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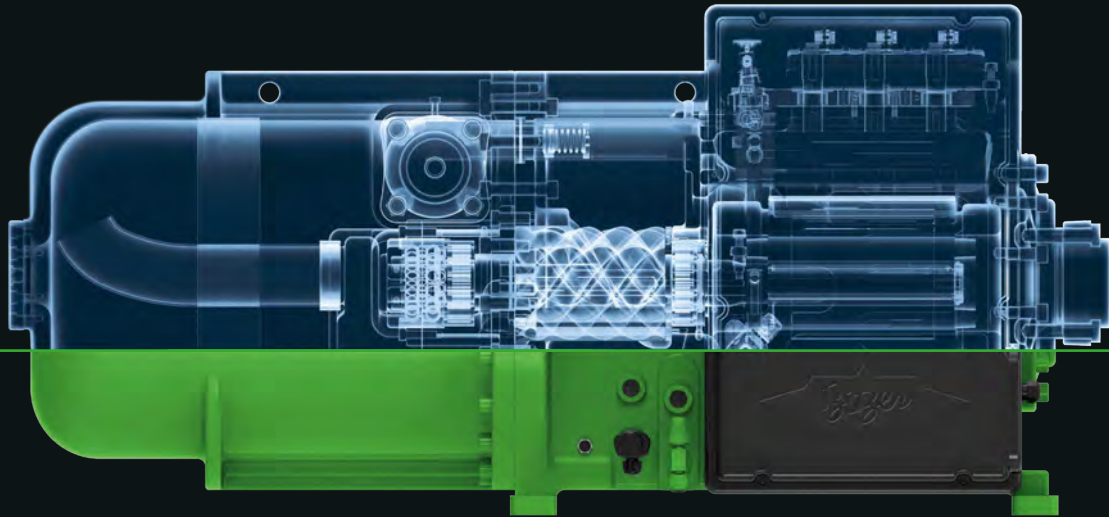
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AIR
CONDITIONING



HEAT
PUMPS



PROCESS
COOLING



INTELLIGENT
PRODUCTS



FREQUENCY
INVERTERS

Welcome to the October/November edition of *ACR Journal*.

It was nice to catch up with so many of you since my last note, both at the ACR Journal and Heat Pumps Today Exhibition at Elland Road and at the reinstated Institute of Refrigeration Northern Dinner in Newcastle.

These regional dinners are a breath of fresh air and it's encouraging to see so many new faces. It also shows that people aren't always inclined to cover the cost of travelling to London. Congratulations to the IOR Northern Committee for hosting such a fantastic evening and hopefully more regions will be formed in the future as I think this is a great way to improve the IOR's reach.

I'd also like to extend my congratulations to industry veteran Matt Morton, Chairman of Durham-based EJM Engineered Systems, who received the Northern Branch Lifetime Achievement Award in recognition of his outstanding contribution to refrigeration.

In this issue, Kevin Glass of Bitzer reflects on how the industry has changed as he prepares for retirement after 40 years; the Environmental Investigation Agency looks at how refrigeration is driving climate change and how retailers can lead the way, while Chris Ferriday of Atlas Copco Process Cooling Solutions explains why a more consultative approach could create new opportunities for growth.

Meanwhile, Lynne Ford of Kooltech tells us that, after 35 years, our industry's constantly evolving landscape continues to inspire her in our Women in the ACR Industry feature.

Andy



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Campaigning for better buildings

The Building Engineering Services Association (BESA) is supporting the fourth annual World Ventilation Day (WV8D) with an event showcasing the latest solutions for improving the health, well-being and productivity of all building occupants.

The global initiative (#WorldVentil8Day) is supported by industry bodies, universities and environmental groups and takes place on November 8 every year. It aims to raise awareness of the vital role played by ventilation in tackling issues like overheating, condensation, mould and damp in both residential and commercial buildings.

BESA's Ventil8 Day Exchange at the Building Centre, London, will feature a full day programme focusing on residential ventilation and mould in the morning followed by an afternoon dedicated to commercial building solutions. It is sponsored by AIRO, S&P Ventilation, Swegon, IAQ Services and Nuaire and is being organised in partnership with industry bodies BEAMA and CIBSE.

The programme includes case studies, expert presentations, a panel debate and several practical take-aways. It will take

place on November 6 with recordings and results amplified through social media and online on the day itself, which this year falls on a Saturday.

Garry Ratcliffe, the CEO of a multi-academy trust of nine primary schools in Kent, will open the event with his personal and moving story. Drawing on his experience with the BBC's DIY SOS Big Build, which involved the demolition and rebuilding of his family home in just over a week, Garry will explore how installing a bespoke ventilation system has dramatically improved life for his children, three of whom have complex disabilities.

Other organisations worldwide will also be running events reflecting this year's theme of Collabor8 to Ventil8 - best practices for all with the focus on providing practical solutions for facilities managers, building

services engineers, local authorities, housing associations and others involved in the design and operation of buildings.

The World Health Organisation (WHO) states that exposure to poor indoor air quality (IAQ) is directly linked to 3.8 million premature deaths worldwide every year and the three previous World Ventil8 Days have featured practical demonstrations of how good ventilation can reduce exposure to air pollutants and infectious diseases, aid human productivity and improve sleep.

Powerful message: Garry Ratcliffe with his family



Employers back mandatory certified training for handling flammable refrigerants

There is strong support from employers for mandatory certified training for those handling flammable refrigerants, according to a survey conducted by the Air Conditioning & Refrigeration Industry Board (ACRIB).

The survey of ACRIB members during April/May sought the views of the RACHP industry towards refrigerant handling training, qualifications and skills. This relates to the future review of the GB F-Gas Regulations and the EU proposals to introduce mandatory certification for flammables and certification for carbon dioxide and ammonia for those working with these types of refrigerant.

ACRIB says the 132 responses received from across 10 member organisations show that employers need to continue to invest in training in this area to ensure their workforce is up to date and working safely, and also send a clear message to

policymakers that future F-Gas legislation needs revision to meet industry needs.

The results were shared in a meeting with Defra on 19 August to propose that industry views and readiness for training on these alternative refrigerants is taken into account, as Defra prepares for its consultation on appropriate legislative approaches to refrigerant handling.

There are high levels of awareness of the availability of qualifications for handling of flammable refrigerants, hydrocarbons, carbon dioxide and ammonia. Over 80% of those who responded said they were aware of certified training for all of these refrigerants. Another positive finding was that many employers already have the necessary certified training in place – or are planning to do so.

There appears to be overwhelming support for the introduction of mandatory

flammable refrigerant certified training alongside or in the next GB F-Gas Regulation, to bring alignment with the EU F-Gas Regulation requirements already in place. This is also true for bringing in carbon dioxide and ammonia training under the Regulation for anyone who handles these refrigerants.

There are mixed views on the need for regular recertification – with a fairly even split between those who would like to see renewal every five years brought in, and those who only want to recertify when legislation changes. ACRIB notes that under the EU F-Gas Regulation, UK Building Safety Act, and to align with Engineering Services CSC Skills Card renewal periods, regular refresher assessment as a means of proof of competence is something that the sector is likely to have to move towards in the future.



Natural refrigerant training room at the Beijer Ref Academy, Glasgow

Beijer Ref to open Glasgow training academy

Beijer Ref UK will officially open its third training academy, in Glasgow, on Thursday 6 November.

Building on the success of its existing venues in Wetherby and Preston, the Beijer Ref Academy, Glasgow launch forms part of the wholesale group's strategic plan to offer top-level training to engineers across the UK.

The event will run from 12noon to 4pm, including a buffet lunch, allowing plenty of time for guests attending the IOR Scotland Annual Dinner in Glasgow later that evening to visit.

John Billson, Managing Director of Beijer Ref UK & Ireland, said: "We are proud of our long-standing commitment to help upskill our industry and improve standards. Glasgow will join our other academies in providing high quality training on the latest innovative and sustainable systems, and our ultimate aim is to ensure every engineer across the UK is no more than two hours away from expert guidance."

A 25% reduction in prices will be applied to all courses booked on the day, and a wide range of sustainable heating and cooling training rigs will be on display.

Competitions at 2pm and 3pm will test visitors' knowledge of refrigeration and air conditioning, with Apple Watches awarded to the winners.

Anyone interested in attending should register their interest at info@beijerrefacademy.co.uk.

Venue: Beijer Ref Academy, 140, St Andrews Road, Glasgow, G41 1PP

New guidance on residential ventilation

Eurovent has published a new recommendation on ventilation systems in new and renovated residential buildings. It provides guidance on the application of technologies that ensure good indoor air quality (IAQ).

The recommendation responds directly to the objectives of the recast Energy Performance of Buildings Directive (EPBD 2024/1275), advocating for harmonised IAQ and ventilation requirements across all EU member states. It highlights the role of mechanical ventilation not only in new construction but also in major renovations, stressing that improved airtightness without proper ventilation can severely compromise occupant health and well-being.

The Vice-Chairperson of Eurovent Product Group Residential Ventilation Systems (PG-RVS), Arie Veldhuijzen, said: "It is important that the recast EPBD contains provisions for IAQ and ventilation and links this to health. In so doing, it is essential to clarify how this can be applied in practice. With this recommendation, we demonstrate how ventilation systems work and which ventilation solution is suitable for which situation. This is important for many people, not only for those involved in the implementation of the recast EPBD, but for anyone involved in new construction or renovation."

The document is available as a free download at: <https://www.eurovent.eu/news/new-eurovent-recommendation-on-ventilation-systems/>



BESA says farewell to Rab Fletcher

The Building Engineering Services Association (BESA) has paid tribute to "hugely popular and highly respected" former President Robert (Rab) Fletcher, who has died after a lengthy battle with cancer.

He was President of the association in 2022/23 and was mechanical services team manager at Fife Council Building Services. He had more than 30 years' experience in construction and building services engineering – but always modestly described himself as "a time-served plumber".

Fletcher also served as chairman of BESA Scotland for several years and was one of the founders of the BESA Local Authority Forum, which he also chaired. This influential network forged strong links between public sector specifiers and Scottish contractors. It included

representatives from every local council in Scotland who met regularly to address key industry topics and find solutions to common problems. Its meetings attracted more than 500 attendees every year.

Fletcher worked for the £130m turnover building services division of Fife Council for nearly 30 years having started in a plumbing role before progressing through the ranks to supervisor and co-ordinator.

He was a powerful advocate of young engineers and a committed champion of apprenticeships. He was lead mentor for Fife Council Building Services mechanical apprentices, of which there were often more than 30 working in plumbing/gas and mechanical disciplines. He intervened personally to ensure several were taken on by the council after being made redundant by private employers.



Chief executive officer David Frise said the whole BESA community was in mourning. "Rab was a delightful man who worked extremely hard on behalf of our members during a difficult period for the industry," he said. "Despite his own health struggles, he remained extremely generous with his time and support, providing inspirational leadership throughout his time as President and as an officer."

"Everyone who met Rab is mourning his loss and we will all miss his cheerful personality and wise counsel."



Munters keeping castle archives safe

Climate control specialist Munters has installed dehumidifiers in archive rooms at Belvoir Castle to protect the family's historical records from deterioration and moisture damage.

The castle has been the ancestral home of the Duke of Rutland's family since 1067. From the days of the Norman conquest to modern day, it is regarded as one of the finest examples of Regency architecture in the world.

To ensure the preservation of precious archives for future generations, Belvoir Castle chose Munters to install dehumidifiers in the castle's archive rooms. These rooms house a vast collection of books, documents, maps, manuscripts, estate management records, with the oldest document dating back to 1103.



His Grace David Manners, 11th Duke of Rutland, in one of the castle archive rooms

Belvoir Castle, in Rutland, houses a vast collection of historical documents



The passage of time has taken its toll on many of the documents, and humidity and moisture has caused visible damage such as mould growth, yellowing, and discolouration.

Recognising the need to protect the irreplaceable records, Belvoir Castle previously tried commercial dehumidifiers with little success. Munters was then selected to design a dehumidification solution tailored to the unique challenges of the castle.

Each of the five dehumidifiers installed were selected to maintain consistent relative humidity levels of 50-55% RH, preventing further damage and ensuring the long-term preservation. This solution meets the British

Standard BS4971 for conservation in archives, as well as reducing the need for additional heating, which in turn saves energy.

His Grace David Manners, 11th Duke of Rutland, said: "You can see why an industrial solution is needed. Due to the thickness of the castle walls, having one dehumidifier in each of the archive rooms is essential."

"Working within a castle presents additional challenges," added Glen Wilson, Munters Sales Team Leader, Southern UK Team. "Due to the castle being Grade I listed, we could not drill holes in the walls to duct wet air out of the archive. This is why condenser dehumidifiers were selected."

Still time to enter IOR Beyond Refrigeration Environmental Award

The Institute of Refrigeration (IOR) is still accepting submissions for the Beyond Refrigeration Environmental Award — an annual accolade that recognises pioneering projects making a measurable impact in reducing environmental emissions from cooling systems across the UK.

Aligned with the IOR's commitment to addressing the Net Zero challenge, the award aims to highlight and share cutting-edge innovations, promote new approaches to cooling and heating, and advance technologies that deliver environmental and societal benefits.

In addition to industry recognition at the IOR Annual Dinner, the winning project will be showcased as a technical paper in the IOR's programme — ensuring the innovation receives the visibility and platform it deserves.

The 2025 award went to the Smart Parc Energy Centre in Derby. Developed by GEA Heating & Refrigeration Solutions, it is a sustainable energy management centre, based on an integrated heating and cooling network that redistributes waste heat.

Open to companies and collaborative initiatives, the award invites entries from projects involving refrigeration,



air conditioning or heat pumps. Submissions can span industrial, commercial or domestic applications. All projects must be installed, operational, and supported by robust performance data demonstrating their energy efficiency and environmental impact.

Entries should address at least four of the seven priority areas set out in the IOR's Beyond

Refrigeration framework:

- Maximising system performance
- Using best technology
- Balancing heating and cooling
- Reducing the need for cooling
- Intelligent energy use
- Developing the best people and skills
- Working together and whole system lifetime.

Full details on these priorities can be found at:

www.ior.org.uk/beyondrefrigeration.

The closing date for entries is 10 November. Download the nomination form at: **www.ior.org.uk/about/IOR-awards/beyond-refrigeration-environment-award**

Retailers 'face £146m annual losses' without Net Zero upgrades

UK retailers are losing over £146 million every year by failing to upgrade their buildings' services to meet Net Zero targets, according to new research from Mitsubishi Electric. The analysis finds that these losses come from outdated equipment that leaks energy and costs more to run than it should.

Despite most retail operations managers knowing that sustainability can boost financial performance, almost half (43%) believe Net Zero is not seen as a priority for their business because the return on investment (ROI) falls in future trading years.

The survey of 500 retail facilities managers across the UK also found:

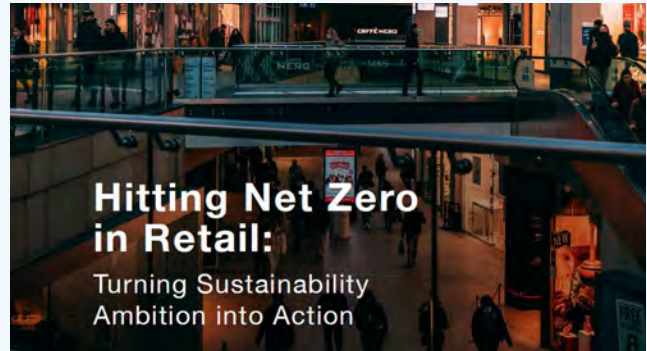
- 35% realise that a third of their stores could become 'stranded assets' – too costly or impossible to rent due to poor environmental performance.
- HVAC systems account for up to 60% of a store's energy use with 54% of facilities managers saying they have already upgraded to modern, energy-efficient systems.
- More than 34% of shops will remain uncompliant and unable to be updated by 2030 Net Zero targets.

Forward-thinking retailers are adopting a phased approach towards Net Zero upgrades, which helps to spread upfront equipment costs by tying it to lease events or planned refurbishment. However, the research also finds that many of those responsible for running these estates have little influence over sustainability and this is affecting their ability to act.

Over a third have no control over budgets or decision making for Net Zero and 42% report that they have had no direction from their seniors, while 21% do not even have Net Zero as part of their performance targets.

This lack of authority is stalling upgrades to one of the UK's most energy-intensive industries. While facilities managers recognise that decarbonising estates can boost financial results, strengthen business resilience and improve the shopping experience, many just aren't being empowered to act.

Chris Newman, Zero Carbon Design Manager, Mitsubishi Electric Living Environment Systems UK, said: "The retail industry has the third largest building footprint in the UK, with around 16% of all non-domestic building space occupied by shops. This offers a substantial opportunity to decarbonise at scale, starting with identifying the 'easy wins' now and reviewing the systems responsible for heating, ventilating and cooling these spaces. In having an in-depth understanding of how this equipment



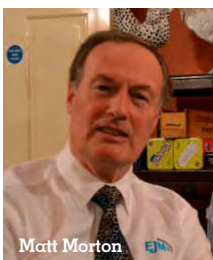
operates, facilities managers are uniquely positioned to support the delivery of net zero estates in future."

With regulations such as the Minimum Energy Efficiency Standards (MEES) expected to tighten over the next five years, and investor expectations on sustainability continuing to rise, retailers that don't adapt their buildings also risk them becoming unlettable, losing asset value, and ceasing operation further down the line.

Already, 35% of operations managers estimate more than a third of their estate could become stranded assets – meaning they are no longer economically viable due to their environmental performance – if these regulations are implemented. This is already having financial consequences, with retailers losing an estimated £146 million through energy leakage per year from ageing equipment that should be replaced with modern, energy-efficient systems.

Newman added: "The longer we leave it, the harder adapting these buildings is going to get. Now is the time for retailers to be creating long-term strategies that align 'business as usual' with concrete commitments for energy reduction. This will not only support compliance with existing and proposed regulations like MEES but also protect asset value and lower costs at a time when the majority can ill-afford further financial strain. This will allow retailers to stay competitive and fully operational within an increasingly sustainably minded market."

The manufacturer says replacing equipment with energy-efficient alternatives – such as modern air conditioning and heat pumps – can be as straightforward as replacing indoor and outdoor units while keeping the existing pipework. This can lead to significant energy and cost savings, compliance with incoming regulation, and ensure that the retail industry is prepared for the Net Zero economy.



Lifetime achievement award for Matt Morton

Industry veteran Matt Morton, Chairman of Durham-based EJM Engineered Systems, has been honoured with the Institute

of Refrigeration's Northern Branch Lifetime Achievement Award in recognition of his outstanding contribution to refrigeration.

The award was presented by IOR Chief Executive Miriam Rodway at the revived Northern Refrigeration Dinner, held in Newcastle and attended by around 180 guests.

Morton began his career with North Eastern Refrigeration in 1963, rising to the role of technical director before co-founding EJM in 1980. He also served as Chair of the IOR Northern Branch for more than 20 years.

Paying tribute, Neil Henry of Option3 Logic, who has succeeded Morton as Branch Chair, praised his predecessor's "wise words and steady guidance", adding that his leadership has provided a strong foundation for the future.

The evening marked a successful return of the Northern Dinner, which had been on hold since the pandemic.

Bitzer supplies compressors for training Academy

Green Point UK, the remanufacturing and specialist service arm of Bitzer UK, has provided two reciprocating compressors to the Beijer Ref's Academy in Yorkshire.

The Bitzer compressors include one HFO-compatible model and one CO₂ unit, both of which will be used to demonstrate how compressor technology works and why it is a critical part of any cooling system.

The compressors were recently presented by Will Pribyl, General Manager at Green Point UK, during a visit to the Beijer Ref Academy in Wetherby.

"We're really pleased to receive these compressors from Green Point UK," said Ian Lemmon, Training Manager at Beijer Ref UK. "Having access to real-world equipment is essential for delivering meaningful, hands-on training at our academy. These Bitzer compressors will help us demonstrate the fundamentals of compressor operation and maintenance to engineers at all levels.

Beijer Ref is a long-standing distributor of Bitzer products across the UK and Europe and its first academy opened in the UK towards the end of 2021. This donation follows on from a successful training day held at Green Point UK in Milton Keynes last year, where Beijer Ref engineers were given a detailed introduction to compressor technologies and the remanufacturing process. Following the session, Green Point UK arranged for the two compressors to be delivered to the Beijer Ref Academy to support its training programmes.



Will Pribyl of Green Point UK, left, with Ian Lemmon of Beijer Ref UK



Record turnout for 38th HRS Golf Tournament

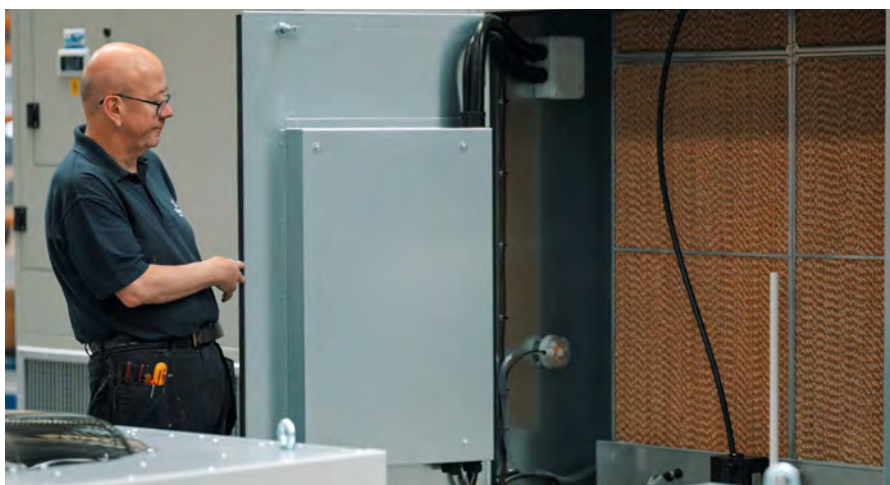
The 38th annual HRS Golf Tournament at Old Thorns was the best-attended event on record, with 29 teams, 116 players and a further 34 guests joining for the evening dinner and prize presentation.

Carel UK won the 18-hole Stableford team event in the afternoon with 93 points, ahead of iCool Refrigeration B (89), A-Gas A (85) and A-Gas B (84).

Andrew Robinson (34) won the best gross score Stableford individual prize, edging out John McEvoy (30), while best net score prizes went to winner Steve Alden and McEvoy (both 40 on countback).

Longest drive prizes went to Ethan Blackwood, Andrew Robinson, Daniel McQueen and James Morgan, while nearest the pin awards were made to Steve Taylor, Joe Pace, Susie Leverton and James Richardson. Luke Mason took the Hole 9 in Two prize.

Earlier in the day, Carrier Solutions UK won the 1st Tee Texas Scramble ahead of A-Gas A, with Ultimate Air B winning the 10th Tee contest and Javac runners-up.



Weatherite and Condair join forces

When Weatherite needed to develop an innovative cooling solution that didn't rely on man-made refrigerants, it turned to Condair's adiabatic cooling expertise. The partnership resulted in Weatherite's innovative AdTec-D direct cooling system, which is now a highly proven free air-cooling unit, used by leading telecoms and data centre clients.

Andy Lewis, General Manager for Data Centres at Weatherite, said: "Incorporating Condair's adiabatic cooling into our AdTec-D unit has saved 80% of power per unit, compared to equivalent refrigerant-based systems. Condair's flexibility and engineering helped us massively for adapting and producing products specific to the client's needs. This allowed us to innovate and really deliver what the client was after.

"A key benefit of working with Condair is their reliability and in not viewing them as merely a supplier, but as a partner, capable of supporting our product from the design stages through to on-site commissioning. I would definitely recommend Condair because of the quality of product, the service that they offer, and also because of the innovation that they offer for this sector."

Weatherite's AdTec-D can offer 15-80kW of sensible cooling per unit, typically operates with an energy efficiency ratio greater than 15, and is an ideal retrofit solution for DC or telecoms operations looking to take advantage of free-air cooling. It can operate in free-air cooling only mode when the outdoor conditions allow or utilise adiabatic cooling to boost performance when needed. Even on the UK's hottest ever recorded day, the AdTec-D successfully maintained the required indoor conditions for a leading UK telecoms provider, without any additional compressor-driven cooling.

Smart setting for young engineers

Sometimes referred to as London's smartest building, 150 Holborn was the setting for the Building Controls Industry Association (BCIA)'s Young Engineers Network (YEN)'s latest event.

Featuring the latest smart building technology, the Sidara headquarters includes a fully integrated workplace management system, computer aided facility management and a mobile application tool to enable occupants to effectively engage with the building's systems and infrastructure.

With more than four hours of networking, panel discussions, group activities, demonstrations of software and hardware platforms, and a building tour, more than 30 young engineers had the chance to experience some of the most innovative and sustainable solutions available, including:

- Knowledge of future sustainability initiatives – attendees got a glimpse of the strategies and schemes in place to cut emissions
- Hands-on smart building technology experience – innovative smart building technology, including BEMS hardware and software, was demonstrated
- Appreciation for new approaches – inspired by the building and the company, attendees had the opportunity to explore different ideas and think outside the box



• Connections and relationships – attendees took part in group activities and presentations, sharing ideas and working collaboratively with fellow professionals. Lucy Gale, Customer Success Specialist at Schneider Electric, arranged the event and was delighted with how it had been received.

The YEN also recently co-hosted the Together We Engineer event, pictured below, a discussion on empowering women and the next generation.

Organised by the YEN and the Chartered Institution of Building Services Engineers (CIBSE) Women in Building Services Engineering (WIBSE), the evening of panel debates and discussions in Manchester brought together panellists from leading building services professional bodies and associations, such as BCIA Young Engineer of the Year and YEN member Zoe Dickson and BCIA Vice President Jen Vickers, to talk about how they are inspiring female professionals and the next generation.

Vickers sat on both panels and highlighted the importance of events focusing on increasing female representation in the industry. She said: "It's important for women already in the industry to be visible in order to make it accessible for those who may not

otherwise consider it as a career option – to quote the tennis player Billie Jean King, 'You have to see it to be it.'

"There needs to be more visibility in schools and colleges, through delivering presentations and offering work placements to demonstrate to young women that it is a viable career path for them. Diversity of thought, from a wider range of presentations, leads to better problem-solving and more creative solutions."

Kate O'Donnell, Business Development Manager, E-ON Controls and YEN regional lead for the North, added: "Events like this spark inspiration, showing that women in BEMS aren't just part of the future, they're shaping it right now! This event matters because it's all about real voices, real stories, and building a BEMS community where women thrive."

Rachael Gilbert, WIBSE representative for CIBSE North West, co-organised the event and was delighted with the positive atmosphere created. She said: "The atmosphere was electric. The room was full of brilliant women and allies uplifting each other, sharing stories, and connecting through their experiences."

<https://www.bcia.co.uk/young-engineers-network>



Aermec strikes silver with Constructionline

Aermec has secured Silver accreditation with Constructionline, a leading provider of procurement and supply chain management solutions for the construction industry.

The Constructionline platform connects buyers with pre-qualified suppliers and is

widely used by over 2,000 organisations including central and local government who require organisations to be accredited before starting the tender process.

Lucy Hutchins, Aermec's Health, Safety, Environment & Quality Manager, said: "Constructionline provides businesses in

the construction sector with confidence that are selecting suppliers, which have been verified, are approved, and accredited. As a leading supplier of commercial cooling, heating, service and maintenance this demonstrates that our company follows best practices in all our procurement operations."



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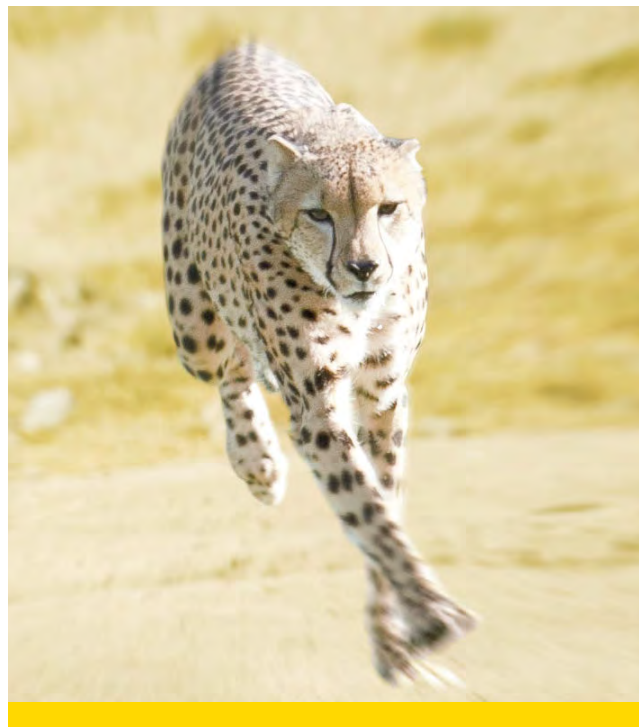
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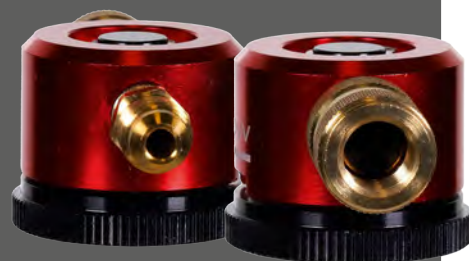
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TOOLS TALK



The original nitrogen purge tool!

DiversiTech's innovative nitrogen purge tool is the only device you will ever need for brazing and purging!

The DP-1 nitrogen purge tool is an easy way to purge copper pipes with nitrogen. With just a turn of the dial, you can switch to a very low flow of nitrogen to properly braze the copper. It boasts a durable aluminium design which does not suffer being thrown in your tool bag at the end of use.

WHY USE A NITROGEN PURGE TOOL?

The use of nitrogen to purge or braze is critical in preventing system failures. During the brazing process, if a



refrigerant line is not purged of oxygen, the joint can "burn" causing warranty defects. Purging can also remove refrigerant, moisture and debris to keep the lines clean.

THE ORIGINAL

Other purge tools in the market simply indicate or adjust the flow of nitrogen through the line. This will not give adequate assurances that a line will be free of oxygen and debris. The DP-1 regulates the flow to the precise flow pressure and volume for either purging or brazing.

FEATURES

- **Easy to use** - A simple 3-click position dial for BRAZE / PURGE / OFF. No flow indicator valve to mess with.
- **Easy handling size** - The DP-1 is small and compact.
- **Durable construction** - All-metal construction is free of glass or other breakable components.
- **Fast** - Connect standard 1/4" refrigerant hoses to the DP-1, and you are ready in seconds.
- **Error free** - By regulating the precise flow and volume, there is no need for manual adjustment.
- **Regulates** - Accurately regulates nitrogen flow to 25-35 SCFH on PURGE and 3-6 SCFH on BRAZE with a 50psi inlet pressure (not to exceed an inlet pressure of 200psi).

Brazing with nitrogen



Brazing without nitrogen



The DP-1 has a 1-year warranty and is sold by all leading wholesalers.
See the DP-1 - use the QR code



Visit our website
<https://diversitech.global/>
or contact our sales team on
sales@diversitech.com

Kevin Glass speaking during his term as IOR President

Cooling through the years: Kevin Glass reflects on four decades in refrigeration

After nearly 40 years in the refrigeration and air conditioning industry, Kevin Glass is preparing to retire from his role as Managing Director of BITZER UK.

It feels a bit strange to think about stepping away from the company I've spent almost the entirety of my working life, but it has given me an opportunity to reflect. I never planned on having a career in refrigeration, but over time I came to understand just how vital this sector is, and how resilient it continues to be.

I started out as a young engineer in the 1980s, originally training in construction plant maintenance. When that route closed off unexpectedly, I found myself in a job installing split system air conditioning units and servicing dehumidifiers. That change of direction led me into a sales role in 1986 at



Kevin's legendary 'Who Killed the Compressor?' talk

APV Hall Commercial, which later became BITZER UK. And that's where I've stayed ever since.

An industry in constant motion

Over the years, I've seen this industry change in more ways than I can count. The pace of development, the rise in environmental legislation, the shift in skills and technology.

When I first started out, things were different. The pace of change was slower, the number of refrigerants fewer and the role of the technician was far more hands-on. Back then, I only knew of one refrigerant – that was R22. But I soon got

to know the likes of R12 and R502. Today, the industry is dealing with, what feels like, hundreds of refrigerants, each with different pressure ratings, characteristics and safety classifications. That shift alone shows how far we've come in terms of complexity and choice.

From paper and rulers to predictive maintenance

But refrigerants aren't the only thing that's changed. The tools we use, the way we design systems, the software we rely on, even the skills we need. Back in the day, if I was doing a compressor selection for a customer, I'd sit at a desk with printed data tables at 5° or 10° increments, a calculator and a ruler. I'd spend three or four hours manually working out the optimal setup. Today, a digital selection tool does it in seconds.

Of course, technology alone doesn't make an industry better, it's how we use it. The advent of smart controls, remote monitoring and, more recently, AI-driven diagnostics has added layers of intelligence to systems. We can now analyse running data in real time, spot performance drift and even predict failures before they happen. In the past, refrigeration systems were reactive. They worked until they didn't. Now, with enough data, we can see the signs well in advance.

Smarter systems, tougher demands

Still, these advancements come with challenges. Systems have become more complex. You need a decent level of knowledge to install, maintain and diagnose modern systems. There was a time when experience alone could get you far. Now, you need knowledge, technical training and digital skills. And while I think our sector has done a great job adapting, we do need to keep an eye on the skills pipeline. There are brilliant young engineers coming through, but we need more of them.

Refrigerants: from R22 to natural solutions

One of the changes that stands out most to me is the shift in refrigerant regulation. When I began, we were just heading into the phase-out of CFCs. That transition felt seismic at the time. But since then,

we've adapted to multiple changes: from HCFCs to HFCs to HFOs, and now a growing emphasis on naturals like CO₂, hydrocarbons and ammonia. Each new wave brings technical and legislative challenges, but the industry has continually risen to meet them.

I've always been particularly proud of the role BITZER has played during those transitions. For example, the Refrigerant Report, which was first published by BITZER's Hermann Renz, has become like the industry's refrigerant bible. It was a neutral, reliable document and full of the kind of technical clarity we all needed when trying to make sense of changing refrigerant landscapes.

Compressors that stood the test of time

The shift in compressor technology itself has also been significant. When I joined the business, reciprocating compressors were the norm, and semi-hermetic designs were only just starting to shake off a mixed reputation. Since then, we've seen scroll compressors introduced with the promise of replacing reciprocating compressors entirely. That didn't quite happen. They carved out their niche, but reciprocating compressors proved themselves robust, adaptable and suitable across more varied applications – especially as we began working with CO₂, which scrolls can't easily handle. Add to that the advances in screw and scroll inverter-driven units, and you start to see how diversified compressor technology has become.

Today's pressures, tomorrow's promise

The challenges facing the sector today are in some ways more sophisticated than those of the past. We're navigating refrigerant bans, carbon targets, energy performance regulations, cybersecurity threats and increasing pressure to automate. But in other ways, the mission remains the same: to keep things cold, safely and efficiently. The fundamentals of thermodynamics haven't changed.

And nor have the importance of people. Even the best technology means little without engineers who understand how to apply it. The camaraderie in this industry is great. Even among competitors, there's a mutual respect and willingness to share knowledge.

Passing the torch

As I approach retirement, people often ask what's next. While I don't plan to work five days a week anymore, I do hope to stay involved. There's a lot of knowledge I'd like to pass on and give back. I know how valuable learning from other more experienced people than you can be.

Looking back, I never expected to stay in refrigeration for four decades. But then again, I never had a reason to leave. There was always something new to learn, some challenge to take on and someone willing to lend a hand. That's what made it worthwhile. And it's why I still believe this industry has a bright, innovative future ahead of it. As long as we keep adapting, supporting one another and staying curious the industry will continue to thrive. 🇪🇺



Pictured during a visit to BITZER HQ in Germany



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Adaptation 2025: cooling for a warming world

Andrew Slater reports from the first IIR Conference on Refrigeration Adapting to Rising Temperatures, where global experts explored innovation, resilience and the race to stay cool.



Close to 120 researchers, engineers, consultants, manufacturers and policymakers from 18 countries attended the first IIR International Conference on Refrigeration Adapting to Rising Temperatures at the University of Manchester. Hosted by the Institute of Refrigeration (IOR), the event brought together industry figures focused on refrigeration technology, heat pumps, air conditioning, food storage, transport and energy efficiency. It created a multidisciplinary platform for sharing research, developing solutions and agreeing strategies for a hotter and more demanding world.

The conference opened with a keynote delivered by Dr Tim Fox of the Clean Cooling Network, working with the University of Birmingham. Drawing on his paper *The Hot Reality: Living in a +50°C World*, Fox argued for cooling to be recognised as critical national infrastructure. He underlined its essential role across sectors from food supply

and healthcare to data centres, industry and digital infrastructure, stressing that sustainable, resilient cooling is fundamental to health, economic stability and national security.

Fox highlighted the risks posed by rising global temperatures, with projections of over 3°C of warming by the end of the century, and explored how inadequate cooling could lead to food losses, compromised vaccine distribution, reduced productivity, and public health crises. He called for coordinated government action, cross sector collaboration, and policy reform to embed cooling into adaptation planning – not as a luxury, but as a vital service without which modern society cannot function.

Technical depth and diversity

Delegates had access to more than 80 technical papers addressing refrigerant safety, system efficiency, renewable integration, and the resilience of cold chains and building services.



Examples included research into the climate and safety trade offs of different working fluids, development of high temperature industrial heat pumps for decarbonising district heating, and the use of phase change materials for advanced thermal storage. Other work examined the need to update UK refrigeration design specifications to reflect higher peak temperatures, alongside sector specific adaptation strategies in retail, healthcare and food distribution.

The breadth of topics showed both the complexity of the adaptation challenge and the innovative thinking already underway, with practical solutions emerging for applications from supermarkets to industrial processing.

Workshops and collaboration

Workshops brought together participants from sectors including retail refrigeration, transport, data centres and building services. Discussions focused on improving energy efficiency, reducing lifecycle emissions and balancing near term adaptation with long term sustainability.

Technical tours gave delegates the chance to see UK projects combining innovation with practical application, including integrated heat pump networks and advanced cold storage facilities.

Shared challenges across the sector

The conference underlined that rising ambient temperatures are already affecting system performance, reliability and operating costs. Solutions presented emphasised the need for smarter, cleaner and more adaptable approaches rather than simply increasing capacity.

While different sectors face distinct challenges, such as cold chain protection in food retail compared to urban cooling ➡



Delegates at Adaptation 2025

Delegates at Adaptation 2025 in building services, the principles of resilience, efficiency and low carbon operation applied across the board.

The takeaway

Adaptation 2025 was a strategic gathering for an industry on the front line of climate change impacts. It brought together science, engineering, policy and business to share knowledge and explore practical steps forward.

A consistent message from Manchester was that adaptation is necessary. Whether through refrigerant transition, improved control strategies, thermal storage or updated design parameters, the RACHP community has the tools and the responsibility to meet the challenge of a warming climate.

For those who want to be part of the conversation and help shape the future of cooling, joining the Institute of Refrigeration offers a direct link to the latest research, events and industry networks.

<https://ior.org.uk/>

Adaptation 2025

- Dates: 10 to 13 August 2025
- Venue: University of Manchester, UK
- Total attendees: just under 120
- Countries represented: 18
- Technical papers presented: more than 80
- Programme highlights: papers, workshops, short courses, technical tours
- Focus areas: refrigeration technology, heat pumps, air conditioning, food storage, transport, energy efficiency

Student research recognised

Also at Adaptation 2025, IOR President Lisa-Jayne Cook presented certificates and prizes in recognition of three outstanding research papers from students.



IOR President Lisa-Jayne Cook with Overall Student Prize winner Thanut Nuangjamnong

Modelling Water Condensation on Fruit Bulks Exposed to Temperature Fluctuations won the Overall Student Prize. Written by Thanut Nuangjamnong of the Université Paris-Saclay, INRAE, it focused on developing a model of heat and mass transfer in bulk fruits, including condensation. This model has the potential to forecast air and product temperature evolution and accumulation of water condensation, thus helping to prevent condensation which is unfavourable for product quality.

The student awards, sponsored by J & E Hall, also recognised the two following papers:

- *Experimental Evaluation Of R472B As R23 Alternative For Ultra-Low Temperature Refrigeration*, written by Pau Giménez-Prades of Universitat Jaume I
- *Application of CO₂ Refrigeration Systems on Small Fishing Vessels: Experimental Laboratory & Simulation Results*, written by Alex Reimer of the Norwegian University of Science and Technology

More at www.adaptation2025.com

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**ADDING VALUE TO
COMMUNITY SPORT**

Why HVAC companies should look beyond comfort cooling

Chris Ferriday, Business Line Manager at Atlas Copco Process Cooling Solutions, believes a more consultative approach can open up new opportunities for growth.

In the crowded HVAC market, finding new revenue streams is critical for businesses looking to grow and differentiate themselves. Yet many firms remain solely focused on comfort cooling, potentially overlooking a parallel business opportunity that builds on their existing skills. In this article, we explore why HVAC companies should consider diversifying into process cooling, an area that can draw on their established expertise while offering access to higher-margin projects, longer-term



contracts, and deeper client relationships.

Process cooling refers to the technology used to manage heat generated by industrial processes. It is essential in sectors like manufacturing, food processing, pharmaceuticals, and electronics, where precise temperature control is critical to maintaining product quality and operational efficiency. Unlike traditional HVAC systems, which are primarily designed for human comfort, process cooling solutions are engineered to handle the intense thermal loads generated by production machinery, chemical reactions, and high-speed manufacturing lines. This makes them vital for industries where even minor temperature fluctuations can compromise product quality or disrupt production schedules.

Essential investments

For businesses (and people) that understand the principles of heat exchange, refrigerant circuits and system diagnostics, this is a logical next step. Many of the core skills required for process cooling – including system commissioning, maintenance, and troubleshooting – are directly transferable from the HVAC sector. HVAC engineers are already experienced in managing complex, high-value equipment and ensuring it operates efficiently over long periods. This operational expertise is critical in process cooling, where even minor system failures can lead to production downtime or compromised product quality.

Because of the technical overlap, there are compelling commercial reasons to consider this shift. Process cooling systems are often critical to a client's core





operations, making them less susceptible to cost-cutting measures. Unlike comfort cooling projects, which can be highly competitive and price-sensitive, process cooling installations are typically regarded as essential investments, commanding higher margins and offering significant cross-selling potential. For example, a manufacturer might also require ongoing maintenance, system upgrades, and regular efficiency assessments, creating a steady stream of repeat business.

Process cooling systems also tend to have longer lifecycles and more complex technical requirements, enhancing the potential for long-term customer relationships. This is a crucial consideration for HVAC businesses looking to escape the seasonal peaks and troughs of comfort cooling work, where demand can be heavily influenced by weather and economic conditions.

Yet the barriers to entry are often perceived as high. Process cooling systems are more technically demanding, requiring a deeper understanding of thermal dynamics and industrial processes. However, this knowledge gap

is often less daunting than it appears, particularly for firms already experienced in larger HVAC installations. Many of the core skills, such as system diagnostics, refrigerant management, and heat transfer calculations, are directly transferable. This technical foundation means HVAC businesses can quickly gain credibility in the process cooling sector, leveraging their existing expertise to secure high-value contracts.

For those willing to make the leap, the rewards can be substantial. Expanding into this sector can open doors to industries as diverse as automotive, food and beverage, plastics, chemicals, and pharmaceuticals. These sectors rely on precise temperature control to maintain product quality and operational efficiency, creating a constant demand for reliable cooling solutions. This means the potential for larger contracts, more predictable income streams, and higher customer loyalty.

Shift in mindset

However, success in this market requires more than just technical competence. It demands a shift in mindset, moving from

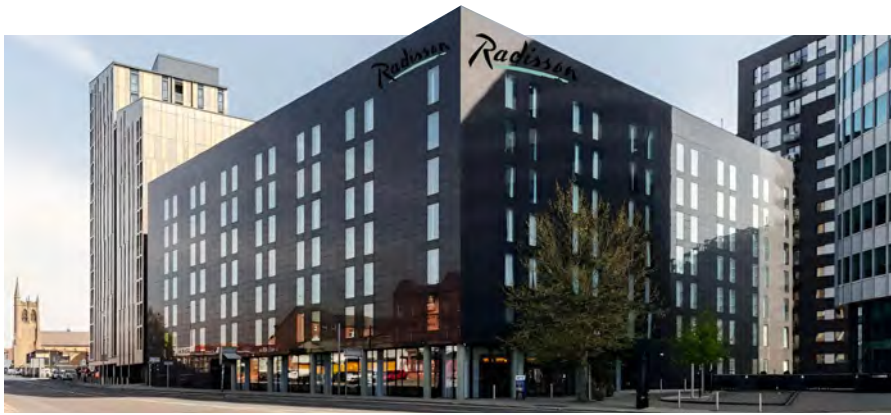
the often transactional nature of comfort cooling projects to a more consultative approach. Industrial clients expect their cooling partners to be deeply familiar with their processes and to offer bespoke solutions that enhance productivity and efficiency. This means becoming a trusted advisor, not just a supplier.

Partnerships with established process cooling specialists can help bridge this gap, providing the training, technical support, and brand credibility needed to compete in this more demanding market. This is where firms like Eurochiller, now part of Atlas Copco's Process Cooling Solutions business line, can be invaluable. Companies such as these offer structured reseller programmes designed to help HVAC businesses expand into process cooling, providing everything from hands-on technical training to service support and ongoing assistance.

For HVAC companies ready to explore this opportunity, partnering with a trusted process cooling specialist can provide the technical support and industry credibility needed to succeed. The path to long-term growth and diversification is clear for those willing to take the first step. ➡

First R290 solution helps hotel's Net Zero journey

Radisson Hotel Manchester City Centre has become the first hospitality venue in the UK to install Carrier Commercial HVAC's new AquaSnap 61AQ heat pumps.



The hotel chose the AquaSnap R290 system to support its Verified Net Zero status.
Photograph: Radisson Hotel Group

The installation strengthened the Radisson's position as a Verified Net Zero hotel as the 61AQ has been designed and optimised to operate with natural refrigerant R290, offering ultra-low global warming potential (GWP) and high energy performance.

The hotel had originally planned to install another heat pump model from Carrier's 61 range. However, with the launch of the 61AQ in February 2025, the hotel revised its specification to take advantage of the system's enhanced efficiency, low environmental impact and future-ready design to help the hotel strengthen its Net Zero position and further align with the 2040 Net Zero Methodology for Hotels.

Four 120kW modular units, providing a combined 480 kW of heating capacity, were crane-lifted and installed on the hotel's rooftop. The design was created by consultants [PS]K Design and installed by award-winning contractor Nationwide Air Conditioning.

Smooth transition

Andrew Murfin, Director at [PS]K Design, said: "We have a long-standing relationship with Radisson Hotels and when the opportunity to integrate new cutting-edge, ultra-low carbon technology came about, Radisson were very keen".

"This project represents one of the first real-world applications of a newly launched R290 air source heat pump, delivered through close collaboration between Radisson, Carrier, [PS]K and Nationwide Air Conditioning," said Daniel Valente, Head of Projects, Nationwide Air Conditioning.

"Drawing on our experience delivering decarbonisation retrofits in complex, operational environments, we supported and developed the integration of the design by upgrading the primary circuit, locating space for the new plant and ensuring a smooth transition away from gas. Despite a reduction in flow temperatures, existing emitters were mostly retained, minimising disruption while maximising carbon savings. It's a strong example of how well-coordinated, lower carbon retrofit solutions can be achieved in challenging, live environments."

"We've worked hard to be a Verified Net Zero hotel at our Manchester City Centre location," said Simon Pearson, Area Engineering Director – UK and Ireland, Radisson Hotel Group. "We use 100% renewable energy, offer low-carbon menus and now have a heating system that enhances our energy efficiency and reduces our carbon footprint while maintaining our high standards for guest comfort."

Each 61AQ unit features inverter-driven compressors and variable-speed fans, allowing the system to adjust output according to real-time demand – a key advantage for maximising seasonal efficiency and controlling energy use. The heat pump exceeds Ecodesign efficiency standards by up to 30% and operates at sound levels 10 dB(A) below regulatory thresholds, helping ensure quiet, reliable performance in a hospitality environment.

Sustainability ambitions

"Decarbonisation requires innovative solutions. That's exactly what the AquaSnap 61AQ delivers," said Andrew Paddock, Managing Director, Carrier Commercial HVAC UK&I and Nordics. "Its advanced engineering, energy efficiency and use of R290 with low refrigerant volume enable businesses like the prestigious Radisson Hotel in Manchester to reduce their carbon footprint further without compromising on performance or reliability. The heat pump is connected to Carrier's Aaround HVAC Performance platform, providing remote visibility, diagnostics and predictive maintenance to help ensure uptime and optimise efficiency."

Four 120kW modular units, providing a combined 480 kW of heating capacity, were crane-lifted and installed on the hotel's rooftop



Refra

Refra

REFRA installation airlock, part of the 500m² medium temperature cold room and the cooling requirements of the existing cold room

Expansion of the cold store with addition of a Kelvion evaporator

R455A solution for Leclerc Drive expansion

Case study from Climalife

Located in Seclin in northern France, Leclerc Drive expanded last year and automated the logistics/delivery section of its warehouse to better meet customer expectations while improving working conditions for employees. This has led to the installation of new refrigeration facilities for the storage of crates of fresh produce and frozen foods awaiting delivery. Fresh produce accounts for 35-40% of orders.

Installed in 2012 in an existing building, the Leclerc Drive decided to continue its development 10 years later by tripling its storage area to 5,000m². With a new multi-storey design and the introduction of partial automation of the picking process, the new system makes it possible to offer more than 15,000 products and prepare more than 150 orders a day in record time.

The aim is to meet customer expectations even more effectively, with quick delivery over longer opening hours.

"Today, we create orders within 3 minutes, compared with over 5 minutes previously. And if customers order after 4pm, goods can be delivered the same day from 6pm. We are now open from 8am to 8.30pm. Before, we had to close during certain time slots so that staff could prepare orders," said Quentin Tronel, Leclerc Drive manager.

Automation also makes it possible to reduce employee fatigue, even though

the picking area has not changed. Thanks to the new system, the organisation has changed, and each operator is now responsible for a clearly defined area. As a result, they can pick 20 orders at a time, whereas previously they would have had to make numerous return trips. The 70 employees also benefit from an extra day's rest and now work five days a week.

A major project for new "Made in France" system

The €7 million project took over a year and a half to complete and four months of testing, culminating in 100% roll-out by March 2023. This is the seventh automated Drive in France, but the first with this new system.

The project was divided into several phases, including the construction of a new building adjoining the old one, with the addition of an upper floor. For the refrigeration part of the project, Leclerc called on Thélia, a trusted partner for many years. It took six months to design and implement the new refrigeration system.

Choosing R455A for reliability and ease of use

Three REFRA condensing units distributed by Fritec were installed on the roof of the new building. Two 7kW units supply the low temperature cold room, each with a charge of 14.8kg of R455A. The third, rated at 18.5kW,

supplies an airlock and two evaporators in the medium temperature cold room on the upper floor, each with a 19kg charge.

Pascal Lejeune, Drive's Technical Director, quickly ruled out CO2 for the new cold rooms (500m² for chilled produce and 60m² for frozen produce). R455A was chosen as it could handle a larger charge than R454C. It is a reliable, safe and accessible solution for all technicians, with lower investment costs.

A fourth 61kW REFRA unit was installed outside the building to complete the cooling production of this 500m² medium temperature cold room and supply the new Kelvion evaporator installed in the existing cold room on the ground floor following its extension. The whole system is equipped with a thermostatic expansion valve, and fixed detectors have been installed to guarantee personal safety.

"The introduction of Solstice L40X has demystified these mildly flammable refrigerants for technicians. Once the charge calculation has been carried out, and we've defined the safety elements, if necessary, it's easy to implement R455A," explains Jérôme Goetz.

"The main challenge in this project was not the technology as such, but the environment in which it had to be installed. Above all, we have had to manage the hygrometry and the fact that we can't work in the cold rooms without stopping the process." ❄️

Pressing Ahead: Why I Use Press Fittings to Deliver Safer, Faster HVAC Installations

In the HVAC world, time and safety are two things you can't afford to waste. For years, I stuck with traditional brazing for joining copper pipework, because that's what I knew. But the job has changed. With tighter deadlines, stricter on-site safety regulations, and new refrigerants like A2Ls becoming the norm, we needed a smarter way to work.

Robert Swieconeck, Owner, Superheat and Subcooling HVAC LLC says "That's when I started using flame-free press fittings. The time and security of knowing we can press fittings and not have to purge nitrogen constantly when piping is priceless."

A Safer, Flame-Free Method

Press fittings have transformed how we install HVACR systems. They're installed using a handheld pressing tool, no gas bottles, no open flame, and no hot work permits required. On jobs with restricted access or in sensitive environments like hospitals and datacentres, that makes them ideal.

Brazing, by comparison, demands additional safety oversight. You need hot work permits, fire watches, and nitrogen purging to prevent oxidation. Not only does **that slow things** down, it increases risk - especially with today's mildly flammable A2L refrigerants like R-32 and R-454B.



Note:

RLS press fittings are approved for use with multiple A2L refrigerants and are now widely available across Europe through a growing distributor network. Their flame-free design has proven particularly effective for UK contractors working in restricted-access buildings and on time-sensitive refurb projects.

By removing the flame, press fittings significantly reduce ignition risk and help contractors comply with evolving building safety standards, particularly where refrigerant handling regulations are tightening.

Time Savings That Add Up

On a typical install, we can cut labour time by up to 60% using press-to-connect fittings. Each joint takes seconds to complete, with no need for post-installation cooling or rework.

That speed doesn't come at the cost of quality. Every fitting includes a pre-installed O-ring and is mechanically pressed to deliver a uniform, high-pressure seal - tested to 700 PSI and suitable for use with A2Ls. It's a consistent, repeatable process, regardless of who's on the tools.

For fast-paced commercial projects, particularly in retrofit settings, the reduction in downtime and labour hours is invaluable.

Training the Next Generation

One unexpected benefit has been onboarding. Where brazing takes years to master safely, press systems can be taught in a matter of hours. That helps us bring junior installers into the fold more quickly and confidently. It also means we can scale up for larger contracts without worrying about inconsistent workmanship.

Still a Role for Brazing

Press fittings aren't a total replacement for brazing. For certain high-temperature applications or where local spec requires it, brazing still plays a role. But for most commercial and residential systems - AC units, heat pumps, refrigeration lines - press can easily become a standard approach.

HVAC installations are becoming more complex. From refrigerant regulations to site restrictions, the pressure is on installers to work faster, safer, and smarter. Press fittings allow us to do exactly that - without compromising on performance.

As Robert puts it: "It's not about cutting corners - it's about working smarter, not harder." 📧



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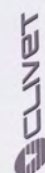
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Cooling under pressure

A recent report from the Environmental Investigation Agency highlights how refrigeration is driving climate change and how retailers can lead the way. Fionnuala Walravens, Senior Climate Campaigner, EIA UK, maps out the cooling pathway.

The cooling industry is at the heart of one of the greatest climate challenges of our time. From hypermarkets in Europe to corner stores across the globe, refrigeration keeps food safe and supply chains moving. But it comes with a heavy environmental cost. According to *Cooling the Climate Crisis**, a recent analysis by the Environmental Investigation Agency (EIA), as much as 70% of a supermarket's non-supply chain (Scope 1 and 2) emissions can be traced to cooling.

These emissions stem from two major sources: energy use and refrigerant leakage. Both have a significant climate impact, but refrigerants tell the sharper story. Hydrofluorocarbons (HFCs) – the most widely used refrigerants in commercial refrigeration – are thousands of times more potent than CO₂. Combined with high leakage rates, emissions from commercial refrigeration often account of a larger share of the energy used by these systems.



Fionnuala Walravens

The good news? The industry already has proven, cost-effective alternatives. And the direction of travel is clear: natural refrigerants, energy efficiency, and transparent climate strategies are not optional extras. They are fast becoming the benchmark for competitiveness, compliance, and credibility.

Refrigeration's climate footprint

Globally, refrigeration is responsible for around 7% of greenhouse gas emissions, whilst HFC emissions are more significant than those from the aviation sector. Although international agreements such as the Kigali Amendment to the Montreal Protocol aim to phase down HFCs, current trajectories remain insufficient to limit warming to 1.5°C.

Fortunately, accelerated action from Europe is driving change. The EU's updated F-Gas Regulation is the most ambitious in the world, set to prevent 500 million tonnes of CO₂-equivalent emissions by 2050.

This has tightened HFC supply, driven up prices, and sharpened the financial risks of clinging to old HFC based systems. The situation is not uniform worldwide, but the trend is universal; retailers and their refrigeration partners must prepare for an accelerated transition and rising HFC costs.

Despite industry challenges, sustainable cooling is scaling rapidly. Systems based on natural refrigerants – CO₂ hydrocarbons, and ammonia – are now mainstream across Europe. With CO₂ transcritical systems installed in about 30% of EU supermarkets.

How the big retailers compare

EIA's report analyses data from five European retail giants, highlighting both progress and gaps:

- **Ahold Delhaize** emitted around 2.16 million tonnes CO₂e from cooling in 2023. Its commitment to adopt natural refrigerants by 2040 lags EU timelines, and progress in the US is minimal, with an earlier report by EIA on US supermarkets, noting that less than 1% of its US stores running on refrigerants with a GWP of less than 10.
- **Carrefour** has a €650 million plan to convert 406 hypermarkets and has trained technicians on natural refrigerant systems. Yet, only 19% of its stores are currently HFC-free, and smaller stores are not fully accounted for.
- **Jerónimo Martins** stands out with 57% of its stores running on low-GWP systems, and nearly complete conversion in Colombia. The retailer also leads on Scope 3 (supply chain) emissions, reporting that 70 percent of its refrigerated shipping uses natural refrigerants. Its global HFC phase-out target is set for 2035.
- **Metro AG** has allocated €1.1 billion to eliminate HFCs, pledging a 90% phase-out by 2030 and full global phase-out by 2040. Half of its stores already run on natural refrigerants, including those outside Europe where regulation is weaker.



- **Tesco** has committed to a 2035 HFC phase-out, with a third of its stores already converted. Notably, it is the only retailer in the report to use natural refrigerants in refrigerated road transport. However, its public disclosures lack detail and transparency compared to peers.

The financial case for F-Gas-free refrigeration

Beyond compliance, natural refrigerants make strong financial sense. While upfront costs can be higher, systems typically pay back in four to ten years, well within their 15-year operating life. Carrefour reports energy savings of 7-25% compared to older HFC systems, adding doors to cabinets can lift reductions to 45%.

At the same time, the rising cost of HFCs is already eroding the bottom line. Some refrigerants have seen price hikes of up to 800% in Europe. On top of that, compliance penalties are an increasingly real risk. Carrefour, for example, has calculated that non-compliance with EU F-Gas rules could amount to €100,000 per hypermarket—a potential €40.6 million liability across its European estate. Taken together, these figures make the business case for transitioning to natural refrigerants as clear as the environmental one.

EIA's Net Zero supermarket cooling pathway

In short, delaying the transition is not only environmentally damaging but financially unsustainable. Drawing on our extensive experience in monitoring and reporting on this sector during the past two decades as well as best practices of the featured retailers, EIA has developed a Net Zero Supermarket Cooling Pathway summarised below (the full pathway can be accessed here: <https://eia-international.org/wp-content/uploads/2025-EIA-UK-COOLING-THE-CLIMATE-CRISIS-SINGLE-PAGES.pdf>)

1. Disclosing Data

Retailers should publish clear information on cooling-related emissions, including the extent of HFC use, roadmaps for conversion, associated costs and risks, and progress toward natural refrigerant adoption. At least 6% of capital expenditure should be dedicated to sustainable cooling, supported by supplier engagement.



Emissions from **refrigeration** are currently responsible for about of **seven per cent** of global GHG emissions.⁶

As temperatures and populations continue to **increase**, scientists estimate that emissions from refrigeration will **double** by **2030**.⁷

2. Cutting Refrigerant Emissions

Companies must commit to natural refrigerant-only cooling in Europe by 2030 and globally by 2040. Immediate steps include reducing leakage, recovering refrigerants from old systems, and ensuring all new stores and distribution centres are HFC-free. Trials in transport refrigeration should prepare the ground for full adoption.

3. Reducing Energy Used for Cooling

By 2030 retailers should cooling-related energy emissions target by 55%. This means retrofitting fridge doors, expanding renewable energy generation, and considering heat recovery. Other actions include optimising freezer settings, adopting passive cooling, switching to LED lighting, and supporting the development of more efficient equipment.

4. Engaging with Supply Chains

Supermarkets must extend action beyond their own operations by working with suppliers to cut cooling-related emissions. This involves creating internal strategies, identifying high-emission suppliers, and offering support through incentives, penalties, or knowledge-sharing. Data-driven tracking will help refine approaches and ensure consistent progress.

Globally, HFC emissions account for two per cent of total GHG emissions - making them larger than the aviation sector, which accounted for 1.7 per cent of GHG emissions in 2023.

Looking ahead

The refrigeration industry is facing a decisive decade. Retailers and their technology partners must navigate not only regulatory deadlines but also a rapidly shifting economic and reputational landscape. Those who act decisively will cut costs, reduce risk, and build climate credibility. Those who stall risk spiralling costs and unnecessary emissions.

The technology is here. The economics add up. The pressure is mounting. For the refrigeration sector, the path to net zero is not just about compliance – it's about securing long-term resilience in a warming world.

- <https://eia-international.org/wp-content/uploads/2025-EIA-UK-COOLING-THE-CLIMATE-CRISIS-SINGLE-PAGES.pdf>

About EIA:

The Environmental Investigation Agency's climate team campaign works to avert climate catastrophe by investigating the criminal trade in refrigerant gases, strengthening and enforcing regional and international agreements that tackle fossil fuels and climate super-pollutants, including ozone-depleting substances, hydrofluorocarbons and methane, and advocating corporate and policy measures to promote sustainable cooling. Detailed information on F-Gas-free cooling technologies can be accessed via its Cool Technologies platform: www.cooltechnologies.org



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A-Gas Rapid Recovery supports efficient refrigerant removal as part of the Daikin Reclaim with Confidence Programme

BACKGROUND

About Maskold

Maskold is a leading independent provider of refrigeration, air conditioning, and ventilation solutions in the South East. They are known for delivering innovative, high-performance, and cost-effective services tailored to client needs.

About A-Gas

A-Gas is a world leader in the supply and lifecycle management of refrigerants and associated products and services. Through our first-class recovery, reclamation, and repurposing processes, we capture refrigerants and fire protection gases for future re-use or safe destruction, preventing harmful release into the atmosphere.

For over 30 years, A-Gas has supported our clients and partners on their environmental journey by supplying lower global warming gases and actively increasing the circularity of the industries we serve, building a sustainable future.

About Daikin Reclaim with Confidence

Daikin's Reclaim with Confidence Programme, part of their Partner with Confidence Programme, supports contractors and end-users in the responsible recovery, reclamation, and reuse of refrigerants. The programme aims to reduce environmental impact and encourage circular economy practices through its partnership with A-Gas Rapid Recovery.

CHALLENGE

As part of Daikin's Reclaim with Confidence Programme, Maskold engaged with A-Gas to support the responsible recovery of refrigerant gases across several rooftop HVAC systems. The project involved the recovery and decommissioning of multiple rooftop units with restricted access, posing a significant logistical challenge.

The scope involved the decommissioning of over 20 HVACR units located on a rooftop with limited accessibility. Traditional recovery methods would have been inefficient and posed safety concerns. A-Gas Rapid Recovery



Dee Robertson Photography



understood that it was crucial to execute this recovery quickly and safely, while adhering to environmental regulations.

SOLUTION

A-Gas deployed its on-site Rapid Recovery service to tackle the access and efficiency challenges. The mobile solution used high-speed refrigerant recovery directly at the rooftop level, eliminating the need for manual equipment transport and significantly reducing project duration, saving the client several days' worth of recovery time.

- After the Daikin online form was submitted, the A-Gas Rapid Recovery team conducted an initial site inspection.
- On the day of recovery, flexible hoses were extended from ground level to the rooftop to connect the HVAC units to recovery systems below.

- The team used a pull-pull method to ensure a steady, controlled refrigerant transfer into the recovery cylinders.
- Once recovered, the refrigerant was securely transported to the A-Gas facility for processing and reclamation.

CONCLUSION

Delivered as part of Daikin's Reclaim with Confidence Programme, this project highlights the value of industry collaboration in achieving environmental goals. By utilising A-Gas' Rapid Recovery service, Maskold benefitted from a streamlined, cost-effective approach to refrigerant removal. The reclaimed refrigerant is now available for reuse, aligning with circular economy principles and reinforcing the commitment to sustainable refrigerant management.

AT A GLANCE Challenges

- Rooftop installation with limited access.
- Over 20 Variable Refrigerant Volume (VRV) Units requiring refrigerant recovery.

Benefits

- Refrigerant recovery completed efficiently with no release into the atmosphere.
- 450kg of R407C and R410A recovered and reclaimed for future reuse in line with the circular economy principles.

ACR regional exhibition held at Elland Road, Leeds

The ACR regional exhibition took place at Leeds United Football Club, Elland Road, on 25 September 2025, bringing together contractors, engineers and suppliers from across the air conditioning and refrigeration sector for a day of technical insight, networking and product updates.

Andrew Slater, Editor of ACR Journal, was among those in attendance, meeting exhibitors and delegates throughout the event.

Organised in association with the ACR Journal, the Leeds event formed part of a growing series of regional showcases designed to offer local access to industry developments and CPD opportunities.

Sponsor support

The event was made possible with the support of:

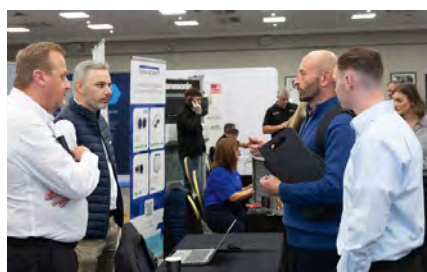
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Technical talks

The morning featured a programme of technical presentations designed to offer practical insights and regulatory updates:

- Climalife (Neil Roberts) – Simple tips to make your system run more efficiently and save money
- F-Gas Register (Graeme Fox) – F-Gas update
- Daikin (Callum Redpath) – Daikin Air to Air Split and Multi+ and Sky Air products

The short-format talks proved popular with visitors, who were also able to speak with sponsors and peers in an informal exhibition area.



Next event: Midlands

The next ACR regional exhibition will take place in the Midlands, with full event details, including registration and sponsorship opportunities, available at:

<https://www.acrjournal.uk/regional-exhibitions-midlands>



Unlocking Energy Efficiency with the PX G1300® Pressure Exchanger

As the world continues its transition toward more sustainable refrigeration, supermarket and industrial operators face mounting challenges. From rising energy costs to tightening environmental regulations, the demand for smarter, cleaner, and more resilient refrigeration solutions has never been higher. CO₂ refrigeration systems are emerging as the preferred alternative to HFC-based systems, but operating efficiently, especially in hot climates, can be difficult.

That's where Energy Recovery's PX G1300 pressure exchanger comes in. Built on a technology with decades of trusted performance, this innovative solution streamlines CO₂ system efficiency while strengthening reliability in even the toughest conditions. By delivering both compression and expansion within a single device, the PX G1300 redefines how CO₂ systems operate, offering operators a dependable, and sustainable path forward while reducing operating expenses.

PX G1300 Benefits

- Support HFC phasedown goals by offering a cost-effective path to CO₂ refrigeration
- Lift COP in subcritical and transcritical modes with maximum efficiency in hot temperatures
- Enhance heatwave confidence with increased cooling capacity
- Reduce water usage
- Engineered with highly reliable alumina ceramic

How it Works

The PX G1300 improves energy efficiency for CO₂ refrigeration systems, reducing flash gas and increasing cooling capacity, even in the hottest conditions. Connected to the gas cooler and flash tank, the PX G1300 recovers pressure energy to create an extra supply of compressed high-pressure fluid in the CO₂ system.

Inside an alumina ceramic rotor, low-pressure vapor enters and is sealed inside a duct while high-pressure fluid from the gas cooler enters from the opposite side. The high-pressure duct rotates, allowing the high-pressure vapor to expand while recovering the pressure energy to compress the low-pressure vapor.

Both fluid streams exit the PX G1300 separately: newly compressed fluid exits to an auxiliary heat exchanger while the saturated mixture goes to the flash tank to increase system efficiency and cooling capacity. Because the PX G1300 is powered by pressure, it equips CO₂ systems to manage heatwaves and run at peak efficiency year-round.

Reliable Performance in Real-World Conditions

The PX G1300 is purpose-built to deliver peace of mind. In normal operating conditions, it saves energy, reduces water usage, and provides flexibility for system designers and operators. When extreme temperatures hit, it acts as a safeguard, boosting cooling capacity and ensuring the rack continues to perform. Built to last, the PX G1300 is not just a performance enhancer, it's an investment in reliability, longevity, and sustainability.

Flexible Integration

One of the PX G1300's key advantages is its versatility. Whether you are building a new CO₂ system or looking to retrofit an existing rack, the PX G1300 can be seamlessly incorporated. This makes it an accessible option for operators of all sizes who want



The PX G1300 Pressure Exchanger

to improve performance, reduce operating costs, and align with environmental goals.

The Path Forward for Refrigeration

The PX G1300 is more than an energy recovery device, it's a bridge to the future of refrigeration. By combining simplicity, reliability, and sustainability, it empowers operators to meet today's challenges and prepare for tomorrow's demands.

For organizations seeking to reduce emissions, control energy costs, and safeguard operations against extreme heat, the PX G1300 is the smart, future-proof choice.

To learn more, email Energy Recovery at CO2@energyrecovery.com.
Website: <https://energyrecovery.com/pressure-exchangers/px-g1300/>



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Hydratech Products

Hydratech's market leading heat transfer fluids, glycol formulations, antifreeze solutions, corrosion inhibitors and water treatment chemicals are proven to provide precise, stable temperature control and comprehensive system protection. **Hydratech's** specialist fluid solutions are trusted by the likes of Waitrose and Sainsbury's to help improve the performance, efficiency and energy consumption of their chiller systems.

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Hydratech Services

The **Hydratech Services** division provides specialist engineering and maintenance services to customers installing, commissioning, operating or optimising closed cooling and heating systems. By combining expertise in water treatment chemistry, fluid thermodynamics and mechanical engineering, **Hydratech Services** delivers a fully integrated, holistic approach to process and hydronic systems management. This in-turn maximises the potential for optimised performance, reduced operational costs and significant return on investment gains.



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.liddington@warnersgroup.co.uk

ASPEN COMPLETES 5TH GEN SILENT+ RANGE

Aspen Pumps has launched the next generation of its popular Silent+ Mini Orange and Silent+ Mini Aqua condensate pumps.

The new additions complete the 5th generation of Aspen's mini condensate removal pump range, joining the Silent+ Mini White and Silent+ Mini Lime pumps. Now offering a full sweep of 'Quietly Brilliant' mini pumps, Aspen gives installers and end-users what it says is the quietest, smartest, easiest to install, most reliable, and versatile mini pumps on the market. Aspen now believes it has a Silent+ mini pump to suit every domestic and commercial mini-split application.

Billed as up to 90% quieter than its competitors, the 5th Gen Silent+ range operates at just 16dB(A), making it quieter than the quietest AC mini-split units, which run at 18dB(A). As the world's quietest mini pumps, the Silent+ range offers end-users comfort without compromise, so they will be unaware the pumps are even there.

Not only is the new Silent+ range quiet, Aspen says it boasts the smartest mini pumps on the market too, thanks to its proven intelligent 5th Gen pump technology. First introduced in Aspen's Silent+ Mini White in 2021, it revolutionised managing condensate removal. Featuring built-in AI technology that adapts to flow rates, the pumps only work as hard as they need to and even switch off before they run dry. Unlike pumps that rely on float switches, optical sensors or pressure sensors, Aspen's 5th Gen pumps' intelligent technology anticipates and adapts, delivering improved performance and low energy consumption (using 10 times less energy than their predecessors), as well as maximising reliability and extending pump life.

Aspen is so confident that installers can fit and forget the Silent+ range that it is offering a 3-year warranty as standard. With zero maintenance



required, each pump features reservoirs that include integrated copper mesh and outlet filter combined with a high-capacity internal bore, which is 50% larger than competitors', allowing the pumps to handle even more contaminated water with ease. Transparent reservoirs make it easy to check for debris build-up on inspections, and reliability is designed into every component. This results in no callbacks for installers, just hassle-free installation and consistent, dependable performance.

The Silent+ 5th Gen range is available in four distinct models to suit all installation applications. With the Silent+ Mini Orange and Silent+ Mini Aqua suitable for up to 35l/hr; the Silent+ Mini Lime suits up to 40l/hr, and the Silent+ Mini White 45l/h, this covers up to 46kW (157,000 Btu/h). The range means installers can fit an Aspen Pumps Silent+ mini pump inside a unit, in the cavity above, under the unit, or in trunking. Aspen has covered all domestic and light commercial air conditioning applications where sound levels and reliability are important.

www.aspenpumps.com

CONDAIR PODCAST AND GUIDE TO HERITAGE HUMIDITY CONTROL

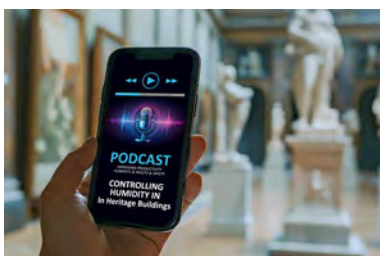
Condair has released a new podcast and published a guide on how to control humidity in museums, galleries and heritage buildings.

In the 10-minute podcast Dave Marshall-George, Sales Director at Condair, explains how to successfully manage humidity in the heritage sector whilst minimising energy consumption.

He said: "Humidity control in the heritage sector is an important aspect of preserving exhibits. Both excessively dry or humid conditions, as well as rapid fluctuations in humidity, can cause damage to artefacts, interiors and the building fabric. This short podcast is an ideal overview of the issues any curator or facility manager should be aware of in connection with humidity management. It also offers some tips on energy efficiency as well as product selection."

This latest podcast is available on the Condair website as well as on Spotify, SoundCloud and YouTube. Also available on the webpage is Condair's back catalogue of podcasts. The series of bite-sized, informative audio episodes cover topics like how to use humidifiers for evaporative cooling in AHUs, how to combat static with humidity, humidity's impact on health and humidity control in cleanrooms.

www.condair.co.uk/podcast



Condair has also published a comprehensive 10-point guide to managing humidity in museums, galleries and archives.

This practical and accessible guide outlines the key challenges of humidity control in heritage environments and offers clear advice on how to monitor and manage it effectively for long-term preservation. It is specifically designed for museum managers, curators, facility managers and consultants working in the heritage sector.

Dave Marshall-George said: "This free guide offers practical solutions to help meet the sector's sustainability goals, while also safeguarding diverse and often delicate collections. Compiled by experts with experience in hundreds, if not thousands, of heritage humidity control projects, this guide identifies the 10 most critical considerations for effective humidity management in heritage environments."

The guide is available as a free download from Condair's website:

www.condair.co.uk/heritage



AERMEC ADDS PROPANE HEAT PUMPS

Aermec has added two new heat pumps using natural refrigerants to its expanding offering of energy efficient and sustainable HVAC solutions.

Alongside the PRM air cooled reversible modular heat pump, Aermec has also launched the PRG reversible air/water heat pump. Both units feature natural refrigerant R290, which offers an ultra-low global warming potential (GWP).

Designed to meet the requirements for commercial buildings and industrial applications, the PRM's cooling capacity is 95.6kW with a heating capacity of 101.7kW. Hot water can be provided up to 75°C.

The modular design of the PRM allows for up to nine units to be coupled together, reducing the overall unit dimensions to a minimum providing flexibility to the designer and future expansion/upgrade of the system. Modularity also provides the user with redundancy and reduced system down time.



Designed for industrial or commercial building applications the PRG reversible air/water heat pump offers a cooling capacity of 49.9kW to 146.9kW and a heating capacity of 51.7kW to a maximum of 144.3kW.

The design of the unit provides the designer with a wide operating range, from as low as -20°C outside air temperature in winter, up to 48°C in summer, with hot water being produced up to 75°C.



"The market for propane products is continually growing," says David Evans, Aermec's National Sales Manager. "This is being driven by demand for more eco-friendly refrigerants with ultra low GWP but also as a result of changing global legislation. Propane offers us and designers a challenge with how we apply it to buildings. It is now part of our role to educate the market."

Propane units offer an attractive proposition thanks to their ability to provide higher output temperatures, R290 is a natural refrigerant and often less charge is required, there is no glide temperature difference and wider delta temperatures. Depending on the application, units can be retrofitted into existing systems.

www.aermec.co.uk

PANASONIC OFFERS £250 CASHBACK ON MINI VRF



Panasonic Heating and Cooling Solutions is offering installers a £250 preloaded Mastercard for every Panasonic ECOi Mini VRF outdoor unit purchased from 1 August until the end of the year. T&Cs apply.

The Panasonic ECOi Mini VRF units are designed for small to medium sized commercial or residential projects that require flexible heating and cooling for year-round comfort. The units offer outstanding energy efficiency in a compact and space saving footprint with continuous operation even at extreme ambient temperatures.

The offer is only available whilst stock lasts and during the qualifying period. Please note, this offer is valid for orders placed and deliveries made during the above period only, with all claims being made by 31 December 2025.

To take advantage of the promotion, please either call 01707 378 670 or contact one of Panasonic's UK-registered distributors to place an order.

ZEPHIR4: A NEW FRONTIER IN AIR RENEWAL

Clivet has launched the new generation of its ZEPHIR4 air renewal and purification units, continuing the innovation introduced with the first model, introduced in 2004. The new series, with air flow rates from 2,300 to 19,000 m³/h, integrates full inverter technology and eco-friendly R32 refrigerant to achieve even higher operating efficiencies throughout the year.



The ZEPHIR4 system recovers energy from the exhaust air and transfers it to the fresh air, amplifying it through the refrigeration circuit. In this way, it is possible not only to completely neutralise the thermal load of the outside air at any time of the year, but also to contribute to satisfying the internal loads of the building. ZEPHIR4 offers precise temperature and humidity control all year round and comfortable air intake even at -20°C outside.

"The main benefit of ZEPHIR4 is its versatility: it is the ideal solution for both the renovation of existing buildings and new constructions," says Damiano Rossi, Product Manager at Clivet.

Thanks to its 'independence' from other air conditioning systems, its capacity, and its low consumption, Clivet says ZEPHIR4 allows significant savings in both first investment and daily management. Its advantages can be enjoyed by all players in the supply chain, from the designer to the investor, from the installer/maintainer to the end user.

<https://www.clivetgroup.co.uk/>

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The Futurebuild Podcast

I was asked to appear in a Futurebuild podcast recently, as part of a series looking at the challenges of commercial HVAC retrofitting. I speak about one of the biggest challenges facing us – moving commercial buildings away from fossil fuels and embracing air source heat pumps (ASHP) as a proven, practical solution.

Not only is this the right thing to do to protect against climate change, but I also believe that it offers our industry a way of future-proofing jobs.

In the podcast, I explore the design, operational challenges and opportunities that come with switching from gas to ASHP, and our role as a heat pump manufacturer in guiding projects from concept to real world delivery.

I look at lessons learnt from standout case studies and our inspiring collaboration with Chester Zoo, where heat pumps are helping wildlife stay warm.

But I start off explaining how, having been at Mitsubishi Electric for over 20 years, I've been involved right from the start of our heat pump journey and how it all began with us trying to solve a problem.

A large gym chain realised that they had a lot of excess energy from cooling their gyms for their customers and asked us if this energy could be recovered to use for hot water for the showers.

An air conditioning system is all about transferring heat energy from one area to another so after playing with some ideas, we worked out a way to deliver exactly what the customer wanted.

And once we had got started looking at the area of heating water well, the rest as they say is history.

After beginning with commercial heat pumps, we then looked at the domestic market with the creation of our Award-winning Ecodan range, which has gone from strength to strength and now includes a high-temperature R290 version.

After the acquisition of Climaventa and its heat pump chiller range, we came back to doing bigger commercial projects again,



Ben Bartle-Ross is a technical trainer at Mitsubishi Electric

so that we can confidently say that we have the biggest and widest range of heat pumps available in the UK.

My role within Mitsubishi Electric has kind of followed along that same line and I then got involved in training our customers and our staff as well.

On the air conditioning side, we train

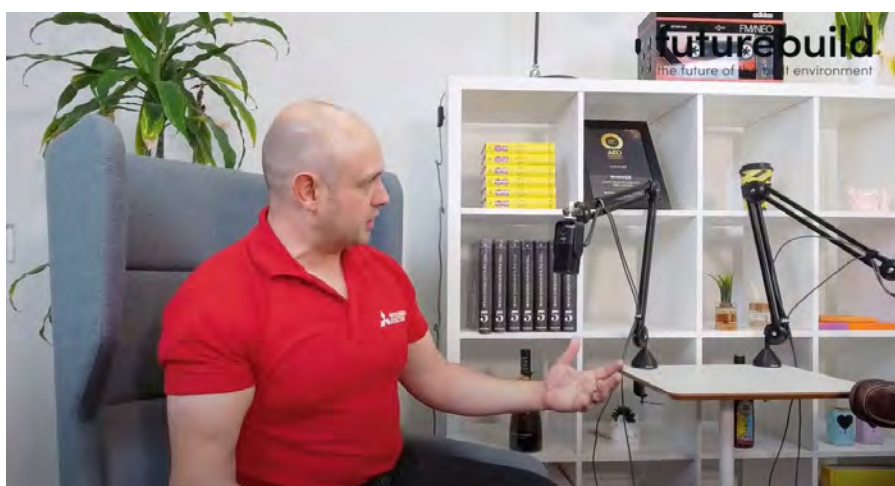
installers, main contractors and even get involved with consultants, so it's all the way up and down the world of HVAC.

On the heating side, sometimes we deal with air conditioning engineers who are changing over to do some of the heating side. But I'm also dealing with heating engineers who are changing over from gas boilers to what they still call 'this new technology'.

However, this isn't new at all, but it's interesting that that is how it's still perceived by some in the industry, when the idea of producing hot water from a refrigeration circuit came about a good 50 or 60 years ago.

What is new though is how we train people and one of the things we've added in recent years has been the use of virtual reality headsets to allow engineers to see and 'get inside' our equipment.

This means they can tackle real issues with equipment in a safe, 'virtual' environment. It has also proved a real draw when we visit recruitment fairs and schools as we are then talking to tomorrow's engineers in a way they are quick to embrace.



We talk about a lot on the podcast so watch it here: <https://www.youtube.com/watch?v=G5SJCDtFB0s>

And if you'd like to book a training course: <https://les.mitsubishielectric.co.uk/installers/installer-training>

WOMEN IN THE ACR INDUSTRY

Lynne Ford is a Sales and Applications Engineer working for distributor Kooltech in Fareham.

What was your first job?

My first job was at the ripe old age of 14 as a Saturday girl at a bakery. This involved interacting with customers, filling the shelves and cleaning the shop. If we were really good, we were allowed to take home any fresh cream cakes that were not sold on the day. I was extremely popular when I got home with the goodies!

My first proper job was in 1970 working for a bus company in the administration office. The position involved monitoring the mileage and fuel consumption of the vehicles and producing weekly reports showing vehicles that needed any work doing on them. I earned the grand total of £7 2 shillings and sixpence per week.

What does your current role involve?

I joined Kooltech six years ago as an Applications Engineer, which involves assisting customers with equipment selection. This can be quite diverse and could be as simple as designing a Twin Split system to a more complex Heat Recovery VRF system. Discussing the customers' requirements with them is of paramount importance to ensure we have a clear understanding of what their expectations are. Sometimes you must 'think outside the box' if the application is a little unusual and come up with a system that fits the bill.

I now have a dual role, which involves looking after the core customers from the Fareham branch. This position encompasses a range of skill sets, including discussing potential project opportunities, offering



At Royal Ascot with, from left, Dean Kirby of Closewood Air Conditioning and Tony Marshall of Home and Industrial Heating Services

viable solutions, generating comprehensive quotes with all necessary product information, and following up in a timely manner to ensure the products meet the customer's requirements. Once an order is placed, I ensure that everything is correct and that we meet delivery deadlines. If any issues arise, I keep the customer informed. Keeping customers updated on any equipment changes is also essential, especially if it may affect upcoming projects.

What attracted you to the industry?

I sort of fell into the industry. I was working in recruitment at the time and

felt I had progressed as far as I could so was looking for a change. I had an interview with the marketing director of a company called Temperature Limited. They were looking for a marketing manager, I was offered the role and that was my first introduction to the HVAC industry. The role was to set up a small tele-sales team to increase the number of potential customers for the sales team. I also liaised with various magazines to promote the company and arranged a number of events during the time I was there. This gave me a unique insight into the HVAC industry, and I was hooked.

What excites/interests you about the industry?

The industry is constantly evolving to ensure it keeps up with the ever-changing requirements of the regulations that the government imposes. Manufacturers are always looking for unique ways of offering new products to their customers. This means you are always learning new things. "Every day's a school day" in HVAC: it certainly keeps you on your toes. Who would have thought 30 years ago we would be offering heat pumps to heat water and an alternative for heating buildings, let alone it being one of the largest growing products in the industry today.

How would you like to see your career developing?

My career has been very eventful over the years. I have met and worked with many characters along the way, forging long-term relationships both business and personal. There are so many stories to be told I could probably write a book! Kooltech enabled me (with the help of some very experienced colleagues) to expand my career into designing air conditioning equipment, which was a challenge I relished and I will always be grateful to those people as they allowed me to achieve the perfect role for my last position in the industry.

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

Always be honest with yourself and the people around you and don't change for anyone but yourself.

What do you see as the challenges facing the industry?

Making the industry more appealing to career-minded people and getting the right type of person to consider HVAC has been a challenge for many years. Young people do not see it as an industry where there is potential to grow, which is quite sad. Perhaps emphasising the unusual aspects of the industry and the achievements of young people already working in HVAC may go some way towards making it more appealing.



With my son and his family, who are my world

What would you say to other women who are considering coming into the ACR industry?

Do it and do it now. I have worked in the industry for well over 35 years and if someone had said at the beginning that would be the case, I would have laughed at them. I have seen many changes during that time, one of which is how women are perceived in HVAC. We will always have to be on our game, and we will always need to give 110%, but once accepted the respect you receive is second to none.

Is there a little-known fact about yourself that would surprise other people (secret skill, unusual hobby etc)?

I was a qualified football referee for about 10 years in the mid-late 80s, officiating at local grass roots matches from Under 10s right up to men's football. When appointed for a match my name would never have Mrs, so you can imagine the reaction when I rocked up and introduced myself to the home manager. That said, the players were pretty well-behaved most of the time. 🇬🇧



Enjoying a night out at a customer's charity event for Mountbatten Hospice, a very worthy cause

J & E HALL IN COMMERCIAL REFRIGERATION RESTRUCTURE

J & E Hall has announced a major leadership restructure within its commercial refrigeration business designed to drive regional growth and sharpen customer focus across the UK and Ireland.

Having played an important role in driving substantial sales growth in both condensing units and cellar cooling systems, Senior Manager **Tony Twine** is stepping back from his UK-wide responsibilities. He will now focus on driving sales activity and market development in Ireland, where the company believes his experience, combined with the support of distribution partner FSW Ireland, will play a vital role in expanding the company's presence in the region.

Taking over as Senior Manager - Commercial Product Sales is the business area's former National Sales Manager, **Paul McDermott**, who has over 22 years of experience within the business. He played a key role in launching the company's commercial refrigeration product range into the UK market and was instrumental in expanding its national distributor network.

The restructure also coincides with the retirement of Northern Sales Manager **Paul O'Brien**, who has spent his career at J & E Hall working closely with refrigeration contractors and installers across the North of England.

The newly appointed Account Manager for the north, **Carl Burton**, joins with a strong background in the refrigeration and HVAC sector. He will be responsible for driving sales growth across the region, strengthening existing partnerships, and identifying new opportunities.

Also rejoining the team is **Kyle ray**, newly appointed Account Manager for the South. He will focus on larger key accounts, while also developing new business and strengthening relationships with contractors, consultants and distribution partners.

McDermott said: "Although sorry to see Tony inevitably stepping away, I'm genuinely excited about the team we now have in place. We've brought together a group of highly capable and customer-focused professionals who understand the evolving needs of the market."

<https://www.jehall.com/>



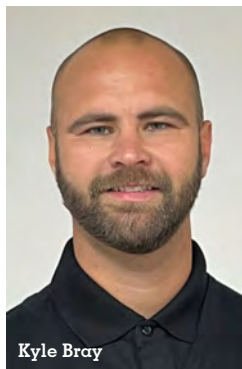
Paul McDermott



Paul O'Brien



Carl Burton



Kyle Bray

CHRISTINA TALIADOROS, KEY ACCOUNT MANAGER, DANFOSS CLIMATE SOLUTIONS

Christina Taliadoros has joined Danfoss as Key Account Manager within the wholesale and distribution business of Danfoss Climate Solutions.

The role is an expansion of the sales team, where she will work alongside Lizzie Dunlop and Brian Skelly and report to Andy Cook, Head of IDS Shared Sales - Nordics & UK. The move is designed to strengthen and enhance relationships with key wholesale partners and indirect customers to develop and grow this important business channel for Danfoss.

A key part of the role will be business development through daily work with installers and contractors, as well as gaining specification with end users for Optyma condensing units and refrigeration and air conditioning controls.

Joining Danfoss from cooling partner Wolseley UK, Taliadoros has 12 years of experience in the refrigeration and air conditioning market, having previously worked at Hawco and LU-VE.

<https://www.danfoss.com/en/about-danfoss/our-businesses/climate-solutions/>



MICK LANGFORD, UK COUNTRY MANAGER, PANASONIC

Panasonic has appointed **Mick Langford** as UK Country Manager for the heating and cooling division after John Kellett stepped down from the role for personal reasons.

Langford began his career and a refrigeration and air conditioning engineer more than 40 years ago and built his experience engineering, sales and manufacturing. He joined Panasonic six years ago and quickly advanced to Head of Air-to-Air Sales for the UK and, more recently, Head of Sales and Marketing for the UK division.

John Kellett wished Langford all the best in his new role and added: "Mick's appointment marks an exciting chapter for Panasonic in the UK, and I'm confident that under his leadership the team will continue to deliver exceptional results."

Langford said: "The strength of the innovative renewable technologies recently launched by Panasonic, along with our strong networks across the UK, positions the company well for growth. The business has plenty to offer the market, and I look forward to working with the team towards a bright future together."

Jose Alves, Regional Director for the UK, Ireland and DACH region added: "Having worked closely with Mick over the last six years, I am positive that he will take the company to the next level and will provide a thriving and strong team to develop the business within the UK."

www.aircon.panasonic.eu



KEVIN VIDAL, TECHNICAL SERVICE MANAGER, LH-plc

Kevin Vidal has been appointed Technical Service Manager at Wimbledon-based chiller maintenance specialist LH-plc.

Reporting to Projects and Service Director Paul Davis, he will be responsible for providing clients with advice and quotes on further works identified following engineer visits during service and maintenance works and equipment surveys. This can range from a simple replacement component to complete equipment replacement.

Vidal said: "It's great to be part of a team that values innovation, quality, and customer support. I look forward to supporting our clients with innovative solutions, strengthening our service excellence, and contributing to the continued success of the business."

With more than 15 years' experience in the HVAC sector, Vidal has previously organised large projects from design through to completion as a compressor engineer, supervisor and owner of his own air conditioning and facilities company.

Roberto Mallozzi, Managing Director of LH-plc, said: "I am pleased to welcome Kevin on board. I look forward to seeing him thrive in the role and contributing to the business. It's always good to bring in new perspectives, and I'm sure he'll find meaningful ways to add significant value to our operation."

www.lh-plc.co.uk

**JEAN-BERNARD COULANGES, HVAC-R BUSINESS DEVELOPMENT MANAGER, INVERTEK DRIVES**

Variable frequency drive (VFD) manufacturer Invertek Drives has appointed Jean-Bernard Coulanges as HVAC-R Business Development Manager for France and North Africa. His background includes expertise in product line management, international market development and innovation management across industries including HVAC and refrigeration components.

Based in France, Coulanges will be responsible for strengthening Invertek's presence in the French and North African markets, with particular focus on HVAC system applications where VFDs play a crucial role in energy efficiency and system optimisation.

"We are delighted to welcome Jean-Bernard to our team," said Rhyddian Welson, Sales and Marketing Director at Invertek Drives. "His proven track record in business development and deep understanding of the HVAC and refrigeration sector will be invaluable as we continue to expand our presence globally."

Coulanges said: "The increasing focus on energy efficiency and sustainability in building systems creates tremendous opportunities for variable frequency drive technology. I look forward to working with customers across France and North Africa to help them achieve their energy efficiency goals whilst supporting Invertek's continued growth in these key markets."

www.invertekdrives.com

**OWEN GARTLAND, APPRENTICE DESIGN ENGINEER, BREng**

Hull-based HVAC and building services specialist BREng has appointed a new apprentice design engineer. Seventeen-year-old Owen Gartland joins straight from school and will follow a three-year Building Services Engineering course, leading to a Level 4 qualification, with the option to progress to advanced levels.

Following work experience, he worked on Saturdays and school holidays before joining full-time. The government-funded apprenticeship combines day-release online study with on-the-job training.

Working alongside HVAC project manager Tom Smelt and electrical engineer Adam Sykes, he is already contributing to live projects, including heat load calculations for 10 high street stores, and a decarbonisation programme for a leading education provider in the North East. He will also support the on-site survey team in producing digital surveys and 3D scans of buildings, and gain proficiency in software such as HEVACOMP, CAD, and Autodesk Revit.

BREng founder and Managing Director Rob Smelt said: "Demand for energy-efficient and low-carbon buildings is expanding at a tremendous rate. Decarbonising the national estate will require a huge increase in skilled manpower. We're committed to helping recruit and train the new generation of engineers and designers needed to meet the UK's net-zero targets."

www.brenghull.co.uk

**BABATUNDE JADESOLA, TECHNICAL PRE-SALES ENGINEER, CLIVET**

Babatunde Jadesola has joined Clivet as a Technical Pre-Sales Engineer, working out of the Reading office.

Jadesola's background is deeply rooted in technical sales across heating, ventilation and air conditioning and he brings a wealth of knowledge and experience to the role.

Clivet adds that he is already known as 'fact of the day guy' and sees this as adding value when helping customers with pre-sales technical enquiries!

<https://clivetgroup.co.uk/>





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