

NATIONAL
ACR & HEAT PUMP
AWARDS
2024

THE MIDLAND HOTEL, MANCHESTER
21ST MARCH 2024

WINNERS & HIGHLY COMMENDED

GRANT AERONA³



A+++

THE AWARD WINNING HEAT PUMP RANGE

- R32 refrigerant
- Excellent SCOP's
- Compact footprints
- Low noise levels



¹when installed by a G1 accredited installer. Full T&C's apply.



HPID13R32 &
HPID17R32



NEW SMART CONTROLS

- Intuitive controller
- Remote monitoring
- Three heating zones + DHW



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AN AMAZING NIGHT WAS HAD AT THE NATIONAL ACR & HEAT PUMP AWARDS 2024

Hundreds of the best and brightest of the HVAC industry met at the Midland Hotel, Manchester on the 21st of March to celebrate excellence within the industry.

The organising team and judges were absolutely thrilled to see over 100 excellent entries put forward for 17 categories.

We don't offer gold, silver or bronze or even a 'prize because we like you'. All our winners are shortlisted for a reason.

That's why it's a huge accolade for companies to become a finalist, highly commended and of course to WIN. The range and breadth of entries within each category are always strong and entrants are competing against the best in their field.

The evening was about rewarding the very best companies and individuals across the sector, those who are setting high standards for the rest to follow. In fact, in many cases there was only one or two points between winners and highly commended.

The night started off with some live music from the very talented Stephen Tanner, followed by the presentation of a few categories before dinner. This was followed by more music, comedy entertainment from the very funny Axel Blake, and finally the rest of the award presentations. Everyone appeared to be in great spirits and thoroughly enjoyed themselves.

Sponsors and supporters

The event would not be possible without the very generous support from our loyal sponsors and supporters. To see these companies visit page 29.

Judges

We must recognise our 10 independent judges, in particular, for their diligence and time and subsequently arriving at clear and worthy winners.

We work very hard to ensure no bias with any of the judging, they are all chosen for their knowledge, technical abilities and experience within their fields.

However, most importantly, we do ensure that if they have any affiliation with ANY of the entries, they are excluded from the scoring processes within those particular categories.

Refer to page 30 for information about the judges.

We're looking forward to exciting times ahead, as in 2025, we'll be moving to a new location and venue. Many of the sponsorship packages and tables have already been snapped up. However, if you would like to reserve your places and enquire about sponsorship, please contact; hayleyc@warnersgroup.co.uk

Best wishes,

Juliet and the team



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RACHP WOMEN OF THE YEAR

WINNER

Hayley Cattell



Hayley joined Beijer Ref Marketing (covering maternity leave) way back in 2010. She then progressed to become a Dean & Wood Trainee Sales Engineer, based in the Newcastle branch. Here she gained NVQ and City and Guilds in Refrigeration and Air Conditioning.

Hard work and determination meant promotion soon followed and in 2016, became Dean & Wood, Birmingham Branch Manager. A year later she progressed to Beijer Ref Product Manager (launching CO2 condensing units into the UK market). Looking ahead, in 2018, she embraced the Northern Regional Sales Manager role for HRP. Following on from this, 2020 saw Hayley become a Dean & Wood Business Director and most recently enjoyed an enviable and well-deserved move on to Beijer Ref Group Sales Director in 2022.

She was instrumental in launching SCM commercial CO2 condensing units into the UK market. From this, the SCM Cubo2smart condensing units were awarded product of the year at the National ACR & Heat Pump Awards.

Hayley believed in turning traditional door knocking sales engineering on its head and developed a core team of specialist sales managers, targeting the environmental market changes. Her qualifications include;

- Nov 2023 Diploma in Strategic Management & Leadership Practice, the equivalent of an MBA masters level qualification
- Dec 2023 Awarded membership of the Chartered Management Institute as a chartered manager

- Part of her training included working within Kylma (pronounced Shulma), which is part of Beijer Ref Sweden
 - Plus, a string of trade and leadership course qualifications
- Hayley is a Fellow of the Institute of Refrigeration (IOR) and most recently, has been nominated as a Fellow. She enjoyed the role of Secretary of the Newcastle IOR and on the dinner committee, as well as membership committee of IOR London. She was also recognised in 2018 by the United Nations Environment programme for her achievements.

A couple of quotes from her colleagues and clients include;
“Hayley oozes enthusiasm which is infectious when being in her company, she has a burning desire for her team to succeed”

“Hayley leads by example and has a real passion for our industry. She never accepts the word no as an answer”

It is said that Hayley has an outstanding passion for the industries transition to natural refrigerants, which would produce a sustainable future for us all.

Hayley is married to an industry man and mother of two young boys, Joey and Archie. She passes her drive and determination to them, ensuring they have every opportunity in life to grow and develop. She is fanatical that they make their own decisions in life and then guide them through it. She has a knack for simplifying things regardless of how complicated they look. She is a DOER.

She is also a keen runner and will be running the London marathon in April.

WINNER

Heat Geek



In 2023/24 we expanded hugely the Awakening and Mastery Heating training courses. Adding a whole range of supplementary courses all focusing specifically on heat pumps. Recognising the skills gap was in theory and knowledge, not hands-on skills, we focused on the low-carbon approach of online training. This fills in the technical and regulatory details and skills needed for heat pump installations in a fun, accessible, and engaging way.

To supplement this additional focus on heat pumps, we also simultaneously released a homeowner version of the training to help demystify the technology for consumers. This is a straightforward guide to assist the end consumer. We have also developed and released an 'industry partners' version which serves to clear up confusion with people working within the industry, but

not necessarily on the tools (suppliers, admin staff etc). Focusing on all three of these demographics, rather than just installers, helps with communicating a clear holistic message.

To ensure quality of outcomes there are no 'A to D' multi-guess questions. The pass mark is 100%. However, unlimited attempts are allowed during a 6-month time frame. Unlike many industry training schemes, this ensures robust and rigorous graduates. In addition to this, and again unlike traditional training, we push trainees onto our range of peer-to-peer support forums. Facilitated by us, these provide support and build relationships not only during our training, but long after into their career. This is fostering a community of rigorously trained professionals who learn and support each other in their day-to-day challenges.

HIGHLY COMMENDED – MCFT



MCFT is not an independent training provider, offering courses to the general public; it is the first Department of Education recognised Employer-Provider of apprenticeships in our industry: food service equipment maintenance.

During the past 7 years, there has been a Level 3 ST0322 - Refrigeration Air Conditioning and Heat Pump Engineering Technician dedicated facility, most recently based in Theale.

As soon as the facility at Theale was discussed with suppliers, manufacturers, wholesalers and parts suppliers they were all keen to be involved - whether helping with components to build training rigs or equipment that can be used for manufacturers

training - both for the in-house courses but also for other manufacturers engineers in the local area. From Advanced sessions such as introductions to pack systems or refreshers on electrical safety, the facility is used by the whole business to make sure development is never-ending. Also conducted are End Point Assessment and Functional Skills, as we can't mark our homework -both City & Guilds and OFSTED are clear about rigorous End Point Assessments. We have a partnership with Eastleigh College - not only to carry out our End Point Assessments - but to help us with Functional Skills: Apprentices must achieve GCSE Level 3 in both English and Maths.

WHOLESALE/DISTRIBUTOR

WINNER

Cool Designs Ltd

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HITACHI



CDL has four branches, at Gateshead, Warrington, Glasgow, and Macclesfield. Opening hours: Sales: 08.30 to 17.00 Mon-Fri and Technical support: 07.00 to 19.00 Mon-Fri (out of hours with agreement). Customers are also able to access the products via the website, telephone, email, and text. We supply a comprehensive range of products from Air conditioning splits to VRF and chillers to heat pumps.

All our external sales team provide customers with design support for projects, and our specification team offers an in-depth design service, which takes into account factors such as BREEAM and embedded carbon calculations, to ensure project specifications are met. From the beginning, we decided that all new staff must

have engineering knowledge. We didn't want to become just a sales company, but have the knowledge required across the team to understand and support customers in the challenges they face. This has been a key to our success.

We offer a comprehensive range of classroom-based and online training courses covering all levels of technical ability, from introductory courses to advanced, enabling our customers to progress and build the skills of staff. To help customers quickly get up-to-date, we have also put our training 'on-the-road' to save people travelling to our offices, where numbers are inevitably limited. In total, we have trained around 3000 engineers to date over 20 years.

HIGHLY COMMENDED – Smith Brothers Stores Ltd

Smith Brothers Stores has UK coverage across a 20-strong branch network and a head office distribution centre in Leicestershire, which has just acquired an adjacent unit specifically to store an increased ACR stock profile. Our standard business hours range from 07:00 to 17:00, Monday to Friday, providing our customers with a reliable daily service. Our commitment to customer service goes beyond conventional boundaries, with many of our branches known to open outside of normal trading hours, often at weekends to service customers in need. In addition to our

trade counters, each branch has its own on-site internal sales team, which offers expert product advice and processes quotes and orders placed via email and over the phone. Our online portal, www.sbsonline.net, offers 24/7 access, allowing customers to view product information and manage their accounts outside of regular business hours. We stock an extensive range of Air Conditioning units and offer a solution for all domestic, commercial, and industrial requirements.



WINNER

AirX Pro - Martin Industries Ltd



There is a big difference between just filtering the air with HEPA filters and UV-C lamps and destroying the DNA/RNA of airborne viruses. AirX Pro does both, it blasts the air in the whole room with 24 million negative IONs (atoms) every second. This disrupts the DNA/RNA of all viruses in the air and surfaces. AirX Pro is unique in its technology, and cannot be compared to other 'filter-only type' air purifiers.

Boasting a class-leading 7-layer filtration system, one of the highest specs in the world, which consists of medical grade H13 HEPA, active UV-C with TiO2 catalyst, and 5 other layers of filter technology. But it's still not enough to make a room safe with Covid-19 blowing around and being continuously exhaled. You need to attack the virus in the air,

which is exactly what our massive ION generators do.

As a case study, BUPA selected AirX Pro after reviewing the other systems available in the market. It enabled them to run their business normally without delays due to long fallow times (cleaning the air in the room between patients). The system produces no Ozone. The IONs also energise the room so the occupants feel more awake and refreshed. They have paid for themselves as there have been 35% fewer sick days. Overall, a massive saving and happier workforce.

AirX Pro is a game changer for keeping staff, patients and visitors safer!

HIGHLY COMMENDED – CIAT EPURE® Filter – CIAT



CIAT has developed the EPURE® filter with unparalleled efficiency in filtering fine particles up to 2.5 microns. This air purification technology is compatible with any one of CIAT's fan coil ranges, and provides excellent indoor air quality, ensuring PM2.5 particulate concentration is below the limit recommended by the WHO (10 µg/m3) - equivalent to a reduction of 50% to 90% in particulate matter.

The unique design boasts a special pleat design offering 11 times larger surface area than standard filters, enabling it to capture particles 2.5 µm in diameter. CIAT's testing shows it is highly effective and has filtration levels of 88% for PM10 (sand, hair) particles, 72% for PM2.5 (bacteria spores, pollen), and 61% for PM1 (virus, nanoparticles) particles. Quite often, virus particles travel on host particles meaning they are captured by the filter.

REFRIGERATION PROJECT

WINNER

Bidfood Glasgow Depot - WAVE Refrigeration



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CORROSION PROTECTION

A new 90,000 sq. ft facility for Bidfood in Glasgow. There were to be three distinct refrigerated areas: Frozen store at -25°C (2,202 m²), Chill store at 2-4°C (414 m²) and Marshalling area at 2-4°C (860 m²).

On selecting a suitable refrigerant, it needed to be environmentally friendly R744 to reduce its carbon footprint, align with sustainability goals, and have integrated control and monitoring systems for optimal performance and energy efficiency. Other considerations were resilience, efficiency, and cost control.

WAVE facilitated design meetings, developed a project requirements document, conducted technical and financial evaluations of contractor proposals, reviewed and audited

contractor's design proposals, monitored installation and conducted site inspections, performed a thermographic scan, and witnessed system pressure tests.

The overall benefits for Bidfood are an energy-efficient and environmentally friendly refrigeration system, increased resilience for extreme weather events and future expansion, reduced operational expenditure and carbon footprint, strict budget management and cost control, and a reliable and long-lasting refrigeration system. Overall, WAVE's expertise and collaborative approach ensured the successful design and installation of a tailored and efficient refrigeration system that met Bidfood's goals.

HIGHLY COMMENDED – Beijer Ref UK & Miramar Engineering – JJ Food Services installed by Miramar Engineering



JJ Food Service, based in Enfield, distributes food and associated products to restaurants and domestic customers alike. For their refrigeration chill and freezer rooms at their new site in Wimbledon, they sought solutions that embodied the latest in sustainable refrigeration technology and would 'future-proof' their investment, standing the test of time. Other considerations revolved around the speed of delivery, reliability of the equipment installed, efficient operation, and a system that offered a high level of control.

The company received assistance and guidance from Miramar Engineering, with the project involving three primary manufacturers:

SCM Frigo for the CO₂ packs, Guntner for the evaporators and Danfoss for the controls systems and condensing units.

Miramar Engineering opted to partner with FridgeHUB, as their choice of supplier, the specialist refrigeration division of Beijer Ref in the UK. FridgeHUB provided dedicated Area Sales Managers to assist with selecting the correct equipment, providing comprehensive quotations and, once the project is awarded, providing dedicated management of the delivery process, vital for a project of this nature.

GALLERY





FINALISTS 2024

The much-anticipated National Air Conditioning, Refrigeration & Heat Pump Awards 2024 will be held at The Midland, Manchester on March 21st, giving the industry a welcome opportunity to recognise outstanding people, projects and products.

CONGRATULATIONS TO:

ACR CONTRACTOR OF THE YEAR

- The RACA Group
- SURE Solutions
- Cross Group Ltd

AIR CONDITIONING PRODUCT

- HMS Networks
700 Series Air
- Hitachi Cooling and Heating
Hitachi Air365 Max VRF
- Carrier
Carrier IdroFan® 36XH Hybrid Hydronic Terminal
- Toshiba Air Conditioning
DAISEIKAI 10 by Toshiba Air Conditioning

REFRIGERATION PRODUCT

- BITZER UK & KGM Refrigeration
AMChill Ultra-low Charge Ammonia Chiller
- Testo Ltd

AIR CONDITIONING PROJECT

- CIAT
Seagreen offshore wind farm project
- Personal Refrigeration Ltd
Rice Cook Ventilation & Cooling Project
- Organic Heat Exchangers Ltd
Cool Net Zero Project
- Personal Refrigeration Ltd
Air Handlers Northern. London Vet Specialists Project.
- Panasonic Heating and Cooling
Riverdale Healthcare

REFRIGERATION PROJECT

- BITZER UK / Chillflow Solutions Ltd
Bespoke R-449A Refrigeration System for 65m Ice Breaker
- BITZER UK and G&O Refrigeration Ltd
Lee Valley Ice Centre
- Personal Refrigeration Ltd
Harlech Foodservice Ltd
Freezer Upgrade & Replacement Project
- Panasonic Heating and Cooling
Keep it Cool and Hawco Ltd
- WAVE Refrigeration
Bidfood Glasgow Depot
- Sure Solutions
Little Moons
NEW MOON PROJECT
- Beijer Ref UK & Miramar Engineering
JJ Food Services installed by Miramar Engineering supported by FridgeHUB
- Cross Refrigeration (NI) Ltd
IPL Sittinbourne

TRAINING PROVIDER

- Ideal Heating
Expert Academy
- Meridian RACHP Training
Meridian RACHP Training
- Grant Engineering (UK) Ltd
Grant UK Training Academy
- Heat Geek
- South Hampshire College Group
Eastleigh College Heat Pump Training Provision
- McFarlane Telfer Ltd
MCFT

WHOLESALER/DISTRIBUTOR

- Smith Brothers Stores Ltd
- Cool Designs Ltd
- Nuenta

HEAT PUMP INSTALLER

- R A Brown Heating Services Ltd
- Castle Climate Control Ltd
- RPS Group (Rothwell Plumbing Services)
- Oxon Energy Ltd

HEAT PUMP PRODUCT DOMESTIC

- Ebac Ltd
- Ecoforest
ecoGEO+ PRO
- Ideal Heating
Logic Air
- Panasonic Heating and Cooling
Panasonic Aquarea R290 L Series Air-to-water Heat Pump
- Mitsubishi Electric
Mitsubishi Electric Ecodan R290
- Clivet Group UK
Edge EVO 2.0
- Nuenta Ltd
ecoAIR+ EVI 4-20kW
- Nuenta Ltd
ecoGEO PRO 1-6kW
- Warmflow
Warmflow Zeno air source heat pump
- Viessmann
Viessmann Vitocal 150 / 151-A
Air Source Heat Pump
- Strom Limited
Strom Vertex HP

THANK YOU TO



THE NATIONAL ACR & HEAT PUMPS AWARDS



HEAT PUMP PRODUCT COMMERCIAL

- **Solid Energy**
Solid Energy
Modular HC Heat Pumps
- **Carrier**
Carrier AquaForce® 61CA air-source heat pump
- **Clivet Group UK**
ELFOEnergy Storm EVO
- **Solid Energy**
DH Sub Station Heat Pump 200kW
5MW
- **Swegon**
BlueBoxOMICRON Zero

GROUND SOURCE PROJECT

- **Ecoforest**
Daly Renewables single house installation
- **R A Brown Heating Services Ltd**
Ground Source Heat Pump in The Old Rectory
- **Calibrate Energy Engineering**
2-phase 3 Megawatt Modified Capacity GSHP
in Scotland

DOMESTIC AIR SOURCE PROJECT

- **R A Brown Heating Services Ltd**
New Build Family Home in Norfolk
- **Panasonic Heating and Cooling**
Panasonic Delivers sustainable Warmth to EPC
A-rated Home, Wakeman heating & renewable
and Dovecote homes
- **Ability Energy UK**
ASHP Development in Scottish Borders
- **Viessmann**
EPC Improvements & Viessmann

- **Viessmann**
Blakemore Plumbing & Heating and Viessmann
- **Viessmann**
Heat Different and Viessmann
- **Batchelor Air Conditioning & Refrigeration Ltd**
Batchelor makes a splash with multi zone
pool project

NON - DOMESTIC AIR SOURCE PROJECT

- **Carrier**
Glasgow Bank Estate
- **The Bruce Boucher Consultancy**
Weleda World Leader in Natural Cosmetics
and cures
- **RPS Group**
Decarbonisation of Wallesy Hub
- **ICG HEAT PUMPS**
Kirkby Leisure Centre
- **Mitsubishi Electric**
Decarbonising hot water in The Gym Group's
Leyland site
- **Calibrate Energy Engineering**
Water Research Centre Phase 1 Energy
Transformation Project

ANCILLARY PRODUCT OF THE YEAR

- **Discrete Heat**
ThermaSkirt
- **Discrete Heat**
ThermAssured
- **Grant Engineering (UK) Ltd**
Grant EvoLink Hybrid System Hub
- **Grant Engineering (UK) Ltd**
Grant Aeron Smart Controller

- **SAMON**
GLACIÄR MIDI Refrigerant Gas Detector
- **WAVE Refrigeration**
Theoretical Performance Calculator

BEST IAQ INNOVATION

- **Martin Industries Ltd**
AirX Pro
- **CIAT**
CIAT EPURE® Filter

RACHP WOMAN OF THE YEAR

- Publishers vote

PHIL CREANEY'S ACR CHAMPION

- Publishers vote

Had fun?

Join us for the next
National ACR and
Heat Pump Awards



Scan to find out more!



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

GALLERY



ANCILLARY PRODUCT OF THE YEAR

WINNER

Theoretical Performance Calculator - WAVE Refrigeration



The Theoretical Performance Calculator is a comprehensive software solution that goes above and beyond typical ancillary products. It offers a range of features and capabilities that set it apart from existing tools, making it an invaluable asset for HVACR professionals.

The software represents a significant improvement over what has previously been available in the HVACR industry. While existing software focuses primarily on equipment selection, the tool goes beyond that by incorporating all elements of refrigeration and heating systems.

It also offers a wide range of benefits to HVACR professionals, revolutionising the design and validation process including

informed decision-making, accurate predictions of performance, reduced environmental impact, energy reclamation opportunities, adaptability to variable ambient conditions, energy profile generation, comprehensive and visualised results and reduced design time.

This simulation software offers numerous benefits to installers, providing them with valuable tools and capabilities to enhance their work efficiency and effectiveness including improved system performance and efficiency, troubleshooting and problem-solving, enhanced design and layout flexibility and simplified commissioning.

HIGHLY COMMENDED – ThermaSkirt – Discrete Heat



ThermaSkirt has exceptional efficiency and cost-effectiveness. It offers a comfortable and even heat distribution, reducing energy consumption and heating costs. This technology has a direct positive impact on both homeowners and the environment, making it a sustainable choice for the future.

Its innovative design seamlessly integrates with air source heat pumps—a cornerstone of renewable energy systems. This synergy not only enhances the efficiency of these systems but also makes them more accessible and appealing to a wider audience.

ThermaSkirt is a transformative approach to sustainable heating. Unlike traditional radiators or underfloor heating, it combines functionality and aesthetics seamlessly. It acts as both a heating system and a decorative skirting board, eliminating the need for intrusive radiators or complex underfloor setups.

It is made from 98.5% recycled aluminium, emphasising our dedication to environmentally responsible manufacturing. Moreover, with a life expectancy of over 40 years, it ensures minimal carbon impact throughout its long lifespan, especially considering that 80% of aluminium made since 1866 is still in circulation today.

GROUND SOURCE HEAT PUMP PROJECT

WINNER

2-phase 3 Megawatt Modified Capacity GSHP in Scotland - Calibrate Energy Engineering



The project was a 2-phase Ground Source Heat Pump installation project for a client in Scotland, with big plans for expansion and growth. Due to the nature of their business (soft fruit processing and puree production), they require large amounts of heat and chill to ensure that their product is processed and stored in premium condition. The system needed to ensure minimal, if no business disruption, the technology needed to be outside of the factory, and the client wanted simple, responsive, and intelligent controls to ensure that the system was adaptive to the daily needs of the business, whose success lies on exacting temperatures and conditions. There was also a time pressure as the Ofgem RHI payback scheme was

closing within months and the business wanted to secure the passive income that the heat/chill technology would be able to benefit from.

The installation had some unique features including, Calibrate Analytics, a key innovation within the system as it identifies the best solution, controls the system remotely, monitors in real-time, as well as identifies efficiencies and maintenance requirements, thus saving time, money and carbon emissions 24/7. Also due to the capacity in the original ground loop, this client could take advantage of the extra RHI income through the expansion of the system had a swift ROI, and also generated 17 years of extra passive income, aiding the growth of the business further.

HIGHLY COMMENDED – Ground Source Heat Pump in The Old Rectory – R A Brown Heating Services Ltd



The project was in a large Rectory house off the gas grid in rural Norfolk. The customer had experienced numerous problems and breakdowns with an installed ground source heat pump and was disillusioned. When the heat pump stopped working, he hired

another installation firm which installed a commercial-sized 38kW Electric Boiler. Due to cost he did not feel this was an affordable situation. We installed a 40kW Ground Source Heat Pump, with 3-phase electricity and 3 x 136 metre boreholes.

WINNER

Panasonic Heating and Cooling – Riverdale Healthcare and Sub-zero Climate Control



The Riverdale dental practice adhered to COVID advice by refraining from using air conditioning within their facility. However, this decision resulted in an uncomfortable environment for staff, prompting the need to find an air conditioning solution to improve comfort and enhance protection by inhibiting the growth of certain viruses.

They collaborated with Sub-Zero Climate Control, a long-standing partner, and selected the Etherea range of air conditioners with nanoe™ X technology. This innovative technology collects moisture from the air, generating hydroxyl radicals that inhibit the growth of viruses, bacteria,

and allergens. The project involved collaboration with Panasonic, aiming to create a safer environment for both patients and staff. The proactive adoption of new technologies demonstrates a commitment to providing the best solutions for the evolving needs of the dental sector, thereby contributing to a safer and more reassuring healthcare environment.

Initially, 2 installations were completed, and Riverdale Healthcare has since continued to work with Sub-Zero and Panasonic, transforming and installing 11 additional dental practices with a total of 29 Panasonic units so far.

HIGHLY COMMENDED – Cool Net Zero Project - Organic Heat Exchangers Ltd



Quotient Sciences requirement was to avoid cooling deficiencies during high ambient temperature periods, where the cooling capacity of the existing chillers required prioritisation of cooling demand within the facility. They also wanted to reduce energy usage and carbon emissions associated with the chilled water network. The solution had to fit in an existing enclosed area which included the existing chillers and their connection to the high-level chilled water flow and return lines.

The solution was tailored to the client's requirements through detailed data analysis, which included the installation of heat meters and the examination of BMS and electrical usage data over a year. This analysis allowed OHX to comprehend cooling demand peaks, temperature preferences, and the cost-efficiency of energy use. The outcome was a specification for an EnergiVault system that incorporated a thermal energy storage capability of 650kWh in latent heat, enhanced by 30% extra resilience in sensible heat.

GALLERY





DOMESTIC AIR SOURCE PROJECT

WINNER

Panasonic Delivers sustainable Warmth to EPC A-rated Home Panasonic Heating and Cooling, Wakeman Heating & Renewables and Dovecote Homes



A new build bespoke property from Dovecote Homes has become the exemplifier of integrated cutting-edge green technology, featuring the Panasonic 12kW T-Cap Aquarea Monobloc air-to-water heat pump alongside solar panels and a battery storage unit. The stunning property has achieved the most-efficient EPC rating possible (A-rated) thanks to its thoughtful specification. The heating and cooling system was supplied and designed by authorised Panasonic distributor Oceanair and installed by Danny Wakeman of Wakeman Heating & Renewables. Dovecote Homes is a respected independent developer specialising in creating bespoke, luxury homes with a sustainable ethos. They collaborate with their buyers during the

planning phase to tailor each home to the buyer's preferences. To bring their sustainable ethos to this home, the company aimed to use a combination of green technologies, to earn the highest possible rating for energy efficiency. Therefore, the home needed a highly efficient renewable heating solution to help achieve these extraordinary goals. To complete the build on time and allow the homeowners access to start living within their home, the installation had tight deadlines. The solutions needed to deliver easy installation alongside exceptional performance, were made an absolute priority after the original heat pump manufacturer chosen was unable to deliver or install their units before the homeowners move-in date.

HIGHLY COMMENDED – Detached Edwardian home - Blakemore Plumbing & Heating and Viessmann



The owner of the detached Edwardian home had the desire to regain control of spiralling energy bills and move away from gas to a heat pump and solar panels.

The new installation consists of a single 10 kW Vitocal 150-A heat pump with weather compensation, built-in buffer for defrost and built-in instantaneous water heater. This is combined with a 200-litre OSO Geocoil water cylinder.

The owner had named Damon Blakemore as the installer behind his cylinder and heat pump. Damon, said: "Specifying the

Viessmann Vitocal 150-A was easy as in my opinion, Viessmann has the best controls on the market. I'd been wanting to install the Vitocal 150-A for a while and this seemed to be the perfect project for it; there was space for the indoor and outdoor units, and I could get the flow temperature down to 40oC."

Six months post-installation, the owner's energy costs have turned into profits, his 1928 detached property is more comfortable than it's ever been, and his system's performance ranks among the best in the country.

WINNER

Decarbonisation of Wallesy Hub – RPS Group



The Wallasey Asset Building is the first building across the Liverpool City Region (LCR) portfolio to be decarbonised and on the path to net zero, the performance results being better than forecasted, and the collaboration between all involved. The building was eligible to receive central government Public Sector Decarbonisation Scheme (PSDS) funding which provides grants for public sector bodies to fund heat decarbonisation and energy efficiency measures.

Rothwell Plumbing Services (RPS Group) was appointed as the principal contractor. Across the live scheme- RPS Group appointed Twelvetreets Consulting Ltd to review performance and produce regular financial cost and progress reporting to ensure that the

client, could effectively draw down the funding when required.

Increased insulation via a new roof, external wall insulation, cladding system, and new double glazing – has resulted in an improvement in fabric thermal efficiency of between 73% and 95%. The new Low carbon heating systems are providing efficient, clean, effective, and direct emission-free heating via Air Source Heat Pumps. This included a new distribution pipe network, heat emitters and future-proofed smart controls. The new integrated metering and monitoring systems installed by RPS also act to provide effective reporting to track and report specific, real-time progress on carbon savings, cost savings, and building efficiency.

HIGHLY COMMENDED – Water Research Centre Phase 1 Energy Transformation Project – Calibrate Energy Engineering



The Water Research Centre (WRC) is a provider of consultancy and technical services.

The research centre building was feeling the pressure on costs as it was being heated using a very inefficient heat/chill system. The need was to heat and chill the function of the water testing centre as well as the office space of this large glass-fronted structure. The client was unsure if they wanted to go down the road of an air or ground source heat pump, so Calibrate set

about implementing their energy transformation assessment. Although the plan was to replace existing oil and chiller systems, some infrastructure was to remain, with the new addition of the heat pump and controls being added. The Calibrate Analytics innovative control system was integral to the success of this project as it identified the best solution, controls the system, as well as identified efficiencies and maintenance requirements, thus saving time, money, and carbon emissions 24/7.

REFRIGERATION PRODUCT

WINNER

AMChill Ultra-low Charge Ammonia Chiller – Bitzer & KGM Refrigeration

Sponsored by

HVAC
Communications



Bitzer & KGM Refrigeration went back to the drawing board to develop a new chiller design that dramatically reduces the charge required for a given duty while retaining the efficiency and environmental benefits. Charge reduction is key to the chiller's innovative design. Flooded evaporators on conventional ammonia chillers require a large reservoir of liquid ammonia. AMChill works with very low superheat, maximising efficiency. This approach, coupled with minimised pipework, reduces the ammonia charge by around 75%. For example, for a duty of 150kW, the charge on a traditional ammonia chiller with a flooded evaporator could be around 40kg, compared to just 10kg on the KGM chiller. They are now working on further reducing the

ammonia charge by refining the design and minimising pipe lengths, which it believes could yield an additional 20% reduction – to around 8kg for a 150kW unit. In addition to the roof-top mounted design, safety is further enhanced by the use of integrated ATEX-rated leak detection with system shutdown, and an ATEX-rated fan for enclosure ventilation. The industry and end users face some difficult decisions in light of the recently revised F-gas regulation. The AMChill rooftop-mounted, ultra-low charge packaged ammonia chillers offer some compelling benefits, and opens the way to the use of ammonia systems in mainstream applications currently served by global warming synthetic refrigerants.

HIGHLY COMMENDED – Testo 570s Digital Manifold – Testo Ltd



The Testo 570s Digital Manifold, provides unparalleled insights into system performance and diagnostics to aid the engineer in commissioning and servicing of refrigeration equipment. With its testo Smart app connectivity and real-time data logging, it empowers users for proactive maintenance and efficient issue

resolution, setting it apart as a comprehensive solution for optimising refrigeration systems. Connectivity to accessory sensors allows the testo 570s to also monitor vacuum during system evacuation procedures, and compressor current can also be measured if required.

WINNER

Solid Energy-Modular HC Heat Pumps - Solid Energy

Sponsored by



Factory assembled modular water and air source heat pumps 200kW to 10MW using four hydrocarbon refrigerants in single or cascade combinations to deliver flow temperatures from 65C to 150C. This product extends the boundaries of existing heat pump technology as it uses HC refrigerants in combination to maximise COP figures and achieve higher flow temperatures when required. Fully factory assembled with minimal installation work on site. Integral control panels easily connected to BMS. Ideally, large deltaT's preferred

however the modules can be configured to deal with high return temperatures and low deltaT's.

It benefits the customer by providing the best possible COP figures. All compressors are sealed units with a design life of 100,000 hours. No oil changes. Minimal maintenance costs.

The installer also benefits as this heat pump is very easy to install. All flanged connections. No welding. No loose components. Fully wired electrically and control cabling.

HIGHLY COMMENDED – DH Sub Station Heat Pump 200kW - 5MW - Solid Energy



One of the major problems facing the development of new and existing District Heating schemes, operating at efficiently low temperatures, is that they cannot be connected to many of the large older buildings along their route, due to their current heating operating temperatures of 82 /71 . This problem has been overcome with a super-efficient heat pump that can use the

lower temperature district heating to provide these buildings with the flow temperatures that they require. The heat pumps range in size from 200kW to multi MW and when operating at 82 /71 can deliver a COP of over 6.00, determined by the district heating temperatures. Higher flow temperatures can be achieved when required by hospitals or for industrial process heat applications.

HEAT PUMP PRODUCT - DOMESTIC

WINNER

ecoGEO+ PRO - Ecoforest

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secon



Last year Ecoforest presented the ecoGEO 1-6 PRO, a 6 kW ground source heat pump for indoor installation with only 150 grams of R290 as refrigerant. The ecoGEO 2-10 PRO and the ecoGEO 4-16 PRO are two new models that include more than the 150 gram limit of R290 but come with a security system in case of a leak to also be installed inside without problems. With this model, we reach 16 kW in a single phase, being an ideal product for the retrofit of old homes throughout the UK.

The benefits to the end user are that they can enjoy maximum comfort with the latest technology on the market, the higher efficiencies so great savings are achieved. As this refrigerant is natural, you don't need to. For the installer, this is easy to install. Remote control is available for the diagnosis. It is not necessary to replace the current production system and plug and play installation.

HIGHLY COMMENDED – Viessmann Vitocal 150 / 151-A Air Source Heat Pump - Viessman

VIESSMANN

While most domestic heat pumps can reach flow temperatures of 55-60°C, both the wall-mounted Vitocal 150-A and the floor-standing Vitocal 151-A with integral 190-litre DHW cylinder, have a maximum flow temperature of 70°C. This provides customers with superior hot water comfort even when outside temperatures fall to -10°C; directly

challenging the stereotype that ASHPs don't deliver enough heat. With a COP (Coefficient of Performance) of 4.9-5.0 (according to EN 14511 for A7/W35 and depending on the model), the new heat pumps generate up to five times the usable heat for heating and hot water from one kilowatt hour of electricity and heat from the outside air.

AIR CONDITIONING PRODUCT OF THE YEAR

WINNER

Hitachi Air365 Max VRF - Hitachi Cooling and Heating



HITACHI
Cooling & Heating

SmoothDrive 2.0 Technology ensures a consistent internal temperature by monitoring the air-off temperatures on the indoor units rather than the refrigerant delta T ensuring far better control over the compressor operating frequencies. Aircloud Tap + NFC technology will allow faster commissioning, faster maintenance and overall better control of the VRF AIR365 Max. The technology will allow HVAC professionals to pre-commission systems prior to getting to the site and upload the necessary settings directly to the condensing unit without having to open the system up. It will allow remote commissioning of the indoor fan coils as well. The engineer will also be able to access all the operational data from the system remotely.

There is a smaller footprint through new design, providing a single module 24HP / 64kW Maximum height difference of 110M Heating and Cooling range from -25DegC to 52degC New Aircloud Select design software to support AIR365 design Reduction in refrigerant capacity of 10% average based on previous Sigma VRF model Gentlecool - change the off coil temperature on individual internal units through four possible temperatures 8 - 12 - 14 - 16degC off coil temperature to ensure maximum comfort. A new hardwired colour screen controller in both white and black casing is designed for intuitive use for users who don't.

HIGHLY COMMENDED – Toshiba DAISEIKAI 10

TOSHIBA

Toshiba Air Conditioning's DAISEIKAI 10 extends the boundaries of existing air conditioning technology with its blend of sustainability and performance. It pioneers the use of eco-friendly materials, with 43% of its plastic components made from recycled materials. Its advanced features like motion tracking, plasma ionizer, ultra-pure filter, and coated coil, set new standards in air purification and user convenience and push the boundaries of what modern air conditioning technology can achieve.

DAISEIKAI 10 operates on R32 refrigerant, the most balanced refrigerant in terms of environmental impact, energy efficiency, safety, and cost-effectiveness. There are three sizes of DAISEIKAI 10 available, with cooling capacities ranging from 2.5 to 5.0 kW and heating capacities from 3.2 to 6.0 kW.

It ensures outstanding performance even down to -30°C. Its design philosophy, "Go back to the Earth," is reflected in its unique natural wood grille, sourced from PEFC-certified sustainable forests, offering a distinct aesthetic appeal in the air conditioning market.

HEAT PUMP INSTALLER

WINNER

RPS Group (Rothwell Plumbing Services)

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RPS Group (Rothwell Plumbing Services) is an SME family business established for 35+ years. In this time, we have grown to be the largest independently owned plumbing and heating company in the North-West- specialising in heating services: heating, renewables, M&E, and heating maintenance services. We service both private and public sector clients. Our main offices are based in Wigan (GMCA), Carnforth (Cumbria) & Tyneside (North East). RPS Group directly employs circa 200 operatives- and we use directly employed labour for the majority of our heating, mechanical and electrical works which ensures high levels of both expertise and service delivery to our clients.

Our company has maintained a core turnover and has grown considerably in the last few years. In 2021 we acquired a similar family-based heating business Rogerson HomeServe+, established for 15 years, based in Carnforth, servicing Cumbria and beyond. This integration within RPS meant we could offer our customers full coverage across the entire North West- further developing new employment and training opportunities for people in this area which is known to be geographically difficult to service.

In 2023 alone we installed 975 heat pumps, 900 ASHP's and 75 GSHP's. This will generate an average energy savings of 2,535KW.

HIGHLY COMMENDED – R A Brown Heating Services Ltd



R A Brown Heating Services has been installing ground and air source heat pumps since 2007. Before this Richard Brown had a successful plumbing and heating business initially with a more urban customer base in Norwich but moving out to barn conversions and other rural properties by being a specialist in underfloor heating. The decision to install heat pumps came from Richard's desire to work at the cutting edge of the industry in terms of offering the best technologies to customers.

This ethos continues and has been instilled into the current workforce from senior management down to new apprentices.

In 2012 the company moved into showroom premises having previously been run from a home office and steadily grew from 7 employees to 21 today. Richard felt strongly that prospective customers need to see these technologies and understand how the system will fit into their property. The showroom adds credibility and shows that the company is a professional establishment.

WINNER

SURE Solutions

Sponsored by

TOSHIBA



SURE Solutions was incorporated in August 2016, and has now grown to a team of 53 employees. 2023 has been a year of growth and development via high-quality project design, technical skill and close customer focus. We continued to grow our customer base with new clients and expanding with existing customers. We welcomed 14 new team members to the business this year who continue to add varied experience, skills, and coverage which will only put us in a stronger position longer term and ensure that we exceed the needs of our customers.

After a successful year, we are very proud that SURE Solutions has been recognised as the first contractor in the World to receive the ATMO-approved label, setting the standard for excellence in natural refrigerant design and installation and pushing the sector towards environmentally conscious, sustainable heating and cooling solutions. ATMOSphere launched the label in June 2022 to set a global gold standard highlighting best-in-class manufacturers of natural refrigerant systems and components around the world, which has very recently been extended to Refrigeration Contractors.

HIGHLY COMMENDED – The RACA Group



The RACA Group is a group of Independent Contractors whose companies are well established in the industry and provide a first-class service in their respective geographical areas of the UK. The group was formed to provide Installation, Service, and Maintenance of commercial refrigeration and air conditioning systems on a national scale from strong regional bases. The member's areas are divided up by postcodes, each member

covering a number of the 120 total postcodes in the UK. The 13 group members employ circa 250 engineers.

The RACA Group has developed significantly over the last 20 years and the strategies for the immediate future are to raise the profile of the Group within The Refrigeration and Air Conditioning industry, actively market the RACA Group to potential new clients and secure new contracts, increase the social media activity.

PHIL CREANEY'S CHAMPION

WINNER

Garry Shaw

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Garry is a designer at heart and very focused on solutions to complex problems. He's had 37 years within the sector and, only 7 years ago decided to launch his own company SURE Solutions.

During the 7 years, Garry has built a team of 53 who can deliver technically challenging and complex projects, with a high degree of customer focus. It is a testament to him that he's managed to grow a business to this size, while maintaining that family ethos where everyone is looking after each other and engaged in the company's vision.

Garry continually encourages and recruit's apprentices into the business and since its conception, 16 apprentices of varying ages and backgrounds have successfully passed through the apprentice program. He aims to always sit within the "trusted advisor" role, to

use as a method of adding value. The business focuses on natural refrigerant solutions and has installed multiple ammonia glycol, CO2, and heat pump systems over the years, helping customers to decarbonise their supply chains and improve efficiencies.

Garry's work with the business led to them becoming the first contractor in the World to receive the ATMO approved label, setting the standard for excellence in natural refrigerant design & installation and pushing the sector towards environmentally conscious & sustainable solutions.

In his personal life, Garry is a Liverpool season-ticket holder, a passionate golfer, and enjoys spending time with his wife, children, and dear friends.

GALLERY



GALLERY



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THANK YOU TO OUR JUDGES

JUDGES

The 10 independent judges, who were chosen for their knowledge, technical abilities and experience within their fields.



Judith Evans - Director RD&T and Professor at London South Bank University



Iain McCaskey - Head of Devolved Nations, BESA



Graeme Fox - Director of Technical, BESA



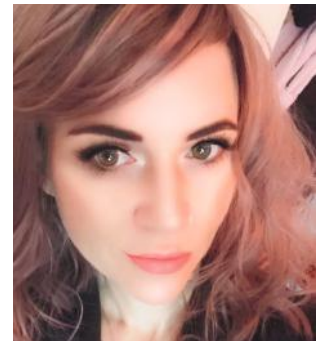
Mike Gittos - Business Development Manager, Wave Refrigeration



David Dunn - Sales Director North Europe, Carrier RLC Europe & Riello



Andrew Slater - Editor, ACR Journal



Lisa-Jayne Cooke - Service Sales Manager - Key Accounts at GEA



Damian Wiszniewski - UK Sales Manager, Carrier DX



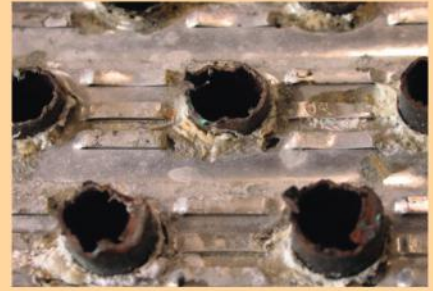
Rob Vine - Heat Pump Consultant, Applied Renewable Energy



Juliet Loiseau - Publisher Heat Pumps Today, ACR Journal & The Woman Engineer

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T. 01895 259346 F. 01895 259356
E. info@blygolduk.com W. Blygolduk.co.uk

Blygold UK Ltd, Units 2/3 Dinting Ind. Est., Dinting Lane, Glossop, Derbs, SK13 7NU
T. 01457 859111 F. 01457 850715
E. info@blygolduk.com W. Blygolduk.co.uk



ACR REGIONAL EXHIBITION

LEEDS

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