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Essential Information for the Air Conditioning and Refrigeration Industry

APRIL/MAY 2025

SAMSUNG

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[1] GWP R32: 675 GWP R410A: 2088 R32 refrigerant charge 2.2kg tCO2e=1.49 R410A refrigerant charge 2.00 & 2.5 kg tCO2e=4.18 & 5.22.

[2] Wi-Fi connection and Samsung SmartThings application account are required. Wi-Fi Kit to be ordered separately. Requires iOS 10.0 or later & Android 5.0 or later.

[3] Only available on certain models.

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Welcome to the latest edition of *ACR Journal*.

In an issue full of events and celebration, we are proud to reflect on the recent National Air Conditioning, Refrigeration & Heat Pump Awards (NACRA), held at Manchester's iconic Midland Hotel, which once again demonstrated our industry's finest through groundbreaking innovations and the professionals behind them. A special congratulations to Kevin Glass, Managing Director of BITZER UK and former IOR President, who was honoured as Phil Creaney's ACR Champion for his longstanding contribution to the trade.

In addition, the AHR Expo 2025 in Orlando stood out as a significant international gathering for the HVACR sector. There, the global community came together in record numbers, with over 1,600 exhibitors and a packed programme of educational sessions.

Back in the UK, the 125th Institute of Refrigeration Annual Dinner continued the spirit of recognition and excellence. The event once again celebrated outstanding individual contributions to the advancement of the RACHP industry and recognised businesses for their dedication to sustainability. During the evening, President Lisa-Jayne Cook reflected on the IOR's history of innovation, collaboration and dedication. She highlighted current projects and achievements while also looking to the future of the industry, emphasising emerging leaders and upcoming initiatives.

Finally, we are pleased to feature Vice Chair of IOR Scotland, Lizzie Dunlop of Danfoss, as this issue's Woman in the ACR Industry.

I hope you enjoy this edition.

Andy

REGULARS

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Carrier extends backing for touring car team

Carrier Commercial HVAC is continuing its support for Laser Tools Racing with MB Motorsport during the 2025 British Touring Car Championship (BTCC) season.

Building on a championship-winning 2024 campaign, Carrier is once again partnering with the team as they prepare to take on this year's races with a renewed focus on performance and sustainability.

This season, Carrier will support Laser Tools Racing with MB Motorsport's BMW 330i M Sport challenger, which now runs on fully sustainable fossil-free fuel, across all 10 rounds of the 2025 BTCC season. The Carrier logo will feature on the car's front corners and on the racing overalls of driver Jake Hill.

Oliver Sanders, Commercial Director, Carrier Commercial HVAC UK and Ireland, said: "The BTCC's shift toward sustainable fuels aligns perfectly with Carrier's commitment to customer sustainability. We look forward to supporting the team in their pursuit of further success and continuing to advocate for cleaner, more energy-efficient solutions."

"Carrier has been an incredible partner throughout our championship-winning 2024 season, and we are delighted to have them on board again for 2025," said Mark Blundell, former Formula 1 Driver and Sporting Director of Laser Tools Racing with MB Motorsport. "They have become a true partner in every sense way beyond our BTCC programme. In the last 12 months that has involved enlisting their support with our new London office, introducing them to many of our fellow commercial partners and even running our first-ever staff recognition day together at Silverstone last year."

Ben Haigh is Advansor's Area Sales Manager for the UK

Advansor launches full UK operation

Danish climate control equipment manufacturer Advansor has officially launched its UK operation.

The company has been supplying its CO2 systems to selected customer in UK for more than 15 years, but has now decided to establish itself directly and make the full Advansor line-up available.

"Our decision to establish operations in the UK is driven by our commitment to helping businesses achieve their sustainability goals," said Kristian Breitenbauch, CEO of Advansor. "With our proven expertise in sustainable CO2 systems, we are excited to offer our high-quality climate solutions to the UK market and contribute to a greener future."

Ben Haigh has been appointed as Area Sales Manager. He said: "I have known Advansor cooling and heating systems for a long time and look forward to establishing good customer relations, offering sustainable products with a proven high quality to the UK market."

Advansor specialises in providing sustainable combined cooling and heating solutions tailored to a diverse range of sectors, including food processing, breweries, district heating and distribution centres. It now aims to support UK businesses in their quest for efficient and environmentally responsible climate solutions.

Advansor operates a state-of-the-art production facility and laboratory, which allows for the development of CO2 systems designed to meet evolving demands within industry, food retail and heating. In addition to manufacturing, it offers a centralised customer support and sales engineering team, as well as providibnf CO2 technical training both online and onsite..

The company says it has designed and produced more than 20,000 CO2 systems for commercial and industrial cooling and heating around the world since 2006.

Pukka puts its faith in Starfrost

Piemaker Pukka is preparing to install a third Starfrost Helix spiral freezer at its Syston bakery in Leicestershire.

This investment is said to be part of the baker's ongoing strategy to integrate cutting-edge technology, meet rising demand, improve quality and consistency and boost overall manufacturing efficiency.

Scheduled for installation later this year, the new spiral freezer follows the successful addition of two Starfrost systems in 2021. The third freezer will replace an older, less efficient freezing system, safeguarding continuity of supply.

The updated technology is said to offer several benefits, including reduced downtime and lower maintenance requirements, resulting in smoother and more reliable operations.

Peter Gull, Engineering Manager at Pukka, said: "The new system will provide an automated and dependable freezing process, just like our other Starfrost equipment. This latest spiral freezer will enable us to increase production throughput while maintaining the high standards our customers expect."

AHU upgrade for shopping centre

AUK Nationwide Heating and Cooling Distribution has designed and supplied a high-efficiency NOVAIR air handling unit (AHU) delivering full ventilation and extraction at the Bridges Shopping Centre in Sunderland.

The project, with contractor Nationwide Heating and Cooling, involved the installation of a Eurovent-certified NOVAIR CTA 60 stacked AHU solution with airflow of 6.192 m3/h.

The bespoke energy recovery system features a highly-efficient plate exchanger recuperator and is also fitted with energy-efficient EC inverter Plug Fans. To help future-proof the unit, it has also been fitted with a low temperature hot water coil so that an air source heat pump can be added at a later date, potentially reducing power consumption by up to a third.

AUK Managing Director Darryl Smith said: "The previous system was nearing the end of its useful life and the brief called for a more efficient approach. After attending the site with Nationwide's Ian Calderwood, the unit was designed at the NOVAIR factory to our specific requirements.

"We were able to deliver a highly-efficient heat recovery solution in a slightly more compact footprint. The addition of the low temperature hot water coil will bring even more efficiencies further down the line."

Ian Calderwood, Director at Cramlington-based Nationwide Heating and Cooling, said: "The biggest challenge for this job was access, because the plant room door at the shopping centre was only 800mm wide. Both AUK and NOVAIR were absolutely fantastic and it only took a day to come up with an answer; I've never known such a quick turnaround. The biggest section is the heat exchanger, at 800mm, and we were able to get it fitted by taking the plant door off its hinges

"We matched the three stages of electric heat for the supply air on the previous unit, but the decision to add the low temperature coil means the end user will benefit from a significant reduction in power consumption when we fit an air-to-water heat pump, probably later this year."

Easy maintenance

The CTA range comprises 36 customisable models with airflow from 1.000 to 112.000 m3/h. Full design flexibility means the units can be placed on one or two levels, side by side, with special dimensions or shapes, or with fully independent sections for air inlet/recirculation.

Construction features a steel base and aluminium frame, with double skin sandwich panels of varying thickness for different profiles.

Once installed, the CTA line-up is designed to allow simple maintenance, including easy removal of all components and full access to all sections for cleaning and replacement.

Martyn Ives marks 30 years at Fujitsu

Fujitsu General Air Conditioning UK Commercial Director Martyn Ives is celebrating 30 years with the business.

Martyn joined the company in 1995 from a small refrigeration contractor based in Witham, Essex. He has since developed a deep understanding of the product range during spells as Technical Service Engineer, VRF Technical Service Engineer, Technical Service Manager and Distribution Sales/Technical Service Director.

After receiving an award to mark the anniversary, he said: "There have been many changes over three decades and I have seen the product portfolio grow, from being an RAC market leader, to introducing VRF, and now applied products.

"My proudest moments are probably the opening of the Elstree office and hopefully playing a big part in it being recognised as the European training centre for VRF.

"I'll always be grateful to my first boss, Cris Nadauld, who gave me the opportunity to join Fujitsu and helped me develop as an engineer. Martin Richards made me responsible for supporting the VRF product, which was an important step, and Ian Carroll helped me to develop further, leading me to where I am now."

Ian Carroll, Deputy Chief Executive Officer, said: "Martyn has been such a big part of Fujitsu's success over the past 30 years. The whole team is delighted to celebrate this milestone with him."

First winners of 2025 at NRGS

The Northern Refrigeration Golf Society (NRGS) hosted its first event of the year at Wheatley Golf Club in Doncaster.

NRGS captain David Taylorson (21pts) picked up the ACR Journal Trophy over nine holes ahead of Paul Airey (15), while Phil Wray (38) of Leeds-based ACM triumphed in the Kooltech Cup, with Steve Milnes (38) of Fujitsu runner-up.

Formed in 1974, the NRGS has now been operating for 50 years and currently has 18 Full Members, 8 Life Members and 10 Associate Members.

It hosts sponsored 9- and 18-hole events each year from March-September, with an AGM in October and Christmas team event in December.

David Taylorson receives the ACR Journal Trophy from Editor Andy Slater

Phil Wray of ACM, centre, collects the Kooltech Cup from Seb Rowe of Kooltech, right, and NRGS captain David Taylorson

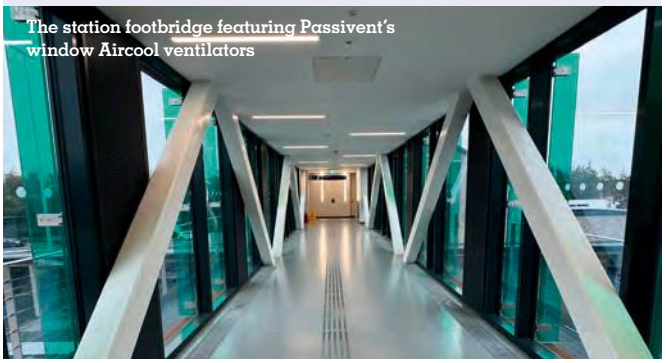
Passivent station ventilation on track

Natural and hybrid ventilation solutions manufacturer Passivent has supplied nine bespoke Aircool ventilators as part of a new fully enclosed, glazed footbridge spanning the railway track at the upgraded York Street station in Belfast.

The footbridge, part of a £17m project at the station, was designed by Gregory Architects. Working alongside mechanical and electrical consultant Semple & McKillop and mechanical sub-contractor Alufix Facades, Passivent manufactured the bespoke Aircool ventilators to integrate within the curtain walling of the footbridge. The units complement the aesthetics of the project perfectly, while controlling the temperature and CO2 levels within the glazed footbridge to prevent overheating,

Alufix Facades installed the Aircool units, which Passivent supplied with externally accessed 24V actuators to modulate the motorised dampers. The externally fitted actuators allow for ease of maintenance as the steel structure within the footbridge was installed 10mm away from the internal cover grilles, meaning access from the inside was not possible. The actuators provide controlled air intake and extract via the Building Management System.

Designed to work with all forms of wall construction, curtain walling and window profiles, Passivent's Aircool ventilators have excellent weatherability which means they can remain open even in adverse weather conditions. They offer excellent airtightness performance when closed and both louvres and grilles can be colour matched to any RAL or BS colour. BIM Objects are available for both window and wall versions.



The station footbridge featuring Passivent's window Aircool ventilators

AFR supplies CO2 retail solution

Commercial and industrial wholesale specialist AFR Refrigeration has helped deliver a CO2 (R744) refrigeration project for a major UK retailer using Panasonic Cold Chain Poland ICOOL-CO2 units.

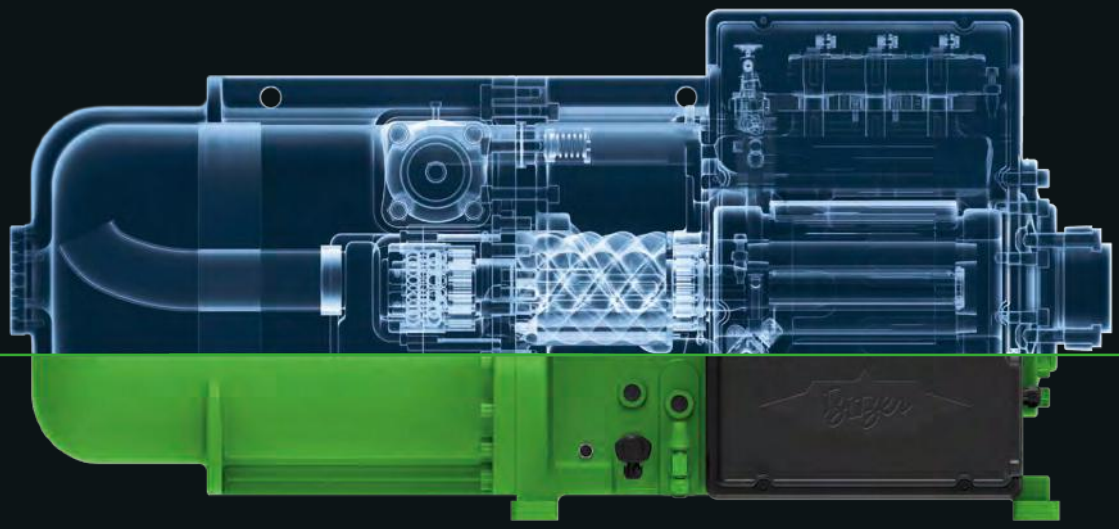
While specific details about the retailer and the installation are not publicly available, AFR says the project highlights the growing trend of using CO2 as a natural refrigerant in the UK retail sector, with low global warming potential (GWP) and non-ozone depleting properties, making it a sustainable alternative to traditional synthetic refrigerants.

The system in Sutton, South West London, will provide efficient cooling for the supermarket's freezer aisle cabinets. PCCPL worked closely with AFR Refrigeration to design and implement a bespoke solution while adhering to the highest industry standards. Although the installation process, theoretically, presented unique challenges, the technical solution and the installation went smoothly with standard units from PCCPL. The team from contractor RAC Engineering ensured a seamless and efficient installation, minimising disruption to the client's operations.

The installation consists of 2x ICOOL-15 CO2 units each with an additional external receiver on each system due to the extreme pipe length (over 70m). Always by the side of the customer, AFR Refrigeration and manufacturer were on site during commissioning to assist with final checks and set up. Eryk Witasik of PCCPL supported the commissioning process and both systems ran perfectly on first start-up, with the handover from RAC Engineering on schedule.

AFR Refrigeration Managing Director Rudy Reginiano said: "We are incredibly proud to have spearheaded this R744 installation in the UK along with our dedicated contractor customer, RAC Engineering. R744 represents the future of refrigeration, and we are confident that its adoption will continue to grow."

DAS HERZ DER FRISCHE



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Hybrid cooling for Oval Village

Indoor air quality and ventilation specialist Nuaire is supplying hybrid cooling solutions at the new Berkeley Oval Village mixed use development in central London.

A total of 103 MRXBOX hybrid cooling systems with Nuaire ducting are being installed into one-bedroom apartments in an area called the Zone. The compact units are housed within each apartment's utility cupboards.

The hybrid system, which is a cooling extension for the MRXBOX mechanical ventilation with heat recovery (MVHR) range, combines the heat-exchanger coolth recovery of an MVHR system with the cooling effect provided by a DX coil. A wall-mounted room temperature sensor senses indoor temperatures and activates the cooling module automatically when necessary.

The system has been designed to address the issue of overheating in problem areas of developments, where specific apartments or groups of apartments cannot be naturally ventilated and where site-wide cooling technologies are not an option. The system is said to significantly lower the temperature of the fresh air supply for occupant comfort, and enables compliance with Building Regulations Part O, which addresses overheating mitigation requirements in new build properties.

Whilst passive ventilation solutions, such as opening windows, are prioritised under Approved Document O, there are instances when this is neither desirable, nor practical.

The system was selected by the consultant on the development following an assessment of the acoustics, air quality and overheating. For apartments that would not meet the noise criteria, natural ventilation was not an option and an alternative solution had to be found in the form of mechanical ventilation.

Nuaire says the hybrid solution was welcomed by the consultant as a means of achieving compliance with Part O without the energy cost of a full cooling system that occupants have to pay for. It adds that as well as creating a simple solution to overheating in summer months, the units provide a high standard of indoor air quality year round via high-efficiency MVHR.

ICS Cool Energy upgrades hospital's critical systems

ICS Cool Energy has delivered a critical cooling system upgrade at the Princess Royal University Hospital in Orpington.

Working with construction company Vinci, ICS Cool Energy installed three temporary chillers during the refurbishment of the permanent system, ensuring uninterrupted cooling for the hospital's operating theatre and essential medical equipment.

The h was dealing with outdated cooling infrastructure and needed a reliable and efficient replacement system to maintain precise temperatures for essential medical equipment, sensitive medications, and hospital environments. The chiller plant's location on the hospital roof posed logistical challenges for dismantling the old equipment and transporting and installing of the new ones. Additionally, providing a temporary cooling capacity of 1.8MW was crucial to ensure seamless hospital operations during the refurbishment.

Given the logistical challenges posed by the rooftop location and due to the restrictions imposed on crane usage, the specification deemed it necessary to flat-pack all the chillers for removal and installation. Vinci engineered and constructed an extensive scaffold from the ground-level compound to the roof, incorporating an integral hoist to facilitate the positioning of the equipment on site.

The complexity of the temporary install was further amplified by the need for "hot tapping" – attaching to a pipeline without depressurising or disrupting normal operations – which was crucial to putting the hire chillers in place and provide immediate and reliable cooling during the transition.

For the final new cooling system, the team selected three 600kW HVAC chillers featuring R513A low-GWP refrigerant, meeting the hospital's demand for capacity, performance, and efficiency, as well as future-proofing the equipment for the duration of its lifetime.

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TOOLS TALK

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- Suitable for A3 refrigerants such as R290 and R600a
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- Fully automatic high and low pressure reset
- Available in 110V and 240V
- 1-year warranty

BOSCH CS LD 1.0

- One sensor – one tool to detect Halogenated CFC, HCFC, HFC, HFO compounds, HC refrigerants, Tracer gas (95%N2/5%H2 mixture), ammonia, butane and propane
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- Leak tracing mode to pinpoint hard to find leaks
- Rubber keypad and ergonomic design
- Includes carry case, spare filters and battery charger
- 1-year warranty

ROBINAIR RA1550-A3 5CFM VACUUM PUMP

- Spark-proof components independently tested and validated against applicable sections of ANSI 12.12.01 standard
- For use on Class A1, A2, A2L and A3 refrigerant systems
- Dual voltage, dual frequency motor
- 2-stage design to achieve lower ultimate vacuum
- 1-year warranty

ROBINAIR RA1500-A3 EXHAUST VENTING KIT

- For use when routing evacuated gases to a safe area during the service of systems that use flammable refrigerants
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An amazing night was had at the National ACR & Heat Pump Awards

Hundreds of the best and brightest of the HVACR industry met at the Midland Hotel, Manchester on the 6th of Ma

RACHP Woman of the Year

WINNER: Charlotte Lee
Chief Executive of the Heat Pump Association

Training Provider

WINNER: Mitsubishi Electric
The Gamification of HVAC Training

HIGHLY COMMENDED: MCFT

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Wholesaler/Distributor

WINNER: Unitherm

Best IAQ Innovation

WINNER: Martin Industries Ltd
AirXPro

Ancillary Product

WINNER: Carrier Solutions UK
Toshiba RBC-MTSC1 Mini Touchscreen Smart Controller

HIGHLY COMMENDED: Intatec Ltd
Inta XCEED Heat Pump Magnetic Filter

Refrigeration Project

WINNER: FridgeHUB
CO2 plant for Wilkins Jam Factory

HIGHLY COMMENDED:
AE Refrigeration Air Conditioning
Specialist Support at Thistle Seafoods Ltd

Ground Source Project

WINNER: Viessmann Climate Solutions UK
Waters View, Futureserv with Viessmann Climate Solutions UK

HIGHLY COMMENDED: NIBE
Lackington Mill, 18th century corn mill heated with NIBE GSHP

Air Conditioning Project

WINNER: WAVE Refrigeration
Aldi Goole Underfloor Heating and Cooling

HIGHLY COMMENDED:
BREng / EBA Climate
Tingley Garden Centre

Domestic Air Source Project

WINNER: R A Brown Heating Services
Retrofit Townhouse, City Centre Riverside Property, Norwich

HIGHLY COMMENDED:
Viessmann Climate Solutions UK
Custom Renewables

THANK YOU TO OUR SPONSORS

rch 2025 to celebrate excellence within the industry. Congratulations to all the winners and highly commended.

Non-Domestic Air Source Project

WINNER: Solaris Energy Ltd
Mobile Energy Plantroom (MEP) at Wembley Park

HIGHLY COMMENDED: Pure Thermal Ltd
Greenpeace make the Natural move

Refrigeration Product

WINNER: Hubbard Products Limited
Hubbard A2L Industrial monoblock range

HIGHLY COMMENDED:
Beijer Ref UK & Ireland
SEC (Sustainable Energy Controller)

Commercial Heat Pump Product

WINNER: REFRA; Absolutely Chilled Ltd
Refra Propane Heat Pumps | Standard Line: Improved COP

HIGHLY COMMENDED:
Carrier Solutions UK
Toshiba Universal Smart X (USX) Series Edge Modular Heat Pump

Domestic Heat Pump Product

WINNER: Qvantum Energy Technology
QE Exhaust Air Heat Pump

HIGHLY COMMENDED: NIBE
NIBE S735 Exhaust Air Heat Pump (EAHP)

Air Conditioning Product

WINNER: Fujitsu General Air Conditioning UK
J-VS Mini VRF

HIGHLY COMMENDED: Klima-Therm
Rhoss POKER290 distributed by Klima-Therm

Heat Pump Installer

WINNER: R A Brown Heating Services

HIGHLY COMMENDED: IMS Heat Pumps

ACR Contractor

WINNER: Forest Group

HIGHLY COMMENDED: SURE Solutions

The Phil Creaney ACR Champion 2025

WINNER: Kevin Glass FIinstR
Managing Director of Bitzer UK

To read more about the National ACR & Heat Pump Award 2025 Winners and Highly Commended, visit:

https://heyzine.com/flip-book/NACRA_WINNERS_2025

HVACR industry gathers in record numbers at AHR Expo 2025

Orlando played host to more than just warm weather this year as the 2025 AHR Expo turned up the heat with record-breaking attendance and groundbreaking innovation. ACR Journal joined over 50,000 attendees and nearly 1,900 exhibitors filling the West Hall of the Orange County Convention Center, as this year's Expo set a new standard for scale, creativity, and industry collaboration.

Held annually, the AHR Expo is the premier gathering for professionals across the heating, ventilation, air conditioning, and refrigeration sectors. The 2025 edition stood out not only for its scale, but also for its palpable energy. "There is a lot of movement happening around the industry... professionals were keen to gather and discuss it all," said Show Manager Mark Stevens.

Networking and technology take centre stage

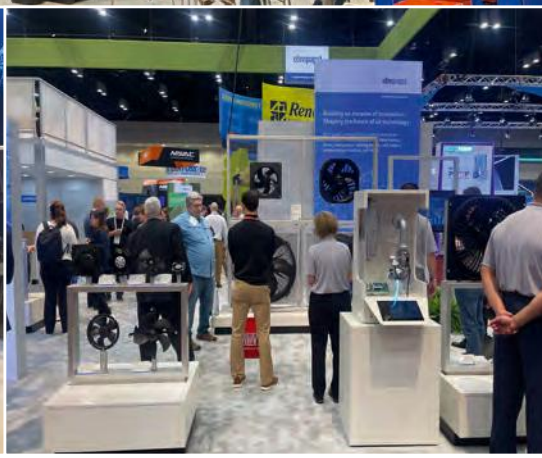
From the moment doors opened on the first morning, the atmosphere was electric. The exhibition floor spanned over 516,000 square feet (approximately 48,000 square metres), offering visitors access to the latest equipment, technologies, and product innovations. Live demonstrations and hands-on displays made it easy to explore new ideas and make meaningful connections—something that remains invaluable in a digital-first world.

A standout addition this year was the Podcast Pavilion, where 22 podcasters recorded interviews and live sessions with leading voices from across the HVACR landscape.

Manufacturers and influencers also came together for a range of experiential events, competitions, and networking meet-ups. "Five years ago the industry was struggling with two-way communication channels," said Nicole Bush, Director of Marketing at AHR Expo. "Now it exists in abundance... and this is proving to be incredibly valuable to our industry."

Education programme matches industry momentum

Education has long been a cornerstone of the Expo, and 2025's programme was its most extensive yet. With more than 300 sessions—145 of which were product presentations—the agenda tackled the biggest challenges and opportunities facing



the sector. Key themes included regulatory updates, equipment redesign, tariffs, cybersecurity, workforce development, and the rise of artificial intelligence.

A major highlight was the State of the Industry Panel, featuring prominent figures such as ASHRAE President Dennis Knight, AHRI CEO Stephen Yurek, HARDI's Talbot Gee, and Dominick Guarino from the National Comfort Institute. The panel explored transitions to A2Ls and A3Ls, as well as market shifts expected in the coming year.

"There's a strong connection between the discussions taking place in our sessions and their real-world application on the show floor," said Kimberely Pires, Special Projects Manager. "That offers attendees a deeper, more practical understanding of the latest industry developments."

Celebrating innovation

Amongst the many product launches and technological showcases, one stood out. The coveted 2025 Product of the Year award went to PassiveLogic for its Sense Nano—a fully wireless, self-powered sensor that communicates via Bluetooth mesh and harvests energy from its environment. With no batteries to replace, it marks a major step forward for intelligent, sustainable HVAC systems.

Looking ahead

The buzz on the show floor was undeniable, and attendees left energised about the future of the industry. "Walking the hall yesterday, I could feel innovation," said one Florida-based distributor. "From the simplest components to the most complex systems, things are evolving rapidly."

Jennifer Butsch of Copeland echoed the sentiment, praising the Expo for creating space to discuss the energy transition, lower-impact refrigerants, and the technology shaping tomorrow's systems. Others highlighted the invaluable opportunity to reconnect with peers, suppliers, and partners in person.

> "THERE'S A STRONG CONNECTION BETWEEN THE DISCUSSIONS TAKING PLACE IN OUR SESSIONS AND THEIR REAL-WORLD APPLICATION ON THE SHOW FLOOR"

Next stop: Las Vegas

With the 2025 edition now in the books, attention turns westward. The 2026 AHR Expo will take place from 2–4 February at the Las Vegas Convention Center. If the momentum from Orlando is anything to go by, it promises to be another essential stop on the HVACR calendar.

IOR recognises excellence at 125th Annual Dinner

The 125th Institute of Refrigeration Annual Dinner once again celebrated outstanding individual contributions to the advancement of the RACHP industry and recognised businesses for their dedication to sustainability.

President Lisa-Jayne Cook reflected on the IOR's history of innovation, collaboration and dedication. She highlighted current projects and achievements while also looking to the future of the industry, emphasising emerging leaders and upcoming initiatives.

Five awards were presented during the evening at a new venue, the Hilton London Bankside:

The J&E Hall Gold International Medal recognises the most noteworthy practical contribution to the field of innovation in refrigeration, air conditioning and heat pump technology. This year's winner is **Professor Ahmed Kovacevic**, from City St George's, University of London. His work blends academic research with industrial collaboration to deliver transformative solutions for high-fidelity numerical modelling of rotary positive displacement compressors. The specialist software he has developed has revolutionised compressor design. It has enabled improved performance, efficiency, and reliability across refrigeration, air conditioning, heat pumps, and energy recovery systems. In partnership with industry, he has enhanced compressor technology and expanded its applications into areas such as high-temperature heat pumps, hydrogen compression, and sustainable lubrication. Professor Kovacevic has an international reputation in the field of compressor technology and is renowned for encouraging knowledge exchange, training future engineers, and advancing the understanding of compressor technology on a global scale. This work will have a profound impact on the future of refrigeration and sustainable energy systems.

Eshagh Goudarzi of London South Bank University was awarded the

President Lisa-Jayne Cook

Professor Ahmed Kovacevic

Eshagh Goudarzi

Matthew Byfleet

Dylan Betts

Ted Perry Memorial Award for **Student Research** for his work on "The integration of waste heat and mine water for heat recovery and storage in district heating and cooling." This project, which has led to the first scheme of its kind in the UK, uses the ground as a geobattery to store waste heat for seasonal heating and cooling on a significantly large scale. The judges were impressed by this researcher's comprehensive approach, which integrates heat recovery, long-term storage, and the re-use of energy.

The **RACHP Engineering Technician Section Lifetime Achievement Award**, sponsored by ACR Journal, went to **Matthew Byfleet** of Adcock, recognised for his expertise in a wide range of equipment and technologies, from VRV systems, to industrial and pharmaceutical applications. A strong advocate for low-carbon, low-GWP solutions, Matthew is dedicated to driving sustainable innovation in the industry. He is also passionate about mentoring apprentices and young technicians, sharing his knowledge and enthusiasm to inspire the next generation and propel the sector forward. His employer described him as "a superb engineer, dedicated to his role and constantly going above and beyond for the client".

This year, the judges had an outstanding pool of nominees to consider and also recognised **Andy Clarke** from Airconuk with a Highly Commended award .

The **Lightfoot Medal**, awarded for the best IOR Talk and Paper of the previous year, was made to **Dylan Betts** for his paper "Heat Networks in Rural Areas." The winner of this award is decided by vote of IOR Members and the paper and recording of the presentation are available on the IOR website.

Smart Parc Energy Centre, Derby

The IOR Beyond Refrigeration Environmental Award went to GEA Heating & Refrigeration Solutions for the Smart Parc Energy Centre in Derby. The Smart Parc Energy Centre is a sustainable energy management centre, based on an integrated heating and cooling network that redistributes waste heat. It uses an industrial ammonia heat pump to provide cooling as well as zero-carbon heating.

The system can deliver up to 11MW of cooling and 10MW of heating across a 1.8 million square foot food production facility. It is designed to achieve a minimal seasonal heating efficiency of 400% (COPh 4). Between 2024 and 2030, the system is projected to yield an annual CO2 saving of 27,000 tons compared with an equivalent R404A system.

The judges described this project as “a technical and holistic makeover to the existing ‘district heating’ philosophy, focusing on food production and distribution hubs.” They also agreed that it demonstrates potential for wider adoption on other sites.

Professor Kovacevic, Eshagh Goudarzi and GEA Heating & Refrigeration Solutions will all be invited back to give talks to IOR Members in the next papers programme.

Eight new Fellows

The IOR announced eight new Fellows of the Institute in recognition of their technical expertise, leadership and contribution to improving the standing of the RACHP industry.

IOR Fellows are long-standing Members who have demonstrated a commitment to leading and advancing the industry that goes beyond their day-to-day work responsibilities.

The new Fellows are:

- John Billson, Managing Director, Beijer Ref UK & Ireland
- Nick Franzen, Refrigeration Advisor
- Juliet Loiselle, Publisher, ACR Journal and Heat Pumps Today
- Neil McGoldrick, Managing Director, Ice Gold Services
- Julie Murray, Head of AncillaryHUB, Beijer Ref UK & Ireland
- Steven Padgett, Head of Technical, Beijer Ref UK & Ireland
- Nick Rivers, SCM Frigo
- Justin Southwick, Group Head of Digital, Carter Thermal Industries

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Sustainable Innovation: The Role of LU-VE Group Heat Collectors

LU-VE Group, a leader in ventilated heat exchanger manufacturing, is committed to developing heat collector technology for use with Air Source Heat Pumps (ASHP) in district heating applications. ASHP are widely recognised as an energy-efficient and sustainable alternative to fossil fuel-based heating.

ASHPs are becoming more common as Europe is building a more sustainable energy system. ASHPs for industrial scale systems up to tens of megawatts have come to replace the role of fossil fuels powering district heating networks.

With delivery of products to the HVAC & Refrigeration industry for more than 40 years, LU-VE Group has consistently led the way in research and development of innovative solutions to meet evolving customer needs. LU-VE Group has substantially increased their development of optimised solutions for harvesting heat from air. These special air heat exchangers are designed particularly for use in industrial scale ASHP systems and are called heat collectors, with multiple units usually installed together as a 'field'.

With a heat collector field approaching the size of a football field, reliability and assured performance are of utmost importance. Having delivered over 50 successful air heat collector fields (incorporating over 600 units) LU-VE Group provides tailored solutions that generate the required heat capacity. These systems are designed to operate in any weather condition, even at ambient temperatures as low as -25 °C.

Let's explore examples of how LU-VE Group has supported ASHP clients using three primary refrigerants: Brine, CO_2 and NH_3 .

Eco-Friendly Heat Pumps Transform District Heating in Finland

In western Finland, the Runosmäki district of Turku is embracing a greener future with a cutting-edge 3 MW AmbiHeat heat pump plant, built by Calefa Oy. Operational since 2022, the plant provides heating to approximately 7,000 residents, harnessing outdoor air energy to deliver emission-free warmth.

A highly efficient system utilizes 8 LU-VE Solar Series heat collectors, placed on the ASHP building roof, to harvest heat from air to the secondary circuit. The potassium-formate based secondary circuit absorbs and transfers the heat to the heat pump's evaporator.

Designed for extreme conditions, these heat collectors operate efficiently even at ultra-low temperatures, ensuring stable performance throughout Finland's harsh winters. This innovative approach reinforces LU-VE Group's commitment to a sustainable future.

Advancing Sustainable District Heating with High-Efficiency Heat Collectors

Following the success of several brine-based ASHPs, LU-VE Group continues to support Finland's green energy transition by employing CO_2 direct expansion evaporator technology for ASHPs. This time, 4 advanced LU-VE Heat Collectors harvest energy for a 1.5 MW air-to-water CO_2 heat pump system by FENAGY.

Located north of Helsinki, this system features an H-1200 CO_2 heat pump specifically designed for district heating networks with high return temperatures of up to 55°C, ensuring reliable and efficient heating. To further optimise performance, an HCI-1000 isobutane unit acts as a subcooler, enhancing overall efficiency.

Smart Energy Integration in Ørum, Denmark

LU-VE Group continues to lead the way with NH_3 recirculation evaporator heat collectors at an advanced 2.5 MW air-to-water heat pump system supplied by CSP Aalborg for Ørum Varmaværk, in the small town of Ørum, Denmark.

This innovative ASHP installation integrates seamlessly with Ørum's solar heating plant, harnessing natural energy sources - solar and air - to create a highly flexible heating solution. A large hot water accumulation tank helps to improve efficiency for periods when needed, ensuring a reliable and optimised heating supply for the Ørum district.

Intelligent energy management improves efficiency while the balanced operation of the solar and heat pump system optimises flexibility ensuring eco-friendly performance with NH_3 as natural refrigerant in 10 heat collector units with stainless steel tubes.

Discover more about LU-VE Group solutions, visit: www.luvegroup.com

The Importance of Refrigerant Recovery and Reclaimed Refrigerant

A-Gas is playing a leading role in the Lifecycle Management of used refrigerants as the industry looks to reduce its carbon emissions and move away from high global warming potential (GWP) gases.

The recovery and reclamation of gases is a key pillar of Lifecycle Refrigerant Management (LRM). It is clear that reducing leakage and recovering existing refrigerants for future re-use, or destruction, has a far greater impact on our climate than the substitution of lower global warming potential refrigerants alone.

This is the opposite to the take, make and dispose business model and by adopting these principles we are making better use of what we already have, and at the same time, making sure that

Dee Robertson Photography

these gases are not vented or leaked into the atmosphere. Reclaimed refrigerant can reduce raw material usage, energy consumption and unnecessary transport, normally associated with virgin production. Every time the product is recovered the circular cycle repeats.

Tools that make refrigerant recovery easier and quicken the process are valuable. The A-Gas Rapid Recovery, F-Gas compliant, on-site recovery service, is a good example of how having the right equipment can make a real difference when it matters.

A-Gas Rapid Recovery has a network

of vehicles and engineers in place to give refrigeration contractors national coverage and this is available to go on site at short notice to handle jobs of all sizes.

The equipment can recover refrigerants up to ten times faster than the conventional recovery methods and the team take responsibility for all aspects of the recovery work – from start to finish.

Once recovered, refrigerant is returned to A-Gas for reprocessing through mechanisms such as filtering, drying and non-condensable gas removal to return it to the same quality as virgin refrigerant, in line with AHRI 700 specification.

The importance of conserving every kilogram of refrigerant should not be underestimated. As an industry we need to do all we can to ensure no kilogram of refrigerant, once produced, is released into the atmosphere.

A-Gas is proud to support customers on their journey to net-zero. Our dedicated Towards Zero, Together campaign puts net-zero at the top of our agenda. We are aiming to become a net-zero group of companies by 2035 with an early target of reducing baseline emissions by 50 per cent by or before 2028.

Towards Zero, Together encompasses three key areas – our dedication to stay safe, providing superior quality to customers and protecting our environment by preventing emissions to the atmosphere. We are engaging meaningfully with our talented people, looking at our processes and seeing how they can be materially improved to become best practices. We believe that together with our customers we can lower the carbon footprint of this industry and help build a more sustainable world for us all.

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Innovative solutions with Ultra Refrigeration

Future-proofing eco-friendly portable cold storage and blast chiller/freezer units with low-GWP R-454A (Opteon XL40).

Derbyshire-based Ultra Refrigeration is at the forefront of commercial refrigeration solutions, designing, building, and installing blast chillers/freezers and cold storage units for the food and drink, storage and distribution, pharmaceuticals, and manufacturing sectors. The company is committed to delivering innovative, technology-led, sustainable, and energy-efficient products to its customers.

Seeking cost and energy efficiencies without compromising reliability

Working with a producer of portable, blast chillers/freezers and cold stores that had historically used R-449A (GWP 1397), Ultra were looking to test a lower GWP refrigerant to reduce the environmental footprint of their new units, without compromising on the system performance.

Already in regular discussion, Climalife's Technical Sales Director, Neil Roberts, and Ultra Refrigeration's Operations Director, Anthony Lomas, considered the various refrigerant options available for the new unit designs taking into account predicted performance, product availability, safety and environmental credentials.

Several refrigerants were assessed, including CO2 and options with a GWP below 150, but due to blast freezer capacity requirements and the need for easy transportation, Opteon XL40 | R-454A (GWP 239) emerged as the most suitable solution.

It is worth noting that the lowest GWP refrigerant is not always the best solution for a project. The location, cost, energy efficiency and reliability should all be considered too which is why it's key to seek out the expert advice of companies like Climalife when specifying a new system.

Neil Roberts commented: "Uncertainty around the changes in legislation often leads to a delay in taking decisions, so it's great to be able to assist a manufacturer and end user with the foresight to get ahead of the imminent legislation changes by moving to a very low GWP, sustainable and energy efficient refrigerant option and potentially setting a new benchmark for others in the industry to follow."

Ultra was very keen to future proof its equipment for the next 10-20 years at least and so commissioned a trial with their blast freezers using Opteon XL40 | R-454A, alongside an identical unit running under the same conditions, containing R-449A.

Trialling R-454A in cold storage and blast freezing applications

Cold stores

The cold store unit performed smoothly during testing, with some system adjustments made to accommodate pressure variations. Following successful trials, the unit is now in full production, with the first delivery to a client's site completed in July 2024.

Blast chillers/freezers

The blast freezer trials revealed key differences in refrigerant performance. Initially, the R-454A unit did not operate as efficiently as the R-449A unit. Due to slight differences in pressure/temperature relationships, the existing control system—originally designed for R-449A—was self-limiting performance unnecessarily.

From left, R-449A blast freezer, R-454A cold store, R-454A test blast freezer

To address this, Ultra Refrigeration optimised the control system, allowing the R-454A unit to perform at a comparable level of efficiency to its R-449A counterpart with all of the environmental benefits.

During the testing phase, IBCs full of water were stored in the blast freezers to simulate product load.

During the testing phase, IBCs full of water were stored in the blast freezers to simulate product load

Pressure Equipment (Safety) Regulation

Any system with a pressure over 0.5 bar must comply with the Pressure Equipment (Safety) Regulation (PE(S)R). Systems are categorised from SEP (Sound Engineering Practice) to Category 4, based on factors such as system volume, pipe size, fluid risk category, and pressure.

- The R-449A system was classified as Category 1, using an A1 refrigerant (fluid group 2).
- The R-454A system fell under Category 2, using an A2L refrigerant (fluid group 1).

This change in classification required additional safety compliance measures, new component sourcing, and the involvement of a notified body to certify the system. Updates to welding, brazing certifications, and software were also necessary.

Anthony Lomas said: "Despite an initial steep learning curve and some additional costs, once the required changes were made, manufacturing the system was relatively straight forward and not significantly more complex than the previous design."

Beyond the challenges: success in real-world applications

The time and effort invested in re-engineering the new system and meeting compliance requirements have proven worthwhile. Numerous cold storage units and blast chillers/freezers running on Opteon XL40 | R-454A are now operating on-site in real-world applications.

End users have been delighted with the performance, reinforcing the success of this transition.

Ultra continues to work on further product innovations with new unit designs aimed at enhancing energy efficiency, performance and ease of use expected to be released later this year.

A heat pump installer on every street

I've just spent the weekend at the Ideal Home Show in London's Olympia talking to consumers about heat pumps and two things really stood out for me.

The first was how many more people know about heat pumps now or have at least heard of them, compared to last year's Show.

For me, that means that the message is getting through about heat pumps being the future, as more and more people realise that we simply have to stop 'burning stuff' to keep our homes warm.

I was only there for two days out of a 17-day show, but if that level of interest is maintained, then I think the heat pump industry is highly likely to break through 100,000 installations this year.

The second thing that struck me, was I had several gas engineers come and ask what they needed to do to become a heat pump installer.

And nothing could be simpler.

One of our Directors was asked recently about the shortage of heat pump installers and whether this would be a barrier to increasing the number of installations.

His answer was very simple. There is already a heat pump engineer on every street. They're just called a gas installer at the moment.

So, this raises the issue of training which is why we were particularly delighted to recently win the Training Provider of the Year Award at the recent National ACR and Heat Pump Awards in Manchester.

Simple steps to training

We've completely revamped our training so a lot of it can be done at a time to suit the engineer and be completed at their own pace.

This means that existing heating engineers can learn about the nuanced differences between gas heating and heat pumps, as well as understand how to add to the skills they already possess.

Ben Bartle-Ross is a technical trainer at Mitsubishi Electric

Once they've completed a few online sessions, they can join me and my 'award-winning' colleagues in our virtual classroom, where they can test their knowledge, learn more about the range of renewable options, and quiz our trainers.

They can also look inside our equipment using virtual reality to help explain how much engineering has gone in to manufacturing these heat pumps so that they work in our temperate climate.

Finally, there is always the option to come into one of our training centres to get the spanners out and learn on the actual equipment.

Retrofit challenge

And we do need to keep increasing the number of engineers installing heat pumps which is why we will continue to develop and innovate our training courses.

There are millions of homes and commercial properties that need to have their heating upgraded and there are now heat pumps that are ideal for the retrofit market.

The market is there and the technology is fully tried, tested and ready to go.

However, there is one area we do need to work on and that is countering the myths that still exist about heat pumps because a correctly designed, installed and commissioned system can heat just about any home or building.

There are several heat pumps that will deliver water at 70°C or even higher, while working with small bore pipework, so there really aren't many situations were a heat pump can't be used – They're even being used at Chester Zoo to keep the endangered rhinos warm.

And as George Clarke said himself when he visited the zoo "If a heat pump can heat a rhino house then it can heat just about any home".

Ben Bartle-Ross is a technical trainer at Mitsubishi Electric

Find out more training by visiting **https://les.mitsubishielectric.co.uk/installers/installer-training**

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WOMEN IN THE ACR INDUSTRY

In this issue we meet Lizzie Dunlop MInstR, Key Account Manager at Danfoss Climate Solutions, and Vice Chair of IOR Scotland.

What was your first job?

I worked as a counter assistant in a local chip shop at 14 before leaving for a whole £1 more an hour (plus tips) to work as a waitress and later a shift manager at Pizza Hut, where I worked until I finished both school and university.

What does your current role involve?

It's a mixture of overseeing relationships with end users, contractors and our key wholesalers within the UK and Ireland. I advise on new products and legislation changes within the industry.

What attracted you to the industry?

Like many others I fell into the industry. I studied mechanical engineering at university in the hopes of later maybe doing a post grad in tech teaching, as I had an incredible female tech teacher who inspired me. However, I swiftly realised after completing Camp America that teenagers are a bit more hard work than I thought and that might not be the correct path for me! After my degree I was looking for graduate positions and stumbled across a Trainee Sales Engineer position on Indeed and interviewed for the job the following week at HRP in Glasgow. That was almost 9 years ago. I loved the look of the job as I still got to be technical but also wasn't chained to a desk and could be out and about meeting new people! I have since been very fortunate to be involved in the STEMazing programme which allows me to go into schools and be a STEM ambassador, along with working closely with the colleges to provide them access to the Danfoss eLearning platforms, which covers that need to be a role model in the industry.

Lizzie Dunlop, centre, with colleagues from the IOR Scotland Committee

What excites/interests you about the industry?

It's always evolving! Since I joined the industry the refrigerant changes and legislation changes we have had and are now seeing again is really interesting. The new technologies and the road to Net Zero is amazing. I also love being involved with the IOR Scotland committee and am incredibly honoured and proud to be supporting Jason Fraser in his role as Chair by becoming his Vice Chair. I've been on the committee for the past 7 years and have loved seeing it flourish, the committee is dedicated to running Cooltalks, manufacturer visits and subsidised training events for engineers in Scotland. Not forgetting our incredible dinner that helps fund all our initiatives. A lot of hard work goes on behind the scenes to organise each event, but the team really do pull together.

How would you like to see your career developing?

I'd love a more European role in the future, maybe with a team overseeing more wholesalers, as I think that would be a great new challenge.

What is the best piece of advice you were ever given?

To believe in myself and that I deserve to be in the room and heard.

Lizzie is a lover of the great outdoors

Lizzie says one of the best things about her current role is that it allows her to stay technical without being restricted to the office

What do you see as the challenges facing the industry?

Finding enough engineers. It's a hidden industry that needs more people out there speaking to schools/ colleges and showing young people this is a rewarding and ever growing profession.

What would you say to other women who are considering coming into the ACR industry? Do it, you won't regret it. There are so many allies in this industry ready to champion you and help you!

Is there a little-known fact about yourself that might surprise other people?

I enjoy circuit training, lifting weights and anything outdoors from paddleboarding to hillwalking.

The Innovation Zone

The guide to what's new for ACR Journal readers, offering vital industry news.

To advertise your product in 'The Innovation Zone' section please contact **victoria.brown@warnersgroup.co.uk**

FERNOX LAUNCHES NEW PRODUCT SELECTOR TOOL FOR EXPANDING RENEWABLES RANGE

Leading water treatment manufacturer Fernox is pleased to announce the launch of its new Renewables Product Selector, designed to provide a fast, easy-to-use single source tool for professionals working with renewable heating systems.

Streamlining the product selection process, Fernox's new Renewables Product Selector tool is user-friendly and intuitive making it easier than ever for heating professionals and engineers to find the right renewables water treatment product for their specific requirements.

Available on the manufacturer's website, users simply provide the project details using the multiple-choice prompts, such the type of heating emitters, the size of the system being treated, and the level of frost protection required. Based on the provided criteria, the intelligent online tool provides instant access to Fernox's water treatment recommendations and product information for each. Plus, users can also request the results are emailed to a chosen address for future reference.

As renewable systems grow in popularity, the new tool provides installers with a valuable resource to identify the most suitable Fernox products for each project, so that heating systems operate efficiently and reliably, ultimately saving on energy consumption and reducing utility bills for householders.

Speaking on the latest launch, Mike Skivington, UK & Ireland Sales Director at Fernox, commented: "We're delighted to add this useful resource to our website. We recognise the unique issues that low temperature renewable heating systems present and the growing choice of products that are available to address them. As such, we were keen to provide heating professionals with a product selection tool that is helpful, yet quick and easy to use to identify the products that are designed to preserve the health and longevity of renewable heating systems."

The latest development from Fernox joins an expanding line-up of water treatment products and solutions for heating installers and engineers working on renewable systems, which includes the award-winning heat pump filter – the TF1 Sigma HP, Antifreeze Valves and a range of transfer fluids and cleaners.

For more information, or to try out the Product Selector, please visit:

www.fernox.com/renewable-solutions-tool

CONDAIR ISO 9001 MARKS 30 YEARS OF QUALITY

Condair, a leading provider of humidity control systems, has successfully achieved re-accreditation for the ISO 9001 Quality Management System (QMS), demonstrating its commitment to delivering superior products and services to its customers.

The ISO 9001 standard is a globally recognised certification that acknowledges companies for their quality management systems. Having first achieved this standard in 1994, this re-accreditation for Condair UK marks over 30 years of dedication to principles such as customer focus, leadership, process optimisation, continuous improvement, evidence-based decision making, and relationship management.

"Re-accreditation for ISO 9001 is a testament to the continuous effort and dedication of Condair's team to deliver excellence in all aspects of our operations," said Dave Marshall-George, UK & Ireland Sales Director of Condair. "In addition to holding ISO 9001 for more than 30 years, Condair is also accredited for ISO 14001 (Environmental Management) and ISO 45001 (Occupational Health and Safety Management). Our long-term achievement of these standards shows our commitment to environmental sustainability and the health and safety of our employees. We are proud to hold these accreditations, as they reflect Condair's commitment to our customers, employees and our wider corporate responsibility within the HVAC sector."

"WE ARE PROUD TO HOLD THESE ACCREDITATIONS, AS THEY REFLECT CONDAIR'S COMMITMENT TO OUR CUSTOMERS, EMPLOYEES AND OUR WIDER CORPORATE RESPONSIBILITY WITHIN THE HVAC SECTOR."

Condair's success in meeting these internationally recognised standards illustrate its position as a leader in the humidity control industry. With a focus on both customer satisfaction and social responsibility, the company strives to deliver innovative and environmentally friendly solutions while safeguarding the well-being of its employees.

www.condair.co.uk

KOOLTECH APPLIED DEMO SUITE OPENS IN FAREHAM

Distributor Kooltech has opened a new demo suite designed to provide a valuable resource for anyone interested in heat pump decarbonisation projects.

The Kooltech Applied Demo Suite, at the company's Fareham branch, features a fully operational commercial heat pump connected to all components up to the point of outlet, including bespoke designed K-con thermal store, potable hot water vessels, and all associated valves, stats and controls.

The full system offered by Kooltech Applied aims to simplify and accelerate the procurement and logistics of the heat pump solution, reducing potential pain points from design to order to installation and commissioning, and providing cost-certainty for every party.

Everything seen in the suite (excluding copper piping) can be obtained and supported by Kooltech Applied directly. Industry professionals, M&Es, installers and end-users involved in decarbonisation heat pump projects are encouraged to visit.

Scott Mason, Head of Kooltech Applied, said: "I encourage anyone who is interested in heat pump decarbonisation projects to visit. Contractors wanting to take their first steps into commercial heat pumps and potable hot water can become familiar with the full solution here at our Fareham branch. It's ideal for pre-commissioning checks and general hands-on training as the system set-up allows them the opportunity to test, check, touch and ask questions before installing on-site.

"We also encourage end-users who are looking at decarbonisation projects as it may help them to identify potential sites easier. We will be providing a CPD guide and Q&A for the full experience, for those that want it."

Among the first visitors were Matt West, Associate Director at ARB, and Paul Jenkyns. Projects Director at Closewood. Matt West commented: "The demo suite is a great resource for learning about and testing heat pump solutions. I'm particularly impressed with the fact that it includes a fully operational commercial heat pump system. This will allow visitors to get a real sense of how the system works and new engineers to identify any potential issues before installation."

Part of the packaged supplied is the new linkage interface kit KS1-K-CLIK. The latest component added to the K-con catalogue of bespoke products, K-CLIK allows for a 48mm stainless-steel Victaulic coupling that matches the connection of the CAHV-R heat pump for a tight joint and is a suitable material not mixing iron into the system. Having these in stock avoids long-lead times and offers flexibility of installation with threaded, compression and press fit connection, making connection to the CAHV units to the water system, secure and hassle-free.

For applications such as primary schools, where a full BMS is out of budget, the K-con R&D team have also designed and assembled the KS1-BR41N, aka the K-Brain, currently as a prototype. Designed to offer a low-cost control solution when operating the heat pump and potable hot water. The KS1-BR41N is a self-contained box requiring only wiring between the CAHV heat pump unit, motorised valve and a remote temperature sensor located within the potable water cylinder.

The K-con products, though optional, are engineered to achieve optimal efficiency of the CAHV heat pump unit

All components required to complete the full CAHV installation to the point of outlet follow Kooltech's comprehensive suite of materials, including schematic drawings which adhere to the manufacturer's installation guidelines, and the complete bill of materials. Kooltech says this is so customers can be confident that the system will perform as reliably and efficiently as possible, while guaranteeing warranty beyond the heat pump unit, when encompassing the Kooltech-supplied components.

To visit the Kooltech Applied Demo Suite, contact the team at AppliedSupport@Kooltech.co.uk

www.kooltech.co.uk

PHIL PHILIPPOU, NATIONAL SALES MANAGER, LH-PLC

Phil Philippou has been appointed National Sales Manager at HVAC distributor and engineering business LH-plc. His responsibilities include leading the company's sales team to target and growing its chiller maintenance portfolio and installation projects, as well as supporting sister company Klima-Therm in its service provision.

During his 33 years working in the corporate facilities management and HVAC sectors - including 10 years as a Senior Technical Engineer, coupled with a further 23 years in Business Development - Philippou has previously held roles at Johnson Controls, Swegon, BAM FM, and other businesses.

Roberto Mallozzi, Managing Director of LH-plc, said: "We are thrilled to have Phil join our team. He is a seasoned professional, having held a series of senior technical and business development roles in the facilities and HVAC sectors spanning more than three decades.

Philippou added: "I am delighted to be joining LH-plc, a pioneering air conditioning and refrigeration engineering business that operates at the cutting edge. I relish the opportunity to work with the exceptional sales team at LH to boost the company's business, and to continue to grow and innovate in all the fields in which it operates."

https://lh-plc.co.uk/

HAYLEY KENT, ROB BROUGHTON, JAY SONI, FUJITSU GENERAL AIR CONDITIONING UK

Fujitsu General Air Conditioning UK has made three key appointments to further strengthen its team.

Hayley Kent joins as Area Sales Manager (Midlands). She was previously a Business Development Manager at Daikin UK and prior to that spent 13 years in sales roles for Mitsubishi Electric. She said: "I am delighted to join Fujitsu and work with a product range that has already had so much success through wholesalers and distribution partners.

Rob Broughton arrives at Elstree as Applied Specialist. He brings extensive industry experience, having worked for a number of contractors and distributors, including Space Air and Ultimate Air, in commissioning, technical and project roles. He said: "Having previously enjoyed working alongside the Fujitsu team at a distributor, I jumped at the chance to join the company. I'm enjoying the challenge of learning more about the applied product range and working on the 'other side' for a manufacturer."

Jay Soni joins as a Pre-Sales Specification Engineer and is relishing the challenge of creating designs for customers. He was previously a Technical Sales Engineer at Mitsubishi Heavy Industries (MHIAE).

https://webstore.uk.fujitsu-general.com/

KEVIN MORRISSEY, TECHNICAL DIRECTOR, BESA

The Building Engineering Services Association (BESA) has appointed **Kevin Morrissey** as its new Technical Director. He brings more than 35 years' industry experience to the role, including as chair of the association's technical committee since 2023.

Morrissey joins from HE Simm, where he spent almost six years, having previously held technical and operational leadership roles at Wates, Lorne Stewart, NG Bailey and Axima/Sulzer Infra. His career began in 1989 as an apprentice with Matthew Hall where he qualified as a building services engineer.

"We are absolutely delighted that Kevin has agreed to join the staff having already served the Association with great distinction as a volunteer," said BESA's Chief Executive Officer, David Frise. As chair of the technical committee, Morrissey oversaw BESA's regular output of technical guidance and advice. His appointment follows BESA's recruitment of Tony Gilbert as its first Chief Operating Officer in a reshaping of its senior leadership team.

Morrissey said: "Our sector is facing an extraordinary rate of change and technical demands, but there are significant opportunities too. Whilst trading conditions remain tough, and many contractors are having to battle hard to keep their heads above water, there is increasing awareness of the crucial role BESA members play in providing comfortable, functional, sustainable, and safe environments for building users."

www.theBESA.com

MICHELE MARTELLO, CHIEF SOLUTION MARKETING OFFICER, CAREL

Controls specialist Carel has appointed **Michele Martello** as Chief Solution Marketing Officer, with responsibility for defining the strategic priorities and objectives for the company's solutions in the HVAC, refrigeration and services sectors.

He is expected play a key role in directing, managing, and coordinating corporate marketing activities to ensure a competitive global positioning of Carel solutions.

Martello joined Carel in 2004 as a Product Manager in the Systems for Humidity Control Business Unit, later becoming Climate Business Unit Manager and subsequently Group Head of Platforms. From 2018 to 2021, he served as CEO of Recuperator, a Carel Group company specialising in the design, production, and marketing of air-to-air heat exchangers. Since 2023, he has held the position of Group Chief IAQ Officer within Carel's IAQ Global Business Unit, tasked with developing and supporting the group's growth plans for indoor air quality solutions.

He said: "Carel is a benchmark for innovation in the HVAC/R sector. Our goal is to continue developing cutting-edge solutions that proactively meet market needs, with a sustainable and integrated approach."

https://www.carel.com/

DONNA-MARIE SMITH, STRATEGIC APPLIED MARKETING MANAGER, KOOLTECH

Distributor Kooltech has strengthened its team with the appointment of **Donna-Marie Smith** as Strategic Marketing Manager

With over 25 years' experience in the HVACR sector, she joins from PR and marketing agency HVAC Communications. She previously worked at LG Electronics as B2B Product Marketing Lead, Space Air and Daikin Europe.

In what is a new role within the applied heating team headed by Scott Mason, Smith will be responsible for the development and execution of integrated marketing campaigns and emphasising the key benefits of Kooltech Applied and K-con products.

Jonathan Brown, Commercial Director of Kooltech, said: "Donna-Marie's appointment strengthens our applied sustainability team and reflects our ambition to become the provider of decarbonisation heating solutions across the built environment."

Smith said: "Kooltech is an amazing company that is very invested in its employees and customers. I and looking forward to marketing the applied and sustainable solutions and playing my part in the transition to a low-carbon future."

https://www.kooltech.co.uk/

LUCY HUTCHINS, HEALTH, SAFETY, ENVIRONMENT & QUALITY MANAGER, AERMEC UK

Aermec UK has appointed **Lucy Hutchins** as its Health, Safety, Environment & Quality Manager.

She joins the business with a strong background in regulatory compliance, risk management and environmental sustainability, in sectors including environmental contracting and manufacturing.

The group-wide role will see her oversee the planning, implementation, monitoring and reviewing of all Aermec UK policies and procedures.

Hutchins said: "My personal aspirations are to build a culture that is strongly focused on organisational health and safety. I will be working with key stakeholders and supporting them with specialist advice, policies and guidance whilst promoting a culture of safety and continuous improvement.

"Aermec is a fantastic business which is continually evolving and growing. With diversification into many market sectors of the HVAC industry, now more than ever it is imperative that there are robust health and safety strategies in place, whilst making our workplace a healthier, happier place for all."

Paul Lawrence, Managing Director of Aermec UK, said: "Lucy's expertise will inform and strengthen our health and safety policies."

www.aermec.co.uk

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