

RAC Cooling Industry Awards winners honoured

AWARDS

You can now read a detailed breakdown of the winners and shortlisted entries for the 2023 RAC Cooling Industry Awards online.

A digital brochure is now available that highlights all the entries honoured at the Cooling Awards ceremony held at London's Grosvenor House Ballroom on 21 September. Hundreds of people from across the sector attended the ceremony, which was hosted by comedian Ivo Graham as part of a celebration of industry achievements over the past 12 months.

A total of 16 categories were contested for this year's awards.

RAC Magazine editor Neil Merrett opened this year's awards by highlighting the importance of the Cooling Industry Awards' expert judging panel to determine the winners.

Every shortlisted contestant takes part in face-to-face judging that lets them share in their own words what makes a particular entry stand out in the wider push to create a



safe, successful and sustainable industry.

In terms of the technical innovations recognised by our judges this year, Mitsubishi Electric took home the prize for Air Conditioning Innovation of the Year for its Ecodan CAHV-R450YA-HPB commercial air source heat pump technology. Judges praised the solution as a welcome technical upgrade of the company's systems that had a wide range of applications.

The Air Conditioning Product of

the Year for component or peripheral innovation was claimed by Panasonic for its Air-e in-ceiling Nanoe Fan Unit, while Toshiba was winner of the system or standalone category of the same prize for its SHRM Advance heat recovery system.

Other categories at the awards are designed to honour projects the judges decided highlighted an effective demonstration of good practice in the HVACR sector.

Energy Recovery and Epta were honoured with the Refrigeration

Innovation of the Year prize for their work on implementing a new approach to further scale up the efficiency of CO₂ refrigeration.

Ziehl Abegg UK won the refrigeration Product of the Year Award for component or peripheral for its ZAplus fan system that was recognised for its innovative 'biomimetic' design features.

The other focus of the Cooling Industry Awards is to recognise the contributions of leading individuals working across the sector to ensure best practice is being upheld.

This year's winner of the Fred Jamieson Award for Industry Achievement, named in honour of the founder of Ryan Jayberg, was Colin Coe.

Also honoured during the evening was Luke Chidwick-Lennon of ARH Air Conditioning. He took home the top prize at the 2023 RAC and IOR National Student of the Year prize.

You can read about this year's winners via the digital brochure at shorturl.at/bckvE

REFRIGERATION INNOVATION OF THE YEAR

WINNER: Energy Recovery and Epta – PX G1300

In developing its PX G1300 (PX G) system, Energy Recovery took a decades-old technology that revolutionised the desalination industry and saw opportunity in translating that technology into CO₂ refrigeration.

The innovation is built on a simple engineering premise: recycle energy in high-pressure fluid-flow systems. The PX G acts like a fluid piston, efficiently transferring energy between high-pressure and low-pressure liquid or gas through continuously rotating ducts. In this way, it simultaneously captures transcritical CO₂ gas from the gas cooler and medium-pressure flash gas from the liquid receiver.

Energy Recovery estimates that for every 1,000 supermarkets in Europe, deploying the PX G reduces CO₂ emissions by around 9,600 tonnes annually.

"A very innovative product with great results, very simple to install, with clever technology that delivers energy savings," said the judges.

HIGHLY COMMENDED

Organic Heat Exchangers – Flexible Intelligent Cold Thermal Energy Storage

Organic Heat Exchangers has built and demonstrated an AI-optimised cold thermal energy storage system, Energivault, which allows the decoupling of electrical power demand from a cooling requirement. "Very innovative use of phase-change material, achieving very efficient energy storage solution," said the judges.

FINALISTS

Ziehl Abegg UK – Zaplus

Ziehl Abegg's ZApplus fan system boasts a new blade design and a high-performance fan housing to increase efficiency and reduce noise. The judges summarised the development as "good use of clever engineering with nature in the loop to produce an energy-efficient product."

WAVE – Integrated Heat Reclaim Feasibility: A Principled Approach

Last year's winner in this category, Wave has further developed its software to include two prominent integrated heat reclaim systems in a retail environment for direct comparison. The judges noted the "small improvement from last year" and the "very clever implementation for theoretical system design. A step in the right direction".

20 | The Cooling Industry Awards 2023

Carrier – AquaForce Vision 30KAV air-cooled variable speed chiller

Carrier's AquaForce Vision 30KAV air-cooled variable-speed screw chillers are designed to minimise energy consumption, offer refrigerant with an ultra-low environmental impact, and maximise performance. The judges praised the "very clever use of control software during failure mode".

SK Refrigeration – Opteon A2L refrigeration project

This project proves the concept of using low-flammable and non-toxic A2L very low GWP refrigerants at scale, meeting all safety requirements as designated by regulation while reducing emissions, both direct and indirect, through improved energy efficiency. "Impressive installation with a lot of thought in the specification and use of an A2L refrigerant," said the judges.

Epta UK – XTE Extra Transcritical Efficiency

Epta has adopted Energy Recovery's pressure exchanger into its XTE system. "A very innovative product with great results, very simple to install, with clever technology that delivers energy savings," said the judges.

Koura – Klea 456A refrigerant

Koura's Klea 456A refrigerant is a drop-in replacement for traditional R134A in old vehicles and has only 50 per cent of the old refrigerant's global warming potential. The judges appreciated the product's "innovation in its specific industry," and its potential to overcome the problem of replacing old refrigerants with a drop in, thus prolonging the vehicle life.

EJM Engineered Systems/Climalife – Single Circuit Cold Store

This entry concerned the use of a very low-GWP refrigerant in a 15,000m³ cold store. EJM Engineering Systems collaborated with Climalife to deliver the largest single-circuit cold-store installation in the UK using very low-GWP A2L refrigerant. The judges described the project as an "impressive installation with a lot of thought in the specification and use of an A2L refrigerant".

Area Cooling Solutions – iCOOL 30 CO2MT

The iCOOL 30 CO₂ MT is the newest transcritical CO₂ unit based on tandem Panasonic two-stage BLDC inverter compressors and is the biggest compact CO₂ unit. "First to market with a 30kW CO₂ system, with good control system and PLC," remarked the judges.