold CEO Giuseppe Galli about the company's vision, the rapid growth of its natural refrigerant business, and the expected impact of the updated F-gas Regulation.

How is Frascold positioning itself to continue its almost 90-year history of innovation and growth?

Refrigeration Industry (RI): *At the end of last year, Frascold unveiled a new brand identity. What necessitated this change, and what does this say about the company's future direction?*

Giuseppe Galli (GG): The change in Frascold's brand identity was driven by the company's dedication to sustainable innovation. This commitment is evident in our focus on energy efficiency, recycling initiatives, and the launch of new, eco-friendly solutions. The updated branding conveys the versatility of Frascold's approach to temperature control, covering the full spectrum from cold to hot.

The introduction of a new grade symbol and fresh color palette in our communications serves to inform the stakeholders of our strategic shift towards a broader range of products, including those that can achieve higher temperatures. This rebranding signifies Frascold's future direction towards a more comprehensive and environmentally conscious product line.

RI: *Frascold also recently announced a new range of CO₂ compressors. How important are natural refrigerant products for Frascold's current and future portfolio (and why)?*

GG: Frascold's dedication to natural refrigerants like CO₂ is a strategic part of our in-

novation and sustainability goals. We have been investing in research and development (R&D) of natural refrigerant solutions for the past two decades. We are pleased to see that the market is increasingly moving toward these natural solutions, thanks to a growing awareness of care for the environment and the passage of the new F-Gas law, which will impose increasing limits on refrigerants with high Global Warming Potential (GWP) over the next few years.

Frascold is ready to meet this challenge through past and current R&D investments. In addition to their low carbon footprint, natural refrigerants allow us to develop high-performance products in total safety, combining our know-how and experience with their unique properties.

These eco-friendly solutions are key to our future product development, aligning with environmental regulations and market trends towards greener refrigeration technologies, such as our new CO₂ compressors for heavy operations highlight our commitment to high performance and environmental responsibility.

RI: This wasn't the only new range Frascold has announced. You've consistently unveiled new and improved products. How important is R&D to Frascold, and why?

GG: At Frascold, we believe that continuous

innovation is the key to embracing the future. We view this approach as a strategic tool for maintaining competitiveness in the global landscape. We are proud to invest substantially in R&D and to have an ongoing dialogue with major players in the HVAC&R industry and universities, such as the Politecnico di Milano, the Università di Padova, and several other universities around Europe and the world. This commitment allows us to transform each solution into real added value for customers, developing advanced technologies that ensure maximum continuity and reliability in each application context.

We view change as an opportunity to invest in incremental innovation. Our goal is to improve plants, processes, and know-how. This approach aims to optimize the efficiency of existing ranges in the short term and, in the long term, to create revolutionary solutions to address new challenges.

RI: What other products and services are you currently focused on regarding R&D?

GG: Now, we are focusing our efforts on R&D of products and services that are responsive to the evolving needs of the market. In particular, we are working on the development of new compressor sizes to meet any new needs and demands.

We are also exploring a new series of natu-

ral refrigerant compressors, to provide an innovative and sustainable response to the demands of various industries, ensuring broad coverage of current needs.

These efforts reflect our commitment to providing solutions that not only improve the efficiency and performance of our products but are also aligned with our environmental standards and sustainability expectations. R&D is a key pillar for Frascold, as it allows us to be proactive in the market and anticipate future trends, ensuring that our customers always receive the most advanced and reliable solutions.

RI: What percentage of your global business is made up of natural refrigerant products and services currently? How is this expected to grow in the near- to medium-term?

GG: Our global natural refrigerants business currently accounts for about 25% of our total business volume, with a double-digit annual growth each year. In recent years, Europe has been at the forefront of the evolution of natural refrigerants and is currently leading the global HVAC&R market in this important transition. In the United States, we are seeing an increasing number of applications using natural gases [refrigerants], with the goal of replicating the trend toward a more sustainable indus-

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@50 Hz

S

7.9 - 25.3 m³/h
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Z

30.7 - 37.9 m³/h
@50 Hz



try as experienced in Europe.

RI: *Frascold has been around since 1936, what's the most popular manufactured product in the history of the company, and how has that changed over the years?*

GG: In Frascold's nearly 90 years of operation, the size S of our piston compressor has been our most popular and market-demanding product. Over the years, we have met the demands of the market, first

by developing higher-cube compressors with natural lubrication and then by designing ATEX-certified compressors to ensure total safety, which we have believed in from the beginning and are proud pioneers and market leaders.

We are also proud of our screw compressors, which have been designed nearly 30 years ago and has reached the highest performance and efficiency.

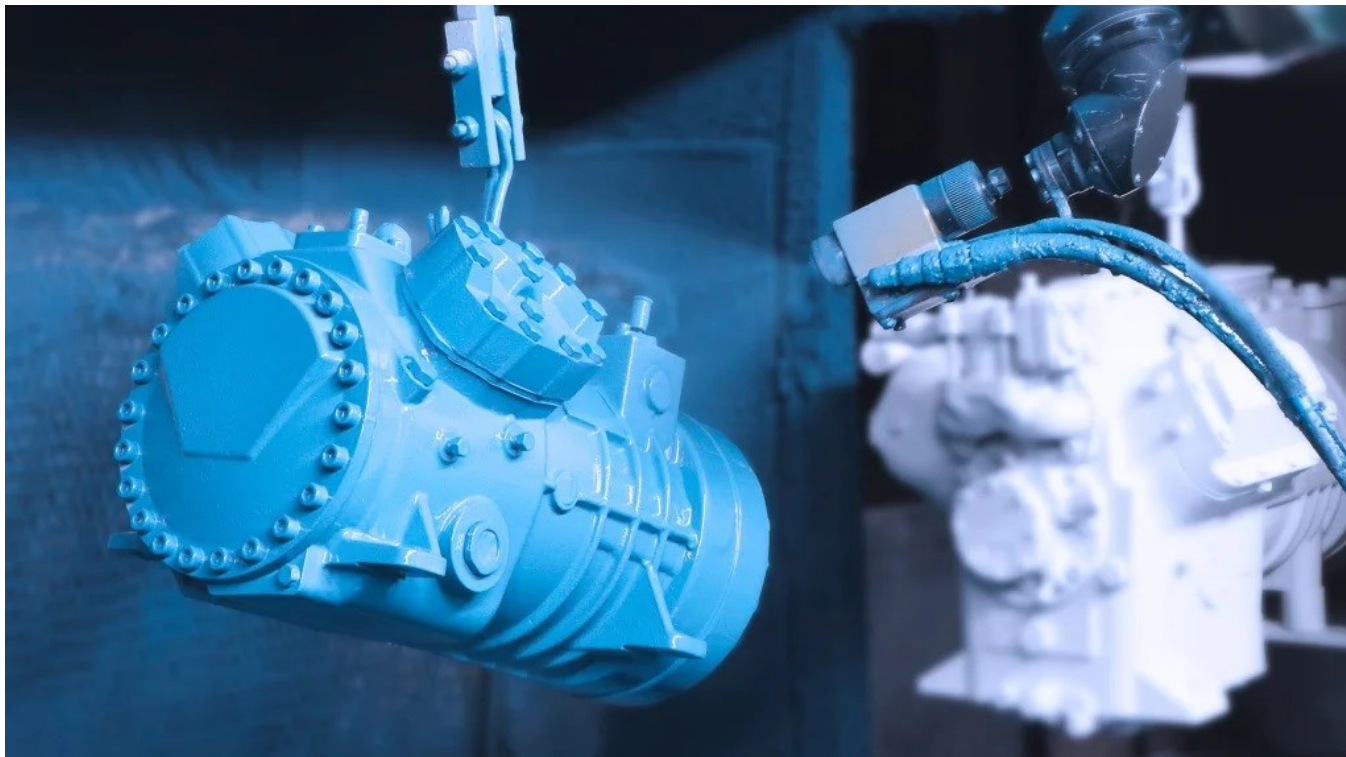
RI: *What has been the biggest learning opportunity for the company over its history?*

GG: Our biggest learning opportunity has been the COVID-19 emergency. Despite the temporary closure of its plant due to the pandemic, Frascold was able to recover and achieve remarkable results. When we successfully reopened our production plant and offices after weeks of closure, we managed to report growth in production and sales. These achievements are a testament to the resilience and dedication of our hard-working team after the difficult period of the pandemic, and are a result of Frascold's continued investment in recent years and its expertise in natural refrigerants.

Furthermore, recently, with the introduction of the new F-gas law and the resulting shift in the market, we have had to adapt with a comprehensive redesign of most of our products to meet the challenge of natural refrigerants and low-GWP refrigerants, a process that was already ongoing but that required an acceleration in the R&D to ensure and deliver high-quality performance.

RI: *What are the main challenges and opportunities Frascold faces in the current market, especially with the shift towards eco-friendly solutions?*

GG: In the context of the current market challenges and opportunities, particularly



with the shift towards eco-friendly solutions, we believe that Frascold's most significant achievement is our innovative Testing Center. This facility, equipped with advanced test benches and a team of highly skilled technicians, is the foundation of our commitment to sustainability and high performance. It's here that we develop and refine our compressors, which are the embodiment of our efforts.

We are pleased to offer efficient compressors that use natural refrigerants with a low environmental impact, thanks to the work

done at our Testing Center. These compressors are a testament to our dedication to reducing emissions and consumption while safeguarding resources and improving efficiencies and performance. We believe that sustainable innovation is at the heart of Frascold's business growth and our goal to lead the decarbonization process in the HVAC&R sector, playing a key role in the fight against climate change.

RI: How is the updated F-gas Regulation expected to impact Frascold's business, and the global RACHP/ HVAC&R sector?

GG: Refrigeration is one of the biggest contributors to global warming, therefore, we take very seriously both the directions provided by the European community and the needs of industrialization of our customers. Certainly, with the passage of the new F-Gas law there will be a shift toward new refrigerants, both low GWP and natural refrigerants, in preparation for the restrictions that will occur in the coming years.

We, at Frascold, are hopeful that the market will reach a balance in the short term where there will be a compromise between sustainability goals and industry demands.

[**Read the full interview**](#)



Events

New Industrial Refrigeration Network Promotes Natural Refrigerants in Europe

Advansor, Armaturenwerk Altenburg (AWA), BITZER, Güntner, Johnson Controls, SCM Frigo S.p.A., Vahterus, and TH. WITT Kältemaschinenfabrik GmbH have launched the "Industrial Refrigeration Network" (IRN) to promote the use of natural

refrigerants in industrial refrigeration technology across Europe. This collaborative initiative aims to shape the future of industrial refrigeration by welcoming further industrial partners.

The network was introduced at the "Industrial Refrigeration Network Conference," held from June 6 to 7, 2024, at the SCHAUFLEER Academy in Rottenburg-Ergenzingen, hosted by BITZER Kühlmaschinenbau GmbH. The two-day event provided a platform for over 90 participants to engage with the network's vision and explore

innovative solutions in industrial refrigeration.

Renowned industry speakers discussed numerous cutting-edge technologies and industry trends. The conference program included keynote speeches, tech talks, and contractor presentations addressing important industry challenges. Participants had the opportunity to visit small exhibition stands where sponsors showcased pioneering solutions for industrial refrigeration technology.

The event also featured various networking opportunities, including coffee breaks, lunch, and a BBQ dinner, allowing participants to connect and build a robust network for Europe.

For more information about the event and the Industrial Refrigeration Network, visit [Industrial Refrigeration Network \(IRN\)](#).

Introducing the magazine in PDF Format to the partners

We are thrilled to introduce our new PDF magazine, designed to be a valuable resource for our readers. In a world brimming with information, our mission is to streamline the process of staying informed by delivering the most crucial updates and insights from the past quarter.

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We are committed to ensuring that our readers receive our magazine promptly. We distribute it through our newsletter to over 4,000 subscribers, registered users on our website, and webinar attendees.

Additionally, we will actively promote the magazine across our social media platforms. With more than 50,000 followers on our news feeds and over 150,000 members in our LinkedIn and Facebook groups, we guarantee extensive and far-reaching exposure.

We are excited to share our initial outlook on this new magazine and have plans for its ongoing development. Join us on this exciting journey, and please share your feedback and ideas.

Discover more about the magazine's features and pricing on the following pages.

Main Headings in the Magazine

- **The Most Popular News from Refindustry.com:** Stay updated with the most crucial developments.
- **Sustainability:** Discussing green refrigeration practices and their impact on the environment.
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- **Opinions:** Expert perspectives, commentary, and analysis on relevant industry issues and trends.

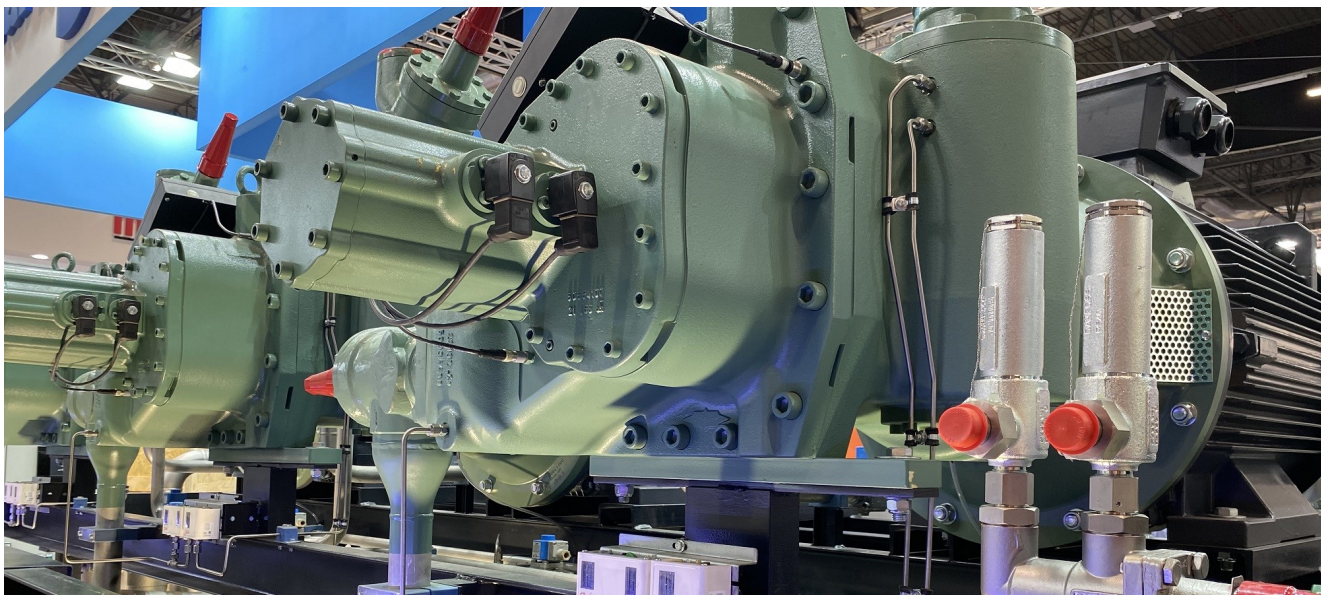
Advertising Opportunities in Our Magazine

Place an advertising module or contribute an article on topics like sustainability or successful case studies, sharing your company's experience with the magazine audience. Know more in [Media Kit 2024](#).

Magazine Issue Plan

- October 2024 — Issue N 2024 / 4
- January 2025 — Issue N 2025 / 1
- March 2025 — Issue N 2025 / 2

For any inquiries, feel free to contact us at info@refindustry.com.



The opportunities

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