


5-1-2015

BS News May/June

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(2015) "BS News May/June," *Building Services News*: Vol. 54: Iss. 3, Article 1.
Available at: <https://arrow.tudublin.ie/bsn/vol54/iss3/1>

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Building Services news



■ Building Automation



■ BC(A)R Explained



■ CIBSE YEN 5-a-Side



■ A Postcard from Abroad

Published by BS News@TU Dublin, 2015

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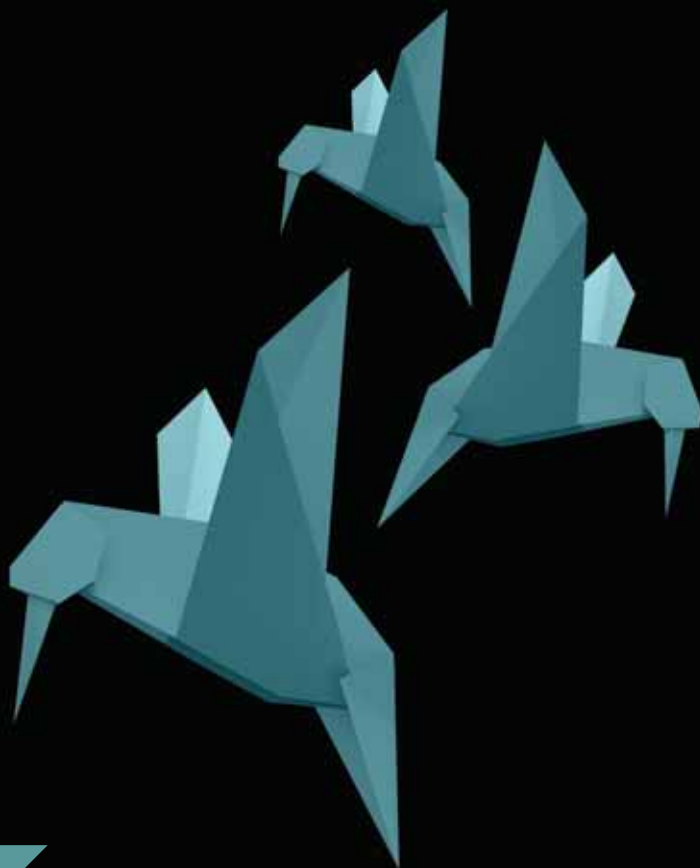


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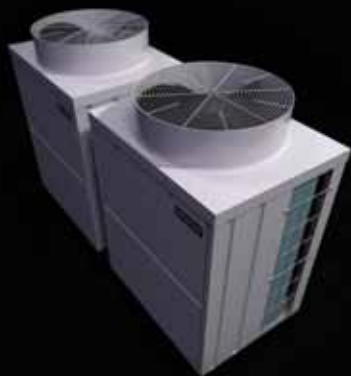
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Inspire the Next

Important to flag success stories

Entries are now being sought for this year's SEAI Sustainable Energy Awards. While submissions can be made across eight categories by public, private and community organisations, the Awards seem to be off the radar of many in building services.

Today's consultants, installers and manufacturers cooperate together to deliver all kinds of innovative, energy-saving solutions for clients across all industries.

Moreover, they very often have a vast reservoir of evidence-based data on these projects that proves just how high-performing they are. It is time to shout about these achievements.

Coordinating an entry to the SEAI Sustainable Energy Awards in conjunction with the full project team, and of course the client, on such successful projects is the ideal place to start.

The closing date of Friday, 26 June, is fast approaching. Log on to www.seai.ie/energyawards now to get the ball rolling.

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 – €70

Printed by: Swift Print Solutions (SPS).

© All editorial contents and all advertisements prepared by the publishers, Pressline Ltd.



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NEWS AND PRODUCTS

Ireland hosts Panasonic PRO Awards

With projects in Ireland and England winning four out of the eight inaugural pan-European Panasonic PRO Awards last month, Panasonic Ireland recently hosted the presentation of the four awards at the K Club in Co Kildare.

Panasonic PRO Partners from Ireland emerged victorious in two categories. Straffan Manor by Mulberry Properties in Co Kildare won Best Residential Project in the Multi-dwelling category. It was installed by Mick O'Shea Heating & Plumbing and supplied by Heat Merchants.

The Special Award for Best Contribution went to Tech Refrigeration & Air Conditioning for three entries in the Commercial Air Conditioning category – the Smurfit Kappa HQ, Savills HQ Dublin and Google Block R projects.

Representatives from all companies were joined in the K Club by the UK winners for a day of celebration that included golf, the formal presentations, and a dinner later that evening in a leading Dublin restaurant.



Group including the Ireland and UK Panasonic PRO Awards winners pictured at the K Club.

Trainer awarded City and Guilds Medal

Westmeath local David Coyne was recently awarded a City & Guilds Medal for Excellence. David is a trainer in domestic insulation in CDETB

Ballyfermot Training Centre in Dublin and received the award for his outstanding commitment to training.

David began his career training as a bricklayer in Ballyfermot Training Centre in 1987 and was awarded a City & Guilds Gold Trowel for his achievements in 1991. He has completed two degrees – in Training & Education and Construction Technology, and is also a certified Passiv Haus designer.

The award was presented by Brid Healy, Regional Manager of City & Guilds Europe, and the Minister of State for Skills, Research and Innovation, Damien English TD.

Photograph shows David with his wife Audrey and their son Liam.



Condair appoints Pat Byrne

Pat Byrne has been appointed Area Sales Manager for Ireland for Condair (formerly JS Humidifiers). Pat, who is based in Gorey, Co Wexford, has over 20 years experience in the HVAC and humidification industry and is widely known and respected within the building services sector.

In his new role Pat will be responsible for supporting sales of Condair's humidification and evaporative cooling products and services across Ireland.

The Condair Group is the world's leading manufacturer of commercial and industrial humidification systems, setting the standard globally for innovative, energy-efficient and hygienic solutions.

Today, with 600 employees, Condair operates production sites in Europe, North America and China, is represented in 14 counties by its own sales and service organisations, and supported by distribution partners in a further 50 locations worldwide.

Contact: Pat Byrne, Ireland Sales Manager, Condair. Tel: 091 – 507 120; email: pat.byrne@condair.com



New ceiling-concealed RAC indoor unit from MHI

Diamond Air Conditioning has just introduced MHI's new SRR unit which is the latest version of its ceiling-concealed RAC indoor range of products.

This new line-up incorporates advanced features that deliver significant additional benefits. These include:

- Higher efficiencies;
- A new infra-red remote controller which has a weekly timer function, night set back and child lock;
- Slimmer unit size: it is 13% thinner than previous unit;
- Custom code switching;
- RCEX1A remote controller functionality;
- Adjustable set-temperature facility.

Contact: Michael Clancy (087 – 262 0701) or Graham McCann (087 – 950 9402), Diamond Air Conditioning. Tel: 01 – 636 3131; email: info@diamondair.ie; www.diamondair.ie



NEWS AND PRODUCTS

RACGS season gets underway

The first RACGS outing of the year was held in Woodenbridge Golf Club which is set in the heart of Wicklow. The day was sponsored by RSL Ireland and Seamus Kerr was on hand to present a lovely array of prizes. The winner on the day was Joe Warren, *Building Services News*.

Woodenbridge results

Overall Winner: Joe Warren.

Class 1 – Winner: Paddy Smee; Runner-up: Ken Roden.

Class 2 – Winner: Martin O'Connor; Runner-up: Bill Qually.

Back Nine – Winner: Darren Keane.

Front Nine – Winner: Stephen Mulvany.



Left: Woodenbridge GC – John Ryan, BTU Captain with overall winner Joe Warren and sponsor Seamus Kerr, RSL.

Below: Castlemartyr Golf Resort – Overall winner Johnny Lynagh receiving his prize from sponsor Pat Cummins, RDL.



The next outing was held in Castlemartyr Golf Resort in Co Cork a few weeks later. The day was sponsored by RDL Ltd and Pat Cummins and his team had an excellent day where the weather was very kind to all. The winner was Johnny Lynagh from Whiskey Refrigeration.

Castlemartyr results

Overall Winner: Johnny Lynagh.

Class 1 – Winner: John Ryan; Runner-up: Mick Clancy.

Class 2 – Winner: Jack Elstead; Runner-up: Matt Butler.

Back Nine – Bernard Sharkey

Front Nine – Ger Darcy.



CONDAIR RS

New resistive steam humidifier with advanced scale management



The new Condair RS steam humidifier's patented scale management system makes servicing simple. Scale detaches from the heating elements and falls into the external collector tank where it is easily removed.

As the humidifier has a cleanable boiling chamber, it does not need disposable boiling cylinders, significantly reducing operating costs in comparison to electrode boiler systems.



New Ireland sales manager – Pat Byrne

Discover more about the Condair RS

www.condair.ie/RS

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condair
The new name for JS Humidifiers

NEWS AND PRODUCTS

Hitachi expands Multi Split range

As part of its continuing product research and development activities, Hitachi has introduced an updated and expanded MultiZone product range that includes both indoor and outdoor units.

Three new-capacity outdoor units have been added, extending the number of outdoor models to eight, and capacities from 3.3kW to 10.6kW.

In addition, a new 1.5kW indoor unit has been introduced to meet a changing market where smaller buildings and higher levels of insulation mean smaller indoor units can be specified. It is priced accordingly and is approximately 8% cheaper than the 1.8kW model.

A big benefit for trade customers is the common indoor wall and floor unit designs used for both MonoZone and MultiZone installations, simplifying installer selection, stock control and improved aesthetics where single and multi combinations are installed within the same building.

Building Services News will have full details in our next edition.



Riello CIBSE-accredited CPD course

In response to growing demand, Riello is continuing its free CIBSE-accredited CPD courses through 2015. The three courses currently available cover *Specification of Pressure Jet Burners*, *Optimising Performance of Pressure Burners* and *Specification of Gas Boosters*. Each one can be delivered as separate one-hour presentations, or the pressure jet burner courses can be combined as a two-hour presentation if desired.

The Specification of Pressure Jet Burners course provides a detailed explanation of how pressure jet burners work and the key criteria in their specification. As such it encompasses matching of the burner to the boiler, design of fuel supplies and the principles of burner and boiler turndown.

Building on the content of the specification course, the Optimising Performance of Pressure Burners CPD looks in more detail at the factors influencing energy efficiency and emissions, and the measures that can be taken to optimise performance.

Specification of Gas Boosters covers the specification, installation and maintenance of gas boosters for use with gas-fired burners in commercial and industrial applications.

In the first instance, specifiers should register their interest by visiting www.rielloburners.co.uk/cpd, emailing cpd@rielloburners.co.uk or calling 0044 - 1480 432144.

New Condair Steam Humidifier

Condair has introduced a new resistive steam humidifier, the Condair RS. It has a patented scale management system that allows easy removal of limescale, resulting in reduced maintenance and extended operational periods between major services.

It also incorporates the latest touch screen control technology, has BMS connectivity as standard and offers very close humidity control at $\pm 1\%RH$ with RO water.

To further enable long periods between major services, the Condair RS water inlet and drain are located in a "cold water pool" to prevent scale blockages. By locating

these orifices between an inner liner and the external wall of the boiling cylinder, the water temperature in this insulated area is kept at around 55°C.

The inner liner prevents falling scale from causing blockages and the low water temperature inhibits direct scale formation. Furthermore, as scale is collected in the tank, it is prevented from being flushed into a building's pipework and blocking it.

Condair RS also incorporates the latest touch-screen technology, providing intuitive control over operation and extensive reporting functions. As well as all operating parameters, the user can view trouble-shooting suggestions and service requirements. An optional hygiene pack that will automatically drain the complete system following a predetermined period of inoperation is also available.

Contact: Pat Byrne, Ireland Sales Manager, Condair.

Tel: 091 - 507 120; email: pat.byrne@condair.com



Lee Railton joins DWG

As part of its strategic growth plan for the future DWG Refrigeration Wholesale has appointed Lee Railton, Technical Sales Engineer. Based at its Dublin office in Broomhill Road, Tallaght, Lee is no stranger to Ireland having previously worked with Danfoss Ireland (formerly known as JJ Sampson). Most recently he worked as a project engineer with UK business Ryan Jayberg.



NEWS AND PRODUCTS

Myson's Finesse electric radiator

The new Myson Finesse electric radiator from Baxi Potterton Myson provides all the benefits of central heating without the need for a plumbed-in system. It can be used as a stand-alone radiator or can be connected to a radio frequency programmer via a wireless wall receiver for programming flexibility.

This new unit has many innovative design features and meets the new demand for electric back-up heating in commercial boiler houses as well as domestic applications. Features and benefits include:

- Sleek and modern control panel;
- Instant warmth due to a perfect balance of radiant/convection heat;



- Precision electronic thermostat with frost protection providing maximum control and minimum energy consumption
- Filled with environmental-friendly vegetable oil;

- Class 1, splash-resistant (IP44).

For further information contact:
Baxi Potterton Myson.

Tel: 01 – 459 0870;

email: sales@potterton-myson.ie

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IERC looks to North America for energy partnerships

New industry links have been established in North America for the Irish energy sector. The International Energy Research Centre (IERC), which is responsible for enabling Irish-based companies and researchers develop next-generation energy solutions, has just signed a new partnership agreement with Seneca College in Canada.



Jeff Spittler, OG&E Energy Technology Chair, Oklahoma State University with Rowena McCappin, Project Director, Glen Dimplex; Jeff Smith, CEO Bilfinger and Eckhart Morre, Managing Director, Bilfinger.

The collaborative agreement will enable the IERC to work with Seneca College and industry partners in the building, energy and environmental sectors in North America.

This development gives the Irish energy sector a new platform to test technologies, new routes to market for developed products, awareness of new technology developments in North American markets, and potential new industry relationships. Details of the agreement were announced at the recent IERC Annual Conference in Cork.

Commenting, Professor Tony Day, Director of the IERC said: "The focus of our conference today is 'The Agile Energy Future' and this new partnership demonstrates how important agile collaboration is between industry and researchers. We will not only learn from each other, but we will create industry links in the North American market for energy technologies and systems currently being developed in Ireland. We need to seize this opportunity".

Other topics on the agenda at the IERC Conference included reducing energy demand, smart cities and buildings, making energy more sustainable, and how "the internet of things" will affect the energy sector of the future.

Key outcomes included new perspectives and debate on future technology, business and policy roadmaps for the energy sector, along with demonstrations of collaborative research delivered by industrial and academic partners.

Addressing the conference Alex White, Minister for Communications, Energy and Natural Resources, said: "Energy research in Ireland feeds directly in to our action plan for jobs, and expansion into new markets like North America is high on our agenda. The sustainable-energy solutions sector currently supports an estimated 18,000 jobs, and up to 30,000 jobs are expected to come from the manufacturing and construction sectors in next five years". ■



John Mullins, Chairman of IERC with Professor Tony Day, Director of IERC, and Minister Alex White TD, Minister for Communications, Energy and Natural Resources, unveiling the new ROWBUST smart energy management technology at the conference.

Flexible Space Underfloor Air Conditioning



Save energy, increase comfort, reduce building costs

Underfloor air conditioning has many benefits:

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- › Reduced maintenance
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- › Improved LEED and BREAM points
- › Maximise rentable space
- › Design freedom
- › Increased flexibility
- › Faster construction
- › Reduced build costs
- › Floor height savings
- › Increased headroom



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email: info@coreac.com
Web: www.coreac.com



Despite recent falls in oil prices, the cost, security and environmental impact of energy used in Ireland's buildings remains a major concern. With serious geo-political conflicts in both the Middle East and in and around Russia – two of the world's major energy-producing regions – and with growing recognition of climate change, these concerns are unlikely to go away, writes *Henry Lawson, Market Research Consultant, BSRIA (below)*.
Tel: 0044 1344 465590;
email: henry.lawson@bsria.co.uk



Possibilities limitless with today's BMS systems



The building manager or consultant looking to improve the energy efficiency of a building has a limited range of weapons at his/her disposal. These include making the structure of the building more energy efficient, but this can sometimes be difficult and expensive, especially where existing buildings are concerned. Installing more energy-efficient HVAC systems is another route to go, but this can require substantial investment.

However, the main option lies in monitoring and managing the building's use of energy more efficiently. Hence

the importance of Building Energy Management Systems (BEMS). These are computer software-based systems that help to manage, control and monitor building technical services and the energy consumption of devices related to the building's use.

BSRIA research at the end of 2014 showed that the BEMS market was growing at about 10% annually in Europe and is expected to reach some €1.7 billion in Europe this year. BSRIA's findings are also echoed by web coverage of major issues concerning energy and smart

technology. This includes both major news stories and company announcements. Coverage of building energy efficiency trebled between the middle of 2013 and the end of 2014.

But how is this growth in interest being focussed? To improve a building's energy performance you need to understand how the various building systems are performing, and ideally to identify patterns and predict and pre-empt problems, as where, for example a piece of equipment is using an abnormally high amount of energy.

Accordingly, BEMS systems increasingly offer advanced and sophisticated analytical capabilities, going far beyond simple charting and reporting. When we look at web coverage of building analytics, we see a massive surge of coverage in the second half of 2014 alone. See Figure 1.

Of course this coverage reflects the attempts of companies offering analytics to promote their solutions as well as the interest of the media and the market. But the genuine growth in the BEMS market – with building analytics at the core – suggests that this is a lot more than just "hype". However, with such a range of BEMS solutions and associated analytics available, the client needs to make sure that any BEMS solution selected can collect the information that is needed, and present clear information that identifies what action needs to be taken.

Delivering building energy efficiency

Today's BEMS facilitate different levels of interaction with buildings' systems. These include:

- Automatic control
- Alarms
- Automatic optimisation
- Demand response
- Monitoring and targeting
- Equipment performance analysis

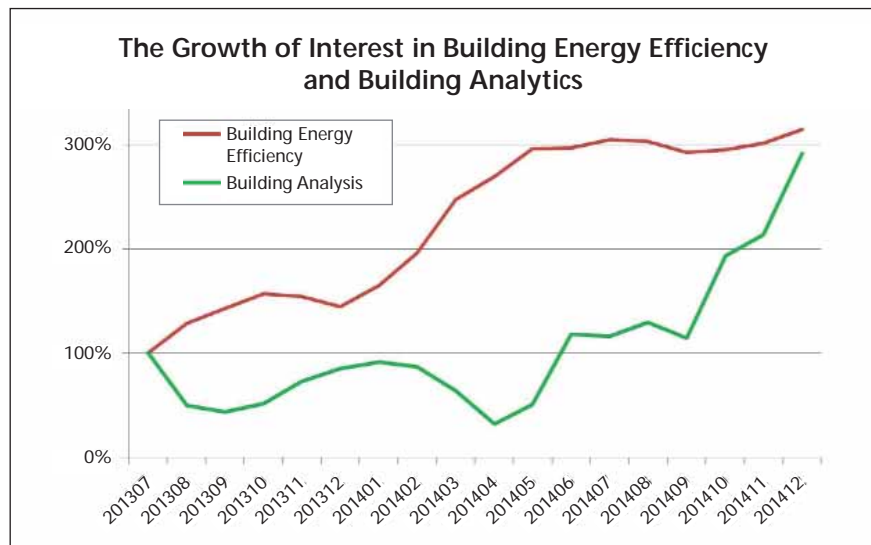


Figure 1

Source: BSRIA

- Maintenance actions
- Estate monitoring and targeting.

Building managers need to be able to respond in a timely and effective way to problems and anomalies that are identified. At the most basic level this means that those operating and maintaining the building on a day-to-day basis – whether in-house staff or outsourced facilities managers – understand the information being generated, how to prioritise it and what concrete steps to take.

For many facilities managers the perfect BEMS would collect, analyse, act on and distribute all necessary information, and save energy, with the minimum of human intervention. The problem has always been that even with the best available hardware and software, the BEMS is only as good as the person who installed and programmed it on day one.

There is certainly a shortage of good BEMS engineers and controls technicians but the dominance of BACnet, providing plug-and-play hardware – together with open-source configuration and analysis tools – means that engineers' and technicians' time can be much more productive and added-value functions are much easier to implement.

Facilities managers no longer need to

fear being stuck with a rigidly-defined BEMS from a single supplier as the ultimate specification is limited only by their imagination. A simple BEMS starting solution for one building can be progressively expanded in terms of scope and versatility across an entire organisation. Need to integrate renewables, smart metering, carbon management, demand response, reactive maintenance etc? No problem.

If you can think of an energy management task or energy saving opportunity associated with your building or estate operations, the new generation of BEMS can probably do it, probably more easily than you might think, and without the risk of drowning in data. Add components from the wider internet of things and the possibilities are limitless. ■

For many facilities managers the perfect BEMS would collect, analyse, act on and distribute all necessary information, and save energy, with the minimum of human intervention.

Metac celebrates ten years of training leadership

The annual Metac Open Day at its extensive training complex in Mountrath, Co Loais, is now firmly established as one of the highlights on the building services industry annual calendar of events. However, this year's gathering was a special occasion in that it also marked the 10th anniversary of the founding of the company by Dominic Dunne.

Over the years Dominic has championed the cause of training, assessment and continuous education for the building services sector, spearheading the adoption of new rules and regulations and devising tailored courses to promote them.

To that end he has worked closely with the likes of OFTEC, SEAI and other representative and regulatory bodies to ensure the rigour of both the course content, and the assessment procedures. As Dominic himself says: "People come to Metac for professional training and strict but fair assessment, whereas they can easily go elsewhere for just the certificate".

In the pursuit of training excellence and industry best practice standards Metac also engages with the leading manufacturers and product suppliers to the sector. The fact that so many had personnel on hand to greet and meet with visitors on the open day bears testament to the strength of these relationships.

Here's to the next decade and beyond Dominic.



Pic 1: Liam Maddock, Firebird with Charlie O'Neill, Heating Engineer Supplies; David Knipe, OFTEC and Niall Browne, Firebird.

Pic 2: Patrick Reynolds, Metac with Sean McBride, OFTEC; Freddie Bentley, Metac and Keith Scully, Grant Engineering.

Pic 3: Peter Crutchley and Paul Sharpe, Riello with Frank Daly, Glenergy and Conor Quiggley C&F Quadrant.

Pic 4: Andrew Brosnahan, Metac with Stephen Lynam, Calor.

Pic 5: Richard Payne, Blueflame Certification with Robert Staiger, guest speaker; Gearoid Fitzgerald, Arachas Corporate Insurance and Dominic Dunne, Managing Director, Metac.

Pic 6: John O'Mara, Mi Flues with Tom Noone, Chronotherm; Noel Gavigan, IrBEA and Patricia Mulligan, Bord Na Móna.

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New Sime Murelle domestic range from Hevac

The recently-introduced Murelle Pro HE IE range from Hevac is part of a new generation of wall-hung boilers that are particularly compact and functional. They represent the ideal answer to the requirements of modern domestic environments where space must be used in the best possible way.

Despite compact dimensions, they have technical solutions and features associated with superior classes of product, making them small in size but big on performance. The elegant design and ease of use further improves the user experience while, over time, homeowners will also appreciate the quality and reliability that Sime incorporates into all of its products.

Hevac has supplied Sime boilers to the Irish market for over 35 years. This new Murelle Pro HE (IE) range of wall-hung gas boilers is the latest addition to the Sime portfolio. Available in outputs ranging from 5kw to 40kw, there are four system boilers (25kW, 30kW, 35kW and 40kW) and one combination boiler (25kW to heat/30kw to hot water) within the range. All are fully modulating and HARP A rated.

Specifically built for the Irish market, the Sime Murelle Pro He (IE) range has a host of features and benefits including:

- Extremely compact dimensions: 70cm high by 40cm wide by 25cm deep;
- Gas adaptive valve: This makes conversion from natural gas to LPG simple with a parameter change on the control panel being the only requirement. There is no need for changeover kits;
- Self-commissioning setting for ease of installation;

- Adjustable pressure switch;
- In-built service timer option;
- Simple fault diagnosis;
- 3-piece casing for ease of servicing;
- Simple to use;
- Modulation of 1:5;
- Weather-compensation option;
- 5-year warrantee (terms and conditions apply).

Boiler manufacturers have always worried about adjusting the more efficient and environmentally-friendly combustion. The passing of time often cancels these efforts, lowering the quality of the combustion due to uncontrollable physical drifts.

However, with the Sime Murelle range, an active control of the combustion allows the system to be maintained within the pre-defined limits of efficiency, safety and emissions.

The system is based on two essential components – the ignition electrode and the control electronics. The electrode immersed in the flame works as a control sensor of the combustion,

providing feedback to the electronics to continuously control the combustion. Upon ignition, the boiler works in optimum combustion conditions. During operation, the combustion undergoes drifts that may lead it outside of the pre-defined field. However, the system detects this drift and automatically runs a new calibration to go back to working at the pre-defined set.

Contact details:
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Santry: Tel 01– 842 7037;
Cork: Tel 021– 432 1066
email: info@hevac.ie; www.hevac.ie ■





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POTTERTON

Davies Ltd Winner of 'Business Focus Award' at Octabuild 2015

Davies Ltd, Raheny, has won the "Business Focus" category at the national Octabuild Builders Merchant Awards 2015. Gerry Tobin, Managing Director said: "We're delighted to be part of the Octabuild Awards. This award is really down to the hard work of our staff ... it is a real team effort."

"The Octabuild Awards are of tremendous benefit to the plumbing and heating industry, encouraging merchants to focus on many areas which may otherwise have been forgotten. The sheer volume of people at the Awards proves how important it is to our industry. I am proud to be bringing this back to the Davies team and look forward to improved success in the years to come! "The award winners were announced recently at a presentation dinner in the Round Room of the Mansion House in Dublin. Speaking at the awards the newly-elected Chairman of Octabuild, Tadhg Donohoe, said: "All of the companies who

were nominated for these awards are among the best in the business. They have been judged in these awards by independent retail expert James Burke on their customer service, business focus, management and premises."

Introducing the awards Taoiseach Enda Kenny congratulated the Octabuild members who he said, "make a significant contribution to the Irish building and construction industry, and will continue to contribute to its growth and to its strength."



Above: Gerry Tobin, Managing Director, Davies Ltd, Raheny, Dublin (centre) receiving the award from Tadhg Donohoe, Chairman, Octabuild (left) and Hugh O'Donnell, President, Hardware Association Ireland.

Left: Davies Ltd staff at the presentation (l to r): Ben MacMahon, Grainne Hannigan, Graham Sheridan, Caroline Ruddy, David Blaides, Cian Tobin, Keith Sloan, Gerry Tobin, Andy Donnelly, Rory O'Hanlon, Adam Glaholm.

“ This award is really down to the hard work of our staff ... it is a real team effort.

Davies Ltd

150 Harmonstown Road

Raheny, Dublin 5

Tel: 01-851 1700 Fax: 01-851 1701

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Web: www.davies.ie

<https://arrow.tudublin.ie/bsn/vol54/iss3/1>

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Introducing Ideal's **5-Year Warranty** on The Evomax Boiler Range

Ideal Commercial Boilers' commitment to long-lasting quality is exemplified by the introduction of a new 5-year warranty* which is now available on the entire range of Evomax wall hung condensing boilers.

Providing additional peace of mind to customers, the new 5-year warranty* is testament to the proven reliability of the Evomax range, which also offers one of the largest output ranges on the market for this boiler type. Other key benefits include energy efficiencies up to 110% part load that exceed upcoming ErP 2015 requirements, and optional frame and header kits that have been proven to greatly simplify multiple boiler installation.

With the latest accessories, the Multiline Flue Cascade system extends the installation options to include a common flue header on multi-boiler installations up to 600kw, while the new Plume Kit allows flue terminal relocation up to 10m from the boiler.

Gerry Tobin, Managing Director of Davies, Ideal's Irish agent explains: "Having listened to responses from customers and installers, we are delighted to offer a 5-year warranty* on the Evomax at no extra cost, demonstrating our

confidence in this leading range. The exceptional quality of these boilers, which is a result of rigorous design, component selection and testing, along with the Evomax's excellent track record for reliability, made this an easy decision to make."

The best-selling Evomax range has been meticulously designed and developed by Ideal's Award-winning R&D team using six sigma configuration and the latest testing technology to ensure it meets and exceeds all Irish standards.

Available in seven outputs from 30kW to 150kW, Evomax provides an easy-fit reliable solution for an extensive range of buildings, from single boiler buildings to those requiring multiple boiler installations. Throughout any project or installation, technical and service support is readily available through our skilled commercial team.

The Evomax's energy-saving capabilities are the result of its innovative design and wider output modulation capability of 5:1, which ensures the load is matched closely to the building's requirements to maximise system efficiency.

A comprehensive system of controls and sequencers enhances the efficiency still further. Alternatively, it is easy to integrate each boiler with a BMS system via the 0-10V boiler control input.

Evomax can be installed directly on a wall or on Ideal Commercial Boilers' prefabricated floor-standing and fully-insulated "Frame and Header Kit".

**Subject to terms and conditions*



Cutting-edge Baxi EcoBlue and Potterton Profile

Baxi Potterton Myson has an extensive boiler portfolio with a wide range of model variations to choose from to cater for all types of applications. All incorporate innovative designs and cutting-edge technology, with features and benefits that deliver high-performance, energy-efficient solutions. The Potterton Profile and Baxi EcoBlue are two typical examples.

Baxi EcoBlue is a pioneering range of boilers set to make easy work of the complex boiler installation process for today's busy heating engineer. It is the result of an extensive Baxi research study that identified ease of installation, efficiency and reliability as the top priorities for heating installers.

In terms of eco-credentials, EcoBlue boilers have a modulation ratio of 1:5, meaning they are very efficient and economical to run.

They have convenient upright packaging with parts assembled as required, making them easier to transport and unpack on site.

Adding to the ease factor, all boilers in the

range are compact and designed to be easy to install, with a wall jig that has an audible positive fix when the boiler is positioned, and accessible connections. They offer easy access for straightforward servicing, with no special tools required. There is also an industry-leading choice of flue lengths, bends and accessories.

The EcoBlue range includes EcoBlue Advance Heat, the EcoBlue Heat, the EcoBlue Combi, the EcoBlue Advance Combi and the EcoBlue System. All are available at a variety of different outputs to suit any application. They come with a 5-year warranty, apart from the Baxi EcoBlue Heat, which has a two-year warranty, subject to registration.



The Baxi EcoBlue pioneering range of boilers.



The new Potterton Profile range is efficient and reliable with a sleek and compact design.

The new Potterton Profile is available solely to independent merchants throughout the Republic of Ireland. There are two models in the range – the Potterton Profile System boiler and the Potterton Profile Heat Only boiler.

Lightweight, compact and stylish, both boilers come with a standard 2-year warranty, which is extended to five years for Works members. See www.works2gether.ie for full details.

The Potterton Profile range is efficient and reliable and has a sleek and compact design, making it extremely easy to install. It has easy to use controls thanks to an intuitive boiler control display, meaning that end-users can regulate the heat correctly, for maximum comfort and efficiency.

On the customer support front Baxi Potterton Myson is continuing its installer training programme on domestic and commercial heating and hot water. This will run throughout the summer months.

The company has also extended the competition to find the oldest working Potterton Profile that carries a prize of a replacement model free of charge. Further details on this and installer incentives available through the Works Installer Loyalty Scheme are available via the website or by emailing us at sales@potterton-myson.ie.

Contact: Baxi Potterton Myson.

Tel: 01 – 459 0870;

Email: sales@potterton-myson.ie



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CIBSE News

Masterclass scores at Croke Park



The recent CIBSE Masterclass on building services held in Croke Park proved an enormous success with just over 100 delegates participating in a varied and diverse programme. Presentations were excellent but, what marked the occasion even more, was the level of engagement between the audience and speakers during the Q & A sessions.

Topics covered BIM, use of LEAN for offsite fabrication, sustainable buildings, and new energy legislation. There were also a number of case studies showing innovative

building design in practice.

Completing the programme were the many networking opportunities over lunch and during session breaks.

A special thanks is owed to Alan O'Reilly of Houghton & Young for organising a private tour of the Croke Park building management facilities for the group of delegates from Waterford Institute of Technology. Alan led the group, along with Ed Brennan, Croke Park Facility Officer, in what proved a very exciting and informative tour of the building services and controls centre.



Alan O'Reilly of Houghton & Young and Ed Brennan, Croke Park Facility Officer, with the WIT group.



David McAuley, SEAI with Paul McGrath, Arup; David Doherty, Hevac and CIBSE; Tadgh Hickey, Arup and John Dolan, Department of Education.



Colin Keane, Mercury Engineering with Mick McKeever, DIT; Paul Martin, SEAI and CIBSE; Paul Kane, Heat Merchants and James Duff, Arup.



Sean Hogan, RKD with Sean Dowd, CIBSE, and Colin Conway and Keith Sunderland, DIT.

Doherty elected CIBSE Ireland Chairman



David Doherty, previously Vice-Chair, was unanimously elected Chairman of CIBSE Ireland at the recent annual general meeting in Dublin. In his outgoing address former Chairman Sean Dowd reported on the many successes of the last 12 months, and in particular on the emergence of CIBSE YEN as an active representative force for young engineers within the Institute.

As Sean's "shadow" over the last 12 months David has been actively involved in all events and activities. He now intends to develop and build on recent achievements to further strengthen the membership, and authority, of CIBSE Ireland within the building services sector.



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Hitachi kicks off YEN 5-a-side

The inaugural Hitachi-sponsored CIBSE YEN 5-a-side soccer tournament took place recently at the Astro Park complex in Tallaght, Co Dublin. Participants included BDP, Ethos Engineering, Hevac, IN2 Engineering, OCSC and Origen. As subs were also allowed a total of 38 players were involved.

The games kicked off at 6pm on two pitches with matches running simultaneously and lasting 10 minutes. This didn't allow much breathing space between games with several matches running back to back.

By the end of the round-robin league with all teams having played each other once, two teams – OCSS and Ethos – were joined on ten points. They then played out a hard-fought final with Ethos emerging popular winners on the night. After the official presentations by Fergus Daly, Area Sales Manager, Hitachi Ireland, everyone adjourned to the local Metro Bar to socialise and network.

Aaron Brogan and Adam Dent, Chair and Vice-Chair respectively of CIBSE YEN organised the tournament, and indeed played as well!



"We are delighted with the number of teams that took part", says Aaron, "and a special thanks to Hitachi for their sponsorship. We're confident that this will now become annual event."

Left: The winners – Team Ethos pictured with Fergus Daly, Hitachi Ireland and organisers Aaron Brogan and Adam Dent.

CIBSE YEN lecture and BBQ

The CIBSE YEN technical evening and BBQ at the end of May signals the start of summer and always attracts a great attendance.

This year was no different with the business end of the evening commencing with some lectures and discussion in DIT Kevin St before everyone adjourned to the famous (infamous?) Dicey Reilly's in Harcourt St for burgers, pints, chat and craic.

Engineers young and old mingled together until late into the evening before the sensible "oldies" made their excuses and left, while those without sense tried to recapture lost youth and paid for it the next day!

Pictured at the BBQ were (back row): Manus McManuson with David Nolan, Enda Gilroy and Darren Holland. Front row: Adam Dent with Aaron Brogan, Kevin Hazlett, Paul Mooney and Adam Traynor.





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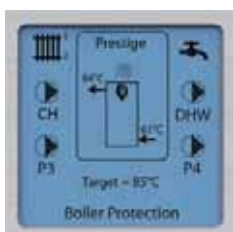


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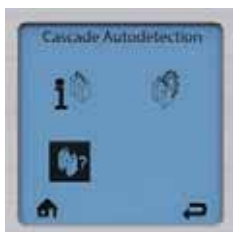
- Graphical user interface



- Easy installation set up menu covers 80% of standard installations



- Easy diagnostics with full text error messages and problem solving information



- Control cascades of up to 4 boilers without an additional controller

Further innovation in the new generation of Prestige boiler is the all new ACVMAX® system control, which has been designed to be flexible yet easy to use. The new control panel with integrated manometer and LCD provide all the necessary information with the simple push of a button. As well as monitoring the boiler to ensure optimal efficiency, the ACVMAX® offers many advanced control options, including control of up to 4 boilers in cascade without the extra expense of an additional controller, and native support for open protocols such as OpenTherm® 3.2 and Modbus® enabling easy integration into Building Management Systems (BMS).

Operating the Prestige in cascade offers a modulation ratio of 1:73 a highly flexible output from the minimum output of one unit to 100% of the combined



excellence in hot water

condensing wall-mounted boilers



The new generation of Prestige wall hung boilers from ACV are now available. With an extended range of 4 models in sizes 50kW, 75kW, 100kW and 120kW there is a prestige boiler suited to almost every commercial application. At the core of the Prestige is ACV's unique, self-cleaning stainless steel heat exchanger, developed and improved after intensive research and laboratory testing. The use of stainless steel provides unparalleled resistance to corrosion and the additives used in modern heating systems; we believe the durability of the material makes it a reliable and efficient choice.



power of all the boilers. Prestige boilers can be installed in a cascade from 2 to 8 units with a maximum combined output of 920kW. A cascade installation greatly improves the system efficiency and fuel usage resulting in reduced running costs and helps keep emissions to a minimum. The prestige boiler also now comes with an integrated non-return flue valve to make fluing options easier when considering a cascade system.

The new prestige boiler has been developed for ease of installation, maintenance and efficiency which will benefit the installer and end user. All parts are serviceable from the front of the unit by removing the front cover, which cuts down on service time. The improved ACVMAX® system control also has an easy menu structure which covers up to 80% of standard installations, easy diagnostics and full text error messages and problem solving information.

The connections on the underside of the prestige give easy access during installation with the added benefit of being in the same position as the previous models. All the accessories required for a cascade installation are available from ACV.

If you would like more information on the new generation of ACV Prestige wall hung boilers, please call C&F Quadrant on

Dublin: 01 630 5757

Belfast: 028 9036 5555

or visit www.cfquadrant.ie





Conall Finn is Chief Operations Officer and Assigned Certifier with i3PT Certification, a multi-disciplinary assigned certification body. He is a chartered engineer with a mechanical and fire engineering background and coordinates the courses for the Institute of Fire Engineers. He also chairs the Engineers Ireland PM Society. He is currently working as the Assigned Certifier on a number of large-scale commercial and residential development projects.

BC(A)R IN PRACTICE

Implications of the Building Control (Amendment) Regulations for consultants and M+E sub-contractors on large-scale commercial projects

Fourteen months after new rules covering compliance in building works were introduced, the building services industry is still coming to terms with the levels of commitment needed to demonstrate compliance with the Building Regulations. The Regulations place legal obligations on various parties to produce compliant buildings that are safe for occupants.

The Regulations place additional responsibilities and duties on all parties to the building contract. Designers, specifiers, suppliers, specialist sub-contractors, installers and inspectors are seen as "Ancillary Certifiers". They have a responsibility to familiarise themselves with their obligations under the new regulations. As a chartered engineer and a fire systems specialist with a background in M+E contracting now engaged as an Assigned Certifier with i3PT Certification, Conall Finn is ideally placed to give an insight into how the industry is adapting to the new regulations.

The Building Control Amendment Regulations, BC(A)R or SI9 of 2014, were introduced on 1 March of 2014, in part as a political response to Priory Hall. The regulations apply to new projects and renovation projects with material alterations to Technical Guidance Documents (TGD's) Parts A, B & M (i.e. alterations to structure, alterations requiring a fire certificate or works affecting accessibility).

Two types of regulations

In essence, there are two types of regulations – Building Regulations and Building Control Regulations. Building Regulations cover minimum standards under 12 books of regulations. Building Control Regulations cover how absolute compliance with the building control regulations is demonstrated.

The regulation and its associated guidance document, the *Code of Practice for Inspection and Certifying Building Works*, are light on detail around the roles and

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responsibilities of the sub-contractor/specialists who act as ancillary certifiers under the new regulations. This is especially noticeable when compared to the detail provided for the other BC(A)R roles (i.e. Builder/Assigned Certifier/Designer Certifier/Designers and Owner).

It would be beneficial to have additional guidance from the legislators to clarify the responsibilities of sub-contractors and specialist ancillary certifiers. Nonetheless, this ambiguity does not diminish the responsibility of ancillary certifiers to understand their roles and responsibilities under the new regulations.

Mechanical, electrical and fire sub-contractors, specialists and consultant professionals must first satisfy the designer and contractor that they are competent to both carry out the work and inspect against those works to validate that the works are Building Regulations compliant. They have a key role in facilitating both the assigned and designer certifiers in delivering a certified building, as their ancillary certificates will be relied upon by the builder, designer and assigned certifier.

M+E contractors on the ground generally have less awareness of the implications of BC(A)R than their consulting counterparts. Sub-contractors generally benefit from a BC(A)R induction and information pack – prior to their commencing works – in order to advise them of their responsibilities and obligations under the new regulations.

Contractual clauses as standard

Contractual clauses describing BC(A)R pre-conditions are now being included as standard in many contracts between builders and sub-contractors, to explicitly define the contractual obligation of sub-contractors and specialists. This is leading in

some instances to defensive specifications.

It is recommended that sub-contractors, specialists and suppliers familiarise themselves with the wording of the ancillary certificates for engineers, specialists and sub-contractors. These state that specialist ancillary certifiers should “undertake to prepare a Preliminary Inspection Plan for their element of the works”. As the specialist or sub-contractor is often engaged later than building commencement, an inspection plan for their element may have been pre-prepared by the designer, builder or assigned certifier.

The level of scrutiny and the frequency of inspection may be far more intense than the sub-contractor anticipates. However, they are obliged to adhere to the “Project Inspection Plan”. The inspection regime should take a risk-based approach, focusing on building elements, “the failure of which would be deemed significant”.

Each assigned certifier/designer certifier/ancillary certifier can determine his/her own methodology for applying the Code of Practice. However, their inspection plans should take cognisance of the overall inspection plan. The level of robustness of the inspection regime that is implemented can vary considerably from project to project. This makes it difficult for M+E consultants and sub-contractors to fix a fee for the number of inspection visits that will be required from them on a specific project, as the assigned certifier or design team ancillary certifiers may require substantially more, or less, than the average anticipated number of inspections.

Commencement stage

Project timeline allowances for BC(A)R should be communicated to the client as early as possible in the process, along with the implications for project budgets.

Responsibility for this communication is cumulative and should involve discussions with the architect and QS at project planning stages, where practical. For example, a rapid-build school project originally scheduled pre-BC(A)R for 32 weeks, rose to 38 weeks in order to facilitate BC(A)R hold points and inspections.

Critically, the upload to the Building Control BCMS site requires an upfront two-week validation period at commencement and a three-week validation period at completion stage. A two/three-week buffer period is needed to allow for administration, e.g., collation of certificates and documentation. This will cause some anxiety to project planners. This final few weeks of a project – when building services specialists are busiest with completions and commissioning – now has to facilitate a period of relative inactivity, with only final snagging and non-compliance close-out allowed.

Design

The M+E consultant is usually assigned the role of signing the M+E Ancillary Design Certificates (at commencement and completion stages), along with the Ancillary Inspection on Completion Certificates. Consultants will be required to carry out regular Inspections of the M+E systems to confirm that the design(s) they are responsible for are effectively delivered by the M+E sub-contractor(s) in accordance with the Building Regulations. Inspections will occur at 1st/ 2nd/ final fix and commissioning stages.

Inspectors are required to have the requisite training and experience to inspect against particular building elements. As a company director must sign certificates of compliance for inspection and completion,

“ Our experience on large projects indicates a willingness by builders, sub-contractors and design team members to engage with varying levels of commitment to the challenges that BC(A)R presents.



they must have a clear knowledge and hands-on understanding of the project that is being executed on site.

Workmanship TGD D & CE Marking

There is a genuine concern in the industry on how to interpret inspections against TGD Part D materials and workmanship. Since 1 July 2013, any products placed on the market under the new CPR (Construction Product Regulations) that are covered by a harmonised EN standard must be CE marked.

This can cause issues for specialist systems designed to US standards such as NFPA or FM, where it may not be possible to procure all products and components with declarations of performance and CE marking. This particular topic is worthy of an article in its own right and needs an industry-wide approach.

Project completion

As the project completion stage approaches, the assigned certifier notifies the BCMS of the intended occupancy date. Practical completion can no longer coincide with the occupancy date, as this assumes that the works are complete, inspected, certified and validated on the

same day. In reality, a minimum of a week should be allowed for completion information to be lodged on the BCMS and validated by building control.

BCMS administrators and local authority building control engineers are under considerable pressure due to the increased administration burden caused by BC(A)R. Each completion notice validation period needs to be agreed by the assigned certifier and the relevant local authority. Where an ancillary certificate of completion is late from a sub-contractor or specialist for whatever reason, this may have a detrimental impact on the agreed occupancy date. In a worst-case scenario it can result in resetting the validation period of 21 days, making for a very unhappy owner.

Technical Guidance Documents (TGD)

The TGDs which generally apply to M+E installations include TGDs B (Fire), D (Workmanship), F (Ventilation), G (Hygiene), H (Drainage) and J (Heat-producing Appliances) respectively. It is important that consultants and contractors stay abreast of the current regulations. A number of these have been updated recently – TGDs E (Sound), J (Heat-

producing Appliances) and K (Stairs).

With TGD B (Fire) also due for an update later this year, consultants and sub-contractors have a responsibility to know how individual TGDs apply to their element of the works. Reliance on design drawings and relevant EN/BS codes and performance requirements for the systems they are responsible for is no longer sufficient.

Sub-contractors and builders

The responsibility to design in compliance with the TGDs is shared among designers, builders and sub-contractors/specialists. Should an installation be installed to a non-compliant design, the onus is on the builder and sub-contractor to rectify the works, otherwise they may be held jointly liable for any resulting defect.

The M+E consultants can no longer rely on the contractor to provide “as-built” drawings. Ancillary design on completion certificates should relate to completion drawings rather than commencement drawings, reflecting what is actually installed on site. I would expect a cross-checking exercise on the part of the consultant to confirm that the “as-built” installation and compliance on completion drawings are consistent.

The effectiveness of BC(A)R depends on each party in the process taking responsibility for verifying and validating that their element of the works is compliant, i.e., self-certified. However, the M+E consultant is expected to carry out regular scheduled inspections at 1st/2nd/final fix and commissioning stages to validate that this compliance is achieved.

The relevant format of the ancillary

These certificates require the sub-contractor/specialists to inspect the works and verify that they have installed the

In order for BC(A)R to be successful, it requires that all stakeholders take ownership for their element of the works. They should be suitably compensated for the additional effort involved. The success of the project from a compliance perspective requires a collaborative approach to be employed from pre-commencement through to completion.

“BC(A)R is all about certification and sign-off

Panasonic bivalent controller maximises energy savings

Panasonic has added an innovative bivalent controller to its Aquarea range of air source heat pumps that maximises energy savings in installations where the heat pump is operating alongside an existing energy source. A typical example would be refurbishment projects where there is often pressure to minimise investment costs.

Panasonic's bivalent controller enables a heat pump from the Aquarea range to operate alongside a gas/oil-fired boiler or second heat pump and controls sequencing to minimise running costs. The controller includes three different operating modes and the package incorporates all necessary sensors to operate both energy sources and a secondary pump. A thermostat can be connected to stop both the pump and the heat pump/boiler according to room temperature.

"Hybrid systems, where a new heat pump is added to an existing boiler, are a popular option in refurbishment projects," explains Vincent Mahony, National Accounts Manager, Panasonic Ireland. "It is very important in such systems

to make sure they operate at maximum efficiency, so that energy use can be reduced and running cost savings maximised."

The three bivalent operating modes are – alternative, parallel and boost/parallel demand.

In alternative mode, if the outdoor temperature is below the threshold design value, then the system stops the heat pump and starts the gas/oil boiler, second heat pump or other alternative energy source.

In parallel mode, if the outdoor temperature is below the threshold design value, then the system starts the gas/oil boiler or another

energy source, and the heat pump and the gas/oil boiler work alongside each other.

In boost/parallel demand mode, if the outdoor temperature is below the threshold design value, then the controller starts to monitor the buffer tank temperature. If the buffer tank is below a set temperature over a specific period, then the gas/oil boiler is switched on.

In the case of buffer tank control, the user can apply a constant buffer set temperature and the heat pump is switched on if the buffer tank temperature is below the set point. If a room thermostat is installed, then the thermostat switches on or off the secondary pump and the heat pump supply to the buffer tank.

For secondary pump control, the water pump and the heat pump are activated by the room thermostat. If the room thermostat opens the contact, then the system stops both the secondary pump and the heat pump.

In all applications summer shut down is operated so that the secondary pump (if activated) and the heat pump are stopped if the outdoor temperature is above the design set point.

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

Panasonic's bivalent controller and part of the Panasonic range of heat pump units.



BTU Golf News

BTU St Annes results

Overall winner: John Lavelle (11) 37pts.

Class 1:

First: Graham Fay (5) 33pts;

Second: Desy Haughton (8) 32 pts, Back 9.

Class 2:

First: Martin Duffy (14) 35pts;

Second: Rory O'Hanlon (14) 33 pts.

Class 3:

First: Vincent Broderick (17) 36pts;

Second: Garvin Evans (28) 35 pts, Back 9.

Visitors:

Winner: Steve Jones (14) 38pts.

Front Nine:

Winner: John White (17) 20pts.

Back Nine:

Winner: Terry Murray, 18pts.



St Annes – Jim O'Shea, Victualic with John Lavelle, overall winner on the day and Shay Kiernan, Captain, BTU.



Above: Malahide – Padraig Gillen, TIDL with Vincent Broderick and Dominic Ward, third, and Shay Kiernan, Captain, BTU. Right: Shay Kiernan, Captain, BTU with Joe Warren, Winner Back Nine (with Shaun Gillen) and Padraig Gillen TIDL.



St Annes – BTU President John Lavelle with Michael Stone, President, CIF and Shay Kiernan, Captain, BTU.



St Annes – Jim O'Shea, Victualic with Steve Jones, Visitors Winner and Shay Kiernan, Captain, BTU.

Malahide results

4-ball better ball format. Sponsor on the day was TIDL.

Overall winners:

First: Shay Kiernan/Declan O'Reilly, 41pts;

Second: Paul Gillen/Padraig Gillen;

Third: Vincent Broderick/Dominic Ward.

Front Nine:

Winner: Michael Kearney/Garvin Evans.

Back Nine:

Winner: Joe Warren/Shawn Gillen.



With Hitachi, 3-pipe into 2-pipe does go!

When it comes to air conditioning upgrades, refurbishment or retrofit, one of the major headaches faced by system designers is the challenge posed by having to replace a 2-pipe system with a 3-pipe system. The physical disruption to the existing building fabric, coupled with the need for new hardware and ancillary equipment – not to mention time, crane-lift and labour costs – can be prohibitive.

However, this is the scenario now faced more and more by system designers as never-unoccupied but relatively newly-built speculative commercial buildings are being brought into first-time use. Unfortunately, many of these buildings were designed for open-plan occupancy whereas today's requirement predominantly seems to be for individual office layouts.

So, where you previously had say five floors of open-plan office space with the appropriate 2-pipe air conditioning services, the interiors are now being re-configured to incorporate multiple smaller offices on each floor. Hence the requirement for individually-controlled, simultaneous heating and cooling solutions.

This was precisely the scenario faced by the system designers when they had to reconfigure the services for the The Mill office

complex in Barrow St, Dublin for a high-profile international client. Designer Group are carrying out the mechanical and electrical installation on this project. Tech has been appointed by Designer Group as it had completed the original installation in conjunction with Hitachi Ireland.

The existing system comprised a 2-pipe Hitachi VRF set-free system with five ducted units operating off one outside unit on each floor. While the new interior office configuration called for a 3-pipe solution, conversion was no problem because Hitachi is the only manufacturer whose outdoor units can support both 2-pipe and 3-pipe systems. Hence there was no need for new outdoor units, just the simple addition of Hitachi changeover branch boxes.

Moreover, the capacity of the existing outdoor units was also sufficient to serve the additional indoor units required for the extra

offices, while the modular design added multiflex capability.

"Another requirement was for LEED accreditation and this too was achievable with the Hitachi installation", says Paul Byrne, Technical Sales Manager, Tech Refrigeration & Air Conditioning. "Using Hitachi's CS Net Web controller and the Hitachi Hi-ToolKit software programme, we were able to devise the most efficient and cost-effective solution."

By using CS Net Web – and because Hitachi is the only manufacturer that has a dedicated off-coil thermistor on all of its indoor units – draft prevention is guaranteed. Other benefits of CS Net Web include:

- Centralised independent control of up to 640 indoor units (four connected devices);
- Remote control via Web/Lan network;
- Timer: unlimited calendar configuration;
- Outdoor control;
- Heating fan stop during thermo off (heat draft);
- Integrated email alert;
- Calculation of energy consumption;
- Multiple access by password;
- Total control over system functionalities.

"Given the many new challenges retrofit poses, especially in relation to previously-unoccupied but newly-built and fully fitted-out commercial premises" says Fergus Daly, Area Sales Manager, Hitachi, "clients, consultants and installers can trust in Hitachi to deliver an energy efficient, cost-effective solution."

Contact: Fergus Daly, Hitachi Ireland.
Tel: 01 – 216 4406; Mobile: 087 – 277 9505;
email: Fergus.daly@hitachi-eu.com ■



The Mill, Barrow St, Dublin

TD Silent Ecowatt 'Air Movement Product of the Year'

Building on the success of the exceptionally low-noise TD Silent, S&P has enhanced the design further in the TD Silent Ecowatt, introducing improved energy efficiency and controllability. The result is a fan range that has received all manner of prestigious industry accolades, including the H&V News Air Movement Product of the Year Award.

The TD Silent Ecowatt range has also been awarded the Quiet Mark, and satisfies the specific fan power requirements of the latest Building Regulations Part L in the majority of applications. In addition, it includes features that anticipate future regulatory changes.

The design of the TD Silent Ecowatt addresses two key factors – energy consumption and noise. As such, they provide specifiers and installers with the opportunity to deliver added value solutions to their clients, while also helping to reduce the environmental impact of the ventilation system.

The TD Silent Ecowatt combines the advanced low-noise features of the TD Silent with an EC (electronically commutated) motor to deliver enhanced energy efficiency and facilitate more sophisticated control strategies. These include demand-controlled ventilation, as well as standard trickle and boost requirements for schools, offices, health centres and many other commercial applications.

TD Silent Ecowatt fans are available in diameters from 100mm to 315mm, enabling the benefits of these fans to be applied to a wide range of applications, especially where continuous operation is involved. Unlike axial fans where the airflow is normally axial, with mixed-flow fans the initial air flow is axial but

is then deflected through 45°C by the impeller.

The result is an increase in pressure due to the centrifugal force, making the fans ideal for overcoming the inherent resistance of ducted systems. At the same time, the design of mixed-flow fans retains the benefits of compact dimensions and low profile.

Using mixed flow in-line fans also contributes to energy efficiency as the mixed-flow configuration allows for a very efficient impeller. This, combined with the use of EC motors, ensures that the TD Silent Ecowatt provides very low specific fan power (SFP).

EC motors are highly controllable, making fan speed 100% adjustable using a 0-10V input signal. The difference with the TD Silent Ecowatt range is that it comes with an onboard 10V signal voltage and potentiometer that allows a trickle ventilation rate to be set. Most ventilation systems that provide adjustable trickle and boost settings involve the use of complex "smart" controllers – with the TD Silent Ecowatt this is integral with no

additional cost or complexity.

EC motors also provide a constant torque so that efficiencies are maintained at all fan speeds, taking full advantage of the fan cube law whereby a 50% reduction in fan speed results in power being reduced by a factor of eight times.

Low profile in-line fans are often installed in false ceilings or other locations close to the space they are ventilating. Consequently, noise is even more of a critical issue that it might be with some other fan types. S&P has invested heavily in R&D that has led to the noise reduction measures incorporated into TD Silent Ecowatt fans.

These include a specially-developed sound-absorbing perforated lining which provides integrated attenuation and sound-absorbing insulation in the external skin of the fan. As sound waves are produced inside the fan they are directed through the perforated inner skin and absorbed by the insulation in the outer skin.

In addition, the fans feature a specially-modelled, aerodynamic inlet that reduces sound further, as well as improving air flow. Motor vibrations are absorbed by a twin-material support bracket for the motor section. The overall result is that sound levels are reduced by as much as 7dB(A) less than a box fan with the equivalent performance.

Contact: S&P Ventilation Ireland Systems. Tel: 01 – 412 4020; email: sales.ie@solerpalau.com; www.solerpalau.ie ■



S&P's TD Silent Ecowatt

MHI introduce the highly efficient unique KX/Q-ton combined solution for commercial and industrial applications

The Mitsubishi Heavy Industries' KX VRF system, combined with the Q-ton heat pump system, is now available from Diamond Air Conditioning. This all-in-one solution offers space heating, cooling, sanitary hot water, underfloor heating and ventilation heat recovery. The unique combination this represents covers various requirements and, at the same time, delivers flexible solutions.

"This is the only real alternative solution to replacement or new install of chilled water and boiler configurations", says Michael Clancy of Diamond Air. "It has a combined efficiency of 375% and saves approximately 40% on running costs per hour when compared with boiler/chiller running costs per hour."

Combining KXZ and Q-ton technologies makes for highly-efficient solutions for commercial and industrial applications.

The main features of KX/Q-ton are as follows:

- All DX inverter system;
- No gas mains required;
- Easy and flexible installation;
- Compact design and lightweight;
- Reduced installation/maintenance costs.
- Lower CapEx when compared to chillers.

This unique combination can be used in a number of commercial and industrial applications such as hotels, gyms, universities and modern building offices. The solution offered includes the complete package and offers high performance, high efficiency, environmental responsibility, easy operation and long-term reliability.

The high-level technologies represented by this unique combination ensure reduced energy consumption and high efficiency rates. In essence, the KXZ technology integrates so well with the Q-ton technology that it provides the best alternative solutions available on the market today.

Contact: Michael Clancy
(087 – 262 0701) or Graham McCann
(087 – 950 9402), Diamond Air Conditioning.
Tel: 01 – 636 3131;
email: info@diamondair.ie;
www.diamondair.ie



AET Underfloor AC from Core

Core Air Conditioning has just signed an agreement with AET to distribute its Flexible Space underfloor air conditioning systems in Ireland.

Underfloor air conditioning systems (UFAC) make use of a raised access floor to provide the air ventilation duct, eliminating the need for traditional ceiling-based services. The system is especially suitable for commercial applications where flexible quality indoor environments and comfortable work spaces are an essential requirement.

With Flexible Space, the whole plenum under the building's raised access floor becomes the "duct" with each floor divided into a number of zones depending on the potential use and occupancy density of the area. Each zone is supplied with chilled or warmed air by a conditioned air module (CAM).

The underfloor void is split into supply and return air plenums using easily-relocatable, airtight baffles. The conditioned air is delivered into the space using a recessed Fantile or floor-standing fan terminal. Air travels back to the CAM for re-conditioning via return air grilles located over the return plenum.

AET Flexible Space offers a variety of standard configurations as well as bespoke hybrid solutions. Zonal systems use downflow units (CAM-C or CAM-V) and air terminals (Fantile). Central plant systems are used with passive terminals for constant air or variable air volume (CAM-P) using Flexible Space's Airfixture technology.

Total system components include air

handling unit (CAM); fan terminal unit (xTU); controls and communications; and grilles and accessories.

Optional extras include a fresh air module that draws fresh air from outside and delivers it into the CAM to



mix with supply air, and a floor-standing terminal for use in areas not suited to floor-recessed terminal units.

Key benefits of UFAC

- Energy efficient operation;
- Integrated user-friendly controls;
- Personal environmental control;
- Comfortable, healthy, draught-free environments;
- EC fan options with all units;
- Easy access for maintenance;
- Modular and re-configurable;
- Variety of system configurations;
- Easy access for maintenance;
- Elimination of horizontal pipework and ventilation ductwork;
- Pre-engineered integrated technology reduces time on site;
- Modular components allowing future layout changes at minimal cost.

Contact: Austin McDermott or Steve Wood, Core Air Conditioning.

Tel: 01 - 409 8912;

email: austin@coreac.com;

steve@coreac.com. www.coreac.com



Clockwise from left: Flexible Space CAM-V downflow unit; Flexible Space supply air grille with hatch access to integrated Fantronic controller; Flexible Space fantile cut-away; Flexible Space fantile in-situ on raised access floor.



After graduating in 2005 with a degree in building services from DIT Bolton Street (having already got a diploma in electrical services in 2003) I worked for a small consultancy called RCA (Ramsay Cox & Associates) for 12 months to gain experience before implementing my plan to travel abroad with some fellow DIT graduates.

Enjoying the good life in Vancouver

Come December 2006 I travelled to Vancouver in Canada on a one-year working visa. I found it difficult initially, especially given the time of year, but after six weeks of endless searching I landed a job with Cobalt Engineering (now known as Integral Group). The Winter Olympics were coming up and Cobalt had the contract to do the mechanical engineering on the Olympic Village. In my interview I was asked if I wanted to do mechanical or electrical but when I replied both I was told I had to choose one or the other as their system involves two separate teams. So much for integrated design! Anyway, I choose mechanical.

Canada is officially on the metric system so I felt more comfortable units wise. However, as I soon discovered, Canada is the worst country in which to do engineering as in practice the industry uses both imperial and metric systems. This is

because they are so close to the US (where imperial is used) and with whom they do a great many projects. In meetings, units get thrown around all the time so you have to know your conversions pretty well. It's ok now after eight years but initially it was some challenge.

The British Columbia Building Code consists of two large binders and one small binder for plumbing systems only. The codes are very different and cumbersome compared to Ireland. Also, they can be different depending on the municipality. For instance, the City of Vancouver has its own building code compared to the remainder of the province, and the University of British Columbia also has its own codes.

In addition, the energy codes are complex. For rezoning, some municipalities mandate LEED Gold rating for the building. There are also two energy codes to choose from,



Eoghan pictured with girlfriend Jessica Hudson against a back drop of Skookumchuck Narrows Provincial Park. Skookumchuck is a native word and the translation is turbulent or strong water. There are very large rapids in the area. Also, the Canadian and US military test their submarines here as the water in the area is extremely deep.

The Olympic and Paralympic Village Vancouver is located on the southeast side of False Creek in Vancouver.



both very different from one another so all sorts of gaming goes on to use the best code to suit a particular project.

When I started in Cobalt I was assigned a 25-storey high-rise office tower seeking a Leadership in Energy and Environmental Design (LEED) platinum rating (the highest possible). LEED is the green building system most commonly used in North America to demonstrate commitment to green sustainable design and construction for buildings. This was a great introductory project and I learned a lot working under my boss at the time, who was from Serbia.

I also got to do the LEED energy modeling for this project where I used IESVE to simulate the building's mechanical and electrical systems for submission for LEED. It was on this project I witnessed the benefits of energy modeling as several design changes were made based on feedback from the energy model. In order to maximise LEED points water from the roof of the tower, and an adjacent tower, is collected and stored in a concrete tank in the basement. This is used for toilet flushing and urinals and saves approximately 80% of the water use of the building.

In 2008 I got handed the toughest

project in the office, a small 20,000 sq ft visitors' centre building in a botanical garden seeking to get "living building" accredited building rating system, the toughest building rating system in the industry at present. In order to get net zero energy a detailed energy model using IESVE software was created. This model was used to make several changes to the design, including simulating natural ventilation, building orientation and all HVAC and electrical system components.

From the model we asked the architect to rotate the building 20° as the building was overheating on the west orientation when using natural ventilation. The architect obliged (you don't get to do that too often!) and, as a result, the building does not require mechanical cooling, just natural ventilation. Recent energy data from the site is 5% more than the detailed energy model. Any buildings where a detailed energy model was generated and where I was also involved in the mechanical design has always been in the +/- 10% range comparing the model energy to actual utility data.

I left Cobalt in 2011 and joined Fenix Energy, a design build geo-exchange contract company. This company is the first of its type in the world and uses low headroom drilling technology to

go into an existing parkade and drill beneath the building and install a vertical borehole geo-exchange system. It was great working on existing buildings and retrofitting them with this technology. It works by rejecting unwanted heat from air conditioning in the summer months and absorbing this heat to heat the building in winter. The first retrofit building came online in December last year and to date is saving 80% of the building heating energy, equivalent to about \$200,000 per annum in central steam utility costs.

My old Serbian boss once told me that in order to be a great energy modeller you must first understand design. However, I believe that in order to do a good design you need to be a good energy modeller too. Ben Costello of DIT Bolton St was always strict on using energy simulation software without checking and knowing how to do the energy modeling software calculation manually. This is the main reason I use the IESVE software as it is very easy to extrapolate data from the model and to check that the correct inputs and outputs are being generated when completing simulations. There needs to be integrity behind all energy modeling simulations, especially if the

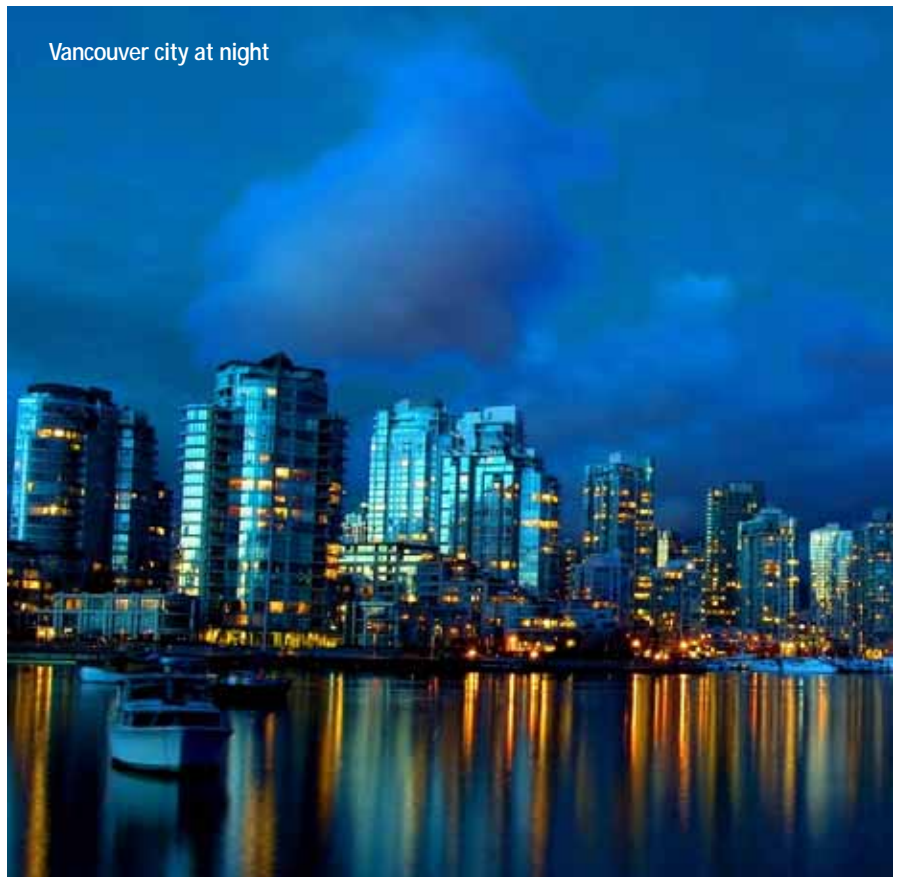
results are being used to implement changes to the building design.

Against this background I took the bold step last September to start my own energy modelling design assist company called Ions Engineering. My goal is to bridge the gap between design and energy modelling and to ensure that energy modelling simulations closely reflect actual on-site measured energy from utility bill data.

So far things have been good. I get to work with different clients – building owners, mechanical contractors and consultants. This in itself is a learning process as you have to be more open-minded and to make decisions based on more than the mechanical design. You learn to appreciate where all parties are coming from, and overall, to make better-rounded decisions.

On the day-to-day personal/social front Vancouver is a great place to live. There is a very energy-conscious presence in the city, its goal being to be the greenest city in the world by 2020. The diverse mix of nationalities includes Chinese, Japanese, Canadian, Irish, Australians and natives. When

Vancouver city at night



I first arrived there were not many Irish here but, over the past four years, I have seen a big increase. Ice hockey is the main sport people follow but recently the soccer team, the Vancouver White Caps, is becoming

more and more popular.

There is no highway through the city so it is never too congested. The city itself consists of multiple high-rise residential and commercial towers next to one another, which makes commuting great for people working and living downtown, or in nearby surrounding areas. There is also a seawall going around the entire city you can bike or run on, and there are lots of good places to eat and socialise.

One of the best things about Vancouver is the ease with which you can travel to remote parts of the province (British Columbia) and be in the wilderness in two hours or less travel time. I just spent the weekend at the West Coast Wilderness Lodge. This part of BC is unspoiled and is full of nature and natural beauty. I try and get to visit new areas once a month or so.

Overall, coming to Vancouver has been a fantastic opportunity and experience for me and I am thoroughly enjoying my life here. ■

British Columbia is often described as Paradise on Earth.



Baxi Potterton Myson

Corporate golf day aids Irish Hospice Foundation

The annual Baxi Potterton Myson charity corporate golf day in aid of the Irish Hospice Foundation has now become a “must-play” event for an increasing number of installers, merchants and consultants.

As with last year, Newlands was in excellent condition while the weather made for perfect playing conditions. Forty plus golfers took to the course from early afternoon and then adjourned to the clubhouse for the prize-giving and a wonderful meal.

While it is always an enjoyable and fun-filled occasion, there is also a serious element to the day. This year €2000 was raised for the Irish Hospice Foundation with the Foundation’s Amy Vaughan attending to accept the donation at the close of the evening.

That said, the golf was also high on the agenda with Tom Dunne, George Cowzer and Denis Heatherington emerging triumphant on the day. Team New Wave came second with Team DPL (Cork) getting third. Liam Harte from DPL Cork won the individual competition.



Paul Clancy, Managing Director, Baxi Potterton Myson with Amy Vaughan, Irish Hospice Foundation and Fidelma Cowzer, Baxi Potterton Myson.



Winning Team – Tom Dunne with George Cowzer and Denis Heatherington.



Second: Team Nu Wave – Sean Ryan with Gerrard Nugent and Sean O'Grady.



Third: Team DPL (Cork) – Liam Harte with Andrew Keating and Sean Cronin.



Team O'Shea – Glen Bailey with Mick O'Sea (Snr) and Mick O'Shea (Jnr).



Team DPL (Drogheda) – Paul Clancy with Gerry Hennessy and Brendan Clinton.



Team Hevac – Sean McCluskey with Dave Verschoyle and John Murray.



Team Heat Merchants – Willie Murphy with Vincent O'Brien and Ken Pringle.



Team Eurofluid 1 – Liam Trundle with Brian Conlon and Ger Hutchinson.



Team *Building Services News* – Mark Kiely with Joe Warren and Kevin Sheerin.



Team Eurofluid 2 – Noel Tobin with Bernard Costelloe and Noel Brennan.



Team Quinn Downes – Mike Flanagan with Alan Carton and Pat Healy.



Team Baxi Potterton Myson – Vincent Broderick with Richard Louth.



Team BSS – Jason Warnock with Martin Murphy and Ken Clarke.



Team City Building Supplies – Bernard Tougher with Dave Brady and Gerry Birmingham.

RGI mandatory assessment



With the regulation and registration of gas installers (natural gas and LPG) now well established, the matter of continuous assessment and accreditation is now coming to the fore as all RGIs are required to complete Domestic Gas Safety Assessment (DGA) every five years. It is currently estimated that in the region of 450 to 500 registered gas installers are now due for assessment and they are obliged to successfully complete this process if they are to retain their registered gas installer status.

In order to maintain their registration status an RGI must hold a valid certificate of competence issued by a certification body that has been assessed and accredited against the requirements of ISO/IEC 17024, by a national accreditation body signatory to the IAF multilateral agreement (e.g. INAB, UKAS etc) to certify the competence of personnel. The City of Dublin Education Training Board (CDETB) is one such certification body (see opposite page).

Individuals are required to demonstrate competence in safe gas work by successfully completing agreed standard assessments administered by an accredited Certification Body.

The scheme brings about the need for assessment to be carried out separately from any training, to ensure the objectivity and impartiality of the assessment process. Effective separation is achieved by satisfying the requirements of ISO/IEC 17024:2012.

The objectivity and impartiality of the scheme is processed to give confidence that the individual who is awarded a certificate is competent to carry out gas work safely in the area of certified competence. All of the assessment criteria and operational requirements developed and used in the scheme have been agreed, verified and approved.

The assessment(s) require the candidate to:

- Complete a practical assessment;
- Complete a written assessment;
- Correctly answer any oral questions posed by an assessor.

All practical, written and oral assessments undertaken by the candidate must be assessed by a competent assessor and internal verifier. Those undertaking these tasks must be approved by the Certification Body.

The actual test criteria

The natural gas and LPG gas safety assessment is designed to test the gas safety competence of a registered gas installer (RGI) in domestic gas work by



requirement

CDETb



**Ballyfermot
Training
Centre**



CDETb Domestic Gas Assessment (DGA)

The City of Dublin Education & Training Board (CDETb) was established in July 2013 following the Education and Training Boards Act 2013. It now encompasses the training functions formerly run by FÁS with the Ballyfermot and Finglas Training Centres coming within its remit.

The Ballyfermot facility has a comprehensive purpose-designed assessment centre specifically dedicated to gas safety assessment. It is fully fitted out with tailored working bays so all relevant tests can be carried out by those seeking domestic gas assessment. It also offers an optional pre-assessment training course that applicants can complete before taking the formal assessment.

The Ballyfermot facility also includes a subsidised canteen and ample free parking.

All applicants for the DGA must be RGII registered and proof of this will be required beforehand. The theory and practical elements of the assessment process take place over a day and a half with the applicant receiving DGA certification that is valid for five years on successful completion.

The assessment-only cost is €395 with the pre-assessment and training cost €950.

Contact: Maureen Bahraoui or Paul Noctor, CDETb, Ballyfermot Training Centre, Ballyfermot, Dublin 10. Tel: 01 605 5900.

practical, written and oral assessments. It comprises seven competencies:

- (1) Combustion and its control;
- (2) Pressure and flow;
- (3) Domestic pipework installations;
- (4) Flues and ventilation;
- (5) Domestic gas appliances;
- (6) Electrical safety;
- (7) Gas safety legislation and relevant Irish Standards.

Pre-requisite to test assessment

RGIs wishing to undertake this assessment must hold either a current Domestic Gas Safety (DGS) FEATC Award, a valid Gas Installer Domestic (GID) or training and assessments Certificate or equivalent (GI2, GI3, City & Guilds 662,

Mutual Recognition), or a previously-held DGS Competency Assessment Certificate.

RGII assessment fee subsidy

Assessment centres are separate entities to RGII and offer this assessment to RGIs only on a commercial basis.

However, there is an RGII subvention of €230 to assist applicants when taking the assessment, therefore substantially reducing the net cost.

This sum will be credited to the installer's RGII account on receipt of his/her DGA certificate. This credit may only be used for payment of registration fees and/or the purchase of Declaration of Conformance Certificates. This credit is non-refundable.

Integrated room
automation and
energy efficiency

Where comfort meets technology

“Comfort Meets Technology” was the theme of the recent ISH 2015 held in Frankfurt where dedicated display areas, complemented by an extensive programme of seminars and technical presentations, portrayed current and future trends in the sector.

The presentations focused on current issues and trends in the sector and reflected, among other things, how innovative technologies ensure individual convenience of use and operation in buildings.

It is in individual rooms that residents or users of a building are most aware of building automation. It is there where temperature, humidity, air quality and lightness are perceived directly by the body's own senses. Room automation is the electronic control and regulation of precisely these factors to deliver a sense of well-being in the occupied space. People can see and feel it.

In terms of room automation, integrated means fully incorporating all relevant technical equipment such as lighting, heating/cooling, ventilation, humidification and blinds, together with all external factors such as external temperature, direct sunlight, the use of the building and needs of the users.

In a broader sense it can mean integrating room automation with central energy preparation (heat, cooling, air), to be able to regulate these on the

basis of need (demand-led control).

The ultimate objective of integrated room automation is to maximise the users' feeling of well-being while minimising the energy required to achieve this. The EU Standard EN15232 sets benchmarks for energy efficiency on the basis of building automation and defines functionalities for efficiency classes from A to D.

The building automation sector has set itself the objective of increasing energy efficiency. However, it also recognises that rooms must be suitable for intended use, i.e. be comfortable and convenient. Modern buildings are practically airtight and their long-term use would scarcely be possible were they not to have an integrated system to intelligently control the room climate.

Apart from the large-scale system solutions that form part of building planning, there are a large number of smaller, decentralised solutions that can be integrated easily into existing house and living/work space designs. Their purpose is the same – to regulate



energy and security equipment such as intelligent heating controllers and remote-controlled door locks. They must also optimise the well-being of the occupant(s) by means of mood-dependent light ambiances or appropriate room temperatures.

Building automation and energy management systems are the perfect complement to demand-led energy supply in smart networks. A large number of innovative hardware and software solutions are available to achieve this defined objective. Automated Demand Response solutions (ADR) strategies

for energy control in new and existing buildings enable reductions to be made in energy consumption in line with demand so as to compensate for critical peak loads in the supply networks. Building operators and the energy experts of system providers are working together to develop bespoke strategies to reduce energy consumption, which in turn will lead to reductions in energy supply costs and carbon dioxide emissions.

In addition, network operators are able to reduce overloads in the power network resulting from outdated transmission and

distribution systems. This makes it possible to reduce the demand on reserve power stations fired by fossil fuels. However, while these safeguard the national power supply, they produce large amounts of greenhouse gases that are harmful to the climate.

ADR and comparable technologies are key technologies in this turnaround, since they ensure network stability and, at the same time, maximise the ecological benefit of renewable energies. Combined with other suitable hardware, software and system solutions, ADR technologies are designed to achieve an efficient use of volatile energies in smart grids.

In the future, renewable forms of energy will play an even more important role so demand-response solutions will therefore contribute to the stability of the network at low start-up costs.

There have recently been a large number of solutions intended to speed up the introduction of smart technologies into both homes and commercial/industrial premises. As ever, energy efficiency is the most quoted buzzword, but latterly it has been more about user comfort and convenience and user-friendly serviceability. These are all now major goals.

For several years user-friendly iOS and Android control apps have been gaining ground. These are, however, concerned simply with the user interface. The actual "intelligence" that lies behind them is the result of a complex system of requirements and equipment relating to the building services. These were initially underestimated by the IT industry and laymen alike but today's market reality where falling prices, coupled with incredible technological advancements, mean there is a simple-to-use app for virtually everything that falls within the building services sector category.

It is now possible to get control solutions for indoor spaces that are suitable for use by anyone and everyone, and which have similar appeal to that of the smart phones themselves.

The latter provide intuitive interfaces for use as control consoles for HVAC and lighting solutions. As a result, automated heating, ventilation and air-conditioning systems in interior spaces have finally become simple.

The challenge now facing the building automation sector is not so much developing ever-more-sophisticated ways of controlling indoor environments, but of conveying to both professionals and end-users alike that so much is already possible. ■



back issues

Ireland's largest solar installation

Designed, managed and installed by Salis Renewables, Ireland's largest solar PV system has just been completed at Bombardier's wing facility on Belfast's Airport Road West.

The 3.6 megawatt system, featuring 14,000 solar PV panels, is housed on the roof of Bombardier's 50,000sq m wing facility and is equivalent to the size of ten football pitches! The system cost approximately £3.5 million and took 10 weeks to install.

Pictured on the rooftop solar installation are Michael Ryan, Vice-President and General Manager, Bombardier Belfast and Michael Burke, Managing Director, Salis Renewables.



Illegal gas works – penalty must reflect the gravity of the offence

A Kildare-based fireplace fitter, who pleaded guilty to carrying out illegal gas works and portraying himself as a registered gas installer, was instructed to pay €500 to Crumlin Hospital by the Dublin District Court recently.

The Court heard that he had installed a gas fire at a home in Ballsbridge, Dublin 4, compounding the offence by using the registration number of another registered gas installer on the certification required to complete this work.

Despite the presiding judge describing the offence as a "serious matter" and that gas works were "dangerous to be dealing with", he imposed the probation act on condition that the fitter pay a €500 donation to Crumlin Hospital.

While no one would begrudge Crumlin Hospital the donation, just how is this sufficient punishment for such a blatant disregard for the law? Is it any wonder RGII-registered installers feel aggrieved at the soft-pedaling of the Courts on this matter.

Maith an fear thú Fergus!



Fergus Daly, Hitachi Ireland, pictured presenting players Lorcan Molloy and Ross Lynch of the Naomh Áine GAA Club Senior Team with their new Hitachi-sponsored jerseys. Rumours that Fergus is to make a number of "guest" appearances for the team throughout the forthcoming season have been strenuously denied by all involved.

Eve has 1.65 million miles on the clock!



This old girl – affectionately known as Eve (first lady) – is the longest-running Dachs CHP in Ireland. Installed by Kinviro (now Glenergy) in 2006 in Newtownpark House nursing home in Blackrock, Co Dublin, it has clocked up in excess of 55,000 operating hours.

To put that into context, it is the equivalent of a car travelling at an average of 30 miles per hour, for 1.65 million miles, without a single problem. Even more amazing is that throughout that time it has had just 16 oil changes and eight spark plug changes!



DOMESTIC GAS ASSESSMENT (DGA) RGII Reassessment and Training



CDETB Ballyfermot Training Centre, Dublin 10

Course Code: BAR02

Domestic Gas Assessment

The CER appointed the RGII with responsibility for registering gas installers and regulating their activities with respect to safety. Installers are required to demonstrate competence in safe gas work by successfully completing assessments.

Entry Requirements

Applicants should be RGII Registered (proof of this will be required)

Pre Assessment Training

1 week (optional)

Competency Assessment

Theory and Practical Assessments
Duration 1 ½ days

Certification

Domestic Gas Competency Assessment Valid for 5 years



Price:

Pre-Assessment and Training - €950

Assessment only - €395

Content

- Standards and Legislation
- Combustion
- Domestic Installations
- L.P.G.
- Flues and Ventilation
- Testing Existing Gas Systems
- Decommissioning Domestic
- Systems
- Electrical Safety
- Commissioning New Systems
- Servicing

Facilities

- Spacious well equipped training environment
- Modern comfortable subsidized canteen
- Car parking available
- On bus routes 18, 25, 26, 40, 66a, 67, 76a, 79

FOR FURTHER INFORMATION

01 6055900

CONTACT THE RECRUITMENT TEAM

barecruitment@btc.cdetb.ie

NEW PACi RANGE - COMPACT AND EXTREMELY EFFICIENT



NEW - next generation of Commercial Air Conditioners

Panasonic has redesigned the PACi range of air conditioners to suit the high performance demands of commercial applications. These new models are more energy-efficient than ever before and feature:

- Two product ranges - PACi Standard and PACi Elite ensure better integration into your project
- New extremely compact 5,0 kW outdoor unit - only 56cm high, 79cm wide and 28,5cm deep
- Top-class SEER: A++ / SCOP: A+ at 10,0 kW (Cassette 90x90 and ceiling options)
- Large line up of Air Curtains with Jet Flow and Standard Flow with DX Coil for extremely high savings
- Pack of accessories to connect PACi outdoor units to AHU for easy integration to ventilation systems
- Maintains the same nominal capacity even at -10°C (only for PACi Elite*)
- Compatible with all ECDi connectivity solutions
- Easy control from smartphones with optional Wi-Fi add-on
- Twin, Triple and Double-Twin connections possible and all controlled with just one remote control

* Maintains the capacity for the size 10KW, small capacity drops on the other models. Please check the technical manual for more details.

A class energy saving	6,80 A++ SEER	4,00 A+ SCOP*	Down to -15°C in cooling mode	Down to -20°C in heating mode	Easy control by BMS	Environmentally friendly refrigerant
INVERTER+	SEASONAL ENERGY EFFICIENCY RATIO	SEASONAL COEFFICIENT OF PERFORMANCE	OUTDOOR TEMPERATURE	OUTDOOR TEMPERATURE	CONNECTIVITY	R410A

