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THE ACR JOURNAL

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Essential Information for the Air Conditioning and Refrigeration Industry

NATIONAL ACR & HEAT PUMP AWARDS 2025
See pages 28 & 29 for details

ACR & HEAT PUMP REGIONAL EXHIBITION
See page 44 for details

Ask ME
about low-carbon heat pumps

Ecodan CAHV-R

Mitsubishi Electric's Ecodan CAHV-R makes complex installations simple. Designed for commercial heating and hot water projects, it delivers water temperature up to 70C to help remove gas from buildings while minimising the need to change heat emitters.

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Welcome to the first issue of ACR Journal 2025.

It's strange venturing straight back into last year, but December saw the Trainee of The Year Awards take place at the Marriot Hotel in Leeds. It was yet again an outstanding success, with organisations across the ACR and Heat Pump sectors coming together to support this not-for-profit event. Please take time to look through the event coverage on page 14.

Onto this year's events—we are celebrating our 35th anniversary at ACR Journal, or ACR Today, as some of you will remember! We have included a few pictures showing how we have evolved. It has been fascinating looking through past editions and seeing how R22 was the next big thing, then R407C...I'm sure you get the picture!

With the National Air Conditioning, Refrigeration and Heat Pump Awards taking place on March 6, the judging took place earlier in the month, and an unprecedented number of entries were received. You can read more about the entries the judges selected as finalists on page 28. Best of luck to all, and I'm looking forward to seeing you all in Manchester.

Elsewhere, our Women in the ACR Industry feature includes Sam Bucknell and Astrid Prado, newly appointed co-chairs of the Women in RACHP Network. We also show how Helirig delivers HVAC equipment when cranes prove too challenging.

I hope you enjoy this edition.

Andy

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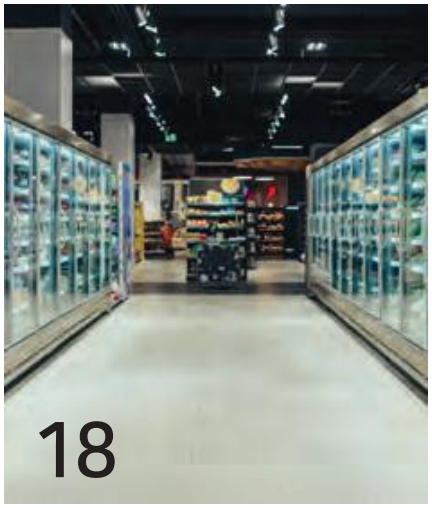

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Modine named Beijer Ref Supplier of the Year

Modine has been recognised as Supplier of the Year by Beijer Ref UK & Ireland.

The award was made at Beijer Ref's 20th Supplier Dinner in York, which was once again attended by many members of the wholesale group's supply partners from the UK and Europe.

Modine, manufacturers of evaporators, condensers and gas coolers, was named Supplier of the Year for 2024.

Pictured, from left, John Billson, Managing Director, Beijer Ref UK & Ireland, Davide Bianco, Senior Sales Manager EMEA-SA, Modine, and Greg Cattell, Purchasing Director, Beijer Ref UK & Ireland.

HRS golf returns to Old Thorns

The 38th Hampshire Refrigeration Society Annual Golf Tournament is scheduled for 17 July in the familiar surroundings of the Old Thorns Hotel, Golf and Country Club Resort.

The highly popular event will again begin with a 4-ball, 9-hole Texas Scramble, which gives the players a chance to meet up with their team-mates and warm up for the main tournament. This is followed by breakfast/ brunch in the Sports Bar, after which players will start the 18-hole Stableford Tournament.

On completion of rounds, guests can make use of the leisure facilities including the pool, spa and gym, or relax in the Sports Bar. In the evening, a four-course dinner will be served at 7.30pm prompt, followed by the prize presentation.

If you are not on the HRS emailing list, please contact Jayne Emm to arrange a golf booking and sponsorship form (jayne.emm@btinternet.com; 07979 208795).

The HRS been able to secure 50+ rooms for a limited period, before they are released for general sale. Superior rooms, with single or double are available for £110 B&B. Please book rooms directly with Old Thorns (01428 724 555) to avoid disappointment. A deposit of £30 per person will be required.

Delivering decarbonisation for landmark building

British Land's flagship London headquarters is benefitting from new heat pump technology to deliver its cooling and heating.

York House is a five-storey, multi-tenanted office building in Marylebone, which previously relied on gas boilers for heating and requires 24-hour cooling with extended fresh air requirements.

When looking to decarbonise the building, British Land opted for two air source heat pump chillers and one water-to-water heat pump from Mitsubishi Electric to replace four gas boilers and an old chiller system.

This was part of a wider goal to achieve a 75% reduction in operational carbon and a 25% reduction in energy use by 2030, and the result is a building where heat pumps deliver a more than 400 kilowatt-hour reduction in energy use year-on-year.

The design of the solution was provided by 21 Engineering, with installation by Nationwide Air Conditioning.

The chillers are also helping British Land to reuse waste heat from the process to heat the building and minimise energy consumption. The four-pipe heat pumps use R513A, a refrigerant with a lower global warming potential. Using R513A has also helped British Land get the Energy Performance Certificate (EPC) rating for the building as high as possible.

Roofing ventilation 'key to tackling overheating'

Ventilation supplier Klober says the issue of overheating in homes will become a greater priority when the Future Homes Standard (FSH) comes into effect this year.

Klober believes that rising temperatures and growing awareness of climate change are highlighting the critical need for effective ventilation strategies that support mechanical extract ventilation while also balancing airtightness. It is emphasising the importance of correctly installed roofing ventilation to address this challenge. These measures support mechanical extract ventilation which help to balance airtightness with effective airflow, ensuring homes meet regulatory requirements and provide healthier, more comfortable living environments.

Overheating has become a pressing topic in recent years and has led to the introduction of Part O of the Building Regulations, which specifically aims to limit solar gains and provide sufficient ventilation to remove excess heat. This responds to both the increasing climate change issues, while also helping to improve building efficiency.

Under the CIBSE TM59 methodology, properties can be considered to be overheating if the internal temperature of bedrooms exceeds 26°C for just a small percentage of the night, and this can have negative impacts on health and wellbeing. It can also be dangerous for the most vulnerable groups of people. In a report from Arup that was commissioned by the Climate Change Committee, however, it revealed that about 55% of the UK's housing stock is classed as overheating in the current climate.

Nick King, Portfolio Manager at Klober, said: "Overheating is already a problem for many homes – with stifling temperatures being uncomfortable and known to cause issues such as exhaustion and generally triggering productivity to drop. It's vital that, as a nation, we get on top of this issue, given that the global climate is expected to go up by a further 1.5 - 2°C in the next few decades.

"Where, for example, mechanical extract ventilation (MEV) systems are used, it is essential that effective outlets are in place to ensure their efficiency. Using high-quality roofing ventilation solutions helps to combat the overheating challenge while supporting overall building performance.

"There are different options available for ventilating the roof space, with different vents that can tackle different scenarios. By bringing awareness to the topic, we can begin to reduce this issue of overheating in the home, before the problem escalates."

Daikin targets easier carbon data reporting

Daikin is building a suite of Environmental Product Declarations (EPDs) for its climate control solutions to assist in carbon data reporting.

The available EPDs include the VRV5 R32 heat recovery system and R32 ducted fan coils, with many more in development, including one for its CZ-HT commercial heat pump.

With a growing number of businesses committing to measuring and reducing the whole life carbon impact of their operations, EPDs are a key tool for obtaining robust and transparent data.

Steve Molloy, Sustainability and Commercial Solutions Manager at Daikin, said: "There is a huge and quickly increasing appetite for EPDs from our clients, as every business has its own net zero goals and obligations that they must meet. With a more considered focus on whole life carbon, having easy access to clear and reliable data about all stages of a product's life cycle allows specifiers, developers and installers to better understand the environmental impact of the products they choose.

"EPDs provide the transparency needed to drive sustainable change and we are proud to be leading the way in this effort. We are committed to further developing our offering, providing our customers with the right data, services and products to meet their needs, as well as those of their clients."

Munters makes the difference for seed storage

Climate control specialist Munters has delivered improved storage conditions for a leading wild seed producer.

Established in 1980, Emorsgate Seeds supplies seeds for rewilding and conservation projects across the UK, including to The National Trust and RSPB.

The business faces significant challenges in maintaining optimal storage conditions for its seeds. Humidity control is crucial for increasing seed longevity and preventing germination during storage.

Prior to the installation of Munters dehumidifiers, seeds were stored in a repurposed meat store that struggled with moisture control, particularly on warm days. This led to unreliable storage conditions, with fluctuating humidity levels that often failed to meet the desired standards.

To address these issues, Emorsgate collaborated with Munters to install a desiccant dehumidifier to maintain consistent conditions of 45-50% relative humidity (RH) within a +/- 5% RH tolerance, all year round.

Following their relocation to a larger farm, Munters conducted a thorough survey to ensure the system remained optimal. As a result, Emorsgate installed four additional desiccant dehumidifiers to maintain conditions across their new cold stores.

Dan Campbell, Project Manager at Emorsgate, said: "Working with Munters, we have been able to bring seed production and modern farming into the 21st Century. For any future investments, we will certainly be coming directly to Munters."

EMI makes market predictions to 2030

Eurovent Market Intelligence has published a new report presenting a picture of the HVACR market from 2023 and analysing future trends and challenges with forecasts until 2030.

The data provider says the 154-page HVACR 2030 report aims to help manufacturers understand the direction of the market by going beyond the usual framework of its collections and capitalising on the long history of its statistics, with many cross-analyses, hindsight and insights.

Eurovent Market Intelligence, which celebrated its 30th anniversary in November, uses statistics from more than 500 participating manufacturers to compile its data.

Following introductory chapters covering a European economic overview, regulatory developments and market overview, the report presents analysis of 16 HVACR products in five groups:

- Cooling: cooling towers, dry coolers, adiabatic coolers.
- Refrigeration: coolers, condensers, CO2 cooling units.
- Thermodynamics: chillers, rooftops, IT Cooling (CRAC, RACK, AHU and fan walls), VRF.
- Terminal units: fan coil units, chilled beams, air curtains.
- Ventilation: AHU, central residential ventilation with heat recovery (MVHR), air filters.

The report is priced at €2,000 for EMI participants and €6,000 for non-participants.

For more information, contact **statistics@eurovent-marketintelligence.eu**

Quidos launches Premium Supplier scheme

Quidos has created a new voluntary scheme, via its F-Gas Register, for members of the supply chain to demonstrate they are exceeding the minimum standards required by F-Gas regulations.

The Premium Supplier scheme has been introduced by Graeme Fox, recently appointed as Quidos' F-Gas Register Director, who implemented a similar programme during his time at REFCOM.

He said: "When I created the scheme in my previous industry role it was widely lauded as a positive move for the industry sector in helping suppliers, wholesalers, and manufacturers to signal their intent in demonstrating our sector could be professional in its sales of equipment containing refrigerants than can be damaging to the environment if released to the atmosphere.

"The initiative won industry awards for its progressive stance at the time and I am excited to be driving this forward and improving on the offering to industry. This new scheme will fully audit suppliers ensuring they are properly training and checking their sales staff to make sure they only sell to appropriately qualified and certified business entities. If you do not audit properly then how can you be confident that your scheme does what it claims?

"The F-Gas Register is proud to be championing best practice and demonstrating its commitment to professionalism and protecting the interests of contractor members who are frequently undercut by rogue traders obtaining systems and equipment illegally through online sellers, and a supply chain which has been known to supply non-registered businesses without obtaining the legally required evidence of registration."

Logicool Air Conditioning became the first supplier to back the scheme, with wholesale group Wolseley Climate Centre also swiftly declaring its support.

The F-Gas Register operates a mandatory registration scheme under licence to the Secretary of State which currently has 3,500 companies registered.

info@fgasregister.com

Scouts prepared for winter thanks to Fujitsu

A Hertfordshire Scout group was facing a long, hard winter when the outdated heating system in its meeting hut failed. But a donation of free equipment from Fujitsu General Air Conditioning UK means the Scouts are now fully prepared to face the colder months.

The Second North Watford Scout Group includes Squirrel Scouts, Beaver Scouts, Cub Scouts and Scouts, who are based in a concrete building dating back to the 1960s. Its forced air gas-fired heater was beyond economical repair and, without radiators in the hut, an air-based solution was required.

The group approached Dyffyd Goode, Commercial Supervisor at Fujitsu, due to his connections to the Scout movement in the same district. When a heat loss calculation revealed that the hut needed 20kW of heating, Fujitsu donated two 10kW wall mounted split systems from the training room of its Elstree HQ. Due to be replaced by newer units, the systems were otherwise destined to be stripped for parts and/or scrapped.

Goode said: "They reached out to me because they wanted to know what options were out there. They would have been looking at running expensive electric heaters as a temporary measure until they decided how to proceed, so it was great that Fujitsu was able to donate the equipment to a community-based charity. It would definitely have been a long winter for the group.

"The kit we supplied can provide cooling as well in the summer, but that's just a nice bonus, really. The main thing is that the group's meetings can continue in comfort, whatever the weather."

The equipment was installed by Mick Mills, owner of Watford-based electrical and air conditioning contractor Truenorth. He also donated his time and any materials he had in stock, only charging the group for additional purchases specific to the job.

He said: "I was involved in the Scout movement myself when my two sons were younger and I've known Dyffyd for as long. In fact, he was my first employee at Truenorth when I took him on as an apprentice. So when he asked about the possibility of fitting the equipment, I was more than happy to help."

In a letter of thanks, John Savern, Chairman of the Second North Watford Scout Group, said: "Thank you for your recent, very generous donation and installation of air conditioning equipment for heating our Scout HQ. I know the children will really appreciate it over the coming winter months.

"It is only thanks to the generosity of individuals and businesses, like yours, that we are able to provide Scouting, and thus deliver all the fun, learning and life skills the children get from being in Scouts."

Two indoor units provide heating for the group, with the added bonus of cooling in summer

One of the Fujitsu outdoor units at the Scout hut in Watford

Guidance on choice of molecular filters

Eurovent has published new guidance on the selection of molecular filters for supply air for general ventilation rated according to ISO 10121-3. It is aimed at all HVAC professionals dealing with ventilation systems.

The Eurovent Recommendation 4/26 provides comprehensive and practical guidance on the selection of ISO 10121-3 rated molecular filters for outdoor air in general ventilation systems for typical applications. It discusses issues such as the importance of molecular filtration, the most significant gaseous pollutants and their impact on health, sources of information on the local concentration of gaseous pollutants in ambient air, the principle of operation and types of molecular filters, practical aspects of molecular filter exploitation and much more.

The recommendation was published by Eurovent and prepared in a joint effort by participants of the Product Group 'Air Filters' (PG-FIL), which represents the majority of all manufacturers of these products active in the EMEA market. The document can be downloaded free of charge on the Eurovent website.

https://www.eurovent.eu/publications/eurovent-4-26-selection-of-molecular-filters/

Clivet Group UK earns growth award

Clivet Group UK was recognised as the air conditioning and heat pump manufacturer's fastest growing subsidiary at the global General Managers' Boot Camp in Milan.

Andy Taylor, General Manager of Clivet Group UK, said: "It was really nice to receive this recognition from our head office for the hard work that all of the team in the UK put in every day. We have big ambitions, and with the incredible support from everyone at Clivet UK, they are turning into reality."

Clivet has been producing sustainable comfort solutions, including heat pumps, for more than 35 years and was established in the UK in 2001.

Andy Taylor, General Manager, Clivet Group UK, left, and Andrea Guderzo, Subsidiaries & International Development Manager, Clivet S.p.A.

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Mansfield Pollard reports record performance

Air management specialist Mansfield Pollard says it is on track to meet its five-year growth plan after posting increased turnover and profitability in its latest financial results.

For the year ended 31 July 2024, the Bradford-based manufacturer and provider of industrial air handling units, acoustic control products and data centre cooling solutions saw turnover rise in line with expectations by 20% year-on-year to £24m. Underlying net profit also increased by the same margin to £2.02m.

Based on current forecasts, Mansfield Pollard expects revenue performance over the next two financial years to continue positively, boosted by a strong pipeline of new and existing customer opportunities, with a number of new data centre and healthcare projects continuing to be rolled out.

The business is on track to meet its £50m turnover target by the end of 2026, as set out in its five-year business plan.

The increased turnover comes as the business made strategic investments, including more than doubling the available manufacturing space to a total of 321,000 sq ft with a move to a single site, and the purchase of industry leading machinery which has improved production times.

Alongside the new manufacturing facility, the business has also invested in a state-of-the-art 10,000 sq ft bespoke office space which also opened during the period, enabling senior leadership functions to come together for the first time. The new space also includes the latest in employee wellbeing innovations for use by employees, including nap rooms, collaboration spaces and a free-to-use gym.

The investments are part of Chief Executive Officer Lou Ellis-Frankland's commitment to delivering a programme of activity focused on transforming workplace culture to create an environment which supports everyone and positively contributes to financial performance. This and other investments were recognised recently when Mansfield Pollard was featured in the coveted 'Sunday Times Top 100 Places to Work' list.

Ellis-Frankland said: "For more than 150 years Mansfield Pollard has transformed thousands of working environments across the air management space, controlling temperature, removing pollutants and limiting noise across all working environments. We are proud of our strong Yorkshire heritage and are looking forward optimistically as we continue to lead the field as an innovative British manufacturer.

"We have a fantastic and loyal team and myself and the Board are extremely passionate about making sure Mansfield Pollard is not only a great place to work but that our people are at the heart of everything we do.

"This means investing not only in our spaces but in our culture and ensuring we are offering our people industry leading physical and mental health benefits. This includes encouraging all team members to develop their own wellbeing action plans, so they feel supported in managing their health and welfare."

Carrier customers in driving seat

Carrier Commercial welcomed a record number of customers to its annual conference, held at Silverstone, which featured former Formula 1 World Champion Damon Hill as guest speaker.

Throughout the day, Carrier experts provided insights into its innovations in sustainable and intelligent building solutions while addressing key topics and trends aligned with customers' sustainability goals, energy needs, and cost pressures.

The data centre team outlined the forecasted growth in this industry and explained how a 'conception to completion' approach to HVAC can benefit not only the data centre but also its wider community. Guest speaker Laura Bishop, a leading voice in decarbonisation and sustainability, talked about the adoption of heat pumps in the UK.

Rounding off the afternoon of presentations was the Carrier HVAC Service team who explained more about its service and aftermarket solutions with a focus on lifecycle asset management and predictive maintenance strategies.

Customers then had the opportunity to compete in teams through various racing-themed activities in the Silverstone pit garages such as a pit stop challenge, which included tyre changing, Batak light reaction, and simulator racing. In the equipment zone, guests could see some of Carrier's latest innovations including the AquaForce 30XF, specifically designed for the data centre, and a look at the newly extended AquaForce 30XWH range.

Winners of the pit stop challenge with Damon Hill, third left

There were also areas for Carrier's building controls and the Carrier Rentals team to explain more about the range of solutions they offer, alongside a mini recreation of Carrier's new Training Academy.

The final section of the pit garage was filled by British Touring Car Championship team, Laser Tools Racing with MB Motorsport. This season's championship-winning driver, Jake Hill, reflected on a historic season for the team, in which Carrier was a proud partner.

Didier Genois, Vice President and General Manager, Carrier Commercial HVAC, Europe, Middle East and Africa, said: "Our industry is essential to achieving global carbon reduction goals. At Carrier, we're committed to leading with innovative solutions and products that advance energy efficiency and environmental stewardship."

Natural refrigerants provide 'safe harbour' says BITZER UK

Compressor specialist BITZER UK is championing the use of natural and ultra-low global warming potential (GWP) refrigerants as the future of sustainable cooling.

The company highlights natural refrigerants such as propane (R290), CO_2 (R744), and ammonia (R717) as essential to addressing both current environmental concerns and future regulatory challenges.

"Natural refrigerants provide a 'safe harbour' amidst the uncertainties surrounding synthetic refrigerants and emerging regulations," says Kevin Glass, Managing Director of BITZER UK.

"With the revised F-Gas regulations further limiting high-GWP refrigerants and the potential for new restrictions on certain PFAS-based HFC/HFO refrigerants, it is increasingly clear that sustainable cooling will depend on natural alternatives."

The ongoing debate over PFAS, compounds associated with certain HFCs and HFOs, poses additional challenges. While some HFOs may face fewer restrictions due to their more environmentally benign properties, the complexity and evolving nature of regulations make it challenging for end-users to commit to synthetic refrigerants in the long-term.

In the light of this, BITZER UK anticipates that major end users will follow the lead of pioneers in sectors such as food retail, and increasingly turn to natural refrigerants as reliable, proven options with a low environmental impact.

Glass added: "Natural refrigerants bring several decades of proven performance to the table. Refrigerants like propane, carbon dioxide, and ammonia have a solid track record. They come with known risks, such as flammability and high pressures, but these are well-understood and manageable with the right design and training.

"Far from being uncharted territory, we have the technology and expertise to deliver safe, efficient, and sustainable cooling systems today."

In anticipation of these shifts, BITZER UK is expanding its training initiatives to ensure technicians and end-users are well-prepared. BITZER's Schaufler Academy in Rottenburg, Germany, has played a key role since 2016, providing specialist instruction in the use, design and safe handling of natural refrigerants. Building on this success, BITZER UK will launch new training courses at its Milton Keynes site next year, which will include updates on technology for use with natural refrigerant-based systems.

Specialist training in CO_2 at BITZER's Schaufler Academy

MHI earns top marks for school project

High efficiency VRF air conditioning systems from MHI have helped to transform the learning experience for pupils with complex needs at a school in Yorkshire.

Keighley-based specialist air conditioning and refrigeration contractor Knight Engineers completed a successful phased installation to deliver heating and cooling for the refurbished classrooms and sports hall at Fairfield School in Batley.

The MHI solution, supplied by wholesaler HRP, was chosen based on value for money and installation simplicity, as the need to remain within budget was crucial.

Chris Govan, from MHI Technical, said: "Knight Engineers chose to use MHI air conditioning on this project for two compelling reasons: cost efficiency and installation simplicity. The solution not only met all financial requirements but also provided high-quality air conditioning, while the ease of installation minimised disruption and ensured a smooth, efficient process."

Three heat recovery VRF systems from the MHI KXZ range were designed and supplied by HRP, along with 24 indoor cassettes covering the specialist classroom areas plus three 10kW wall mounted MHI split systems in the sports hall.

The individual VRF system capacities are 56kW (connected to 9 cassettes), 50kW (again connected to 9 cassettes) and 33.5kW (supplying 6 cassettes), all operated via MHI's SC-SL4-AE2 centralised touch screen controller.

The installation took place during three holiday periods throughout the school year to avoid any disruption to the curriculum.

Paddy Coleman, Operations Manager at Knight Engineers, said: "MHI provided the ideal balance of cost-effectiveness and ease of installation, making it the preferred choice for this school project."

Fairfield School in Batley caters for pupils with complex needs

The MHI solution was selected due to cost efficiency and installation simplicity

24 indoor cassettes were installed in the specialist classroom areas

SoundScoop helps create Passivhaus school

Ventilation manufacturer Passivent has supplied its SoundScoop acoustic cross-talk attenuators for use in a new primary school in Wales designed and constructed to meet Passivhaus standards and achieve a BREEAM Excellent rating.

Ysgol Penbre (Pembrey School) near Llanelli was designed by Carmarthenshire County Council as part of its multi-million pound Modernising Education Programme in collaboration with the Welsh Government's Sustainable Communities for Learning Programme.

At just 320mm high, the SoundScoop units are accommodated within the bulkheads that supply the rooms with fresh air, which can also be heated or cooled, via a centralised air-handling plant. The units then passively exhaust air back out into the central circulation space for it to be extracted, tempered and redistributed back into the classrooms by the main air-handling plant.

Passive in operation, the system requires no mains power supply or maintenance. It is said to combine exceptional acoustic attenuation with very low airflow resistance enabling cross-flow ventilation between internal spaces of a building and, in the case of schools, compliance with both Building Bulletin 93 (acoustic design of schools) and Building Bulletin 101 (ventilation, thermal comfort and indoor air quality in schools). SoundScoops can also be fitted with a fire damper (by others) in fire walls to satisfy fire regulations.

Providing technical support both at the design and installation stages, the Passivent team worked closely with project partners Bullock Consulting (Mechanical and Electrical Consultants), specialist contractor Narbeths Mechanical Services, and local contractor TRJ (Betws).

Sian James, from Bullock Consulting, said: "The unique design of the SoundScoop made it the perfect choice for attenuating noise between the classrooms and circulation spaces. As the system is passive in operation and requires no energy to operate, this contributed greatly to the sustainability goals for the school."

ICS Cool Energy creates chiller engineer apprenticeship programme

Temperature control solutions provider ICS Cool Energy has announced the launch of a new four-year apprenticeship programme, in partnership with Portsmouth College and Bradford College, to develop the next generation of chiller engineers.

The programme will recruit up to eight apprentices annually–four in the South of England in partnership with Portsmouth College and four in the North with Bradford College.

"This programme reflects our commitment to fostering talent and ensuring the industry's future workforce is equipped with the technical expertise and hands-on experience required to excel," said Luke Sullivan at ICS Cool Energy. "Through a combination of academic learning, practical skills, and on-the-job training, our apprentices will gain the specialised knowledge and problem solving capabilities necessary for success in this field."

Over the four years, apprentices will gain in-depth knowledge and practical experience in water chiller systems through structured learning and real-world application:

- Year 1: Introduction to ICS Cool Energy and preparation for college studies and company roles, with guidance from senior engineers.
- Year 2: Focus on foundational skills, including basic refrigeration principles, electrical and mechanical skills, health and safety, and environmental compliance. Practical training includes tool handling, small chiller installations, and shadowing senior engineers. Towards the end of the second year, apprentices train for F-Gas Category 1 certification for handling and using fluorinated refrigerants legally in the UK.
- Year 3: Builds on foundational skills with advanced water chiller operations, electrical control systems, and hydraulics. Practical training covers large scale installations, maintenance, diagnostics and system optimisation for energy efficiency. The second year concludes with NVQ Level 2 refrigeration and air conditioning certification and F-Gas Category 1 certification.
- Year 4: Focus on large-scale commercial and industrial systems, advanced fault diagnostics, and system integration. Apprentices lead installations, perform complex repairs, and engage in client communication and system design. They consolidate skills and complete advanced qualification concluding with the NVQ Level 3 certification in refrigeration and air conditioning with a focus on water chillers.

Get in. Get out. Get on to the next job!

TOOLS TALK

Hilmor are revolutionising the industry by creating tools that are a step ahead. Every tool made is designed to give you all the features you need and none of the ones you don't. Hilmor are determined to deliver smart and innovative solutions when and where you need them most. So, you'll be fully equipped to retool and conquer.

In the ever-evolving fields of HVAC/R/ASHP and plumbing, the tools used by professionals play a pivotal role in ensuring the efficient and reliable operation of systems. Hilmor, a renowned brand in the industry, has been manufacturing high-quality hand tools that are efficient, deliver exceptional results and look good too.

Digital adjustable torque wrench (1963826)

Tightening to true torque when working on mini splits is serious business. Under tightening could result in refrigerant leaks, while overtightening could mean burst tubing. That's why the Hilmor Digital Adjustable Torque Wrench is critical to perfecting your torque time. The 9-factory memory settings make it quick to set common torque values, while the digital display shows the amount of force applied to the flare nut. And if that didn't make the job easy enough, lights and buzzers illuminate and sound when the desired torque is achieved.

Deluxe compact swage tool kit (1964041)

The Hilmor Compact Swage Tool is thoughtfully designed to fit into the smallest of spaces and can knock out the picture-perfect swage in just one shot. An innovative hydraulic mechanism and release button let you take care of any job single-handedly.

Ratcheting plastic tube cutters (1885393)

These ratcheting plastic tube cutters are rugged and durable, made with an ergonomic cast-aluminium body and a high-carbon steel blade. All of these features help increase productivity and the life and durability of the tools.

Ratcheting 9-in-1 multi-tool (1891259)

It only takes a simple twist of the hand to drive a screw, nut or bolt in no time. Nine different bits are at your disposal. A ratcheting mechanism and an ergonomic rubber grip come as standard.

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The ACR & HEAT PUMP Trainee Of The Year Awards

5th December 2024

WorldSkills silver medallist Luke Haile addressed a 170-strong audience at the ACR & Heat Pump Trainee of the Year Awards 2024, held at The Leeds Marriot Hotel, providing insights into his career so far and his journey since winning the event in 2021.

Haile, of Lightfoot Defence, said: "Events like this don't just celebrate individual achievements; they highlight the collective effort it takes to nurture and grow talent in our field. Opportunities like this aren't just about recognition; they create a sense of belonging and pride in what we do."

Established in 2009, the ACR & Heat Pump Trainee of the Year Awards is a non-profit luncheon that recognises the young people who represent the future of the air conditioning, refrigeration, and heat pump sectors. This year, 28 candidates competed for recognition in four categories: Air Conditioning Trainee Engineer, Refrigeration Trainee Engineer, Heat Pump Trainee Engineer, and Trainee Sales and Support Service.

Hayley Comey, Events Manager at ACR Journal and Heat Pumps Today, said: "The number of entries we received this year is unprecedented. Forty-eight different organisations attended on the day, so thank you so much to everyone who supported this fantastic event. Huge congratulations to all of the finalists; you should be so proud of your achievements so far."

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SILVER

Brandan Rushton - Building & Maintenance Services Ltd

BRONZE

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James Bridgewater - GalxC Cooling Services Ltd

BRONZE

Tom Overend - Forest Group

ACR Trainee of the Year 2025

will take place on 4 December at the Leeds Marriot Hotel.

For enquiries, please get in touch with Hayley Comey at **hayleyc@warnersgroup.co.uk**

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Charlie Wyatt - IMS Heat Pumps

A new perspective on solid refrigerants

Solid refrigerants, or so-called 'caloric materials', have been proposed as a replacement for refrigerant gases for several decades. But so far, the underlying materials performance prohibited commercial applications. A research group from the University of Cambridge has now discovered a new class of materials which allow for ultra-efficient and low-cost use of solid materials called barocaloric materials. Florian Schabus, Chief Commercial Officer at Barocal, looks at why this is a potential game-changer for the industry.

Barocal's latest TRL5 prototype is said to deliver cooling powers and temperature spans in line with vapour-compression systems while surpassing them in terms of energy efficiency

The first synthetic refrigerant gases were created in the 1920s and fundamentally changed cooling and refrigeration. The discovery of Freon allowed the industry to move away from toxic or flammable alternatives that would prevent widespread adoption. Refrigerant gases like CFCs or HFCs enabled the mainstreaming of comfort cooling and are the basis of our modern living standard. However, they cause severe environmental issues. Through the leakage of gases and low energy efficiency, the HVAC industry is contributing massively to climate change.

Given the size of the problem, numerous alternatives have been proposed, including the use of solid materials that undergo phase changes. The idea of using these so-called 'caloric materials' as a replacement for gaseous refrigerants to overcome their inherent challenges is not new. In fact, research into solid refrigerants has been going on for decades.

A history of unfulfilled promises

NASA first studied 'magnetocaloric materials' in the 70s and in the last decades many prototypes based on solid materials have been unveiled. Over the years scientists discovered different material classes that could be activated using e.g. magnetic fields, mechanical stress or electric fields. Contenders were numerous and the promise was usually the same: by replacing gases with solid refrigerants, one could eliminate the fugitive emissions associated with vapour-compression and increase energy efficiency. But none of this ever materialised.

The reason is simple: proposed systems were fundamentally limited by their core materials. The thermal performance of caloric materials at that time was by a factor of 100x lower than that of conventional refrigerant gases. A fight against intrinsic materials properties that even the best engineering cannot win. Plagued by low efficiency, low temperature lifts and high materials cost, the industry rightly saw this as largely an academic pursuit.

To have a realistic chance of competing against synthetic refrigerant gases, new refrigerants would have to fulfil several criteria: large entropy changes, low-cost base materials, simple activation mechanisms, long lifetimes - just to name a few. A seemingly impossible task for novel materials, keeping in mind that the vapour-compression industry had over 100 years to refine and optimise its technology.

The discovery of barocaloric materials

The University of Cambridge has been at the forefront of solid refrigerant research for the last 15 years and is the origin of seminal work in different areas of solid refrigerant research. Even the best existing solid materials only delivered temperature lifts of about 3°C under magnetic fields generated by permanent magnets, which is impractical for most real-world applications. The research group in Cambridge set out to change that.

A widely cited 2015 Nature Communications publication[1] put so-called 'barocaloric materials' on the map. For the

first time, Prof. Moya, who led the research group in Cambridge, found a solid material with the same thermal performance as conventional refrigerant gases. This was a huge scientific breakthrough.

Like refrigerant gases, these barocaloric materials go through a phase change when compressed and change their temperature based on changes in pressure. But it was not only their large entropy changes which triggered interest. Since these materials are organic, they are simple to produce and already available on a commercial scale. They don't come with any environmental concerns and can be cycled almost infinitely while allowing for ultra-high efficiency operations. For the first time, there seemed to be a feasible pathway for new refrigerants to match conventional gases in terms of performance and cost while offering the potential of 2-3x higher energy efficiencies.

Pathway to commercial viability

However, it would take another few years for that materials promise to be proven in an actual system. Activating the materials takes high pressures and designing efficient heat transfer mechanisms proved to be difficult. The material can't be pumped and the compressor and heat exchange design differ from existing systems. Barocal, a spin-out resulting from materials research at Cambridge, works on exactly that. Supported by the Global Cooling Prize, an initiative by the Rocky Mountain Institute and Breakthrough Energy, Bill Gates' climate funding arm, it has been working on first functional prototypes based on these novel materials.

With a team of 10 engineers and scientists, Barocal is working on new systems around these special materials. Their latest TRL5 prototype is said to deliver cooling powers and temperature spans in line with vapour-compression systems while surpassing them in terms of energy efficiency. The technology is modular and has a high energy density, making it suitable for most cooling, heating and refrigeration applications around ambient temperature.

This is a true paradigm shift for the scientific community, but to be a real contender to conventional cooling systems, the company will have to prove its ability to reduce the system cost to effectively compete with refrigerant gases on the market. Barocal plans to partner with OEMs and manufacturers to help achieve the scale and production volume necessary to reach cost parity, but a fundamental challenge remains: compressing a solid requires higher pressures than compressing a gas.

Outlook

The discovery of novel barocaloric materials may be foundational for an entirely new generation of refrigerants. The thermal performance of these materials matches that of refrigerant gases, and 1kg of materials can theoretically deliver over 121,000 joules. While research into new materials is ongoing, this performance already today is good enough for new cooling systems that have the same form factor and functional performance as conventional systems while offering 2x higher efficiency.

Amidst all the excitement, the real field proof is still out. The company plans to deliver the first field pilot systems later this year and will collect real deployment data together with OEMs. It remains to be seen whether this is the start of a real revolution or whether the market barriers are too big. After all, these systems would require different maintenance and are trying to change an industry that at times can be slow moving and largely cost-driven.

So 97 years after Thomas Midgley Jr. synthesized Freon, the first commercial chlorofluorocarbon, we may see another fundamental shift in refrigerants. And it is urgently needed. Without radical changes, refrigerant gas leakages will cause additional emissions of 57 Gt Co_2e over the next 25 years[2]. This is more than 1.5x the entire world's annual emissions. Together with the energy efficiency savings, a switch to solid refrigerants could almost singlehandedly put us back on a 1.5°C pathway.

https://barocal.com/

The Barocal team is working to develop systems around a new class of solid materials

1. https://www.nature.com/articles/ncomms9801
2. https://drawdown.org/solutions/refrigerant-management

Low-GWP options for refrigeration applications

Neil Roberts, Technical Sales Director at Climalife, explains the importance ensuring longevity with the correct selection of refrigerant.

The F-Gas phasedown in whichever nation's form, is a significant driver for the adoption of very low Global Warming Potential (GWP) refrigerants across various refrigeration applications. This phasedown aims to reduce the environmental impact of refrigerants by encouraging the use of alternatives with lower GWPs.

Retrofitting existing systems designed for high or moderate GWP refrigerants to very low GWP alternatives is challenging and often impractical. Therefore, it is crucial for new equipment to use refrigerants with a low, or preferably very low GWP, to ensure longevity and compliance with future regulations.

System specifics

For hermetically sealed commercial refrigerators and freezers, the use of refrigerants with a GWP of 150 or higher has been banned since January 2022. This regulation significantly limits the options available for these applications. A common choice for this type of equipment are hydrocarbons such as isobutane (R-600a), propane (R-290) and propylene (R-1270), which are highly flammable and are assigned the A3 safety class. Safety standards, such as IEC 60335-2-89, limit the maximum charge of A3 class refrigerants to 500g. Despite this limitation, R-290 is often chosen for its excellent energy efficiency.

Although not currently applicable in Great Britain, the EU F-gas regulation has extended this restriction to include self-contained stationary refrigeration systems (except where safety exemptions exist) which may involve much larger refrigerant charge sizes and potentially make the use of A3 (e.g. R-290, R-1270) difficult within the current safety standards. A2L safety class alternatives to A3 refrigerants include R-454C and R-455A, both with GWP < 150, as well as R-1234yf and R-1234ze.

Carbon dioxide (R-744) is a non-flammable option with a GWP <150, however in some applications the equipment cost can be prohibitive, and it is important to compare the complete system energy efficiency, in some systems this can be considerably lower than other <150 GWP options.

In single compressor or non-retail commercial remote condensing unit systems, the existing F-Gas regulation for Great Britain banned the use of virgin refrigerants with a GWP of 2500 or higher for new stationary equipment, with a charge of 40 tonnes carbon dioxide equivalents (TCO2e) or more, since 2020. This led to the adoption of alternatives such as R-448A and R-449A, both with GWP <2500 but >1300. The HFC TCO2e phase down has reduced by 50% since 2020 and will continue to significantly reduce over the next few years raising the question as to whether R-448A and R-449A should still be used for new installations. Viable alternatives to R-448A/R-449A include R-454A, R-454C and R-455A, all with GWP <300. R-744 is also an option, but as previously mentioned, a full assessment compared to other very low GWP options should be made to ensure the most eco-efficient choice is made.

Since January 2022, new multi-compressor retail or food service systems with a cooling capacity of 40kW or more must use refrigerants with a GWP <150. Although in general, centralised systems can show performance benefits over distributed systems, modular distributed direct expansion systems with low GWP A2L refrigerants have proven to be cost-efficient and have lower total CO2 emissions in a retail environment. Studies have shown that A2L systems, such as those using R-454A, R-454C and R-455A offer lower 10-year total tCO2e emissions and life cycle costs compared to some other low GWP technologies.

Neil Roberts, Climalife

Refrigerants in action

Using very low GWP A2L refrigerants is nothing new. One of the first retail applications was installed by Central England Co-op in 2019 using the very low GWP A2L refrigerant R-454C at their Langley Park store in Derbyshire, UK. This installation achieved an 11% energy saving compared to a similar store operating with <2500 GWP A1 refrigerant. The analysis indicated that using R-454C led to lower capital expenditure, maintenance costs, and total emissions compared to an equivalent R-744 installation.

Also in 2019, Asda, a major UK supermarket chain that had already moved away from traditional centralised plant architecture in favour of a modular distributed system design, installed a low GWP A2L refrigeration system using R-454A at their Trafford Park Manchester store.

Since then, Central England Co-op and Asda have continued to install very low GWP A2L systems, demonstrating energy savings and lower emissions without significantly increasing system complexity or installation costs.

In industrial refrigeration, ammonia is widely used due to its high efficiency and low GWP. However, where ammonia is not feasible due to safety concerns, carbon dioxide (R-744) is often used as an alternative. Low GWP A2L refrigerants are also viable options for smaller industrial systems. For example, in 2017 Park Cake Bakeries installed a new refrigeration system using R-454A in a low-temperature warehouse at their site in Oldham, UK. The system, designed and installed by Dawson Rentals, demonstrated the feasibility and efficiency of using R-454A in industrial applications.

In 2022 a single circuit centralised refrigeration system was installed in a 15,000m^3 chilled cold store using very low GWP R-454C. The system used 414kg of refrigerant and was estimated to cost 28-32% less than other low GWP technologies, have an energy efficiency ~20% higher and annual emissions ~17% lower than an equivalent R-744 system.

Compliance and safety

Compliance with EN 378 and the Pressure Equipment Safety Regulation (PE(S)R) is essential for the safe and legal use of all refrigerants. Based on the location and access categories of the installation, EN 378 can be used to determine suitable design and what additional protective measures can used, covering a wide range of application needs. The PE(S)R is a legal requirement, and non-compliance can lead to prosecution. System design can help avoid more rigorous requirements, such as minimising the size or eliminating liquid receivers.

Risk assessments need to incorporate the requirements of The Dangerous Substances and Explosive Atmospheres Regulation (DSEAR) and are necessary for all refrigerants. DSEAR is often thought to only apply to flammable refrigerants but this not true. Any refrigerant which has the hazard code H280 on the safety data sheet (which is virtually all refrigerants) must comply with DSEAR. Compliance with EN 378 and PE(S)R is a crucial part of this process. Compliance with EN 378 guidance will in many cases prevent the formation of flammable atmospheres, but if this is not possible, risk assessments using the principles within EN 60079 (Explosive Atmosphere Standards) must be performed. Guidance documents on the safe use of flammable refrigerants are available from organisations such as the Institute of Refrigeration and the Federation of Environmental Trade Associations (FETA) and help is always available from responsible refrigerant suppliers such as Climalife.

Final words

In conclusion, legislation is driving the refrigeration industry towards the adoption of very low-GWP refrigerants. To avoid obsolescence and ensure long-term viability, new systems should be designed for use with very low GWP refrigerants. A thorough assessment of compliance, costs, and total emissions is crucial when choosing a very low GWP refrigerant. Support and tools are available from responsible refrigerant suppliers such as Climalife, to help navigate the transition to very low GWP technologies, ensuring that the industry can meet regulatory requirements while minimising cost and environmental impact.

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Managing Existing Refrigerants: Opportunity for the Circular Economy

An Interview with Elvira Nigido, Group Sustainability Compliance Manager at A-Gas, a world leader in the supply and lifecycle management of refrigerants and associated products and services: "We work to reduce the risk of serious environmental harm caused by refrigerant gases with high ozone-depleting and global warming potential"

The global economy is only 7.2% circular, despite the fact that this model is estimated to fulfill people's needs with only 70% of the materials we now extract and use. More than 90% of these materials, on the other hand, are either wasted, lost or remain unavailable for reuse for years, according to the Circularity Gap Report 2023. This scenario makes clear the urgency of moving human activity back within the safe limits of the Planet in every sector, including refrigerant gases.

In this case, the Montreal Protocol signed in 1987, and its subsequent amendments, including the Kigali Amendment of 2016, has been pivotal in phasing out ozone-depleting substances (ODS) and phasing down global warming hydrofluorocarbons (HFCs) in heating, ventilation, air conditioning and refrigeration (HVAC-R) equipment.

The Challenge of Existing Refrigerant Banks

However, historically it has not addressed the existing refrigerant banks, defined as the total amounts of these substances still contained in equipment and products not yet released into the atmosphere, which have the potential for fugitive emissions or worse, being deliberately vented.

"These refrigerants represent a significant, hidden climate challenge, thus leveraging the opportunity for more circularity", comments Elvira Nigido, Group Sustainability Compliance Manager at A-Gas, a global company specialising in Lifecycle Refrigerant Management (LRM), founded in 1993 in Bristol, UK.

"As our Sustainability Report 2023 explains, historically at A-Gas we were a re-packer and supplier of virgin refrigerants. Over the years, we have been transitioning and differentiating our value proposition to become a market leader in championing refrigerant circularity and enabling the supply of lower-GWP replacements".

Key Factors According to A-Gas

Numerous actions are necessary according to A-Gas, as Nigido points out: "Minimising emissions of refrigerants that otherwise may have been released into the atmosphere (even in the presence of anti-venting regulations); managing the refrigerant supply and demand imbalance by assuring refrigerant product availability during quota phasedowns designed to restrict importation and production; ensuring refrigerant product lifetimes are extended and buying the industry time to invest in technologies that will help them transition to using lower-GWP products".

And again: "Increasing the lifetime of refrigeration and air conditioning appliances and equipment; preventing the premature destruction of refrigerants that still have value allowing their useful life to be extended; Reducing the lifecycle emissions, including supply chain emissions associated with the production of virgin refrigerants".

How A-Gas Has Championed Circularity

Underpinning effective and viable refrigerant circularity is the recovery of used product. Without recovery, there is no circularity, and the industry (and end users) finds itself back in the linear model.

"Working with governments and local industry stakeholders to raise awareness about the risks posed by existing banks of refrigerants and their potential impact if left unmanaged is a critical starting point", Nigido explains. By investing in recovery equipment, cylinders and services, like Rapid Recovery, Rapid Exchange and Refri-Claim, and by partnering with stakeholders in its value chain, A-Gas has been offering practical and tailor-made approaches to LRM for more than three decades, considering the characteristics of each market and country.

"Recovered gas is often out of specification due to its use or the way it has been previously managed. Depending on the nature and level of contamination, we have invested heavily in deploying various reclamation technologies. This gives us plenty of capacity to clean and reclaim the used gas to AHRI 700 standards, which is equivalent to virgin-grade product specifications. Once refrigerant has been reclaimed and meets AHRI specifications, there is no differentiation between reclaimed and virgin products".

When reclamation is not possible, refrigerants are safely destroyed using UN-approved and TEAP-certified technologies, permanently removing the potential for future emissions. "By leveraging off compliance programmes and voluntary carbon market methodologies, we have been able to create tradeable carbon credits from the destruction of eligible material, whose value can lead to further investments in LRM efforts".

The scale of the opportunity to build a sustainable future is huge: "There is still much scope and potential and there is no shortage of collective work remaining to be done", Nigido concludes. "Through our LRM offerings and stakeholder partnerships, we will continue to invest in and expand recovery channels across regions. By maximizing the useful life of refrigerants and limiting the opportunity of release into the atmosphere, we can reduce the risk of serious environmental harm".

For further information: **www.agas.com**

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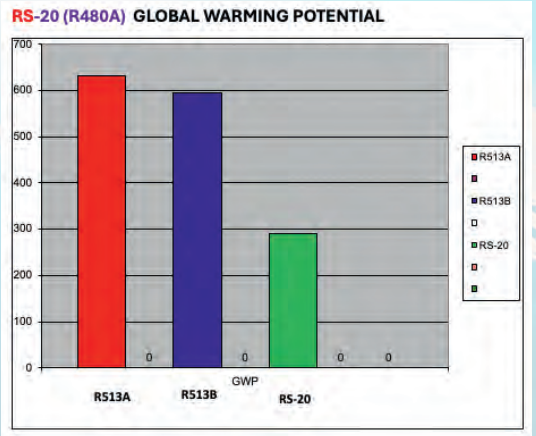

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An ideal time to add heat pumps to your portfolio

At the end of 2024, we issued a Report into the UK Heat Pump Market which threw up some interesting stats as well as some predictable headlines.

'Heat Pumps – the Financial Tipping Point' looked at the barriers to growth in heat pump sales as well as the opportunities that can be capitalised on. It focused predominantly on air to water heat pumps as this is currently what the 'general public' perceive as a 'heat pump'.

The UK has a legally binding target of reaching net zero carbon emissions by 2050, and an ambitious target of installing 600,000 heat pumps per year by 2028 – which we are a long way from. However, ongoing misconceptions and a lack of understanding about renewable heating are hampering uptake from homeowners.

At the same time, the commercial sector is making huge strides in the uptake of heat pumps for two predominant reasons.

Firstly, the Public Sector Decarbonisation Fund, otherwise known as Salix Funding. This is limited in how much budget is available each year, but over the last few years, it has quietly allowed hundreds of public sector buildings across the land to remove gas and install renewable, sustainable heating.

The other thing that is driving the commercial sector away from gas towards heat pumps is global finance, which is refusing to invest in new-build or even retrofit projects that cannot show how sustainable they are.

Commercial sales were estimated to be just under 2,000 units last year, but each year there are over 30,000 heat generating products sold into the commercial market.

So, the opportunity for growth is phenomenal.

The same is true of the residential sector as 2025 may well be the first year that it breaks through the 100,000 installs in a year.

Yet there are still over 1.4 million gas boilers sold domestically, so there is quite some way to go!

While the research from our 'Tipping Point' Report confirms that businesses are ahead of homes in adopting renewable heating, it's surprising that 36% of heating installers currently don't see the financial benefits of learning to install a heat pump, whether for the domestic or commercial sector.

Ben Bartle-Ross is a technical trainer at Mitsubishi Electric

The Report also shows that 8 out of 10 homeowners are still using gas, and whilst the survey reveals almost half of UK consumers want to buy low-carbon heating solutions, 73% still feel that they don't know enough to make an informed purchase.

Importantly, the Report identifies three key steps that Government could do to help drive the adoption of heat pumps

1) **Balance –** Government needs to deal with what is known as the 'Spark gap' which currently sees an significant imbalance between gas and electricity prices

2) **Consistency –** Setting consistent, actionable standards for the decarbonisation of all types of buildings would enable a phased approach to retrofit and help tackle this challenge, turning it into a real opportunity

3) **Certainty –** Raising energy efficient building standards will provide clarity on how new buildings must be fitted for low carbon heating

The coming months will see the Government make important decisions on the Carbon Budget, the Future Homes Standard, and the Future Building Standard but the direction of travel is clear for all to see. We are very near the end of gas as the dominant form of heating for both homes and businesses.

So, whether you are already involved in installing heat pumps either commercially or residentially, one thing is certain – the UK market is set to expand rapidly over the next five years, offering a significant opportunity for growth.

If you'd like to know more and see what training is available, visit our training page. **https://les.mitsubishielectric.co.uk/installers/installer-training**

You can download a copy of the Tipping Point Report by clicking here. **https://library.mitsubishielectric.co.uk/pdf/book/Mitsubishi_Electric_Financial_Tipping_Point#page-1**

Ben Bartle-Ross is a technical trainer at Mitsubishi Electric

24 ANNIVERSARY

35 1989-2024

Happy Birthday to us:

Your favourite industry publication has reached the ripe old age of 35!

Launched as ACR Today at the end of 1989, the magazine was later purchased by its current owners, Lincolnshire-based Warners Group Publications.

Rebranded as ACR Journal in 2015, we have kept our readers up to date with the latest developments, product launches and appointments ever since. We have also done our utmost to support the industry at all times.

Alongside our sister publication, Heat Pumps Today, we offer in-depth coverage of the entire HVACR sector in print, online and via our booming social media channels.

We organise the hugely-popular National ACR & HP Awards (coming to Manchester on March 6) and the annual ACR & HP Trainee of the Year Awards to support the next generation.

Following on from the success of our first regional industry exhibition in Leeds last year, 2025 will see us return to Yorkshire on September 25, with an additional event to be staged at Aston Villa FC on May 15. Whether you interact with our titles in print, via our websites or by attending our events, we sincerely thank you for your support.

Here's to the next 35 years... now take a trip down Memory Lane with just a few pages from the archives.

1989

35 years of the ACR Journal

1990s

35
1989–2024

2000s

2010s


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NATIONAL ACR & HEAT PUMP AWARDS 2025 6th MARCH

FINALISTS 2025

The much-anticipated National Air Conditioning, Refrigeration & Heat Pump Awards 2025 will be held at The Midland, Manchester on March 6th, giving the industry a welcome opportunity to recognise outstanding people, projects and products.

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- RACA Group
- Climarite Refrigeration

AIR CONDITIONING PRODUCT

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  Fujitsu General Air Conditioning UK
- **UniPACK-P and UniPACK-P EXP**
  Distributed by Klima-Therm
- **Rhoss POKER290 Heat Pump**
  Distributed by Klima-Therm

REFRIGERATION PRODUCT

- **BBF500**
  Bitzer/David Thirtle Air Conditioning & Refrigeration Services
- **A2L Industrial Monobloc Range**
  Hubbard Products
- **20HP Condensing Units**
  Panasonic Heating & Cooling Solutions
- **ECOV Series Condensing Units**
  Mitsubishi Electric
- **SEC (Sustainable Energy Controller)**
  Beijer Ref UK & Ireland
- **Daikin LMS & LMC R290**
  Inverter Monobloc; Hubbard Products

AIR CONDITIONING PROJECT

- **Tingley Garden Centre**
  BREng/EBA Climate
- **Radisson RED, Liverpool**
  CIAT
- **Garsington Studios**
  CIAT
- **Tingdene Caldecott Hall**
  Carrier Solutions UK/SpeedyFit
- **York House, British Land HQ**
  Mitsubishi Electric
- **ArcelorMittal Orbit, London**
  Carrier Commercial HVAC
- **St Michael's Manchester**
  Hitachi Cooling & Heating UK&IRE
- **Aldi, Goole**
  WAVE Refrigeration

REFRIGERATION PROJECT

- **A2L R454C Heating/Cooling Solution, Gloucestershire**
  Bitzer UK/SK Refrigeration
- **Ammonia Project, Pilgrim UK**
  Bitzer UK/Demeva Refrigeration
- **Europe's Largest Industrial IQF Freezer**
  SURE Solutions
- **Dunstaple Farm, Farmer Tom's Ice Cream**
  Panasonic Heating & Cooling Solutions
- **Thistle Seafoods**
  AE Refrigeration & Air Conditioning
- **CO2 plant for Wilkins Jam Factory**
  FridgeHUB

TRAINING PROVIDER

- Unitherm
- MCFT
- Grant Engineering (UK)
- Carrier Commercial HVAC
- Beijer Ref Academy
- Mitsubishi Electric
- The City of Liverpool College

WHOLESALER/DISTRIBUTOR

- Unitherm
- Thermovent

HEAT PUMP INSTALLER

- R A Brown Heating Services
- Wesley Hort of West Hampstead Heating
- IMS Heat Pumps
- Daniel Davies Plumbing & Heating Engineers
- UK-B London

DOMESTIC HEAT PUMP PRODUCT

- **Edge F**
  Clivet Group UK
- **Aerona 290**
  Grant Engineering (UK)
- **Aquarea M Series**
  Panasonic Heating & Cooling Solutions
- **QE Exhaust Air Heat Pump**
  Qvantum Energy Technology
- **NIMBUS NET R32**
  Ariston UK
- **Multi+**
  Daikin UK
- **S735 Exhaust Air Heat Pump**
  NIBE

THANK YOU TO

Absolutely Chilled Ltd. · Bitzer · BESA Building Engineering Services Association · Blygold · Clivet · Refra · HVAC Communications · IOR.org.uk Refrigeration Air Conditioning Heat Pumps · IOR Scotland · Qvantum Heat pumps for sustainable cities · REFCOM

THE NATIONAL ACR & HEAT PUMPS AWARDS

COMMERCIAL HEAT PUMP PRODUCT

- **REFRA/Absolutely Chilled**
- **Heat Pump Mover**
  Lite Work Designs Ltd
- **FUSION T/ Tplus**
  Adveco
- **YORK YMAE and YCPB**
  Johnson Controls Building Efficiency UK
- **Toshiba Universal Smart X (USX) Series Edge Modular Heat Pump**
  Carrier Solutions UK
- **Thunder R290 Commercial Heat Pump**
  Clivet Group UK
- **150°C Industrial Heat Pump**
  Solid Energy
- **Rhoss FullFLOW Range**
  distributed by Klima-Therm
- **CZ HT High Temperature Commercial Heat Pump**
  Daikin UK
- **UniPACK-P and UniPACK-P EXP**
  Distributed by Klima-Therm
- **Rhoss POKER290 Heat Pump**
  Distributed by Klima-Therm

GROUND SOURCE PROJECT

- **Suffolk Red Brick Barn Conversion**
  R A Brown Heating Services
- **Kingston Lacy**
  with Viessmann Climate Solutions UK
- **Waters View**
  by Futureserv, with Viessmann Climate Solutions UK
- **Lackington Mill**
  NIBE
- **Queen's University Belfast**
  Geoserv Solutions

DOMESTIC AIR SOURCE PROJECT

- **Harron Homes, Nevison's Fold Project**
  Secon Renewables, Panasonic Heating & Cooling Solutions, UK Cylinders, Honeywell Home, D&R Plumbing & Heating Contractors, Steve Wade Electrical
- **Heat Pump Report - The Financial Tipping Point**
  Mitsubishi Electric
- **Townhouse Retrofit, Norwich**
  R A Brown Heating Services
- **Custom Renewables**
  Viessmann Climate Solutions UK
- **J T Stead Heating & Energy**
  with Viessmann Climate Solutions UK
- **Lea Hall Grade II Listed Property**
  NIBE

NON - DOMESTIC AIR SOURCE PROJECT

- **Hoar Cross Hall Spa Hotel**
  Clivet Group UK/B3 Building Services
- **Decarbonising Chester Zoo Rhino Habitat**
  Mitsubishi Electric
- **Mobile Energy Plantroom (MEP) at Wembley Park**
  Solaris Energy
- **Greenpeace make the Natural move**
  Pure Thermal

ANCILLARY PRODUCT OF THE YEAR

- **Inta XCEED Heat Pump Magnetic Filter**
  Intatec
- **Inta Klean HP Magnetic Filter**
  Intatec
- **Inta Hydra**
  Intatec
- **Inta Zero**
  Intatec
- **The Heat Pump Mover**
  Lite Works Designs Ltd
- **565i Smart Vacuum Pump**
  Testo
- **Toshiba RBC-MTSC1 Mini Touchscreen Smart Controller**
  Carrier Solutions UK
- **Zeus Articulated Mounting Feet**
  Secon Renewables
- **DRX3 - Atex Rated Leak Detector**
  Fieldpiece Instruments
- **Caleffi HED 5516**
  Altecnic
- **K3 Radiators**
  Stelrad
- **Variable Frequency Drives**
  Carrier Commercial HVAC
- **Rhoss MTM Sequencer**
  Distributed by Klima-Therm
- **Heat Pump Covers**
  Heat Pump Covers Ltd
- **ClearFlow CF20 Compact**
  Kamco Ltd
- **Virtual Heat Pump Planning in 3D**
  Immersight

BEST IAQ INNOVATION

- **AirX Pro**
  Martin Industries Ltd
- **CPS IAQ PRO SmartAir™ Indoor Air Quality Meter**
  Evomart Ltd

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THE MIDLAND, 16 PETER STREET, MANCHESTER, M60 2DS

Celebrating 45 Years of Coolair Equipment Limited

A Journey of Innovation and Commitment

Part 1: Our Journey – Building a Legacy of Excellence

Coolair Equipment Limited has come a long way since its humble beginnings in 1980. Founded in Manchester, the company set out to provide high-quality air conditioning solutions to an emerging market. What began as a small operation has blossomed into a nationally recognized leader in the HVAC industry, celebrating 45 years of innovation, dedication, and commitment to excellence.

The 1980s saw the company start as a small but dedicated team, focused on providing air conditioning solutions for commercial clients. The industry was changing rapidly, and Coolair kept pace with the evolving technology. As demand for air conditioning solutions grew, so did the company, expanding nationally from our Head Office in Manchester. We built a reputation for delivering installations that were technically advanced and installed to the highest standards.

Our commitment to quality has always been the cornerstone of Coolair's success. From the beginning, we invested heavily in training our engineers and ensuring they had the skills to handle even the most complex installations. This focus on skill, knowledge, and attention to detail helped Coolair develop a strong reputation in the industry which continues to this day. This was formally recognised in 2022 when we achieved the trademark for our name and logo.
In the years that followed, Coolair expanded its range of services incorporating heat pumps and a service and maintenance division into its operation. By forming strong partnerships with all leading manufacturers, we were able to offer the most advanced systems available, ensuring that our clients received the best possible solutions for their needs.

The world has seen dramatic technological changes since 1980. Digital control systems, variable refrigerant flow (VRF) technology, and smart building integration have transformed the way we approach air conditioning. Coolair has consistently been at the forefront of these changes, ensuring we provide the most up-to-date and energy-efficient solutions for our clients.

As Coolair grew, so did our client base with whom we've built strong relationships, and it is their loyalty and continued business that has allowed us to flourish. Mark Garstang, our Managing Director, reflects on his own journey with Coolair, saying:

"I joined Coolair in 1995, and it's been incredible to watch the company grow and evolve into the leader it is today. I'm incredibly proud to have played a part in our success, and now as MD, I'm excited to lead Coolair into the next chapter."

45 Coolair™
Celebrating 45 years

Part 2: Looking Forward – Building a Sustainable Future

As Coolair celebrates 45 years of success, we know that the future of our business lies not just in continuing our tradition of excellence but in adapting to the ever-changing challenges the world faces. The most pressing of these challenges is climate change, and Coolair is committed to playing its part in addressing this issue.

Looking forward, one of the key areas of focus for Coolair is building a younger, more dynamic team. We understand that the next generation of talent will drive our success, so we're continuing to invest in training and development to ensure that we continue setting standards within the industry.

"The future of Coolair is all about nurturing young talent," says Mark Garstang. "Since I joined the company in 1995, I've seen how important it is to build a team of passionate, skilled individuals. It's inspiring to watch them bring fresh ideas and energy to the business, and I'm excited to see what they will achieve in the years ahead."

The changes in technology over the years have had a profound impact on the air conditioning industry, and as the world grapples with the effects of climate change, the industry is evolving more rapidly than ever. The need for energy-efficient, environmentally friendly solutions is more urgent than ever, and Coolair is dedicated to helping our clients reduce their carbon footprints.

As global temperatures rise, air conditioning is no longer just a luxury—it's a necessity. However, as demand for cooling increases, so too does the need to find solutions that don't exacerbate climate change. At Coolair, alongside our business partners we've long been committed to offering energy-efficient systems that help our clients reduce their energy consumption and, by extension, their environmental impact. From the introduction of low-GWP (Global Warming Potential) refrigerants to the use of renewable energy sources in our systems, we're constantly looking for ways to improve the sustainability of our installations.

For Coolair, sustainability is a priority. The company has been a leader in promoting the use of energy-efficient systems and is committed to reducing its environmental footprint. As part of this effort, Coolair continues to monitor our carbon footprint and offset our emissions with a plan to reduce emissions over time. We have also recently achieved Gold badge status with the Supply Chain Sustainability School which our teams use as a learning resource.

But our commitment to sustainability doesn't stop there. We're also focused on helping our clients achieve their own environmental goals. Many of our clients are seeking ways to reduce their carbon footprints, and Coolair is proud to support them in these efforts. Whether it's through designing energy-efficient systems, offering maintenance services to ensure systems run optimally, or advising on the latest technologies, we're here to help our clients achieve their environmental objectives.

We recognize that our success is tied to the success of our clients and business partners. We are grateful for the relationships we've built over the years, and we look forward to working together to create a more sustainable future. Our clients, whether they've been with us from the beginning or are new to Coolair, are a vital part of our journey, and we value their trust and support.

As we reflect on the last 45 years, we're excited for what the future holds. We will continue to grow, evolve, and innovate, always keeping our clients, our employees, and the environment at the heart of everything we do. The next 45 years will bring new challenges and opportunities, and we're ready to embrace them head-on.

Here's to the future, and to continuing the legacy of Coolair Equipment Limited for the next 45 years and beyond!

Refrion free cooler and buffer tank

Summit delivers energy-efficient cooling upgrade for Fisher Plastics


Nigel Hallett from Summit Process Cooling with Kelly Autey, CEO of Metalliform Group, parent company of Fisher Plastics

Fisher Plastics, based in Huddersfield, is a leading toolmaker and moulder in the plastic injection moulding industry. Its extensive product range includes producing components for the automotive, medical, building services, education and leisure sectors. A key element of its process is to keep the hydraulic power packs and moulds cool while manufacturing their product range.

The company faced challenges with its existing chiller system, which consumed significant amounts of energy to cool both the moulds and hydraulic oil circuits. Rising energy costs were putting financial pressure on the business, and reliance on a single, large chiller created a risk of operational downtime. Failures in the chiller system had already resulted in production losses due to the lack of a backup system. Fisher Plastics sought a solution to enhance energy efficiency, improve system reliability, and reduce operational costs.

Summit Process Cooling proposed an innovative upgrade to address these challenges. The solution included replacing the outdated Bluebox chiller with an adiabatic cooler for hydraulic oil and throat cooling, while repurposing the Industrial Frigo chiller exclusively for mould cooling. This approach utilised existing equipment effectively, minimising waste while optimising resource use.

Adiabatic cooler

One of the key design elements was the integration of a new adiabatic cooler, which offered free cooling for the Industrial Frigo chiller during low ambient temperatures.

This significantly reduced reliance on the chiller's compressors, lowering energy costs and extending equipment lifespan. To facilitate seamless operation, a plate heat exchanger (PHE) was installed between the two cooling circuits, aided by a 3-way temperature control valve to automatically pre-cool water returning from the moulds, via the adiabatic cooling system in low ambient conditions. The use of glycol in the adiabatic cooling circuit provided frost protection, while the mould circuit remained glycol-free to avoid losses and shop floor slip hazards through possible spillages during frequent mould changes.

The upgrade also involved replacing outdated carbon steel piping with stainless steel pipework to eliminate corrosion risks. A buffer tank and separate pipework circuits were installed to serve the hydraulic oil coolers, while a duplex filtration system removed particulate and maintained water quality for the process.

An advanced HMI touchscreen provides visualisation control system, automated operations, rotating duty and standby pumps for even wear. The PLC software monitored key parameters like return water and ambient temperatures, ensuring optimal energy use by switching to free cooling when possible.

The installation was carried out with minimal disruption, thanks to close collaboration between Fisher Plastics' management and Summit's experienced team. The new system brought immediate improvements. Annual energy savings of 357,667kWh—equivalent to £150,220—were achieved, representing a 90% reduction in energy consumption compared to the original system. During low ambient conditions, only 6.5kW of energy was required to meet a 200kW cooling demand, delivering an impressive coefficient of performance of 30.7.

The system's environmental impact was also reduced by eliminating glycol from the mould cooling circuit. Additionally, operational reliability was enhanced through the use of standby pumps and separate cooling circuits, reducing production downtime risks. Free cooling further lowered operational costs and extended the chiller's lifespan by reducing its workload.

Jonathan Hill, Group Technical Manager for Metalliform Group, parent company of Fisher Plastics, said: "The new system has been a game-changer in terms of efficiency and performance. It has drastically improved the chilled water supply to the machinery within our factory, ensuring that optimal and consistent process temperatures are maintained while reducing our energy consumption. We've already noticed a significant decrease in our utility bills, thanks to the system's energy-saving features.

User-friendly design

"The installation was done with minimal disruption to our operations and considering we undertook this project in the Christmas period when resources were low, Summit pulled out all of the stops to get us fully operational by January startup. The technicians were extremely knowledgeable and integrated with our site maintenance team to get the project delivered in a timely manner. The system has been designed in a user-friendly way and the training provided ensured all our staff know how to fully utilise the system.

"Additionally, we have had multiple visits from the team after install to ensure we are fully happy with the results which has shown to us that Summit really care about the product they have supplied and our satisfaction with the new installation. We are very happy with our new chiller system and would highly recommend Summit to anyone in need of a reliable, efficient and energy saving solution."

Summit Process Cooling will provide ongoing support and maintenance, with remote monitoring to ensure optimal performance. The system was designed for scalability, with provisions for a 25% capacity increase and space for an additional chiller if needed.

This upgrade has delivered substantial energy savings, improved reliability, and a reduced environmental footprint. By incorporating energy-efficient technologies and optimising existing resources, Summit Process Cooling provided Fisher Plastics with a future-proof solution that meets both current and long-term cooling requirements.

www.summitprocesscooling.co.uk

The system includes an advanced HMI touchscreen

HVAC plant installation by helicopter

Michael Newman, Managing Director of helicopter lifting contractor Helirig, explains why there is a growing demand for his company's services as the UK's rooftops continue to reach skywards.

For more than a decade, a lifting solution like no other has been deployed across London, but you can be forgiven for not having noticed. Helicopter lifting operations are easily missed - no large cranes, minimum disruption and very little inconvenience to public or traffic. A helicopter lift can be completed in minutes rather than days, leaving barely a trace at street level.

The challenges faced by lifting contractors today in London and other UK cities are becoming increasingly multi-layered, inter-related and just plain difficult to overcome.

Buildings are getting taller and tall buildings are clustered together more densely, reducing street space below for the setting up of mobile cranes. Many city buildings are also reaching a certain age, and installed equipment, such as chillers and BMUs, are reaching end-of-life and need to be at least maintained, but often wholescale replacement is required. Equipment replacement strategies, if they exist, might have been developed decades ago and before taller neighbouring buildings were built, effectively closing down the possibility of siting large mobile cranes adjacent.

Streets are busier than ever, with TfL red routes, bus routes, emergency response routes all but preventing the siting of large cranes in any reasonable timeframe. And as the cranes required to reach the taller rooftops are getting larger and heavier, so too are the loads from their outriggers. It is often the case that these ground loads cannot be supported due to underground train lines, services or basements.

And then there's the weather! On the occasion where the stars align and both street layout and city authorities allow for the set-up of a large mobile crane with jib extension, will the whole operation be winded-off due to the vulnerability of such cranes to even moderate windspeeds?

It is probably the speed of a helicopter lift that is such a vote winner with city authorities. A single lift is typically 3 to 4 minutes, so a batch of say 10 lifts can be completed within an hour. Without the need for heavy plant or equipment in the street, a lift can often be executed with a partial road closure and some simple traffic management.

Lead times of 4-6 weeks for planning a helicopter lift are realistic, allowing contractors to respond more effectively to equipment failures that require urgent attention, or to fit in with demanding construction schedules.

When planning a lift around a large mobile crane, contractors will generally reserve two or three weekend road closures, to protect against the risk of the operation being winded-off. Helicopters can operate in windspeeds in excess of 25mph, giving greater confidence that a lift can proceed as planned.

The unlimited height and reach for a helicopter often make it the obvious choice. A more recent valued application for helicopters has been for the positioning of equipment across the roofs of mega warehouses and distribution centres being constructed throughout the UK.

Here helicopters can eliminate the need for multiple crane set-up positions around the building's perimeter, which can be particularly problematic when hard-standing and access roads remain under construction.

Standards such as PUWER, LOLER and BS7121 govern the planning and execution of any load lifting operation. Helicopters are simply deemed Lifting Equipment under LOLER's definition, so it's appropriate that helicopter lifts are planned and carried out in accordance with these same regulations. Understandably, there is also a permitting process governed by the UK's Civil Aviation Authority, and flight approvals managed by the National Air Traffic Services.

Examples of recent lifts

FCO, London, below: Installation of essential cooling equipment at the Foreign & Commonwealth Office at the heart of Westminster. A 500T crane with extended jib section was set-up in an adjacent street on two occasions and both times was winded-off. A helicopter lift was performed without the need for any road closure due to the ability to lift from within the FCO's enclosed quadrangle.

EY More, London, above: Chiller replacement for the EY offices at More London Estates, adjacent to City Hall and HMS Belfast. At this location there is no realistic possibility of setting-up a mobile crane and so a helicopter was used on two separate visits to install 4 new chillers.

Hilton London Metropole Hotel: Chiller replacement for the hotel on Edgware Road. The crane required to reach the roof of this hotel would have required a full road closure of the Edgware Road (TfL red route) for at least 48 hours, and such a closure is very difficult to secure. The chillers were lifted from a small adjacent private site without the need for any road closures and the swap-out of two chillers was completed within about 15 minutes.

Three Snowhill, Birmingham, above and previous page: BT's Birmingham Hub at Three Snowhill in the centre of the city required UPS, batteries and chillers lifted to the roof to provide secure power supply for an emergency services call centre. The lifting plan by crane called for two crane positions each closing major Birmingham arteries for two days. The helicopter lift closed the adjacent street for a few hours early one Sunday morning, providing minimum disruption.

The Gherkin, London, right: The Gherkin required a new telescopic boom for one of the BMUs housed in its 'garage' 150 metres above street level. In such a congested corner of the City, there was insufficient space to set up the size of crane to reach to that level. The lift by helicopter was completed in under 5 minutes and St Mary Axe was closed for about 30 minutes.

Newbury-based Helirig is the UK's leading contractor for heavy-lift helicopter lifting, and is a partner of global operator Heliswiss International. The company provides a full contract lift service including helicopter, ground crew, load preparation and slinging together with all the necessary lift plans, risk assessments, method statements and appropriate Civil Aviation Authority permits. The company has undertaken almost 200 helicopter lifts across the UK, including London, Bristol, Birmingham, Cambridge, Brighton and Luton.

https://www.helirig.com/

CASE STUDY

33 King William Street, City of London

33 King William Street was the first real estate purchase outside of the US for Wells Fargo, and it now serves as the company's London HQ. It is one of the most well-connected office buildings in central London, close to London Bridge, Monument and Bank.

Helirig's involvement came towards the end of the final fit-out of the building. The lifting of key HVAC plant to the roof required a weekend road closure on Upper Thames Street for the siting of a large mobile crane with luffing jib. However, the approved and long-awaited road closure on this busy London artery had just been revoked to allow for urgent gas mains repairs, leaving dates for completion, handover and occupancy all in jeopardy.

Meetings were arranged with representation from TfL, City of London Corporation and the Police, to agree a lifting plan acceptable to all parties. The final plan was fixed within a few days allowing for the lift to go ahead, subject to CAA approvals. It was agreed that we would maintain traffic flow on Upper Thames Street, albeit with some strategic traffic management, for the duration of the lifting. This could be achieved by having the pick-up point for all the loads in the small adjacent Arthur Street.

The City of London should be commended for their engagement in the process and the speed of their approvals. The prospect of 30 minutes of moderate disruption caused by the helicopter, compared to a full weekend road closure was a good incentive.

The speed of helicopter lifting requires a closer attention to detail during planning than is normal for a crane lift. Minutes and even seconds need to be made to count. Nowhere was this more important than at King William Street. With each lift being separated by only 3 minutes and the zone of pick-up restricted to an area of only a few square metres, each load needed to be driven accurately into position as empty trailers were removed.

A similar 'choreography' was required on the roof. With just a small opening to lower equipment through, each item of plant needed to be swiftly skated from the landing zone to make space for the arrival of the next item.

The helicopter was flying with a fixed 80 metre long line. This reduces any disturbances from rotor downwash on the roof; the manpower and the load being lifted. It also allows the helicopter to lower the hook down into a relatively narrow street for pick-up, while maintaining a safe distance between the helicopter and adjacent buildings.

Six items of plant were lifted in just under 20 minutes, with the heaviest making full use of the helicopter's 4,000kg lifting capacity. With the last load delivered to the roof and the helicopter departed from site, the traffic management was lifted and in a matter of minutes life on the busy Upper Thames Street was returned to normal.

Customer becomes supplier of indoor air quality equipment for healthy workplace

Bradley Bray, Managing Director of Evomart

From a health perspective, it's essential that the indoor environment is not overlooked when it comes to air quality concerns. For many years, Bradley Bray, formerly of Advanced Engineering and founder of Evomart, distributor of CPS Products (Tools) and Dry All (AC&R Components), has helped contractors and operators of equipment understand that Indoor Air Quality (IAQ) and Sick Building Syndrome (SBS) have an impact on health, hygiene and occupant well-being.

With estimates suggesting that we spend 80-90% of our time in buildings or public transport, IAQ is increasingly a hot topic. A YouGov report stated that nearly 70% of office workers believe IAQ had a negative impact on their well-being, and The Chartered Institute of Architectural Technologists (CIAT) recently called for government to introduce enforceable IAQ standards.

It's not only about building regulations, of course. The UK Health and Safety Act, and regulations such as COSHH, place a duty on employers to conduct regular risk assessments to identify potential hazards, including those related to indoor air pollution.

John Pike, Evomart Operations Manager (left) and Steve Enright, Lola Print Production Manager, with the CPS IAQ PRO SmartAir indoor air quality meter

Case Study

When Evomart's local printer needed help with IAQ, the HVAC distributor was quick to respond. Evomart has worked for many years with Lola Print Services, a Reading-based print shop that provides marketing materials to HVAC contractors and wholesalers. When the printer's production manager raised a concern about occasional physical symptoms, including headaches, sinus and throat irritation, and feeling unwell, they wanted help investigating the cause.

CPS IAQ PRO SmartAir indoor air quality meter with CPS Link Pro™ phone app

"Previously it's always been Evomart asking Lola for help, so we were delighted that our equipment would support their workplace IAQ investigation," said John Pike, Evomart Operations Manager.

"As someone involved in HVAC maintenance and IAQ, when the Lola Print production manager raised the air quality question, I knew immediately that the SmartAir meter could assist," explained Bray.

In response, Evomart provided a CPS IAQ PRO SmartAir Indoor Air Quality Meter, which allowed Lola Print Production Manager, Steve Enright, to monitor key air quality metrics such as particulates, CO_2, temperature, and Volatile Organic Compounds (VOCs) via samples taken automatically throughout the day.

Enright explained: "The air quality meter was so straightforward to use. As a compact unit it is easy to move from place to place. Pairing with the CPS Link Pro phone app, it stores a record of the data which we could link to activity taking place at the time. Apart from measuring VOCs, the data on temperature, humidity and dew point is also valuable for us as a printing company, for substrate management and storage, offering many benefits."

After reviewing the data provided via the CPS Link Pro app, Lola Print has reviewed floor and equipment plans, mechanical ventilation systems and fresh air inlets.

An opportunity for HVAC professionals

Evomart's experience with the Lola Print shows that the HVAC industry has a unique opportunity to make a positive impact on health.

"It's an important issue," says Bray. "But it may require some changes in how we think about our HVAC roles. Bringing indoor air quality to the fore involves taking a pro-active approach, staying up-to-date with the latest IAQ research and guidelines, incorporating best practice into installation and maintenance, and engaging with clients to ensure they are aware of and take steps to mitigate IAQ issues."

Thanks to the equipment Evomart provided, Lola Print was able to pursue appropriate remedial solutions. As a distributor, Evomart recognises the importance of providing businesses with the latest technology to ensure a healthy and safe working environment.

"It's not every day that a supplier becomes your IAQ project," said John Pike. "It was nice that we could help our print provider solve a problem which has had an immediate effect on the wellbeing of its staff."

WOMEN IN THE ACR INDUSTRY

In this issue, we meet the new Co-chairs of the industry's thriving Women in RACHP Network, Sam Buckell and Astrid Prado.

BITZER UK's Sam Buckell and Astrid Prado of Star Refrigeration have been appointed Co-chairs of the Institute of Refrigeration (IOR) Women in RACHP (WiRACHP) Network. They succeed Lisa-Jayne Cook, who stepped down to become IOR President.

Buckell is PA to BITZER UK Managing Director Kevin Glass, while Prado is Head of Marketing for Glasgow-based Star Refrigeration.

Buckell joined BITZER UK in 2016 and served as the first Chair of WiRACHP when it was founded in the same year. She has since played a key role in the company and wider industry in championing the contribution of women across the sector, highlighting the importance of diversity and inclusion (D&I).

Her advocacy for the contribution of women at work dates back to her previous employer, Arup, where she served for 14 years in senior administrative and HR positions in the company's London HQ. At BITZER UK, in addition to acting as PA she has responsibility for advertising, event and project planning, and social media.

Buckell has been part of a number of D&I initiatives, including promoting and attending the STEMAZING Inspiration Academy, and contributed in numerous ways to the work of the network, including its training courses and nationwide discussion forums. She is currently heading up an IOR team that produces the network's monthly blog on the IOR website, which is coming up to its first anniversary in January.

She said: "Through the group, I have been lucky to meet some of the most dedicated and inspirational women in our industry. The group is always inclusive and big enough that there is always someone ready to help, and work with you on anything you may need. I very proud of us and what we have achieved so far, and know there is a lot more yet to come.

Exciting solution

"Given how busy and demanding the world of work is today, the joint role with Astrid is an exciting and creative solution that will allow us to share responsibilities and support each other in developing the network and expanding activities over the coming year."

Issues close to her heart include developing the group's recently launched monthly lunchtime meetings. Recent topics have covered Personal Protective Equipment (PPE) for women, and the University of Bristol's collaboration with the Women's Engineering Society on research into better-fitting PPE for women; plus, the new Sexual Harassment at Work Regulations, which require employers to implement measures to safeguard staff from sexual harassment, including incidents involving third parties such as clients or customers.


Sam Buckell


Astrid Prado

"THROUGH THE GROUP, I HAVE BEEN LUCKY TO MEET SOME OF THE MOST DEDICATED AND INSPIRATIONAL WOMEN IN OUR INDUSTRY."

Other initiatives planned for next year include a new networking platform for the group, being championed by Astrid Prado, training through the year, and a networking event in March, currently in the planning stage. The award-winning WiRACHP podcast series and blog will also be a focus.

"There is a lot going on, but a lot of our new ideas come thick and fast when we are together. I believe there is nothing this team cannot do, and I am looking forward to working with Astrid to see where the next chapter will take us."

A Chartered Marketer and IOR member, Prado has been with Star Refrigeration since 2005.

Her dedication to promoting diversity within engineering industries aligns with Star's longstanding commitment to drive positive change in the sector through education. Throughout her career, she has contributed to the development of future business leaders by delivering guest lectures on marketing to MBA students at the University of Glasgow.

In 2019, she was nominated by the WiRACHP group for the Diversity Impact Award at the RAC Cooling Industry Awards for her work, on behalf of the IOR, in driving the group's groundbreaking gender parity survey. The research provides valuable insights into the industry's attitudes and benefits for women, identifying steps to close the gender gap and attract more female talent.

"THIS GROUP IS ABOUT MORE THAN NETWORKING. IT'S A MOVEMENT TO EMPOWER WOMEN, FOSTER MENTORSHIP AND INSPIRE THE NEXT GENERATION. TOGETHER, WE CAN ENSURE THE REFRIGERATION AND HEATING SECTOR IS A PLACE WHERE EVERYONE CAN CONTRIBUTE AND THRIVE."

Great opportunity

At Star, she has supported initiatives that empower women, including the STEMAZING programme, which provides resources to help women build confidence to deliver STEM sessions to primary school children. She has also led STEM awareness events with local schools as part of Star Refrigeration's 'Little Stars' programme, which encourages children to explore the exciting opportunities a career in engineering can offer.

Prado has additionally played an active role in supporting Star Refrigeration's commitment to developing an inclusive workplace. The company continues to lead by example by offering part-time and flexible working arrangements, alongside enhanced maternity, paternity, and shared parental leave policies. These initiatives create an inclusive environment that supports women in the workplace and fosters shared caregiving responsibilities.

She said: "I am honoured to take on this position alongside Sam Buckell, a valued colleague and dedicated professional in our industry. This is a great opportunity to collaborate with talented individuals to expand the impact of the Women in RACHP group. I firmly believe that individual efforts alone are not enough; true progress happens when women unite to amplify their voices and visibility. By sharing experiences, challenges and successes, we can create a more inclusive industry where diversity becomes the norm, not the exception.

"This group is about more than networking. It's a movement to empower women, foster mentorship and inspire the next generation. Together, we can ensure the refrigeration and heating sector is a place where everyone can contribute and thrive."

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**

ASPEN LAUNCHES NEW 'QUIETLY BRILLIANT' SILENT+ MINI LIME CONDENSATE PUMP

Aspen Pumps, a global market leader in condensate removal pumps, has launched the next generation of its popular Silent+ Mini Lime pump – an evolution in pump technology. Perfect for air conditioning applications where silence is important, such as offices and meeting rooms, the new and improved 5th generation Silent+ Mini Lime operates at only 16dB(A) making it the quietest and most versatile elbow pump available. Simple and flexible to install, this proven technology delivers an impressive flow rate and lower power consumption than previous models. Boasting a raft of design innovations, this new mini condensate removal pump offers unrivalled performance, on-demand power, near-silent operation, optimum reliability, and increased energy efficiency.

With sound levels a critical comfort and health and wellbeing issue for end-users, the new Silent+ Mini Lime offers even quieter noise levels than previous models, with whisper-quiet operation. Since the Silent+ Mini Lime only pumps when needed, motor noise is reduced, as well as offering cost and energy-saving benefits, in addition to a longer motor life. Utilising the same technology as Aspen's best-selling Silent+ Mini White, the new Silent+ Mini Lime features intelligent variable speed demand control with the pump dynamically adapting to its environment, reducing the flow to the minimum required, and using 10 times less energy than its predecessor. This is enabled by an innovative electronic float switch that provides more precise control and improved reliability than mechanical alternatives and is ideal for integrating with digital control systems.

Designed to be simpler and faster to install, the new Silent+ Mini Lime pump has fewer parts to connect since there is no longer a need for a damper, anti-siphon, buttons or lights. Perfect for replacement installations, the Silent+ Mini Lime also provides backwards compatible Plug & Play. Delivering a powerful flow rate of 40L/h, around four times the performance of a piston-based mini pump, as well as boasting a larger tank and head capability, makes it suitable for a wider range of applications, including high wall split systems. Engineered to fit discreetly in trunking elbows the Silent+ Mini Lime offers installation versatility thanks to its compatibility with a raft of trunking systems for both left or right install options.

"An evolution in pump technology, our 5th generation of Silent+ Mini Lime pump incorporates the same electronics and software used in the Silent+ Mini White. As a result of this proven technology Aspen has developed an intelligent pump that is effective, reliable, energy efficient and is the quietest commercial elbow pump available. Not only that but it is quick and easy install with a three-year warranty giving engineers confidence they can fit and forget it," said Marisa May, Senior Product Manager at Aspen Pumps Group.

Providing improved reliability and increased performance all backed up by a new 3-year warranty, the Silent+ Mini Lime offers engineers and wholesalers complete peace of mind from a trusted brand. For wholesalers Silent+ Mini Lime simplifies stock management and increases warehouse space, with fewer product lines required, since its increased flow rate eliminates the need to stock the Maxi Lime pump. Plus, the pump's univolt compatibility with both 110v and 230v means there is no need for separate pumps. There has also been a 20% reduction in replacement pack size, saving warehouse space, reducing waste, and reducing environmental impact.

For more information on the Silent+ Mini Lime and its stockists, please visit: **www.aspenpumps.com**

www.aspenpumps.com

SWEGON PRESENTS CONCEPT AIR HANDLING UNIT IN WOOD

As the environmental impact of the building industry increases in focus, the call for sustainable innovations has never been more pressing. Swegon is therefore proud to present its first wooden air handling unit that could redefine the industry's approach to reducing carbon emissions.

When the GOLD air handling unit was launched in 1994, it was an all-new concept that transformed industry standards. With its pioneering design and innovative features, it set a new benchmark for energy efficiency and performance. Now, three decades later, embodied carbon is increasingly in focus, and the first wooden concept air handling unit is presented.

So far, two functioning prototypes of wooden GOLD air handling unit, size 005, have been built, where the traditional casing of conventional steel has been replaced by cross-laminated timber (CLT). By replacing the steel, Swegon managed to reduce the CO_2 footprint by 40%. For a larger air handling unit, the saving would be even greater.

"By rethinking material choices and challenging industry norms, we are driving the future of sustainable building solutions and this concept is an important step in testing the limits for the industry," says Martin Ottersten, PhD, Innovation and Knowledge Centre at Swegon.

"We have already introduced recycled steel inside our GOLD units to minimise environmental impact. With this concept wooden air handling unit we take a significant step further, in line with our ambitions within the RE:3 concept to be in the forefront of reducing embodied carbon of products," says Annika Sedwall, Head of Product Management, Kvänum.

The unit is a concept product that is not on the market for sale, but will be evaluated and used in discussions around future alternative materials.

https://www.swegon.com/uk/

JAVAC EXPANDS TOOL RANGE TO COMPLETE THE SET

JAVAC, part of the Aspen Pumps Group, has launched the largest number of tools in the company's history. With almost 40 new products added to the range, JAVAC now provides a comprehensive one-stop-shop for HVACR engineers providing access to every tool they need to do their job, while offering exceptional reliability and value.

The new lines include exciting launches such as the JAVAC Edge Hydra-XP9 Hydraulic Expander and the JAVAC Edge Turboflow Vacuum and Charging Kit. In addition, there is a raft of standard products that are now available under the trusted JAVAC brand, including 18 sets of hoses that cover the full range of industry applications.

Designed by engineers for engineers, the new JAVAC Edge Hydra-XP9 Hydraulic Expander offers single-handed operation and comes complete with nine interchangeable imperial expander heads. Laser-engraved expander heads are easy and quick to identify and attach and for the first time includes 1 3/8" and 1 5/8" sizes to cover an ever-wider range of applications. No other manufacturer provides the breadth of pipe size heads that JAVAC Edge offers from domestic to large industrial projects. The Hydra-XP9 Hydraulic Expander comes complete in a robust hard carry case with a deburring tool and spare heads available.

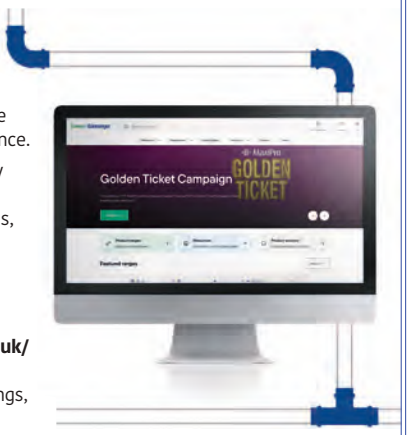
The innovative JAVAC Edge Turboflow Vacuum and Charging Kit is a complete charging and evacuation kit designed for speed and efficiency, saving engineers valuable time on site. Significantly reducing evacuation times compared to a set up with a manifold and ¼" hoses, the kit is designed to handle all high-pressure refrigerants without collapsing or permeating under vacuum pressure. Housed in a specially designed Veto Pro Pac Hose Hauler bag the kit includes: two new 3/8" by ¼" Turboflow Vacuum and Charging Hoses; two JAVAC ¼" by 5/16" core removal tools; and a new Veloci-Tee which creates two outlets on any vacuum pump with a 3/8" connection offering a significantly deeper vacuum in less time. JAVAC's new large bore Turboflow Vacuum and Charging Hoses are suitable for vacuum charging thanks to 4000 psi (270 bar) burst pressure and the 800psi (55 bar) max working pressure.

Another stand-out product is the JAVAC Edge Digital Torque wrench. Packaged in an adjustable branded protective case this torque wrench has adjustable jaws to suit all applications up to 1 1/2". The Digital Torque easily tightens connections to manufacturers' specifications to avoid costly leaks and bursts. By inputting the required setting on the tool lights and an audible warning are activated when the correct torque it achieved.

In addition, broad selection of standard products are now available under the trusted JAVAC branding including Standard Hoses, Ball Valve Hoses and Ball Valve Set Back Hoses lines, as well as HVACR speciality tools such as the Edge Piercing & Pinch Off Pliers, Edge Safe Access Valves, and the Hydrocarbon Scale and Can Valve.

www.javac.co.uk

DYNAMIC NEW WEBSITE FROM CONEX BÄNNINGER



Conex Bänninger has launched a new interactive website incorporating many new features designed to provide an enhanced visitor experience.

Users can quickly locate any product within an extensive range of innovative solutions, thanks to a well-planned navigation pathway which ensures ease of access.

The website - **https://conexbanninger.co.uk/** - is the shop window to the global manufacturer of fittings, valves and accessories. The company says it reflects the quality of the products, and the first-class technical back-up and service offered.

The search bar is intuitive and will start recommending and remembering favourite search options. Visitors can also search by range, code, description and product name.

https://conexbanninger.co.uk/

SENSITRON LAUNCHES SMART 3 BLIZZARD AT INTERSEC 2025

Sensitron, part of Halma plc, launched its new SMART 3 Blizzard gas detector for the HVAC-R industry at Intersec 2025in Dubai. The SMART 3 Blizzard is designed to provide a simpler, more reliable way to monitor refrigerant gases by combining advanced technology with user-friendly features.

What makes it unique is its wireless interface. Users can manage the device remotely, with no need for physical access. This makes routine activities easier and safer, reducing exposure to sensitive parts.

Marco Passadori, Sensitron's Managing Director, explains: "The idea for the wireless interface came from one of our engineers, and we immediately saw its potential. SENSE, our new interface, improves safety and usability, marking the first step towards a safer world, for both the environment and the workers using these systems every day."

Equipped with infrared sensors for high accuracy and long lifespan, the SMART 3 Blizzard is SIL2 certified. It detects refrigerant gases like R32, R454B, and R410A.

Designed for use in HVAC-R systems, as well as non-classified areas like onboard machinery and machinery rooms, the SMART 3 Blizzard is an affordable, high-performance solution that meets both regulatory requirements and the growing demand for sustainability.

https://www.sensitron.it/en/

NEW CONDAIR PODCAST ON CLEANROOM HUMIDITY

Humidity control specialist Condair has released a new podcast on how to control humidity in cleanrooms. In this 10-minute interview, Dave Marshall-George, Sales Director at Condair, explains how to manage air humidity in tightly controlled manufacturing or research environments.

He said: "Cleanrooms are used in a huge variety of industries and are classified by the level of particulate matter that is permissible in the air. Alongside air purity, humidity can often have a dramatic impact on the success of any cleanroom operation. Humidity maybe controlled to combat static, eliminate moisture losses from sensitive materials, and prevent or encourage a reaction in a specific substance.

"However, providing the accurate humidity control needed for these sensitive environments can be a challenge. This short podcast gives a comprehensive overview, is ideal for anyone who is managing or designing cleanrooms and covers both humidification and dehumidification."

Condair now offers a series of bite-sized learning sessions across a range of humidity-related topics at **www.condair.co.uk/podcast**

www.condair.co.uk

FROM HEAT GENERATION TO INDOOR AIR QUALITY: CAREL'S EVOLVING SOLUTIONS AT ISH

At ISH 2025, CAREL will showcase solutions dedicated to heat generation and indoor air quality to optimise system performance, reduce energy consumption, and simplify management while ensuring maximum reliability and compliance with the latest regulations.

Two new solutions include the Stone Virtual Loop, which offers a simulation that replicates the behaviour of real thermodynamic machines in a virtual environment and seamlessly integrates with the Stone ecosystem. In addition, the pYC Mini, with built-in serial communication, allows direct management of key actuators, such as electronic expansion valves, and complies with the latest regulations on low-GWP refrigerants.

CAREL@ISH
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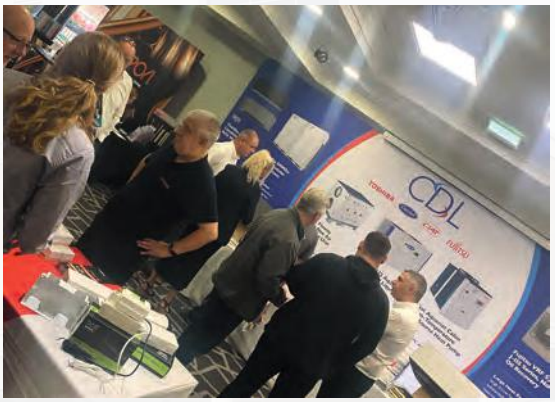

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TOMOJI MIKI, MANAGING DIRECTOR, DAIKIN UK

Daikin UK has appointed Tomoji Miki as its new Managing Director, succeeding Hiroyasu Ishikawa, who becomes Managing Director of Daikin Central Europe.

Tomoji Miki's career spans over 30 years at Daikin, during which he has worked exclusively in sales and held key leadership roles. His international experience includes 13 years in China, seven years in Brazil and three years in Malaysia.

He said: "I look forward to meeting many of Daikin's customers in the coming months to understand how we can develop and grow our businesses together. We see great potential in the residential and commercial markets. We would like to go back to basics: providing the best products, best services, and best technical proposals that the market demands. In the residential market, we are also looking to strengthen our service business."

Mark Dyer will continue to provide support as Deputy Managing Director.

Daikin UK expressed its gratitude to Hiroyasu Ishikawa for his service as Managing Director since 2022, adding that under his leadership the company has achieved significant milestones.

https://www.daikin.co.uk

STEVE MILNES, NORTHERN SALES MANAGER, FUJITSU

Fujitsu General Air Conditioning UK has appointed Steve Milnes as Northern Sales Manager.

Milnes was already familiar with the Fujitsu product range before joining the business, having spent almost 11 years with air conditioning, refrigeration and heat pump wholesaler TF Solutions. He progressed to the position of Regional Manager North before leaving in 2022 to become Business Development Manager at Haier Air Conditioning – Europe.

He said: "I enjoyed working with Fujitsu in my TF days and am delighted to be joining the team. Fujitsu has built a very strong indirect route to market in the north through its wholesale and distribution partners. I'll be looking to build on that wherever possible, but my main focus will be on developing our direct sales operation."

Stuart Eagleton, Sales Director at Fujitsu, said: "Steve has a proven track record and brings a wealth of industry as well as Fujitsu experience with him. Steve's focus will be on increasing Fujitsu's market share in the North, whilst working in conjunction with our distribution partners and internal team to ensure a joined-up and focused approach in achieving our goals."

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

JAMES ANDERSON, MANAGING DIRECTOR, CARTER SYNERGY AND KB REFRIGERATION

Carter Thermal Industries has appointed James Anderson as Managing Director of Carter Synergy & KB Refrigeration.

Anderson has extensive experience in the service and contracting industries and joins the business following more than 14 years with VINCI Facilities, where his roles included Managing Director and Sector Director.

He said: "I'm delighted to be presented with a fantastic opportunity with Carter Synergy/KB Refrigeration, and to work with an experienced team of amazing people whose passion and dedication is infectious.

"I truly believe we can offer our customers a service and experience that others can be measured against and look forward to an exciting and inspiring future."

https://www.cti-ltd.co.uk/

TONY GILBERT, CHIEF OPERATING OFFICER, BESA

The Building Engineering Services Association (BESA) has appointed Tony Gilbert as its first Chief Operating Officer as part of a major strategic transformation.

Gilbert joined the organisation full-time at the start of 2025 having worked as a consultant to the association since last year. He was previously with management consultancy, illumini consulting, where he specialised in helping organisations manage change and position themselves for increased growth. Before that he spent 10 years as group technology director for France Telecom - Orange after founding his own management consultancy in 1993.

"Tony brings enormous experience and vision to the association and has already played a key role in our strategic review and re-organisation," said BESA's chief executive officer David Frise. "We are delighted that he has now agreed to join us full-time to guide us through the next vital stage as we put our plans into action and refocus our products and services in line with this incredible time of change across the building engineering sector."

Gilbert said: "It has been a real privilege to work closely with the staff and membership of this historic and forward-looking trade body as it re-sets for an exciting and challenging new era in building services technology and practices."

www.thebesa.com

ALAN GORDON, REGIONAL DIRECTOR, EXI-TITE SCOTLAND

Leading HVAC supplier Exi-tite Group has promoted Alan Gordon to the role of Regional Director for Exi-tite Scotland.

He joined the business in 2022 after nine years at Helios Ventilation to establish Exi-tite Scotland. He was appointed Regional Sales Manager for Scotland in January 2023.

Last year, Gordon helped Exi-tite to become the first Passive House Institute (PHI)-certified ventilation distributor in Scotland when he passed the PHI Tradesperson examination. Passive House (or Passivhaus) buildings deliver high levels of energy efficiency and comfort for users, alongside outstanding air quality through ventilation.

He said: "The team in Scotland has grown from two employees to seven. They have helped us to make great progress over the past three years and we are looking forward to further success in 2025 and beyond."

Exi-tite Group Managing Director Andrew Robinson said: "Exi-tite Scotland has exceeded all expectations to swiftly become a key part of the business. Alan has been integral to the success of this new venture for Exi-tite in Scotland and we feel this is only the beginning of the success in this region with the team he has now built."

https://exi-tite.com/

JONATHAN FEAVER, MATT BROWN, BCIA

Jonathan Feaver, General Manager UK & I at Priva, has been elected to the Building Controls Industry Association (BCIA) Management Committee following a competitive process which saw a record 10 nominations received.

With more than 12 years' experience in the industry, Feaver replaces Simon Patman, who stood down after serving his three-year term. He joins Matt Brown, Managing Director at E.ON Control Solutions, who was re-elected for a further three-year term.

Feaver said: "By promoting continuous learning, I believe we can empower professionals at all levels to innovate and address the evolving challenges in our field. My goal is to help the industry grow by supporting new technologies and practices that align with energy efficiency and sustainability, which I see as key drivers for the future."

Brown added: "I feel that I have been able to add a lot of value from a corporate governance, finance, and general business perspective to strengthen and professionalise the BCIA, and would like to continue with this."

BCIA President Stacey Lucas said: "With smart buildings becoming ever popular, the building controls industry is set to play a vital role in the UK's journey towards net zero. Jonathan, Matt and the other members of the Management Committee are going to be hugely important in driving the industry forward and increasing awareness of the importance of building controls."

https://www.bcia.co.uk/

JORDAN STEVENS, COLIN TURNBULL, CONDAIR

Jordan Stevens and Colin Turnbull of Condair UK

Humidity control specialist Condair has recently appointed Jordan Stevens as its new Sales Manager and Colin Turnbull as Installation Manager. Stevens joins with over 10 years' experience in sales management and Turnbull more than 20 years' experience in the HVACR sector.

Dave Marshall-George, Sales Director at Condair, said: "It's wonderful to welcome such experienced professionals to the team and they've really hit the ground running. Jordan has already made a significant impact in enhancing our sales management processes and has helped secure one of our largest ever orders, whilst Colin is now expertly overseeing our busiest period of install projects."

Turnbull added: "The technical expertise available at Condair is first class. From an engineering project perspective, working directly with the manufacturer makes getting to grips with the technical aspects of the products very easy. This really enables us to deliver the manufacturer's expertise on-site."

Condair describes itself as the UK's largest specialist humidity control company with over 60 employees. Over half the team have been with the company for more than 10 years and Condair says this enables the organisation to provide an exceptionally high level of expertise to its customers. Globally, the Condair Group has recently topped the 1,000-employee milestone.

www.condair.co.uk

NICK WILKS, TECHNICAL SALES MANAGER, TQ ENVIRONMENTAL

Nick Wilks has joined Yorkshire-based leak detection specialist TQ Environmental as Technical Sales Manager.

Wilks makes the move after 18 years with Fujitsu General Air Conditioning UK (formerly Eurofred UK), most recently as National Distribution Sales Manager.

He said: "Having worked alongside TQ Environmental for some years, I knew that this opportunity was going to be a great fit for me and that I could work extremely well with a company that holds such high values for its team and customers alike.

"My sales experience, knowledge of the industry, loyalty, and work ethic will help to grow the business that TQ Environmental has already established. I cannot wait to get out there and reconnect with my customer base, meet lots of new customers, engage with manufacturers, and build on TQ Environmental's success as a leading manufacturer of leak detection equipment.

TQ Managing Director Gary Hall said: "I have known Nick both personally and in a professional context for a good few years now. He has always been a loyal dedicated individual. When I found out that we could get him at TQ Environmental it was a very easy decision to make. Nick will make a perfect addition to the team, his past experience in the AC industry will stand him in good stead at TQ and we look forward to a successful and rewarding future together."

https://tqplc.com/

MARINO TANAS, REGIONAL CEO, CAREL

Marino Tanas has joined HVAC controls specialist CAREL as its new Regional CEO – Western Europe.

With extensive experience in leadership and management roles within the industry, Tanas will oversee CAREL's operations in its subsidiaries located in the UK, Italy, Spain, France, Germany and the Nordic countries. The Managing Directors of these organisations will report directly to him, and CAREL says this organisational structure, already implemented in other key regions such as APAC, EEMEA and the Americas, ensures a 'unified yet flexible approach'.

Francesco Nalini, CEO of the CAREL Group, said: "The arrival of Marino Tanas marks an important step in our growth journey. His commercial and service expertise will be key to better meeting the needs of our customers in Western Europe, while his strategic vision will enable us to continue driving our development in the region."

https://www.carel.com/

KAREN MCQUADE, PRESIDENT, BFFF

The British Frozen Food Federation (BFFF) has appointed Karen McQuade as its new president, succeeding Ian Stone, who steps down after serving in the role since December 2020.

In 2007 McQuade founded The UK Foodhall Ltd, which provides healthy, quality-assured British meat, fish, and poultry products to the school meal sector. Driven by a commitment to sourcing locally and supporting British farmers and manufacturers, McQuade has earned national recognition, including 17 national business awards and 32 national product awards. Her portfolio now includes three additional food manufacturing companies, employing around 260 people.

She said: "I have always supported the BFFF for their championing of frozen food and the much-needed voice they give to the frozen-food category. Today, more than ever, we need the BFFF to speak loudly on our behalf about the sustainable benefits of frozen food, its role in reducing food waste, and the quality it brings without added preservatives."

Rupert Ashby, CEO of the BFFF, said: "I'd like to take this opportunity to welcome Karen to her new role and am delighted that she has been appointed as president. Her entrepreneurial spirit, dedication to British food, and commitment to the frozen sector make her an inspiring leader for our industry.

"I would also like to express my gratitude on behalf of the federation to outgoing president Ian Stone. His invaluable service and steady leadership over the past four years have been instrumental in steering the BFFF through an exciting and challenging period which included changes following Brexit and lockdown. We are grateful for his dedication."

https://bfff.co.uk/

MIKE SKIVINGTON, SALES DIRECTOR UK AND IRELAND, FERNOX

Water treatment manufacturer Fernox has promoted Mike Skivington to Sales Director for the UK and Ireland.

Skivington first joined the business as a graduate in 2010 and has held several sales positions, including Area Sales Manager and Southern Regional Sales Director. He will now oversee all sales operations, strategic initiatives and customer relationships across the UK and Ireland.

He said: "Backed by a talented and dedicated team, along with a strong portfolio of chemical water treatments and system filters, such as our newly launched TF1 Sigma Mini, we are well-positioned to collaborate with our trade partners and drive continued growth."

Greg Banham, European Sales Director, said: "Since joining, Mike has been a vital member of our business. His in-depth understanding of Fernox and its values, coupled with his enthusiasm and proven sales experience will serve him well to lead our UK and Ireland sales operation."

www.fernox.com

KEVIN GOODISON, REGIONAL TECHNICAL SALES MANAGER, CONEX BÄNNINGER

Kevin Goodison has been appointed Regional Technical Sales Manager (Midlands) by fittings, valves and accessories specialist Conex Bänninger.

Goodison, who has worked primarily within the HVAC sector for the past 25 years, joins from composite pipe manufacturer Fraenkische UK and will look to further develop existing installer and merchant relationships, as well as bring on new customers.

He said: "I am delighted to have joined Conex Bänninger, a company renowned for innovation. Part of the appeal for me is its impressive heritage, which goes back to 1909, as well as the culture which runs throughout the business.

"The sector has seen major changes in recent years with a shift away from solder and brazing to press-fit. Continuing to educate customers and installers on the benefits of press-fit is a big part of the job."

https://conexbanninger.com/

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