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ASHRAE President visits CIBSE

Building Information Modelling

Geothermal Awards Presentation

Just who is pushing industry buttons?

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opinion

Industry finally pushing its own buttons!

While there is still a great deal of work to be done, developments over the last 12 months emphatically demonstrate that the building services sector is determined to take ownership of its own destiny.

Many were sceptical that the emergence of a handful of new industry representative bodies earlier this year was but a fad, a knee-jerk reaction to the unprecedented difficulties facing the industry. Thankfully, they have been proved wrong.

Throughout 2011 the Association of Plumbing & Heating Contractors of Ireland (APHCI), the Heat Pump Association (HPA), the Irish Ventilation Industry Association (IVIA) and the National Insulation Association of Ireland (NIA) have matured from fledgling newcomers into the authoritative voices of the industry sectors served.

Individually, they have all engaged in lobbying for their members' interests at the highest level. This has included Government Departments, statutory bodies, industry regulators, and inter-association activity.

As it happens, this intense activity coincided with an equally-energetic campaign by longer-established associations such as the Chartered Institution of Building Services Engineers (CIBSE), the Oil Firing Technical Association (OFTEC) and the Institute of Refrigeration Ireland (IRI).

bs news has played a very active role in supporting the aims and objectives of all the aforementioned, and has participated in many of their activities. As a consequence, we recently facilitated the inaugural *Building Services Federation* meeting (see page 2).

Bring on 2012 … it is not going to be easy but building services will be united in meeting the challenge. ■

News and Products

Building Services 'Federation'

At a recent meeting convened in Dublin by Pat Lehane, Publisher and Editor of *bs news*, representatives from seven different building services-related associations came together to discuss common areas of interest and concern.

Pictured at the meeting were Paul O'Donnell, HPA; Damien Keenan, OFTEC; Richard Sherlock, HPA; Ciaran King, IVIA; Sean Giffney, APHCI; Henry Sheehan, NIA; Seamus Kerr, IRI; Simon Jones, IVIA; and Dave Killalea, IRI.

The organisations represented were the Heat Pump Association of Ireland (HPA); the Association of Heating & Plumbing Contractors of Ireland (APHCI); the Irish Ventilation Industry Association (IVIA); the Oil Firing Technical Association (OFTEC); the National Insulation Association of Ireland (NIA); the Institute of Refrigeration Ireland (IRI); and the Chartered Institution of Building Services Engineers (CIBSE).

The discussions were wide-ranging and covered issues of specific interest to each of the organisations, and also broader industry-related matters. However, what was very apparent from the outset was that there are a number of core fundamental issues which are common to all. Briefly, these are:

- Industry regulation and effectivepolicing
- Installer training (regulated) and certification
- Product and system certification
- Energy and environmental considerations

On foot of this inaugural meeting all the organisations represented have agreed to meet again shortly to explore means of cooperation, and collective action where appropriate, in the future.

Further NSAI accreditation for Varming

Varming Consulting Engineers' environmental and occupational health and safety management systems were recently certified by the National Standards Authority of Ireland (NSAI) in accordance with internationally-recognised Quality Assurance Standards:

- ***Environmental Management Systems I.S. EN 14001:2004;***
- ***Occupational Health and Safety Management System OHSAS 18001:2007.***

This achievement integrates with the companies existing quality assurance management system certification to IS EN 9001:2008 and reflects Varming Consulting Engineers' pioneering achievement in the area of quality assurance when, in 1992, it became the first engineering consultancy in Ireland to achieve accreditation to ISO 9001.

Pictured receiving the awards at the NSAI Headquarters in Dublin recently were Ann Riordan, NSAI Chairman; James Kavanagh, Varming Joint CEO; David Farren, Varming Director; and John Perry, TD, Minister of State.

Hitachi 'Heating Manufacturer of Year'

Hitachi Europe has won the "Heating Manufacturer of the Year" award at the InstallerLive Awards 2011 for its Yutaki-M air source heat pump.

The award category was open to all companies engaged in the manufacture of heating technology for the UK and judging criteria included the effectiveness of the product offering, and the level of after-sales support provided.

Almost 600 professionals from the industry gathered for the awards at the Hilton Birmingham Metropole Hotel. They heard about Yutaki-M and the other award-winning products, projects and performances across the sector.

Martin Richards, UK and Ireland National Manager for Hitachi, said: "We are delighted to receive this award. Yutaki is very energy efficient and represents a great opportunity to update an existing heating system, or for incorporation as part of a new installation."

Left: Hitachi's Martin Richards (centre), with comedian Rufus Hound and judge Bernie Witt, Gas Contracts Manager, Newnham Council.

TOSHIBA Leading Innovation

Lite-Vision Plus Remote Controller

GT Phelan has introduced the latest innovative development into the current range of Toshiba local control options for TCC-Link.

RBC-AMS51E-ES

Key features and benefits

- Unique Energy Saver Function
- Menu-based operational strategy
- Weekly timer function with multi-programmable settings
- Fully compatible with Toshiba DI/SDI and VRF systems
- Individual louver settings
- Programmable button restrictions (lock function)
- Individual registering of the name of room
- Illuminated display
- Option to display service provider name and telephone number
- Room temperature sensing option

The Toshiba Lite-Vision Plus remote controller offers a unique energy-saving function which can reduce an ac system's running cost while also reducing its carbon footprint.

A maximum of eight indoor units can be grouped together and controlled from the device. It is also fully forward and backward compatible with Toshiba's R410A equipment (excluding RAS).

Full configurable capabilities are available, along with data retrieval and the facility to store a list of past fault codes, which are date and time stamped.

For further information contact:

GT PHELAN Est. 1970
Tel: 01 286 4377
Email: info@gtphelan.ie
www.gtphelan.ie

TOSHIBA AIRCONDITIONING
Advancing the eco-evolution

News and Products

Paramount Three from Potterton Commercial

Potterton Commercial, part of Baxi Commercial Division, is continually developing advanced ranges of boilers and LZC solutions that lead the way in energy efficiency, space saving and control management.

The most recent addition is the new Paramount Three wall-hung high-efficiency condensing boiler. Offering advanced boiler control technology, the Paramount Three has the ability to control three heating zones and one domestic hot water cylinder, while incorporating all the physical attributes of its predecessor, the Paramount Two, in terms of size, appearance, outputs and condensing high efficiencies.

In addition Paramount Three delivers advanced ultra-low NOx performance of less than 20mg/kWh, exceeding Class 5, and up to 109% net energy efficiency. It is available in six outputs including 30, 40, 60, 80, 95 and 115kW models.

Also new to the the Potterton Commercial range is the already popular Eurocondense Three floor-standing condensing boiler. Offering the smallest footprint of any gas-fired condensing boiler in the Irish market for the kW rated output, this new-generation Eurocondense boiler is available in six outputs from 125 to 315kW and, at only 760mm wide, it will fit through a standard doorway.

The Eurocondense Three is built on a totally different platform from its predecessors, based on feedback from customers. The heat exchanger has been turned round through

90°, achieving a taller narrower profile and to accommodate a single burner assembly, which is positioned at the front and slides out for ease of servicing. As all connections are located on top, no access is necessary to the back or side for either installation or maintenance.

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

CIBSE Conference

CIBSE Republic of Ireland Region will once again hold its annual conference in the Croke Park Conference Centre in Dublin.

Put the date in your diary now – Tuesday 6 March 2012. See also page 33 for resume of the most recent CIBSE activities.

First certified antimicrobial copper coil AC unit

The first certified antimicrobial copper coil air handling unit has been produced in Europe by French manufacturer Hydronic, in association with Centre d'Information du Cuivre-Laitons et Alliages (CICLA).

The large-scale air conditioning coils can vary from 300mm x 600mm to 1.600mm x 1.800mm, contain copper tubes of 12.7mm and 15.45mm internal diameter, and handle an air flow between 300 m^3/hour (0.1 m^3/s) to greater than 130,000 m^3/hour (36 m^3/s).

"Controlling the quality of air in healthcare units is at the heart of our strategy" says Thomas Dupire, Product Manager for Hydronic. "Our air handling unit was designed to comply with air hygiene standards. Integrating antimicrobial copper into our products was the logical way to proceed. Moreover, these certified antimicrobial copper coil units have a better thermal efficiency, up to 8% higher than standard aluminium fins coil."

Afraid of the dark?

Afraid of the Dark? was the title of a major event organised by the School of Electrical Engineering Systems in DIT recently to highlight what is to happen with domestic lighting as incandescent lamps are replaced by lower energy sources with higher efficacy.

Opened by DIT President, Professor Brian Norton, it was attended by members of the public, lighting practitioners, engineers, students and researchers.

Paul Marah and Michael McDonald presented key findings of recent research undertaken in DIT by PhD student James Duff (Arup) and others. The pros and cons of compact fluorescent lamps (CFLs) were outlined, more questions about LED lighting were raised than answered (highlighting possible research questions to be addressed by future researchers), and other lamp types were also displayed and discussed.

A critical evaluation was offered by the expert presenters and panel members, clearly outlining the advantages and disadvantages of each lamp type.

Paul Heffernan highlighted the importance of good technical support in research with his model/display which directly showed comparable lamps side by side in order to allow a viewing comparison by the audience.

Left: Michael McDonald, Paul Heffernan, Brian Norton, Kevin Kelly, Paul Marah and James Duff.

News and Products

Heatrae Sadia Aquatap from PMI

Heatrae Sadia has introduced its new Aquatap boiling and chilled water unit, which has been designed for use in a wide variety of applications. The main unit is located underneath the worktop and is permanently connected to the mains water supply. The dispenser tap is then fixed on the top of the counter, usually next to the mains water taps.

Vincent Broderick of Potterton Myson Ireland, said: "Traditionally, workplace kitchen and staff areas with kettles and coffee machines tend to be messy environments. Increasingly, companies are turning to permanently-connected installations such as Aquatap which offer a cleaner, more efficient solution."

Aquatap offers five-litre capacity for the delivery of up to 30 consecutive cups of boiling water. Based on Heatrae Sadia's market-leading Supreme, it includes similar built-in safety features and the same Intelliboil™Plus technology. A "temperature ready" LED indicator advises when Aquatap is ready for use.

The unit is available in three versions – boiling; boiling/chilled; and boiling ambient. A drip tray for counter mounting is available as well as an extension piece to enable larger vessels such as flasks and water bottles to be filled.

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

Hevac supports DIT students

Aa part of an initiative to attract more young people into the industry – and especially on to DIT construction-related courses – Hevac has collaborated with DIT over the last six months to support five students from Michael Flaherty's 3rd year Building Services Class (DT026/3).

The initiative was spearheaded by David Doherty of Hevac who made a presentation to the class of 23 students on his experiences since leaving DIT, and discussed with them the various avenues open to them within the industry. Subsequent to the presentation five students joined a specially-devised in-house Hevac mentoring programme covering the subjects they were majoring in. These included condensing boilers, under-floor heating, biomass boilers, district heating and heat pumps.

These students then visited Hevac's headquarters on the Naas Road in Dublin and received a demonstration of a range of products from the various industry sectors featured in Hevac's newly-completed product showroom. The day concluded with a breakout session with in-house design engineers demonstrating the various design disciplines related to the students' sample projects.

Conversations covered installation procedures, detailed product performance and design parameters. The students aim to use the knowledge gained for inclusion in their dissertations which go towards their final-year results.

Feedback was positive from all concerned with discussions now taking place between Hevac and DIT with a view to further developing the programme.

Pictured are Seamus English, Hevac with John Smith, Aaron Byrne, Gerard Conmy, Keelan Cuthill, James Connolly and David Doherty, Hevac.

Highly-adaptable heating by Ecodan

Mitsubishi Electric has introduced a new packaged Hydrobox for its range of Ecodan® air source heat pumps to offer a flexible and adaptable heating solution for retrofit or new build.

Designed specifically to integrate with the Ecodan units and a third-party cylinder, the packaged Hydrobox provides hydraulic components with a simplified graphical user interface to ease control and provide energy efficient space heating.

The new Hydrobox is pre-plumbed and wired for faster installation and is also compatible with Mitsubishi Electric's wireless room controllers to bring advanced 20th century control to almost any home.

The system offers an integral 7-day schedule with in-built room temperature measurement and control, a holiday mode, and an intelligent weather-compensation system. Settings can be altered to suit the property and level of user interaction to give a control system that suits all applications and types of home.

Contact: Mitsubishi Electric Ireland. Tel: 01 – 419 8800; email: sales@meir.mee.com

Eurotech Renewables wins inaugural Geothermal Award

Eurotech Renewables Ltd has won the inaugural Brecan Mooney Domestic Geothermal Heating Installation of the Year Award for the innovative geothermal heating system it installed in a home in County Louth.

The award is named in memory of Brecan Mooney who was active in the research and promotion of geothermal energy in Ireland up to his death in November 2009. It aims to continue Brecan's work by showcasing excellence in geothermal system design and installation in Ireland. In this, the inaugural year of the competition, the award was presented for the best domestic heating system in operation since before January 2010, submitted for assessment in 2011.

The winning system installed in Sean and Mary McDonald's home by Eurotech Renewables uses an open-loop system comprising two wells. The first well takes water from the ground which then passes through a heat exchanger connected to two Ochsner heatpumps. Thermal energy is extracted from the groundwater for the purposes of heating the house.

A third heat pump extracts heat from the bathroom exhaust air to heat the domestic hot water. The cooled water is then recharged back into the ground through the second well.

The standard of installation in this project is exceptional. All heating plant and ground wells are easily accessible for maintenance and observation. The heating pipework systems are fully insulated and all equipment is clearly labelled. Operating instructions and installation manuals provide clear guidance on system use.

The operation of the heating system is very efficient, resulting in a low-energy, low-cost system for the owners. The primary energy operational rating of this house is 88kWhrs/m² each year, placing it at B1 on a building energy rating scale. The installation is saving 8,053kgs of CO2 emissions per annum when compared to a heating system that uses oil-fired heating.

Analysis of the system's energy performance characteristics indicates that the cost of heating the house is at least one quarter of that which would have arisen from using an oil-fired boiler.

Sean and Mary McDonald both feel the comfort levels in this house are very much improved from any house they have ever lived in before. The family also feel the system has benefited the family's health, as the relative humidity in the house is not affected by heating system.

Overall Winner – Paul Sikora, GAI Development Officer pictured with Brian Mooney; Mary Mc Donald, homeowner; John Burgess, GAI Chairman; Noreen Mooney; Sean Mc Donald, homeowner; and Gerard Duffy, Eurotech Renewables, winner of the Brecan Mooney Installation of the Year Award 2011.

Merit Award – Roisin Goodman, Vice Chair GAI pictured with Padraig Murphy, Green Renewable Heating, Brecan Mooney Award of Merit; and Gareth Jones, GAI Newsletter Editor.

Merit Award – Monica Lee, GAI Secretary pictured with Gerry Cunnane, Wind Water Solar Energy Systems, Brecan Mooney Award of Merit; and Heather Murphy, GAI Membership Officer.

Merit Award – Roisin Goodman, GAI pictured with Mike Cotter, Alternative Heating & Cooling, Brecan Mooney Award of Merit; and Laurena Lacey, GAI.

Certificates of merit

Certificates of merit were awarded to these companies and homeowners for installations that were of comparable quality and performance to the winner, and deemed to be worthy of recognition and promotion. These were:

- **Wind Water Solar Energy Systems Ltd** for the installation at the home of Jochen Gerz and Laurence Vanpoulle of Derryquin, Co Kerry;
- **Green Renewable Heating Ltd** for the installation in the home of Anne Murphy of Castlequin, Co Kerry;
- **Alternative Heating & Cooling Ltd** for the installation in the home of Nick and Anne Ross of Brook Lodge, Co Cork.

For more information in relation to the Brecan Mooney Geothermal Installation of the Year Awards, the Geothermal Association of Ireland and geothermal energy, visit www.geothermalassociation.ie

Contact: GAI Secretariat, c/o Groundwater Section, Geological Survey of Ireland. Tel: 01 - 678 2780/2784. ■

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NEW PRODUCT

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MINI ECO i

We are pleased to announce the launch of the Mini ECOi Series, exclusive to Panasonic, to complete the VRF range from 4HP to 48HP, 2 pipe, 3 pipe and GHP.
The single phase Mini ECOi will be available from October 2011, with a three-phase version coming in December 2011.

- Top-class EER:4.30/COP: 4.62 (4HP version)
- DC inverter technology combined with R410a for excellent efficiency
- Piping length: 120m (total piping length: 150m)
- One Amp start current
- Three sizes: 4HP / 5HP / 6HP
- Maximum number of connectable indoor units: 4HP (6 units) / 5HP (8 units) / 6HP (9 units)

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down to -20°C in heating mode OUTDOOR
A class energy saving INVERTER

heatingandcoolingsystems

www.panasonic.ie/aircon

Carrier Aquaforce from Core

Carrier's Aquaforce liquid screw chillers are the premium solution for industrial and commercial applications where installers, consultants and building owners require optimal performance and maximum quality.

The units are designed to meet current and future requirements in terms of energy efficiency, noise levels and reliability, and use the latest technological innovations pioneered by Carrier. They are also simple and easy to install, thereby affording additional savings and less system downtime.

Features and benefits include:

- Twin-rotor screw compressor equipped with a high-efficiency motor and a variable capacity valve that permits exact matching of the cooling capacity to the load;
- R134a refrigerant with zero ozone-depletion potential;
- Low-noise generation IV Flying Bird fans made of composite material;
- Aluminium micro-channel heat exchangers (MCHX) or copper/aluminium coils (option);
- Touch-screen Pro-Dialog control system.
- Extremely high full-load and part-load energy efficiency;
- All aluminium condensers with micro-channels (standard version);
- Flooded multi-pipe evaporator to increase the heat exchange efficiency;
- Electronic expansion device permitting operation at a lower condensing pressure and improved utilisation of the evaporator heat exchange surface (superheat control);
- Economiser system with electronic expansion device for increased cooling capacity.

Options available include DX free cooling; total or partial heat recovery; factory-fitted chilled water pumps; condenser coil anti-corrosion protection.

A key element of Aquaforce is the new generation Carrier 06T screw compressor that benefits from Carrier's long experience in the development of twin-rotor screw compressors. It is equipped with bearings with oversized rollers, and oil pressure lubricated for reliable and durable operation, even at maximum load. A variable control valve controlled by the oil pressure permits infinitely-variable cooling capacity. This system allows optimal adjustment of the compressor cooling capacity and ensures exceptionally high stability of the chilled water-leaving temperature.

The compressor is equipped with a separate oil separator that minimises the amount of oil in circulation in the refrigerant circuit and, with its integrated silencer, considerably reduces discharge gas pulsations for much quieter operation.

From an energy efficiency point-of-view, the MCHX heat exchanger used in Aquaforce is approximately 10% more efficient than a traditional coil and allows a 30% reduction in the amount of refrigerant used in the chiller. The low thickness of the MCHX reduces air pressure losses by 50% and makes it less susceptible to fouling by sand than a traditional coil. Cleaning of the MCHX heat exchanger is very fast using a high-pressure washer.

Apart from performance efficiencies and reduced energy usage, compliance with, and support for, environmental considerations are equally important. Hence the use of R134a refrigerant, a refrigerant of the HFC group with zero ozone depletion potential.

Control and management of the installed system is also critical. With Aquaforce the Pro-Dialog control combines intelligence with operating simplicity. It constantly monitors all machine parameters and precisely manages the operation of compressors, electronic expansion devices, fans and the evaporator water pump for optimum energy efficiency. Aquaforce is also equipped with an RS485 serial port that offers multiple remote control, monitoring and diagnostic possibilities.

With nominal cooling capacities of 270kW up to 1700kW, Carrier's Aquarforce 30XA high outdoor temperature air-cooled liquid chillers offer a very cost-effective, energy-efficient range of solutions for a broad range of applications.

Contact: Austin McDermott, Core Air Conditioning.
Tel: 01 – 409 8912; email: austin@coreac.ie; www.coreac.com ■

Many pairs of hands craft a Daikin chiller

then support the one pair that continues the good work

Applied Systems

Daikin chillers aren't just churned out on a production line. Each one is painstakingly crafted by the hands of many. We have the largest range in the industry, from 5 kW to 2 MW, offering solutions for every application: air cooled and water cooled, cooling only and heat pumps. We use our extensive manufacturing experience to ensure our products meet the highest performance specifications. And our comprehensive training programmes and technical support services keep installation and maintenance as trouble-free as possible.

A lot goes into a Daikin chiller. So it can enjoy a long and simple life.

Contact us now for further details.
Tel: 01 642 3430 Fax: 01 642 3431 Email: info@daikin.ie
Or visit www.daikin.ie

DAIKIN

Increased use of inverters in applied systems

As part of the increased trend towards energy efficient solutions in the HVAC market, inverters (or variable frequency drives) have become more and more commonplace. Inverter-driven units increase the part-load efficiency by slowing down the rotation speed of the compressor. This requires less power, as well as reducing the number of stop/start operations the unit goes through.

Every time a compressor starts, it experiences a very large in-rush current before settling down to a steady state. By minimising these start-ups, the in-rush current can be prevented, thereby reducing the total power consumption of the system. Through this, inverter-driven chillers can achieve seasonal efficiencies (ESEER) in the region of 5.5 - 6. While these units do require an additional capital outlay, the part-load savings are sufficient to significantly reduce the payback period.

Low noise at part-load, high-precision control of leaving water temperature, and quick response times to changing conditions are all well-known advantages of inverter compressors. Each one stems from the ability to change the speed of the compressor to exactly match the requirements, moment to moment. Over 70% of a chiller's life will be spent in part-load conditions so the ability to perform well in these changing conditions is essential.

It is this flexibility and ability to cope with changing conditions, be it ambient condition or load, that allows the inverter chiller to achieve large savings compared to a fixed-speed chiller.

In addition to these well-documented advantages for part-load efficiency, inverters also offer a number of other advantages. Each stop/start puts the compressor under significant mechanical stress, so preventing these stop/starts extends the life of the compressor and hence the chiller as a whole. This reliability also makes annual maintenance easier and cheaper for many years.

Often with units that draw a large amount of power, such as large chillers, power factor becomes a problem. Power factor is the ratio of real power flowing to the load divided by the apparent power in the circuit. When large sites have a low power factor, 0.8 – 0.85, it causes problems for the power supplier as it has to generate a higher current to deliver the same useful power. This means higher investment in power plants, distribution systems and cables. Often power companies charge penalties when a customer's power factor drops too low.

With inverter-driven units this is always kept at >0.95, thus helping the end-user avoid potentially-large penalties. So as well as consuming less overall power, an inverter chiller can prevent the power provider charging additional penalties to the client.

By using inverter technology, Daikin's inverter-driven large chillers (EWAD-CZ) can achieve seasonal efficiencies (ESEER) of up to 5.8. These are among the best in the market for units with screw compressors. When combined with a large array of options, including full and partial heat recovery, the result is a very versatile and energy-efficient chiller.

For 2012, Daikin can offer air cooled, inverter-driven chillers from 5kW to 63kW, and 300kW up to 1,800kW.

Contact: Daikin Europe Ireland Office. Tel: 01- 642 3430; email info@daikin.ie ■

Daikin Inverter Chiller

Hitachi Air Conditioning

Engineering for tomorrow. And the tomorrow after that.

AG2 Samurai Chiller

Powerful yet quiet in its delivery. Meet our newest Samurai.

Hydrokit option

Single cycle units are Hydrokit compatible

Ultra quiet

Improved DC inverter fans increase airflow, reduce motor power input and achieve market-leading low noise (further 4dB(A) reduction on 'super low noise' model)

Compact installation space

Meticulous design of each component means high cooling capacity in less space

Wide product range

Cooling only units from 110~1030kw - available with heat recovery option – and Heat Pump models from 120~600kw

World-class reliability

Twin screw compressors, low vibration, low noise, low starting currents and infinite capacity control for increased efficiency

Precise control

Control outlet water temperature to +/-0.5°C independent of cooling load (depending on site conditions)

Continuous capacity control

Infinitely variable slide valve for 15-20% energy saving over step control systems and excellent partial load performance

Introducing Hitachi's newest Samurai AG2 chiller unit. With two blade propellers instead of four, it's able to reduce noise and power output as well as increase airflow. It's also smaller than previous units and boasts a number of key improvements for easier servicing and maintenance. Not to mention compatibility with Hydrokit for single cycle units. In short, it's highly effective, powerful, yet surprisingly quiet – meet our newest Samurai.

To find out more call Hitachi on **+353 1216 4406**
Email **aircon.ireland@hitachi-eu.com** or visit **www.hitachiaircon.com**

HITACHI
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Special Report

ITT Corporation splits into three separate companies

Water and Wastewater Division is renamed Xylem Water Solutions

ITT Corporation, the New York Stock Exchange (NYSE) listed company with expertise in defence, fluid technology and motion flow, has split into three separate companies, each separately listed on the NYSE.

As of 31 October 2011, the fluid technology division was renamed Xylem Incorporated and will provide products, services, technologies and solutions vital for the efficient transport, treatment and analysis of water.

Xylem Incorporated is a $3.2 billion stand-alone global water technology company. Xylem's market-leading product brands, applications expertise and technological strength enable the transport, treatment, testing and efficient use of water in public utility, residential and commercial building services, industrial and agricultural settings. Xylem serves a $30 billion segment of the global water equipment and services market through a distribution network consisting of a direct sales force and independent channel partners. Its wholly-owned Irish operation is based in Tallaght, Dublin 24.

The Xylem strategy is simple – to provide water infrastructure and application solutions delivered by a business that is fully focused on global water issues, such as the increasing need to re-use water and the increasing demand on supply through urbanisation and population growth. With over 100 years of experience in the water business and a portfolio of strong, reputable product brands, Xylem still has the same commitment to providing a local service to meet its customers' specific needs, while leveraging its global network, technological innovation and applications expertise.

Xylem will concentrate on four key areas of operation:

Water Solutions
Municipal and industrial water and waste water solutions, including pumping and mixing, biological treatment, filtration and disinfectant products for waste water transport and treatment;

Residential and Commercial Water
Residential, commercial, light industrial, agricultural and irrigation applications concentrating on the efficient movement and use of water;

Analytics
Laboratory, field portable and online analytical instrumentation servicing applications that require precise measurements;

Flow Control
Speciality pumps, engineered valves and membrane filtration systems servicing the marine, oil and gas, beverage dispensing systems, hygiene and industrial markets.

Within the UK and Ireland, Xylem continues to focus on water and waste water solutions for the municipal and industrial markets – in municipal utilities, transporting and treating water to the highest standards and keeping water clean and safe for the environment; in industry, it works with customers to optimise their use of available water, reduce the amount they use, and make it safer, reducing their impact on the environment.

Consisting of seven market leading brands – Flygt, Godwin, Leopold, Lowara, Sanitaire, Vogel and Wedeco – Xylem in Ireland maintains its stance as the principal provider of water and waste water solutions. This is backed up by a dedicated projects team offering bespoke planning and design of major developments, and with a first-class after-market offering including service and rental, while at all times customer service remaining at the forefront of their responsibilities.

Contact: Terry Murray, Xylem. Tel: 01 – 452 4444; email: terry.murray@xyleminc.com; www.xylemwatersolutions.com/.ie ■

xylem
Let's Solve Water

Sustainable solutions to meet energy and climate challenge

As a world-leading manufacturer of advanced controls and monitoring systems, Danfoss has been providing a wide range of refrigeration, air conditioning, heating and industrial process products in Ireland for 60 years. Danfoss is extremely proud of this achievement and continues to focus on satisfying today's market needs and advancing new technologies, applied for tomorrow's requirements.

60 years in Ireland

Danfoss takes its role as global trendsetter very seriously and invests considerable resources in developing products and system solutions that are innovative, reliable, offer technical excellence, are energy-efficient, environment-friendly, and guarantee legislative or regulation compliance.

Danfoss is a leader in the research, development and production of mechanical and electronic products and controls designed to help heat and cool homes and offices, refrigerate food, and control production lines.

Through innovative mechanical design and advanced electronics – often including embedded software – Danfoss produces products and system solutions of high quality, reliability and versatility. Fundamental to its success is its ability to combine traditional mechanics-based technologies with electronic solutions.

Global company operating locally

Danfoss is a global company with turnover in excess of €3.5 billion, production facilities located at 59 factories in 21 countries, and a sales/distribution network covering the entire world. This includes Ireland where its wholly-owned subsidiary, Danfoss Ireland, brings these global resources to bear at local level.

This continues to be supported through the considerable experience, competency, and technical know-how of key personnel, including: –

John Sampson (Sales Director, Food Retail, RAC Division);
Shane Fleming (Adap-Kool Retail Solutions, RAC Division);
Eric Walsh (Wholesale & Distribution, RAC Division)
Bill Carbery (Heating Controls Division).

A real effect on environment and climate

The extent and depth of the Danfoss product technologies and resultant portfolio – along with the all-embracing scope of applications catered for – is massive and best understood by logging on to www.danfoss.com.

The core common to all is that they result in energy-efficient, cost-effective solutions that are particularly environmentally friendly.

Typically, these manifest themselves in the strength and value of both Danfoss products and system solutions, such as:–

– The 50,000 plus Adap-Kool systems installed worldwide deliver annual savings of 5kW billion of power consumed;
– The 2.4 million Danfoss variable speed drives installed worldwide deliver annual CO2 reductions of 26 million tonnes;
– By applying Danfoss energy optimisation concepts to systems, an average of 15-25% energy savings has been seen to be achieved.

Danfoss' objectives supporting the green economy are to:–

(1) Utilise existing energy-efficient solutions to an optimum;
(2) Invest in and provide new solutions based on core energy-efficiency and competencies, such as the following:
– Cooling systems based on natural refrigerants;
– Heat pumps;
– Solar inverters;
– Efficiency components for wind turbines.

"Essentially", says John Sampson, "we in Danfoss Ireland see ourselves as part of the overall engineering team providing products and systems in partnership with the consultant, installer and end-user. It is an interactive process which aims to identify the precise application need so that the most appropriate cost-effective, energy-efficient, environment-friendly solution is delivered and sustained." ■

Six decades in Ireland
Providing quality products & services

As a leading manufacturer of advanced controls and monitoring systems, Danfoss offers a wide range of products for typical applications in refrigeration and air conditioning, heating, and industrial processes.

www.danfoss.com/foodretail

Avocent turns to Sirus and Hitachi for F Gas compliance and energy savings

Because of Avocent's industry-leading portfolio of software, hardware and embedded technologies, it requires exacting indoor climate control over its entire operation. It also has to be high-performing and energy efficient. Hence the major challenge faced by Avocent's Shannon-based plant when changes in F Gas legislation required that existing R-22 chillers be replaced by new regulation-compliant equipment.

Having carefully considered the situation Avocent appointed Sirus Air Con to oversee the entire project. Sirus had already successfully delivered projects of a similar nature, including Penny's in Cork and the Irish Aviation Authority in Shannon. The appointment included configuration, planning, procurement, management, installation and final commissioning.

To begin with, Sirus carried out a full building energy load assessment which showed that most of Avocent's ventilation, fresh air make-up, heating and cooling were provided by nine roof-top air handling units. This comprised two large units for open-plan office areas, individual offices, meeting rooms, reception and the staff restaurant etc on two floors, and seven smaller units for production and warehouse areas.

Further analysis resulted in the decision to address the high energy consumption of the existing units by replacing them with reversible heat pump technology. The selected approach was to install two 250kW water-based Hitachi Samurai reversible heat pump chillers to provide cooling in summer and heating in winter. Reversible heat pump technology was chosen rather than a conventional chiller as it improves winter performance of the heating of the building, and reduces energy consumption by reducing the use of the much less efficient LPHW boiler (COP less than 1). The LPHW is now only used as a top-up.

Fergus Daly, Area Sales Manager Ireland, Hitachi Air Conditioning & Refrigeration with Brendan Cronin, Project Manager, Sirus Air Con and Martin O'Brien, Hitachi, pictured with one of the 3.5 tonne, 250kW Hitachi Samurai chillers as it was delivered to the Avocent site in Shannon.

A water-based heat pump system was chosen over a DX solution as higher efficiencies could be achieved by having tighter control using water systems.

Sirus used their expertise in building energy management systems to tie the controls of the new heat pumps into the existing site system and provide Avocent with very accurate control of the heating and cooling systems for their facility.

The new heat pump units – mounted on new structural frames with associated buffer vessels, twin pump sets and heat exchanger coils – were individually craned into position and installed over two weekends. The only downtime on the existing roof top units was during the removal of the old DX coil and installation of the new water-based coil.

The pipework was pre-fabricated off-site and required final adjustments and welding of a minimum number of joints in-situ. Optical pressure and temperature gauges were installed for future maintenance. Pressure and temperature transducers were installed, together with 3-way flow control valves for connection into the existing building management system to provide the necessary control. The system was then filled, commissioned and set to work.

The new high efficiency reversible heat pump units and system modifications will provide a performance gain of approximately 30% over the existing chillers and system. Approximately 20% of savings will derive from improvements in plant performance, a reduction in plant size and greater plant operating control. Additional savings will come from reduced building energy loads. Changes to the HVAC and BMS system will allow facility managers to heat and cool the building in a more efficient manner than previously possible.

Throughout the project Sirus and Hitachi worked very closely to ensure that all the works, right up to final commissioning, were carried out swiftly and with little or no disruption to Avocent's operations. ■

Pat Guilfoyle, Projects Manager, Sirus Air Con guiding one of the two Hitachi Samurai 250kW reversible heat pump chillers on to the purpose-built support frame on the roof of the Avocent building.

For renewable or conventional systems, new build or renovations MYSON tick all the boxes

Whether you are planning a new build project, doing renovation work or adding an extension, **MYSON** has the optimum heating solution for you.

Choose MYSON and you can be confident that you are using the highest quality products and receiving the highest quality service available.

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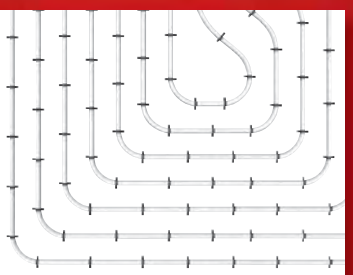

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Available now! NEW iVECTOR – Intelligent Heating

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- ☑ Integral intelligent controls
- ☑ Heating and cooling function

heatingthroughinnovation

Potterton Myson Ireland Ltd.
Tel: 01 459 0870 Fax: 01 459 0880
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GT Phelan – 'technology is nothing without control'

As a world leader in electronics, Toshiba is committed to delivering the highest standards of quality and innovation in all of the industry sectors it serves. These principles apply across the entire portfolio, including air conditioning and controls, for which Toshiba continues to develop market leading-products with the emphasis on performance, reliability and energy saving.

Toshiba has a passion for innovation and constantly works to ensure that its air conditioners and controls help protect the environment while delivering reassurance and reliability to end-users.

The benefits of this philosophy are brought to the Irish marketplace by GT Phelan, its long-standing distributor for Ireland. GT Phelan also has a passion for delivering pioneering cooling and heating solutions that are cost-effective to install and operate, environmentally-friendly, and reduce CO2 emissions.

GT Phelan is now stocking the latest generation back-lit controller (Lite-Vision Plus) from Toshiba which includes a host of new features including the much-asked-for locking function.

The Toshiba Lite-Vision Plus controller offers a unique energy saving function which can assist in reducing a system's running cost. This can also help to reduce the carbon footprint due to the higher efficiencies and reduction in the power consumption associated with part-load operation. The mode can be used for either heating or cooling and demand limitations are selectable from 50% to 100% duty and programmed in 1% increments throughout this range

The controller has an in-built, menu-driven, weekly time clock function which offers the option to set specific room temperature set points on system start-up.

On top of the fully-programmable weekly scheduling, this can utilise up to eight different running patterns throughout the day. The controller benefits from a keypad quick-lock option to instantly reduce keypad functionality.

Full configurable capabilities are available along with data retrieval, including the facility to store a list of past fault codes which are date and time stamped.

Serial numbers and model reference of indoor and outdoor units can also be obtained from the controller, which is fully backward-compatible for all R410a systems, excluding the residential range.

In the broader context GT Phelan offers a wide range of Toshiba controls to ensure all building requirements and occupants' needs are met. These include advanced touch-screen controllers which offer graphical interface of the system, together with the energy consumption for the selected indoor unit, in addition to centralised controllers, wired, simplified and remote controllers.

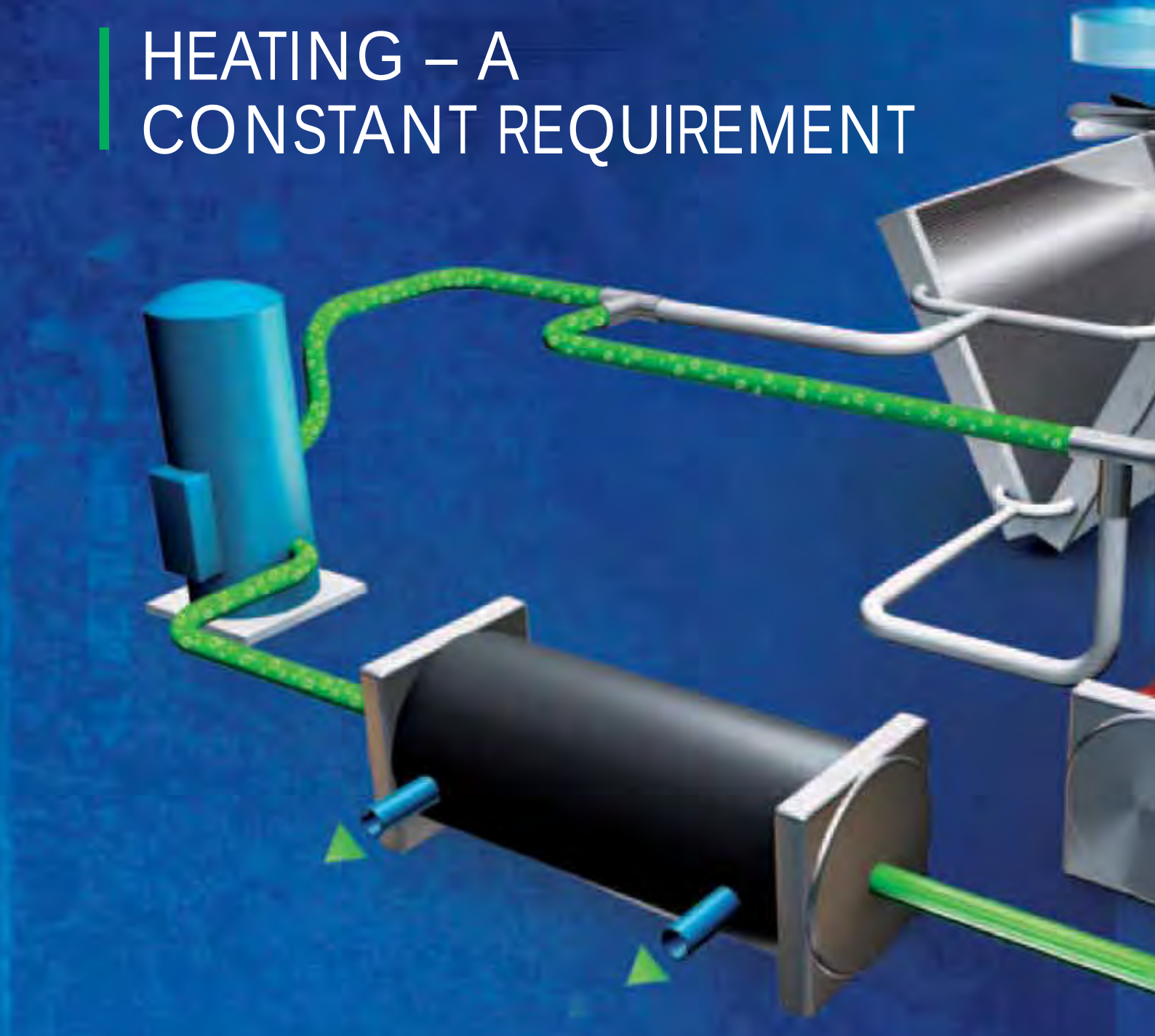
In partnership with Toshiba, GT Phelan has the expertise to deliver the right controls, for the right application. In addition, it has the capability to design bespoke controls to meet architects'/ consulting engineers' criteria that is increasingly becoming an important element of cooling and heating solutions for hotels, leisure centres, offices, etc.

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

The Toshiba Lite-Vision Plus controller.

Carrier

HEATING – A CONSTANT REQUIREMENT



Why reject and lose the heat generated by the refrigeration system and not benefit from it free-of-charge? In many activity sectors, such as agriculture, the food industry, industrial processes, hospitals and hotels heat reclaim permits a considerable reduction of the energy bill for the heat generation equipment. This controlled optimisation contributes towards a responsible commitment to reduce waste energy and the harm done to our planet. ■

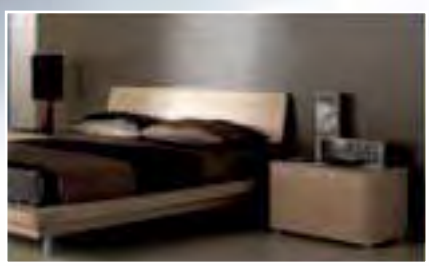
FREE HOT WATER, NOTHING IS LOST, EVERYTHING IS RECOVERED

TOTAL HEAT RECLAIM

A simple principle: if there is a demand for heating, the hot gases leaving the compressor are directed towards the heat reclaim condenser, the gases give up their heat to the hot water, leaving the condenser at a temperature of up to 60°C. 100% of the heat rejected by the chiller can be used to produce the hot water required by your installation. When the demand for heating is satisfied, the hot gases are automatically directed to the initial air condenser circuit where the heat is rejected to the air by the fans. ■

PARTIAL HEAT RECLAIM

At a leaving temperature of up to 80°C this system is particularly suited to the production of sanitary hot water. A heat exchanger placed upstream of the condenser ensures the desuperheating of the gases before they enter the condenser. Another advantage, available with the Aquasnap heat pumps: the system guarantees sanitary hot water production all year round, summer and winter. ■



NATURAL ECONOMICAL HEATING

Heat reclaim is often associated with the generation of solar heat; it offers energy savings and is a significant step forward towards safeguarding our environment. ■

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Published by ARRO

iVECTOR'S low water content means it is able to respond almost immediately, rapidly heating or cooling rooms as required with minimal energy usage.

New iVECTOR intelligent heating from Myson

The iVECTOR is Myson's latest product innovation and the first in a new generation of intelligent fan convectors. It has been designed specifically to combine all the traditional advantages of a fan convector with a range of new product features made possible by the latest energy efficient heating technology.

The iVECTOR was designed to operate efficiently even with low flow temperatures. This means that it is a cost-effective option for use with both traditional boilers and renewable technologies.

With renewable installations such as heat pumps, iVECTORs are a viable alternative to underfloor heating or radiators, and can be installed in different rooms or on separate floors of the same building. This is because all products can operate using the same low flow temperatures.

For systems with traditional boilers, high outputs can be achieved making it ideal for domestic and commercial applications. The lower water content inside each iVECTOR means that it produces an instant heat response where needed and cools quicker when heat is no longer required.

iVECTORs, therefore, waste minimal energy and have lower lifecycle costs than other fan convectors, making them a realistic alternative to traditional radiators in refurbishment projects.

The iVECTOR's low water content means it is able to respond almost immediately, rapidly heating or cooling rooms as required with minimal energy wastage. It utilises a high-efficiency heat exchanger, intelligent controls and fan-assisted convection. This powerful combination means it can provide a fast, accurate and co-ordinated response to the heating requirements of every room in a building.

The large surface area of the iVECTOR's heat exchanger means that units are compact in size and occupy less space than a panel radiator of equivalent output. By utilising fan convection, the iVECTOR also provides an even distribution of warm air throughout a room, meaning that rooms feel more comfortable, even at lower temperatures.

iVECTOR'S controls are intelligent and easy-to-use.

In winter months, the iVECTOR rapidly supplies warmth and can automatically switch to cooling during the summer when fitted with a reverse-cycle heat pump. The electronic thermostat in each iVECTOR closely monitors temperatures room by room and controls the fan speed to accurately maintain temperatures at the desired comfort level.

The intelligent, electronic control system in every iVECTOR provides a wide range of easy-to-use heating and cooling operating options. Its two-tier level of programming incorporates an "easy" mode for everyday operation and a "full" mode for more advanced functions.

Main control features are:

- Each iVECTOR is individually programmable;
- 24/7 programmer with 1-hour time periods;
- Lockable LCD backlit display;
- Automatic and manual options for control of fan speeds;
- Option to link to building management systems;
- Night set-back function;
- Programmes saved in memory for 12 hours in event of power failure.

For more information on this new product, or any of the emitters or controls in the Myson range, please contact the sales office in Potterton Myson at
Tel: 01 – 459 0870;
email: sales@potterton-myson.ie;
www.potterton-myson.ie ■

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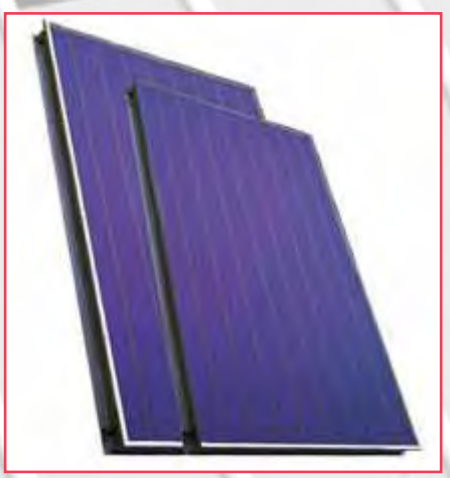

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Mitsubishi Electric has just launched a short animated film to highlight how easy it can be for both existing and new-build commercial buildings to achieve renewable energy targets with the company's range of commercial heat pump water heating systems.

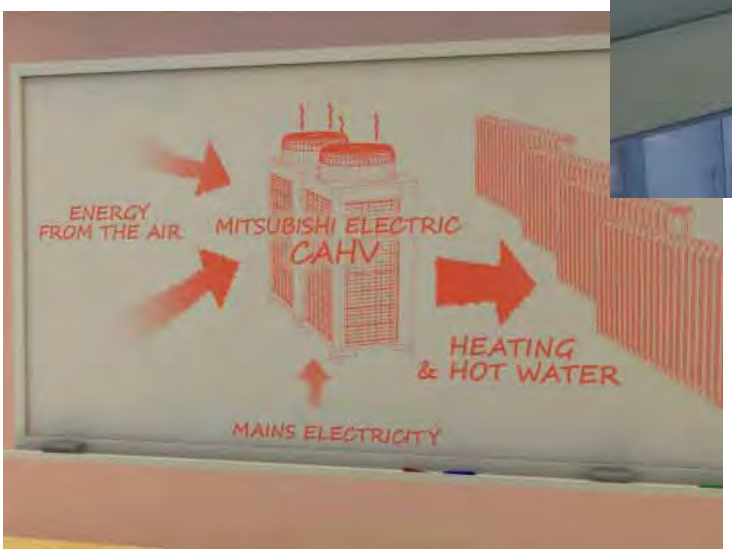
Mitsubishi Electric animation focuses on renewable heating for commercial buildings

The four-minute animation focuses on a modern school building and shows how easily air and water source heat pump systems can be incorporated into a building to work alongside, or replace, traditional heating systems.

"We have used a school because of the high demand for heating, but the technology is suitable for almost any commercial building," explains Mike Sheehan, Divisional Manager for the company's Living Environmental Systems Division in Ireland.

Mitsubishi Electric has developed a range of systems that can supply a building's hot water and heating. The units offer complete flexibility of design and can work alongside current technologies to allow a building to achieve renewable energy targets without major upheaval.

Three models are shown in the animation starting with the flagship, award-winning Ecodan® CAHV-P500YA-HPB, which is scalable from 43kW to 688kW.

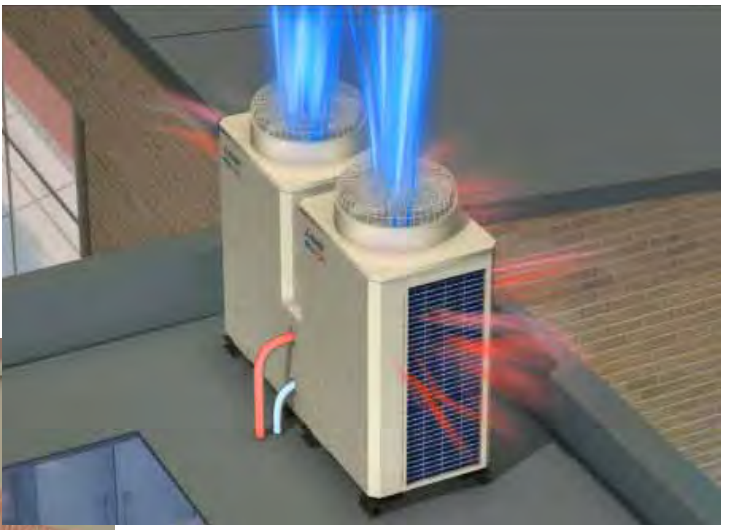


The MCS Approved (Microgeneration Certification Scheme) air to water heat pump uses advanced air source heat pump technology to provide a building's heating and hot water.

The monobloc CAHV unit is a factory-sealed system with two separate refrigerant circuits, which overcomes the issue of the heat pump defrost cycle and ensures that heating capacities can be maintained accurately and reliably all year round.

For every 1kW of electricity consumed, an average of 3.2kW of usable heat is generated and supplied to the building. The CAHV can provide heating and hot water either on its own or in conjunction with other technologies and can work particularly well with community heating schemes.

The animation also highlights how the CHU air source heat pump and the CHQ ground or water source heat pump systems bring flexibility into the design process for building specifiers and architects.



These "stills" are taken from the animated film produced by Mitsubishi Electric to promote the benefits of heat pump technology for the commercial market.

Both systems link to the unique Ecodan CAW heat pump boiler via refrigerant piping to transfer converted renewable heat energy into heating and hot water for the building. The CAW unit has been specifically designed to fit easily into existing plant rooms.

"We have built a range of products that will help both new-builds and existing buildings to achieve renewable energy targets for heating", explains Sheehan. "We have also designed these to work alone or alongside existing systems to provide complete flexibility for building designers and operators."

The animation is available on YouTube(www.youtube.com/ watch?v=KuPVoMolzxo <http://www.youtube.com/watch?v= KuPVoMolzxo>) or on the commercial heating website, along with further details on the company's complete range of commercial heating solutions. ■

For almost 40 years Hevac Ltd has maintained a leading role in the supply of building services equipment to the mechanical services industry. Together with its sister companies, it maintains close to 10,000 product lines within its offering, and almost two million individual items.

De Dietrich excellence from Hevac

This makes Hevac the most comprehensive stockholding company to the mechanical services sector in Ireland. Together with its technical and sales staff, Hevac remains the benchmark for technical excellence and practical know-how within the trade.

It is with this in mind that De Dietrich Thermique sought out and chose Hevac as its exclusive representative for all its products in Ireland. Since 1778 De Dietrich has been a symbol of quality in Europe and has been committed to the development of sustainable comfort by creating innovative heating systems which consume less energy, are reliable and preserve the environment.

Hevac conducts regular training seminars for both installers and consultants at its various branches throughout Ireland, in addition to regular training trips for staff, consultants, commissioning engineers and installers to De Dietrich's Headquarters in Mertzwiller, France.

Among the latest De Dietrich models to be introduced are the ECO commercial gas condensing boiler range, and the new Innovens Pro MCA wall-hung modulating condensing boilers.

The ECO range of gas condensing boilers have a silicium-aluminium heat-exchanger and a modulating burner which maximises the energy use for commercial installations.

The total premix modulating burner guarantees:

- Optimal combustion quality across the entire output range thanks to a system of integrated mixing for a constant air/gas ratio;
- A boiler output range of 18 kW to 1146 kW which can be adapted to a wide variety of needs;
- Very low polluting emissions;
- Annual operating efficiency of up to 109% at 40/30°C.

Innovens wall-hung condensing boiler available from 8kw to 114kw.

The De Dietrich commercial condensing boiler range makes it possible to achieve substantial energy savings.

The Diematic 3/m^3 regulation system can control and programme a direct circuit, a domestic hot water circuit, and two circuits with a mixing valve. It is also possible to connect a number of boilers in cascade.

The Innovens Pro MCA is a high-technology wall-hung gas condensing boiler. Using the latent heat of the steam that is contained in its vapours, condensing provides additional heating while using less energy.

Additional features include a Diematic iSystem control panel which is capable of adjusting boiler functioning to the most precise needs, and a modulating gas burner which reinforces the benefits of the condensing effect while guaranteeing very low emission levels. It is also capable of providing large volumes of domestic hot water.

Key benefits are:

- A boiler output range of 8.9 kW to 114 kW which can be adapted to a wide variety of needs;
- Optimised for energy savings and ecology;
- A system that is complete, flexible and intelligent;
- Customised domestic hot water output at high levels of comfort;
- Maximum performance in minimum space;
- Complete hydraulic cascade systems available with full cascade control for connection of 2 to 10 boilers, over 1000 kW.

Contact: Karl Carrick, Hevac. Tel: 01 – 419 1919. email: karlcarrick@hevac.ie; Mark Guinan, Hevac. Tel: 021 – 432 1066. email: markguinan@hevac.ie ■

Mark Eire pioneers new developments in heat pump technology

When Mark Eire decided to enter the heat pump market its objective from the outset was not merely to replicate existing technologies but rather to innovate and pioneer new developments. The core idea was to design and build a heat pump that was high-performing, energy-efficient, simple to install and cost-competitive in the marketplace.

History in the making – the first Mark heat pump coming off the end of the production line at Mark's manufacturing plant in Coolea, Co Cork.

To that end it began by building a state-of-the-art climate chamber at its Coolea manufacturing facility in Co Cork. It is built according to the guidelines set down in the EN14511 standard, which also specifies the conditions under which the heat pump is tested and evaluated.

The chamber allows for testing at temperatures between -30°C to 60°C with humidity levels up to 100%RH, and a heat pump capacity up to 100kW. It is also possible to simulate rain and snow, which is especially useful in determining the effectiveness of defrosting.

While this involved considerable investment, it gave its engineering team – led by specialist consultant Mervin Burns – total control and the flexibility and freedom to do highly-calibrated, evidence-based, testing and research. It also means that Mark can have all its heat pumps tested and accredited by an approved test organisation at its own manufacturing plant.

The result of this investment and extensive research is the new range of Mark heat pumps now coming off the production line and which will be ready for marketplace delivery early in the new year.

The first model to be introduced is the 15kW air-to-water unit, which will be followed shortly by a 15kW geothermal unit. These will then be supplemented with additional units, offering similar configurations of varying capacities, over the course of 2012.

The Mark heat pump is of monoblock design and comprises a self-contained unit incorporating variable speed control, variable speed compressor, a small buffer tank, and a water circulation pump, all of which are built in. Due to the careful positioning of internal components, the unit's physical footprint has been greatly reduced, making installation quick and easy. It is suitable for installation at ground level or mounted on wall brackets, with noise kept to a minimum thanks to low-noise fans and acoustic padding.

Through the process of building a prototype unit and constantly testing it in the climate chamber – and making design changes based on data collected – the Mark development team came to the conclusion that the core concepts behind mainstream heat pump technology could be considerably improved on.

This led directly to some notable changes in the basic fundamentals behind established heat pump technology. One of these was the decision to integrate modern, brushless, direct-current (BLDC) rotary compressors, driven by variable speed dc drives, into the unit. This makes for a higher-capacity, lower-running-cost, high-efficiency unit.

In addition, the dc drive is custom-built to Mark's own specifications. This means that when the heat pump is running the unit has full and variable control, right down to low speed, which is not normally possible with existing compressor technology. As a result, the Mark heat pump will run only at a speed necessary for the requirements, as opposed to switching on and off to full speed like many mainstream units do.

Other features incorporated into the Mark heat pump are electronic expansion valves and variable speed control on outdoor fans. These features all contribute towards the efficiency of the Mark heat pump.

However, according to Mark Eire Managing Director Mike O'Donoghue, designing and building the ultimate heat pump is only part of the equation. Equally important is the service back-up provided. Mark has been operating in the Irish market for 25 years and prides itself in the level of support it delivers to installers and service personnel on its traditional product lines.

Custom-designed monitoring systems ensure that the data collected from the climate chamber testing is recorded and collated for thorough evaluation.

Designing and building the ultimate heat pump is only part of the equation. Equally important is the service back-up provided

The Mark heat pump undergoing tests in the specially-constructed climate chamber that is built to the guidelines set down in EN14511.

This same level of support will be provided in respect of heat pumps. A specially-adapted heat pump training programme has been devised which will cover heat pump technology in general, in addition to specifics on the Mark unit, along with installation and service guidance. This will include everything from basic positioning to control set-up and commissioning.

"As all installers of Mark heat pumps will have completed our intensive induction and training course", says Mike O'Donoghue, "homeowners can rest assured that they are buying more than just a heat generator. This is essential for the heat pump market as it is still a fledgling industry sector.

"With a properly-installed and commissioned heat pump, the homeowner is more likely to recommend the heat pump concept to others. It is only by delivering quality products, that are properly installed and commissioned, that all of us operating in the sector can hope to benefit. We at Mark Eire are confident that we can now deliver to that demanding criteria and, in the process, capture a significant share of the developing heat pump market, both here in Ireland and internationally." ■

mark®

Mark Eire BV

Coolea, Macroom, Co Cork
Tel: 026 – 45334 Fax: 026 – 45383
email: sales@markeire.com
web: www.markgroup.eu

The new EU regulation which became law in May of this year governs the energy efficiency of all electric motors sold after June 2011, and glandless heating pumps sold after 1 January 2013. Up to 90% energy saving potential can be found in building distribution systems for heating and air-conditioning if high-efficiency pumps, with particularly low power consumption, are used instead of inefficient, uncontrolled, glanded and glandless circulation pumps.

'ErP-ready' Wilo high-efficiency pumps

The current range of Wilo high-efficiency pumps are "ErP-ready", which means they meet these new requirements, and indeed are future-proofed in that they also meet the requirements of the second stage of the same EU regulation which is due to come into force in 2015.

The Wilo-Stratos, Wilo-Stratos Pico and Wilo Stratos-Giga high-efficiency pump series offer a comprehensive range of products for various building services and related requirements. This range of products already exceeds all the stricter new requirements which will be applicable as of 2015.

This is due to Wilo high-efficiency pumps already having extremely low power-consumption values because of their advanced electronic control and innovative EC motor technology. These electronically-controlled circulating pumps, with relatively maintenance-free frequency converters, automatically adjust their power to the changing load requirements of the relevant systems.

This is especially true when the pumps operate in partial load conditions, which can make up as much as 94% of the operating time of a circulating pump. A very considerable reduction in power consumption can be achieved under such operating conditions when compared with an uncontrolled pump.

The EC motor technology (ECM) is the most modern variant of the DC motor and is characterised by particularly high energy efficiency. This allows the efficiency to be doubled in comparison to electronically-controlled pumps using conventional drives motors.

The Wilo-Stratos has already set standards since its launch in 2001, and the total Stratos series for heating and cooling circuits in commercial properties has been continuously expanded and optimised since then.

The Wilo-Stratos Pico high-efficiency pump, introduced in 2009, is primarily designed as a heating pump for residential applications, but can also be used in air-conditioning applications. With an energy saving potential of 90% in comparison to uncontrolled standard pumps, the Pico consumes approximately half as much power as that required to meet the current top energy efficiency Class A rating.

The Wilo-Stratos Giga is the latest addition to the range, making it possible to have a high-efficiency pump that covers the upper performance range in heating, cold-water and cooling applications.

According to Wilo, approximately 8,000 kg CO2 per year, as well as up to €85,000 electricity costs per installed pump, can be saved with the Wilo-Stratos Giga in a 15-year operating cycle compared to conventional uncontrolled pumps (based on the load profile "Blauer Engel").

Wilo Stratos Giga, the latest addition to Wilo's "ErP-ready" high-efficiency pump range.

The Giga series is a completely new development. For the first time glanded pumps can be driven by extremely power-saving EC motors, with the pump's hydraulics optimally matched to the motor technology. Giga was awarded the "iF Product Design Award" even before it was presented for the first time at the ISH trade fair in March 2011.

Wilo's high-efficiency pumps are suitable for use in many different types of building services circulatory systems, and are ideally suited for use on heating and cooling systems where innovative design and energy efficiency should be a pre-requisite for the end user.

The full range is available through Wilo's extensive merchant and distributor network throughout Ireland.

Contact: Wilo Ireland. Tel: 01 – 426 0000; 061 – 227566; email: sales@wilo.ie www.wilo.ie ■

Thanks to its team of highly-qualified, experienced and specialised engineers – coupled with a clearly-defined, customer-driven, management structure – Airflow Services in Cork continues to expand and develop at a time when many find their businesses contracting.

'Heat pumps now a viable market segment'

Established in 1996 to provide heating, ventilation and air conditioning services, much of its growth to date has been on the ac side, with particular emphasis on the pharmaceutical and cleanroom sector.

However, it is now making significant inroads into the heating sector thanks to its strong partnership with Daikin and the latter's industry-leading status in heat pumps.

Airflow Services was in a unique position to capitalise on heating and renewables thanks to its experience and expertise across a wide range of HVAC systems, from design right through to commissioning. It now provides professional, practical, cost-effective advice and services on energy efficiency and related matters to both the domestic and commercial sector.

It has provided HVAC performance/energy surveys, building energy rating reports and air leakage testing for a number of years so, to now deliver comprehensive heating solutions using Daikin's Altherma is a natural development. Daikin has over 50 years experience with heat pumps and provides more than a million units to homes and commercial applications throughout the world each year.

People in Ireland are now more energy-conscious and environment-aware than ever and are looking for heating solutions that are not just renewable but also cost-efficient to operate. Given that two-thirds of the heat generated by Daikin's Altherma air source heat pump is free, and that maintenance of the system is minimal, this is an obvious alternative to traditional boiler-led installations.

As for domestic hot water requirements, the Altherma technology is equally advanced. The unique lay-out and special placement of the system components maximises energy efficiency. The water inside the storage tank is primarily heated by thermal energy from the outside air, thanks to a heat exchanger connected to the heat pump. However, an additional electrical heating element in the domestic water tank provides extra heat if required in the shower, bath or sink. At necessary intervals the water is automatically heated to 70°C to prevent the risk of bacteria growth.

While heat pump technology is tried, tested and proven throughout the rest of Europe, it is a newly-emerging industry segment in Ireland. Airflow Services is spearheading its development and market penetration and, to that end, has participated in numerous home-build exhibitions.

In partnership with Daikin, it has also kitted out a specially-designed mobile trailer which features a fully-functioning Daikin Altherma heating system. This is used to portray the features and benefits of heat pump systems to both consumers and installers alike. Reaction at the latest outing – the Self-Build Show in Cork – proved very encouraging with quite a number of very positive leads generated.

Richard Sherlock, Daikin with James O'Donoghue, Design Engineer, Airflow and Denis Moynihan, Director, Airflow, pictured at a trade show with the specially-fitted out Daikin mobile display unit.

"While at a relatively new stage in terms of market penetration, our experience of late is that heat pumps are now very much on the agenda of most discerning installers and householders considering a new or replacement heating system", says Airflow Services Design Engineer James O'Donoghue.

"They display a level of awareness of heat pump technology that demonstrates a genuine interest and we are confident that, with the quality of the services we provide matched by the quality of the Altherma system, we will convert a large percentage of the leads in hand."

Richard Sherlock of Daikin is equally upbeat about the new-found status of heat pump technology. "In recent months there has been a noticeable shift in the type of questions posed. Consumers and installers no longer ask what heat pumps are but instead ask probing questions about installation, applications suitability, performance efficiencies, energy outputs and actual running costs. While embryonic, the heat pump market is now a viable market segment and we are confident that, together with our dealer partners such as Airflow Services in Cork, we can develop and realise its full potential". ■

Saving the environment with sustainable solutions

Unitherm Heating Systems is one of Ireland's leading suppliers of innovative, sustainable, heating systems. It has a portfolio of top-quality products from renowned European manufacturers, and delivers custom-designed heating solutions incorporating high-efficiency, engineering-led, technologies. It initially concentrated on underfloor heating for domestic and commercial installations but now offers fully-integrated solutions which include complete control packages.

Every system is individually-designed and supplied with full mechanical and electrical CAD drawings. Indeed, a key strength of the service provided is its ability to interface with, and support, both the electrical contractor and heating installer, right through to final commissioning.

The product portfolio includes established, market-leading, brands such as Alpha, Solartherm, Daikin, Mitsubishi Electric, Oventrop and Worcester Bosch. The choice of solutions offered is extensive, with products and systems available to cater for all manner and size of application.

Alpha gas condensing boilers with gas saver.

Unitherm can design systems using combined heat sources such as Solartherm panels, heatpump and a boiler or solid fuel stove etc. This can be achieved through their Eco-combi multi-energy tank which will allow up to three heat sources. The whole system can be controlled by using an advanced Merlin Control & Regulating Unit which combines various open-loop and closed-loop control functions. In addition to the weather dependent control of the boiler and the heating circuits, it naturally also controls the hot water supply, allowing hot water to be controlled at various times and temperatures over a 24-hour period.

On the boiler side, Alpha high-efficiency condensing boilers offer a comprehensive range of Sedbuk Band A rated combination, system and regular gas boilers with outputs from 12kW up to 115kW. Apart from new installations, the Alpha range is ideal for retrofit and refurbishment as older, inefficient boilers can be replaced without the need to replace pipework.

Alpha has a pedigree going back 40 years with a reputation for constantly introducing innovative products incorporating cutting-edge technology. This is particularly true of its renewables products which are specifically designed to be compatible with the core boiler ranges. The Alpha GasSaver, FlowSmart and Alpha SolarSmart are typical examples.

GasSaver is easily installed between the boiler and the flue and delivers hot water savings of up to 37% and gas consumption reductions of as much as 52%. It also reduces pluming as gases expelled through the terminal are significantly cooler, which in turn saves energy and helps the environment.

SolarSmart also delivers impressive energy-related savings by making solar-based domestic hot water heating more accessible and cost-effective than ever before. The system consists of a solar collector panel, drain-back unit, solar cylinder and solar valve. All items are WRAS approved and come with a 10-year guarantee, provided all recommended installation guidelines are followed.

Then there is the Altherma air to water heat pump from Daikin. Using proven heat pump technology, Altherma utilises naturally-occuring energy from the air and uses this to provide domestic space heating and hot water. It is easy to install and reduces CO2 emissions by up to 50% while delivering savings of 30% on home heating running costs.

Meanwhile Worcester Bosch is one of Europe's longest-established heat pump specialists with a reputation for developing innovative heat pump solutions dating back over 30 years. It offers an extensive range of heat pumps designed to extract heat from everything from soil, rock, water and outdoor air right through to ventilation exhaust air. It also has a strong history of collaborating with other world-leading brands in related areas of expertise.

Taken together, the foregoing represents what is undoubtedly one of the strongest heating portfolios available in Ireland. When combined with the expertise and experience of Unitherm Heating Systems' personnel, it makes for a formidable market force offering infinite heating solutions for all manner of application.

Contact: Unitherm Heating Systems.
Dublin: Tel: 01 – 610 9153;
Galway: Tel: 091 – 380 038;
email: info@uni-therm.net ■

Message from the CIBSE Chairman

As we approach the end of 2011, it is appropriate to reflect on the busy and productive schedule of events completed thus far in the CIBSE calendar. It is also important to do so in the context of next year as we look forward to an equally-intensive programme for 2012 covering a wide range of technical, engineering and other related topics.

We were extremely honoured to host a visit by Ron Jarnagin, President of ASHRAE in early October. This visit was particularly successful due to the combined efforts of the CIBSE Committee, DIT, TCD and Engineers Ireland. Between us we arranged a lunch, a tour of the Engineering Faculty and Campus at TCD, and an address at Bolton St, followed by a dinner in the President's Room at Engineers Ireland. This collective effort underpinned and reinforced the CIBSE theme this year of an integrated approach to engineering and the built environment.

Other events of note in Autumn 2011 included Christopher Cuttles CPD on lighting design at DIT Kevin St; David Wolahans CPD on Compressed Air at DIT Bolton St; the Young Lighter and Irish Lighter Awards at DIT Kevin St ... not forgetting the extremely enjoyable annual golf outing at Edmondstown Golf Club in September.

In terms of reporting our activities to CIBSE HQ, I delivered a presentation to the CIBSE Council in Balham in October, where I outlined the committee's activities, technical evenings, awards and new publications. This presentation was well received and we secured CIBSE President, Andy Ford, to attend our annual conference which will take place in Croke Park next March.

Our programme for 2012 is taking shape, and aims to include a wide range of areas which we feel will be both interesting and relevant to our sector. We also intend to host some of our events in other venues such as Engineers Ireland, in addition to the DITs.

Our new website in under construction and will go live in December, just in time to capture our programme for 2012, and share our experiences from 2011.

Finally, we are very proud to have delivered and published the first edition of the *SDAR* Journal*. This was a combined effort between CIBSE and DIT Kevin St, with sponsorship support from Airtricity. This industry first was a major achievement for all concerned and was circulated to CIBSE members, and the industry at large, through *bs news*. The intention is to publish a second edition in 2012, and we welcome papers for consideration.

CIBSE always welcomes new members. Please go to the main CIBSE website, www.cibse.org or email us at contact@cibseireland.org for further details.

Derek Mowlds, CIBSE Chairman, Republic of Ireland Region

CIBSE and DIT host ASHRAE President

Above:
Dr Kevin Kelly, Head of Department, Electrical Services Engineering, School of Electrical Engineering Systems, DIT Kevin St pictured with Derek Mowlds, CIBSE Chairman; ASHRAE President Ron Jarnagin; and Dr Ben Costelloe, Head of Department, Building Services Engineering, DIT Bolton Street.

Below:
Group pictured with ASHRAE President Ron Jarnagin during his visit to DIT Kevin St recently. They include CIBSE Chairman Derek Mowlds and DIT President Professor Brian Norton.

ASHRAE President Ron Jarnagin was in Dublin recently for a visit jointly hosted by CIBSE and DIT Kevin St. Ron's term began when he was formally elected to the post in June of this year and such is his commitment to the role that he has already criss-crossed the globe delivering his presidential theme not just to members, but also those of other building services-related organisations.

That theme is "Sustaining Engineering Society Through Leadership", something which Ron is absolutely passionate about. In describing his vision of what leadership entails, he quoted Dwight D Eisenhower who said: "Leadership is the art of getting someone else to do something you want done because he wants to do it" … think about it!

While Ron is primarily concerned with ASHRAE, his approach is equally applicable to CIBSE, and indeed to all other industry representative bodies, especially those run on a voluntary basis.

He cited three core pillars upon which he hopes to develop this leadership role.

The first is developing future leadership and the emphasis here, he said, should be on devising an education system that takes students beyond just the basics. In addition to load calculations and the other fundamentals, he said students should learn about modeling and system selection.

He also suggests that it is vital to consciously develop students' ability to lead. He said students showing leadership qualities should receive more encouragement and support to develop. His idea is to assign them to some of the Associations' officers, to get them to attend committee meetings where they can network, and to show them how the system works.

In doing this he also talked of the importance of the "old guard" learning to communicate with students using today's technology such as text, iphone, Facebook and Twitter.

The second major pillar Ron talked about was building a global presence. "We're a global organisation", he said, "an international organisation, and I think we need to start doing some things to help realise that. One clear need is to better support our international members, and also to develop partnerships with other bodies such as CIBSE.

"We've already worked very closely with CIBSE to develop Building eQ, the ASHRAE building labeling system, and also on research activities. We've had some discussions about further collaboration and I'm looking forward to more of this in the future.
The third and final pillar of the leadership role is strengthening the industry. Quite simply, he said engineers have to do a better job in their designs; contractors have to do a better job putting designs together; commissioning agents need to make sure everything works as intended; and then they've got to make sure the owners are fully trained.

"This is our responsibility and we need to bring our partners together to help. Remember, you don't have to start every parade, you just sometimes have to be able to jump in front of it if it comes by, and that's okay too in my book", he concluded. ■

For companies to survive in an ever-challenging market they must offer good value to clients. Could value be improved in your company by establishing a research base?

Free research partnership to boost your business

At DIT we believe it is necessary to move from ideologically-based innovations to low energy solutions offering proven value. This can be done with post-occupancy evaluations and similar applied research themes.

Of course, you are thinking that the related fee structure and market competitiveness does not allow this. Well maybe this can be achieved by collaborating with research students? Research students are time rich and data poor. The probability is that your company is data rich and time poor.

If your company has research questions or access to post-occupancy energy data, then we would like to hear from you with a view to establishing research collaborations. Students are data poor and need access to data in order to be able to perform good quality research.

We have students on the following programmes looking for access to data:

– PhD/MPhil research;

– MSc in Energy Management (for theses and shorter assignments);

– BSc (4-year honours degree) in electrical services and energy management (for theses and shorter assignments);

– B Eng Tech (3-year degree) in sustainable design of electrical services engineering (for theses).

We would be happy to collaborate with you to help you answer your research questions. There are benefits for your company, the industry, DIT and the students involved – it really is a WIN-WIN-WIN-WIN scenario.

Three of the authors in the *SDAR* Journal* (http://eleceng.dit.ie/sdar/index.php?go=sdar_journal) are from the above-listed programmes.

You can see the beginnings of our vehicle for research in the School of Electrical Engineering Systems in DIT (http://eleceng.dit.ie/sdar/). You might consider joining with us on this. There is no cost and the projects on your books could provide students with access to data that could fill many theses, while also answering important questions for your company.

If you would like to explore this then please contact kevin.kelly@dit.ie

Kevin T. Kelly
Head of Department
Electrical Services Engineering
School of Electrical Engineering Systems
Dublin Institute of Technology

RACGS

Arklow Concludes Highly-Successful Season

The Danfoss-sponsored RACGS outing in Arklow concluded what is perhaps the most successful season the Society has had to date. Throughout the entire programme the number of member participants has been above average, while more and more guests are also being invited.

The celebratory air was fitting as it was sponsored by Danfoss, who themselves are currently celebrating 60 years in business. Adding further to the occasion was the presence of many of the RACGS' ex-captains who were invited along as guests. ■

Golfer of the Year – Dave Killalea with Golfer of the Year Matt Butler, John Sampson and RACGS Captain Seamus Kerr.

Arklow – Johnny Lynagh, Winner Class 2 with sponsor John Sampson, Danfoss and RACGS Captain Seamus Kerr.

NRG Captain Mike Kerrigan presenting the trophy to RACGS Captain Seamus Kerr.

RACGS Regains Ryder Cup

This year it was the turn of RACGS to host the Ryder Cup competition against long-standing UK opponents Northern Refrigeration Golf Society.

The Links, Portmarnock proved a challenge for both teams though that did little to dampen the highly-contested nature of the event. As it happened, RAGS emerged victorious, but only secured the win with the last group out, on the last green, and by a margin of just one point.

As is customary, the competitive edge was then discarded with the meal and presentation of prizes being more of a social occasion with those in attendance renewing old freindships, and forging new ones.

Arklow results

Overall Winner
Matt Butler, H11, 35pts

Class 1
Winner: Joe Warren, H12, 34pts; Second; Nicky Norris, H12, 32pts; Third; Liam Hoctor, H6, 32pts.

Class 2
Winner: Johnny Lynagh, H14, 32pts; Second: Martin O'Connor, H17, 30pts; Third: Billy Qually, H16, 29pts.

Class 3
Winner: Dave Killalea, H18, 23pts; Second: Eamon Murphy, H25, 24pts; Third: Don Ryan, H20, 28pts.

Front 9
Jack Elstead, H15, 13pts.

Back 9
Kevin Roden, H10, 16pts.

Visitors
Winner: Lorcan Maher, H13, 33pts; Second: Tony Weir, H17, 31pts.

Plumbing TIPS

Tap into 'Trap's Green Army'

by Paul Clancy, Managing Director, Potterton Myson Ireland.

The Irish lads are not the only ones with 'great green engines'. Boiler manufacturers also perform for Ireland with their great green engines!

I guess you can't help but get caught up in the positive feelings that surround the recent great performance of the Irish soccer team … what they have achieved has been phenomenal.

Everyone knows they will do us proud and no doubt advertising agencies all over the country are looking at ways that their customer's brands can benefit by a positive association with "Trap's Green Army".

This got me thinking about some of the soccer clichés that abound at a time like this and one stood out for me – he has a "great engine" – referring to abounding energy levels that players display. In the context of the loyalty and commitment the current squad has displayed, this can be further embellished to a "great green engine".

So, what have we in the heating sector got that gives us a positive association with Trap's Green Army? Our gas and oil boilers certainly have great engines and, more to the point, they are also green.

All leading gas and oil boiler manufacturers produce high-efficiency domestic and commercial boilers with intelligent controls, hot water cylinders, and a wide range of renewable technologies that deliver low energy consumption, and reduced operational costs and carbon footprint. So, we have the "great engine" bit covered with our HE boilers, and we also have the "green" covered.

We all know how difficult the heating and hot water market is right now, and that it will continue to be so into 2012. So, as an installer and/or service engineer you should be planning promotional campaigns and, what better way than by tapping in to the positive "green army" momentum.

Why not develop a simple flyer, a sticker for the van, or place an advert in your local paper that captures this theme. Keep it simple and light-hearted but with a clear, direct message. Use our Trap illustration to get you started. ■

Published by ARROW@TU Dublin, 2011

Building Information Modelling – the next step in design evolution

The evolution of building design through the last 20 years or so has seen a progression from draughting to computer-aided design, fax to email and hard copy to digital format documentation.

Building information modelling (BIM) introduces a new concept that seeks to harness the wealth of technological advancement that has occurred during the last two decades into a holistic design system. The ambition is to improve the efficiency of the design process, to give better information to all stakeholders with a shorter turnaround, and to enable clients to maximise the full range of services which their design teams can offer.

Too often, the project fee has determined the level of analysis that can be carried out as it is too costly for architects and engineers to carry out multiple iterations of analysis on various elements of the design. With BIM that has become possible, writes *Keith Mellon, Mechanical Project Engineer, Ethos Engineering, and CIBSE Committee member*.

The ability to carry out multiple iterations of concept design and produce results quickly means that clients can get more value for their fees and engineers can deliver a better, more-informed solution which can only help the design process. Internal environmental conditions can be refined at an earlier stage in the design process through visualisation of internal lighting, adjusting the building form to counter the effect of shading from adjacent buildings, the creation of light wells, and the improvement of the building façade. This can be achieved through the use of software packages such as IESVE or Ecotect.

Keith Mellon is a Mechanical Project Engineer with Ethos Engineering. He is a member of the CIBSE Ireland Committee, representative for the CIBSE Ireland Committee on the CITA BIM Group and part of the Ethos Engineering BIM Group. He is actively involved in both the design and sustainable aspects across a variety

of projects including offices, schools, residential healthcare units, hospitals, hotels and archive facilities. Keith's expertise includes passive building design, energy management systems and renewable energy technologies. He holds an MSc in Energy Management, a BEng in Building Services and is also a DEC assessor.

The concept of M&E services design through BIM is a departure from the current disjointed design process. Design calculations are carried out in spreadsheets or software programs that are not automatically linked to the design drawings, and thus, in turn are not automatically linked to the schedules and quantities of materials and equipment. Engineers are required to trace their steps forward and backwards through this process to ensure that the design is fully quantified, qualified, recorded, evaluated and presented.

The tracing of these steps often consumes most of an engineer's time and distracts from carrying out actual design or attending site to monitor the installation. BIM is an integrated design process that can carry out design calculations, automatically produce drawings based on these calculations, automatically schedule equipment and materials, and also monitor the development of the architectural, structural and civil engineering elements of the design.

***Figure 1:** Typical 3D building section.*

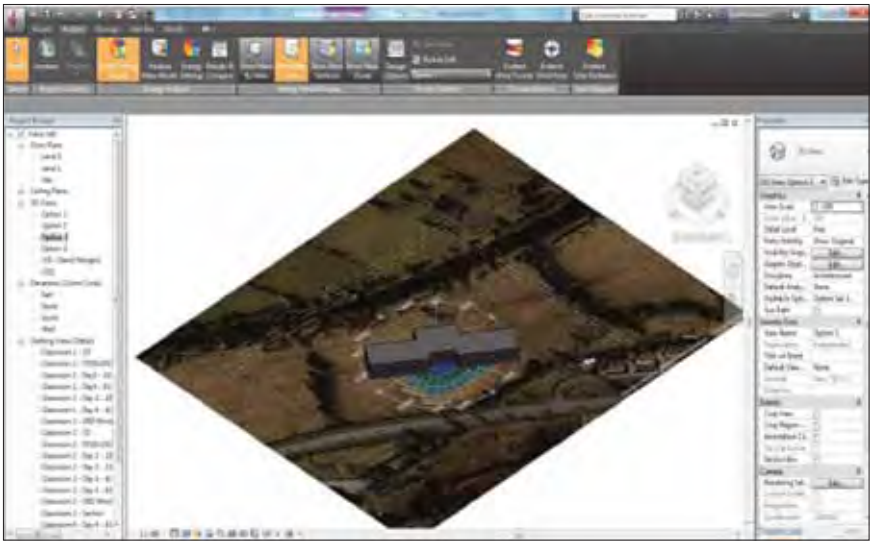


Figure 2: Typical mass model with imported site image from Google Maps and site wind rose.

Within the BIM process, components are introduced to the design software as "families" which contain specific information pertaining to a particular component. A light "family" will have the specific physical size of that fitting; an ldt file with specific photometric data for that fitting; and a power connector for that fitting which has voltage or current requirements and can be connected to a cabling system.

Software programs such as Autodesk Revit MEP are supplied with a basic set of component libraries containing families of some of the components used by MEP engineers. Many more of these can be found online on websites such as Autodesk Seek, BIM Store and Revit City. The long-term aim is that product manufacturers would develop BIM libraries for their products in the same way as they have developed CAD drawings to date. The difference with BIM libraries is that they will contain specific performance data which facilitates design through BIM.

At the very core of the BIM process is the concept of parametric design, which involves the components such as radiators, lights, grilles, etc having information that is live and which can feed into the various elements that connect each system, i.e. pipework, cabling, ductwork.

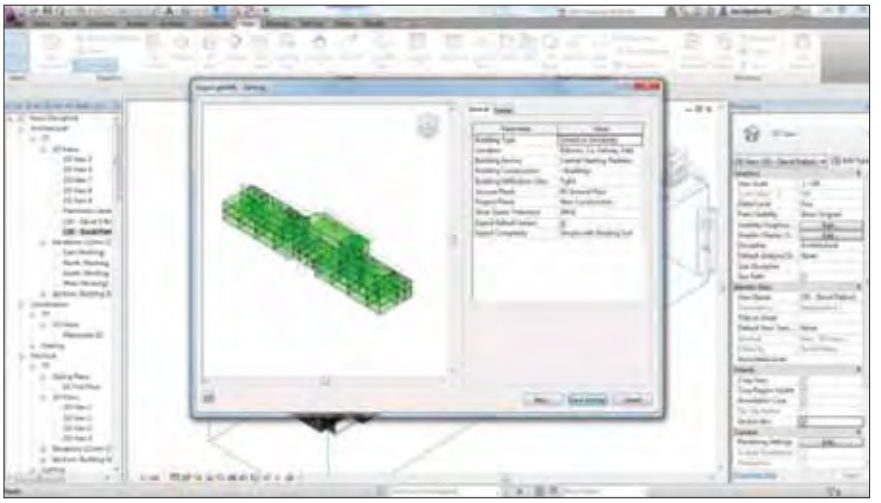


Figure 3: Exporting BIM model to IES or Ecotect.

Figure 4: Typical classroom rendered view.

Take an example of a ductwork system. If we design a ventilation system which has each grille supplied at 80 litres/second and size the ductwork system based on this and then, following a review of the calculations, determine that we only need 60 litres/second, all of the ductwork would need to be re-sized by an engineer and re-drawn by a CAD technician. With BIM, because the grilles have parametric data that the ductwork system can base its calculations on, simply changing

one “family” element will result in the ductwork being automatically re-sized accordingly. Think of the time that would save!

The production of dynamic schedules which can be easily exported is a tremendous aid to engineers who can now produce documentation that can be used for tendering projects, or to keep as a record for internal quality systems’ compliance checking. These schedules can be adapted to facilitate a wide range of parameters while maintaining a “live” link to the components within the building model, which space and which level they are on.

Looking at the wider picture, the evolution from 2D to 5D and XD

Figure 6: BIM evolution.

Figure 5: Electrical panel schedule.

design is something that is inevitable to achieve the level of savings that are needed to make projects viable in today’s economic climate. The UK has set targets of 20% savings in costs and 20% reduction in carbon emissions on public sector projects over £5 million from 2016 onward. The construction industry sees BIM as the only real platform that can achieve this. The Irish market must strive to have the same level of ambition and embrace the impending evolution in design and construction practice. ■

Panasonic AC opens dedicated Ireland office

As part of it's continuing expansion plans Panasonic has opened a dedicated Ireland office and appointed Vincent Mahony National Account Manager. Vincent has wide-ranging experience in the ac sector and worked extensively with Panasonic products for many years, in addition to Sanyo, before taking up his new role.

Tony Duffy – who also has extensive experience in the ac sector – has been appointed Technical Support Specialist for Ireland. His main role will be to provide customer training and technical support in both Ireland and across Europe.

Over the coming weeks and months they will establish a network of dedicated Panasonic dealers, strategically chosen to ensure all-Ireland coverage and penetration of all market segments served. These include:

– Residential ac;
– Commercial splits units;
– 2-pipe and 3-pipe VRF;
– Air-to-water heat pump systems;
– Energy recovery ventilation systems;
– GHP systems (from 2012).

Tony Duffy, Panasonic Technical Support Specialist with Vincent Mahony, Panasonic National Account Manager.

In addition, Walkair – who have been a long-term distributor of Panasonic products in Ireland – will continue to work closely with the new operation.

Announcing the new appointments Marc Diaz, Panasonic UK & Ireland Manager, said: "As a company, we pride ourselves on providing our customers with a fantastic array of products, backed by high-quality service. As we continue to expand, these new appointments will support this position and give us a platform for even greater growth in the future."

In the last 12 months Panasonic has secured a series of significant distribution deals, opened a new training centre – the Panasonic Pro Academy – and introduced state-of-the-art, low-energy, products to take the innovation lead in VRF and heat pump technology.

As *bs news* went to press Vincent Mahony said: "Both Tony and I are very excited by this new development and are confident that, given the high quality and extensive scope of the Panasonic portfolio, we will capture a significant market share over the course of 2012.

Panasonic's new Mini ECOi VRF unit.

New and innovative products are constantly coming on stream, all of which are specifically designed to meet today's market requirements."

A typical example is the new Mini ECOi series which is specifically designed for the most demanding applications in light commercial and residential use. Offering between 12kW and 15.5kW cooling capacity in three sizes, and connecting up to nine indoor units, the range offers impressive performance and flexibility in system design. Also, as these units are an expansion to Panasonic's existing VRF line-up, the mini ECOi is compatible with the same indoor units and controls as the rest of the range.

Panasonic has incorporated a number of cutting-edge technologies to this product range to deliver industry-leading COP values. Innovative design and construction of the fans, fan motors, compressors and heat exchangers has delivered impressive energy-saving performance results. In addition, the use of R410a refrigerant and DC inverter technology further reduces C02 emissions and lowers operating costs.

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

back issues

Energy debate is never-ending!

It has been reported that by the end of the year Sainsbury's will become the first supermarket in the UK to send all its food waste for anaerobic digestion (AD) – the process that decomposes food waste to release biogas which can then be used to produce electricity. Most of the other supermarkets are not that far behind.

Great idea you would think – not so say some experts. Apparently, sending food waste to an AD plant only recovers a fraction of the energy that went into growing the food in the first place. Recycling tomatoes in this way, for example, generates less than 1% of the energy used to produce the crop.

By contrast, it is claimed to be up to 500 times better for the environment to divert food waste to pigs rather than sending it to AD. Fattening livestock on food waste reduces the need to feed them with the 40m tonnes of soya imported into Europe each year from South America, where its cultivation contributes to deforestation, soil erosion, water depletion and global warming.

By the time we arrive at a consensus on what's best across the entire energy debate it will be too late!

Daly does Village People … on the double!

Hitachi's Fergus Daly is known throughout the industry for his ingenuity and inventiveness but colleagues, and even close friends, were taken aback at his 40th birthday bash recently when he made a guest appearance not once, but twice – and at the same time – with Village People. I missed it myself but, as you can see, the camera does not lie.

How Smartt is that!

Congratulations to John Smartt, Assistant Head of School of Construction, DIT Dublin, who received a special award at the InstallerLive Awards ceremony in the UK recently.

As everyone knows, John has been the committed champion for heating and plumbing skills not just in Ireland, but worldwide, for many years.

This award is in recognition of his dedicated service to the heating and plumbing industry, most notably his expert input to the Chartered Institute of Plumbing and Heating Engineers.

Let there be light

Light+Building, the world's biggest trade fair for lighting and intelligent building-services technology, will take place in Frankfurt from 15 to 20 April 2012. Around 2,100 exhibitors from 50 countries will show new products for lighting, electrical engineering, home and building automation, and software. Always worth a visit.

Brian, what a waste!

While Brian Motherway's day-job is Chief Operations Officer & Head of Strategy at SEAI, he really should consider chucking it in favour of the stand-up comedy circuit.

Brian is not shy when it comes to performing but he really excelled himself recently when compering the SEAI Sustainable Energy Awards in the Conrad Hilton in Dublin.

These Awards are one of the most important in the annual building services calendar of events and, while it is a serious, business-like occasion, Brian's content and delivery made for a thoroughly enjoyable – and entertaining – evening.

Who needs a separate entertainer or after-dinner speaker when Brian seamlessly marries these elements into the serious aspects of the evening?

Save Energy - Save Money

Is your business thinking about investing in energy saving technology?

Then now could be the ideal time, thanks to the Accelerated Capital Allowance (ACA) scheme. With the ACA, your company can write off 100% of the cost of qualifying products against your profit in the first year of purchase.

How the ACA can benefit you:

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- Reduces your tax bill
- Reduces your energy costs
- Ensures best practice procurement

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visit: **www.seai.ie/aca** or **call 01 808 2100**

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