Building Services News

Volume 55
Issue 4 *July/August*

Article 1

7-1-2016

BS News July/August

ISSN 0791-0878

July/August 2016

Building Services news

Underfloor heating set for growth

Another Side of … Brendan Coghlan

Heat pumps on the rise

Decarbonising Ireland

Well-meant rhetoric colliding with harsh reality?

Achieve Part L Compliance with Mitsubishi Electric's Ecodan

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And still the charade continues

Early July saw the CER secure yet another successful prosecution of an unregistered gas installer, this time against a Tony Gallagher from County Meath for portraying himself as a Registered Gas Installer.

Mr Gallagher placed an advertisement on Adverts.ie portraying himself as a Registered Gas Installer when in fact he was not at the time. The penalty? … €599.

How can a fine of €599 act as a deterrent? It is a paltry sum, especially when it also includes costs. What is the point of the Register if it can be so easily flouted?

Obviously, it is not the remit of the CER, or RGII for that matter, to set the penalty for non-compliance but, when the penalties being imposed by the Courts are so insignificant, they are just wasting their time in pursuing prosecutions. The only message it sends out is that, if you are caught and successfully prosecuted, the likely financial penalty is well worth the risk.

Fines for non-compliance need to be punitive if the problem of non-registered gas installers is to be eradicated.

Building Services news

ISSN 0791-0878
Published by:
Pressline Ltd, Carraig Court, George's Avenue, Blackrock, Co Dublin.
Tel: 01 - 288 5001/2/3 Fax: 01 - 288 6966
email: magazine@buildingservicesnews.com
web: www.buildingservicesnews.com
www.pressline.ie
Publisher and Editor: Pat Lehane
Advertisement Director: Joe Warren
Origination and Design:
Pressline Ltd. Tel: 01 - 288 5001
Subscription: One Year – e70
Printed by: Swift Print Solutions (SPS).

NEWS AND PRODUCTS

SEAI gets international achievement award

The SEAI received a Special Achievement in Geographical Information Systems (GIS) Award from Esri, a leading global GIS solutions provider, at its international conference in San Diego recently.

SEAI GIS dramatically improves the accessibility of spatial data on renewable energy resources, including wind, geothermal and bioenergy. SEAI was the only Irish winner among 167 winning organisations from over 300,000 eligible candidate projects across agriculture, defence, transport and local government.

SEAI's GIS system has intuitive features making it easier for users to gain insight into the potential value of existing and new sustainable energy projects, against the backdrop of some of the environmental designations and other constraints that may exist.

See www.seai.ie

O'Brien joins Pipelife Ireland

Martin O'Brien has joined the growing technical sales team in Pipelife Ireland Ltd, which will rise to five by the year end. Martin's role is technical sales for the Leinster region with responsibility for the company's new Qual-PEX Crimp System, underfloor heating systems, low-surface temperature radiators and heat pumps. This is a timely development as this year the company will celebrate the manufacture of its 800 million meter of Qual-PEX pipe in Ireland.

Martin has extensive experience in the HVAC sector as he has worked with Hitachi Ireland for 10 years. Indeed, this association will serve him well in his new role as Hitachi is the principal brand of heat pumps distributed by Pipelife Ireland.

Pipelife Ireland has produced quality goods for the plumbing, construction and agricultural sectors at its Cork base for over 45 years, specialising in the extrusion of polyethylene pipe for these applications. The product range has evolved over time to the latest generation of Qual-PEX hot and cold water thermoplastic pipes.

Pipelife has also developed an expertise in the design of heating systems. Many systems are straightforward but new methods of heating buildings are now emerging with the use of thermoplastic pipe in applications such as renewable heating and of course underfloor heating.

Pipelife Ireland offers a fully insured design service and Martin will liaise directly with consultants and other specifiers providing advice and guidance, and delivering CPD semninars.

Contact: Martin O'Brien, Technical Sales, Pipelife Ireland. T: 021–488 4700; M: 087 – 791 5392. email: martin.obrien@pipelife.ie

UKAS accreditation for heat pumps

BSRIA it has extended the scope of its UKAS (United Kingdom Accreditation Service) accreditation to include part load testing of heat pumps. BSRIA already provides heat pump testing in accordance with BS EN 14511 and BS EN 12102, and is now accredited to test to meet with BS EN 14825 for part load testing and seasonal efficiency. BSRIA operates a specialist heat pump test chamber offering clients compliance testing in agreement with a range of UK and European incentive schemes, quality labels and directives, including:

- ErP Directive;
- MCS (Microgeneration Certification Scheme);
- EHPA QL (European Heat Pump Association Quality Label);
- Heat Pump Keymark;
- ETL (Energy Technology List);
- HARP (Home-heating Appliance Register of Performance).

Each of the incentive schemes, quality labels and directives outlines specific testing criteria, which are drawn from the standard rating conditions and climates outlined in BS EN 14511 and BS EN 14825. Contact: BSRIA. Tel: 0044 1344 465626; email: bsria@bsria.co.uk

NEWS AND PRODUCTS

Sustainable energy thesis wins EirGrid award

University College Cork Master's graduate Xiufeng Yue has won the EirGrid award for high achievement in engineering for his paper "Incorporation of Risk into the Exceedance Techno-Economic Model".

Yue graduated from UCC with an MEngSc in Sustainable Energy in 2015. His paper presents the work he conducted in the Hydraulics and Maritime Research Centre (HMRC) in UCC and focuses on "reviewing current systems of calculating energy output" and "financial returns into the future".

Yue was given a tour of EirGrid's National Control Centre before being presented with the award by Jon O'Sullivan, EirGrid Innovation Manager.

Dr Brian Ó Gallachóir, Director of MEngSc in Sustainable Energy at UCC School of Engineering pictured with award winner Xiufeng Yue and Jon O'Sullivan, Innovation Manager, EirGrid.

Brogan joins Tritech Engineering

Aaron Brogan has been appointed Project Engineer at Tritech Engineering. Aaron has four years' experience in the building services industry having previously worked for Hevac Ltd as both a building services engineer and projects manager.

Tritech Engineering is a leading mechanical and electrical contractor established in 1999 and is now listed as one of the top 20 M&E contractors in Ireland. It is currently engaged as the lead mechanical contractor on some major developments, including the Ballsbridge and Capital Docks projects.

Contact: Aaron Brogan, Project Engineer. Tritech Engineering.
Tel: 01 – 413 1000;
email: info@tritech.ie

NEWS AND PRODUCTS

Spirotech appoints Euro Gas

Euro Gas has been appointed sole distributor for Spirotech BV throughout Ireland. Spirotech is the leading expert in system water quality with over 60 years of experience in developing solutions to prevent and remove air and dirt in HVAC and process systems.

Spirotech offers "best-in-class" solutions for air and dirt separation, system fluid analysis and design support. The products provide unique guarantee periods and save on time, energy and costs. Solutions offered maximise energy efficiency and avoid unnecessary maintenance and maximise uptime.

Euro Gas welcomes the opportunity to discuss this product range and also delivers CPDs on air/dirt and pressurisation.

Contact: Euro Gas. Tel: 01 – 286 8244; email:sales@eurogas.ie

Dent joins Heat Merchants

Adam Dent, B.Eng, has joined Heat Merchants as Commercial Business Development Manager and will work closely with the Technical Services Team delivering mechanical services, plumbing system design, commissioning and after-sales service.

Adam brings a wealth of knowledge and experience to the role having previously worked with Origen Energy (part of the Hevac Group) where he was responsible for designing bespoke systems featuring heat pumps, solar thermal, solar PV and district heating projects. He is also involved in CIBSE Ireland and is currently Chair of the Young Engineers Network (YEN).

Speaking about his new role Adam said: "It is exciting to be involved with Heat Merchants at a time when the company is building the Technical Services Division to provide complete solutions to consultant engineers and mechanical contractors. The service is covered by full professional indemnity insurance for all mechanical services design and we can now act as the assigned certifier on projects.

Contact: Adam Dent, Commercial Business Development Manager, Heat Merchants. Tel: 086 – 821 0948; email: adam.dent@heatmerchants.ie

Wilo takes gold

The German Design Council and the German Brand Institute have presented Wilo with the German Brand Award in Gold. The German Brand Award is presented in three classes, which are then subdivided into categories. Wilo made the running in the class "Industry Excellence in Branding" in the category "Machines & Engineering". Among all participants, there is only one company that is honoured with the highest award in "Gold".

"We know about the power, effect and competitive edge of a strong brand, and thus live and breathe this at Wilo every day", said Derek Elton, Sales Director, Wilo Ireland (pictured left). "We are particularly proud of this award, as it honours our long-standing and multifarious efforts with regard to brand reinforcement. It also sets a benchmark for us going forward".

O'Brien joins Wolf

Wolf GmbH has appointed Peter O'Brien, B.Eng, as Technical Sales Manager for Ireland and the UK. Peter has extensive experience in the industry and, in his new role, will be responsible for developing the Wolf brand and establishing it as a "total system provider" with consultants and mechanical contractors.

Wolf GmbH is one of the world's leading manufacturers of both domestic and commercial heating, ventilation, and combined heat and power units with all products manufactured at its Mainburg factory in Germany. "I'm delighted to join Wolf and look forward to developing the brand here. It is brilliant to be able to offer a total system solution to our clients", said Peter.

Contact: Peter O'Brien, Wolf. Tel: 086 – 021 6992; email: peter.obrien@wolf.eu; www.wolf.eu

On the job drugs/ alcohol testing

The UK's Considerate Constructors Scheme new "Spotlight on..." campaign was devised to protect and safeguard all construction site workers in relation to drugs and alcohol.

Many contractors, suppliers and clients already conduct random testing, provide information through toolbox talks and display on-site posters.

A recent survey of people working across the sector in the UK discovered that 59% have concerns over the effects of drugs and alcohol in construction.

GOODBYE SQUARE AIR

NEWS AND PRODUCTS

NUI Galway 'Battle of the Buildings'

NUI Galway has launched a new sustainability initiative which aims to make the campus one of the greenest, smartest, healthiest and community-focused in the world.

The first project in this initiative is the "Battle of the Buildings" which aims to make students, academics and staff more aware of the energy use of campus buildings and to encourage energy-efficient behaviour through collegial competition.

The first departments to "battle off" are engineering, nursing and business, all located in the north of the Newcastle campus. Details of daily energy use of buildings will be available online, and on dashboards throughout campus. An energy training and awareness campaign will encourage students, academics and staff to make informed decisions about energy use that will reduce energy costs.

NUI Galway has also launched a new website to collect all existing research, teaching, outreach and management relating to sustainability.

Contact: www.nuigalway.ie/sustainability

At the launch of NUI Galway's new Sustainability website were John Gill, Chief Operating Officer, NUI Galway; Professor Colin Brown, Director, Ryan Institute, NUI Galway; Michelle O'Dowd Lohan, Sustainability Engagement Associate, NUI Galway; Declan Meally, Head of Emerging Sectors, SEAI; and Professor Pól Ó Dochartaigh, Registrar and Deputy President, NUI Galway.

S&P appoints Holmes MD

Robert Holmes has been appointed Managing Director of Soler and Palau Ventilation Ltd. Robert has extensive experience in the air movement sector, having worked in both contracting and sales throughout an extensive career that took in senior management positions in Ireland and Canada. He joined Soler and Palau Ventilation as Technical Sales Manager approximately 12 months ago and took up his new role as Managing Director in June of this year.

Contact: Robert Holmes, Managing Director, Soler and Palau Ventilation.
Tel: 01 – 412 4020;
Mobile: 087 – 091 8429;
email: rholmes@solerpalau.com

€27 million for energy research projects

Irish research institutions and industry have consistently won funding for energy-related research under the EU Horizon 2020 programme with over €27 million in funding secured to date. As the programme's national delegate, SEAI has been supporting many of these organisations in their Horizon 2020 bids, as well as providing additional research funding.

Horizon 2020 is the EU's largest research and innovation programme with an energy research budget of €6 billion for the period 2014 to 2020. SEAI, with Enterprise Ireland, helps identify opportunities for Irish research institutions and industry in the programme.

Commenting on Irish participation in Horizon 2020 energy programmes, Dr Eimear Cotter, Head of Low Carbon Technologies, SEAI said: "It's fantastic to see such support for Irish projects in the area of energy research and renewable energy technologies. SEAI is helping to build national energy research capacity through its Research, Development and Demonstration Programme from which many researchers proceed to European funding. It is particularly pleasing to see Irish SMEs perform well with companies such as NVP Energy and Exergyn successful in drawing down both national and EU funds to support the commercialisation of their products".

Ireland has also been successful in securing funding in large-scale energy-related projects. RealValue, a consortium led by Glen Dimplex, won €12 million for its energy storage project which will see physical demonstrations of its technology in Ireland, Germany and Latvia.

For details see www.horizon2020.ie; and on SEAI's RD&D Programme, see www.seai.ie

MITSUBISHI ELECTRIC
Changes for the Better

for a greener tomorrow eco Changes

Mitsubishi Electric Ireland, the market-leading supplier of energy efficient air-conditioning equipment, has commenced a further expansion phase and is currently seeking to recruit three additional engineering sales personnel. Details of the positions to be filled are as follows.

Regional Sales Manager

Air Conditioning Division — Munster & Connacht Region

The ideal candidate will have extensive sales experience in the air conditioning industry in Ireland, working with both consultants and air conditioning contractors. He/she must be outgoing, confident, and possess the ability to work on their own initiative. The successful candidate will be based in the region and will report directly to the National Field Sales Manager.

Consultant Sales Engineer

Air Conditioning Division — Eastern Region

The ideal candidate will have consulting sales experience in the air conditioning industry in Ireland working with both consultants and air conditioning contractors. He/she must be outgoing, confident and possess the ability to work on their own initiative to build and foster strong relationships. A good knowledge of the Irish construction industry is required, while the successful candidate will most likely have a BSc in an engineering-related discipline. Must hold a valid driving licence. Based in the region and reporting directly to the Field Sales Manager.

Consultant Sales Engineer

Air Conditioning Division — South & West Region

The ideal candidate will have consulting sales experience in the air conditioning industry in Ireland working with both consultants and air conditioning contractors. He/she must be outgoing, confident and possess the ability to work on their own initiative to build and foster strong relationships. A good knowledge of the Irish construction industry is required, while the successful candidate will most likely have a BSc in an engineering-related discipline. Must hold a valid driving licence. Based in the region and and reporting directly to the Field Sales Manager.

Mitsubishi Electric Ireland is an equal opportunities employer and offers a competitive salary with attractive benefits.

To apply please send your application to:
Mitsubishi Electric Ireland, Westgate Business Park,
Ballymount, Dublin 24, or via email to hr@meir.mee.com

Closing date for receipt of applications is Friday, 19 August 2016

ANOTHER SIDE OF ...

Brendan Coghlan ... soccer referee

Most people within building services know Brendan Coghlan. He is a an acknowledged industry figurehead who plays a very active role in the affairs of the industry, be it as a Director of BSS (Ireland) Ltd or, in this current year, as Captain of the BTU. However, what not many know is that Brendan is also a highly-respected FAI-registered referee who officiates every weekend of the season at either intermediate or junior Leinster Senior League (LSL) football games.

While it is now something he is passionate about, the irony is that he only became involved because his wife, Geraldine, saw an advert in the *Herald* looking for would-be referees and enrolled him in an FAI-sponsored referee training course in DIT. But more of that later.

Having played football at every level, from underage right up to the Over 35s, he eventually retired at the age of 36 having suffered a serious groin strain. Before he knew it, he was involved in team management. Eric Barber, the former Irish international with whom he had played, convinced him to take on the management of the Saturday team at the recently-amalgamated Aylesbury and Tymon Bawn clubs and it spiralled from there. Soon he was in charge of Intermediate League club Newtown Rangers and on it went.

After some years he stepped back from team management and was running at least four days a week in Marlay Park before a chance encounter with George Victory, then an engineer with the Department of Justice, got him thinking about refereeing. George was already an established referee and felt that it would suit Brendan.

He no sooner mentioned the idea at home than Geraldine had him enrolled on that course and, before he knew it – at the tender age of 46 – he was an FAI-registered LSL referee. He opted to officiate at LSL games because, having played so much in that league, he knew exactly where all the grounds were.

Over the years he progressed up through the various grades and is now a senior referee qualified to officiate at the top level. This process involved participation in all the regular (and mandatory) FAI-run courses and training modules, something which still applies today. He even has to attend fitness training once a week, in addition to undertaking a number of written exams each year. A panel of Referee Assessors also do unannounced spot checks during games.

"The football referee regime is now very well managed in Ireland", says Brendan, "having changed a great deal since I started. We even have referee Schools of Excellence and it is not uncommon for referees from Ireland to officiate at EUFA games.

"That said, I think it does help enormously if a referee has actually played the game, especially at junior and intermediate level. You have to get the balance right between officialdom and common sense. You hear a lot about referees getting abuse from players and spectators but, thankfully, I have experienced very little of that.

"Indeed, for the most part I enjoy the banter with players and managers. Generally it is all very good natured and, while some harsh words might be spoken in the heat of the moment, all is forgiven once the final whistle blows.

"I also thoroughly enjoy the inter-action with other referees. As a group we come from very different backgrounds, with a mix of everything from bankers and barristers through to engineering, plumbing, teaching, etc. The camaraderie is infectious and that makes it all the more enjoyable".

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et al.: BS News July/August

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Significant changes to Public Works Contracts

The past number of months have seen some significant changes to the landscape of the Irish construction industry in the form of:

- Amendments to the Public Works Contracts;
- An implementation date for the Construction Contracts Act; and
- EU Procurement Regulations.

These changes, in the context of a return to growth in the construction industry, mean that firms must adapt quickly to maximise their potential benefits and minimise the risks associated with the changing market conditions.

In this article, *Brian Quinn of Quigg Golden,* focuses on the amendments to the Public Works Contracts and their potential implications for the building services industry. In our next issue, Brian will discuss the likely impact of the Construction Contracts Act.

Amendments to Public Works Contracts

The publication of Circular 01/16 *"Construction Procurement – revision of arrangements for the procurement of public works projects"* on 18 January 2016 by the Department of Public Expenditure and Reform confirms a number of revisions to the Public Works Contracts. These changes apply to the full suite of Public Works Contracts (PW-CF1 to CF5) and their associated tender documents from 4 April 2016 with an optional derogation period up to 8 January 2017. The changes relate to:

- The status of the Bill of Quantities ("BOQ");
- Direct tendering of specialist works packages; and
- New dispute resolution procedures.

For those operating in the building services industry, whether it be in a consultancy or contracting capacity, the more important changes are the status of the BOQ and specialist tendering.

A return to primacy of the Bill of Quantities

It is now a mandatory requirement for a contracting authority to produce a fully measured BOQ (in accordance with an approved method of measurement as set out in the Schedule) as the pricing document for employer-designed projects. This will attempt to negate the ability of contracting authorities to transfer the risk of inaccurate take-offs to the contractor through Schedule Part 1 K17. This practice often led to tenderers being asked to price on the basis of incomplete information which invariably meant claims. This change should be broadly welcomed by industry, as it should allow more accurate, and therefore more competitive, pricing at tender stage. However, there is some trepidation in the building services industry as to whether this could lead, in fact, to increased difficulties in pricing works packages rather than less.

The accepted practice in pricing mechanical and electrical packages before this change was the "drawings and spec" approach typically produced by the mechanical and electrical consultant. The specialist would then price this information and arrive at its tender price.

This change now provides that a fully measured BOQ must be produced at tender stage for the specialist to price and thus represents a significant increase in the workload and potential liability for quantity surveyors and consultants alike. The general consensus in the construction industry appears to be that if you can understand the technology you can measure any item but, in terms of building services technology, this is simply not the case. So how will this effect the role of the consultant?

Part 3.2.2 of Guidance Note 1.5.3 states that:

> *"The Designer must ensure that the documentation that is to be included in the tendered Works Requirements is prepared and coordinated in such a fashion that it is suitable for the production of a fully measured Bill of Quantities by the Cost Consultant."*

The Guidance Note further states that:

> *"The Cost Consultant when preparing the Bill of Quantities must not make assumptions to cover for inadequate or incomplete design information".*

If a quantity surveyor is expected to interrogate the design documentation in

Brian Quinn (pictured right)
Bsc (Surv) PG Dip Const Law
e: Brian.Quinn@QuiggGolden.com

Brian is a quantity surveyor with extensive experience in the construction and commercial management of civil engineering and building projects. He is head of project management at Quigg Golden, a specialist company in the area of construction and procurement law based in Ireland and the UK.

order to provide a "fully measured" BOQ, he/she is inevitably opening himself/herself up to increased exposure if there are inaccuracies. This will invariably lead to the quantity surveyor putting far more pressure on the design team to provide information relating to its design than would traditionally have been the case. A quantity surveyor will not produce a fully measured BOQ on the basis of a design he/she does not fully understand.

While quantity surveyors are proficient in the measurement of building works using standard methods of measurement, such as the Agreed Rules of Measurement (ARM), many have voiced concerns about the level of knowledge in the profession relating to building services technology. A contributing factor to this issue is that quantity surveying courses at third level, at best, offer a cursory overview of mechanical and electrical technology.

The Office of Government Procurement has attempted to address this issue by advocating the measurement of these services using the ARM Supplement 2 for a period of approximately 18 months. While these rules are a simplification of the work section M and N of ARM4, their use must be stated in a BOQ. If this is not expressly stated the tenderer must conclude that the mechanical and electrical sections are measured in accordance with the relevant work section of the ARM4 and not ARM Supplement 2.

The envisaged benefits of the use of Supplement 2 is that it will allow the quantity surveying profession time to start developing a better understanding of mechanical and electrical technology and will also give the building services contractors time to develop an understanding of the use of standard methods of measurement. The use of standard methods of measurement in the pricing of such specialist works may well necessitate the development of new estimating procedures and practices by contractors in the sector.

While the intention of this change is a welcome reallocation of risk for contractors in general, it is questionable as to whether it will be as welcome in the building services industry given the specialist nature of the work, the skills shortage in the industry in measuring it, and the subsequent reliance being placed on the adequacy of the BOQ. This change could prove to be a recipe for more claims due to inaccuracies and deficiencies that are not addressed and rectified at tender stage. The question is, will they fall at the door of the design consultant?

A return to "nomination"?

This change provides that contracting authorities have the option to allow specialists to tender directly to the contracting authority for specialist packages carried out under the PW-CF1, CF3 and CF5. Guidance Note 2.3.3 sets out when named specialists should be considered but it remains an optional undertaking on the part of contracting authorities. This system may appear similar but, it is not the same as the old nomination mechanisms.

Traditionally, contractors would have developed working relationships and accepted tendering procedures with a core group of specialists. This change means that specialists will now be tendering on a much more competitive basis, so it is essential that a streamlined pre-qualification system be utilised by specialists at an early stage. This may create short-term challenges for specialists to upskill in understanding and completing the qualitative aspect of tender documents, if there are to be any, at initial selection or tender stage.

Once the main contractor has been appointed, the tendering specialists will receive:

- The completed form of tender; and
- A copy of the main contractor's programme.

Specialists will have a minimum of 14 calendar days to consider this information and amend its tender price (or not) and submit a programme in accordance with the main contractor's.

Typically, a main contractor's programme includes minimal detail for specialist works. This is not likely to materially change much and creates its own issues in that it is unclear if tendering specialists will have clarification avenues regarding, for example, preliminaries that are being provided, access dates, etc. This may represent a significant challenge in arriving at a competitive price for tendering specialists.

This change should see obvious benefits for specialists such as:

- A more structured and transparent tender process;
- Knowledge that their tender sum is not subject to adjustment at the behest of the contractor; and
- Details of the specialist's payments will be included in the interim certification.

New dispute resolution procedures

Parties to PW-CF1 to CF4 now formally have the option of engaging in a *without prejudice* dispute resolution procedure prior to conciliation via a Project Board. As an example, the Project Board (as a minimum) could consist of a director from the contractor's organisation and an executive from the contracting authority's side. Both have no direct involvement in the project.

In addition, for projects over a value of €10 million, the parties must appoint a standing conciliator to conciliate any disputes that may arise during the life of the contract. For those contracts under a value of €10 million, the parties may appoint a standing conciliator. It is hoped that this will lead to a more time and cost efficient mechanism in resolving disputes.

Conclusion

Although long overdue, these changes can only serve to assist what we all hope is a resurgence in publically-funded construction projects. However, it is important to be aware of the fact that these changes bring with them increased levels of accountability for all parties involved.

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Ireland's National BIM Council formally ratified

Ireland's National BIM Council (NBC) – a national body to support the advancement of digital in the construction sector – is now fully operational. NBC was formed as a recommendation of the Enterprise Ireland 2014 National BIM Forum and is a key measure in fulfilling the Government's national "Construction 2020" strategy.

Chair is Caroline Spillane, Director General of Engineers Ireland. In welcoming members to the inaugural meeting, she said: "The formation of the NBC is a key step forward in realising the potential of digital tools and processes within Ireland's construction sector, recognising as it does the role of technology and 'better information management' in achieving measured improvements in productivity, international competitiveness and collaboration. Further, the move towards a more highly-engineered 'data rich' product, with less 'on-site' physical labour, opens new opportunities for innovation and a far more interesting, exciting and diverse range of career choices within the industry."

Stephen Hughes, Head of Construction at Enterprise Ireland, said: "Ireland's National BIM Council is a partnership between the public sector and industry to provide vision, leadership and a collective voice for the advancement of digital in the design, construction and operation of built assets. A primary role for the council will be to develop an industry 'road map' that will seek to optimise the successful implementation of Building Information Modelling (BIM) in Ireland."

Members of the National BIM Council (NBC) pictured at the inaugural meeting.

NBC Council

The National BIM Council is made up of members from leading public and private sector representative bodies and includes clients of construction and the industry supply chain. The current line-up is as follows:

Ms Caroline Spillane, Chair, Engineers Ireland;
Tom Costello, Irish Property Unit Trust (IPUT);
Damian Duffy, National Development Finance Agency (NDFA);
David O'Brien, Office of Government Procurement (OGP);
Gerard Bourke, Office of Public Works (OPW);
Noel Kennedy, Intel Corporation;
Sean Downey, Construction Industry Federation (CIF);
Ralph Montague, CitA BIM Group;
John Hunt, Enterprise Ireland;
Dr Alan Hore, Secretariat, DIT/CitA.

BIM Adoption in Ireland

The first national survey (October 2015) to benchmark the level of Building Information Modelling (BIM) adoption across architects, engineers and contractors (AEC) in Ireland revealed that 67% of the industry sample possessed confidence in their skills and knowledge to deliver BIM. While only 6% reported no confidence, the remaining 27% reported a general knowledge of BIM and a gradual improvement in BIM skills. A total of 75% of the sample reported an increase in demand for BIM in Ireland. The research was conducted by Construction IT Alliance and Enterprise Ireland.. ■

The BIM Council is a key measure in fulfilling the Government's national "Construction 2020" strategy

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Heat pumps on the rise – time to move to 'system integration'

According to one of the most recent bulletins from the European Heat Pump Association (EHPA), the European heat pump market grew by 10% in 2015, resulting in a record year with 880,179 units sold. This in turn contributed to 24 Mt of CO2 emission savings and the creation of 47,103 full time jobs, explains *Thomas Nowak, Secretary General of EHPA (pictured below).*

In Ireland, the Heat Pump Association's sales figures for 2015 fully reflect this pattern, showing an increase of 67.76% on the previous year, making for a total of 3902 units sold. Indications for the first six months of 2016 are for another bumper year in store.

This overall growth is mainly driven by the strong segment of air-sourced heat pumps, a renewable technology that finds increasing attention in European and national statistics, according to EPHA.

Geographically, most of the growth can be attributed to increased sales in countries such as Spain (+15%), Italy (+20%) and France (+8%). However, as indicated, Ireland had by far the greatest percentage growth, albeit from a lower starting point.

"These figures could increase further in these countries if an appropriate framework would be set at EU level to account for renewable cooling", commented Pascal Westring, EHPA expert in statistics. This issue is being addressed by the Commission this year, with the Heating & Cooling Strategy and revision of the Renewable Energy Directive.

"Technology-neutrality"

Looking at the sales potential identified by EHPA, if European markets would reach the same maturity level as the Swedish one, the European heat pump stock could realistically grow to 60 million units, enough to replace today's imported Russian gas for heating purposes.

"We are not yet there", says Thomas Nowak, Secretary General of EHPA, "but interest in heat pump technology is on the rise across Europe. A growing number of experts conclude that decarbonisation of the heating sector is impossible without heat pumps.

"Civil society is also turning to the technology. We see a growing number of cities applying to our 'heat pump city of the year award'. Yet, EU policy-makers prefer to remain technology-neutral. Instead, they should create framework conditions that favour the most efficient and best performing technologies. When the state of our planet requires immediate action, high ambition must be the answer."

Integrated solutions = heat pumps

Thomas Nowak added: "A catchy word in Brussels energy discussion nowadays is 'integrated approach'. Heat pumps are the perfect system integration technology for a resilient Energy Union. They are a bridge between the electricity and the thermal sector, between heating and cooling. They can be combined with residual heat, district heating, cogeneration and other RES solutions. Maybe system integration could be the new way forward to unleash the potential of heat pumps"

EHPA Key policy messages

Meeting EU's climate and energy goals entails the decarbonisation of the heating sector. The latter requires a full decarbonisation of the building sector by 2050.

According to several studies, this can only be achieved in time by exploiting the full potential of heat pumps, the most efficient and renewable technologies.

Due to the "lock-in" effect of investment in thermal appliances, heat pumps need to be given strong political recognition as of today. This means:

- Heat pumps need to be openly supported by policy makers to reassure consumers and investors. Best available technologies must be promoted in EU and national policies, on the basis of a consumer-friendly energy label (that has no empty 'A' class and compares functionally-equivalent products);
- Heat pumps need a stimulating climate-friendly regulatory framework, such as strong building requirements, policies to foster the renovation sector, defined phase-down objectives for fossil fuel boilers, and a forward-looking primary energy factor;
- Heat pumps play a key role in system integration and should be valued and promoted. They offer huge flexibility potential through demand-response and thermal storage. ■

Vaillant

Vaillant aroTHERM Air to Water Heat Pump

Because Vaillant thinks ahead

INSTALLERS

No F Gas qualification required for installation

- ✔ Monobloc, hermetically sealed
- ✔ Blue fin coated evaporator as standard
- ✔ Up to 63°C flow temperatures for hot water
- ✔ Quiet Mark accredited
- ✔ EU legislation compliant/future proofed
- ✔ Compact size for easy siting
- ✔ Four models – 5kW, 8kW, 11kW and 15kW
- ✔ Intuitive control

www.vaillant.co.uk

Call C&F Quadrant on
Dublin: 01 630 5757
or visit www.cfquadrant.ie

C&F QUADRANT

joule
Manufacturing Excellence

Complete Heat Pump and Underfloor Heating System

When it comes to specifying renewable heating systems that also deliver the hot water requirement, consultants need look no further than Joule for a totally-integrated, packaged solution. Joule combines specialist manufacturing knowledge and expertise dating back to 1970 with today's cutting-edge engineering and design know-how to deliver customised solutions that are produced in-house.

SAMSUNG
7 YEAR WARRANTY

Working closely with the consultant, Joule's design team of highly-qualified and experienced building services engineers devise the best possible solution for each project and then oversee its production to ensure that a tailored, all-encompassing package is delivered to site ready for installation.

A system schematic is produced so that all parties involved in the project are working off the same plan and Joule engineers commission every project to ensure optimum system performance.

Joule is renowned for its combined Samsung heat pump and underfloor heating solutions, an added bonus being that the heat pumps come with a full 7-year warranty. Already one of the leading suppliers of domestic solutions, it is now seen as one of the fastest-growing systems suppliers in the commercial sector, with more and more consultants trusting and relying on the expertise it has to offer.

Installer Training and ErP Tool

Joule is fully aware that the best-engineered solutions also require installation to the same exacting standards. To this end it has an ongoing installer training programme that is delivered either in-house at its own specially-built training centre or via its fully-equipped mobile training van (below).

It has also designed an ErP tool so that installers can work out a system's efficiency in three easy steps.

Step 1 – Log onto the Joule website, select installer from the top tabs and then click onto the ErP tool on the left hand side;
Step 2 – Select the relevant products and, once selected, create the label and fiche;
Step 3 – Finally, fill out the form and click submit.

The generated label will then be sent via email to download and use.

Nationwide Technical Support

Joule has a network of experienced and highly-qualified sales and technical engineers strategically located throughout the country to ensure nationwide support. All are F-gas registered and can react to, and solve, virtually any likely problems that arise with a system.

Local contact details are:
Ulster: Niall McArdle, 0044 7730 145018. niall@joule.ie
Connaught: Sean Collins, 087 692 8114. sean@joule.ie
Munster: Eoghan Conway, 083 176 2372. eoghan@joule.ie
Leinster: Eoin Naughton, 086 773 5095. eoin@joule.ie

www.joule.ie

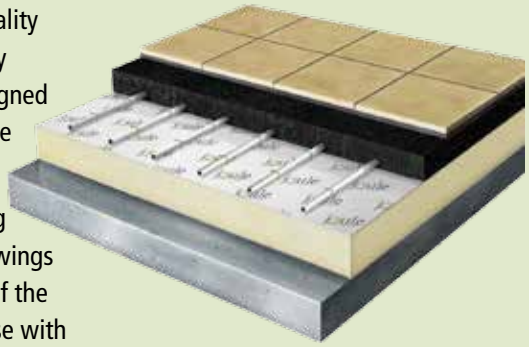
Joule combines specialist manufacturing knowledge and expertise dating back to 1970 with today's cutting-edge engineering and design know-how to deliver customised solutions that are produced in-house.

Manufacture and Assembly

A major strength of Joule is its ability to manufacture every key component in-house. The engineers working in this division ensure the system is expertly built, assembled and programmed prior to being packaged and placed in the distribution network for site delivery, at a time that suits the project works schedule.

Underfloor Heating

Joule underfloor heating packages only use quality components and every system is custom designed in conjunction with the project consultant.



The full range of fixing methods and line drawings are provided as part of the service, along of course with all the necessary components such as stainless steel manifolds, digital touchscreen thermostats, aluminium barrier pipe, etc.

Samsung Heat Pumps

Samsung heat pumps form an integral part of Joule renewable heating solutions. The Samsung range is the culmination of years of research and represents cutting-edge technology incorporated into units that are easy to install. The range is extensive with a model to suit virtually any capacity. All deliver high-performing, energy-efficient, cost-effective renewable heating and hot water solutions when incorporated into a Joule system.

Smart Plumb

Another critical component of Joule's heating and hot water system solution is Smart Plumb, the next generation in pre-plumbed hot water solutions. With its sleek design the space required for a complete system installation has been reduced dramatically.

It has been specifically designed and engineered so that it requires much shorter installation times to fit than a standard hot water cylinder. It also incorporates only brand-leading components such as Honeywell and Reliance so that quality is guaranteed.

joule
Manufacturing Excellence

Kylemore Park West,
Ballyfermot, Dublin 10.
Tel: 01 – 623 7080
Email: info@joule.ie
www.joule.ie

Manufacturing Excellence

Vaillant aroTHERM heat pumps from C&F Quadrant

aroTHERM is Vaillant's second generation air-to-water heat pump range. Developed in line with the exacting standards and precision engineering associated with Vaillant, this MCS-accredited heat pump range offers one of the most adaptable heat pump systems on the market, ensuring high performance, quality and comfort levels.

The aroTHERM is the perfect solution as a renewable system for heating, domestic hot water, and also cooling. Whether it is new-build or retrofit, it can provide low-cost space heating and also provide up to four times as much heat as an electric heater using the same energy. Produced with high-quality materials in Vaillant plants in Europe, it is easy to install and operate, has a modern, attractive design, and needs just one control to manage the entire system.

aroTHERM can be used as an independent heat generator but also as part of a hybrid system. Combinations are possible with any other heating generator, whether oil or gas fired. The control is taken over by the intuitive operating calorMATIC 470/4 with integrated hybrid management. By the use of the triVAI parameter, the customer will profit automatically from highest efficiency, lowest costs and greatest protection of the environment.

The intuitive operating calorMATIC 470/4 with integrated hybrid management.

The Hybrid system automatically monitors, calculates and selects whether it is more cost-effective for heating to be provided by the boiler or the heat pump. The system calculates the respective efficiencies based on the outdoor temperatures, the heating requirement and the specific energy tariffs – which are pre-programmed into the calorMATIC 470/4 – and then automatically switches between the two sources as required.

Main features and benefits are as follows:

- Blue fin-coated evaporator as standard to increase life and efficiency;
- Tray and trace heater ensures quick de-icing, even in the most extreme weather conditions;
- Can produce up to 63°C flow temperatures for hot water;
- Designed and built to meet current and ErP requirements;
- No F-Gas qualification required for installation;
- Inverter-driven technology;
- Low sound power levels, from 58dBa on the 5kW;
- Monobloc hermetically-sealed unit.

Contact: C&F Quadrant. Tel: 01 – 630 5757; email: sales@cfquadrant.ie; www.cfquadrant.ie ■

Vaillant aroTHERM heat pump from C&F Quadrant.

CO_2 Unique Efficiency

Q-ton is an air-to-water heat pump which uses CO_2 gas as a natural refrigerant and delivers industry leading coefficient performance of 4.3* with a **minimal carbon footprint**.

Q-ton is ideal for heating water up to temperatures of **90°C**, which is suitable for a wide range of applications. With a Global Warming Potential **(GWP) of 1** & Ozone Depletion Potential **(ODP) of 0**, Q-ton is already future proven.

High Performance

High Efficiency

Environmentally Responsible

Easy Operation

Long-term Reliability

DIAMOND AIR CONDITIONING, LTD.

Diamond Air Conditioning Ltd,
C5 Bymac Centre, Northwest Business Park,
Blanchardstown, Dublin 15. Tel: 01 – 636 3131;
email: info@diamondair.ie;
www.diamondair.ie

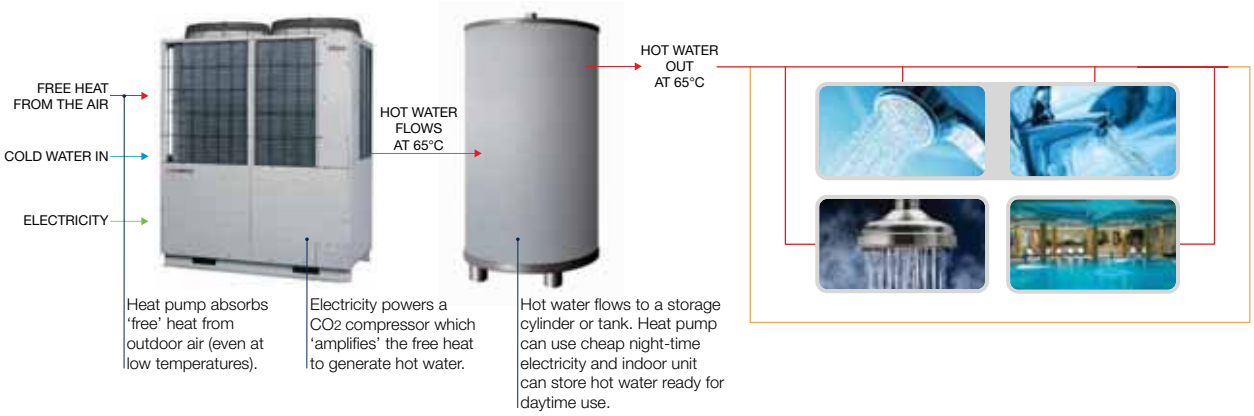
Introduction

Carbon dioxide (CO_2) hot water heat pumps are relatively new on the market and have the ability to deliver sanitary hot water at 65-90°C very efficiently. They can offer significant carbon and energy savings potential compared with hot water boilers.

Q-ton is specifically designed to transfer heat from the ambient air into a water heating system. The refrigeration system uses carbon dioxide as the working fluid. It can be used to provide sanitary hot water in a wide range of buildings.

How it works

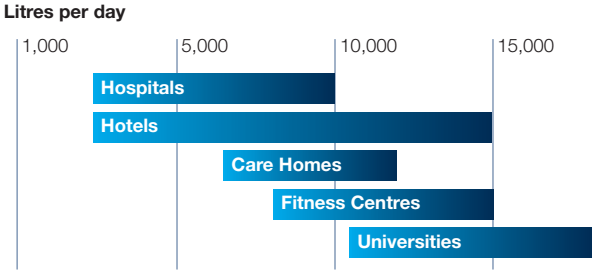
- Systems can be specified from one 30kW Q-ton unit giving 6,000 litres of hot water/day, to up to sixteen heat pump units in a modular configuration of 480kW, connected to substantial hot water storage tanks.
- Touch screen controller makes the system easy to operate.
- Hot water production and availability can be monitored via a user-friendly graphic display.



Who it's for

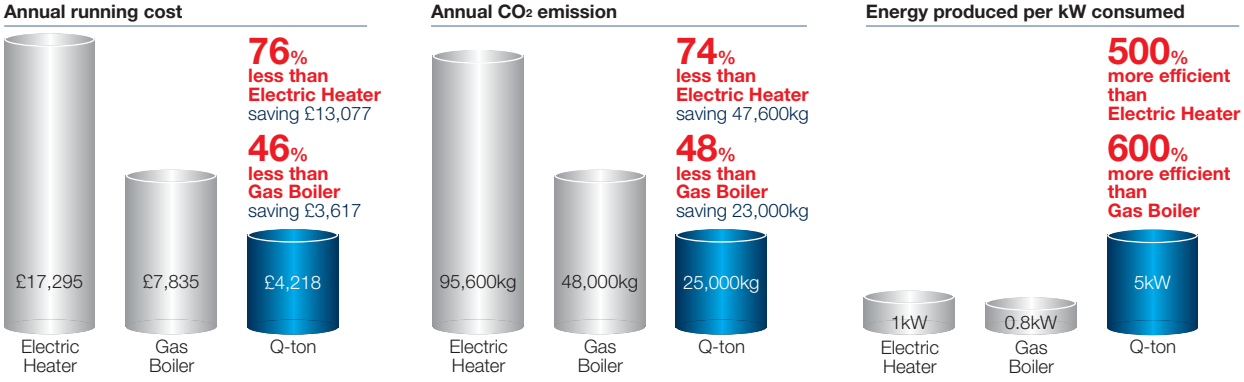
Q-ton is suitable for any applications using sanitary hot water in excess of 5,000L per day. Typical applications:

- Hospitals
- Hotels
- Care Homes
- Fitness Centres
- Universities
- Restaurants
- Laundries
- Food Industries
- Camping Sites etc.



The benefits

- Substantial reductions in running cost (40-75%)
- Substantial reductions in CO_2 emissions (45-75%)
- Suitable for new build and retrofit
- No need for heating back up
- CoP of 5 (produces 5kW of energy for every 1kW of electricity)



Operation conditions: senior care home, 80 persons, 8,000L/day, 60°C conversion

Q-ton Air to Water

MITSUBISHI HEAVY INDUSTRIES, LTD.

Our Technologies, Your Tomorrow

Meet Part L compliance with Yutaki Heat Pumps

YUTAKI

Completely redesigned to meet the needs of specifiers, installers and homeowners – and to meet Part L compliance and CO2 reduction objectives – Hitachi's expanded Yutaki air source heat pump range is now one of most advanced on the market.

The simplified design utilises common components, common outdoor units and common controllers, while the compact size makes for ease of handling and installation in tighter spaces. All models have domestic hot water (DHW) Legionella protection and are supplied with a five-year warranty as standard.

Moreover, this streamlined approach reduces the need for multiple spares and lowers installation and maintenance time. Performances have also been improved, with higher COPs, better seasonal efficiencies and higher capacities.

"Yutaki has some of the best seasonal performance (SCOP) figures on the market", says Robin Chandler, Johnson Controls – Hitachi Air Conditioning, "with many models A+++ rated. The scope of applications covered is massive, the 70 plus models catering for virtually every requirement. Part L compliance is assured with the BER certification process made simple. These units are perfect for those looking for performance excellence and to reduce their energy bills, as well as their impact on climate change".

Yutaki has some of the best seasonal performance (SCOP) figures on the market

ErP active

ErP Active Tool

To help installers meet the requirements of the ErP Directive Hitachi has developed a special web application showing all the technical details relating to the energy performance label of Hitachi products. Users are guided through all the required steps to input the necessary information and then produce the related energy label and fiche documentation.

Yutaki for all applications

Yutaki S

The Yutaki-S 60°C units feature a 6kW outdoor unit as well as three indoor units (4.5kW, 6kW and 7.5kW) to suit the heating and domestic hot water requirements of small to large properties. Ideal for both new build/renovation projects.

Yutaki S Combi

The Yutaki S Combi (4.5kw – 16Kw, 60°C) is split type with an integrated pre-plumbed domestic hot water tank. The range includes a new 6kW unit, plus an innovative solar version with integrated 260L domestic hot water (DHW) tank, with solar coils designed specifically to be "ready to use" with solar panels.

Yutaki S80

The high temperature Yutaki S80 generates domestic hot water at up to 80°C. It now includes two specific indoor units to be used either stand-alone (with top-pipe connections) or with an optional 200L or 260L domestic hot water (DHW) tank, with rigid-pipe connections to the rear of the unit. This unit is especially suited to retrofit applications;

Monobloc Yutaki M

Monobloc Yutaki-M, which requires no indoor space, now shares many of the same components and controllers as the splits for simplicity of installation and maintenance. All Yutaki models can be supplied with a new "Cooling Kit" accessory to enable both heating and cooling modes.

Hitachi dedicated controller

The new Hitachi multi-function wired remote control is common to all Yutaki models – meaning a single menu for all Yutaki products with a dedicated installer view, wizard start-up configuration and a more intuitive menu for quick and simple commissioning.

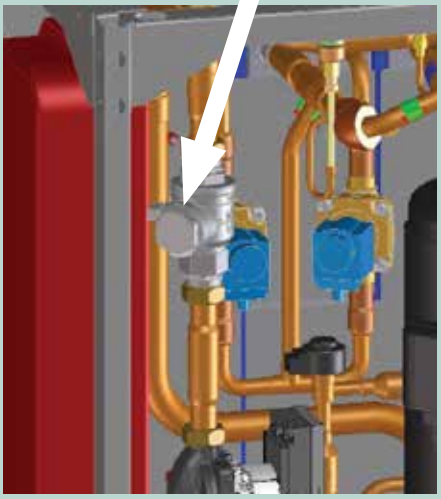
The alarm history is logged to assist engineers with trouble-shooting while it comes complete with dedicated end-user view and features weekly timer, holiday mode, smart function, favourite button and boost function.

The new wireless remote has similar features, is easy to fit, simple to use and offers remote control via a smartphone app.

HiToolKit Design Aid

Hitachi's range of HiToolKit software has been developed to design systems which meet building consultants' and technical advisors' requirements. This software allows you to proceed quickly and easily through the phases of product selection for a system solution through to the complete project in just six clicks. The software package is freely available to download from Hitachi.

Unique ball valve strainer



Thanks to Hitachi's unique new ball valve strainer, it is possible to clean the strainer without having to drain out the water.

Hitachi Training Updates

Hitachi provides comprehensive product training programmes that include technical CPD seminars for consultants and other specifiers, along with practical hands-on installer courses for contractors. Some can be delivered in-house while others are presented at Hitachi's dedicated Training Centre.

And you think heat pumps are new?

Most people within building services are now familiar with heat pumps, and especially so in recent years as their market penetration has multiplied. Just last year alone saw a 67% increase in unit sales over the previous year. However, as the article below from the August 1981 edition of IHVN (now *Building Services News*) illustrates, heat pumps were being installed in Ireland as far back as 35 years ago.

Heat Pump — The Only Choice!

"When it came to heating my home, there really was no alternative to the heat pump as far as I was concerned". So said John Freestone, an American who settled in Dublin eleven years ago, and operates his company, Blackrock Glass & Glazing from premises adjacent to his home. Coming from a country where the heat pump has been well known and accepted for several years as the cheapest form of heating, to John the choice was incredibly simple.

The Freestones purchased their picturesque cottage some five years ago and John then set about extending it, doing much of the work himself, to add a lounge, kitchen, additional bedroom and a bathroom. The design of the system was handled, by Walker Air Conditioning who specified a Carlyle 50DQ024 packaged heat pump, with an 11 kW electric heater battery for supplementary heat. The heat pump, with a nominal heating capacity of 7 kW, is installed at the back of the house and underfloor ducting distributes supply air at the rate of 1000 cfm (0.47m^3/s) throughout the house via strategically located floor grilles. Return air is taken back through celing grilles to a common return air duct installed in the roof space.

As a further demonstration that the heat pump system presents no mysteries, John Freestone installed all the ducting himself, using fibreboard in place of metal to further reduce costs. As the system has not been operating for a full year, it is obviously too early to determine how great the savings in running costs are over conventional heating systems, but the Freestones are so confident that the costs will be low, that they not switch off the heating at night. They merely reduce the temperature by about five degrees, thereby keeping their home warm the whole time. As the bedrooms are located at the extreme ends of the house anyway, they are slightly cooler than the rest of the house.

As a man with an engineering background, John Freestone readily appreciated that to get the best from the system, there had to be a high level of insulation and so all outside walls have 4" insulation, and all interior walls have 1".

A fresh air intake on the cold air duct to the machine provides all the ventilation that is needed in the summer. 'Unfortunately' says John 'I don't think that the Irish weather is warm enough to make air conditioning a necessity for us during the summer, but of course, we can switch to coolingt if we are lucky enough to neet it'.

Mrs. Freestone, a prominent dog breeder, is completely non-technical but as a busy housewife she is absolutely delighted with the heating system. 'Because we never have to open the windows, not only do we get no traffic noise, we get very little dust, and as far as I am concerned that's a very big bonus'.

Walker Director, Michael Buckley, is also very pleased to be associated with this installation. 'It takes the mystery out of the heat pump and demonstrates very clearly that this type of system can save energy, and therefore money in all sorts of ordinary homes, not only those ultra-modern, architect designed houses that feature in the glossy magazines.

'Of course, there has to be a three phase electricity supply, which involves added expenditure at the outset, but at the moment we estimate a payback period for John Freestone of about six years. Inevitably, fuel costs will rise and reduce this period even further, making it a more attractive proposition than ever'.

● The living area of John Freestone's cottage.

● Picture shows the Carlyle 50DQ024 packaged heat pump installed at John Freestone's house, in Dublin.

Panasonic move in to Cloud with Aquarea Smart Cloud

Panasonic has developed a new cloud-based control system, the Aquarea Smart Cloud (CZ-TAW1), for the Aquarea H Generation of heat pumps. The control system, which can connect to the heat pump via an Ethernet cable or Wi-Fi connection, offers an intuitive user interface and wide range of control options for end users and for maintenance professionals.

"We are delighted to introduce this new smart control system for our Aquarea heating systems," says Vincent Mahony, National Account Manager, Panasonic Ireland.

"It brings an already-advanced heating system into the *Internet of Things* age, as this cloud-based control system is accessible from anywhere in the world, from computers, tablets and smartphones. The flexible, intuitive interface offers a wide range of control functions and gives us the opportunity to add even more functionality as the technology develops. The possibilities for this control system are really exciting."

The Aquarea Smart Cloud has a simple, intuitive user interface that enables installers and maintenance operators to control a number of functions of the Aquarea H Generation heat pump. It enables users to easily adjust the temperature in two different zones, and see the current room temperature in that zone, as well as changing the temperature of the hot water provided by the Aquarea system.

Users can also set weekly timers with different instructions for the separate zones and hot water, set holiday timers, and check the system for faults. Crucially for commercial property owners, they can see the heating and hot water system's power consumption compared with the temperature on a daily, weekly, monthly or even annual basis. This allows for detailed energy consumption analysis.

The Aquarea Smart Cloud is much more than a simple thermostat for switching a heating device on or off.

The Aquarea Smart Cloud has a simple, intuitive user interface and also enables installers to respond more quickly to faults and issues, keeping the end-user completely satisfied.

Throughout 2017 Panasonic will add new services to the Aquarea Smart Cloud focused on enabling full remote maintenance of the Aquarea system. This will allow maintenance specialists to engage in predictive maintenance and system fine-tuning, as well as fixing malfunctions when they occur. Installers will be able to manage several installations at once with a dedicated interface, saving time and simplifying logistics.

The Aquarea Smart Cloud also enables installers to respond more quickly to faults and issues, keeping end users completely satisfied with their heating and hot water systems.

The only requirements of the Aquarea are the H Generation heat pump, the CZ-TAW1 interface to connect to the Aquarea unit, and Internet connection via Wi-Fi or Ethernet cable. When the user registers the device online, it will be connected to the service, and the user can begin controlling it from the device of their choice.

The Aquarea Smart Cloud is much more than a simple thermostat for switching a heating device on or off. It is a powerful and intuitive service for remotely controlling the full range of heating and hot water functions, including monitoring energy consumption. In addition, malfunction warnings and remote maintenance capabilities will be added to the system from 2017, making it a comprehensive heating and hot water control system.

Contact: Vincent Mahony, National Account Manager, Panasonic Ireland. Tel: 087 – 969 4221; email: vincent.mahony@eu.panasonic.com

St Botolph

St Botolph combines high specification with aesthetics. The HVAC system is an integral part of the design, the challenge was to meet the design aesthetics whilst ensuring that the diffusers provided the highest aerodynamic and acoustic performance levels. Many of the diffusers were custom built and featured a combination of sweeping 11, 12 and 13 metre curves replicating the many curvatures of the building's design. The Fixed Blade Swirl Diffusers provided an attractive but aerodynamically efficient alternative to conventional circular or square ceiling air terminals.

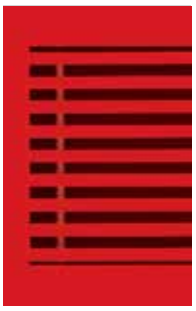
Bon Accord

Air terminal devices have been used throughout the Bon Accord shopping centre where there was a need to design an efficient air distribution system to help reduce emissions and carbon footprints. Air distribution was a key element, requirements included providing the most effective air distribution to maximise airflows and ensure that the air throws deliver the correct temperatures throughout the centre. Waterloo's 'CSF' range of linear slot diffusers have been used throughout the centre including the food court, atrium and Upper Mall. The modern architectural design of the food court required a customised solution, with Waterloo manufacturing bespoke products to provide long sweeping curved designs above the food court.









Products



Waterloo Air Products manufacture an extensive catalogue of products suitable for all wall, ceiling and floor applications. Designed to suit both performance and aesthetical requirements, most can be ordered in customer specified colours and finishes. The majority of Waterloo's products are produced in the UK, meaning higher quality, shorter lead times and lower costs.

The **Waterloo Aircell** presents a contemporary style combining high performance and robust construction with the significant cost advantage of injection moulded engineering polymers. Waterloo Aircell are multi-purpose products which bring particular benefits to chlorinated environments (swimming pools) or high cleaning regime areas (hospitals). However, these products can be used in any air distribution system where temperatures do not exceed 50°C.

available from S&P Ireland Ventilation Systems Ltd

Soler and Palau are suppliers of domestic, commercial, industrial and process ventilation equipment in Ireland.

The team at Soler and Palau have over forty year's experience in the ventilation business. With their knowledge and experience of fans their staff will offer you professional and technical advice on the optimum ventilation solution from their extensive product portfolio.

For more specific information, contact:

Tel: 00 353 (01) 4124 020 www.solerpalau.ie sales.ie@solerpalau.com

Baxi Potterton Myson unveils CIAT heat pump

Baxi Potterton Myson has expanded and strengthened its portfolio with the addition of the CIAT range of air to water heat pumps. A sister company of Toshiba, CIAT has manufactured heat pumps for over 40 years and designed its current Ereba range to deliver renewable heat in a cost-effective, energy efficient, manner.

Ereba 12H from Ciat.

There are seven models in the range, with operating capacities for heating of 4kW to 15kW, and cooling of 5kW to 16kW. These reversible air/water heat pumps incorporate inverter technology and are ideal for heating and cooling individual homes or small service-sector premises.

Delivering a water temperature of 60°C with a -10°C ambient temperature, Ereba can be connected to all types of hydraulic systems, including underfloor heating or radiators. Coupled with an electric heater or boiler, this new system is easy to install and maintain.

"This is the perfect addition to our product line-up", says Vincent Broderick, Sales Director, Baxi Potterton Myson. "Ereba is equipped with the latest Toshiba DC inverter technology and delivers excellent energy efficiencies with a COP of 4.2 certified by NFPAC. Soft-start technology ensures quiet operation.

"Thanks to its high water outlet temperature, Ereba provides comfort by utilising the heat pump during very low ambient conditions. With further enhancement of electric heater boiler back-up, the best of both worlds is achieved with excellent efficiency and security of constant temperature, regardless of conditions."

Ereba 4H from Ciat

Ereba is not restricted to heating only. It can also provide cost-effective hot water utilising the 300 L water heater option.

The "Touch'N'Go" electronic controller supplied with every model gives optimised control of the temperature. It manages all of the operating parameters and allows multiple settings, including time clock control, day and night settings, etc.

Ereba features and benefits

- Reversible packaged air/water heat pump;
- DC Inverter technology;
- Hydraulic module with variable speed accelerator pump and expansion vessel;
- Crankcase heater as standard;
- Self-adjusting functions;
- R410A refrigerant;
- 230V single-phase and 400V three-phase 50Hz;
- Heating mode operating limits -20°C/+30°C;
- Hot water outlet temperature up to +60°C;
- Pre-configured water flow.

Contact: Baxi Potterton Myson.
Tel: 01 – 459 0870;
email: sales@potterton-myson.ie;
www.baxipottertonmyson.ie

Mitsubishi Electric introduces CO2 refrigerant, 4kW Ecodan heat pump

Mitsubishi Electric's new 4kW Ecodan air source heat pump was designed specifically to tackle the needs of new-build homes and incorporates a system that delivers the hot water requirements while still meeting the lower heating demand of today's well-insulated properties. Because of the reduction in U values and thermal bridging in modern, better-insulated homes, the requirement for hot water is likely to exceed the heating demand for the first time ever.

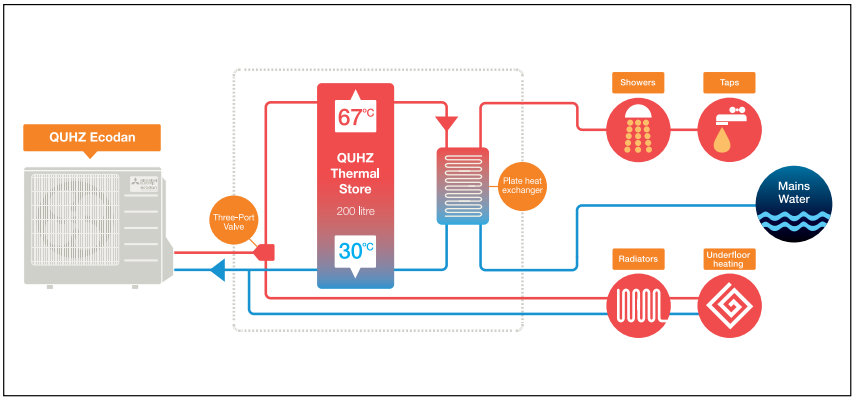
"What is needed is a new way of delivering energy efficient heating and hot water", says David McConnell, Sales Manager Heating Products, Mitsubishi Electric Ireland. "We have engineered the Ecodan QUHZ monobloc system to meet this need by providing exceptionally-high efficiency in the production of hot water, along with renewable space heating, for the home.

"This model uses CO2 as a refrigerant to ensure a large delta T between the flow and return temperatures to and from the outdoor unit, resulting in high levels of efficiency that enable the system to meet the high hot water, low heating requirements of today's new-build properties".

The Ecodan QUHZ unit is MCS-Approved and straightforward to install, delivering water at 70°C to a packaged 200-litre thermal store. From this thermal store mains water is heated directly up to 65°C via Mitsubishi Electric's unique plate heat exchanger, meaning the homeowner receives hot water on demand.

The fundamental design, application and control of the Ecodan QUHZ is exactly the same as the rest of the range with advanced control logic within the thermal store allowing the system to deliver the high efficiency levels that the market has come to expect from the Ecodan brand.

With legislation forcing housing developers to use products and practices that reduce the energy required for space heating, hot water is becoming the dominant load in new dwellings. This means that high-



Thermal storage schematic of Mitsubishi Electric's new 4kW QUHZ Ecodan heat pump.

There is now an Ecodan model suitable for both new-build and retro-fit homes in almost any situation

CO2 emissions and reduce running costs. Air source heat pumps are now recognised as an important part in the delivery of that solution.

"As more homes are built and more heat pumps are installed, the operating noise will become an increasingly important factor", says David, "so we have deliberately designed the Ecodan QUHZ to address this. The QUHZ model offers exceptionally-low noise levels with a whisper-quiet 41.2 dB(A) at 1.5 metres from neighbouring properties, making it ideal for almost any scenario.

"This new addition to the range means that there is now an Ecodan model suitable for both new-build and retro-fit homes in almost any situation. We have introduced this new way of delivering hot water to the new-build sector because we see a real potential for modern homes to receive reliable hot water and heating in a low carbon, energy efficient way that will help the country reduce overall emissions".

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PRODUCT REVIEW: UNDERFLOOR HEATING

Underfloor heating set for significant growth

Kelly Butler, author of this article, is Deputy CEO and Marketing Director of BEAMA, the manufacturing trade association for the electro-technical sector. He has a background in both energy and telecoms, and since joining BEAMA in 2004 has engaged with the UK Government to develop modern policies to encourage the use of domestic heat pumps, electric heating, ventilation and hot water products in low energy housing. He developed the first SAP Appendix Q proposal for the UK Government and its agencies in 2006, and continues to push for support for new and and emerging technologies.

All indicators suggest that underfloor heating is set for significant growth in the coming years as consumer interest in energy efficiency increases, and the measure becomes a more popular aspirational feature than conservatories and hot tubs. Recent research conducted by One Poll in the UK indicates that 40% of people searching for a new home would prefer to have underfloor heating as their first choice. This is reflected by way of a 10% year-on-year sales growth trend in the sector, and an increase of 5% on the result of a similar survey in 2014.

More importantly, 70% of 45-54 year olds aspire to have an energy efficient home with underfloor heating at the heart of this drive and we now know that over one million UK householders would pay a premium of £5,000 or more for aspirational measures such as underfloor, rising to around 7.5 million prepared to pay £1,000.

While there are no recent detailed figures for the Irish marketplace, Ireland does tend to mirror the UK experience and anecdotal evidence supports this trend.

So, what is stimulating this response from ordinary homeowners, self-builders and home hunters? Comfort and energy efficiency are the main drivers. Underfloor heating delivers 10-15% greater efficiency from a boiler-driven system compared to other heat emitter types, and room by room-controlled evenly-distributed temperatures are far more attractive to customers than hot and cold-spotting radiator systems. If you couple this with surface space saving, it is not hard to see why underfloor heating is the preferred choice for 90% of self-builders.

But it's not only the aspirational drivers that are at play here. Underfloor heating has been hitting the mainstream in recent years through the vehicles of progressive building regulations and renewable heat incentives/grants. For instance, from a very small sales base in 2009, low temperature distribution dependent heat pump sales in Ireland grew exponentially to nearly 3,500 units in 2015, and the indications for this year are of another very significant increase in unit sales. As oil prices increased, so too did the investment in renewable heat and interest in underfloor heating.

But the heat pump financial incentive argument is somewhat one-dimensional considering that the ramping up of building regulation standards, coupled with growth in the apartment sector, also saw

Perceptions of underfloor heating being costly or disruptive are changing

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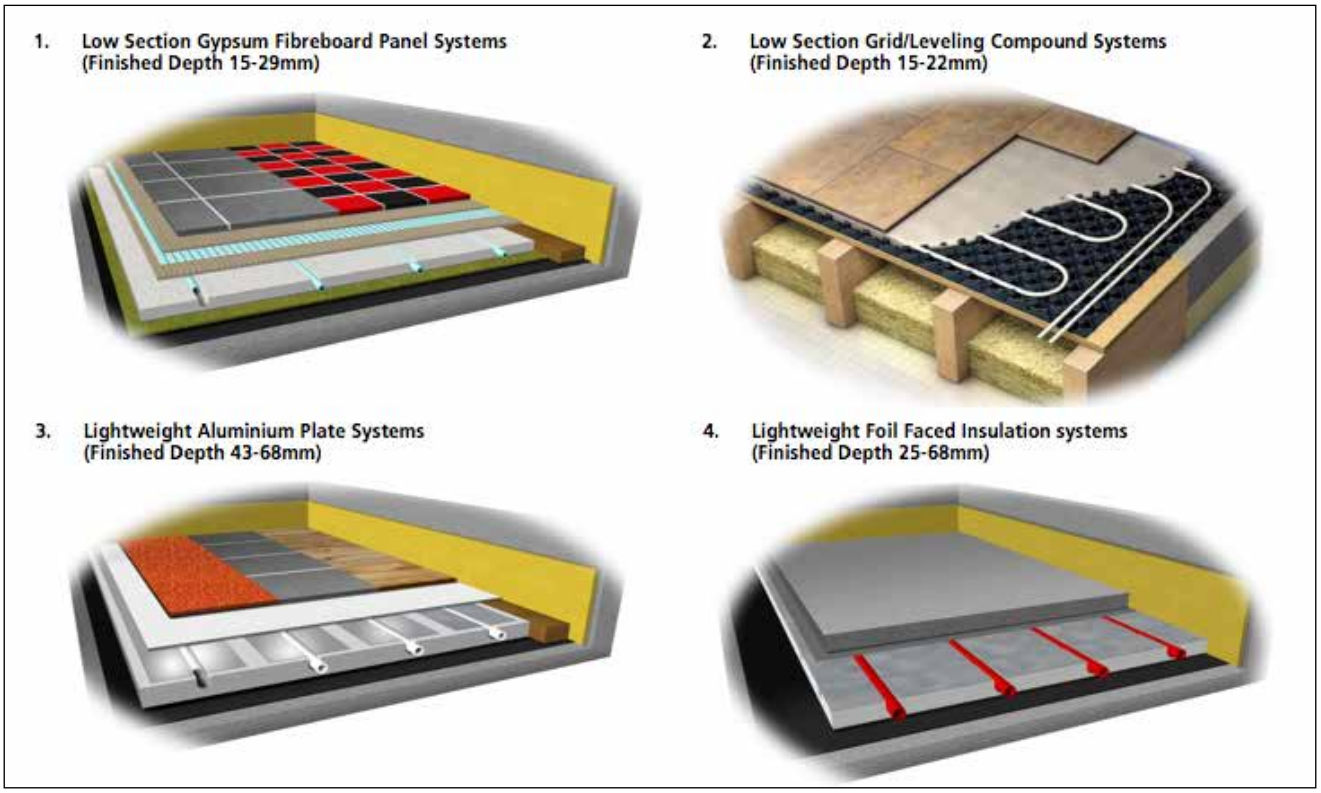

increased take-up and with it, an increasing acceptance of underfloor heating across the specifier and architect communities.

Regulations and incentives have come hand in hand with a suite of guidance documents and rules associated with heat system design and specification. These guidance documents all provide useful references to underfloor heating. BEAMA's Underfloor Heating Group is currently working on a revision to the CIBSE Design Guide and expect publication in Spring 2017. The new edition will better reflect the latest technology developments for underfloor and the design requirements when considering hot water service delivery alongside low temperature emitters. It will contain the basics of simple systems, surveying methodology and the sometimes overlooked importance of commissioning.

On the subject of technology developments, perceptions of underfloor heating being costly or disruptive are changing in the face of a compelling benefits argument for energy efficiency and systems that are simpler to install. New technology has paved the way for underfloor heating in the retrofit market, taking the measure beyond the old perceptions of difficult construction integration. Low height and lightweight thin systems are growing in popularity as they can be simply applied to existing floor surfaces (including upper floors) with various degrees of insulation required. BEAMA is currently working on a new guide which will be published shortly. It is examining the four following systems types:

Low Section Gypsum Fibreboard Panel Systems (finished depth 15-29mm)

Typically a gypsum fibre board which has been routed or grooved to accept the underfloor heating pipework and laid directly onto the existing/new structural floor;

Low Section Grid/Levelling Compound Systems (finished depth 15-22mm)

Normally a profiled adhesive-backed plastic panel designed to accept underfloor heating pipework and levelling compound, and laid directly onto the existing/new structural floor;

Lightweight Aluminium Plate Systems (finished depth 43-68mm)

Normally a profiled polystyrene insulation panel designed to accept underfloor heating pipework and aluminium plates (typically 0.5mm) with an intermediate layer of plywood, chipboard or gypsum fibreboard. The insulation boards are laid directly onto the existing/new structural floor and the aluminium plates then placed in the grooves of the boards with pipework pressed into place. An intermediate layer is laid over to accept floor coverings;

Lightweight Foil Faced Insulation Systems (finished depth 25-68mm)

Normally a profiled polystyrene insulation panel with a bonded aluminium layer (typically 0.05 – 0.1mm) design to accept underfloor heating pipework with an intermediate layer of plywood, chipboard or gypsum fibreboard. The thickness of the aluminium foil layer influences heat output, the thicker the better. The insulation boards are laid directly onto the existing/new structural floor and the aluminium plates are then placed in the grooves of the boards with pipework pressed into place. An intermediate layer is laid over to accept floor coverings.

Conclusion

In summary, a mixture of product innovation, progressive Government policy and consumer aspirational demand is increasingly influencing heating system design and we would advise designers, installers, specifiers, architects and consumers to keep a close eye on the BEAMA Underfloor website to download the latest guidance and advice documents, or access our regularly updated *Frequently Asked Questions* section. Go to the underfloor heating section at www.beama.org.uk ■

Xylem creates underfloor heating mixing unit for Polytherm

The ecoFloor 25-6/130

underfloor heating mixing unit assembled by Xylem for Polytherm comprises a thermostatic control group, Lowara ecoFLOOR circulating pump, temperature gauge, mounting brackets and swivel joints for connection to the manifold assembly.

The A-rated underfloor heating circulating pump (branded Polytherm) is specifically designed for underfloor heating and has an automatic constant pressure mode which is a unique feature in a circulator.

When this mode is selected, the pump will maintain a constant differential pressure until it reaches its maximum power output, at which point the pressure will be decreased automatically. This is particularly suitable for underfloor heating systems as it means there is less risk of "short circuiting" through shorter pipe runs in individual zones.

The Lowara ecoFLOOR is a high-efficiency circulator using a shaftless spherical motor design. This design combines high efficiency and low noise. It is also ErP 2015 compliant and has a high magnetite resistance due to the revolutionary "Anti-Block" technology. This prolongs the lifespan of the pump.

The thermostatic mixer included in the unit ensures that hot water from the heat source and return water from the underfloor circuit are mixed together in the valve body to produce a range of temperatures from 20ºC to 70ºC. This range of temperatures suits a wide range of underfloor heating applications, from commissioning new floor screeds to operating with very thick floor screeds in commercial applications.

Main features/benefits

- **Automatic air purge** – The user can purge the trapped air from the pump housing;
- **Unique anti-block function** – Blockages can occur from a build-up of magnetite in heating systems and can cause the pump to seize;
- **Fully compliant** – A-rated and ErP 2015 compliant;
- **Remote sensor** – Thermostatic mixing valve on the set which has remote temperature sensor for accurate control of flow temperature;
- **Adjustable temperature range** – Adjustable temperature range from 20ºC to 70ºC. The low range makes it suitable for screed floor drying to EN1264 (protocol BS EN 1264-4);
- **Non-return valve** – There is a built-in non-return valve to aid filling during commissioning;
- **Air and temperature gauges** –There is a built-in automatic air-vent, plus temperature gauges;
- **Stability/noise reduction** –There is a mounting bracket with vibration dampers for additional stability and noise reduction.

The ecoFloor 25-6/130 underfloor heating mixing unit specially designed and assembled by Xylem for Polytherm.

Austin Kennedy, Xylem Sales Manager for Ireland and Northen Ireland with Sean McManus, Polytherm.

To ensure the integrity of every unit, Xylem has set up a test bay in its warehouse in Tallaght where every unit is air tested to 6-bar before packing.

Contact: Austin Kennedy,
Sales Manager, Ireland & NI, Xylem.
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email: austin.kennedy@xyleminc.com

Engineered

Unitherm Heating Systems is renowned for providing high quality fully integrated heating system solutions for domestic and commercial applications for over 10 years. Representing many top European manufacturers, Unitherm has always been at the forefront, introducing innovative products and systems to the market.

Initially established to design and supply underfloor heating systems, Unitherm quickly recognised the need to integrate low-temperature systems such as underfloor heating, aluminium radiators, fan coils etc with renewable energy sources. Every Unitherm system solution, both commercial and residential, is individually designed by a team of specialist and highly skilled design engineers. All systems are supplied with supporting project-specific mechanical and electrical schematics. Unitherm can also provide design and inspection ancillary certification for every project undertaken. Systems can include underfloor heating, air-to-water heat pumps, aluminium low-temperature radiators, multi-energy cylinders, district heating etc.

"Good system design, integration and control is absolutely crucial to the efficient and cost-effective running of a heating system", says Unitherm's Declan Kissane. "Hence our biggest asset is a combination of quality products, trained installers and commissioning by our own in-house engineers. Indeed, a substantial amount of our business comes by way of recommendation from satisfied customers".

Some of the products included in a Unitherm system are Daikin Altherma air-to-water heat pumps, Sira Emerald aluminium radiators, and Profi-air® heat recovery systems from Frankiscke in Germany.

Underfloor heating

Underfloor heating is long established in the Irish marketplace and Unitherm has an enviable reputation for providing innovative system solutions and top-quality products. Coupled with on-site technical support for the installer and detailed schematics, Unitherm ensures every system designed and supplied by the company is installed to the highest quality. Commissioning is offered on all commercial and domestic systems by its own in-house engineers.

Sira aluminium radiators

Unitherm represents leading Italian manufacturer Sira Group and can supply its full range of aluminium radiators. Designed to run at low temperature (45°C), these low water content units deliver faster heat up times than traditional steel panel radiators.

Other benefits and features include excellent heat conductivity; 30% higher output than steel radiators; better resistance to corrosion; suitable for low and high-temperature systems; 15-year manufacturers' warranty.

Unitherm HEATING SYSTEMS LTD

9 City East Business Park, Ballybrit, Co Galway
Tel: 091-380 038 Fax: 091-380 039
Peamount Business Centre, Newcastle, Co Dublin
Tel: 01-610 9153 Fax: 01-621 2939
Email: info@uni-therm.net

heating solutions

Daikin Altherma air-to-water heat pump

Daikin has a worldwide reputation for quality and innovative technology with over 50 years experience in the design and manufacture of heat pump solutions. It is the leading supplier of heating, cooling, ventilation and refrigeration solutions for commercial, residential and industrial applications, and also offers a comprehensive choice of domestic heating and renewable energy products.

The Daikin Alterma is a total heating and domestic hot water system based on air-to-water heat pump technology that represents a flexible and cost-effective alternative to a fossil fuel boiler. The inherent energy-efficiency characteristics make it an ideal solution for reduced energy consumption and low CO2 emissions. Its high and low temperature heating systems also delivers optimal comfort.

Daikin Altherma energy-efficient heat pumps, with advanced compressor technology, transform unused and inexhaustible heat from the surrounding air into usable heat. There is a comprehensive range of heat pumps available including Monobloc 5kW to 16kW units, Split units 4kW to 16kW, and High-temperature 11kW to 16kW units. There is also a range of integrated system solutions including solar technology.

Unitherm, in conjunction with Daikin, provides training for installers on the mechanical installation and wiring of heat pump systems. Project-specific drawings for every installation are also provided, including underfloor heating layout drawings, first and second fix wiring, and complete mechanical schematics. Unitherm's commissioning engineer will commission every heat pump system once installation is complete to ensure every system is properly installed.

Profi-air heat recovery systems

Nowadays homes and other buildings are being built or renovated to be more airtight. This leads to the desired effect of improving energy efficiency but also to a lack of natural air exchange between indoors and outdoors. Controlled home ventilation is now commonly incorporated into new buildings. This ensures a constant supply of fresh air and removes odors, moisture and CO2.

Profi-air, from German manufacturer Frankische, is an ideal, reliable, flexible and hygienic air distribution system offered by Unitherm. Profi-air pipes are manufactured with an anti-static and anti-bacterial coating agent making them absolutely sterile, hygienic and safe. The heat recovery systems devised by Unitherm are individually designed by its in-house engineers to meet the exact requirements of each application.

Cost-effective and energy efficient products **www.uni-therm.ie**

Wilo EMUport Core – the 'clogging-free' one

The solids content of sewage continues to increase. Whether is it from domestic households, commercial premises, hospitals, shopping centres or the hospitality sector, it very often contains items that pose serious problems for pumps, and maybe even failure. Wilo EMUport Core, the compact solids separation system developed to combat this increased threat, offers maximum operational reliability during sewage collection and transport.

"Wilo EMUport solids separation systems separate the sewage into solid material and pre-cleaned sewage", explains Derek Elton, Sales Director, Wilo Ireland. "With this technology, larger solid material does not have to be conveyed by the pump hydraulics. While the coarser particles are collected in the solids separation reservoirs, the pre-cleaned sewage flows back through the pump into a collection reservoir. Once this reservoir is filled, one of the two pumps starts, based on the liquid level, and pumps the pre-cleaned sewage out of the collection reservoir and through the solids separation reservoir.

"In this way, the collection reservoir is emptied, the separation reservoir is flushed and the solid material with the pre-cleaned sewage is conveyed into the discharge pipeline. For extra security the solids separation systems always use two pumps that operate alternately. This measure ensures that sewage intake via the second pump continues in parallel with the drainage pumping sequence, thereby assuring continuous sewage intake."

Reliable long-term operation

When selecting its materials, Wilo decided in favour of polyethylene and polyurethane. In contrast to stainless steel, which can corrode quickly in the event of poor passivation after welding, these materials are absolutely corrosion-free. Moreover, polyethylene stands out with its extremely long service life, and compared to other materials is very light, which greatly simplifies on-site relocation of the system.

The intake box is made of polyurethane, which is also corrosion-free and extremely impact-resistant so that larger solid objects such as stones or pieces of wood cannot damage the intake box. To minimise the volume of water remaining in the collection reservoir, the reservoir geometry was tailored to requirements. The entire bottom of the reservoir is sloped, whereby the lowest points of the reservoir are located directly under the pumps. This design prevents the formation of deposits in the collection reservoir.

The pump is also vented automatically. This is accomplished by mounting the pump at a slight angle on the system, thereby preventing air becoming trapped in the hydraulics. For hygiene reasons, the pumps are kept dry, yet nevertheless satisfy the demanding requirements for the high IP 68 protection class (continuously immersible). Operational reliability is thus assured, even in the event of temporary flooding of the system. The entire system is designed for continuous duty (operating mode S1).

Minimal maintenance/ small footprint

The solids separation unit has proven itself a thousand times over, a special design that combines the functions of a rake and a valve. Solid material that could disrupt pump operation and ultimately cause a breakdown is not allowed to enter the pump. Residue-free cleaning of the solids separation unit and the solids separation reservoir takes places automatically in the course of the regular pumping cycle. Maintenance work can be carried out without labour-intensive and time-consuming dis-assembly of the pumps. The intake box is just as easy to service. Thanks to a transparent cover, visual inspection during operation is possible without the use of tools.

With its compact construction, the Wilo EMUport CORE solids separation system also fits in chambers with an inside diameter of only 1.5 metres.

Contact: Wilo reland. Tel: 01– 426 0000; email:sales@wilo.ie; www.wilo.ie

Wilo EMUport Core – the "clogging-free" one.

Myson helps installers punch above their weight on underfloor

Myson has launched the Punch Pack, a new single-room underfloor heating pack, specially designed to provide installers with a complete solution for hydronic underfloor heating installation in rooms with screeded floors. The packs come in two sizes, one for rooms of up to 20 sq m and another for larger rooms of up to 40 sq m.

Each pack contains the required amount of 16mm multi-layer pipe for high performance and longevity; Myson's innovative Tackernails for ease of fixing; and a FLOORTEC A-rated single zone control unit. Also included is a FLOORTEC Touch Screen Thermostat 230V with remote sensor and all the fittings and instructions needed to complete the single-room installation.

Vincent Broderick, Sales Director, Baxi Potterton Myson said: "Our new Punch Packs are designed to give installers complete confidence when installing underfloor heating. By providing everything in one pack we offer the reassurance that installation will be straightforward and that all the products are tailor made to work together. This also makes ordering simpler and ensures that everything for the project is available at one time".

The single-room Myson Punch Packs are also cost-effective, covered by Myson's product guarantees, and supported with technical and design specification advice.

Myson's new radiator Plan comes together

Myson has just introduced the new Plan Compact and Plan Compact Plus, two stylish flat-fronted panel radiators designed to please both installers and end users alike. The Plan Compact is a panel radiator with a completely flat-fronted, smooth-edged design, while the Plan Compact Plus benefits from an added feature in its highly attractive, finely-lined, decorative front panel. Both ranges come with top grill and side panels in a finish that will complement any setting.

Both ranges offer single convector, double panel 'xtra and double convector versions in heights from 300mm to 600mm, and lengths from 400mm to 3000mm, depending on model height. The Plan Compact also comes in a triple convector model to provide maximum warmth from a smaller footprint, still elegantly styled with a sleek flat front panel.

All Plan Compact and Plan Compact Plus models carry a 10-year warranty

"In the Plan Compact and Plan Compact Plus we have achieved the best of both worlds in an easy-to-install decorative radiator that delivers excellent outputs with exceptional good looks", says Vincent Broderick. "The finishes on each model will delight end users, while the great outputs and range of options will make product selection simplicity itself for specifiers and installers alike."

Contact: Baxi Potterton Myson. Tel: 01 – 459 0870; email: sales@potterton-myson.ie; www.myson.co.uk

Teknospeed variable speed drives

The single-phase Teknospeed variable speed electric pumps and pressure booster units from Xylem are designed for residential applications as they provide all the comfort and advantages of constant pressure in the home. The Teknospeed series comprises a frequency converter integrated into the pump which adjusts motor speed so as to constantly provide users with the same pressure, even when demand for water changes.

The main applications for which the Teknospeed series offers elevated comfort and benefits are home pressurisation, irrigation, greenhouses, light industry, fountains and creative water displays.

Extensive choice

The range features a large number of models and pump types, including:

- Horizontal and vertical pumps – TKS/HMZ, TKS/BG, TKS/CA-CEA, TK/SV.
- Single pump or two-pump pressure booster units – GTKS20/HMZ, GTKS20/CA, GTKS20/SV

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T: (+353) 01 452 4444 (+353) 01 452 4795
lowara.ireland@xyleminc.com
www.lowara.ie

Let's solve water ...

Energy saving Hydrovar System Controller

Xylem's HYDROVAR® is a pump or wall-mounted variable speed, microprocessor-based system controller, and was the world's first of its type to manage motor speed and match pump performance to a range of hot and cold water applications.

Energy saving is a key issue within the heating and ventilation market and HYDROVAR® incorporates a unique parameter that allows the pump to follow a system curve – the minimum system head is set together with the maximum and the pump will then operate between these two points. This option has been specifically developed for use in the heating industry as it allows end-users to save up to 70% on their energy costs over a fixed speed pump.

HYDROVAR® allows up to eight units to be interfaced together, thereby providing the ultimate in flexibility. The pumps have an automatic cyclic changeover facility and, in the case of failure, the remaining pump/s take up the duty.

HYDROVAR® also eliminates the need for additional master control panels and circuitry, system control valves and large pressure vessels.

LOWARA
a xylem brand

AC Heating and GT Phelan keep Council tenants warm

During refurbishment of the Cromcastle Court complex in 2015, Dublin City Council (DCC) called for tenders for an energy supply solution for all apartment blocks. Having offered the best solution, AC Heating won the tender process.

AC Heating met the criteria outlined by DCC. Stipulations included that:

- The heating solution must meet the City Council's green credentials;
- The new system must optimise temperatures in all apartments;
- The installed system must be suitable for remote monitoring;
- The installed system must be monitored for energy usage.

When the flats complex was originally designed during the 1960s, an oil-based underfloor district heating system was installed which provided unregulated heat to each block. Then, over the past two decades, natural gas boilers were used to generate heat to each apartment block.

From 1 October through to the end of May every year the heating was switched on, regardless of the weather outside. Each apartment was heated whether or not they required it, and the floor temperatures were always uncomfortably hot (in the region of 40°C). It was not uncommon for tenants to leave windows and doors open throughout the complex to try and keep cool.

AC Heating was charged with devising a solution to the problem and, having consulted with GT Phelan, installed Toshiba outdoor units linked to AC Heating's patented xCC® building management controls system throughout the entire complex. This was a major challenge as there are eight blocks in all, each one consisting of 16 flats. All were fitted with two Toshiba DI Big (RAVSM2804AT8), providing 56kW of heat.

DI Big (RAVSM2804AT8) units are installed on all eight blocks.

The existing underfloor heating system was retained and every apartment was fitted with a wall-mounted thermostat so that tenants could see and monitor the temperature in their own particular apartment.

The AC Heating control system xCC® is also reactive to open windows and the heating zone in the apartment switches off if windows are opened. That situation rarely arises now though because floor temperatures have returned to normal, resulting in greater comfort levels for residents. There is no longer the need to open windows and doors because of excessive heat.

If a fault is flagged the engineers at AC Heating can remotely log on and monitor the performance of each Toshiba heat pump. They can also view the room temperatures and can see if a window has inadvertently been left open.

DCC technicians also have access to the xCC® building management system, thus saving unnecessary call-outs if there is an issue reported. All electrical and water usage is also monitored online, making it easy to identify the quantity of domestic hot water used by each apartment, or any leaks in the underfloor heating.

While a major advantage of the refurbished project is a much-improved and healthier indoor environment for all residents, critically this has been achieved without additional cost. In fact, the cost of providing heating and hot water to the complex has been reduced by a staggering 70%.

"There is nothing like independent, evidence-based data to confirm the strengths and benefits of a system's solution", says Derek Phelan of GT Phelan, "and, in this instance, the facts speak for themselves".

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Lucas Kadlick, AC Heating.
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email: smarterheating@gmail.com ■

A class of their own

Advances in electronic and manufacturing technology have transformed pumps dramatically over recent years, not just in terms of performance, but also their role in making installation easier. Today, many circulating pumps are "smart" products, adjusting automatically to the demands of a building's heating and air conditioning needs, including underfloor heating applications. Here *Neil Haigh, DAB Pumps Export & Key Account Manager*, explains how this benefits installers and end users alike.

With the advance in electronic pump technology benefits have also been seen in terms of energy efficiency. Energy efficiency is crucial, not just because of the environmental benefits, but because it also leads to increased cost savings, both for the installer and end user.

Leading manufacturers such as DAB Pumps make sustainability part of their strategic choice, and since 2009 this has been driven by the mandatory ErP requirement. The current ErP legislation means that for glandless circulating pumps the limit value of the Energy Efficiency Index (EEI) is 0.23.

The use of quality components and advanced electronics in pumps such as DAB Pumps' range ensures high performance and low energy consumption, as well as simple product installation and operation. In addition, products that meet the legislation also carry the ErP logo, signifying the relevant compliance.

Sustainability is the principal driving force behind many of today's pumps, such as DAB's Evoplus range. These types of pumps are ideal for use in heating, ventilation, air conditioning systems and underfloor heating systems for large residential and commercial buildings and all DAB models are fully compliant with the 2015 ErP European Directive.

The heating requirements of buildings can change significantly during the day and night due to changing ambient temperatures, occupancy levels and the complexity of the installation. Smart, electronically-controlled pumps, such as Evoplus, solve this issue by constantly ensuring sufficient power as and when demand requires. The very best pumps also deliver lower noise emissions, greater comfort and a significant reduction in running costs.

Unlike conventional electronic pumps, some electronic circulators can also be used in air conditioning systems where the temperature of the liquid pumped is lower than the ambient temperature. These units are designed and sized in such a way as to allow the condensate to drain without damaging the construction components.

Designed with ease of installation and use in mind, installer-friendly pumps, such as Evoplus, feature an LCD configuration screen with four easy navigation keys. Using these, all functions can be scrolled through and read, while calibration and parameter settings can be protected. Available in both single and twin versions and with an operating range from 2 to 75.6 m3/h with head up to 18 meters, the range can handle a liquid temperature range from -10 °C to +110 °C.

For smaller residential installations, circulator pumps must also be ErP compliant. Here again pumps such as DAB's Evosta deliver high efficiency performance while minimising energy consumption. They react to system changes automatically and adapt the circulator performance accordingly. As they are dimensionally the same as traditional pumps they are also ideal for retrofit.

Evoplus heating pumps like those shown above are installed in many applications across Ireland, including the Horse & Jockey Hotel, Thurles, Co Tipperary, and the Hertz Call Centre, Swords, Co Dublin.

A single sequential setting button is used to commission the pump and a simple brass vent plug used to bleed the system and unlock the motor shaft if required.

In conclusion, advances in electronic technology in pumps have indeed brought great benefit to installers and end-users alike. Energy efficiency has been boosted, noise levels reduced, while installations and commissioning is simpler than ever.

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Polytherm Heating Systems 17 years of bespoke Underfloor Heating design and supply

Using DEAP software a 1300ft2 house using a heat pump as the primary heat source was able to achieve an A3 BER rating simply by using Polytherm underfloor heating.

Polytherm®
Heating Systems

POLYTHERM HEATING SYSTEMS HAS 17 YEARS OF BESPOKE UNDERFLOOR HEATING DESIGN AND SUPPLY…

Polytherm at the forefront of design and innovation

Polytherm's Heattrack low profile panel system.

Polytherm Heating Systems was formed in 1999 from the success of the underfloor heating division of its parent company, Hevac Ltd. Since then Polytherm has continued to be at the forefront of underfloor heating design and innovation.

For Polytherm staff, customer satisfaction is the primary goal.

When the company receives plans from a home-owner, an installer, mechanical contractor, merchant, consultant engineer, or architect, Polytherm's design engineers and CAD technicians will respond with an initial design and open a dialogue to find out what will best suit the project at hand.

Once the team know these requirements, they produce mechanical and electrical drawings to match the final design. If assistance is required prior to installation, a site visit can be easily accommodated. Polytherm's engineers are also available over the phone, if technical support is required, or if a customer has any questions about underfloor heating. Once the system is installed, a commissioning engineer is available to call out to the project.

ENERGY SAVING

Since the introduction of the Building Energy Rating certification, everyone buying or renting property has become aware of the costs of heating that property. Using Polytherm Heating System's custom designs, home-owners and building operators can benefit from reduced running costs.

Using DEAP software, a 1,300ft² house using a heat pump as the primary heat source was able to achieve an A3 BER rating simply by using Polytherm underfloor heating. The same house using a standard radiator system would attract a 25% efficiency penalty for space heating and fail Part L compliance.

Polytherm systems get the most from your wet central heating systems, including oil, gas or solid fuel boilers and are excellent for typical installations where a mix of heat emitters are used, such as underfloor heating on the ground floor and radiators on the first floor.

Polytherm's underfloor heating system comes into its own when used with low-grade temperature sources, like condensing boilers and heat pumps. As the system only requires a low-flow temperature between 35°C and 45°C, Polytherm can exploit the higher efficiencies that condensing boilers and heat pumps can achieve.

Further savings can be achieved by using Polytherm controls. The company's extensive range and knowledge of controls means that your home or place of business will always be at the temperature you desire. From dial thermostats to internet-ready smart controls, Polytherm has got the product for you. Its intelligent controllers learn the characteristics of your building, meaning no more cold floors in the morning, or high energy bills. In fact, using smart controls can save you up to 30% versus standard controls.

For underfloor heating in existing buildings where floor to ceiling height may be an issue for traditional systems, Polytherm offers Heatrack – a low profile panel system. This enables installation on joist floors and existing concrete floors, increasing the useable area within rooms by removing radiators from external walls.

Key factors for underfloor heating design

- Polytherm's Multilayer pipe is specifically manufactured for underfloor heating applications.
- Polytherm's engineers will select the correct manifold set-up for your heat source.
- Polytherm's engineers will design a solution based on the thermal resistance of the floor covering.
- Polytherm's underfloor heating takes advantage of radiated heat transfer so that lower, more comfortable room temperatures are utilised.
- Polytherm's underfloor heating system components are backed by the company's guarantee, working together for ease of operation.

Polytherm Heating Systems Ltd, Muirfield Drive, Naas Road, Dublin 12 - T: (RoI) 01 419 1990 or (NI) 00353 1 419 1990
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South Ring West Business Park, Tramore Road, Cork - T: (RoI) 021 432 1066 or (NI) 00353 21 432 1066
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Polytherm® Heating Systems

Decarbonising Ireland – well-meant rhetoric colliding with harsh reality?

Notwithstanding the idiosyncratic remarks of one newly-elected independent TD, there is no longer any serious scientific doubt that geologically rapid global climate change is underway, and that human activities – especially the extraction and burning of fossil fuels – are the chief cause, writes *Professor Barry McMullin, Executive Dean of the DCU Faculty of Engineering and Computing* (pictured).

From typhoon Haiyan to the drought-fueled conflict in Syria, human-caused climate change is already having very serious impacts on vulnerable communities around the world. Because of the decades-to-millenia time lag between release of greenhouse gases into the atmosphere and the resulting climate disruption, the challenge is now both stark and urgent. It has been accurately described as a "planetary emergency".

In response, the Paris Agreement on global climate action was adopted by consensus of the 195 participating countries to the UN Framework Convention on Climate Change in December 2015. While it must still be formally ratified, it has received widespread welcome for its unambiguous acceptance of the urgent need for strong, shared action, both to respond to climate disruption that is already unfolding, and to limit its ultimate severity and impact.

Further, there is recognition that this action must respect global fairness and equity, and that if it is to be effective, it must be planned in accordance with the best available scientific understanding. Concretely, the agreement quantifies an overarching goal of limiting global average warming (the trigger for global climate disruption) to "well below 2°C" above pre-industrial levels (we have already reached about 1°C above pre-industrial). Scientific analysis is clear that the only assured way of hoping to meet this goal is to somehow leave the vast bulk (80%+) of known remaining fossil fuel reserves (coal, oil, gas, peat) in the ground.

Ireland fully supported the adoption of the Paris Agreement. Separately, we enacted our own first dedicated climate change legislation, the Climate Action and Low Carbon Development Act 2015. December 2015 also saw the publication of a new White Paper on energy policy entitled *Ireland's Transition to a Low Carbon Energy Future 2015-2030*. Most recently, following the general election and the ultimate formation of a partnership government, we now have, in Denis Naughten TD, our first dedicated Minister for Communications, Climate Action and Environment. It would seem that all the relevant factors are now aligned, both nationally and internationally, for decisive progress here in response to the climate change challenge.

But, do all these lofty words actually add up to a commensurate national response, or do they simply represent another round of green-tinted political waffle, half-measures and high-risk procrastination? Are we embarking on a pathway of rapid, but managed, post-carbon transition, or are we

UNFCCC's Christiana Figures with Secretary-General Ban Ki-moon, Laurent Fabius, French Foreign Minister and President of the UN Climate Change Conference in Paris (COP21), and President François Hollande of France celebrate the historic adoption of the Paris Agreement on 12 December 2015. ***UN Photo/Mark Garten***

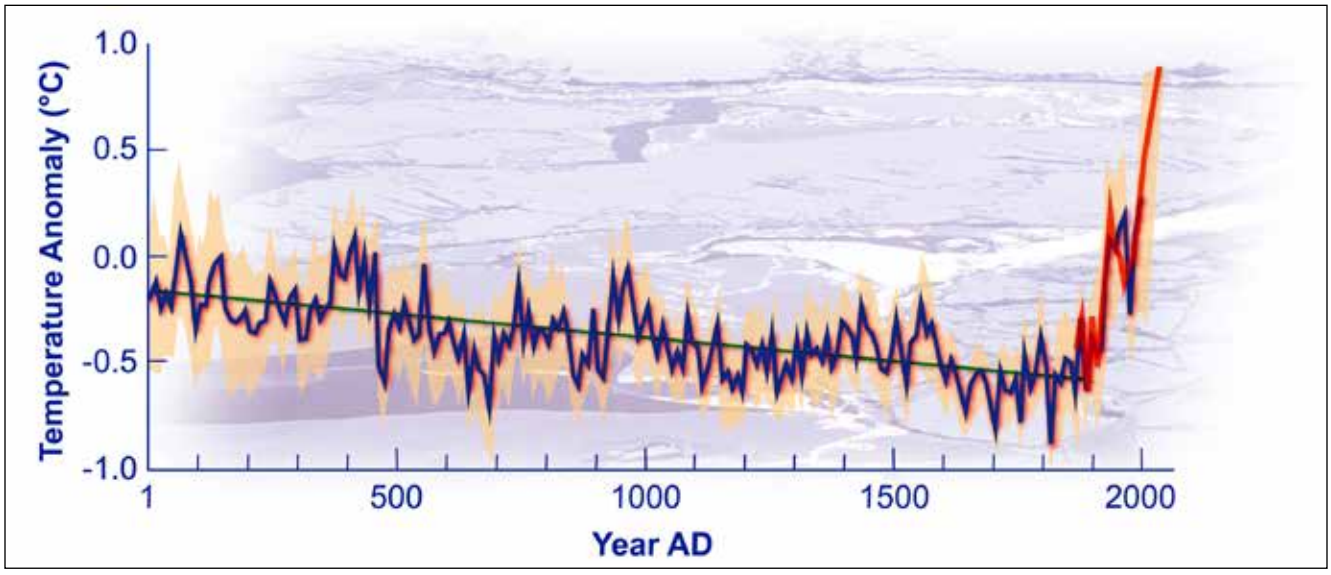
sleepwalking into a chaotic and dangerous unravelling of our current globalised technological society in the immediate coming decades – an unravelling that we are actively, if subconsciously, promoting (by our deeds as opposed to our words)?

In March this year, Professor Kevin Anderson, Professor of Energy and Climate Change at the University of Manchester, and former Deputy Director of the UK Tyndall Centre for Climate Change Research, gave an invited lecture at the Royal Irish Academy in Dublin (see https://www.youtube.com/watch?v=dVJ8lMIm9-c). Professor Anderson is a distinguished international expert on climate and energy policy, and has engaged widely across all tiers of government, from reporting on aviation-related emissions to the EU Parliament, advising the UK Prime Minister's office on Carbon Trading, and contributing to the development of the UK's Climate Change Act.

At the Dublin event he presented a detailed analysis of our current situation, post-Paris, both globally and nationally. It was a calm and measured presentation, based on analysis that has not been significantly challenged in the scientific or policy literature. It was also profoundly disturbing in its stark implications.

In summary, achievement of the Paris agreement goals relies entirely on voluntary commitments by each of the participating parties (individual countries, or economic blocs such as the EU) to rapidly and permanently phase out net greenhouse gas emissions – that is, in effect, to completely stop burning fossil fuels. Parties were already invited to submit their initial commitments (the so-called "Intended Nationally Determined Contributions" or INDCs) ahead of the Paris meeting.

Scientific analysis of these pledges to date suggests that – even if they



Global average temperature change over the last 2000 years.

were all fully delivered and sustained, which is highly questionable – global temperatures would still likely rise by 3ºC/4ºC above pre-industrial within this century. This rate of change is quite beyond realistic "adaptation", and would bring devastating human impacts on a global basis, even within a small number of decades. Clearly then, if the parties meant what they said in the final text of the agreement, they must now bring forward much stronger commitments.

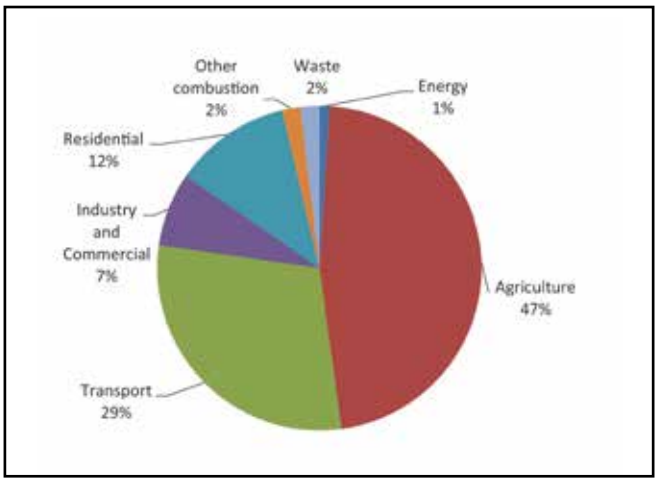
In the case of the EU – and Ireland as a part of the EU – Professor Anderson estimates that the required annual decarbonisation rate (if we start immediately, this year, and make even the most minimal concessions to global equity) would be greater than a 10% reduction per year, sustained year on year for the indefinite future. This would equate to an emission reduction target of 50% by 2020 (relative to 1990), 90% by 2030, and effectively decarbonising all our energy supply by 2035. Note: "all energy supply" here means just what it says – electricity, transport, heating, and the energy embedded in our consumer goods and new capital infrastructure – everything!

Moreover, because carbon dioxide is long lived – it accumulates in the atmosphere for periods up to millennia – any delay in starting such a reduction pathway will just mean that we use up all the remaining atmospheric capacity even sooner. That means that the subsequent rate of reduction (to still stand any chance of meeting the 2ºC "goal") would have to be progressively even more drastic. So, impossible as a 10% rate of reduction seems, and attractive as it may appear to wait for some entirely speculative technological breakthrough that might render it much easier (such as large scale nuclear fusion or bio-energy with carbon capture and storage), the harsh reality is that delay now is much more likely to make things worse rather than better.

By contrast, the current EU plan (the basis for its pre-Paris INDC) is to aim for emissions reduction of just 40% by 2030 (relative to 1990) and, perhaps, 80%/95% by 2050. The local Irish "National Policy Position" on climate action adopts just the weakest version of this, a target of an 80% reduction in energy-related emissions by 2050. Worse, the most recent EPA projections (March 2016) are that Ireland may already exceed its current, agreed, EU emissions levels as early as this year, and that gap is then likely to grow progressively wider over the years to 2020 on the basis of current policies. This brings with it the risk of significant financial penalties post 2020.

So, the current targets at both EU and national level fall far short of what would be required to satisfy the solemnly proclaimed "goals" of the Paris Agreement (which themselves are still significantly above any genuinely "safe" level of global warming). Even at that, there is no indication that Ireland specifically has the will or intention to achieve even these recklessly-inadequate targets. In the words of the journalist David Roberts, we seem to be trapped between the impossible (immediate, radical, decarbonisation) and the unthinkable (devastating climate-induced economic and societal disruption on a global scale).

Of course this is a difficult message but it is still very far from a hopeless one. As Feynmann so memorably summarised it, the one sure road to disaster is to ignore scientific reality. We already have all the scientific understanding that is necessary. What is missing is social and political engagement, nationally and internationally, with the true scale and urgency of the challenge. Under the terms of the new Irish Climate Action Act, national plans are now being prepared for both mitigating the full extent of climate change, and trying to prepare for the impacts that will still inevitably happen.



Agriculture and transport dominate the non-Emissions Trading Scheme (ETS) sector emissions and are projected to account for 76% of this sector in 2020.

"For a successful technology, reality must take precedence over public relations, for Nature cannot be fooled."

– Richard P. Feynman, Shuttle Presidential Commission 1986

(courtesy of Professor Kevin Anderson).

Everyone – citizens, businesses, agencies, universities, media, government departments – has the opportunity to engage with this process, to communicate and support genuine, honest, reality-based policy. Let us all, to the very utmost of our capacities, resolve to do so. Fine words and "doing our best" are no longer enough … we must finally decide to do what is actually necessary. ■

The author

Professor Barry McMullin is Executive Dean of the DCU Faculty of Engineering and Computing. Barry graduated with a BE (Electrical Engineering) degree from University College Dublin, in 1980. He worked in industry for a number of years and then joined the School of Electronic Engineering of Dublin City University in 1987. He has served in many different academic roles in the university and has an extensive record of scholarly publication. He is currently affiliated with the DCU Energy and Design Lab where he is focussed on systems approaches to deep decarbonisation. He can be contacted by email at: barry.mcmullin@dcu.ie

Paroc ... for those who don't cut corners

For those who don't cut corners, Paroc presents PAROC Hvac Bend AluCoat T, a stone wool pipe elbow insulation.

Insulating heating and water pipes may not usually count among the most challenging installation works. However, it certainly requires maximum precision, especially when it comes to pipe elbows. In order to make it easier for builders to design and construct complex HVAC systems, Paroc has developed high-quality, factory-produced bends for efficient and fast insulation – PAROC Hvac Bend AluCoat T.

PAROC Hvac Bend AluCoat T is a non-combustible stone wool pipe section bend for thermal and condensation insulation of pipework in buildings and ships. Coming with a prefabricated layer of reinforced aluminium foil facing and tape in the longitudinal seam, the product effectively prevents condensation and makes it easier for installers to fit the insulation to the existing HVAC pipes.

Factory-produced bends are ready-to-use solutions which ensure fast and easy fitting. Instead of cutting out individual pieces of pipe sections manually and fitting them back together to every pipe elbow in the installation, installers may use dimensionally accurate, prefabricated insulation components which improve the quality of the pipe insulation. PAROC Hvac Bend AluCoat T performs just as effectively as straight pipe insulation made with PAROC pipe sections, thus being a fully complementary solution.

Installing PAROC Hvac Bend AluCoat T is a technically-effective, fast and economical way of insulating pipe elbows. Unnecessary heat loss is minimised due to the stone wool's low thermal conductivity and the fact that no metal support is needed. This in turn leads to a further reduction of operational costs. This insulation method not only helps to avoid potential thermal bridges and heat losses, but also saves precious time.

Technical properties

- Harmonised standard: EN 14303:2009+A1:2013;
- Thermal Conductivity (declared) in 10°C, λ_{10}: 0.034 W/mK;
- Thermal Conductivity (declared) in 50°C, λ_{50}: 0.037 W/mK;
- Thermal Conductivity (declared) in 100°C, λ_{100}: 0.044 W/mK;
- Reaction to Fire Euroclass: $A2_L$-s1, d0;
- Water Vapour Diffusion Resistance: MV2;
- Water absorption, Short-term WS, W_p: ≤ 1 kg/m²;
- Chloride ions, Cl-: <10 ppm;
- Dimensions and Tolerances: T8 for outer diameter < 150 mm, T9 for outer diameter ≥ 150 mm.

Dimensions

- Thickness: 20-100 mm;
- Inner diameter: 15-168 mm.

Contact: Craig Treanor, Technical Support Manager (UK/Ireland), Paroc Technical Insulation Division.
Tel: 0044 – 1706 365568; Mobile: 0044 – 7807 591376;
email: craig.treanor@paroc.com; www.paroc.co.uk

RACGS Captain's Day at Mount Juliet

The impressive setting of Mount Juliet was the venue for Joe Warren's RACGS Captain's Day recently. There was an exceptionally large turnout with some long-standing members returning for the first time in a while, and Fergus Daly of Mitsubishi Electric – sponsors on the day – hosting a number of guests.

Class 1 Winner — Jack Elstead with Fergus Daly, Mitsubishi Electric.

Their attendance was rewarded in that the course was in incredible condition, thanks especially to the fact the RACGS outing was to be followed immediately by Mount Juliet's own Captain's Day.

It was a very good golfing day so the course, which is always challenging, was particularly testing. Nonetheless, many rose to the challenge with overall winner Billy Qually's 36pts reflecting an excellent effort.

Full list of winners on the day were as follows.

Overall winner: Billy Qually, 36pts.
Class 1 Winner: Jack Elstead, 35pts; Second: Declan Walsh, 33pts.
Class 2 Winner: Zac Keane, 34pts; Second: Ger Darcy, 27pts.
Back Nine Don Ryan, 14pts; **Front Nine** Ken Lawlor, 20pts;
Longest Drive Mark Kiely; **Nearest the Pin** Joe Warren;
Visitors' Prize Pat Guilfoyle.
Daikin Golfer of the Year As of the Captain's Day outing Matt Butler continues to lead the Daikin Golfer of the Year. ■

Overall Winner – Fergus Daly, Mitsubishi Electric with Billy Qually and RACGS Captain Joe Warren.

Back Nine Winner – Don Ryan with Fergus Daly, Mitsubishi Electric.

Visitors' Prize Winner – Pat Gulfoyle with Fergus Daly, Mitsubishi Electric.

Visitors' Prize Runner-up – Domnic Ward with RACGS Captain Joe Warren.

Samsung's 360 Cassette brings an air of style to heating and cooling industry

Despite modern technological advances, controlling the indoor environment has remained one of mankind's most elusive obstacles. Samsung Electronics has set out to solve the challenges posed by conventional appliances with the launch of the revolutionary 360 Cassette, an innovative, bladeless system that incorporates an industry-first circular design for an even airflow and stylish aesthetic.

When Samsung engineers decided to revolutionise existing cooling and heating technology, they looked to other industries for possible solutions. In the end, wind turbines – which enhance airflow efficiency by bringing in a sub-airflow through their blades from the outside into the main airflow – proved to be exactly what they were looking for. To adapt this principle to the 360 Cassette, Samsung added a booster fan, a mechanism that uses pressure to alter the direction of the airflow.

With the booster fan in place, engineers next had to evaluate how to fix some of the more common pain points of conventional 4-way cassette systems, including a way to eliminate direct airflow. So, to ensure a more even airflow, Samsung opted to remove traditional blades altogether from the device. When integrated with an all-new circular shape – a complete contrast to the traditional square unit – the result was a triumphant one.

The curved design of the 360 Cassette complements the styles of modern architecture.

The final product – a bladeless, circular cassette equipped with a booster fan – ensured three factors that set a new standard in heating and cooling. First, there are no cold drafts, but rather a cool and comfortable airflow. Next, the airflow ensures even, fast cooling and heating. Finally, the natural curves of the design make it stylishly appropriate for just about any interior.

In the past, some conventional indoor air conditioning systems posed problems for interior design, a component that has a big effect on the way we interact with, and perceive, our surroundings. As a bladeless, circular system, the 360 Cassette blends in naturally with its surroundings while providing a stunning finishing touch.

The curved design of the 360 Cassette also complements the styles of modern architecture. As interiors increasingly become bolder and often incorporate curved lines in their designs, the 360 Cassette, which integrates smooth, natural curves, easily blends with the décor of a variety of contemporary spaces.

"From a superior modern design to unsurpassed functionality, the 360 Cassette is, simply put, a powerful solution to a market that has needed revolutionising for quite some time", says Derek Phelan of GT Phelan, Samsung's distributor. "It is certain that this latest appliance will lead the way in bringing about positive change and creating a more harmonious environment in the spaces in which we live and work."

Contact: Derek Phelan, GT Phelan. Tel: 01 – 286 4377; email: info@gtphelan.ie ■

BTU NATIONALS

BTU Captain Brendan Coghlan and members of the Irish Metropolitan and Irish Provincial teams pictured at the "Nationals" which were hosted by the Yorkshire BTU and held at the Oakdale golf club in Harrogate. Although unsuccessful on the course, a couple of great days golf was enjoyed by all.

Sean Gillen, TIDL pictured with Gerry Tobin.

Captain's Day at Edmondstown

A fine day greeted the 40 plus golfers for Brendan Coghlan's Captains Day at Edmondstown Golf Club which is located at the foot of the Dublin mountains. The course was in excellent condition and the speed of the greens was the talk of the field. Sponsors were TIDL and they were represented on the day by Sean Gillen.

Results

Overall winner: John White, 38pts.

Class 1

Winner: Dermot Ryan, 32pts; **Second:** Joe Warren, 31pts.

Class 2

Winner: Gerry Tobin, 35pts; **Second:** Sean Smith, 32pts;
Third: Bernie Costelloe, 30pts.

Class 3

Winner: Vincent Broderick, 30pts; **Second:** John Littlefield;
Third: Michael Murphy, 26pts.

Front 9: John Larkin; **Back 9:** Maurice Kelly.

Visitors Prize: Nils Conway.

Sean Gillen, TIDL pictured with overall winner John White and BTU Captain Brendan Coghlan.

Bernard Costelloe with BTU Captain Brendan Coghlan.

OBITUARY

Joe Noone (1937-2016) – an appreciation

The recent death of my uncle and great friend Joe Noone marked the end of an era for Ireland's building services sector. Joe was one of the industry's founding fathers, someone who helped influence and shape the development of the sector over many years. Indeed, his spirit is still very much alive in Chronotherm, the company now owned and run by myself.

But let's start at the beginning. Joe set up Heatovent Ltd with my father Pat in 1965, operating out of premises located beside Sundrive Garda station in Dublin. Within four years they purchased the old Harold's Cross laundry and, after extensive renovations, opened the doors in May 1970.

This was at the height of the arms import controversy and coincided with the sacking by Jack Lynch of Charles Haughey and Neil Blaney. Why is this relevant? It is significant because Kevin Boland, then Minister for Local Government who was scheduled to do the official opening, resigned the night before in support of Haughey and Blaney. The next day saw blanket press and TV interviews with Kevin Boland, held in full view of Heatovent's new headquarters!

There followed some very challenging times with political unrest and a six-month bank strike which did untold damage to the economy, and the building services sector. To cap it all there followed the 1973 oil crisis, where worldwide shortages led to considerable disruption to world trade.

Nonetheless, Heatovent survived and, in an effort to expand in 1976, joined forces with two other independent companies in a reverse takeover of Metal Products Cork plc in a deal structured by the banks. Unfortunately, the venture failed and so Joe and Pat started again as Service Merchants Ltd.

This new venture took off immediately and they re-purchased the Harold's Cross premises in 1978. They both worked extremely hard and, while they were successful, it was at a cost. Pat, my father, died suddenly aged 51 in January 1980.

Subsequently, I joined Joe in Service Merchants and, over the next nine years, the company traded successfully through the tricky commercial seas of the 1980s. As a tribute to Joe and Pat's 25-year endeavour, we sought – and were granted – permission to operate under the trade name Heatovent.

In 1989 Joe and I parted as we sought to approach the growing market potential from different angles. I set up Chronotherm Controls Ltd while Joe continued to successfully guide Service Merchants Ltd, now trading as Heatovent. In 1991 he sold out to the Grafton Group, continuing to work with them for three years as part of the deal.

When he left he set up a manufacturer's agent company called Noone Direct, acting as sales agent for top UK and Italian heating and plumbing product manufacturers such as Pettinaroli. He continued in this business until he retired in 2011. Noone Direct continues today under the ownership of Dermot Leahy and still acts for Pettinaroli and the leading pipe brand Ape Italia.

During his years in the heating industry Joe was renowned for his sales ability. He had a quiet, gentle but knowledgeable manner and was extremely popular with both customers and suppliers. He served for a while as Chairman of the IDHE and also contributed to industry advisory bodies over the years.

In his early years Joe was a very talented hurler. Born in Boston, Tubber, Co Clare, he was educated post primary in St Flannans College where he graced many a school team. He was also honoured as a county minor. As an adult he played for the famous Faughs Hurling Club, now based in Templeogue, Dublin.

What is little known is that Joe was a fine cross country and track athlete and indeed turned down a scholarship to Villanova University as he felt he needed to pursue other directions in life. Joe's other great sporting love was horse racing.

In his family life tragedy befell him when his eldest son Ian died tragically following an accident in 2010. The loss of Ian at such a young age was devastating. When he himself was diagnosed with a terminal illness in January 2016 he bore the news with courage and dignity.

He will be greatly missed by all family members and industry friends.

Ar dheis Dé go raibh a h-anam.

Tom Noone

Irish Hospice Foundation beneficiary of BPM golf day

Once again the industry turned out in force recently for the Baxi Potterton Myson charity golf day in Newlands Golf Club. This is now a well-established annual event that raises significant funds for the Irish Hospice Foundation, the nominated charity on the day. Baxi Potterton Myson underwrites the entire day with all the teams' entry fees going directly to the Foundation. Additional funds were raised this year by way of the raffle for an Irish football shirt.

Blessed once again with magnificent weather, the 50 plus participants enjoyed an excellent day's golf before returning to the clubhouse for a meal and the presentation of prizes. While the golf is taken seriously, the atmosphere on the day is relaxed and fun-filled, the main focus being to generate funds for the Irish Hospice Foundation.

That said, the results are important and the various winners were as follows. First, Team Heating Distributors, with a score of 86pts; Second, Team Toshiba, with 84pts; and Third, Team Gleeson Logistics with 82pts. Ken Lawlor won the raffle for the Ireland shirt.

Vincent Broderick presenting Ken Lawlor with an Irish football shirt. Ken's name was first out of the hat in the draw to raise additional funds for the Irish Hospice Foundation.

Team Baxi Potterton Myson: Paul Clancy with Richard Louth.

Team Gleeson Logistics: George Cowzer with Tony Dunne and Dinny Hetherington.

Team Kavanagh Car Hire: Ronald Perry with Timmy Kavanagh and John Gleeson.

Team Hevac: Dave Verschoyle with Darren Yourell and Damien Byrne.

Team Heat Merchants 1: Glen Bailey with Vinnie Grehan and Matt McGuirk.

Team BSS: John Lavelle with Brendan Coghlan and Bernard Sheehan.

Team Heat Merchants 2: Mick O'Shea with Alan Hogan.

Team Heating Distributors: Seamus Kiernan with Colin McParland and Martin Keogh.

Team Building Services News: Rory McGuigan with Joe Warren and Vinnie Carroll.

Team Toshiba: Zac Keane with Ken Lawlor and Robbie Donnelly.

Team CDV: Kieran Emerson with David Tumbleton and Paul Gibson.

Team New Wave: Pat Fitzpatrick with Gerard Nugent and Sean O'Grady.

Team Eurofluid & DPL Cork: Bernard Costelloe with Andrew Keating and Liam Harte.

Team City Building Supplies: Kevin McKeown with Michael Merriman and Mick Matthews.

back issues

Congratulations Derek

Congratulations to Derek Mowlds on his appointment as Managing Director of PM Group's Xuhui District office in Shanghai, China. Derek has been working out of the office for the last three years and this new appointment means he will most likely spend at least another three years on that side of the world.

T Bourke cycle for charity

T Bourke entered a team into the Better Life Charity cycle which took place in Spanish Point, County Clare recently. Weather on the day was fantastic with spectacular views out to the Aran Islands and some superb west Clare scenery.

The funds raised from the event go to St Joseph's Foundation in Charleville, Co Cork, to help people with disabilities to live the life of their choice to their fullest potential. Over the last three cycles it has has raised over €250,000.

David Bourke, T Bourke with Andrew Clifford, JV Tierney, David Doherty, T Bourke, Tom O'Flynn, JODA and Dermot Gunne, Ulster Bank. Image courtesy Kay Caplice Photography.

Russian gas – good or bad?

While the EU is working on powers to vet all EU energy deals between third-party countries, leading energy experts have come out against the notion. Apparently, political tensions between the EU and Russia lie at the heart of the problem.

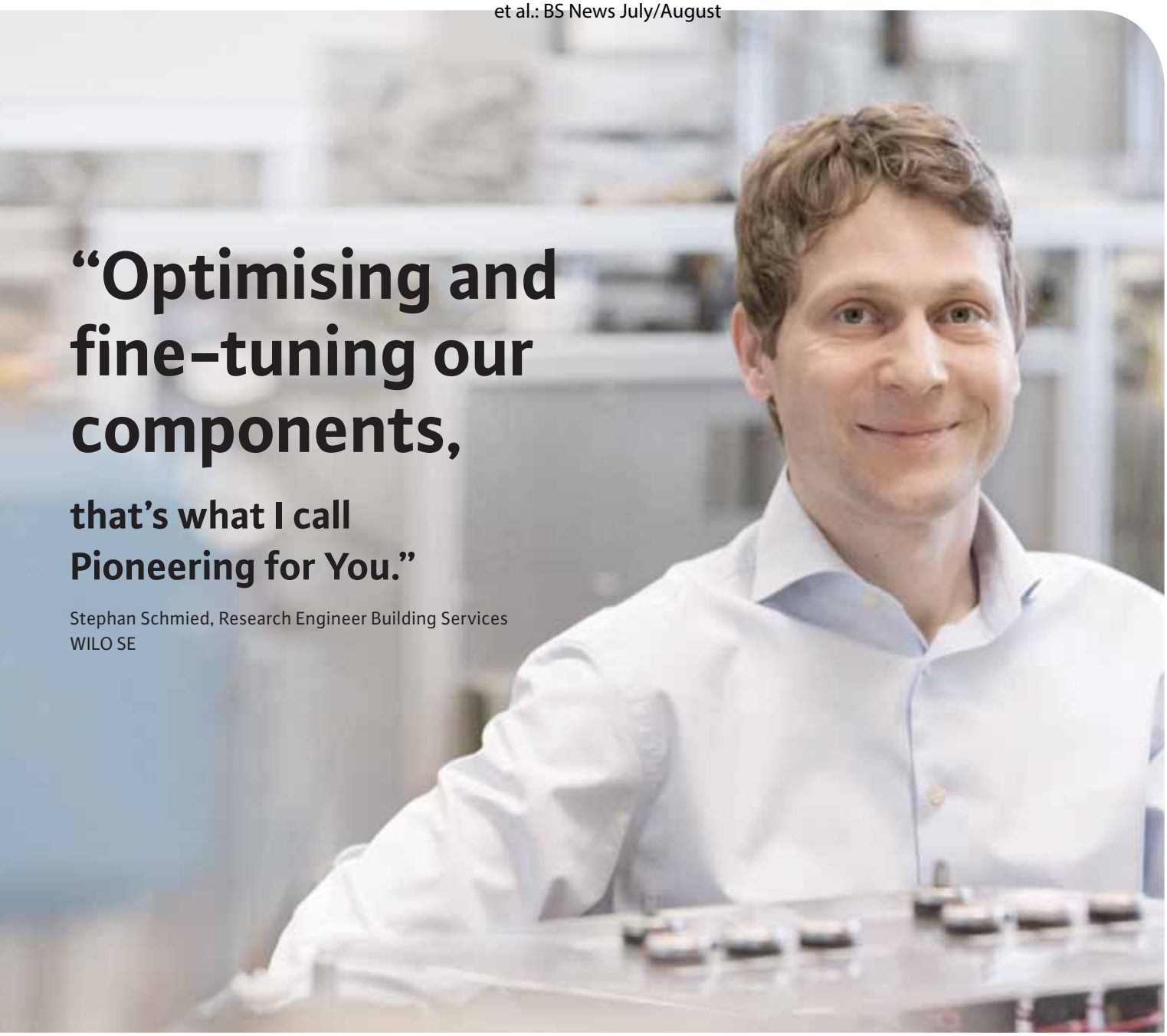
European leaders fear an over-dependence on Russian gas while a panel of leading energy experts – including executives from Shell, BP and Vitol – argues that heavy industry in particular needs this relatively cheap energy source to drive economic growth. It also argues that it reduces carbon emissions.

Are energy providers on a collision course with EU bureaucrats?

OurFuture.Energy

Further to Cathie Simpson's article in the May/June issue on the future of building services and how to attract young people into the sector, check out OurFuture.Energy. This is a very clever initiative aimed at 11 to 16 year olds incorporating animations, videos, games, quizzes and some hard energy-related facts.

Congratulations to the many organisations who came together to bring this about. For those wrestling with the problem of how to attract young people into the sector, it is a fantastic place to start for ideas.



“Optimising and fine-tuning our components,

that’s what I call Pioneering for You.”

Stephan Schmied, Research Engineer Building Services
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