

Refindustry

REFRIGERATION INDUSTRY MAGAZINE

N 2025 / 4 (8)



Subscribe



Platinum partners



CONNECTING
HEAT PUMP
EXPERTS.



Heat Pumps Special Edition

chillventa.de

Introducing the magazine “Refrigeration Industry”



contribute your insights, please don't hesitate to reach out to us by [email](#)—or contact me directly on [LinkedIn](#).

Warm regards, Editor-in-chief

Sergei Mukminov.

Welcome to the 8th issue of our magazine!

We're proud to present this special edition dedicated to heat pumps—a technology redefining the future of industrial and district heating. In this issue, we explore how innovations in compressor design, refrigerants, and system integration are making electrified heating both efficient and economically viable.

This edition brings together in-depth analysis, real-world case studies, and expert perspectives that highlight the central role of heat pumps in global decarbonization. From high-temperature industrial applications to municipal heating networks, these systems are transforming how energy is produced, recovered, and reused across sectors.

If you'd like to learn more, share feedback, or

The concept of the new magazine:

1. In today's fast-paced world, staying updated with the latest developments in the refrigeration industry can be challenging. Our mission is to simplify this by providing the most critical news and insights in a single quarterly issue.
2. The magazine is published exclusively in digital format, with pages designed in a landscape orientation for optimal readability on screens.
3. Our magazine is interactive, allowing you to follow internal content links, as well as external links to detailed articles on our website and advertisements.
4. All news featured in the magazine can also be easily found on our website by title.
5. The magazine is released once every quarter.



Heat Pumps Special Edition



We're Evolving from a Manufacturer to a Full Solutions Provider



Leading Change at IIR: Yosr Allouche on a Year of Renewal and Global Cooperation



European Heat Pump Summit 2025

Table of contents

The magazine "Refrigeration Industry", 2025/4.

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

We recommend reading in a PDF viewer's full-screen mode.
Links may not work in a browser.

News Products

Profroid launches HeatCO2OL industrial CO2 heat pumps for high-temperature applications



Profroid has introduced the HeatCO2OL range of industrial heat pumps using CO2 as a natural refrigerant. The units are designed to deliver hot water up to 90°C and cover heating capacities from 400 kW to 2.2 MW, making them suitable for district heating, commercial buildings, and industrial process applications.

The HeatCO2OL series can utilize natural heat sources such as groundwater, lake water, and geothermal energy, as well as waste heat from industrial processes.

Thermo King launches ECOMode to cut fuel use in Advancer trailer units

Thermo King, a brand of Trane Technologies, has introduced ECOMode, a new feature for its Advancer trailer refrigeration units aimed at optimizing fuel consumption.

The mode automatically adjusts the compressor cycle based on cargo temperature and ambient conditions. It is designed to maintain precise temperature control while minimizing engine run time and energy usage.



This innovation helps fleet operators reduce operational costs and emissions without compromising cooling reliability.

Eberspaecher launches propane-based AC systems for buses

Eberspaecher has launched two roof-mounted air-conditioning systems, the AC135 and AC138 EVO, both operating with propane (R290) refrigerant.



Designed for both factory installation and retrofit applications, these systems offer an environmentally friendly solution for passenger transport.

They address stricter EU F-Gas and PFAS regulations by using natural refrigerants with a GWP of approximately 3.

[Search for news](#) by title on our website to read the full article.

[Subscribe to our newsletter](#) to stay updated with important industry news.



When it comes
to product
performance,
**you can ask
a clairvoyant...**

SCAN ME



www.eurovent-certification.com

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



We build trust.

With Eurovent certification, you can be sure you're
making an eco-friendly choice for reliable,
sustainable HVAC-R products.

Reduce your carbon footprint with confidence,
opt for Eurovent certification.

Carrier introduces Opti-V variable refrigerant flow heat pump



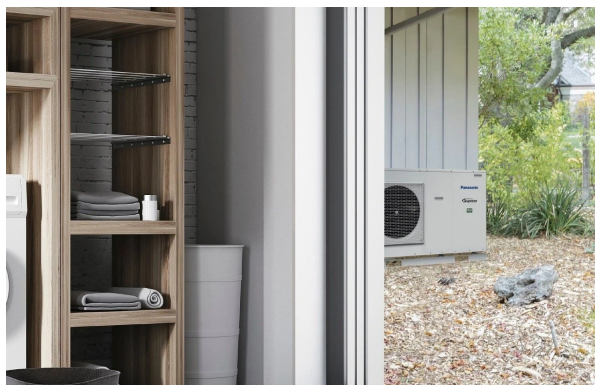
Carrier has launched the Opti-V system, a variable refrigerant flow (VRF) heat pump solution for residential and light commercial buildings. It operates efficiently even at temperatures as low as -22°F (-30°C), providing both heating and cooling functions.

The system achieves SEER2 ratings up to 29.7 and HSPF2 up to 12.2, ensuring exceptional energy efficiency. With its quiet operation and compatibility with smart control systems, the Opti-V enhances comfort and sustainability in everyday use.

Panasonic launches R290 Aquarea DHW heat pump for residential use

Panasonic Heating & Cooling Solutions has unveiled the Aquarea Domestic Hot Water

(DHW) Heat Pump, a complete unit integrating a high-efficiency R290 compressor and storage tank.



The system delivers water temperatures up to 65°C and achieves an A+ energy rating. Designed for ambient conditions between -7°C and 43°C, it ensures reliable hot water production in diverse climates. Available in wall-mounted and floor-standing versions, it represents Panasonic's commitment to sustainable home heating technologies.

Trane launches CRAH and fan wall units for European data centre cooling

Trane Technologies has expanded its portfolio with new air-based cooling solutions for data centres, including Computer Room Air Handlers (CRAH) and Fan Wall Units (FWU).



These systems are designed to deliver capacities from 260 kW to 600 kW per unit, addressing high-density cooling demands.

Both units offer modular configurations, advanced airflow management, and optimized energy use. The new line supports data centre operators in achieving energy efficiency and operational reliability across Europe.

Sanhua launches dual electronic expansion valve controller SECD04

Sanhua has introduced the SECD04, a dual electronic expansion valve controller capable of managing two independent valves in a single circuit. It features advanced PID algorithms that ensure precise superheat regulation under varying load conditions. The controller helps optimize energy efficiency while preventing low or high superheat situations that can affect system performance. Compact and adaptable, the



SECD04 represents a new generation of intelligent control solutions for HVAC&R systems.

J & E Hall expands HallScrew compressor range with new high-capacity models



J & E Hall has expanded its HallScrew open-type compressor line with new 7200 and 8400 series models. These units are designed for high-demand industrial refrigeration, cold storage, and marine applications.

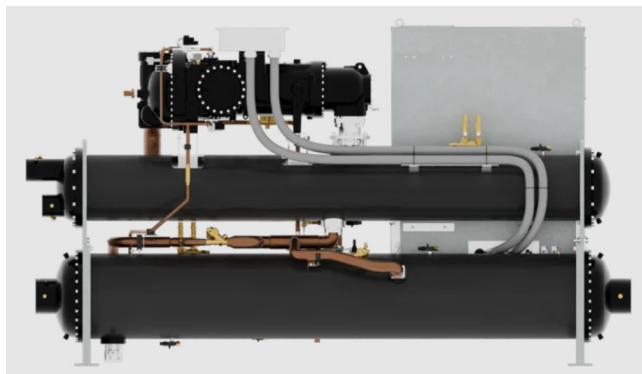
They support a wide range of refrigerants including ammonia (R717), R134a, R513A, R454C, and others.

Featuring high reliability, flexible operation, and easy maintenance, the compressors meet modern energy efficiency and sustainability requirements across global markets.

Daikin expands VZ series with high-temperature option using R-1234ze

Daikin has upgraded its EWWH-VZ inverter chiller and heat pump series to include a high-temperature model using R-1234ze, a low-GWP refrigerant.

The new version provides hot water up to 90°C, targeting industrial and commercial applications that require higher temperature output. With capacities from 400 to



1900 kW, it combines full inverter technology and compact design for optimal performance.

Johnson Controls launches scalable liquid cooling units for high-density data centers



Johnson Controls has introduced its Silent-Aire Coolant Distribution Units (CDUs), expanding liquid cooling solutions for high-density data centres. The platform supports capacities from 500 kW to over 10 MW, ensuring flexibility for a variety of layouts.

These CDUs enable hybrid and direct-to-chip cooling configurations and integrate with building management systems. Designed to enhance heat transfer efficiency, they provide scalability and reliability for next-generation computing environments.

Market News

Daikin opens new R&D centre for heat pumps in Belgium



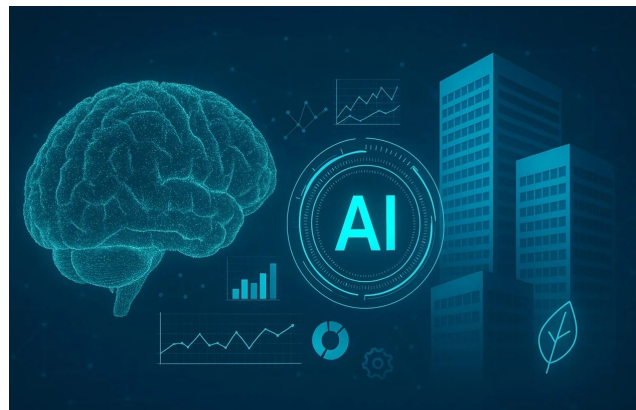
Daikin has officially inaugurated its new EMEA Development Centre for heat pump technologies in Ghent, Belgium. The facility consolidates the company's R&D resources from Ghent and Ostend, employing over 350 engineers. Focused on heating, cooling, and ventilation innovation, it will serve markets in Europe, the Middle East, and Africa.

The new campus strengthens Daikin's leadership in sustainable HVAC solutions and accelerates product development under its global decarbonization strategy.

Lennox to Acquire NSI Industries' HVAC Division for \$550 Million

Lennox has entered a definitive agreement to acquire NSI Industries' HVAC division from Sentinel Capital Partners for approximately \$550 million. The deal includes brands such as Supco and Duro Dyne, expanding Lennox's footprint in HVAC components and accessories. The acquisition strengthens the company's distribution network and supply chain capabilities across North America. It aligns with Lennox's strategy to deliver integrated, high-efficiency HVAC solutions to customers worldwide.

Trane Technologies launches BrainBox AI Lab for sustainable HVAC and building operations



Trane Technologies has launched the BrainBox AI Lab, following its acquisition of BrainBox AI in early 2025. The new research hub focuses on advancing autonomous HVAC optimization and energy management through generative AI.

Its goal is to improve energy efficiency, occupant comfort, and predictive maintenance across building portfolios. The BrainBox AI Lab represents Trane's commitment to innovation in intelligent, sustainable building technologies worldwide.

Embraco expands into HVAC market with scroll compressor acquisition



Nidec Global Appliance, under the Embraco brand, has entered the HVAC market by

acquiring scroll compressor manufacturer Xecom. The acquisition expands Embraco's portfolio from refrigeration to broader heating and air conditioning applications.

It strengthens the brand's technological base in energy-efficient compression systems. This strategic move supports Embraco's vision of becoming a comprehensive solution provider for HVAC and refrigeration markets globally.

Eurammon urges support for revised EN 378 safety standard

The European Committee for Standardization (CEN) has released the draft revision of EN 378:2025 for public consultation. This international safety standard governs the design, testing, installation, and operation of refrigeration, air conditioning, and heat pump systems.

The updated version introduces modernized charge limits and incorporates ISO alignment for greater global consistency.

Eurammon encourages industry stakeholders to support the revision to ensure harmonized, safer, and more environmentally responsible HVACR practices across Europe.

Danfoss opens largest production facility in China to support green transition



Danfoss has inaugurated its largest global production complex in Haiyan, China, expanding its capacity to meet growing demand for energy-efficient technologies.

The new 126,000 m² campus integrates all three of Danfoss' business segments and includes advanced Application Development Centers for testing and training.

It demonstrates the company's commitment to supporting China's green transition and aligns with the global LEAP 2030 strategy.

The site doubles Danfoss' footprint in the region and enhances its local R&D capabilities.

XNRGY expands U.S. operations with new 330,000 sq ft facility in Arizona



XNRGY Climate Systems has announced the construction of a new 330,000 sq ft (30,660 m²) manufacturing facility in Mesa, Arizona.

Named Mesa 2, the plant will produce next-generation air-cooled chillers integrating AI and advanced control technologies. This marks the company's fourth expansion in three years, bringing total operational space to nearly one million sq ft.

The project will create over 500 new jobs and reinforce XNRGY's position as a major U.S. manufacturer of sustainable HVAC systems.



WORLD OF VALUES

Our values come before all our innovations and milestones, and before every refrigerated cabinet we develop. Vision, inspiration, change and service are our starting point and our direction.

Since 1963, they have been the compass guiding our journey worldwide.

Our values determine all our choices, inspire all our ideas.

Together we can build the future of retail.

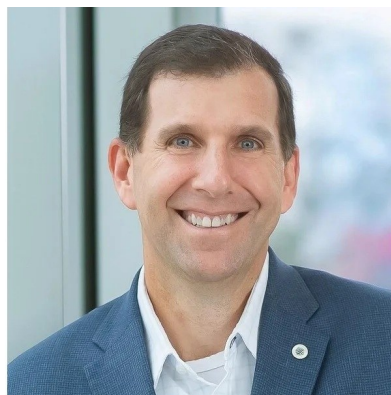
GEA opens new sustainable headquarters in Düsseldorf

GEA has officially opened its new headquarters in Düsseldorf-Derendorf, Germany, consolidating global management and divisional teams under one roof. The modern building, designed for collaboration and sustainability, features open workspaces, green courtyards, and renewable energy systems.

This move supports GEA's corporate transformation towards innovation-driven, environmentally responsible operations. The new HQ reflects the company's dedication to reducing its carbon footprint while fostering creativity and cross-functional teamwork.

Johnson Controls names Todd Grabowski president of Americas

Johnson Controls has appointed Todd Grabowski as vice president and president of the Americas region, effective October 2025. With extensive experience in HVACR strategy and product innovation, he will oversee operations, business development, and customer success initiatives. Grabowski succeeds Nate Manning and joins the company's executive leadership



team. His appointment reinforces Johnson Controls' focus on growth, sustainability, and digital transformation across the North and South American markets.

China issues national plan to reduce HCFC and HFC use by 2030

China has released its 2025–2030 implementation plan under the Montreal Protocol to phase down ozone-depleting substances and high-GWP refrigerants. The plan targets a 97.5% reduction in HCFC production and consumption by 2030, allowing limited use only for servicing existing systems.

It also details the gradual elimination of HFCs through industrial conversion and energy efficiency programs. The initiative supports China's long-term commitment to

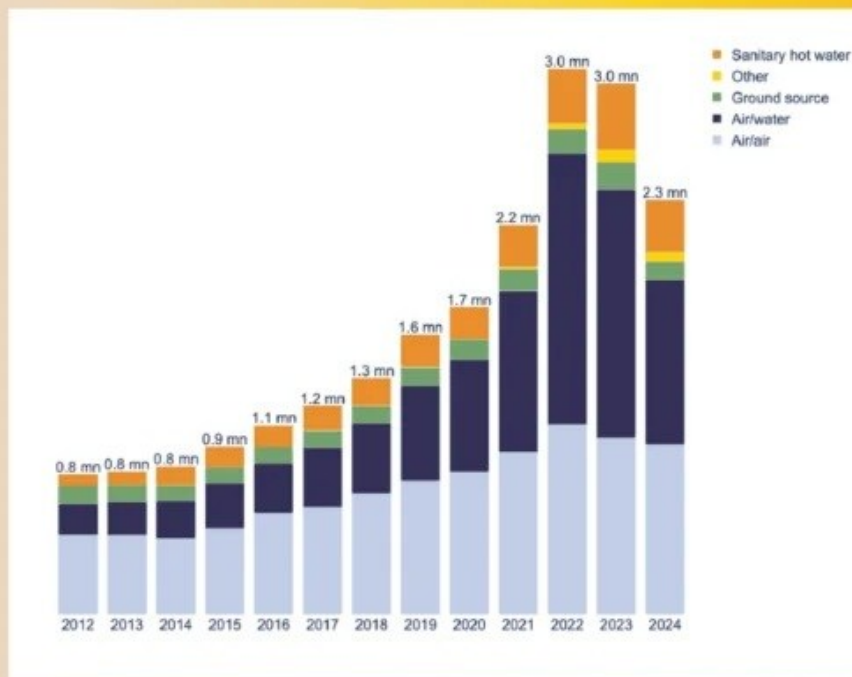
global climate goals under the Kigali Amendment.

Arneg supports Despar Nord with refrigeration solutions for historic Trieste store



Arneg has supplied CO₂-based refrigeration systems for Despar Nord's new supermarket in the historic centre of Trieste, Italy. The project combines modern energy-efficient technology with heritage architectural preservation.

Arneg's integrated solution covers refrigeration, air conditioning, and heat recovery to minimize energy use. This installation demonstrates how sustainable design can harmonize with cultural restoration, contributing to greener retail environments in urban areas.



Larger European economies such as Germany, Italy, the Netherlands, and the United Kingdom are progressing from lower baselines, with heat pump market shares ranging from 5% to 30%. While these figures currently weigh down the European average, they also indicate considerable room for growth.

The report highlights that long-term policy support is essential for maintaining momentum in the heat pump sector. It also notes that adjusting electricity pricing structures, such as by shifting taxes off power bills, could make heat pumps a more attractive investment for consumers and support broader climate and energy goals.

The report was published by the European Heat Pump Association (EHPA), the voice of the European heat pump sector in Brussels. Further data and analysis are available on the association's public platform and in its full market intelligence publication.

Market Research

Heat pumps hold 28% market share in European heating sector in 2024

Heat pumps maintained a strong position in Europe's space heating market in 2024, reaching a 28% market share despite an overall decline in sales. While this marks a slight drop from the 2023 peak of 31.6%, it remains significantly higher than the 2021 level by more than six percentage points.

The Nordic countries continue to dominate in terms of adoption. Norway leads with a 97% market share for heat pumps in space heating, followed closely by Sweden and Finland, both exceeding 90%. These countries demonstrate the impact of aligned policy, consumer demand, and climate conditions.

A second group of countries—including France, Austria, Switzerland, and Portugal—have all surpassed 40% market share. Switzerland has shown particularly strong growth, rising to 76% in 2024 from below the threshold just a few years earlier.

Sustainability

Heat Pumps Special Edition

As global industries intensify their efforts toward decarbonization, industrial heat pumps are rapidly emerging as a cornerstone technology for sustainable heating and energy recovery.

No longer confined to niche applications, these systems now deliver process and district heating temperatures above 120°C, reshaping how factories, utilities, and municipalities manage thermal energy. The transition marks a fundamental shift—from viewing heating and cooling as separate systems to treating them as parts of an integrated thermal management strategy.

In this special edition, we explore how manufacturers, policymakers, and technology providers are accelerating the adoption of industrial and high-temperature heat pumps. The momentum is driven by advances in compressor design, refrigerant innovation, and supportive policy frameworks that make electrified heating not just feasible but economically attractive.

Included in this special edition:

- Feature article: “Integrated Thinking

Drives Industrial Heat Pump Adoption” — an in-depth analysis by Ilana Koegelenberg highlighting global market trends, key barriers, and the paradigm shift toward system integration and decarbonization.

- Case study: BITZER & Scheco – SFS Group, Switzerland — a water-to-water heat pump using a BITZER CSV screw compressor recovers groundwater heat to replace fossil boilers and deliver +75°C heating water.
- Case study: Rosenheim District Heating, Germany — Johnson Controls and Stadtwerke Rosenheim deploy three ammonia Sabroe heat pumps, cutting CO2 emissions by 2,640 tonnes annually and greening the city’s network.
- Partner highlight: Frascold & Tecnofreddo — a high-temperature R290 heat pump with ATEX-HT compressors and LSPM motor, boosting efficiency and sustainability for industrial and HVAC applications.

Together, these insights showcase a maturing technology that is transforming industrial energy systems. The heat pump revolution is not only technical—it’s strategic, redefining how energy is produced, recovered, and reused in a carbon-neutral future.





Integrated Thinking Drives Industrial Heat Pump Adoption

By: Ilana Koegelenberg

Industrial heat pumps are emerging as a critical technology for decarbonizing process heat and district heating networks. With manufacturers now pushing temperature limits beyond 120°C and growing recognition that heating and cooling systems should work as integrated solutions rather than isolated pieces of equipment,

heat pumps are also transitioning from niche applications to mainstream options. Where is the technology heading, and what barriers remain?

Regional Adoption Patterns Reflect Policy and Economics

The pace of industrial heat pump adoption varies significantly across regions, shaped by a complex interplay of mindset, electricity pricing, existing infrastructure, and policy support. Nordic countries lead global deployment, benefiting from favorable elec-

tricity-to-gas price ratios and decades of proven operational experience.

Ivan Rangelov, Industrial Heat Pumps Manager at Danfoss A/S, identifies several key factors that have influenced the up-take. "The Nordic countries have the fastest implementation rates of industrial heat pumps. This can be explained by the very low electricity/gas price ratio in those countries (close to 1), as well as the fact that heat pumps have already been proven technology in Scandinavia for several decades."

The extensive district heating infrastructure in Scandinavia provides an additional advantage, enabling heat pumps to replace boilers entirely in many applications. Meanwhile, central and southern Europe face slower adoption rates where electricity-to-gas price ratios remain less favorable for heat pump economics. Lower heating demand in southern regions further reduces the economic incentive for investing in heat pumps.

Recent geopolitical events are reshaping the market landscape. Gas price fluctuations and supply insecurity following disruptions in natural gas imports have accelerated European interest in electrified heating solutions. Rangelov notes changing dynamics even in traditionally gas-



Ivan Rangelov, Industrial Heat Pumps
Manager at Danfoss A/S

dependent markets. "There is also a rise of interest in heat pumps in countries such as the United Kingdom, where the gas price used to be way too low, but recently, there has been growing interest."

North America presents a different picture. While the continent lags Europe in deployment, Rangelov sees momentum building. "We see more interest in heat pumps in the North American market, and we already have several ongoing projects. We believe that the Canadian market will be moving at a fast pace, among others, because of low power prices."

Technology Types and Application Focus

The industrial heat pump market is dominated by water-to-water systems for process applications, while air-to-water configurations are gaining traction in district heating networks. Each technology offers distinct thermodynamic advantages suited to specific use cases.

According to **Dominique Silva**, Regional Marketing Leader at Trane Technologies, "This really largely depends on the type of application, although we do see high demand for all air-air, air-water, and water-water type solutions."

Rangelov notes that industrial processes and district energy applications are the primary demand drivers for industrial heat pumps, with the former showing the most potential in the longer term.

District heating has integrated heat pumps more rapidly due to simpler system integration requirements, while industrial process applications present greater complexity but offer larger long-term potential. Within industrial sectors, food and beverage operations represent the most accessible opportunity. "I would definitely pick Food & Beverage as the lowest hanging fruit to look into industrial decarbonization," Rangelov notes.

Applications requiring process heat up to 120°C are driving the strongest demand, particularly in manufacturing processes requiring simultaneous heating and cooling.

Thermal Management Systems Challenge Traditional Thinking

Understanding these application demands has driven a fundamental shift in how industrial facilities approach heating and cooling systems. Rather than viewing heat pumps as standalone equipment replacements, leading adopters are moving toward integrated thermal management sys-



Dominique Silva, Regional Marketing
Leader at Trane Technologies



Patrick Crombez, General Manager
Heating and Renewables EMEA at
Daikin Europe

tems. This systems-level thinking represents more than incremental improvement; it challenges decades of siloed design practices.

Silva emphasizes the paradigm shift. "Rather than treating heating and cooling as 'siloed' systems, industrial users should and are increasingly adopting integrated thermal management systems. This design, where chiller and boiler plants work alongside each other as standalone, separate systems, is no longer justifiable."

According to the European Environment Agency, industrial heating and cooling contribute approximately 20–25% of Europe's

CO2 emissions. Traditional systems operating in silos frequently waste valuable energy, whether rejected heat from cooling condensation or waste heat from heating processes.

Silva stresses the importance of holistic thinking. "Integrated thermal management systems challenge the traditional mindset, enabling industrial plants to recover, repurpose, and balance thermal energy across their processes. This system-level thinking is key to reducing emissions, cutting costs, and moving towards truly decarbonized operations."

High-Temperature Capabilities Expand Market Reach

While systems-level thinking addresses how heat pumps are deployed, parallel advances in temperature capabilities are expanding where they can be applied. Manufacturers have significantly increased the temperature capabilities of their products in recent years, opening up applications that were previously considered beyond the reach of heat pumps.

The pace of this evolution has been remarkable. According to Rangelov, five years ago, heat pumps could only reach temperatures of up to 80°C. Now, all of Danfoss's

equipment allows manufacturers to build heat pumps that can deliver water at 100°C. The company has already released compressors that can handle hot water up to 120°C, with 130°C options scheduled for release next year.

Silva confirms that technological advances in heat pumps are raising their appeal: "Advances in technology and design have enabled these systems to achieve higher leaving water temperatures at much higher efficiency levels compared to boilers, which is making heat pumps a very attractive and viable solution to decarbonize process heat while delivering high energy efficiency."

Patrick Crombez, General Manager Heating and Renewables EMEA at Daikin Europe and President of the European Heat Pump Association (EHPA), explains that although high-temperature systems attract attention, Daikin's focus remains on applications below 100°C where efficiency and cost-effectiveness are strongest. However, he recognizes that continued development in high-temperature capabilities will be essential for expanding industrial adoption.

Looking forward, Rangelov envisions refrigerants generating hot water and steam for processes up to 130°C, potentially reaching 150°C. Beyond that threshold, mechanical

vapor recompression using steam as a refrigerant can achieve higher temperatures. "However, for temperatures above 200°C, according to literature, there will mainly be electric boilers or other heat generation technology," he explains.

Refrigerant Selection Navigates Regulation and Performance

These higher operating temperatures require careful refrigerant selection to balance performance, safety, and environmental impact. The revised EU F-Gas Regulation is influencing refrigerant selection for industrial heat pumps, though the transition toward low-Global Warming Potential (GWP) options proceeds at varying speeds across temperature ranges and applications.

According to Rangelov, natural refrigerants, including ammonia (R717), CO₂ (R744), and hydrocarbons, are gaining ground in the lower-temperature segment. Low-GWP refrigerants (such as HFOs) are also in play, and some HFCs, but less so in Europe.

The picture simplifies for higher-temperature applications. "Above 100°C, the picture is much simpler: with minor exceptions which are not yet scaled, there are either only hydrocarbons or low-GWP re-

frigerants which can be used," Rangelov explains.

Water can also function as a refrigerant, though Rangelov notes economic requirements. "To be economic, it needs to be generated already above 100°C, and we still need to get there with a refrigerant."

Crombez confirms the regulatory influence on refrigerant choices, noting that popular options include ammonia, CO₂, and various synthetic refrigerants capable of reaching higher temperatures, sometimes used in cascade systems.

Silva takes a performance-first approach to refrigerant selection. "At Trane, we select refrigerants that offer the optimal performance with a minimal global warming impact, without compromising on safety."

Policy Frameworks Drive Adoption

Policy support is accelerating industrial heat pump deployment across multiple fronts, from direct financial incentives to regulatory mandates requiring waste heat recovery. European initiatives are particularly comprehensive, though implementation and support levels vary by country.

The EHPA has compiled an overview of national support mechanisms for industrial

heat pumps across 24 European countries. These mechanisms vary by country but share common features, including grants covering a percentage of investment costs (often scaled by company size and heat pump capacity), waste heat recovery and grid integration incentives, and technical requirements.

Many national programs require heat pumps to achieve a Seasonal Performance Factor (SPF) of at least 3.8, use refrigerants with GWP below 2,000, and feature a nominal capacity of at least 100 kW for eligibility.

Several European initiatives – including the Clean Industrial Deal, Industrial Decarbonisation Accelerator Act, and EU Heat Pump Accelerator Platform – aim to position heat pumps as central to decarbonization by promoting simplified state aid, waste heat reuse, and fair electricity pricing.

Read the full article: [Integrated Thinking Drives Industrial Heat Pump Adoption](#)

AKO

Stay connected to your refrigerated cold room

Discover the new AKO Controller, and take full control with these key functions:

• Remote control & monitoring

• Built-in Wireless connectivity

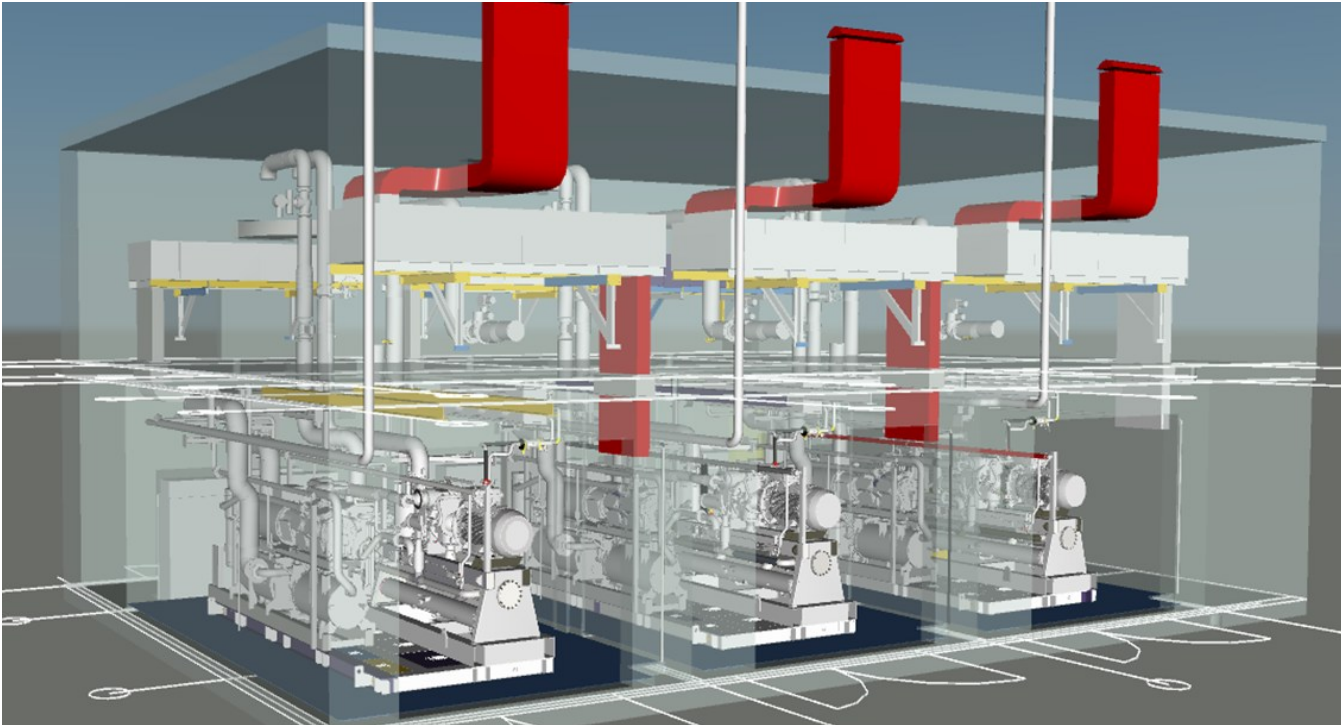
• Quick 2- set up



AKO-16523PN



Don't miss out!
Scan and get yours



Johnson Controls

Transforming district heating in Germany

Three large new heat pumps are being added to the district heating system of Rosenheim to further green their energy mix.

Client: Stadtwerke Rosenheim

Location: Rosenheim, Germany

Facility Type: District heating

Introduction

Stadtwerke Rosenheim, the municipal utility of the third largest town in Upper Bavaria with 63,000 residents, is building on an 80-year tradition of service excellence and innovation with its plans to provide fully carbonneutral electricity and heat by 2025.

In Germany, heating systems are a major contributor of carbon emissions. 90% of the heat energy required is generated from fossil fuels such as natural gas and oil. Thus, with increasing concerns about energy security and the environment, alter-

native energy projects are of vital importance.

In 2019 the city of Rosenheim began investing in new and innovative combined heat and power generation solutions with grants from the Federal Network Agency. The goals of the project include meeting EU carbon targets, expanding the district heating network without increasing the use of fossil fuels and reducing dependence on gas for more energy security and resilience.

Concept

Stadtwerke Rosenheim was looking for ways to make their existing district heating plant more environmentally friendly, cost effective and resilient. After winning a national tender (iKWK or innovative combined heat and power), they worked with Johnson Controls to turn their concept into reality. The district heating plant now includes a waste-to-energy plant, a gas-fired combined heat and power plant (which is hydrogen ready), and three Sabroe heat pumps fed from the nearby Mühlbach river.

The impact of these pumps is significant. Not only do these products reduce fossil fuel consumption and the associated carbon footprint, they also allow Stadtwerke Rosenheim to multiply the value of the

electrical energy consumed by leveraging a natural energy gradient. The temperature of the river water ranges from 1°C to 15°C over the course of the year, allowing each unit to supply district heating water at 88°C with a minimum COP of 2.49 at almost any time of the year, even in winter.

Solution

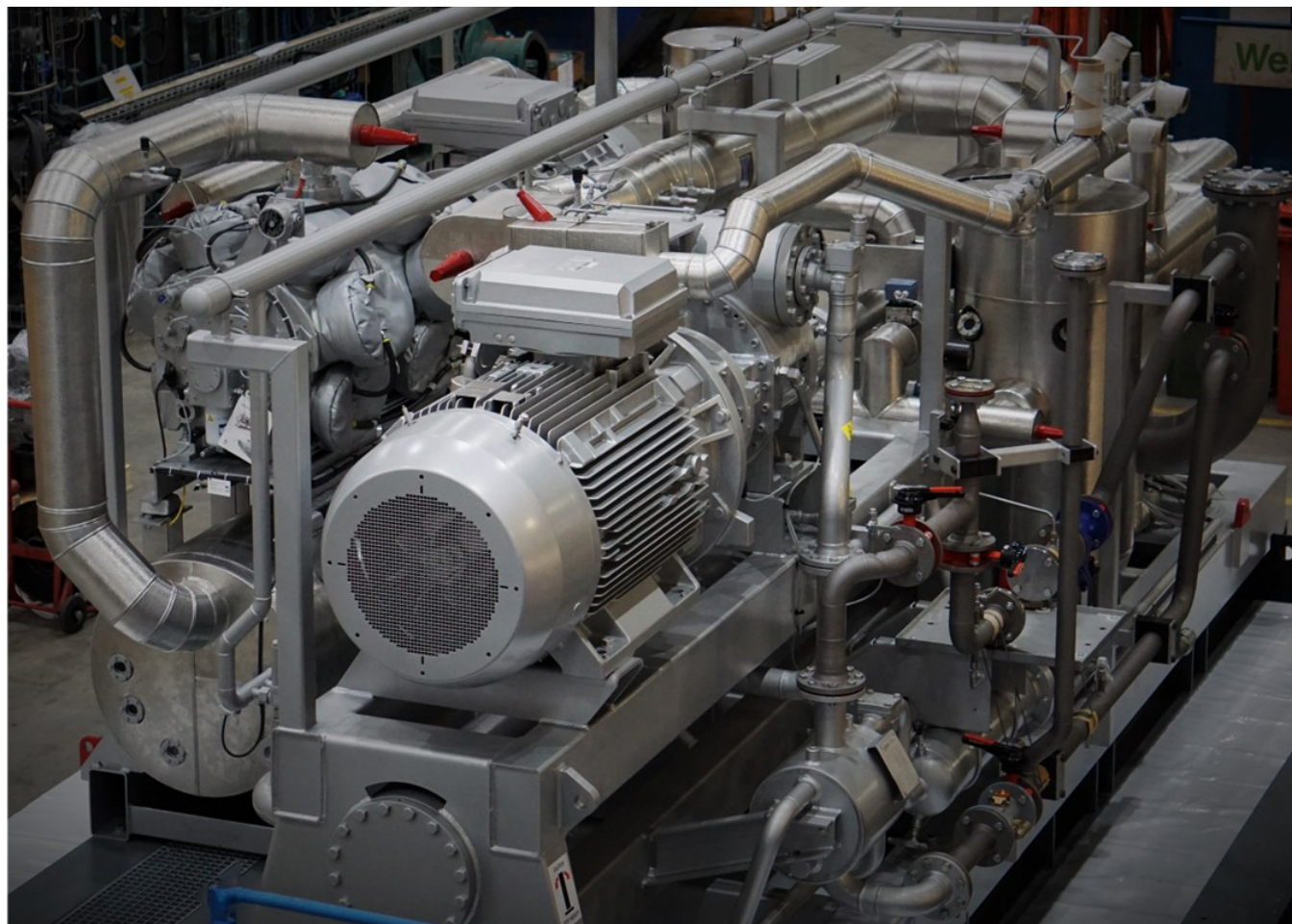
Johnson Controls is supplying three Sabroe DualPAC heat pumps as part of a complete solution.

Each Sabroe DualPAC heat pump combines ChillPAC, HeatPAC and HeatPAC HPX units into one single heat pump. How? It uses an ingenious modular system that makes it possible to achieve high temperature lifts in a compact design with attractive operating economics thanks to maximum part-load efficiency. The use of ammonia as the refrigerant makes these units safer and more sustainable too.

Together, the plants will generate a total of around 4.7 MW of innovative renewable energy and save about 2,640 tonnes of CO₂ per year.

Key outcomes

Driving sustainability -30% CO₂ reduction



versus fossil fuel (natural gas). Will save about 2,640 tonnes of CO₂/year.

Improving performance and reliability 18,600MWh total capacity. Usable all year round: temperature lift from as low as 1°C up to 88°C.

“The heat pumps use environmental heat energy from nearby river water, so we rely on a natural and sustainable heat source.

At the same time, we are replacing natural gas boilers elsewhere in our generation portfolio. This is not only sustainable, but also increases independence.” — Sebastian Hochmuth, Project Engineer, Stadtwerke Rosenheim.

Visit <https://www.johnsoncontrols.com/>



Frascold

High-temperature heat pump for a sustainable future

Frascold and Tecnofreddo join forces for eco-friendly heating solutions

High-temperature heat pumps are increasingly proving essential for the future of the heating sector, with a focus on energy efficiency and environmental sustainability.

In response to these challenges, Frascold and Tecnofreddo have combined their technical expertise to develop a high-temperature heat pump designed to merge energy efficiency, high performance and environmental responsibility.

At the core of this new technology are Frascold's semi-hermetic ATEX-HT series compressors, specifically designed to operate with R290 at high temperatures while ensuring maximum efficiency. This achievement has been made possible thanks to the LSPM (Line Start Permanent Magnet) electric motor, which ensures a significant 6% increase in efficiency and combines the benefits of both induction and permanent magnet motors.

Specifically, the high-temperature heat pump is designed to operate at temperatures up to 80°C, making it ideal for industrial applications with the added benefits of lower energy consumption and compliance with environmental regulations. Among the sectors that can benefit from this solution are the food industry (in processes such as sterilization and pasteurization), the phar-



maceutical sector (for controlled heating applications), and the HVAC/R sector for large buildings and data centers.

The new heat pump is the result of meticulous design and a careful integration of advanced technologies, such as high-efficiency heat exchangers and Frascold compressors managed by inverters. This combination delivers a superior COP compared to traditional solutions, significantly reducing energy consumption and improving overall efficiency. Moreover, the ability to reach high operating temperatures opens the door to new application opportunities.

[***Find out more about Frascold solutions***](#)



The BITZER CSV screw compressor forms the core of the SFS Group's heat pump and enables a compact, efficient system design © BITZER

BITZER

Using existing energy potential sustainably

Contractor: Scheco AG

Location: Heerbrugg, Switzerland

Completion Date: November 2023

SFS Group Schweiz AG uses groundwater from its own well to cool production processes at its Heerbrugg site.

The cooling water is then captured in a collecting basin with a capacity of 80 m³ before being released into the nearby river. In order not to leave the energy of industrial waste heat unutilised and to increase overall energy efficiency, a highly-efficient water-to-water heat pump was implemented and integrated into the existing heating system for the building heating.

This marks an important step toward decarbonisation. By providing heating water temperatures of up to +75 °C, the heat pump replaces a fossil-fuelled boiler.

A powerful BITZER CSV compact screw compressor forms the core of the heat pump. Scheco AG was responsible for the overall planning and implementation of the customised system concept, including the measurement, control and regulation technology.

[Read the full case study here](#)

Indirect hydronic systems with **Natural refrigerants** for industrial refrigeration

- Only **natural refrigerants**

- Ease of **installation**

- Ease of **maintenance**

- Maximum **safety**

- Maximum **reliability**

- Heating & cooling mode



Find out the
benefits



Propane units

Chillers & Heat pumps 2 or 4 pipe
from 66 to 1150 kW

CO₂ Units

Subcritical unit
from 10 to 270 kW



Chilled
warehouses and
food industry
up to 1 MW

Air coolers

Brine air coolers for positive cold rooms,
CO₂ air coolers for negative cold rooms
from 5 to 185 kW



Pump skid

Custom built (on request)



Brine temperature
down to

-15°C

CO₂ temperature
down to

-45°C

Outdoor ambient
temperature up to

48°C

Free hot water
up to

77°C



Interviews

Leading Change at IIR: Yosr Allouche on a Year of Renewal and Global Cooperation

In this special feature, Refrigeration Industry Magazine speaks with Dr. Yosr Allouche, marking her first year as Director General of

the International Institute of Refrigeration (IIR). Since taking office in October 2023, Dr. Allouche has led a period of dynamic transformation within this historic intergovernmental organization.

From modernizing internal processes and strengthening international partnerships to expanding the Institute's scientific and policy engagement, she has focused on making the IIR more agile, visible, and impactful. In this exclusive interview, Dr. Allouche reflects on the challenges and milestones of her first

year, the evolution of the IIR's mission, and her vision for advancing global refrigeration in the era of sustainability and innovation.

Ri: You started your role as Director of the IIR in October last year. Looking back, what progress or key developments would you highlight during this initial period?

It has been a very dynamic and rewarding first year. My priority was to build on the strong foundations of the Institute while initiating a transformation to make the IIR more agile, visible, and impactful for the benefits of all.

It is a collaborative task with the management committee of the IIR and the dedicated people at the head office. It has started by reviewing our internal processes, strengthening financial control, strengthening the workforce with additional skills and competences. We have been expanding our spectrum of activities to offer more benefits to our members. We have also been redefining priorities to align with today's global challenges and the most pressing issues and offer an unbiased and independent scientific responses addressing sustainability, energy efficiency, and innovation in the refrigeration sector.



We also reinforced partnerships with international organisations and key partners, we launched new initiatives to better support our member countries, especially in capacity building and scientific based policy recommendations. Another key action, still under development has been the modernisation of our communication and digital presence to better connect with our global community.

We are building step by step, with clear direction and long-term vision.

Ri: What has been the most challenging part of your new role?

The most challenging aspect has been managing change, both internally and externally. The IIR is an historic institution with a remarkable legacy and modernising such an organisation while preserving its identity requires careful balance.

It is also about aligning the expectations of a very diverse membership, from developed to developing countries, from private to corporate members. Members are kindly invited to understand that supporting the IIR means being part of the global refrigeration community, a global platform which goes beyond science. Supporting the IIR means actively supporting the sector as a whole, as well as humanity. We want countries, companies and people to engage actively with us, there is much to learn from you, and tremendous knowledge that IIR can provide you with, as the trusted scientific voice for refrigeration. We want to work with all of you to advance the sector globally under the best possible conditions. I must say that leading this transition requires not only strategic direction but also strong dialogue and engagement with all our stakeholders.

Ri: Over the past year, we've noticed a significant increase in IIR job postings on LinkedIn. Does this reflect a broader

transformation within the Institute — for example, expanding projects, new priorities, or strengthening the team — and how do these changes fit into your long-term vision for the IIR?

Absolutely. The recruitment efforts reflect a broader transformation of the IIR. We are strengthening our team to better deliver on our mission and respond to the growing demand for partnerships with IIR. Also reviving a few roles which existed long time ago at IIR but disappeared with time such as the refrigeration policy department. The IIR is expanding its spectrum of activities in several key areas: evidence-based policy recommendations, scientific based technical assistance, data and knowledge dissemination, new types of publications, and international cooperation projects. Please closely follow the IIR to be informed about the new membership packages, to be communicated in 2026.

We are also investing in digital communication and project management capacities to increase our impact and visibility. These changes are part of a long-term vision to make the IIR serve global communities.

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



Interviews

Serge Joris, CEO of Frigoglass: “We’re Evolving from a Manufacturer to a Full Solutions Provider”

In this exclusive interview for Refrigeration Industry, conducted by Sergei Mukminov, Editor-in-Chief, Serge Joris—Chief Executive Officer of Frigoglass—discusses the company’s strate-

gic transformation. He outlines how Frigoglass is redefining innovation in beverage coolers, advancing its Net Zero ambitions, expanding through a pivotal partnership in Egypt, and embracing digitalization to deliver intelligent, connected, and sustainable cooling solutions worldwide.

Ri: Energy efficiency and merchandising remain the two levers most demanded by brand owners. What’s your current

innovation thesis for beverage coolers—where will the next 10–20% energy savings and merchandising uplift come from?

Serge Joris: Energy efficiency and merchandising remain the two most powerful levers for our customers, and we have already made significant progress. With our A-class coolers, we’ve achieved a substantial reduction in energy consumption—less than that of a 60-watt lightbulb—demonstrating that high efficiency is achievable without compromising performance.

On the merchandising side, we are innovating with bespoke, customer-branded coolers that allow brands to create unique in-store experiences. These designs go beyond traditional signage, integrating lighting, graphics, and modular layouts that enhance visibility and drive consumer engagement.

Launching merchandising throughout the years with:

- Generation 1- no canopy and no visible cooling mechanism
- Generation 2 – full glass door with floating branding and bespoke solutions

Looking ahead, further energy reductions will come from technological advance-

ments of cooling components.

Ri: The global refrigerant transition is reshaping product design across the industry. Which natural refrigerants and system architectures are you standardizing on in new ICM platforms (R290, CO2), and why?

Serge Joris: We are fully committed to the transition to natural refrigerants to reduce GWP and meet evolving regulatory requirements. For our larger coolers, we standardize on R290, which offers excellent thermodynamic performance and energy efficiency while remaining environmentally sustainable. For smaller units, we use R600a, which is ideal for compact applications due to its low charge requirement and efficiency.

Our approach is pragmatic and customer-focused: by selecting the right refrigerant for each cooler category, we can maximize energy efficiency, maintain safety and serviceability, and stay ahead of compliance regulations, while also enabling scalable and cost-effective production.

Ri: Digitalization is becoming a core differentiator in after-sales and asset performance. How are IoT and telemetry

helping you cut lifecycle costs—energy, uptime, truck rolls—and prove ROI to brand owners?

Serge Joris: We've fully embraced digitalization of our service offerings and technology driven solutions are an integral part of our Frigoserve business vertical. We speak in real time with our customers and service their needs based on an integrated digital platform.

Through the control unit, our coolers provide real-time data such as location, service history, number of door openings, average internal temperature, and compressor activity. This enables our service technicians and customers to monitor performance remotely, identify issues early, and implement robust preventive maintenance programs that reduce downtime and lower total cost of ownership.

These capabilities are delivered via our Frigoserve business vertical, which has fully embraced digitalization. Our integrated service platform ensures direct, real-time interaction with customers, and the use of IoT features and advanced analytics supports predictive maintenance, higher equipment efficiency, increased uptime, and customized reporting.

In addition, our circular economy approach extends traceability into refurbishment, re-

use, and responsible disposal. More than 80,000 assets are refurbished annually, and over 1.5 million units are repaired in the market, while material category waste management ensures compliance and sustainability at end-of-life.

By doing so, we not only meet global FMCG compliance and sustainability demands but also help our customers maximize asset lifetime, efficiency, and environmental performance.

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

Events

European Heat Pump Summit to Highlight Market Trends and Technology



The European Heat Pump Summit will take place in Nuremberg on 28–29 October, offering a two-day program focused on heat pump technologies, market trends, and applications. Alongside the congress, the fully booked Foyer Expo will showcase new products and solutions from industry companies.

“The European Heat Pump Summit thrives on the intensive professional dialogue between peers,” said Daniela Heinkel, Director of the Summit and the Chillventa trade

fair at NürnbergMesse. “The programme has been finalized, and it promises two days packed with interesting topics, high-calibre presentations, and valuable inspiration for the sector.”

The first day will focus on market and energy policy developments. Dr. Björn Schreinermacher from the German Heat Pump Association (BWP) will present an analysis of the German market, while Andries van Wijhe from TNO will examine opportunities and challenges in the Netherlands. Saverio Papa and Leopoldo Micò from the European Heat Pump Association will address EU climate and energy policies, including the Clean Industrial Deal.

Research and development topics will include the use of hydrocarbons as refrigerants. Massimiliano Manfro from Aermec will present safety standards and thermodynamic properties of R-290, emphasizing the role of low GWP refrigerants. Component innovation will also be in focus, with presentations on acoustic improvements for residential heat pumps by Simon Waldner from Getzner Werkstoffe, magnetically levitated high-speed motors by Lateb Ramdane from SKF, and compressor modeling strategies by Marek Lehocky from Gamma Technologies.

The second day will highlight applications in existing buildings, neighborhood projects, and industrial settings. Carsten Wemhöner from OST Rapperswil will introduce concepts for integrating multiple heat sources in system upgrades. Ivo Eiermann from Johnson Controls will discuss large heat pumps of up to 60 MW for district heating.

Key presentations will include Tobias Hirsch from Everllence showcasing the world’s largest CO₂ heat pump in Esbjerg, Denmark, and Josef Grassauer from GIG Karasek presenting the ComprivAP system for industrial waste heat recovery, capable of producing vapor up to 215°C.

[Know more about the event](#)

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.

Distribution Strategy

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

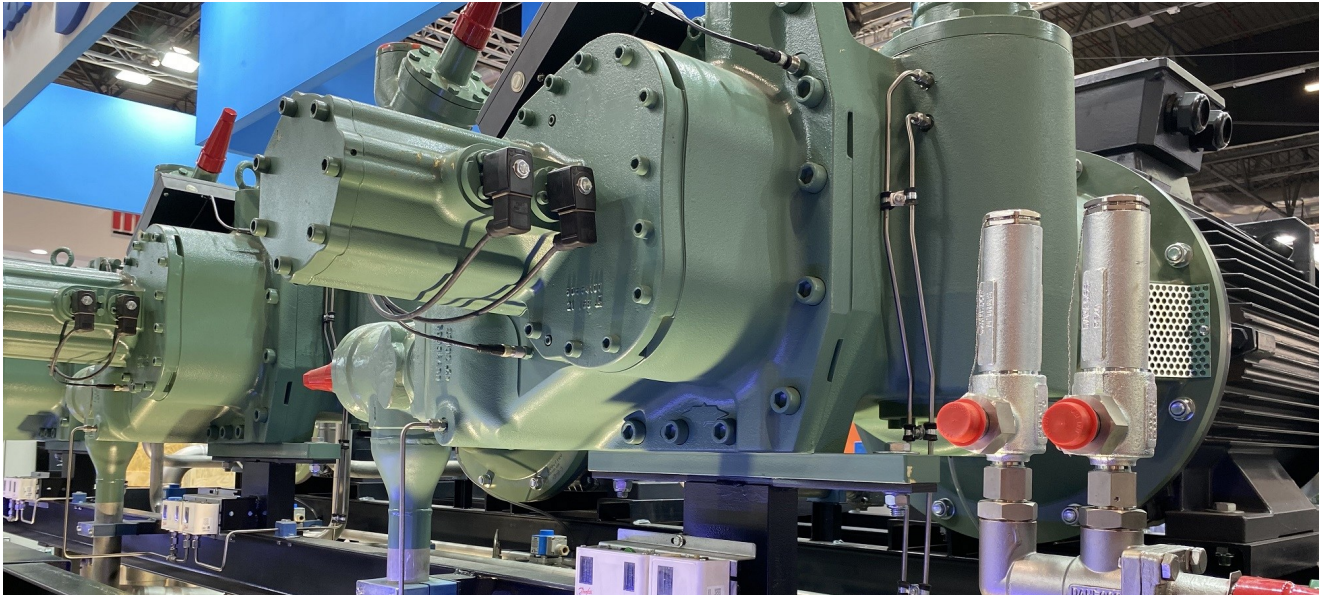
- **The Most Popular News from Refindustry.com:** Stay updated with the most crucial developments.
- **Sustainability:** Discussing green refrigeration practices and their impact on the environment.
- **Technical Insights:** Explaining complex concepts and providing technical insights into refrigeration equipment.
- **Case Studies:** Real-world examples of successful industrial refrigeration projects, installations, and problem-solving.
- **Maintenance and Troubleshooting:** Tips and guides for maintaining and troubleshooting refrigeration equipment.
- **Interviews:** Insights from industry experts, engineers, and leaders in the field.

- **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. Discover more in [our Media Kit](#).

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



The opportunities

Enhance Your Visibility in the Refrigeration Industry with Our Targeted Advertising Options on Refindustry.com

As a leading online magazine and resource in the global refrigeration sector, we cater to over 250,000 users and generate more than 350,000 sessions annually, with a significant audience from the US, India, the UK, and the EU.

Discover our [Website Audience Map](#).

Banner Advertising

Your banner will be visible to all visitors on our website, enhancing your brand's exposure.

Join the Global Refrigeration Directory!

What's in the Global Refrigeration Directory? Our directory features companies and brands from across the global refrigeration industry.

Benefits of Your Company Profile in the Global Refrigeration Directory

- Displaying the company profile on the Directory
- We promote the company profile on our social networks LinkedIn (40,000+ followers), Facebook (19,000+ followers), X (4,000+ followers).

All these benefits are provided for free!

Special Offer:

Add your company to the directory and enjoy our Bronze tariff plan absolutely free for the first month. Afterwards, you can choose to upgrade to one of our premium plans or continue with the Standard plan at no cost indefinitely.

[How to add a company the Global Refrigeration Directory.](#)

For a detailed comparison of our plans, please refer to [the Media Kit](#).

For any inquiries or assistance with your profile and our services, please [contact us](#).



**Know someone who might be interested in this issue of the magazine?
Forward this file or [share the subscription form](#) with them!**