Building Services Engineering

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TM66 Assured certification mark

Bob Bohannon

Engineers must rethink

Franziska Mohr

ALL IS NOT YET LOST...

... but we need neighbourhood approach

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Jozefien Vanbecelaere

Commissioning matters more than ever

Tony Anderson

MITSUBISHI ELECTRIC
Changes for the Better

Lossnay

New LGH-RVX3-E means perfect indoor air quality

The new Lossnay LGH-RVX3-E range of indoor air quality solutions retains key features of the previous range but now incorporates a host of advanced new ones in response to market demand and installer requests.

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Contents

EDITORIAL

Towards NetZero Ireland

Submissions are now being accepted for the 2023 *Towards NetZero Ireland Awards*. Entry is open to all construction disciplines but this is an ideal opportunity for those in the building services engineering sector to demonstrate how they are taking the lead role in the net zero endeavour.

Towards is the critical word in the title of the awards ... they are intended to acknowledge effort and intent in striving to achieve net zero projects, understanding that net zero perfection is still something of a holy grail.

A distinguished and experienced panel of judges will assess all entries submitted via the online process, and shortlisted finalists will then be invited to attend the awards' presentation ceremony in the RDS Concert Hall on Friday, 10 November 2023.

To enter see www.netzeroawards.ie

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Sean Kelly, MEP, says simply scaling up renewable energy resources alone will not be sufficient to meet our climate goals. He calls for a neighbourhood approach that takes account of local mobility, social infrastructures, and water and wastewater management.

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HEAT PUMP SECTOR NEEDS CLARITY

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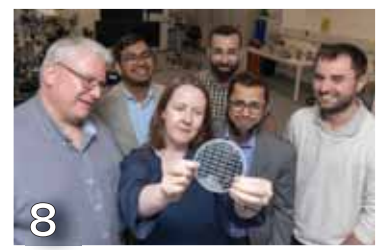
Challenges must be overcome

Heat pumps are undoubtedly key to Ireland's net zero ambitions but challenges such as distorted pricing systems, skills shortages, "interoperability" and other negative market influences must be overcome to realise that potential. Jozefien Vanbecelaere, Head of EU affairs, EPHA, gives a comprehensive marketplace analysis.



BUILT ENVIRONMENT AS SOLUTION

Engineers must completely rethink

Engineers must completely rethink the technical profile of physical structures, to not only withstand increasingly-common climate events, but to also minimise their ecological impact. Furthermore, we now need a built environment that itself is part of the solution.

NEWS AND PRODUCTS

Grant sponsors rising golf star McKibbin

Tom McKibbin, the young Northern Irish professional golfer who is currently making a name for himself on the European Tour, is sponsored by Grant Engineering. Tom grew up playing golf at Holywood Golf Club, the same home club as Rory McIlroy, and cannot escape the inevitable comparisons.

Nonetheless, he is very much unfazed by this and is busy forging his own way in the game. He turned professional in 2021 at the age of 18 and has already enjoyed success, winning the Porsche European Open in Germany in June.

Moody appointed Branch President

Ciaran Moody has been appointed Branch President, Mitsubishi Electric Ireland. Ciaran joined the company in 1989 and has served the organisation in a variety of roles. After spending a number of years in the Factory Automation Division, he became General Manager for the Irish office in 2014, covering both the Living Environmental Systems (LES) and Factory Automation (FA) divisions.

This appointment recognises the role Ciaran has played in driving business growth in the region, helping to boost market share and sales as a result. Key to the growth has been the demand for products and solutions that fit well with Ireland's Climate Action Plan 2021.

The appointment of a dedicated Branch President also attests to the outstanding performance of the Irish branch as a whole, which continuously enhances both its capabilities and offering.

In effect, the Irish Branch is expected to continue on the current existing growth path, and will again double its size over the next five years.

Harty new EI President

Dr Edmond Harty has been inaugurated as the 131st President of Engineers Ireland. In addition to a number of non-executive roles, he is also the founder of Innovalogix, an investment and consultancy firm focusing on strategy, product development, engineering and customer success.

Previously, Dr Harty was the CEO and largest shareholder of Dairymaster, a world-leading dairy innovation and technology company that he built and led successfully over a 22-year period.

HAS indoor air quality guide

Following consultation on the draft publication, including a contribution by CIBSE Ireland, the Health and Safety Authority (HAS) has now published its *Code of Practice for Indoor Air Quality*.

This amended code of practice came into operation in May and provides a practical risk-assessment approach to help make a reasonable determination of IAQ in the workplace. Included are parameters for everything from carbon dioxide through to air changes per hour, temperature, humidity, ventilation rates and other contaminants. See www.hsa.ie

New energy efficiency grant to boost sales

The Energy Efficiency Grant is a new support for small business that will enable them invest in technologies and equipment to make their operations more energy efficient.

The grant will cover up to 50% of the costs to a maximum amount of €5,000 and is the natural next step for companies that have already identified their needs around energy reduction.

It is yet another support from Local Enterprise Offices (LEO) for small businesses that enables them to increase their competitiveness and productivity. Small businesses can also avail of the Lean for Micro, Digital Start and Green for Micro programmes through their LEO.

See www.localenterprise.ie/energy

Left: Simon Coveney, TD, Minister for Enterprise, Trade and Employment.

NEWS AND PRODUCTS

McGuane new SCSI President

Enda McGuane, who is Asset Management Lead for the Land Development Agency, has been elected President of the Society of Chartered Surveyors Ireland (SCSI).

A former officer in the Defence Forces where he was deployed to Lebanon and East Timor, Mr McGuane was first introduced to surveying as part of an artillery training course. He has worked in a variety of property-related roles in the public and private sectors, and spent the last 10 years running a wide-ranging property management business in Galway.

He was formerly Chair of the SCSI West/ Northwest Regional Committee.

Left: Shirley Coulter, CEO, Society of Chartered Surveyors Ireland with Enda McGuane, the Society's newly-elected President.

TM66 lighting design 'bible'

The most recent Lighting Association Ireland (LAI) meeting saw a capacity turnout for a dedicated seminar on TM66, the CIBSE lighting guide, and the impact of Brexit, on the lighting sector.

Principal speaker was Bob Bohannon, Head of Policy & Sustainability at LAI, while his colleague and new LAI CEO, Ayça Donaghy, also made a presentation.

TM66 covers lighting project specification in relation to circularity and sustainability and it is vital for lighting designers and indeed installers to understand this document as it is fast becoming the "specifiers bible" when it comes to lighting design.

Apart from the presentations and Q&As, what made the event especially informative was the level of discussion that took place during the open forum session. This was enhanced still further because of the presence and contribution of two special guests – Elizabeth O'Reilly, Head of Environmental Compliance & Membership at WEEE Ireland, and Circular Economy and R&D lead, focusing on Extended Producer Responsibility (EPR) solutions on behalf of Irish electrical industry members; and Eamonn Sheils, SEAI Programme Manager, Commercial Retrofit (including lighting), and a chartered engineer with over 20 years' experience in the building services engineering sector.

Bob Bohannon addressing the recent LAI meeting in the RDS Member's Club.

Copies of the TM66 guide can be obtained at www.cibse.org

Ideal appointment

Richard Louth has been appointed Commercial Specification Manager at Ideal Energy Distributors. He brings 35 years' experience in the sector to the young, energetic Ideal Energy team who have already established the company as one of the foremost heating suppliers in the market.

His focus is to establish the company's primary brands – that also include commercial and domestic heat pumps and cylinders – with industry consultants and mechanical contractors. Ideal Energy can also supply a range of electric products for this sector, including smart radiators, heat pump/cylinders and mechanical ventilation.

Design and technical support and in-house installer training is also available across the entire portfolio.

Contact: Richard Louth, Commercial Specification Manager, Ideal Energy. Tel: 01 – 961 7700; M: 087 401 5698; E: richard.louth@idealenergy.ie

Jacobs STEM-focused initiative

Jacobs has introduced a new initiative to support people in Ireland to return to work after a career break.

Working with STEM Returners, a privately-owned company based in Hampshire which focuses on careers in the fields of science, technology, engineering and mathematics, Jacobs is offering fully-paid, 12-week placements that enable candidates to refresh their skills and restart their careers.

There are vacancies at Jacobs' Cork and Dublin offices with hybrid working also available.

Pictured is Natalie Desty, STEM Returners founder.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NEWS AND PRODUCTS

GCP Europe and EuropeOn assembly success

The recent GCP Europe and EuropeOn joint assembly in the Grand Hotel, Malahide, Co Dublin, proved an enormous success with the delegates enjoying a mixed programme of technical presentations and workshops, combined with an exciting social itinerary.

EuropeOn is the voice of the European electrical contracting industry, while GCP Europe represents the building services engineering sector, mechanical contractors, plumbers and HVAC installers.

Eamon McGrattan, President, GCP Europe, acted as the primary host. Not surprisingly, he took many of the delegates to Lambay Island on the *Naomi Leigh*, his "Fish & Trips" charter vessel. In addition to a tour of the island that included the castle ruins, the family mausoleum and the bothy coastguard cottages, they also enjoyed a guided nature walk.

GCP Europe and EuropeOn delegates pictured in Dublin for their joint assembly at the Grand Hotel, Malahide, Co Dublin.

NSAI Retrofit Collection

NSAI has compiled a new collection of standard recommendations to guide the efforts of professionals in the sector to deliver high-quality, sustainable and efficient building upgrades

The collection includes clear guidelines around heat pump systems, solar photovoltaic micro-generators, conventional heating systems and solar thermal systems. Among them are:

- SR 50-1 – Building services – Code of practice – Part 1: Water-based heating systems in dwellings;
- SR 50-2 – Building services – Code of practice – Part 2: Thermal solar systems;
- SR 50-4 – Building services – Code of practice – Part 4: Heat pump systems in dwellings;
- SR 55 – Solar photovoltaic micro-generators for dwellings – Design, installation, commissioning, and maintenance.

The Retrofit Collection is now available from NSAI's webstore at the price of €100. See www.standards.ie

AHU evaporative cooling

"Using humidifiers for evaporative cooling in AHUs" is a new CIBSE-approved CPD seminar on offer from Condair. The 45-minute presentation includes training on the psychrometrics of evaporative cooling, a review of the three main AHU strategies (direct, indirect and exhaust-air indirect), analysis of three real-life case studies that employed these cooling strategies, and a comparison of the latest adiabatic humidifiers.

Damien Power, Area Sales Manager Ireland, says: "A single adiabatic humidifier can provide up to 680kW of evaporative cooling to an AHU from as little as 0.3kW of consumed electrical energy. The potential to deliver low energy cooling to an air handling unit is great and we often see this application being employed in modern AHU designs.

"This CPD is an invaluable opportunity for consultants and building designers to explore how humidifiers can be used in AHUs to take advantage of this low energy cooling method. The case studies detailed in the session provide a clear understanding, beyond the theory and physics, of the actual energy savings that can be enjoyed."

The seminar was developed specifically for mechanical engineers and consultants, and all participants receive CIBSE points towards their continuous professional development (CPD) record. The presentation can be given in-house at a recipient's office or online via a webinar platform. Bookings can be requested at www.condair.ie/CPD.

Smart Buildings Show 2023

Smart Buildings Show 2023 will take place on 18/19 October 2023 at ExCeL in London. As well as an exhibition showcasing the latest innovative products and solutions, the event will also include a conference programme featuring industry leaders delivering thought-provoking content.

Over the two-day event visitors can take in presentations from more than 50 speakers covering a diverse range of industry topics – from sustainability and ESG through to smart building networks and infrastructure. Register at https://smartbuildingsshow.com

NEWS AND PRODUCTS

TU Dublin further expansion

Paschal Donohoe, TD, Minister for Public Expenditure, NDP Delivery and Reform, recently unveiled two major buildings costing €220m at TU Dublin – the East Quad and Central Quad on the university's campus in Grangegorman.

Welcoming attendees to the unveiling, Professor David FitzPatrick, said: "Today's official opening represents a significant landmark in our ambition to deliver a world-leading university campus in the heart of Dublin City. Today, we celebrate the wonderful progress that we have made, yet we are less than halfway through the construction planned for this transformative investment for the university."

The East Quad, which currently accommodates almost 4,000 students, is the Cultural Hub of the Grangegorman campus. Meanwhile, the Central Quad caters for approximately 6,000 students studying at the science, health, culinary arts, tourism, hospitality, computer science and engineering faculties. This facility lies at the heart of the Grangegorman campus.

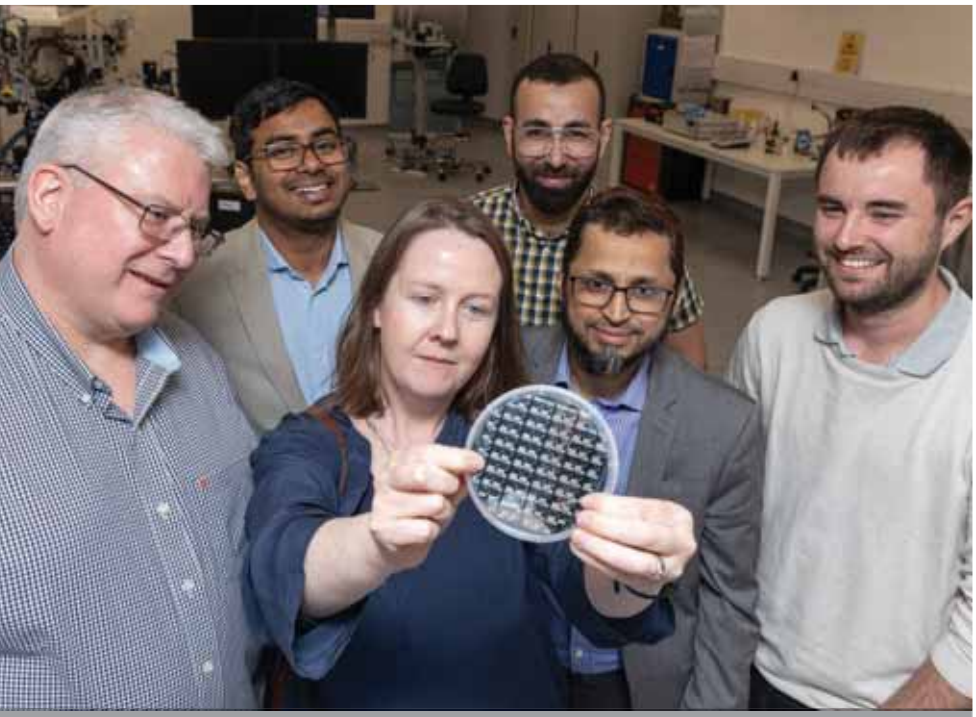
Professor David FitzPatrick, President, TU Dublin with the Minister for Public Expenditure, NDP Delivery and Reform, Paschal Donohoe, TD.

PM Group acquires Milestone

PM Group has acquired Milestone Solutions, the automation and digital systems firm. It specialises in implementing digital technologies to manage and optimise complex manufacturing systems for operational efficiency and regulatory compliance. It is particularly strong in the pharma, life sciences and FMCG sectors.

Milestone recorded revenues of €18.5m in 2022 and forecasts revenues of circa €25m this year. The company currently has a team of 160 people and has live projects in Ireland, the USA, Belgium and Germany.

PM Group and Milestone have a number of common clients including MSD, Lilly, Pfizer and Alexion. They have previously partnered to deliver projects where complex automation or smart manufacturing was required.



Cutting-edge energy research at the IERC

The International Energy Research Centre (IERC) at Tyndall National Institute, based at University College Cork, has secured funding from the SEAI National Energy Research Development and Demonstration (RD&D) Funding Programme to develop a network-aware Community Energy and Flexibility Trading (CEFT) framework powered by artificial intelligence to enable forecasting of local energy market movements and improve decision-making.

The IERC has also secured funding from the same programme to research new technologies to reduce the cost of high-powered EV chargers that can charge electric vehicles (EVs) quicker, more efficiently and more effectively.

Energy community-based local electricity market

IERC's research has found that there is a lack of clarity in terms of market validation, policies, regulations and standards for defining energy communities in Ireland. These communities are groups of people (energy end-users) who come together to improve how energy is used for the benefit of their community, and are focused on using energy in a sustainable, holistic way.

The "Intelligent Grid" research team in IERC is collaborating with Professor Michael Conlon from Technological University Dublin (TU Dublin) to develop the "Concurrent Energy and Flexibility Trading Model in a Grid-aware Local Energy Community" or EnerFlex, which will accelerate the development of the energy community-based local electricity markets and facilitate their integration with the wholesale electricity market.

EnerFlex will also develop innovative business models for multi-actors, identify the barriers, and make recommendations for industry stakeholders, policymakers and public bodies for further deployment of the solutions.

Low-cost, high-efficient charging solutions

Wide-bandgap (WBG) materials, such as silicon carbide (SiC), have opened up previously-unimagined possibilities for the implementation of high-efficiency power conversion systems. However, the adoption of these devices has been slow due to very high device production costs compared to silicon.

Left: The research team at IERC with the SiC wafer that the project will be working on. From left (back row): Sandipan Patra and Mohamed Bahloul, both of IERC; Front row: Alan Blake, Tyndall Institute, with Joanne Fitzgerald, SEAI, and Shafi Khadem and Javier CardoMiota, both of IERC.

However, WBG devices are essential to meet the rising need for high power density and high-efficiency power electronics converters in medium and high-voltage applications. For example, the new generation of SiC devices has accelerated the widespread adoption of electric vehicles (EVs), which will need significant reductions in charging times in the future.

The Tyndall SPS device research team will develop a world-leading device fabrication technology which has the potential to greatly reduce production costs and also offer a route for increased device integration which is not possible with existing SiC technologies. The "Intelligent Grid" team in IERC will be carrying out complementary research leveraging from the device fabrication work to develop new circuit designs and reduced system form factors within the "FET-EV: 3C-SiC FET Revolution For Highly Efficient and Extreme Fast EV Charging Solutions" project.

Professor Brian Norton, Head of Energy Research in Tyndall, congratulated the collaborating teams within IERC, Tyndall and TU Dublin for driving these timely, needed, innovative projects. Professor Norton said: "The solutions of these projects will surely contribute to the empowerment of energy citizens and communities towards the decarbonisation of energy systems, both electricity and transportation, in Ireland and globally."

Kerrie Sheehan Head of Research and Technology, at SEAI said: "SEAI is dedicated to supporting research and innovation by funding projects such as these led by Tyndall National Institute through our Research, Development and Demonstration Funding Programme. We look forward to how the outcomes of these innovative projects accelerate the energy revolution"

Contact: Dr Shafi Khadem, IERC.
E: shafi.khadem@ierc.ie

COVER STORY

ALL IS NOT YET LOST...

... but we need neighbourhood approach

The path towards achieving climate neutrality by 2050 requires addressing the energy efficiency of Europe's diverse building stock. It is evident that without significant improvements in this sector, our overarching goal will not be reached. The recent energy crisis has exposed Europe's vulnerability to sudden price hikes, and it is clear that gas prices will remain high, even after the crisis subsides, writes *Sean Kelly, MEP and senior member of the EU's Energy Committee.*

This "new normal" approach will disproportionately affect those living in poorly-performing buildings, placing a heavier burden on them compared to those in energy-efficient structures.

As other sectors modernise, households will bear the brunt of the soaring energy prices.

The solution is clear: we must renovate our buildings to consume less energy and rely on cheaper and greener renewable sources. Simply scaling up renewable energy resources alone will not be sufficient to meet our climate goals by 2030 and 2050. We must prioritise increased renovations and structural measures in the building sector. Neglecting the benefits of renovations would only shift the burden of reform to other sectors.

At the core of our efforts lies the Energy Performance of Buildings

Directive (EPBD), the EU's primary legal instrument to address energy use in the built environment. While this is EU legislation, its implementation ultimately rests with local authorities and municipalities in most respects. However, it is crucial to recognie the role of the EPBD in setting minimum performance standards for buildings.

In my view, a neighbourhood approach is essential in our pursuit of energy efficiency. By considering entire neighbourhoods and taking into account local mobility, social infrastructures, and water and wastewater management, we can enhance the effectiveness of renovations.

From the historical perspective, most institutional housing providers own residential units that are geographically clustered, i.e., neighbourhoods. Yet, a neighbourhood is more than the sum of its buildings – public and green spaces, amenities, mobility and public transport, social and commercial services are all included.

Looking at scale rather than just individual building level offers additional ways to reach ecological, climate, energy usage and social goals in the building sector. These ways are not available with a perspective that is limited to single buildings or apartments.

The EPBD should now embrace this neighbourhood approach to strike a balance between individual building approaches, as detailed in the European Parliament's Report, and national trajectories for progressive renovations in the Council's General Approach.

Although a number of versions of the Parliament's position at one point included a neighbourhood approach to minimum standards, derogations of certain portions of the building stock were ultimately chosen. However, the practical benefits of a neighbourhood approach are clear. Through integrated planning and subsidy schemes for technologies such as solar installations, heat pumps and energy storage, we can increase energy savings and demand-side flexibility, while actively involving people in the energy transition.

Adopting a neighbourhood approach to renovations offers numerous advantages, including cost-effectiveness and improved air quality. It also presents the potential for sector coupling encompassing energy, heat, mobility and waste management.

A delegation of MEPs led by Seán Kelly, MEP and a senior member of the EU's Energy Committee (fifth from left) recently visited Denmark to explore sustainable initiatives and technological advancements in the context of the green transition.

If done at scale, there will be reduced costs for maintenance, tenant participation is less fragmented and therefore easier to organise, while the renovations themselves become more cost-efficient. In essence, most advantages would result from reduced proximity and homogeneity of buildings.

Given the variations in clean heating alternatives across the EU, and even within the same municipality, area-specific solutions through a neighbourhood approach would prove more efficient, both technically and economically.

Although neighbourhood pilot projects are currently limited, there is significant potential to scale them up across cities, nations and the entire EU. To expedite the heat transition process, we must address key barriers such as labour shortages and citizens' willingness to invest in alternative technologies. Close collaboration between the national government, industry and educational institutions is crucial to developing mechanisms for monitoring the installation times of sustainable alternatives.

Municipalities play a pivotal role in driving the heat transition forward. With their valuable local knowledge of building stock, heating sources, stakeholders and residents, they can better anticipate local skill needs, facilitate job-skill matching, and support small- and medium-sized enterprises in streamlining their workforce. Moreover, municipalities are well positioned to consider the social aspect of the transition in their energy strategies.

By developing locally-tailored solutions and outlining alternatives to fossil fuels on a neighbourhood-by-neighbourhood basis, they can actively engage residents and promote behavioural change. Neighbourhood-level communication has already proven effective in leveraging social influence and sharing success stories related to district heating, heat pumps and insulation, thereby maximising the impact of these measures.

In my view, EU member states should be required to set up a minimum number of pilot neighbourhood projects. Ideally, this would be in every city, but municipality administrative capacity should be factored in. This will help create a positive narrative that could spread through the population, raising awareness and knowledge of environmental problems, as well as the benefits of increased energy performance. If implemented properly, this would increase demand for renovations and complement supply-sided instruments.

Embracing a neighbourhood approach to building renovations is not only a practical and economic means for achieving climate goals, but also for creating a sustainable future.

Company continues to evolve and grow

PM Group celebrates 50 years in business

PM Group recently marked 50 years in business with a celebratory event held in the Gravity Bar at the Guinness Storehouse in Dublin. It was one of many events being held across the Group's worldwide company network and was attended by clients, friends and trade partners.

Established in 1973 by Brian Kearney and Jim Walsh, PM Group's story began in a small office in Dublin. Over five decades, the company has grown to over 3,500 people in 12 countries worldwide. Its reputation has been built on the provision of high-quality professional services in engineering, architecture, project management, construction management and technical consultancy. Today, PM Group is a recognised world leader in the life sciences, food, mission-critical and advanced manufacturing industry sectors.

Paying special tribute at the Gravity Bar event, guest speaker, Leo Clancy, CEO, Enterprise Ireland, said: "I would like to congratulate PM Group on their 50th anniversary. This is a significant milestone by an Irish company that has gone from strength-to-strength, establishing a strong presence in international markets and all the while creating and sustaining high-quality jobs in Ireland. I wish Dave, Anthony and all the team the very best for the future and Enterprise Ireland looks forward to continuing to work with the company on their growth trajectory for the next 50 years and beyond."

Dave Murphy, CEO, PM Group, told the guests on the evening: "There are very few Irish-headquartered companies with a global footprint that stretches from Shanghai to San Francisco, with the track record and reputation that we have with so many of the world's leading companies and with a scale of over 3,500 people. We are very grateful to our clients, as well as the many business and delivery partners who have helped us to deliver for those clients over the past 50 years. Most of all, I want to thank all the great PM Group people, past and present, who have helped us to reach this significant milestone."

Concluding, and looking to the future, Derek Mowlds, Ireland & Western Europe Operations Director, said: "We have been very fortunate to work with so many of the world's leading companies and brands and this has kept us to the forefront in technology, innovation and performance throughout the last 50 years. We are proud to be an employee-owned company where our people create and shape our future. Together with our clients, partners and stake-holders, we continue to evolve and grow." ■

Derek Mowlds, Ireland & Western Europe Operations Director, PM Group with Leo Clancy, CEO Enterprise Ireland and Dave Murphy, CEO, PM Group.

How bespoke solutions are powering the heat pump revolution

With the ambitious goal of installing 600,000 heat pumps by 2030, the pressure is on for Ireland to achieve the targets set out in the National Development Plan 2021-2030. It pledges: "over the next decade the vast majority of new homes will be heated by heat pumps or waste heat from district heating as the regulations that apply to new homes will be further tightened, while existing homes will see 400,000 heat pumps replace older, less efficient heating systems." Here, Kevin Devine from Xylem Water Solutions UK & Ireland examines how the targets can be achieved.

Cut-away of Lowara inside.

Xylem is helping to lead the transition to heat pumps with a high-tech and tailored approach that offers its partners everything they need to deliver the most effective heating solutions now and into the future.

Bespoke heating solutions

Two years ago, Xylem invested in an OEM European Centre of Excellence (CoE) at its facility in Axminster in the UK. The focussed team of experts, with decades of experience in understanding customers' specific requirements, are ready to provide bespoke products for Irish and UK customers.

This new generation of customised solutions, based on each customer's requirements, is making Xylem the partner of choice for OEM solutions, whether from its standard product range, or engineered-to-order special set-ups.

The ability to scale

The Centre of Excellence enables full local assembly with a dedicated team of engineers who can work on prototypes and, when approved, full production models, allowing partners to scale to meet the growing demand for heat pumps and modernised underfloor heating systems.

Xylem customers can make significant efficiency gains and cost savings by out-sourcing their processes to Xylem's OEM facility, be that from a standard product range, or engineered-to-order specific solutions. Xylem can now turn around and ship within one to two days what used to take seven to 14 days in a factory, or at clients' own facilities. Distributors and other customers can equally benefit tremendously from working with Xylem as a one-stop-shop for their packaged solutions.

High-tech lowers energy usage

Xylem's Lowara Hydrovar intelligent variable speed pump controller, named Best Energy Efficient Product at the SEAI Energy Show, controls the speed of a motor to match performance to demand. By adjusting performance in this way, it ensures pump systems only use the energy that is necessary, saving up to 80% at partial loads alone.

Getting smart about water circulators

New smart circulators, like the ecocirc, offer best-in-class energy efficiency (EEI level ≤ 0.18) and are ideal for underfloor heating systems. Due to its electronic motor with intelligent speed control, the ecocirc+ is capable of automatically analysing and adapting to the optimal settings for its environment to reduce power consumption by up to 80%.

For industrial needs, the Ecocirc XL and XLplus can adopt different operating modes according to the situation, yet they have been designed with simplicity and efficiency in mind, and so are deliberately easy to install and start up.

Retrofitting need not cost the earth

Heat pump deployment is set to play a major role in Ireland's transition to Net Zero carbon and, as we look ahead to a new era of heating, it's more important than ever that the accompanying pumps, circulators and heat exchangers exceed efficiency requirements and can be easily retrofitted to offer a plug-and-play solution.

Xylem's assets' ability to self-optimise to ensure the lowest energy consumption, as well as to be tailored to meet the precise requirements of all thermal applications, is setting the bar high. Where needs are more complex, Xylem's dedicated OEM Centre of Excellence team can give the flexibility to quickly customise its readily available solutions to meet the emerging needs of the market and help Ireland meet its targets.

For more information on Xylem water technology solutions across the lifecycle of use, visit www.xylem.com/uk ■

CIBSE Ireland Committee 2023/2024

CIBSE promotes the career of building services engineers by accrediting courses of study in higher education. It also approves work-based training programmes and provides routes to full professional registration and membership, including Chartered Engineer, Incorporated Engineer and Engineering Technician. Once you are qualified, CIBSE offers you a range of services, all focused on maintaining and enhancing professional excellence throughout your career. CIBSE members in Ireland are represented by an active Regional Committee, which is involved in organising CPD events, technical evenings, training courses, social events, awards, etc.

- Visit the website www.cibseireland.org
- Join the committee
- Join ther LinkedIn Group ... CIBSE Ireland
- Contact: CIBSEIrelandContact@gmail.com

Minimum insulation thickness change

Update introduced for BS 5422 insulation standard

At the end of June, an update was introduced to BS 5422. This standard sets out minimum and indicative insulation thicknesses for a range of building services including pipes, ductwork, tanks, vessels and other equipment operating between –40°C to +700°C. While BS 5422: 2023 is a British Standard, it is commonly used for specifications in Ireland, so it is important to ensure the insulation being fitted matches its requirements, *writes John O'Gorman, National Sales and Specification Manager, Kingspan Technical Insulation Ireland.*

As explained on page 64 in the Sept/Oct 2022 issue of *Building Services Engineering*, BS 5422 provides a range of tables setting out the minimum or indicative thickness of insulation needed for different systems and scenarios. The thickness will vary depending on the thermal conductivity or lambda (λ) of the insulation material. Insulation materials with lower lambda values, such as phenolic pipe insulation, are more effective at preventing heat transfer. This means it may be possible to fit a slimmer thickness of insulation without compromising on thermal performance.

Key changes in 2023

BS 5422: 2023 introduces several key changes which specifiers and installers need to be aware of. They include:

- The pipe insulation tables have been greatly simplified. There are no longer separate tables for steel and copper pipework and all pipe sizes are indicated as "less than or equal to". In addition, many of the rarely-used thermal conductivities have been removed. This should make it easier to identify the correct system and insulation thickness;
- New tables have been added, one of which covers requirements for secondary systems as part of heat networks. These should be read together with the guidance in *CIBSE CP1 – Heat Network Code of Practice*. They are also applicable to non-residential schemes, unlike CP1;
- A number of tables with enhanced insulation thicknesses are also provided. This can support efforts to reach net zero operational emissions, or to reach a desired level in voluntary standards such as BREEAM. Use of pipe insulation materials with lower thermal conductivities, such as phenolic insulation, can result in more notable thickness savings when reaching these enhanced values;
- In addition, references regarding reaction to fire performance now solely use the Euroclass system and single-wall plastic pipework is now considered to have no insulative value of its own.

Further update due

It is important to note that the updated standard has been released based on the 2008 edition of the BS EN ISO 12241 calculation standard. This has now been superseded by a 2022 edition. It is therefore expected that the tables will be recalculated once a calculation tool is available (anticipated this autumn). The updated standard has a significant impact on calculating thicknesses for condensation control and will lead to some widespread thickness changes when incorporated.

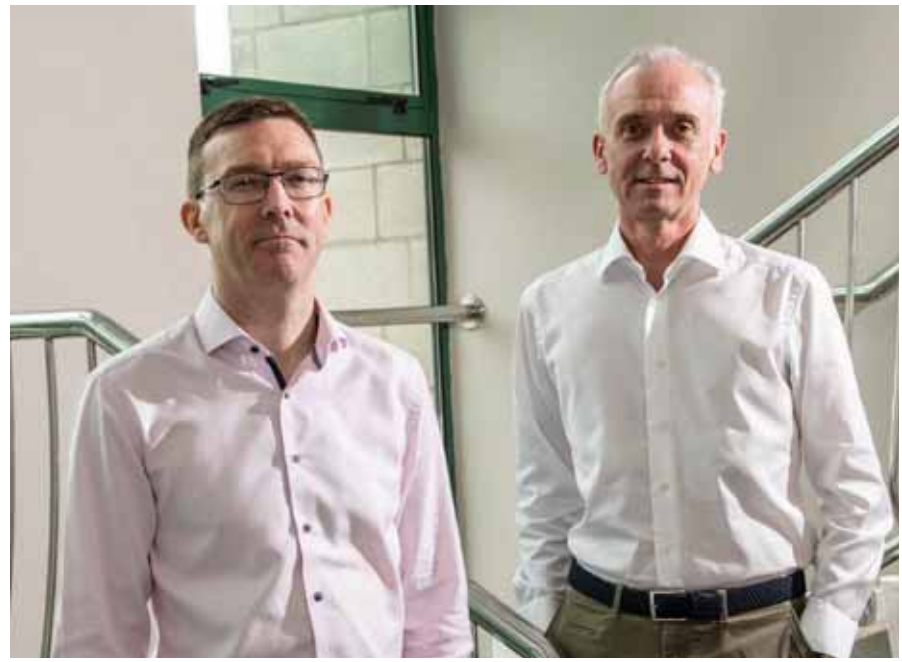
In many cases building services insulation manufacturers should be able to provide tables with recommended thicknesses for their products to meet BS 5422: 2023. When requesting or receiving these, it is important to check they are using the 2023 version of the document to ensure all specifications are fully compliant.

Contacct: Kingspan Insulation.
T: 042 975 4219 E: hvactechnical@kingspaninsulation.co.uk
www.kingspantechnicalinsulation.ie ■

Left: Kingspan Kooltherm pipe insulation features a phenolic insulation core with thermal conductivities as low as 0.025 W/mK – making it possible to meet the minimum and enhanced values in BS 5422:2023 with slim thicknesses of pipe insulation.

Hevac restructure now delivering more customer-focused service

As it approaches its 50th year in business (2024), Hevac is still very much the pioneering industry force with a portfolio of innovative, market-leading brands offering cutting-edge technology.



Garrett White, Managing Director, Hevac with Colm McLoughlin, Managing Director, Tube Company of Ireland (Tubeco).

Throughout that time it has evolved into a group of companies, each one established at a particular point in time to reflect and serve specific niche market segments as they emerged.

However, what were once niche products are now mainstream. Moreover, innovation and developments in technology mean that individual products are now more integrated, the emphasis being on holistic system solutions. So, to better reflect the strength of the solutions Hevac now offers, and to facilitate the delivery of a more focused and cohesive service to its large customer base, the business has been re-structured.

Where there were previously five individual companies – Hevac, Origen, Polytherm, Tubeco and Aluminox – there are now two – Hevac and Tube Company of Ireland (Tubeco).

Polytherm and Origen have been amalgamated into a new business unit within Hevac, and this will focus on the high-rise, high-density residential market with a particular emphasis on residential HVAC system solutions for apartment developments.

It will also be heavily involved in the design, regulation compliance and specification of residential heat pumps, MVHR, underfloor heating and district heating systems. In addition, some of the product sets will be reorganised into specific areas of expertise that will now deliver a more streamlined and improved customer service. These changes mark a move from a product portfolio divided and managed on a company basis, to a customer-focused model under the one strong brand of Hevac and incorporating three business units – Commercial & Industrial; High-density Residential; and Building Services.

Similarly, to better service its customer base and achieve wider market penetration, Aluminox has been integrated into Tube Company of Ireland as a new stainless steel business unit giving a clearer identity of the product set and making it easier to serve the stainless steel needs of the building services customer base.

"These changes will help us be more customer focused by creating a clear branding and communication strategy," says Garrett White, Managing Director, Hevac, "and in turn help us improve our ability to access more growth opportunities for both ourselves and our extensive customer base." ■

From left to right: Dave Grenville, Building Services Unit Manager; Mick McGivern. Tubeco Stainless Manager; Kiara Kenneally, High Density Residential Unit Manager; Donal Stafford, High Density Residential Unit Director; Diarmuid Smyth, Tubeco Office Manager; Karl Carrick, Commercial and Industrial Unit Director.

efca
European Engineering Consultancies

Franziska Mohr, Policy and Communication Adviser, European Federation of Engineering Consultancy Association (EFCA).

Reshaping the future

Engineering consultants deliver climate resilience and sustainable solutions

The single most urgent issue of our time is the climate emergency. We all need heroes to protect us from the consequences of our overheating planet. Never keen to take the limelight, consulting engineers are nevertheless stepping up as the quiet champions, playing a vital role by designing in resilience to physical structures. Their work goes beyond serving their clients, to serving wider society as a whole, as the impact will benefit all of us as we go about our daily lives, in our homes, workplaces, schools and on our journeys to these places. *Here Franziska Mohr, Policy and Communication Adviser, European Federation of Engineering Consultancy Association (EFCA),* details how the Federation is addressing these issues.

The science of construction

Engineers must completely rethink the technical profile of physical structures, to not only withstand increasingly-common climate events, but to also minimise their ecological impact. Furthermore, we now need a built environment that itself is part of the solution. As experts in using science to combat the threats posed by aging infrastructure, consulting engineers have the knowledge and expertise to adapt to climate change and reinforce resilience.

Acknowledging the significance of this issue, EFCA's recent international conference in Rome firmly put the spotlight on climate change and resilience. In the daily operation of EFCA, the European Green Deal Committee, under its new leadership, has established its priorities for the upcoming year, aimed at driving positive change in the industry.

Delivering climate resilience

EFCA's international conference featured three panels exploring in more detail the central theme of *Delivering Climate Resilience: How the European Green Deal, Digitalisation, and Harmonised Standards Present Opportunities for Engineering Consultancies.* These panels showcased the expertise of distinguished speakers from diverse backgrounds, including representatives from the European Commission, the engineering community, academia and various other stakeholders. Their combined insight provided a comprehensive and thought-provoking perspective, fostering engaging and enlightening discussions.

During the conference, the red thread was the inseparability of the digital and green transitions and the fact that both are crucial for progress. The digital transition empowers the sector to expand its carbon handprint by implementing technical design solutions for a carbon-neutral built environment, while also assisting citizens in reducing their own carbon footprint during usage.

Søren Adamsen, Chair, EFCA European Green Deal Committee.

Consulting engineers play a pivotal role in designing for circularity, incorporating the use of secondary materials with end-of-life in mind and a specific focus on deconstruction rather than demolition. However, to enable the twin green and digital transition, the establishment of an enabling framework with harmonised standards is essential.

EFCA European Green Deal Committee

With one of the heaviest agendas among the EFCA committees, the European Green Deal Committee has recently updated its programme, under the leadership of the Chair, Søren Adamsen, Executive Business Development Director at COWI (Denmark), and Vice-Chair, Andreas Gyllenhammer, CSO of Sweco (Sweden). By advocating for sustainable practices, fostering innovation, and collaborating with relevant stakeholders, the committee aims to drive meaningful change and create a built environment that aligns with Europe's sustainability goals. In particular, the committee will mainly focus its work on three key issues over the next year: EU taxonomy, embodied carbon, and EU energy independence.

Taxonomy provides a classification system that directs finance towards environmentally-sustainable projects. As the sector faces increasing complexity in assessment and certification, driven by requirements such as the upgraded Energy Performance in Buildings Directive (EPBD) and the circularity demands of the Sustainable Products Initiative, the expertise of scientific minds becomes indispensable. Addressing these challenges will require scientific knowledge and expertise to navigate the evolving landscape and ensure compliance with rigorous standards.

The EFCA European Green Deal Committee brings these experts together, to work on relevant, emerging EU policy and regulation, and to drive sustainable progress within the sector. One recent task was the European Commission's public consultation on the EU Taxonomy Delegated Acts, which closed in May 2023. In its feedback on the use of concrete in civil engineering, EFCA stressed the importance of prioritising material options that lead to the lowest CO2 emissions. The federation specifically highlighted that, while recycled materials are often seen as environmentally-friendly, their climate-friendliness may vary depending on the distance they need to be transported.

In the latest meeting, the committee members exchanged views on the taxonomy's impact on the consulting engineering sector, with representatives from the European Commission and other industry stakeholders. The discussion highlighted the central role of engineers in performing the calculations for taxonomy reporting. Therefore, it is crucial for our members to actively engage in these discussions and ensure that the taxonomy is well-suited for our profession.

EFCA remains fully committed to actively collaborating with policymakers and industry stakeholders to ensure that the implementation of the taxonomy acknowledges the unique challenges and requirements of the consulting engineering sector. By actively participating in these dialogues, EFCA strives to contribute to the development of a taxonomy that is equitable, inclusive, and supportive of the industry's transition towards sustainability.

As the construction industry is responsible for a significant portion of global greenhouse gas emissions, addressing embodied carbon is another key priority for the committee. The committee is working on a position-paper focused on embodied carbon. This paper will outline EFCA's stance, recommendations and proposed actions to effectively tackle the issue.

Engineers play a crucial role in reducing the carbon footprint associated with construction and infrastructure projects. By implementing sustainable design practices, optimising material selection and promoting circularity in the built environment, engineers can minimise the embodied carbon of structures. This is essential in combating climate change and achieving Europe's sustainability goals.

The third focus area of the committee is European energy independence. "Europe faces a dual crisis - one of security and energy due to Russia's war in Ukraine, as well as an ongoing climate crisis. In this situation, we must not waste the opportunity and accelerate our progress towards European energy independence based on fossil-free sources. As consulting engineers, we aspire to be ambitious dialogue partners with European institutions to find solutions to this crisis," emphasises Søren Adamsen.

Consulting engineers play a crucial role in achieving energy independence through the development and implementation of sustainable energy technologies. They have the ability to diversify Europe's energy mix, optimise renewable energy systems and incorporate energy storage solutions. Moreover, engineers contribute to enhancing energy efficiency by utilising smart grid systems, efficient designs and promoting decentralised energy production.

By actively collaborating with policy-makers and stakeholders, consulting engineers are at the forefront of driving the transition towards a sustainable and resilient energy future for Europe. EFCA is the federation that represents consulting engineers, recognising their crucial role in driving positive change. By facilitating dialogue and supporting their efforts, EFCA actively promotes collaboration and innovation to accelerate the progress of a sustainable and resilient built environment.

Building a sustainable Europe that benefits its communities and preserves the planet for future generations requires a collective commitment to creating a brighter future. Only by joining forces and working together can we achieve this shared vision, fostering sustainability, resilience and wellbeing for all. ■

Benoit Clocheret, immediate past-President, EFCA, addressing delegates at one of the sessions during the EFCA conference in Rome.

Commitment starts at product development stage

S&P champions EU sustainability goals

Ventilation not only contributes to better health and improved living and working environments, but also to the fulfilment of the EU 2030 energy and climate targets, which include:

- A 40% cut in greenhouse gas emissions compared to 1990 levels;
- At least a 27% share of renewable energy consumption;
- At least 27% energy savings compared. with the business-as-usual scenario.

In addition, properly designed and installed ventilation systems ensure compliance with relevant EU Regulations and standards such as the Ecodesign Directive, the Energy Performance of Buildings Directive and the Renewable Energy Sources Directive.

Set against this background, S&P believes sustainability, regulation compliance and respect for the environment are critical to its business philosophy. This commitment starts right at the product development stage and continues through to production operations and the supply chain. It includes component selection, packaging and logistics procedures, and is incorporated across the entire organisation.

Sustainability, regulation compliance and respect for the environment are critical to S&P's business philosophy.

The objective is to spearhead a future enabled by more intelligent and sustainable buildings, not only through products, but through research on the impact of green buildings on human health and productivity. For instance, heat recovery ventilation systems can avoid significant heat loss in buildings, therefore contributing to the overall energy performance of a building, while also allowing households to save up to 30% of their heating costs.

Tristan Healy, Managing Director, S&P Ventilation Group Ireland.

"Energy savings and product efficiency, both in terms of aerodynamics and acoustics, are the foundations for the design of our products," says Tristan Healy, Managing Director, S&P Ventilation Group Ireland. "In this regard, we use the most advanced aerodynamic simulation software and other technological productivity tools to assist our developments around the world.

"The S&P Ecodesign philosophy forms the basis of concepts such as our demand-controlled ventilation and intelligent control system ranges, as well as products that are specifically designed to recover energy. In addition, our engineers not only strive for efficiency, but also take into account the recyclability of components. This is essential if we are to reduce the environmental impact of our products when they reach the end of their service life.

"At the same time, we are totally focused on our commitment to reducing the environmental impact of our own activities. We develop a safe working environment, promote equal opportunities and ensure effective competence development.

"The relationships we build with our employees, communities and customers are essential to help us deliver our goals. Sustainability is unequivocally associated with doing the right thing, and our cultural pillars of humility, austerity and transparency, based on the respect for our roots, are part of who we are."

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www.solerpalau.ie

Sector continues to expand and evolve

Heat pump goals realisable if barriers are addressed

When *Building Services Engineering* asked the European Heat Pump Association (EHPA) how it saw the sector developing in the context of EU standards, statutory requirements, grant incentives, skills shortages and other challenges, Jozefien Vanbecelaere, Head of EU affairs, EPHA, (pictured) provided us with this marketplace analysis.

The heat pump sector is growing, and fast. The latest figures from the European Heat Pump Association (EHPA) show record-breaking sales in 2022, with a 39% increase on the previous year. The benefits are huge ... the almost 20 million heat pumps now installed in Europe are providing clean heat and cooling to about 16% of Europe's residential and commercial buildings, and avoiding annual carbon emissions roughly equivalent to those of Greece. The sector provides around 162,000 jobs, while €5 billion of investment is planned right across the industry up to 2025.

The strong trend looks set to continue, with EHPA's recently-published sales projections forecasting an additional 43 million heat pumps installed by 2030 in a "business as usual" scenario. However, to achieve the EU's target of 60 million additional heat pumps by 2030, set in its response to the Russian invasion of Ukraine in 2022, a number of barriers should be addressed. The EU is working on a *Heat Pump Action Plan*, to be published by the end of 2023, to overcome these barriers.

How to help heat pump roll-out speed up and meet the targets?

EHPA and the European Climate Foundation have, with input from over 20 other organisations, developed a roadmap which sets out the barriers and solutions to increased heat pump growth. Called the *Heat Pump Accelerator* (see page 35), the roadmap was presented to the EU Energy Commissioner Kadri Simson. It will input into the EU Commission's upcoming *Heat Pump Action* plan.

What are the barriers to heat pump growth?

Here we look at a couple of barriers more closely and identify other areas where change is happening which will impact the sector.

Overall, the heat pump sector, like any industry, needs long-term clarity from policy-makers to encourage investment and attract employees. The EU level targets are welcome in this respect. Another important message would be sent by announcing the end of sales of stand-alone fossil fuel boilers and mandating an increasing share of clean heating. The European Commission is currently discussing a potential phase-out on the sale of stand-alone fossil fuel boilers from 2029, and many European countries are already taking the lead. EHPA keeps track of what is happening, and where, in this respect.

One of the ongoing barriers to faster heat pump growth is the distorted pricing system we see across Europe. Gas is often heavily subsidised and lightly taxed, making electricity far more expensive (Figure 1). By default, this makes heat pumps – most of which use a small amount of electricity – a less wallet-friendly option than a gas boiler. EHPA calls for taxation and pricing to be corrected so that electricity is no more than double the price of gas. Doing so will make heat pumps more of an attractive and viable option for consumers.

What about grants and subsidies for heat pumps to help with upfront costs?

The EU encourages member governments to set up subsidy schemes for heat pumps, and different European countries offer a range of these. EHPA gathered together the information on subsidy schemes for heat pumps in residential stand-alone buildings and presented it in the form of a table and a map earlier this year (Figure 2).

EHPA supports these ambitions. As long as clean heating is more expensive than fossil fuel heating, heat pump subsidies have to be continued with a long-term vision, with specific attention to low-income households.

Another key barrier to faster heat pump roll-out is a lack of trained workers and installers. To speed up progress and reach the EU's 2030 target, far more trained workers are needed, especially as it is more time-consuming to install a heat pump than a gas boiler. Europe needs at least 500,000 full-time equivalent trained workers ready for action in the next seven years.

Some boiler installers have already reskilled to move into the heat pump segment, but appropriate training will be required for many more given the skills needed, such as the ability to recover and safely handle refrigerants. In order to address the shortage, EHPA and the

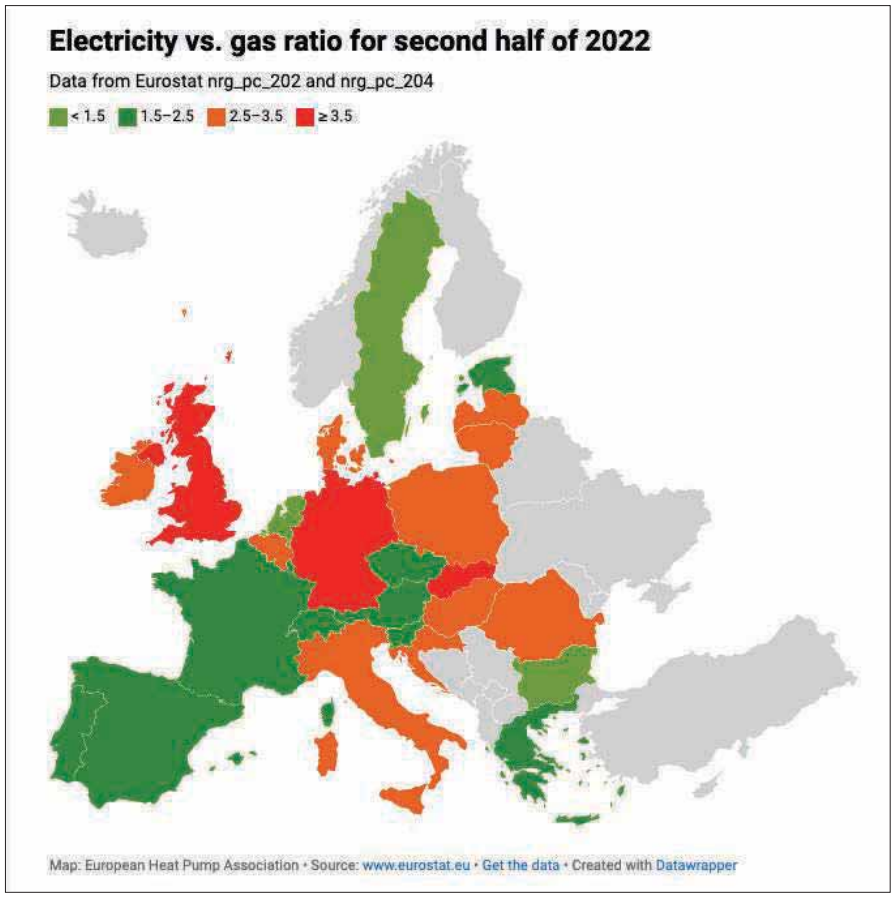

Figure 1.

contributing organisations to the *Heat Pump Accelerator* are calling for the gap between the current workforce and the workforce needed to reach heat pump targets at a national and an EU level to be quantified. Skills data should be collected from the EU, national administrations and industry which could be shown in an EU skills map.

Financial incentives

European countries should be encouraged to introduce financial incentives targeted towards installers, to enable more installers to receive training. Technical schools for electricians, welders and installers should be set up and located close to heat pump manufacturing hubs and in locations where workers are available.

Of course, in terms of money and working conditions, it is crucial to make these rewarding and stable, with financial support provided to people who re-train to work in the heat pump sector.

It is encouraging that the EU is working on a heat pump skills partnership to empower workers with the skills needed for the manufacturing, installation and maintenance of heat pumps. The partnership also aims to establish cooperation between relevant national authorities, vocational education and training institutions, and training platforms.

Other changes afoot

In addition to these barriers to continued heat pump sector growth and their solutions, other changes are afoot which will impact the way the industry develops.

In the digital world, there is increasing realisation of the importance of heating and cooling appliances being capable of communicating with each other, and the movement towards more common standards.

Code of Conduct

Currently, the EU is working on a *Code of Conduct* on what is known as digital "interoperability", which should be finalised over the summer. The aim is to attract other actors like network operators and system providers to ensure flexibility in the energy system, and create a widely-adopted standard to reduce the number of existing standards.

At a recent EHPA-organised workshop called "It's good to talk", participants said they considered this upcoming *Code of Conduct* would be helpful for encouraging crucial standardisation. They emphasised the importance of cybersecurity and expanding the scope of the *Code of Conduct* to include other devices like electric vehicles (EVs).

EHPA aims to contribute to this and to all solutions for unlocking the full potential of heat pumps in demand-side flexibility. We continue to stress the importance and the benefits this will have for consumers – savings on their energy bills, more comfort and lower impact on the climate.

It is clear that our work is only just getting started. Over the coming years, the heat pump sector will continue to expand and evolve, providing clean, sustainable heating and cooling to citizens, businesses and industry.

We look forward to it. ■

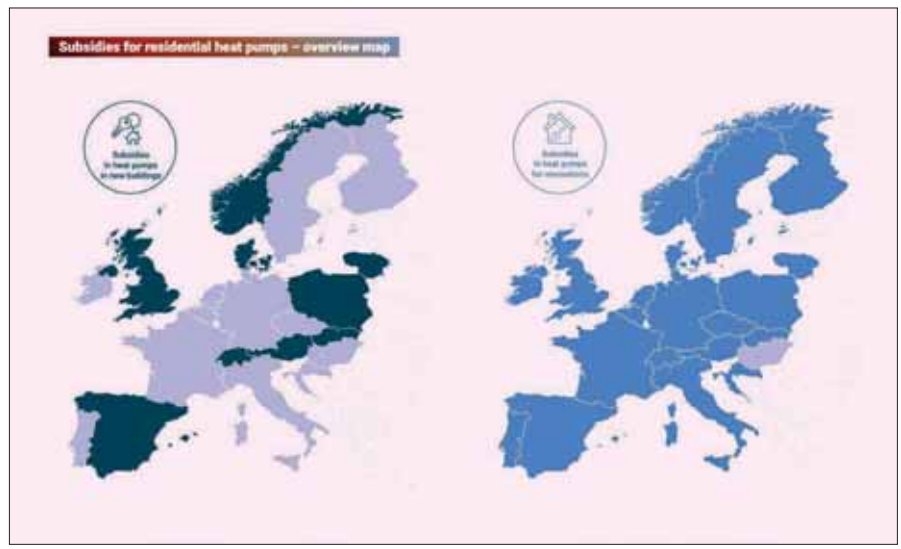

Figure 2.

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www.unithermhs.ie

MAXA heating solutions from Hevac

With a reduction in both energy usage and carbon emissions now of critical importance, Hevac's innovative heating products and systems deliver multiple solutions across all market segments. This is especially so in the commercial and industrial sector where the Maxa range is a prime example.

Paul Devereux, Hevac's Specification Manager, who is responsible for its commercial and industrial range of heat pumps and chillers explains: "Today, it is all about making the primary energy source of buildings environmentally friendly, while simultaneously reducing their carbon footprint. In MAXA, we have a range of options that deliver 100% to that brief, thanks to continuous investment in R&D that results in a constant stream of innovative products.

"Today's marketplace also demands products and system solutions that are energy efficient, sustainable and contribute to the circular economy. Here again, MAXA excels. For instance, with the MAXA air-cooled liquid chiller range featuring a reversible heat pump for outdoor installation, the ecological refrigerant R32 is used. Other features include the scroll compressor and axial fan. Meanwhile, the installation of a supplementary exchanger working as a condenser in parallel to the air conditioning battery allows for sanitary hot water production independent from the unit working mode.

"Another example is the i-HP V5H R32 inverter heat pump range. These units reach high SEER and SCOP values thanks to the incorporation of DC inverter scroll compressors, EC fan exchangers and their high efficiency.

"They deliver high comfort levels with low energy consumption and can produce hot water up to 60°C, even in the coldest conditions. Test data is available for both low (35°C) and high (55°C) temperature applications under average climate conditions."

The change to R290 this year enables MAXA air source heat pumps to achieve higher temperatures while maintaining high efficiencies, as R290 is a natural refrigerant with a low Global Warming Potential (GWP). Designed for outdoor installation (with an indoor ducted version available on request), the structure consists of high-thickness profiles made of hot-dip galvanised steel sheets. They are coated with polyester powder and a RAL 7035 bush-hammered finish that is resistant to weathering (classification of corrosivity similar to C3 according to EN ISO 12944- 2:2017).

The removable panels allow for easy maintenance inside the refrigeration circuit and the hydraulic circuit. Additional options available include super silencing, onboard inverter pump/buffer tank and a full range of BMS connectivity.

Paul concluded, "The current MAXA range is ideally suited to the Irish market, and we have supplied numerous projects throughout the country, including nursing homes, primary care centres, commercial buildings, leisure facilities and public libraries.

"Where the brief calls for energy efficient and sustainable heating and cooling, in MAXA we have the perfect solution, no matter what the application."

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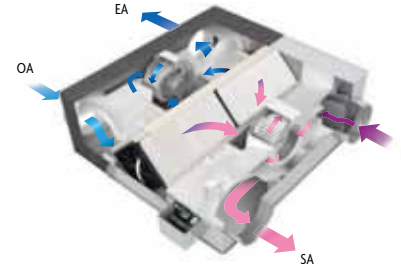
Introducing LGH-RVX3-E

Mitsubishi Electric unveils totally-new indoor air quality solution

While still incorporating key features of the established Lossnay range, the new Mitsubishi Electric LGH-RVX3-E system is a totally new indoor air quality solution designed specifically for use in offices, schools, hotels and similar applications.



Indoor air quality inside a building is optimised through temperature and humidity exchange by the RVX3 series.

Designed to extract stale indoor air continuously and efficiently, and to replace it with fresh filtered air from outside, the system also minimises the amount of energy loss as it includes heat recovery.

Speaking of the new holistic solution, Morgan Treacy, Commercial Products Manager, Mitsubishi Electric said: "The RVX3 Lossnay system is the next generation of our proven ventilation range. Maintaining good indoor air quality is imperative for commercial buildings, and the new units will enable every space to benefit. They can also work in conjunction with Mr Slim and City Multi air conditioning systems to deliver fresh, energy-efficient comfort."

People spend an average of 90% of their time indoors, so ensuring that the air quality inside buildings is fresh and clean is vital for health and wellbeing, not to mention for concentration span and performance levels. Pollutants such as particulate matter and carbon monoxide are found indoors, and outdoor pollutants like nitrogen dioxide can also enter buildings. The RVX3 Lossnay system minimises the impact of these.

The new RVX3 system features a whole host of improvements to enhance performance, efficiency and versatility while, at the same time, reducing running costs. An additional feature is that the units can now also be installed vertically. This allows for use in more spaces and makes high-quality ventilation accessible to a wider range of buildings.

Features and benefits

- Units can be installed vertically, making for more flexible siting options;
- Optional Mitsubishi Electric energy saving CO2 sensor that is powered by the internal board;
- Lossnay paper core enables total heat exchange (sensible and latent) to achieve higher levels of heat recovery, resulting in both cost and energy savings;
- Flexible supply and exhaust fan commissioning in 5% increments;
- Full airflow in bypass mode;
- Dual-barrier coating on the fan;
- Lightweight structure;
- Control compatibility with Mr Slim and City Multi air conditioning systems.

Enhanced controls, with five different levels, make for optimal efficiency, and fan speeds can also be adjusted in 5% increments to use less energy and help deliver Part L compliance.

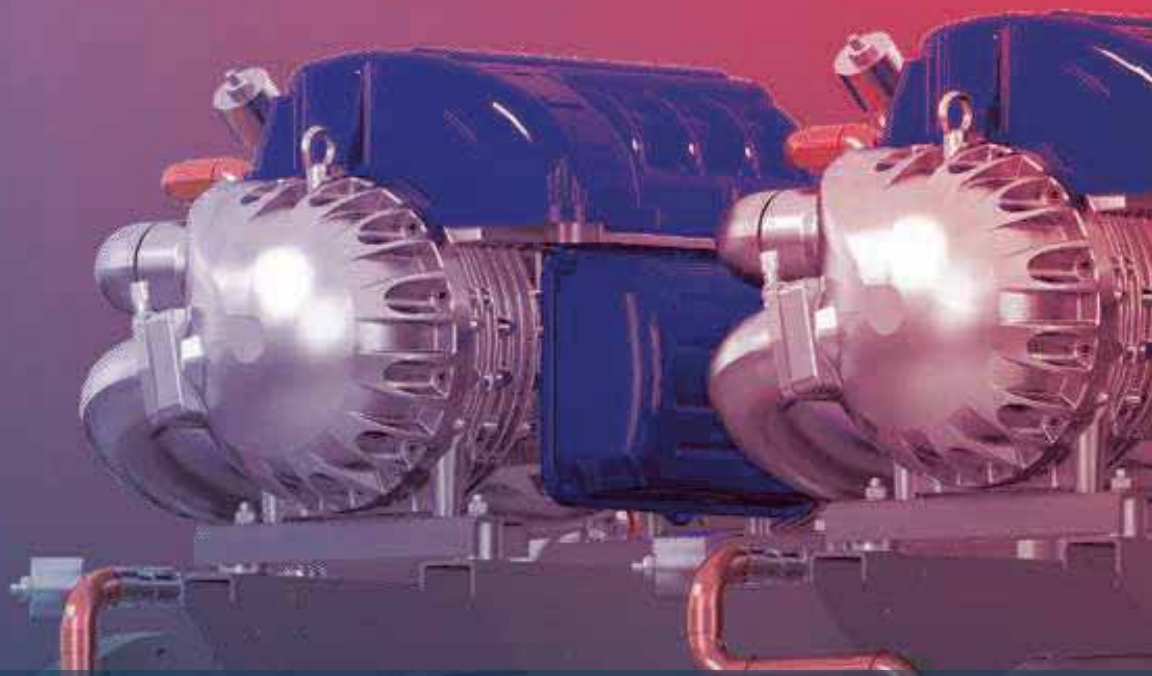
The system is designed to ensure operation at ultra-low noise levels.

An automatic summer bypass, which is built-in, allows the RVX3 units to take in fresh air from the outside without recovering heat during hot weather, reducing the risk of offices, gyms and other commercial spaces from overheating.

With 100% airflow still operating during bypass mode, the same volume of air is brought in while staying cool. The addition of optional Mitsubishi Electric CO2sensors allows for automatic incremental fan control, and the sensors can optimise efficiency by managing the RVX3 system to react to the air quality.

The sensors are directly powered by the RVX3 unit, so no additional power supply is required. The new system offers patented fan coating for improved air quality, longer life and easier maintenance, and comes in a range offering air volumes from 150 m^3/h to 2,000 m^3/h to meet the need of every project specification.

Contact: Morgan Treacy, Commercial Products Manager.
T: 01 409 8800;
E: sales.info@meir.mee.com



Benefits of the SPECTRUM Water Heat Pump from ENGIE Refrigeration:

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- Short payback time
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- US AHRI Certified®
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* Higher Temperatures of up to 90°C available with CO_2 Heat Pumps.

** Calculated for a SPECTRUM W1080-T3R00 with refrigerant R-1234ze(E) (rated heating capacity at 10/7°C; 47/55°C: 825 kW); SCOP47/55 6,11.

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Combining Grant's Aerona³ heat pump and Uflex underfloor heating for seamless operation

Designed with the property developer, architect and homeowner in mind, Grant's innovative heating technologies work together seamlessly.

This means that those working on new-build properties can save time on the project by having the full heating system designed and specified under one roof, using the best-suited products which result in a highly-efficient, compliant heating system.

Specifically, the Grant Aerona³ air source heat pump and the Grant Uflex underfloor heating systems work particularly well together to ensure optimum efficiency within new-build homes. When developing and manufacturing its wide range of products, Grant combines both its innovative and technical insight to develop heating technologies that will future-proof new-build homes for years to come.

Available in four outputs of 6kW, 10kW, 13kW and 17kW, Grant's Aerona³ R32 air to water air source heat pump offers a sustainable form of heating. The Aerona³ is now a popular choice among those working in the trade due to its cleaner, more environment-friendly performance, and its ability to lower a property's overall carbon footprint. This will ultimately help to achieve NZEB building standards.

The Grant Aerona³ heat pump.

The Grant Aerona³ R32 13kW and 17kW models have also been recognised by Quiet Mark for their quiet operation. Quiet Mark is the international award programme validating and awarding low-noise, high-performance technologies, helping to deliver solutions to overcome noise pollution throughout the world.

In terms of heating individual rooms in new-build homes, the Grant Uflex underfloor heating system is one of the most popular choices of heating emitters. This is due to its versatility and ability to work well with a heat pump, as both technologies can run at lower temperatures while using less energy, therefore providing significant long-term carbon and financial savings for the property owner.

An ideal heating solution for new-builds, Grant's Uflex underfloor heating system offers convenient and highly-efficient heating. This unobtrusive heat source is embedded within the floor construction and is fitted as part of the floor's assembly process, therefore causing no delays in construction. The pipework is available in PERT and ALUPERT and is positioned and clipped into place using Grant's tracking and staple system once the flooring's insulation and membrane has been fitted.

After this, a flow screed is laid over the top and allowed to fully dry before heat is introduced. As the system is designed for continuous operation with heat being supplied through the screed all day, this also means that the screed acts as a thermal store.

Both the Grant Aerona³ heat pump and Grant Uflex are included in Grant's integrated heating packages for new-builds, and can be controlled using the Grant Uflex 230V Heatmiser Neo Stats heating controls system.

Grant prides itself on working in partnership with those building new homes to ensure the most efficient Grant heating technologies are specified. This results in a fully-integrated heating system that delivers an efficient, low-carbon and comfortable indoor enviroment for the occupants.

Visit www.grant.ie for more information on Grant's range of innovative heating solutions. Follow Grant on Facebook and Twitter @GrantIRL or Instagram @Grant_IRL.

Think Heating. Think Grant. ■


Grant Uflex underfloor heating system.

Made in Italy

MIXA® HEAT PUMPS

Ensuring best energy efficiency

i-R290

Air-to-water R29 propane inverter heat pump

Capacity range

6kW to 50kW

Low GWP R290 refrigerant

i-HPV5H

Air/water inverter heat pumps with axial fan

Capacity range

40kW to 70kW

Uses R32 refrigerant

Sustainable heating solutions

Reduced energy consumption

Lower carbon emissions

Hevac

Muirfield Drive, Naas Road, Dublin 12. T: 01 419 1919.

Unit 1, Furry Park Industrial Estate, Dublin 9. T: 01 842 7037.

South Ring West Business Park, Tramore Road, Cork. T: 021 432 1066.

email: tender.enquiry@hevac.ie

www.hevac.ie

Space-saving heating solution

LG Therma V – integrated all-in-one solution

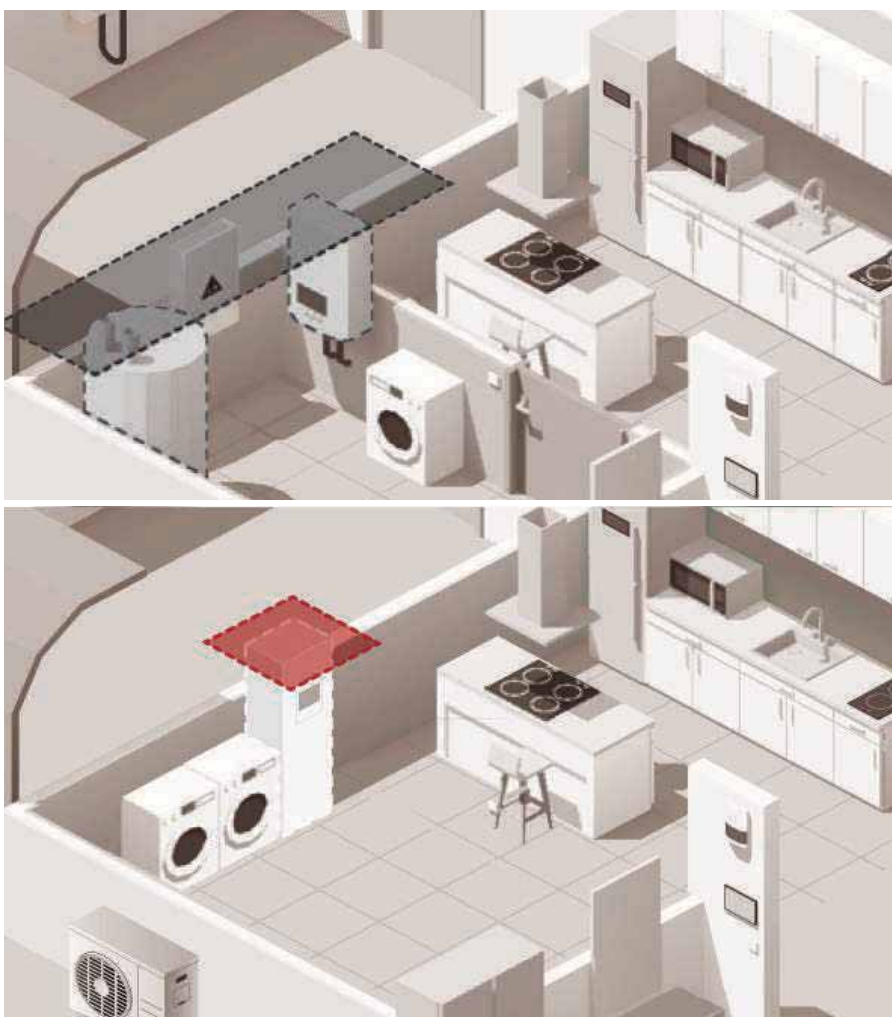
The LG Therma V R32 split IWT from Unitherm Heating Systems is the perfect space-saving solution for residential applications, thanks to its fully-integrated hot water tank. Unlike a typical separate installation, in this all-in-one solution hydronic components and domestic hot water (DHW) are pre-wired.

With the domestic hot water supply, space heating and cooling solution in the one unit, it saves considerable time for the installer and also means more siting options for the householder.

Other features of the unit include an integrated 3kW back-up water heater and expansion tank; refrigerant pipes connect IDU and ODU; Maximum 50m refrigerant piping and 3-way piping connection; duplex stainless steel water tank; built-in water flow and pressure sensors to monitor the water circuit in real time; PWM pump with option to control ΔT.

The stainless steel water tank reduces the risk of corrosion, while an internal coil-type heat exchanger contributes to higher efficiency. Compact and lightweight components mean quicker and easier installation, with a choice of various advanced control options provided for user convenience. It is also convenient for maintenance or moving as the water inside can be easily drained through the built-in drain valve.

Therma V can be connected to the DHW recirculation pump, which can then be managed by way of the scheduling function. When a user opens the tap, hot water is immediately accessible thanks to the DHW recirculating function. This feature also has the added advantage of preventing Legionella growth in the hot water pipe.



All-in-one solution – Top: a conventional installation. Bottom: Installation showing the space-saving benefits of the LG Therma V R32 split IWT solution with integrated water tank.

Seamless connectivity

LG ThinQ, a smart phone app, allows users to monitor and manage compatible LG products remotely, which means they can set the temperature and regulate the use of their Therma V anytime and from anywhere. In most EU countries, LG ThinQ technology also works with Google Assistant and Alexa, letting users control their Therma V with voice commands. It can also be connected to, and controlled by, a third party control system using a Modbus protocol directly, without Modbus RTU gateway.

Estimated power consumption and thermal energy can be monitored on both the remote controller and LG ThinQ. Readings provided include:

- Instant power consumption;
- Power consumption by period (daily, weekly, monthly, yearly), categorised as heat, cool and DHW;
- Produced heat output by period;
- Renewable energy by period.

Contact: Unitherm Heating Systems.
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Galway – T: 091 380 038;
Cork – T: 021 441 4010;
E: commercial@unithermh.ie;
www.unithermhs.ie ■

HITACHI

Yutaki R32 Hydrosplit Combi

A warmer way to think about the future

R32 REFRIGERANT

EN16147 COMPLIANT

- Available from 11 to 16kW in single and three-phase
- Sealed R32 refrigerant outdoor unit with hydraulic connections to a stylish pre-plumbed 220L cylinder
- Exceptional performance with high capacity at very low ambients and leaving water temperature of 60°c at -10°c
- Simple-to-use, award winning colour controller with live energy consumption data
- Easy to install and maintain with all main components accessible from the front

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Cooling & Heating

C&F Quadrant appointed Keyter distributor for Ireland

Keyter, the leading Spanish manufacturer of heat pumps and chillers, has partnered with C&F Quadrant to distribute the brand's extensive portfolio of HVAC products in Ireland. Established in 2000, Keyter is a group of industrial companies dedicated to the design, engineering, manufacturing and marketing of systems and solutions based on refrigeration and air conditioning technologies (HVAC+R).

As an Andalusian-based organisation, it is located in the hottest area of Europe and that enables it test all products under the most extreme circumstances.

Global presence

Recognised for its work in R&D, Keyter has a global presence in the commercial chiller and heat pump sector and operates out of a state-of-the-art 33,000 sq m facility in Spain. It has products and system solutions to suit almost any application, all incorporating innovative features and advanced technology to meet today's market needs.

Keyter's overall strategy is to focus on the development of new technological solutions based on the synergies between air conditioning, refrigeration, renewable energies and other related technologies.

This striving to design more sustainable and efficient products has led to the release of the new "Ziran Pro" heat pump which operates on the R-290 refrigerant and has a heating capacity range of 40kW to 270kW. These compact units contain semi-hermetic piston compressors, high-quality EC fans, and large surface heat exchange coils in copper pipes and aluminium fins. The robust units also come with integrated leak-detection and ATEX exhaust fan for maximum safety.

Keyter recognises the importance of complying with the European ErP Directive governing ecodesign regulations and this is factored in to the design process of new products. This also includes F-Gas Regulation compliance with all models incorporating measures that aim to control and reduce emissions of fluorinated greenhouse gases.

It is also conscious of the net zero objective and a top priority is the development of sustainable, efficient and innovative solutions to limit energy consumption and reduce greenhouse gas emissions. This commitment involves:

- Minimal refrigerant charges;
- Use of environmentally-friendly refrigerants with low GWP and natural refrigerants;
- High seasonal energy efficiency;
- Recyclable materials.

To ensure these features and benefits are fully endorsed, Keyter works with TÜV Rheinland, the internationally-recognised certification body to issue certificates that all equipment is designed, manufactured and tested in accordance with all European technical quality standards.

Contact: Peter O'Brien, Sales Director, C&F Quadrant. T: 083 385 5793; E: peter@cfquadrant.ie; sales@cfquadrant.ie

The new "Ziran Pro" heat pump which operates on the R-290 refrigerant and has a heating capacity range of 40kW to 270kW.

Closing the door on fossil fuels

Heat Pump Accelerator identifies bottlenecks and proposes solutions

Following Russia's invasion of Ukraine in February 2022, the EU set new targets for reducing energy imports. Heat pumps were identified as a cornerstone of the move away from imported fossil fuels and, under REPowerEU, a target of doubling annual heat pump installations in five years was set. There are, however, various bottlenecks that need to be addressed to increase heat pump deployment and production in line with the REPowerEU goals. These include high costs, information gaps, a lack of skilled workers, supply chain bottlenecks and power sector integration.

Against this background, the European Heat Pump Association and the European Climate Foundation – coordinators of a new heat pump roadmap – recently published the *Heat Pump Accelerator* and formally presented a copy to Kadri Simpson, the EU Energy Commissioner. A total of 23 organisations, including industry, governments and NGOs, helped draw up the roadmap to identify the barriers facing the heat pump sector, and to devise solutions to overcome them.

Separately, the European Commission is due to publish its first ever heat pump action plan by the end of 2023, to help the sector reach the REPowerEU target. This target means 60 million additional heat pumps installed in Europe by 2030. Today, there are around 20 million, and demand is increasing all the time, despite the bottlenecks already referenced.

The *Heat Pump Accelerator* is aiming to overcome these bottlenecks and create an improved framework for actions that lead to the accelerated deployment of heat pumps in line with the EU's climate and energy security objectives. These actions include:

- Monitoring annual progress on heat pump deployment;
- Helping increase demand for the installation of heat pumps in line with the overall objective;
- Reducing production costs and installation times for heat pumps;
- Increasing the number of installation companies and skilled installers;
- Kicking off a knowledge platform for professionals;
- Enabling the development of smart heat pumps;
- Facilitating a flexible energy system.

Thomas Nowak, Secretary General of the European Heat Pump Association said: "Europe is closing the door on fossil fuels and getting renewable on the path to net zero. Heat pumps are now recognised as having a crucial role, as

shown by the wide range of contributors to the *Heat Pump Accelerator*. We thank the European Commission for receiving the report and now urge it to take heed of its recommendations. Above all, the sector needs a clear signal from policymakers of their long-term support."

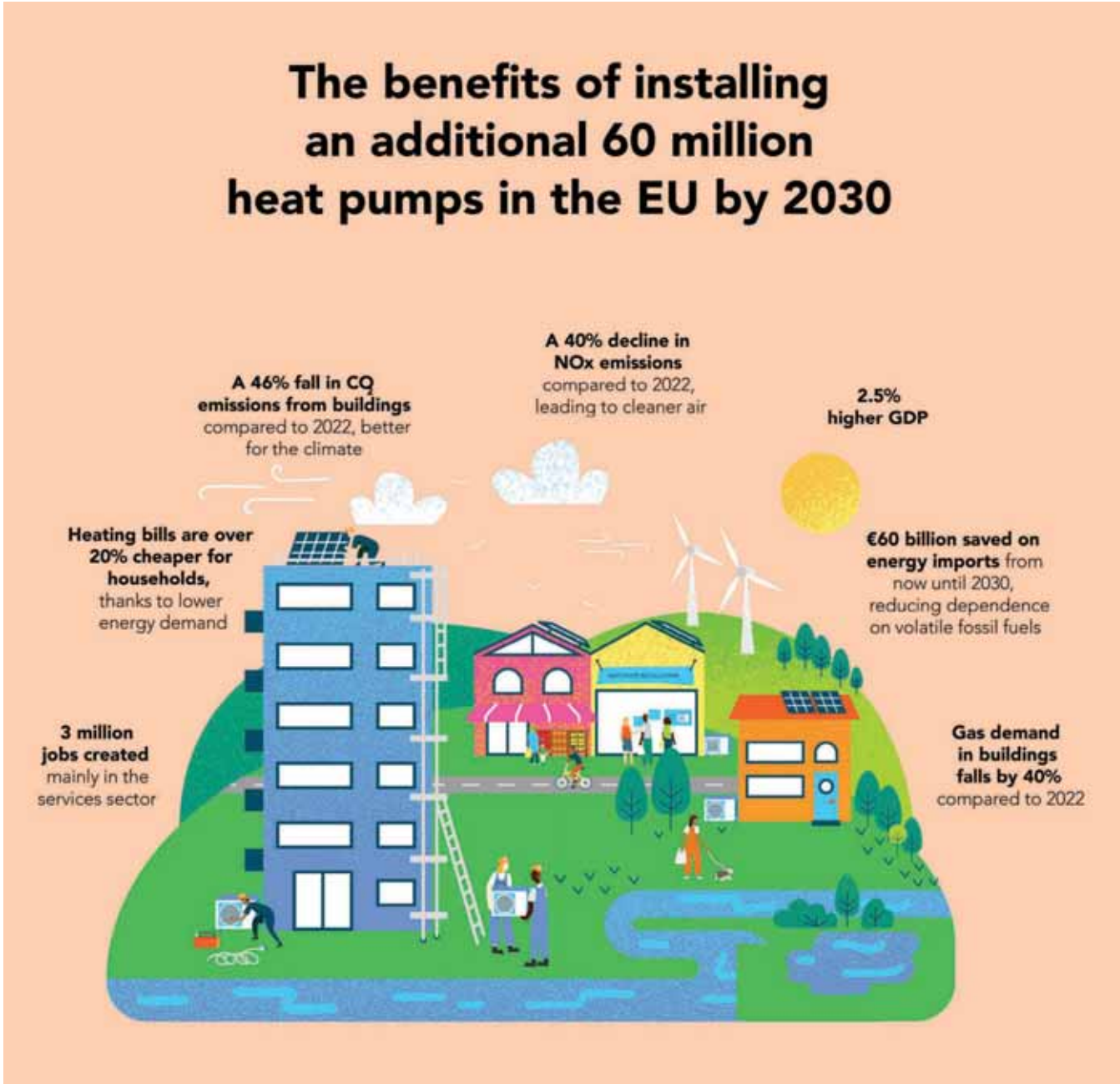
The barriers identified in the *Heat Pump Accelerator* range from upfront and operational costs through to a lack of clear information for consumers and a shortage of installers. The five overarching solutions proposed in relation to these are:

- Make clean heating the standard;
- Support European industry leadership;
- Increase energy system integration with flexible heat pumps;
- Make it easier for consumers in terms of information and affordability
- Develop required skills/workforce.

The EU *Heat Pump Accelerator* process brought together key stakeholders and decision-makers to make progress towards overcoming barriers for deployment. It also offers an overview of the solutions discussed by this group to the barriers they identified.

In deference to the European Commission's upcoming Heat Pump Action Plan, EHPA believes that the barriers identified, and solutions proposed, in the *Heat Pump Accelerator* will be a useful input. All involved in the initiative are fully committed to working together to overcome the obstacles and to help achieve the objectives of the REPowerEU goals.

See link to the *Heat Pump Accelerator* at https://www.ehpa.org/press_releases/accelerator-launch/ ■



NIBE – the power of nature and smart technology

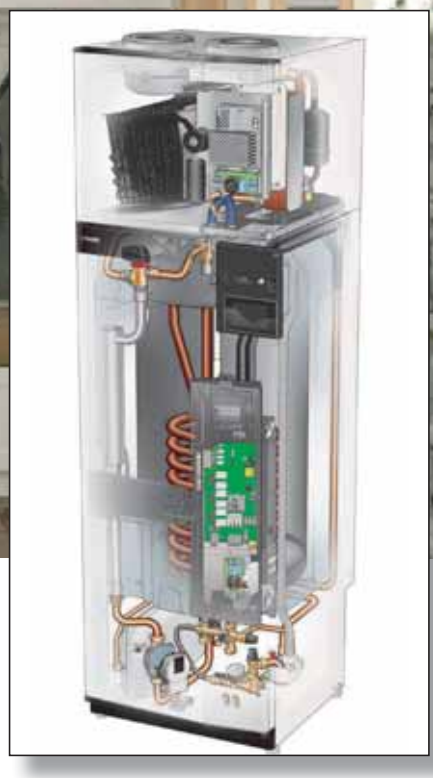
The NIBE S735 is an intelligent inverter-controlled exhaust air heat pump with an integrated hot water heater, providing heating, hot water and ventilation efficiently and economically. It has a high seasonal performance factor, which results in low operating costs, as it automatically adapts to a home's heating needs. Its low noise level, stylish design and compact size make for flexible siting options and ease of installation.

Designed for both new-builds and retrofit, the NIBE S735 can be docked to other heat sources and, thanks to the NIBE supply air module, it is also suitable for homes with exhaust and supply air ventilation.

Paul O'Donnell, Managing Director of distributors Unipipe says: "NIBE harnesses the power of nature with smart technology to deliver sustainable heating solutions that reduce energy consumption and carbon emissions. With integrated wifi and connection to wireless accessories, the S735 uses smart technology for full control over the system via a smartphone or tablet.

"NIBE has now been manufacturing sustainable heating and hot water solutions in the harshest of climates for 70 years, and it has used this expertise to design and manufacture models such as the S735 for our climatic conditions. It incorporates innovative features and technology designed to meet the many challenges posed by climate change and the impact of global events. We have been supplying, maintaining and servicing NIBE exhaust air heat pumps in Ireland for over 20 years, and this is by far the most advanced unit to date."

Critically, the S730 uses R290 refrigerant for reduced environmental impact. Its capacity to absorb heat is nearly 90% higher than R134 or R404, which results in quicker temperature recovery and lower energy consumption. In fact, the average specific refrigerating effect of a R290 refrigerant system is approximately 52% higher than that of R134a with the optimal charge amount.



Main picture shows the NIBE S730 heat pump in situ in a modern kitchen setting. Inset: Cut-away of the unit.

Also, its low ozone-depleting properties and extremely low GWP make R290 one of the most climate-friendly and cost-effective refrigerants on the market.

Features

- Energy saving smart technology;
- Reduced CO2 emissions;
- Wi-Fi connection;
- Smartphone/tablet control;
- User-friendly touchscreen;
- Automatic temperature control;
- Automatic software updates;
- Voice assistant control support;
- Integrated wireless connection;
- Option of smart wireless accessories.

Contact: Unipipe Ireland Ltd.
T: 01 – 286 4888; E: info@unipipe.ie;
www.unipipe.ie

Sustainable and practical solutions

Reduce fuel poverty and CO_2 emissions with Hitachi's HCombi heat pump

Fuel poverty is an increasing issue, especially for families living in old, poorly-insulated housing. Energy price rises are slowing, but show little sign of significantly reducing. Now is the time for councils, housing associations and homeowners to take action to improve the insulation and energy efficiency of old housing stock ahead of replacing inefficient boilers with high-efficiency renewable heating systems.

Heat pumps, and air source heat pumps in particular, are seen as the most sustainable and practical solution to achieve environmental sustainability and net zero.

Heat pumps are far more energy efficient than gas boiler counterparts and generate net zero emissions from their process, unlike fossil fuel systems.

Ozone-friendly R32

Refrigerant is a vital heat pump component, and Hitachi's Yutaki heat pumps use refrigerants with a low Global Warming Potential (GWP) such as R32 with a zero Ozone Depletion Potential.

With Yutaki HCombi, the indoor unit supplies heating, cooling and domestic hot water to the home through its integrated stainless steel cylinder tank with a footprint of less than 600mm x 600mm. With low noise levels, the HCombi can be installed in a utility room, kitchen or airing cupboard, giving installers and homeowners flexibility over the most suitable installation site as part of a retrofit renovation project or new-build.

Homeowners will benefit from a continuous supply of hot water and heating up to 60°C, even when outside temperatures are as low as -10°C. They can also accurately manage their energy use with the new award-winning controller which is intuitive, easy to use, and displays live energy consumption data in colour.

Sealed refrigerant circuit

Yutaki HCombi is a hydrosplit system with the heat exchanger and refrigerant circuit sealed within the outdoor unit and connected to the indoor unit via hydraulic connections. This "plug and play" concept removes the requirement for F-Gas, opening up a new potential income or revenue stream to plumbers and heating engineers looking to expand their range of services. All the main components are easily accessible from the front of the indoor and outdoor units for quick and simple installation, commissioning and ongoing maintenance.

Hitachi Yutaki HCombi front view.

Yutaki HCombi is available in single and three-phase, and is certified compliant with EN16147.

For Hitachi product and heat pump training enquiries contact: Paul McGettigan, Area Sales Manager Ireland, Hitachi Air Conditioning Europe. E: paul.mcgettigan@jci-hitachi.com T: 086 107 7274;

Yutaki HCombi utilises a sealed circuit and removes the requirement for F-Gas, opening a new potential income or revenue stream to plumbers and heating engineers looking to expand their range of services. This is an energy efficient product with extremely easy installation procedures and is suitable for both new-build and retrofit markets.

Panasonic's new R290 A2W reversible heat pump

Panasonic Heating & Cooling Solutions has unveiled its new sustainable and highly-efficient ECOi-W AQUA-G BLUE air to water reversible heat pump range as part of its Green Impact plan and vision for a carbon-free society.

Ideal for large commercial, industrial and multi-dwelling residential applications, it uses the natural refrigerant R290, which has a Global Warming Potential (GWP) of 3, making for a lower environmental impact when released into the atmosphere compared to other refrigerants.

This new range boasts a high seasonal performance value with a maximum SEER 4.4[1] and SCOP 3.9[2], and has an impressive energy efficiency rating of A++[3]. Its cooling mode application sees a water outlet temperature of -15°C, ensuring optimal operation temperature for process equipment in factories. It also provides the ideal solution for heating, cooling and domestic hot water, reaching 70°C leaving water temperature from 0°C outside air temperature.

Range of capacities

Panasonic offers a unique range of capacities available with the R290 refrigerant and scroll compressor technology, with four sizes from 50kW to 80kW. In addition, the range can boost capacity up to 480kW by connecting up to six units in cascade. The units are fully customisable with various configuration options and will be available for delivery this coming Autumn.

The new range is also compatible with Panasonic's Plug & Play Cascade Control. This provides connection to Panasonic's ECOi-W Cloud for remote access in real time, allowing for optimisation of service and maintenance work.

Safety measurements

Panasonic does not compromise on product quality, safety or durability in order to provide the ultimate comfort. Special safety measurements are equipped for R290 refrigerant, including the addition of a ventilation system[4], air/refrigerant separator and a non-flammable sealed electrical box.

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Eamonn Kent. T: 087 439 4032;
E: eamonn.kent@eu.panasonic.com

References

1. For 50kW capacity unit;
2. For 70kW capacity unit;
3. Scale A+++ to D. According to EN14825 and Following Commission Regulation (EU) No 813/2013;
4. For 50kW capacity unit.

For a more reliable and efficient solution, the new range utilises unique scroll compressor technology. This allows the ECOi-W AQUA-G BLUE range to provide the perfect balance of efficiency and silent operation, with a notably low minimum sound power level of only 79.9 dB(A), and a minimum pressure level of just 51.9 dB(A). An optional compressor box is available to provide an additional level of noise reduction.

> *This new range boasts a high seasonal performance value with a maximum SEER 4.4 and SCOP 3.9, and has an impressive energy efficiency rating of A++ .*

Transforming Irish construction and the built environment

‘Build Digital’ project is re-energised

The Build Digital project has been in existence for 18 months and the aim of the recent seminar was to re-establish the programme of work and objectives of the project. The event, which took place in June, provided an opportunity for industry representatives from the CIF, RIAI, ACEI, SCSI, Engineers Ireland and the Building Materials Federation to inform the Build Digital project team exactly what digital transformation looks like to their businesses and for their supply chains and, as a result, to identify what they want the team to deliver in its 5-year plan.

The event kicked off with introductory and context setting presentations provided by Pat Lucey, Chair of the Build Digital Project Steering Group and PJ Rudden, Chair of the CSG Innovation and Digital Adoption Working Group. This was then followed by a presentation from Stephen Lynam, Technical Advisor from the OGP, who set out clearly the intended timing of the Digital Mandate on Public Works Contracts which will commence in Q1 2024 and will then be introduced on an incremental basis.

Fiona O’Carroll, The Digital Mindset with Marguerite Sayers, ESB; Neil Kerrigan, Enterprise Ireland; Hubert Fiztpartrick, CIF; Pat Lucey, Build Digital Project; Clare Eriksson, TU Dublin; Robert Moore, Build Digital Project; PJ Rudden, CSG Innovation and Digital Adoption Working Group; David O’Brien, OGP; Denise Tuffy, CIF and Stephen Lynam, OGP.

This was followed by break-out sessions where stakeholders from the various construction bodies were asked to consider what they believed should be prioritised from the current list of deliverables for the project, with the addition of new work streams they feel are of importance and will add value.

The event was hosted by Fiona O’Carroll, CEO of The Digital Mindset, who has a wealth of experience in digital transformation, *albeit* not in the construction sector. Fiona concluded the event by outlining the importance of leadership and culture due to the disruption that new technologies and ways of working are having on the construction industry which, by the way, is evident in all industries.

This is the first pillar of the five pillars of the Build Digital project:

- Digital Leadership and Cultural Change;
- Digital Standards;
- Digital Education and Training;
- Digital Procurement;
- Sustainability and the Circular Economy.

It is anticipated that the recent seminar will provide fresh and insightful views that will reinvigorate the work programme going forward, while also maintaining this first and important pillar throughout its work programme.

To find out more about the Build Digital project see https://www.builddigitalproject.ie/

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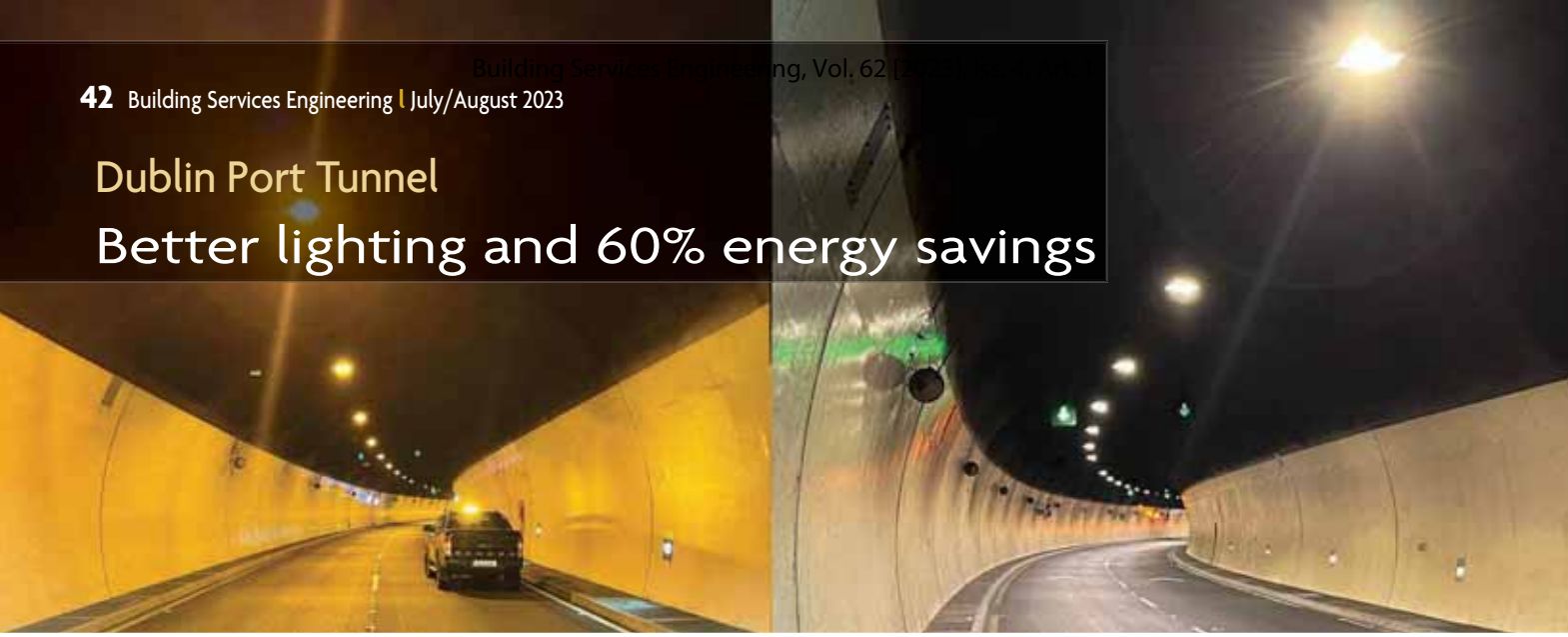
Dublin Port Tunnel

Better lighting and 60% energy savings



Signify has equipped Dublin Port Tunnel with energy-efficient LED lighting for all its 1800 light points in the tunnel. The upgraded lighting has achieved up to 60% reduction in electricity use (based on 2022 rates), or the equivalent of the electricity consumed by up to 300 Irish households[1].

The upgrade has enabled the tunnel to operate with reduced costs, lower emissions and a reduced impact on grid congestion. The project is expected to save anything up to €4 million in electricity costs, including VAT, over the coming five years. Uniquely, the installation involved reusing the existing fittings for all light points. So, this means that the project contributes to a more circular economy, saving an estimated €3 million as opposed to opting for a new LED infra-structural installation.

Tunnel maintenance operator ERTO was instructed by Transport Infrastructure Ireland (TII) to find a solution that would reduce energy costs and improve the quality of light in the tunnel. Signify's LED retrofit solution was selected for its ease of replacement and impressive cost savings, which are especially significant in the context of the current energy crisis.

Given that the tunnel is a dedicated route for heavy goods vehicles between the Port and the greater road network via the Coolock Lane Interchange (M50), the LED lighting project also aims to improve visibility and safety in the tunnel. The project is part of the Irish government's energy efficiency plans and was partially funded through the European Green Deal.

The Installers made use of the existing high-quality housings, which were all retested and CE marked to current standards, and fitted with Philips METIS 2816 LED insert trays. As the new lights were made to perfectly fit the existing fittings, installation was completed with minimal disruption to road users. Installers worked during late night and early morning hours over five weeks, with each lantern taking just five minutes to strip out and replace. Reusing materials also kept the project's capital expense to a minimum.

Dermot Deely, Managing Director, Signify Ireland, said: "With public lighting accounting for 24% of Dublin Council's energy expenditure, energy efficiency projects like this one can make an enormous positive impact. Through a relatively simple upgrade, we've been able to improve light quality, cost, maintenance, and sustainability for Dublin Port Tunnel. We are particularly proud to have supported these environmental goals while giving a second life to many of the materials that were already in place." ■

Reference

1. Data presented here is a simulation within the framework of the Green Switch conventional light point conversion model. This is a programme run by Signify to help its customers accelerate the switch to energy-efficient lighting products, lighting systems and lighting services.

Dublin Port Tunnell before (left) and after (right) the LED upgrade.

LEDVANCE wants to make the transition to future-proofed LED technology as easy as possible for wholesalers, installers, electrical planners and professional users. So, in addition to practical LED equivalents for almost every application, it will be offering its professional range of LED lamps under its own name in future.

Professional LED lamps from LEDVANCE

Having emerged from the general lighting division of OSRAM, LEDVANCE has established itself as a leading name in innovative LED solutions in just seven years. Whether the need is for LED lamps, luminaires, strips, light management systems or human centric lighting, lighting professionals all over the world rely on LEDVANCE's combination of experience, know-how and focus on the future.

LEDVANCE is proving to be a reliable partner, especially in connection with the EU-wide ban on the production of inefficient and pollutant-containing lamps, such as traditional fluorescent lamps. Under its slogan of "Advancing Light", the company offers EU-compliant and future-proofed LED replacement solutions for almost every application – from retrofits and conversions to new luminaire installations.

It now also makes the switch easier by offering its professional range of LED lamps under its own name throughout the EU. This change of brand name for lamps is accompanied by segmentation of the portfolio into the Superior, Performance and Value product classes, which are familiar from LEDVANCE luminaires. Clear nomenclature, in which all the important product information including the segmentation is visible at a glance, adds to the level of clarity.

Although the names and EANs (European Article Numbers) of the lamps are new, LEDVANCE's partners can quickly find their LED lamps in the online product catalogue because the new LEDVANCE LED lamps are linked to the familiar predecessor products for the duration of the transition phase. The new and clearly-presented packaging illustrates how many of the professional LED lamps have become even more powerful to coincide with the change of brand.

However, lamps from the residential sector such as the Vintage Edition 1906 or the LEDinestra range, that will be further offered under the proven OSRAM brand, will continue to meet all client expectations in terms of quality, performance and efficiency.

LEDVANCE also supports its partners in terms of sustainability with products made from recycled materials and with luminaires that reinforce the trend for replaceable components and the circular economy. The company's holistic commitment to sustainability has been recognised with the Silver Medal award from EcoVadis, one of the world's most prestigious sustainability rating agencies.

Contact: Stevie Young, Ledvance Ireland. T: 086 600 1291; E: s.young@ledvance.com

Pump sector view on restriction of PFAS

In light of the proposed EU legislation changes relating to the use of per- and polyfluoroalkyl substances (PFAS – see panel) in various product types, Wayne Rose, Secretariat of the Europump Marketing Commission and newly-appointed CEO of the BPMA (below), offers an insight into the pump sector's position in relation to the restrictions on using PFAS.

For many years, the Association of European Pump Manufacturers (Europump) has been at the forefront of the health and safety, environmental and sustainability agenda, advising and lobbying Governments as they look to update and improve the legislative landscape for industry. It is commonly recognised that pumps and their related equipment are essential for many applications affecting daily life. Wheher it is central heating and water supply in homes, sewage and wastewater treatment in cities, or the extraction and processing of raw materials to manufacture finished products, pumps and pumping systems play a fundamental role.

Industrial applications can range from water treatment, food processing, chemicals, oil and gas, mining, paper mills, firefighting, dredging, waste removal and many more. Future applications linked to the all-important green transition would include the transportation and storage of hydrogen, geo-thermal and other green gases.

Due to their unmatched thermal and chemical resistance, unique tribological properties, and any combination of these characteristics, PFAS-containing materials are used in virtually all of these applications as sealings, bearings, cable sheaths, coatings, pump inserts and membranes. However, given that PFAS materials are up to one hundred times more expensive than any of the natural or synthetic elastomers, they are only used in those cases where absolutely no alternative is available. At the moment, no alternative material guarantees the same levels of performance, safety, and/or working lifetime.

Therefore, any substitution with other, less suitable, materials would lead to rapid failures and leakages. This could result in the release of aggressive media, harmful gases, or steam, which could in turn cause serious injury to both humans and the environment.

Furthermore, the challenge faced by the lack of PFAS-free alternatives for essential use is not limited to pump applications and applies equally to other key pieces of equipment such as valves and compressors in downstream industries like pharma, chemicals, petrochemicals and aerospace. In addition to this, some electronic components which are critical for the safe and efficient operation of these applications also require the use of PFAS-based materials.

So, although Europump fully supports any regulation aimed at preventing PFAS substances from entering the environment, it must be stated that in certain pump (and other related product) applications the use of PFAS remains essential, due to safety, efficiency and functionality concerns. As there are no suitable substitutes for these specific applications currently available, the use of PFAS materials should remain possible, so that pollution of the environment by other acutely-hazardous substances can be prevented, and harm to humans avoided.

Europump's full position statement on the restriction of PFAS materials can be found on both the Europump and BPMA websites. ■

What is PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a large class of thousands of synthetic chemicals that are used throughout society. However, they are increasingly detected as environmental pollutants.

They all contain carbon-fluorine bonds, which are one of the strongest chemical bonds in organic chemistry. This means that they resist degradation when used, and also in the environment. Most PFAS are also easily transported in the environment, covering long distances away from the source of their release.

PFAS have been frequently observed to contaminate groundwater, surface water and soil. Moreover, cleaning up polluted sites is technically difficult and costly.

Climate-action is key for Wilo

'Together we can make a real difference'

The Wilo Group has published its sustainability report for 2022 which documents the progress it has made in implementing its sustainability strategy. It includes various examples of gains made, including a reduction in CO2 emissions (Scope 1 and 2) by a further 17% last year.

In addition, Wilo converted two more sites to carbon-neutral production, meaning that all its European plants are now carbon-neutral. It also invested heavily in self-generated electricity with the installation of new photovoltaic systems at three sites, while the growth rate in sustainable water solutions was 12%.

External validation of its commitment to sustainability was recognised last year by EcoVadis, the world's most respected provider of sustainability ratings, when it presented Wilo Group with the Platinum Medal.

"Last year was marked by numerous global challenges and uncertainties," explains Oliver Hermes, President & CEO of the Wilo Group, "but, despite this, it is important that politicians, business and society do not lose sight of long-term issues such as climate action. Our sustainability report shows our success in this regard. We made great progress in implementing our sustainability strategy while, at the same time, posting profitable growth in 2022."

"Our products and solutions are not only highly efficient, they also move the vital resource of water.

Oliver Hermes, President and Chief Executive Officer of the Wilo Group.

Concrete sustainability goals shape Wilo's business activities. Among other things, the group has set out to provide 100 million people with better access to clean water and to reduce its CO2 emissions by 50 million tonnes by 2025.

In this way, Wilo also wants to contribute to solving the climate crisis. "Our products and solutions are not only highly efficient, they also move the vital resource of water," says Georg Weber, a member of the Executive Board and CTO of the Wilo Group. "This makes Wilo a true climate-action company."

Wilo also made a clear contribution to climate action in the year to mark the campany's 150th anniversary with the inauguration of the H2POWERPLANT at the Wilopark. The hydrogen plant lays the foundation for self-sufficient, decentralised and regenerative energy supply into the future. ■

The H2POWERPLANT at the Wilopark during the family event where Wilo celebrated its 150th anniversary as a company at the Dortmund site.

BTU strikes gold at Powerscourt event

To reach a 50th anniversary milestone is a major achievement in any walk of life or business but, for a non-profit society run on a voluntary basis, it is incredible. But such has been, and still is, the dedication and commitment of all those involved in the BTU Golf Society that this anniversary has come about in the blink of an eye.

To mark the occasion the BTU recently held a special outing at Powerscourt Golf Club which was followed by a celebratory dinner, the presentation of prizes and an interview with Greg Allen, RTE golf sports reporter, conducted by Vincent Broderick.

A capacity turnout enjoyed the perfect day ... the sun shone, the course was in pristine condition, and the slick organisation meant the entire occasion went like clockwork.

More importantly, there was a very relaxed feel to the day with everyone networking, catching up with former colleagues and friends they had not seen in years, and essentially just immersing themselves in the *bonhomie* of the occasion.

Given the sterling work put in by the officers and committee members down through the years, and especially this year in preparation for the 50th celebrations, it is unfair to single out any one person. Collectively, they have all done not just BTU members, but the industry at large, a massive service. It is now incumbent on the next generation to get actively involved and so preserve and safeguard the future of the BTU over the next half century.

Vincent Broderick, BTU President and master of ceremonies on the night, in conversation with guest speaker Greg Allen.

BTU Past Presidents and Captains.

Current BTU Captain Stephen Jones with Tom Fitzpatrick, overall winner.

The results

Overall Winner:
Tom Fitzpatrick, H33, 40pts.

Class 1
First: Ger Hutchinson, H8, 38pts;
Second: Joe Warren, H13, 35pts;
Third: John Lavelle, H15, 32pts.

Class 2
First: Gerry Tobin, H19, 37pts;
Second: Michael Bready, H19, 33pts;
Third: Brendan Keaveney, H21, 31pts.

Class 3
First: Jim Bollard, H27, 39pts;
Second: David Lynch, H22, 38pts;
Third: Stephen Costelloe, H23, 37pts.

Past Captains:
Dermot Ryan, H11, 34pt.

Visitors:
Winner: Sean O'Gorman, H16, 39pts;
Second: Sean Byrne, H12, 35pts (B9);
Third: Stephen Higgins, H14, 35pts.


BTU





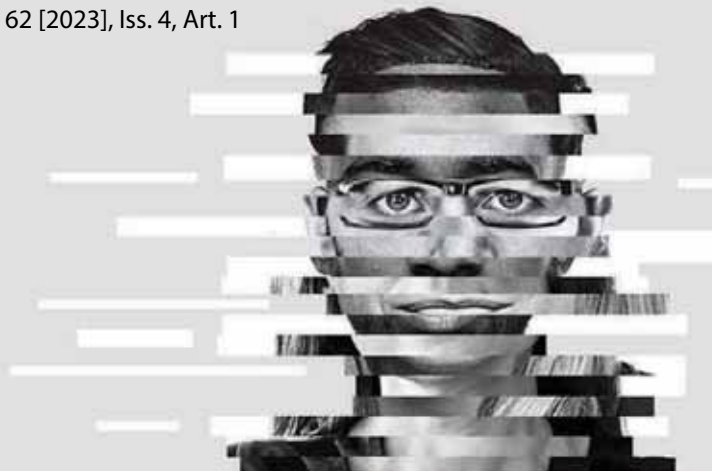






BTU
50th Anniversary


DISCOVER the REHAU Hub



District heating workshop delivers five takeaways

Following REHAU's *Building a Greener Future: Delivering High-Quality Heat Networks* workshop at The Building Centre in London recently, industry-leading figures left with a positive outlook on the future of low carbon heat networks, with five key takeaways emerging from the event.

The workshop saw REHAU bring district heating experts together to discuss industry challenges and solutions. Among the key topics covered were government funding, incoming heat network zoning, the Heat Network Technology Assurance Scheme (HNTAS), and best practice in design and installation of heat networks.

Steve Richmond, Head of Marketing & Technical at REHAU Building Solutions, chaired the workshop, with speakers from the Department of Energy Security and Net Zero, Fairheat, Therma-Mech, Switch2 and Sustainable Energy all delivering keynote speeches. Two interactive panel sessions were also held during the half-day event to allow delegates to ask speakers their opinions on a variety of topics.

On the success of the event, Steve said: "We decided to run this workshop because it's vital that the industry comes together to learn from each other as we accelerate toward low carbon heat networks. Having spoken to the delegates and gathered their feedback, we're very pleased with how the industry is reacting to some big challenges, and how positive the future looks for district heating.

"Two of the biggest topics covered were the upcoming HNTAS and proposed heat network zoning. Our industry partners were brilliant in bringing these new initiatives to light, and we want to thank all our speakers for lending their time and sharing their knowledge at the workshop."

Steve Richmond, Head of Marketing & Technical, Building Solutions, REHAU.

REHAU's event also saw the introduction of the new Clip-Flex shroud system. Clip-Flex revolutionises the shroud market in that it gives up to 22.5° range of motion in all directions, allowing pipework to be angled as per the demands of the project, giving contractors far greater flexibility on site. This makes shroud installation easier and quicker than ever before.

> We're very pleased with how the industry is reacting to some big challenges, and how positive the future looks for district heating.

Five key takeaways

Below are Steve Richmond's own personal takeaways from the event.

1. There was a lot of interest in the Heat Network Technical Assurance Scheme (HNTAS) which is currently in development. Everyone recognises that there are some underperforming projects so the increased emphasis on quality assurance can only be a good thing;
2. The UK district heating market momentum is clearly building – the capital funding is there, zoning is coming and policies such as the Future Homes Standard will help drive demand from developers;
3. There was a considerable debate about how to increase the number of trained contractors to install pipes, and also how to ensure the high quality of pipe installations. The new Clip-Flex system should go some way to solving both these challenges;
4. There is a fine line between designing for future heat network capacity versus the risk of oversizing networks and the risk if that capacity never connects;
5. There was an interesting question about how clients view district heating and its higher complexity versus installing gas boilers in each property. The ensuing debate focused on educating clients and addressing the concerns they have.

For further information about the event, visit: www.rehau.com ■

Panasonic Aquarea K and L ranges at the Guinness Storehouse

Panasonic presented the company's vision of creating technologies for a low-carbon society at the Guinness Storehouse recently, and also used the occasion to introduce the new range of Aquarea K and L ranges of air-to-water heat pumps. Just on 300 guests attended, representing key specifiers across the entire building services sector, and included architects, consulting engineers, merchants and installers.

Attendees at the event were welcomed by Vincent Mahony, Manager Ireland, Panasonic Heating & Cooling, and introduced to the Managing Director of Panasonic HVAC Business Division Europe, Hiroshi Komatsubara, who explained Panasonic's proud heritage in providing innovative heating and cooling solutions. Jose Manuel Alves, Regional Director for Ireland, the UK and Netherlands, followed next, talking through the company's strategy to deliver outstanding performance, aligning with Panasonic's vision of a carbon-free society and its Green Impact plan.

Walter Stephens, Key Account Manager and specialist in air-to-water systems at Panasonic, then gave a full overview of the Aquarea K and L series. He detailed in particular the key features that offer improved energy performance in tandem with a more natural and sustainable future.

Guests then had the opportunity to talk individually with Walter and other members of the Panasonic team, and to view the new products which were on display.

Some of the 300 attendees at the Aquarea K and L presentation at the Guinness Storehouse.

Vincent Mahony, Manager Ireland, Panasonic Heating & Cooling with Hiroshi Komatsubara, Managing Director, Panasonic HVAC Business Division Europe; Jose Manuel Alves, Regional Director for the Ireland, the UK and the Netherlands; Hannah Murphy, Marketing Coordinator & Demand Planning, Panasonic Ireland and Walter Stephens, Key Account Manager and specialist in air-to-water systems at Panasonic Ireland.

The K generation utilises R32 refrigeration, making it an excellent solution for new homes. The L generation uses the natural refrigerant R290, which has a Global Warming Potential (GWP) of only 3. The redesigned construction of the outdoor units of both generations provides a high level of safety as the units are hermetically sealed for easy and flexible installation.

Furthermore, the K generation retains a refrigerant link between the outdoor unit and the indoor unit, while the L generation features a hydraulic link.

Both the K and L generations come in an all-in-one, as well as a bi-bloc, solution and benefit from a reduced noise level. This is up to -8dB(A) less than previous models and so offers more placement possibilities.

Following the formal presentations and product discussions, the attendees moved on to the Gravity Bar located on the seventh floor of the iconic Guinness Storehouse. Here refreshments were served with everyone enjoying the panoramic 360° views of Dublin.

Vincent Mahony, Ireland's National Manager for Panasonic commented: "We were thrilled with the buzz during the event, and the positive feedback we've had since. We are now looking to see how future projects evolve as we start to roll out these sustainable and energy efficient products across Ireland.

Contact: Panasonic Ireland.
Walter Stephens. T: 087 600 5031; E: walter.stephens@eu.panasonic.com; Eamonn Kent. T: 087 439 4032; E: eamonn.kent@eu.panasonic.com ■

Excellent turnout for RACGS Killarney outing

There was an excellent turnout for the RACGS outing at the Killarney Golf & Fishing Club. The weather was also great. While a little overcast, it was warm and stayed dry with many playing in shorts.

The course was stunning with golfers taking as many photos of the beautiful surroundings as they did golf shots. RDL was the sponsor on the day and Derek Cummins and his colleagues raised the bar on the goodie bags and prizes.

The results were as follows:

Overall Winner: Liam Hoctor, 37pts.

Class 1 – First: Johnny Lynagh, 37pts;

Second: Kevin Roden, 29pts.

Class 2 – First: James Darcy, 36pts;

Second: Fergus Daly, 36pts.

Nearest the Pin: Derek Fitzgerald.

Longest Drive: Neil O'Sullivan.

Visitor – First: Conor Allen, 38pts;

Second: Barry Butler, 37pts. ■

Overall winner – Liam Hoctor (centre) with Derek Cummins, RDL, sponsor and Fergus Daly.

Nearest the Pin – Derek Fitzgerald.

Second Visitor – Barry Butler.

Second Class 2 – Kevin Roden.

Winner Class 1 – Johnny Lynagh with Fergus Daly

Winner Class 2 – James Darcy (centre) with Derek Cummins, RDL, sponsor and Fergus Daly.

Independent verification of lighting circularity claims

TM66 Assured scheme is a game-changer for lighting specifiers

CIBSE and the Lighting Industry Association (LIA) have joined forces to introduce an innovative product verification scheme aimed at promoting circular economy practices within the lighting industry. This scheme, known as the TM66 Assured, will provide independent verification of lighting manufacturers' circularity claims, ensuring accuracy and credibility.

The TM66 Assured product verification scheme, developed by the LIA and endorsed by CIBSE, is now an essential component of the comprehensive TM66 toolkit to assess the circular economy credentials of lighting products throughout the supply chain. It leverages CIBSE's *TM66 Creating a Circular Economy in the Lighting Industry* guidelines and the *TM66 Circular Economy Assessment Methods (CEAM)*. These were developed by a cross-industry team of manufacturers, specifiers and associations whose insight and ideas ensured TM66, published in 2021, would be both easy-to-use and widely applied.

TM66 offers practical guidance and tools to enable the lighting sector to adopt sustainable, circular practices and has already gained recognition and adoption by major specifiers and organisations within the industry. In the future, it is envisaged that this will be extended to cover other areas of building services engineering beyond lighting products.

The collaboration between CIBSE and the LIA combines the power and expertise of CIBSE with LIA's robust quality assurance,

Bob Bohannon, Head of Policy & Academy, Lighting Industry Association.

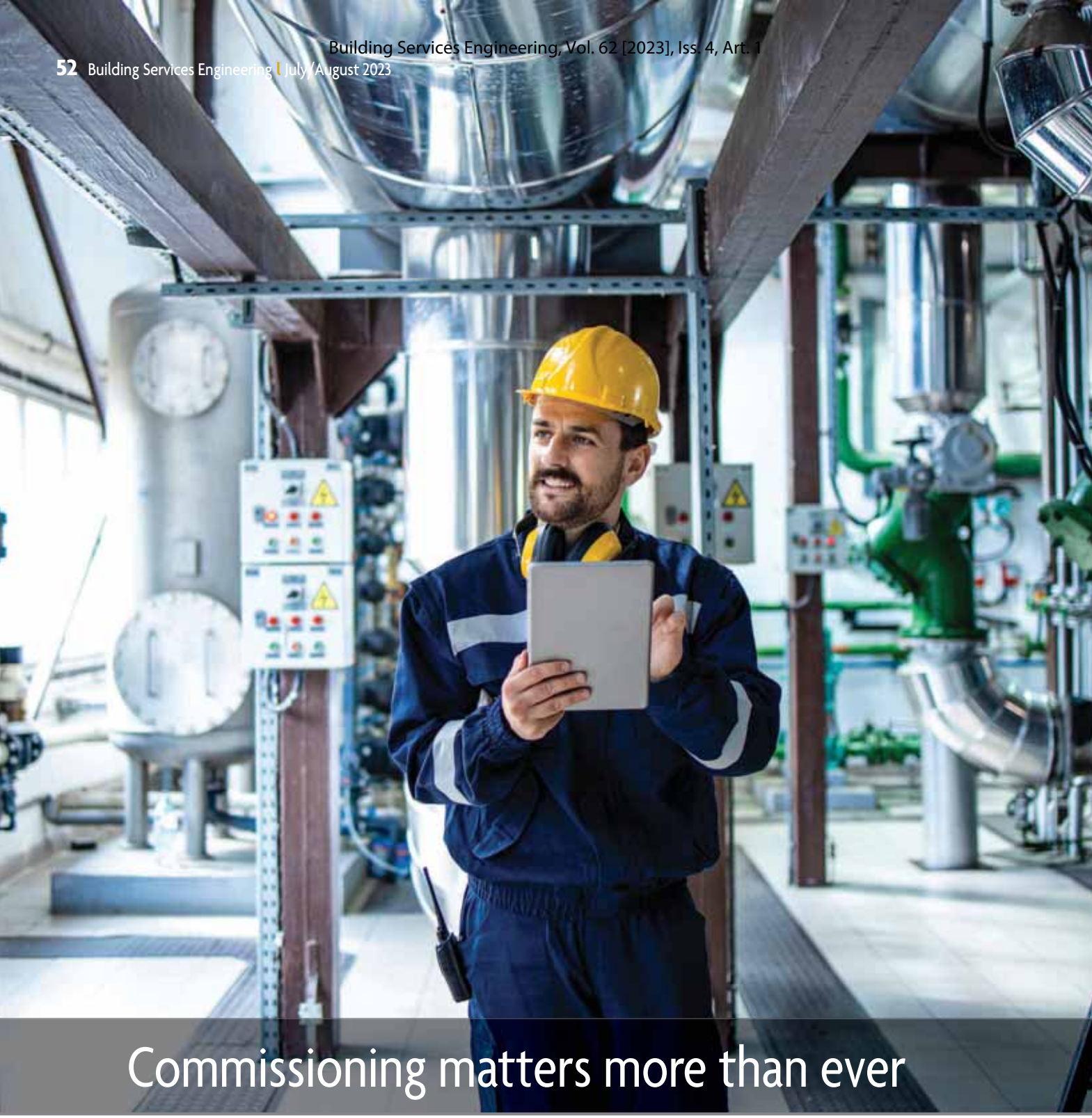
certification systems, and UKAS-accredited laboratory. Manufacturers are already providing ratings for their luminaires, and with the TM66 Assured scheme, they can now seek third-party verification ensuring the credibility, objectivity and consistency of these ratings. This partnership ensures the reliability and integrity of the TM66 Assured Product Conformity Verification Scheme.

Gearóid McKenna, Chair of Lighting Association Ireland (LAI), which is also a member of LIA, commented: "This is a game-changing step forward for architects, consultants and all lighting specifiers and installers. It means they can specify products and lighting solutions in confidence, knowing that their sustainability and circularity credentials have been independently tested and verified."

Helen Loomes, President of the Society of Light and Lighting, highlighted the importance of sustainability in lighting practices and the need to evaluate products based on their whole-life carbon impact and material life cycle. She praised the TM66 and CEAM frameworks for enabling informed specification decisions. With the introduction of the TM66 Assured Product Verification Scheme, decision-makers can now have confidence that circular economy claims are robust and comparable between products, providing protection throughout the value-engineering process.

Ayça Donaghy, CEO of the LIA, emphasised the lighting industry's commitment to delivering net-zero solutions and the necessity to address environmental impact comprehensively. Transitioning from the unsustainable linear economy to a circular economy, where resources in luminaires are conserved and valued, and their life extended, is the next logical step. Donaghy expressed her delight at the partnership between CIBSE and LIA, which brings together both organisations' strengths to establish a much-needed level playing field in sustainability ratings.

For details visit: https://www.thelia.org.uk/page/TM66_Circularity ■



Commissioning matters more than ever

While self-balancing valves and automatic balancing valves might suggest there is no longer a need for commissioning engineers, in this article Tony Anderson, Technical Manager, Commissioning Specialists' Association's (CSA), right, explains why their role is more important than ever.

According to most sales literature, commissioning a system that contains automated valves should be quick and pain-free. However, as most commissioning engineers know, this is rarely the case. Over the last 20 years, automated valves have become the front runners in the commissioning valve market. CFRs, DPCVs, PICVs and EPICV/EPIVs (see panel inset) are just a few of the types available, each having their own sophisticated characteristics that can offer huge benefits in hydraulic applications.

When installed and using variable-flow pumps with a suitable system flow strategy,

automated valves can maximise the flow efficiency, greatly reduce operational costs and offer enormous energy savings to end-users compared with a traditional fixed-flow system. This translates into significant benefits over the operational lifespan of the system.

From the outset though, it is worth noting that the terms "automated" and "self-balancing" as used in sales brochures largely refer to how the valves operate and control water flow after they have been set-up and commissioned. As a specialised component, one of the key challenges with automated valves is getting the system to a commissioned state that allows the valves to perform as per the design intent.

Designers should use caution when assigning the pumping strategy around automated valves to ensure that the entire system is maintainable and lends itself to being flushed correctly. There are numerous examples where "temporary" by-pass loops had to be installed retrospectively around the automated valve or component, as the energy-efficient design model did not allow for suitable flushing and back-flushing of all system components. This is a lengthy and costly addition to each project. It is no coincidence that, in nearly every example, the commissioning team was not appointed until the hydraulic installations were at an advanced installation level.

Specialist care is required when performing the pre-commissioning cleaning of systems that contain automated valves. It is possible that each automated valve has a specific flushing mode or dedicated flushing bypass installed. However, this is rarely found to be the case on site. CFRs of the removable-cartridge type, for example, will need to have been by-passed or have their cartridges fully removed in order to achieve flushing velocities – the BSRIA standard flushing velocity or design +10% will not be achievable with the cartridge in place. Careful handling must be undertaken if removing and storing these cartridges to ensure these are not damaged and that they are correctly identified and re-installed in their original location and orientation.

Most types of DPCVs must also be completely isolated during the initial flushing exercise. Alterations made to the system for flushing activities need to be recorded, and the system needs to be re-instated to "full flow" condition before commissioning activities can commence. Proving the system has been reinstated and that control valves and flow cartridges are re-installed back to their original positions is a pivotal verification step on these types of systems.

The importance of pre-commissioning cleaning once again highlights the benefits of engaging a specialist commissioning engineer's perspective at the design stage, as they can offer advice on the installation, chemical cleaning, commissioning and maintenance requirements of these valves and the system as a whole. Small changes, additions or alterations at design stage can make significant operational and maintenance savings in the long term.

So, what advantages do automated valves offer to the commissioning of a system? A traditional proportional balancing exercise on a fixed-flow system over a large circuit could mean revisiting and adjusting individual commissioning valves two or three times. The second and third times are the fine-tuning exercise, as excess flow from around the circuit can change the flow characteristics within a leg that has already been proportionally balanced.

On an automated circuit with automated valves on multiple branches, after a branch has been balanced there is no need for a second or third fine-tuning exercise. On a balanced branch with an automated valve set-up, the CFR, for example, would operate by limiting the maximum flow to this branch. Alternatively, a DPCV would counteract excessive pressure fluctuations by maintaining a constant pressure in the branch, regardless of what happens in the rest of the circuit.

The real benefit to the commissioning of a system with automated valves comes after this initial balance and set-up phase, as such valves can save a great deal of time by eliminating the need for fine tuning. Conversely, the commissioning engineer has to invest time in setting up the valve in the first instance, and then perform a varying-flow proving exercise. This involves the engineer being able to demonstrate that, when different parts of the hydraulic circuit have been isolated, design flow rates in other parts of the circuit are maintained. This step proves that the variable-flow strategy works across the entire system.

Nowadays, many buildings can contain numerous automated valves or combinations of different types of automated valves installed in various parts of the same system. Therefore, the critical issue for the commissioning engineer is understanding how the various valves are intended to interact and operate as a complete system, not simply how each valve operates individually. The clearest path to successfully commissioning and maintaining these systems is making sure the knowledge of how each hydraulic system is intended to be chemically cleaned, operated and maintained is shared between designer, installer, commissioning engineer and future maintenance teams.

With designers continually striving to produce the most energy-efficient solution to heating and cooling needs, the complexity of variable flow models is forever increasing. As automated valves form an integral part of how each of these intricate design models operate, a specialist commissioning engineer should always automatically be selected at the earliest opportunity to help transform them into a fully-functioning reality on site.

Acronyms explained

CFR: Constant flow regulator

DPCV: Differential pressure control valves

PICV: Pressure-independent control valves

ePICV: Electrically operated, pressure-independent control valve

ePIV: Electrically operated, pressure-independent valve

Empowering a sustainable future

GoPlugable to 'charge up' EV adoption

GoPlugable is a new start-up that aims to address one of the primary obstacles to electric vehicle (EV) adoption in Ireland – the lack of access to charging facilities. The concept is quite simple and involves EV owners taking advantage of privately-owned chargers in their areas with the homeowners earning money by sharing access.

CEO Maebh Reynolds – who has just completed a degree in mechanical engineering from Queens University, Belfast – explains. "Powered by a community-driven app, GoPlugable allows EV drivers who own a home charger to share access with other EV drivers who may not otherwise have easy access to charging points.

"It is empowering a sustainable future by revolutionising the EV charging experience through our innovative peer-to-peer network. This makes electric vehicle charging accessible, convenient and community-oriented for everyone, everywhere. As a group, Irish EV owners and drivers are very tight-knit and collaborative because of the additional research they do when purchasing their cars. GoPlugable is designed to tap in to this spirit of collaboration and sharing."

Highlighting the impressive level of research, innovation and attention given to its software and hardware integration, Maebh was recently named the winner at the Queen's University Belfast Dragon's Den Awards, and received a £10,000 prize which was reinvested into the continued development of GoPlugable. She is one of the first engineering graduates to clinch this prize.

GoPlugable has already secured a Local Enterprise Feasibility Grant and is also included in phase two of Enterprise Ireland's New Frontiers programme based out of DKIT, Dundalk.

In the North, GoPlugable has been included in Catalyst's Co-Founders programme and was a semi-finalist in their annual Invent competition. On an international stage, it has been named among the top four short-listed start-ups selected in the Fédération Internationale de l'Automobile (FIA) Region I Start-Up Challenge with the winner to be chosen at a face-to-face meeting in October 2023.

Maebh assumed full-time duties as CEO of GoPlugable following her graduation this summer. A phased roll-out of the service is now underway across the island of Ireland, the short-term aim being to grow the community to 1,000 by this coming Autumn. Her sights are also set on the UK and further afield.

Commenting on the brand's early success Maebh said: "We have been overwhelmed and reaffirmed by the positive reaction to GoPlugable through the various programmes with which we have engaged over recent months. As the project evolves, we will continue to build important partnerships with EV drivers and owners, stakeholders in the renewables sector, prospective funders and investors."

For more information visit www.goplugable.com ■

Maebh Reynolds, CEO of GoPlugable.

Climate control and industrial process solutions

Cofinair epitomises versatility of cooling towers

Cofinair is the leading European producer of cooling towers, adiabatic coolers and condensers with a stable of three primary brands – Jacir, GOHL-KTK and Decsa. Distributed in Ireland by Core Air Conditioning Ireland, the portfolio includes climate control and industrial process solutions for virtually every application.

Synonymous with innovation and advanced technology, the key features and benefits of some of the models are as follows:

Jacir – The Jacir KH Series of cooling towers is designed for the food, brewing, distillery and pharmaceutical industries. Capacities range from 1500kW to 4000kW with all solutions offering compliance with standards relating to hygiene risks, while delivering high efficiencies and excellent fouling resistance.

Other features include modular design for easy maintenance and transport; large access doors; inclined and plain basin for complete draining; ultra-quiet operation; high energy performance axial-flow fan and low water consumption.

Jacir Topaz – The Jacir Topaz NEO adiabatic cooler range is a combination of dry coolers and adiabatic pre-cooling sections. Capacities range from 150kW up to 1600kW, while the units include high-performance EC motors, Eurovent-certified coils that are protected by an epoxy coating, and a full-opening access door for easy inspection and maintenance.

Jacir KH Series of cooling towers.

TMA-EU series open circuit cooling towers are designed and built by Decsa to best suit all plant applications where high efficiency and low operating cost are required.

All elements in contact with the adiabatic water system are made from stainless steel and no water treatment is required.

Decsa TMA-EU Series – This range of cooling towers is equipped with the exclusive DecsaPACK fill pack, made up of PVC sheets welded together and shaped to increase the efficiency of the range. With capacities ranging from 190kW to 5700kW, the towers are made in Z-725 hot-dip galvanised steel. They can also be protected with special DecsaCOATING Plus epoxy coating that is available in all colours.

Panels are bolted and sealed for perfect water tightness, complete with access hatches for internal inspection, while the water basin is made from hot-dip galvanised steel, complete with anti-legionella sloped bottom.

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THE OBTUSE ANGLE

PAT LEHANE

'Fish & Trips' on Lambay Island

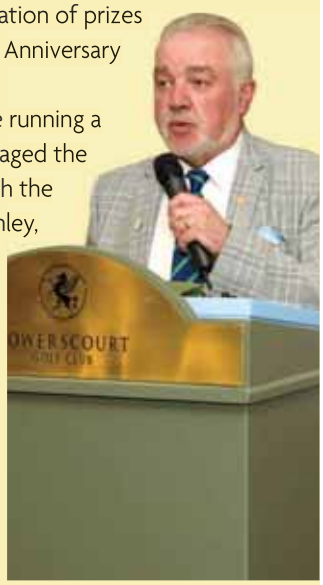
Eamon McGrattan, President, GCP Europe on his "Fish & Trips" charter boat with Martin Bailey, President, EuropeOn, on the way to Lambay Island during the recent joint GCP Europe/EuropeOn international assembly in Dublin. Not sure who was piloting the vessel at the time!

Compere extraordinaire

What a fantastic job Vincent Broderick did during the dinner and presentation of prizes at the recent BTU 50th Anniversary outing in Powerscourt.

With the programme running a little late he stage-managed the formal proceedings with the help of sidekick Des Binley, to deliver a slick and efficient schedule that was, at the same time, warm and relaxed.

To cap it all, his interview with Greg Allen was so incisive that, on completion, they had covered all bases and so there was nothing left to ask from the audience.



T Bourke goes full circle

T Bourke was celebrating its 10th anniversary when it won the tender for the full mechanical services, including associated medical gases, for the green field Tralee General Hospital (now University Hospital Kerry) in 1979.

In 2022, T Bourke returned to the project to supply, instal and commission three 1MW medium-temperature, hot water boilers, complete with dual-fuel burners.

This pressure gauge and boiler plate is from one of the original boilers at the plant and it now occupies pride of place in the new boiler room.

Panasonic thinks of everything!

Surely this is the ultimate in installer-friendly features – a secure, flat surface for your pint on a beautiful, sleek piece of kit that also happens to deliver the perfect indoor comfort levels.

Vincent Mahony of Panasonic assures me it was not part of the design brief but just a coincidental benefit that only became apparent during the showcase introduction of the new Aquarea K and L ranges at the Guinness Storehouse recently.

CJK supports Coolmine

Congratulations to Paul Wong and Conor Kearney of CJK who recently raised €3000 for the Coolmine Drug Rehab Centre while doing a 300km trek along the Camino Way.

CJK has been supporting Coolmine since 2019 through a partnership that aims to raise awareness of the excellent work the centre does, in addition to assisting with its fundraising efforts.

Picture show Coolmine's Cathy McEvoy with Paul Wong, CJK.

NetZero Awards 2023

The appetite and enthusiasm for the *Towards NetZero Awards* were very much in evidence late last year when over 100 industry leaders and net zero champions gathered to celebrate the achievements of the various awards winners for the 2022 event..

In doing so they also set the benchmark for the 2023 awards which include additional categories to accommodate the more diverse submissions anticipated this year.

See https://netzeroawards.ie/ for details on how to enter.

Building Solutions

Today, most of our buildings have a significant negative impact on our environment and climate change. Let's change this together by building sustainable buildings with reduced energy, CO_2 and water footprints.

Wastewater & stormwater

Water supply & pressure boosting

HVAC - Heating, ventilation, air conditioning

Fire protection

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