HEATING

Early analysis critical to finding best solution

CIBSE Christmas Lunch
SEI Sustainable Energy Awards
Part F — Evidence-based Data Holds Key
No outside floor or wall space? No problem...

Expanded range
3HP, 5HP and 10HP models

Energy efficient
DC-Inverter achieves energy savings of up to 25%

Precise control
H-Link controls connect to all Hitachi indoor units

Flexible installation
Interchangeable side panels and inlet/outlet grilles for ultimate flexibility

Reliable
Highly-reliable Hitachi DC-Inverter scroll compressor (horizontal on 3HP and 5HP models)

Thanks to the flexible air configuration of Hitachi's Centrifugal Utopia, you can now offer your customers complete installation flexibility - an outdoor unit that can even be installed inside. And at 15% lighter with a 22% reduction in height, space is even less of a problem. Then there's the highly-reliable scroll compressor with DC inverter and quicker, more accurate temperature controls for a 25% reduction in energy consumption. Not to mention the ability to connect to all Hitachi indoor units with Single, Twin, Triple and Quad options.

Welcome to air conditioning Utopia; Centrifugal Utopia.

*compared to previous models

To find out more call Hitachi on +353 1216 4406
Email: aircon.ireland@hitachi-eu.com or visit www.hitachiaircon.com/tomorrow
Carbon tax – business boost or damp squib?

While on the face of it the €15 per tonne carbon tax introduced in the recent Budget should be a boost to the building services sector, it is difficult to know just how the general public will buy into it.

In theory, it should encourage householders in particular – but also the commercial and industrial sectors – to embark on a replacement/refurbishment spree to switch over to renewable and more sustainable energy forms. Both product suppliers and installers should see a significant upturn in trading activity.

However, the vast majority of people in Ireland are extremely distrustful of the present Government. They are also cynical about its motives, and there is justified suspicion that this tax is merely a revenue-generating exercise masquerading as a genuine green initiative.

These suspicions are fueled further by the fact that it is not clear just how the funds generated by the carbon tax will be used. There is no guarantee that they will be ringfenced to support the adoption of renewable energy sources. Against this background it is imperative that the Government comes clean and details precisely just how the carbon tax-generated revenues will be spent. Moreover, to get people to buy into it, they will also have to demonstrate that concrete safeguards are in place to prevent the funds being hijacked for other uses.

Perhaps an initiative similar to the recently-announced UK Boiler Scrappage Scheme would have been far more effective ... and transparent!
The idea came about in 2003 when a few mates were having a beer in a small bar in Melbourne, Australia. Inspired by the women’s health movement, it was recognised that men were lacking a way to engage and actively involve themselves in their own health. During a conversation about fashion and past trends, the idea came up to bring the moustache back for one month, and in doing so, have some fun, raise some money for charity, and hopefully encourage men to talk about their health with each other.

Since then Movember has continued to grow each year, both in terms of participating numbers and funds raised. In its first year, 30 people took part while last year more than 173,000 participated. Just over €14 million has been raised globally so far. Once again well done to all at Hevac.
Energy efficient R410A Super Digital Inverter - also the perfect solution for R22 and R407C replacement systems, and for the environment.

The new 4 series Super Digital Inverter from Toshiba is equipped with new Eco-driving twin-rotary compressors making the system energy class A in both heating and cooling. This results in savings of up to 70% in annual energy costs compared to fixed speed systems.

Designed as a new, energy efficient R410A single or twin split system, the Super Digital Inverter is also the perfect replacement for existing R22 and R407C systems. Able to replace both indoor and outdoor units whilst utilising the existing pipework*; the result is a quicker, cheaper, more environmentally responsible installation.

Contact us today for more information.

*Provided the existing pipework meets current legal requirements regarding pressure rating of R410A.
Süka greener home heating

The Süka Electro heating company was founded in Germany in 1970 and is now recognised as an industry leader and one of Europe's top producers of electric heating systems. In 1993 the company moved into one of Europe's most modern production facilities, and the following year Süka heaters were awarded certification by the Federation of German Engineers.

Süka opened a dedicated Irish office in 2007 and has already established itself as a household name in the field of efficient home heating. Its objective is to deliver sustainable, energy-efficient, low-carbon heating systems which are cost-effective to install and run.

At the heart of each Süka heating system are refractory ceramic plates — known as Chamotte. They combine a unique storage material with modern design and technology into one highly-efficient unit. Within each ceramic plate is a low-wattage heating element shaped like a W which heats up the plate from inside, but only when it needs it. A typical radiator has individual heating plates wired to form a complete heating unit.

The heating element is fully embedded within the fire place. There is no direct exposure to the surface atmosphere, so less oxygen is burnt, if at all. Thus, within the room the heater provides warmth without causing carbon dioxide or toxin emissions.

Once the heat is absorbed into the radiator system, it is then radiated out in an intensive and comfortable manner. In addition to the healthy emission of radiant heat from the side panels, a chimney effect allows for a low level of convective heat which combines with the radiant heat to ensure an optimal ambient temperature in the room.

Süka heaters have been installed in historic buildings such as castles, abbeys and churches to provide healthy warmth and keep humidity levels low. A Dublin-based leading social housing provider has opted for the easy heating solution provided by the Süka heaters. They are replacing all storage heaters in the properties with the Süka heaters.

Contact: Süka Electro Heating System, Dublin.
Tel: 01 - 526 2470; www.suka.ie

In addition to the healthy emission of radiant heat from the side panels, a chimney effect allows for a low level of convective heat.

Solid fuel ‘potentially’ as lethal as gas

The Irish Nationwide Fireplace Organisation (INFO) has been active for a number of years promoting the safe installation of fireplaces and stoves in new and existing dwellings. It has members in virtually every county in the country, all of whom promote professionalism and compliance with best practice.

However, it is concerned that the Building Regulations don't adequately cover the installation of fireplaces, especially solid fuel appliances. According to the INFO, incorrectly-installed solid fuel appliances are potentially as lethal as incorrectly-installed gas or electrical appliances. Once again it has called on the Government to address this anomaly in the Regulations.

In the meantime, it has initiated a series of training courses in conjunction with FAS and HETAS, the UK regulatory body for the safe installation of solid fuel stoves.

Contact: Aisling Kiernan, Chairperson, Irish Nationwide Fireplace Organisation (INFO).
email: info@fireplace.ie
**Sangamo Powersaver from Chronotherm**

The Sangamo Powersaver range from Chronotherm is primarily used for the control of electric water heaters, although it can also be used for controlling panel heaters, security lights, underfloor heating and towel rails.

It is popular with local authorities, private builders and electrical contractors because of the following features and benefits:
- Reliable and simple to use;
- Energy efficient;
- Suitable for multiple applications;
- Two-year guarantee from date of manufacture;
- Modern styling;
- All products are standard size and fit directly onto a single gang pattress box. They are also approved to BS EN60730 and are fully compliant with the latest low-voltage and EMC directives.

Contact: Tom Noone, Chronotherm Controls Ltd. Tel: 01 – 410 5756; email: sales@chronotherm.ie

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**Carel software for HVAC/R applications**

1tool is the latest development tool for the Carel programmable controller platform.

This exclusive software programming system allows rapid customisation to manage most applications in the HVAC/R sector.

Carel offers a wide range of products for manufacturers, installers and designers operating in the HVAC/R sector.

Carel programmable controllers for HVAC/R systems are designed to meet customer requirements in terms of size, functionality and aesthetics, which offer as standard a high performance at a competitive price. Based on the 1tool platform standard, AHU control packages provide flexible solutions for most AHU applications.

Carel controllers can be integrated into BMS via Carel Modbus, BACnet, TCP/IP, SNMP, Metasys, LonWorks (Echelon) and Trend protocols.

Contact: Dave Killalea or Leslie Mason, Carel Ireland. Tel: 01 - 835 3745; sales@carel.ie; www.carel.com

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**UK boiler scrappage scheme introduced**

While Brian Lenihan’s Budget earlier this month did nothing for the construction sector here in Ireland, his counterpart in the UK, Alistair Darling, introduced a boiler scrappage scheme that will undoubtedly generate some positive trading activity there.

There were a reported four million G-rated gas boilers in the UK and it is estimated that, if these were all replaced with A-rated boilers, it would save almost 4.5m tonnes of CO2 per year.

There is no accurate figure for the number of G-rated boilers currently installed throughout Ireland but it can be taken as read that, if a similar scheme were introduced here, the take up would contribute considerably to a reduction in CO2 emissions from the nation’s households.

More to the point from an industry perspective, in the process it would also generate a significant amount of business for installers and suppliers.

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**MCE - MOSTRA CONVEGNO**

The 37th MCE – MOSTRA CONVEGNO EXPOCOMFORT will take place from 23 to 27 March 2010 at the Fiera Milano Exhibition Centre in Italy. Industry sectors covered include heating, renewable energy sources, air-conditioning, refrigeration, plumbing and sanitary fittings, components, water treatment and bathrooms.

This biennial event is an outstanding point of reference for all involved in building services as it showcases all the latest innovations and developments on offer from the world’s leading market players.
CIBSE News

Gilroy blows breath of fresh air

This year’s CIBSE annual lunch proved particularly successful in that guest speaker Pat Gilroy, Managing Director of Dalkia Ireland (not to mention Manager of the Dublin Senior Football Team), gave a very thought-provoking and stimulating address.

The core tenet was all about the glass being half full, about the extraordinary achievements and success stories of recent years, rather than a focus on what’s gone wrong in recent months. That said, it was not a head-in-the-sand approach to the industry’s current difficulties – he fully acknowledged the dilemma, construction in general, and building services in particular, now faces but stated clearly that we have the knowledge base and technical expertise to rise to this extraordinary challenge. In doing so he weaved a very logical and sequential thread which seamlessly intertwined his industry-related remarks with those on Irish society in general. He left the audience with the feeling that, despite the predicament we now find ourselves in as a nation, individually we can – and indeed have an obligation to – use our strengths to return to, and reinforce, the true values for which we were so renowned before the advent of the so-called Celtic Tiger.

The understated tone of his delivery, peppered as it was with amusing anecdotes, somehow belied the depth and seriousness of his message at the time – it is only in hindsight that you realise just how serious and incisive his remarks were. He left the capacity attendance feeling buoyed up and confident, but also with a feeling of responsibility to ensure that, as we go forward, we restore some morality and dignity to both our business and personal dealings.

In that context it was appropriate that he nominated CARI, the charity which cares for children, families and groups affected by child sexual abuse, as the recipient of this year’s CIBSE Lunch donation.
et al.: BS News

Published by ARROW@TU Dublin, 2009

Eamon O’Kane and Michael O’Carroll, Mercury Engineering, pictured with Aidan Bird.

Jim O’Sullivan, O’FW with Tony McKinley, Chairman CIBSE; Pat Gilroy, Managing Director Daikia Ireland; and Tom Dunne, IPFMA.

Eugene Phillips pictured with Kevin O’Rourke, SEI; Tony McKinley, Chairman CIBSE; and Chris Hughes, SEI.

Brian Sterling, L Lynch and Co with Bryan Keaveny, Keaveny Engineering.

Andrew Clifford, JV Tierney, with Dick MacCormack, McGrattan and Kenny; David Daley, ATP; and Eamon McGrattan, McGrattan and Kenny.

Paul Defreine and Wilf Higgins, HSE Estates, with Pat Gilroy, Managing Director Daikia Ireland; and Derek Mowlds and Ken Kenny, PM Group.
Potterson Myson Ireland now part of BDR Thermea

Baxi Group and De Dietrich Remeha Group have merged to create BDR Thermea, a new €16 billion world-leading manufacturer and distributor of innovative heating and hot water systems and services. It incorporates all Baxi Group companies, including market-leading Irish player Potterson Myson Ireland.

The new entity employs more than 6,400 people across Europe with a turnover of €1.8 billion. It has a top market position in seven key countries – Ireland, UK, France, Germany, Spain, the Netherlands and Italy, and strong positions in the rapidly-growing markets of Eastern Europe, Turkey, Russia, North America and China. In total BDR Thermea operates in more than 70 countries worldwide.

The strategy of the group involves marketing under multiple local brands, with strong national operations in the major European economies allowing for rapid reaction to changes in local demand. BDR Thermea owns and sells some of the leading brands in the European market for heating products. These include De Dietrich, Baxi, Remeha, Heatare Sadia, Brötje, Potterson, Chappée, BaxiRoca and Baymak.

BDR Thermea believes relations with all stakeholders are very important. Therefore it invests in its employees and maintains open and sustainable relationships with external stakeholders. It also focuses on customer needs regarding innovative climate and hot water solutions and services, offering systems instead of only single products.

The strong R&D platform and the financial strength of BDR Thermea provide the opportunity to confirm and build on the leadership in the emerging market for low-carbon, micro combined heat and power products (mCHP). In addition to manufacturing high-efficiency boilers, it is committed to new heating technologies that can play a major role in tackling climate change. The product range already includes biomass boilers, solar collectors and heat pump products, as well as unparalleled developments in what will be tomorrow’s favoured heating solution, mCHP.

Indeed, BDR Thermea is the acknowledged leader in the field of combined heat and power. For over 20 years it has been delivering mCHP solutions to meet the needs of homes and businesses across Europe. mCHP improves the way the world’s limited fuel resources are used by generating electricity at the point where it is used, thereby reducing energy losses and CO2 emissions. A leading example is Baxi Group’s Dachs, a state-of-the-art micro CHP unit based on a natural gas, LPG, fuel oil or bio diesel fuelled internal combustion engine. The one-cylinder four-stroke engine has a capacity of 579 cm³ and was designed to achieve maximum reliability with minimal maintenance intervention.

The Dachs has a continuous output of 5.5kW electricity and 12.5kW heating, and achieves an overall efficiency of approximately 90% with a fuel input of 20.6kW. An additional external exhaust heat exchanger can provide a further 2.5kW of thermal energy, raising the efficiency up to approximately 98%.

A major breakthrough in the form of wall hung mCHP systems for single-family households is expected in 2010. •
**Hitachi makes Kilkenny theatre debut!**

The recently-completed SET Theatre in Kilkenny is the latest addition to Langtons Hotel. Visually stunning interiors, along with tasteful furnishings, speak volumes about just how strong the Langtons brand has become. Designed by the David Collins Studio in London, this is their flagship theatre and they have pulled out all the stops to make it one of the most striking entertainment venues in the country.

Not surprisingly, the HVAC requirements for such a prestigious building were a major challenge and Langtons turned to local professionals Ronan Meally of consulting engineers RMCE, and David McDonald of installation specialists REL Group, to solve the problem.

"The client's brief relating to the HVAC for the SET theatre was simple", says Ronan Meally, "it had to be capable of maintaining a comfortable internal environment for a variety of performance types; to be quite when operating; to be relatively invisible; to be economical to run; and easy to use.

"Working closely with David McDonald and Niall Rhatigan of REL Group, we devised a solution incorporating a Hitachi Samurai 100kW heat pump chiller at its core. This reversible chiller provides the efficient source of heating or cooling water for the air conditioning system, depending upon the requirement in the theatre.

"With a seated capacity of 250 or a standing capacity of 350 people, the air conditioning duct work is large so the slow moving air creates very little noise. The linear grilles which distribute the air at ground floor are concealed in plaster detailing on the ceiling."

"In addition", says David McDonald, "the roof air handling unit incorporates low noise fans, substantial attenuation, variable speed drives, and a high-efficiency thermal wheel for heat recovery. Moreover, the system is controlled by BMS which communicates with the chiller, field devices and valves to ensure the system can respond swiftly to deal with changes in the internal or external conditions."

Last word to Fergus Daly, Sales Manager, Hitachi Ireland. "This is a very significant installation for us in that the multiple-use nature of the venue demands an all-embracing, yet flexible, solution. The Hitachi Samurai delivers to that brief."
New guidelines for the control of Legionellosis

In September 2009 the Health Protection Surveillance Centre (HPSC) published new guidelines for the Control of Legionellosis in Ireland. In order to explain these guidelines, Aquachem recently provided a series of free training courses in Dublin, Cork and Galway. Here Kieran Coleman (right), Aquachem Managing Director, puts the situation as it currently stands into context. He is also preparing a guide to understanding the new guidelines, and to encourage best practice, which will appear in the next issue of bs news.

Legionellosis is the common name for Legionnaires disease and Pontiac fever which is a flu-like illness. It is caused by Legionella bacteria, which was first identified in 1976 when 221 people became ill and 34 subsequently died from a pneumonia-like illness at an American Legionnaires conference.

In Ireland the number of cases of Legionnaires Disease, although low by international standards, have gradually increased over the years. In addition, the HPSC believes that the number of cases in Ireland is under-diagnosed. In many European countries everybody attending hospital with a pneumonia-type infection is tested for Legionnaires disease, and most of these report rates of the disease that are five to six times those reported in Ireland. Legionnaires Disease is a severe and potentially-fatal form of pneumonia. The symptoms include an influenza-like illness with a dry cough which progresses to pneumonia. Diarrhoea, vomiting and severe mental confusion are also common as the disease progresses. Legionnaires Disease is fatal in about 12% of cases.

The new Guidelines, which run to 122 pages, remind employers, designers, suppliers, installers and maintenance companies of their responsibilities to both their employees and visitors to their premises.

These responsibilities start with a detailed risk assessment of the systems they are designing, installing, operating and maintaining. Any water system that operates between 20°C and 60°C which can produce aerosols (droplets) poses a potential risk of Legionnaires Disease. Once a risk assessment is completed, a safety statement must be prepared stating how the risk is being managed or eliminated. Water hygiene logs detailing system operating procedures, temperature monitoring, inspections, system cleaning and treatment must then be set up.

Finally, staff must be briefed and trained in how to correctly operate and maintain systems, making sure that records are kept up to date and inspected on a regular basis.

The new Guidelines are very comprehensive and are available online from the HPSC website www.hpsc.ie or from Aquachem.
Mark Éire open days deliver much-needed stimulus

Over the last two months Mark Éire has provided a much-needed industry stimulus by way of its open information days. At regular intervals throughout October and November a large cross-section of building services professionals were invited to visit the Mark plant in Coolea, Co Cork for a day-long programme of events, including lunch.

The whole point of the exercise was to create an information forum whereby participants could engage with Mark personnel, and one another, and discuss matters of significance to today's marketplace.

Apart from a tour of the factory, visitors saw fully-working demonstration products and systems, were presented with various business opportunities, and engaged in broad-ranging technical discussions. While there was a prescribed agenda, it was not set in stone, so most of the sessions developed as per the interests expressed by each group.

Under the long-term stewardship of Mike Donoghue, Mark Éire has always risen to industry challenges and devised novel schemes which not only serve its own vested interests, but also those of the broader building services community.

Mark Éire was originally established 1987 as an assembly plant in Macroom, Co Cork. Raw materials and sub-assemblies were shipped from the Mark parent company in the Netherlands for assembly into heating products which were destined for both the home and export markets.

Today Mark Éire is one of the leading manufacturers in the sector, not just in Ireland but throughout all of Europe. It is completely self-sufficient, is equipped with state-of-the-art production machinery, and it has its own sales and service organisation. It produces all "standard" heating products for the entire Mark Group, along with air handling and roof-top units for the Irish and English markets.

"We're extremely pleased with the success of this initiative", says Mike Donoghue. "The level of participation was extremely high with consultants and contractors, as well as clients and other end-users, availing of the extra time they have on their hands to come visit us.

"Obviously we gained considerably from participants' feedback on the Mark products on view but, equally important was the manner in which opinions and views were openly expressed on broader issues affecting the marketplace in general.

"Interestingly, the discussion sessions were very productive. While problems and difficulties were aired, the primary focus was on identifying opportunities to take the industry forward. In that respect the idea really proved its worth and we at Mark Éire have every intention of repeating the exercise throughout 2010."
Early analysis critical to finding best solution

While there was a time in the recent past when heating installers and system designers would have been hard pressed to find genuinely sustainable products, the scenario they face today is quite the opposite. Manufacturers in the sector have developed a vast array of truly sustainable appliances and systems, the dilemma now faced by installers and designers being how to choose the most appropriate solution for each application. Today, more than ever, it is essential that all parties engage early in critical analysis of every project – whether it is on the domestic, commercial or industrial scale – so that the best possible solution is arrived at.
The diverse and innovative Myson Décor and Column ranges of decorative radiators include a wide variety of designs to enhance the style of any interior.

The Myson Decorative Range combines aesthetic appeal with performance excellence. Radiators are no longer merely functional but can now become a focal point of interior design.

The Myson Decorative Range offers a stunning alternative to conventional Panel radiators, with the Horizontal, Vertical, Column and Plinth models, giving you the freedom to design your interior to your own individual taste.

For details on the complete range of Myson products contact us at:

Potterton Myson (Ireland) Ltd
7 Whitestown Business Park, Tallaght, Dublin 24
Tel: 01 - 459 0870  Fax: 01 - 459 0880 
email: post@potterton-myson.ie

www.potterton-myson.ie
Leading brands, design advice and technical support

When it comes to sourcing commercial heating products, Hevac offers specifiers and installers a formidable armoury of solutions, irrespective of the application, fuel type, or specific requirement. The portfolio includes brand-leading names from throughout the world, all carefully selected to complement one another.

For instance, when it comes to radiators there are the Chappee cast iron and steel panel radiators, and the Aphrodite steel tubular radiators. Chappee offers traditional elegance or up-to-the-minute designs, while Aphrodite is the only radiator that can be grouped to the desired size using exclusive nipples and “o” rings to guarantee perfect sealing.

All deliver excellent heat output, long life, quiet operation, and a very comfortable, natural heat.

When it comes to boilers, Hevac’s major brands include long-established and emerging names, all of whom produce innovative products designed for today’s sophisticated marketplace.

For biomass heating solutions it combines Herz experience with practical biomass knowledge to provide superior design, functionality, performance and reliability. The Hevac/Herz package comes complete with full product and design support at all stages of the project, and includes advice on fuel selection, supply, handling and storage.

Then there is Hamworthy, the UK’s leading boiler manufacturer for more than 30 years. It produces high-quality commercial boilers and associated equipment for customers in both the private and public sectors. Hamworthy is BS EN ISO9001 accredited and supplies European CE Certified boilers, offering a wide range of modular systems. It also manufactures high efficiency condensing and pre-mix modular boilers in a variety of configurations.

Its gas-fired boilers are suitable for natural gas and LPG or, alternatively, there is the power flame series solutions using oil, gas or dual fuel. Complementing the Hamworthy boiler portfolio is a range of supplementary products such as boiler sequence control systems, direct gas-fired water heaters, flue design options, etc.

Meanwhile Chappee, part of the Potterton & Baxi Group, manufactures an extensive range of boilers which includes sectional cast iron, steel commercial and industrial boilers, apart from the radiators already mentioned.

In addition to the large steel and cast iron boilers, Chappee offers top-of-the-range condensing technology in its newest range of wall hung gas boilers. With outputs ranging from 45kW to 110kW, this range makes it the perfect choice for large domestic applications, as well as for use in light commercial premises.

For water heating there is State, the water heater company established over 50 years ago. It offers a comprehensive choice of electric, gas and oil fired waters for the supply of hot water for all domestic, commercial and industrial applications. Using the latest condensing technology in product design, the State commercial range also utilises the Hydro Cannon, re-engineered to take State’s self-cleaning design to the next level.

State’s impressive range includes traditional steel glass-lined tanks, semi-instantaneous commercial copper high-flow water heaters, and a range of direct-fired stainless steel water heaters. In addition to the direct-fired range, State offers a range of calorifier’s and buffer tanks with storage capacities from 286 litres up to 3000 litres. Direct fired heaters are available in open conventional flued, and room-sealed balanced flue, options.

Another market-leading name within the portfolio is DINAK, one of Europe’s leading manufacturers of chimneys and metallic flues for the industrial and building sectors. DINAK understands what is needed to achieve peak performance from fluing high-efficiency commercial heating systems.

But Hevac is not just about the provision of products – it also engages in specification consultation and advice at an early stage in each project. Using its wealth of experience and technical ability, it helps the client and specifier choose the most cost-effective, energy-efficient solution for each specific project.

Contact: Karl Carrick, Hevac. Tel: 01 - 419 1919; email: kcarrick@hevac.ie; www.hevac.ie
Keep ahead with Honeywell.

It's reassuring to know you can keep ahead of the game with Honeywell. We have been making energy saving controls for over 100 years. So people trust us to provide quality, reliability and good value.

Our top quality range of thermostatic valves includes the smart chrome-top VT200, as well as the VT15 and VT117. All offer energy savings and reversible flow bodies to give unrivalled performance, individual room temperature control and stylish appearance.

Make the smart move - use Honeywell
MANOTHERM

Electronic room stats and temperature controllers

The extensive Arle range of electronic controllers from Manotherm caters for all building services segments, including heating, where the choice of products is diverse and all-embracing. It comprises everything from clock-controlled, electronic room thermostats through to temperature controllers with remote sensors, and radio-controlled heating systems (both transmitters and receivers).

A typical example from the range is the Model FDTR-U clock-controlled electronic room thermostat. This flush-mounted controller was designed for the time-dependent control of temperatures developed by electric and warm water heating systems (normally closed actuators).

It is equipped with a week-cycle clock and three individually-adjustable programs (factory preset to "normal" day sequences). It can also be used as a master controller to trigger the temperature decrease operations of other controllers (slaves). The controller models of the FETR, FTR and RTBSB series are particularly suitable for this purpose.

The unit is delivered with a self-learning function in activated condition which allows for autonomous adaptation of the controller to the heating time start. However, this function can also be deactivated but, in this mode, the frost protection function is out of service.

Another versatile controller is Model HTRRBu. This clock-controlled electronic room thermostat with remote sensor is intended for use with floor, wall and ceiling heating systems.

It is ideal for time-dependent temperature control in closed rooms; for the heating of floors; of fringe zones; bathrooms; ceilings; tiled stoves; and marble and/or wall heating systems or tempering systems.

Like Model FDTR-U, it too can be used as a master controller to trigger the temperature decrease operations of other controllers (slaves). However, it is important to note that the sensor line must be laid inside the protecting tube. Parallel laying with power cables is prohibited. It also has a similar self-learning function.

Other products in the Arle heating technology range include bimetal room temperature controllers. For instance, Model RTBSB is a surface-mounted unit suited for all types of heating systems. It was specifically designed for the control and/or supervision of temperature in closed rooms.

It is generally used in conjunction with normally closed-type valves. Where normally open-type valves exist, it must be connected to the cooling outlet of the changeover contact. In all up to 10 valve actuators can be connected (break contact) and up to five actuators to the changeover contact.

Contact: Bob Gilbert, Robert Gilbert or Conor Stead, Manotherm. Tel: 01 – 452 2355; email: info@manotherm.ie; www.manotherm.ie
Make a Style Statement With Your Choice Of Radiators

At Quinn Merriott we strive to achieve a perfect synergy between form and function in the design of our radiators. A quick glance through Quinn Merriott's current product portfolio will reveal sculptured lines, bold geometric shapes and stunning finishes in a wide variety of sizes, colours and shapes. With a comprehensive selection of radiators on offer, such as the horizontal panel pictured above, Quinn Merriott is guaranteed to have the perfect choice for any project.

Quinn Merriott Radiators, Derrylin, Co. Fermanagh, BT92 9AU.
Quotes: Tel.: +44 (0) 28 6774 2606  
Fax: +353 (0) 49 9525231  
Email: sales@merriott-radiators.com

Orders: Tel.: +44 (0) 28 6774 2503  
Fax: +353 (0) 49 9525231

www.quinn-merriott.com
Honeywell

Ultimate control from Honeywell TRVs

Installing thermostatic radiator valves (TRVs) in new and upgraded heating systems has many advantages. For instance, they prevent radiators from overheating rooms, which is good for comfort, while they also save energy, which is good for the environment.

When planning a heating system, remember that a TRV regulates hot water flow through a radiator, but has no control over the boiler or central heating pump. So, if all TRVs have shut-off because rooms are up to temperature, the boiler would keep firing just to heat the water in the pipes.

To prevent this fuel wastage and unnecessary wear on the boiler, a room thermostat (or a programmer with an in-built temperature sensor) should be mounted in a room without TRVs, to switch off the boiler and pump when there is no longer a call for heat.

TRVs provide excellent room temperature control in individual rooms, provided they are installed so they can sense the real temperature of the room. A TRV should not be exposed to draughts or fitted where it can be affected by a heat source, such as a fire or direct sunlight. Nor should it be isolated from the airflow of the room by furniture or fittings – boxing off the radiator and its TRV is not a good idea.

In some cases performance may be better if the TRV head is fitted in a horizontal position to obtain better performance. This may be done on either end of the thermostat and is easy when installing Honeywell TRVs because they feature reversible flow – without any adjustment in the body – so there is no need to identify flow and return pipes.

They eliminate the possibility of water hammer and wasteful callbacks for installers. The defining feature is a unique insert that allows them to be fitted horizontally or vertically at either end of the radiator. In addition to conventional TRVs with pipe connections at right angles, Honeywell offers "straight-through" versions allowing greater choice of installation positions.

When TRVs are fitted to many radiators, an automatic bypass valve should also be installed to accommodate the changes in flow and pressure. They also help condensing boilers run more efficiently.

Honeywell ‘RadPlan’ packs contain a thermostatic radiator valve with a matching lockshield valve.

Wireless radiator control

The temperature setting on conventional TRV heads can only be adjusted manually. However, Honeywell is unique in offering its HR80 wireless controller head which, fitted onto standard TRV bodies as part of a CM Zone wireless zoning system, enables a building to be divided into separate heating zones without cabling or plumbing pipework changes. Radiators in each zone are adjusted automatically using wireless signals from a central CM Zone controller.

Users can programme up to six time/temperature changes per zone each day – and a different programme each day of the week. The Honeywell HR80 is supplied with a variety of adapters to fit valves from other manufacturers.

Each TRV fitted with the HR80 wireless controller head receives the same programmed set point as every other radiator controller in the same zone. If it is the only head in the zone, then it will be completely independent.

The local temperature adjustment available on all Honeywell TRVs is also offered by the HR80 head: the user simply turns the knob to override the last value transmitted by the central controller. When the central unit transmits its next set point value, the manually-adjusted setting on the radiator controller is overridden.

Contact: Honeywell Controls. Tel: 0044 1344 656125; email: literature@honeywell.com; www.honeywelluk.com
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Product Review: Heating

POTTERTOM MYSON

Optimum performance and maximum control

Myson is one of the most innovative producers of heating equipment in the business, offering heating solutions for every application and across all price ranges. Included are radiators, towel rails, fan convectors and underfloor heating including boxed kitchen/conservatory underfloor kits.

Myson produces something like two million radiators a year using exacting quality-control procedures certified to BS EN14001. Moreover, all products meet the European Standard EN442 and come with a 5-year warranty.

Potterton Myson (Irl) is the Myson distributor for Ireland and, in addition to carrying extensive stocks across the entire range, it offers comprehensive back-up and support by way of design advice and product selection guidance.

Brief details of the vast choice on offer are as follows:

Premier HE
This is Myson's flagship range and is renowned as much for its famous round-top, safety-conscious, design as its excellent heat outputs. Stylish and elegant, it complements traditional and modern environments alike;

Premier Compact
This is the newest radiator in the range and features the design strengths of a traditional roundtop with the added features offered by compact radiators. It is unique in the market and appeals to the discerning installer with an eye for aesthetically chic design. It is available ex-stock.

Select HE
Suitable for all types of room decor, the Select range of radiators is neat and tidy with a high-quality white gloss finish. Available as a radiator with matching grilles and side panels.

Column Radiators
Myson has always been to the forefront of radiator design concepts and this is especially true of its column styles which are decorative as well as being functional.

Myson Décor
This is a specially-developed decorative range. There are 52 standard sizes, including horizontal, plinth, column and vertical models in a wide range of colours with a variety of connections and fixings. Customised models can also be produced.

Myson LST
Myson's low surface temperature range ensures that the surface temperature of the radiator remains under 43°C. Available in four heights and eight lengths.

Towel Warmers
The vast range of Myson towel warmers offers a choice of elegant units with design styles to meet every type of bathroom decor and budget. There is also a full range of matching accessories.

Myson Fan Convectors
Myson's convector range is for situations where instant heat is required. There is a choice of Hi-Line, Lo-Line, Slim-Line and Wallstrip models, all of which connect to the central heating system.

Myson Controls
The Myson controls range continues to expand from its origins in manual valves to today's offer of high-quality zone controls, electronic programmers and stats. Then there are the market-leading products in manual radiator valves for domestic and commercial projects. In addition to these products, the innovative and competitively priced Petite Radpack shows continuous commitment to new product development from the only manufacturer of valves and controls for the heating industry in Ireland.

Contact: Vincent Broderick, Potterton Myson (Irl).
Tel: 01 - 459 0870;
email: post@potterton-myson.ie
Retail and telecoms emerged as the most progressive sectors for energy management at Sustainable Energy Ireland’s (SEI) sixth annual Sustainable Energy Awards in Dublin, with Dunnes Stores, Heatons, O2 and eircom each taking awards at the all-island event.

Retail and telecoms dominate at SEI Awards

Sponsored by ESB Customer Supply, the SEI Awards highlight excellence in business energy management and this year included entries from over 100 organisations.

Top prize on the night – Outstanding Energy Manager of the Year – went to Jonathan Pugsley of Leitrim-based door manufacturer Masonite Ireland, which demonstrated 30% energy savings across their business, slashing their energy costs dramatically in the process.

Other winners included:

- **Dunnes Stores** for “Inspiring Energy Awareness Campaign” following a reduction in electricity use of 17% across all 114 stores nationwide;
- **Leading Energy Efficiency Project** for Heatons Dundalk whose new building uses 45% less electricity and is on target to achieve a 90% reduction in maintenance costs;
- **eircom** who won the award for “Sustainable Energy Building Excellence” for its energy-efficient headquarters in the Heuston Quarter in Dublin.

In total, projects entered demonstrated energy savings of €14 million, with an additional €18 million in projected cost savings identified. This year also saw a jump in the number of smaller businesses entering the awards across multiple sectors, reflecting the completion by SEI of over 1,500 small business energy assessments over the past two years. Cumulatively, €341 million in estimated energy cost savings has been achieved by projects entered in the Awards since 2004.

Commenting on the Awards, Professor Owen Lewis, CEO, SEI said: “In this the sixth year of the Energy Awards, SEI is particularly pleased at the number and quality of this year’s entries. We saw a marked increase in entries from smaller businesses that are reaping the rewards of energy management. This is further proof that energy efficiency is on the agenda of every business throughout the country, regardless of size or sector.”
Building Services News, Vol. 48, Iss. 8 [2009], Art. 1

Building air tightness, ventilation and indoor air quality

Evidence-based research data points the way

The imminent publication of Part F of the Irish Building Regulations has far-reaching implications, not just for general building design and the air tightness of buildings, but in particular for the design of building services pertaining to indoor air quality. There are as many opinions as there are industry commentators as to what is the best approach to indoor air quality but, in the absence of detailed Irish studies, we have to look to the experience of other countries for evidence-based research data.

It is against this background that Aereco Ireland, in conjunction with its parent body Aereco in France, recently hosted a trip to Paris for a cross-section of construction industry professionals from Ireland. While the itinerary was quite mixed, the central theme focused on the findings of a comprehensive two-year study to measure precisely the efficiency of the French standard ventilation system for new buildings (humidity-controlled, single-exhaust, mechanical ventilation).

The core objectives of the study were to:
- Demonstrate that a quality process can be used to develop good practice in ventilation and to improve resulting performances;
- Demonstrate that a good building air-tightness can be really achieved and that corrections are possible;
- To assess the real performances obtained on site by humidity controlled MEV (French standard ventilation system) by the means of a large scale monitoring.

The study ran from 2007 to 2009 and involved two "social housing type" occupied buildings equipped with the French standard ventilation system — humidity-controlled mechanical ventilation. This is composed of humidity controlled air inlets in the dry rooms, associated with humidity-controlled or presence-detection extract units in the wet rooms. A centralised fan with pressure control was connected to the extract units.

The two buildings were equipped to measure the outdoor conditions (wind-speed and direction, temperature and humidity), the indoor climate parameters (CO2, temperature and humidity), and the ventilation terminals parameters (pressure, opening sections, airflows) in all the rooms of the monitored dwellings. This was the first time that CO2 was measured in occupied dwellings in such a large scale.
With numerous probes (all specifically designed for the exercise) installed in all the rooms of the monitored dwellings, the monitoring has provided a better understanding of the parameters which can influence the ventilation performance. The results demonstrated the efficiency of humidity-controlled ventilation in managing the indoor air quality, and its adaptation to occupancy by measurements of CO2 and humidity concentrations.

Energy savings on the equivalent airflow for energy were evaluated at 30% on the monitored dwellings, with the extrapolation to the average occupancy of the French building stock shown to be between 50% and 55% energy savings.

During the recent trip the Irish party had the opportunity to visit one of the projects, the Paris site, where 19 dwellings are monitored on the top five floors of an apartment block. They gained access to one of the apartments, viewed the installations in-situ, spoke to the occupier, and visited the control room where all data is managed and recorded according to strict control parameters.

It is important to note that the study was not driven by Aereco but involved all-industry participation, including the leading French construction, regulatory and representative bodies.

The results make for fascinating and thought-provoking reading, particularly in the context of construction in Ireland, where the imminent publication of Part F of the Building Regulations deals directly with the matter of building air tightness, ventilation and indoor air quality.

Information on the study and copies of the report are available from Simon Jones, Aereco Ireland.
Tel: 086 – 025 2210;
email: simon.jones@aereco.ie

**About Aereco**

Headquartered in France, Aereco has offices throughout Europe – including Little Island in Cork – as well as in China and Japan. With a 5000 sq m manufacturing plant in Marne-la-Vallée, the company produces nearly two million intelligent ventilation components each year.

All means of production are bespoke and are fully designed and manufactured in-house. Quality is key throughout the entire manufacturing process, especially in relation to the humidity sensors. These are produced and assembled in a special air-conditioned room in order to meet the specific needs of this essential component.

The portfolio is extensive and includes passive, mechanical and hybrid ventilation systems which react to humidity or presence, or are activated by switches.

Apart from the actual products, Aereco also provides comprehensive design advice and technical support. Aereco places great store in consultation at the earliest possible stage so that the most appropriate and cost-effective solution can be devised for each project.
The promoters believe there is a need for one, cross-disciplinary, organisation within the building industry to be a consistent resource for information, training and accreditation in sustainability. The idea is to establish an Irish Green Building Council which, at a later phase, would be affiliated with the World Green Building Council. This would pull together not only existing state, academic and professional bodies, but also the owners of buildings, the manufacturing industry and social and environmental NGOs.

One of the greatest challenges in the next 10 years will be reducing the energy use of existing buildings, rather than the construction of new buildings. The development of holistic “building in use” assessment methods will be an essential part of a toolkit for facility managers. Building services engineers can play a vital role in the development of the Irish Green Building Council in working to create, or adapt, existing assessment methods for the Irish context, and also in providing guidance for best practices within the members’ areas of expertise.

The promoters would welcome the contribution of building services engineers – and especially CIBSE – interested in the development of an Irish Green Building Council, and invite contact to discuss further activities and involvement.

The issue
There is currently no agreed definition or metrics for sustainable building for Ireland. The environmental impacts of the construction and operations of buildings are vast, and include energy, water, waste, materials, transport, ecology, land use, and social impact. There is an urgent need to provide a framework to move towards best holistic sustainable practice.

Proposed mission
The Irish Green Building Council will provide a vision and leadership for sustainability in the built environment based on accepted scientific principles of sustainability. To achieve this,...
Such benchmarks already exist in other countries, BREEAM, LEED, Green Star etc. IBEAM was a proposed system developed for Ireland by the UCD energy research group:

• Provide accreditation in sustainability for building professionals to ensure a quality assurance system for clients.

Implementation and funding
The idea is to establish a non-executive steering committee comprising representatives from each of the organisations named above, as well as other relevant organisations. Its first objective will be to form a small executive body to start the practical implementation. Pending government support and the development of an individual/company membership scheme, each of the participating organisations will fund this executive body.

How long will it take?
If the organisations involved have the will and commitment—and if existing structures developed in other countries are used as a starting point—it is envisaged that an organisation providing information, training, and a holistic assessment method, could be up and running within 18 months.

Who to contact
Devyn Olson-Sawyer –
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patbarry.thefunnel@gmail.com
Éasca – Tel: 01 - 674 5773;
email: info@easca.ie

Who will do it?
Currently there are professional and government organisations with sustainability groups working in their own professional field to reduce the environmental impact of their actions. In addition, there are organisations who are working towards moving construction and development towards better environmental practice. These, relevant areas of third-level research, should come together to form the Irish Green Building Council, so that their work is complementary and assessable to practitioners from all disciplines. This proposal is not to diminish any one group's work, but to allow real and continuing development of a sustainable built environment in Ireland. The illustration of "the petals" is an example of how the council's structure is envisioned.

What will it do?
The aim of the Irish Green Building Council will be to provide the following:
• Resources for information on all aspects of sustainability;
• Leadership towards an end goal of a neutral impact of buildings on the environment across all categories;
• Training for building professionals that informs and reflects on the environmental impact of the built environment;
• Create an accepted holistic environmental leadership benchmark assessment procedure for buildings.

As a non-profit organisation, it will bring together professional, academic, voluntary, environmental, and state bodies, as well as companies involved with the design, construction, and operations of buildings, to look at the built environment from a whole systems perspective, including planning, transport, construction, waste, pollution, food and fuel security, energy and community.
CIBSE (Rol) Sustainable Building Services Design Awards 2009

The Republic of Ireland Branch of CIBSE held the inaugural Sustainable Building Services Design Awards competition in 2009, with the finals and presentations taking place early in December. This now annual competition is sponsored by John Sisk & Son and is supported and organised by DIT, with additional support from bs news.

The objective with this award is to encourage innovation and evidence-based evaluation in building services engineering. It is different to other “best project” competitions in that it is intended to encourage research, disseminate knowledge and raise the level of innovation in projects. CIBSE expects entries to critically evaluate what they are doing and to examine mistakes, as well as successes, in an open way on innovative projects. In this way the profession builds capacity to innovate successfully.

One-page abstracts were invited from the industry in the summer of 2009 through bs news and the CIBSE website. There were multiple entries initially, and from this a short-list of five papers were selected by peer review. Four entrants were invited from this to present their papers at the final on 10 December in DIT, Kevin Street.

Overall winner
The overall winner of the inaugural CIBSE Sustainable Building Services Design Award was Chris Croly of the Building Design Partnership. His paper was on Innovative Sustainable Design in Waterford Institute of Technology. This paper was presented in two parts — firstly, the many passive elements of the WIT building were examined but then, perhaps more importantly in the context of this competition, cutting-edge developments in high-energy kitchen technology were critically analysed. This paper was considered to be “an innovative cutting-edge engineering innovation” by the judges.

Chris Croly, CIBSE Sustainable Design Award Winner 2009 (holding framed cert) with (from left) Justin Keane, John Sisk & Son; Tony McKinley, Chairman, CIBSE Republic of Ireland Region; Paul Hackett and John McNamara, John Sisk & Son; and Kevin Kelly of DIT, the event co-ordinator.
Event organisers Kevin Kelly and Keith Sunderland, both of DIT and CIBSE Committee.

Runners up
There were a total of three runner up prizes awarded. One went to Paul Tighe, Ethos Engineering, who presented a paper on the very innovative IMAGINOSITY building in Dundrum. This was commended for an imaginative passive design, complemented by fine-tuning of the energy usage with renewables, in a most unique setting;

Then there was Darragh Canning of Axis Engineering. He presented a paper on Simmons Court House Office, and highlighted how it achieved the status of being Ireland’s only BREEAM Excellent rated building;

The final runner up spot went to Ken Beattie, DIT. He presented an analysis of Google Sketch Up, a building simulation tool available free online. This was an excellent educational demonstration of a design methodology for practicing engineers.

Details of next year’s CIBSE (Roi) Sustainable Building Services Design Award competition will be announced in bs news and on the CIBSE website in 2010.

Irish Lighter and Young Irish Lighter
The next of the CIBSE competitions for which entries are sought are the Irish Lighter and Young Irish Lighter 2010 awards. Abstracts will be invited in spring 2010.

If you are interested in entering the 2010 Irish Lighter or Young Irish Lighter competitions then contact the SLL Roi representatives: Kevin Kelly at kevin.kelly@dit.ie or Keith Sunderland at keith.sunderland@dit.ie

Normally, a short description of the project is all that is required initially. For the Irish Lighter it can be any recently-installed innovative and sustainable lighting project in Ireland. For the Young Lighter it can be any piece of research or project. If the project is thought appropriate with regard to quality and sustainability, entrants will be invited to submit a 300-word abstract by 31 May 2009. All 300-word abstracts will be assessed by peer review and between three and five finalists will be invited to submit full papers by 31 July 2010.

The final will be held in early September 2010 and is open to individuals and teams. The convenors would particularly like to hear from ILE, PLDA, IET and Engineers Ireland members, as well as CIBSE/SLL members. In other, words this competition is open to all.

To prepare for this competition would-be entrants should consider undertaking a module of the highly-popular MSc in Energy Management programme at DIT. The Low Energy Lighting Design Module is available on a stand-alone basis to working engineers as a CPD module. Those successfully completing this module (which begins very early in February 2010) are awarded five ECTS credits at Masters level.

Contact: Dr Kevin Kelly at kevin.kelly@dit.ie

The Judges – Kevin Gaughan, MSc Energy Management Course Chair DIT; Michael McNerney, Energy Manager with Tesco; Tony McKinley, CIBSE Chair and Jacobs International; Kevin O’Rourke, Manager of the Energy Demand Division in SEI; and Justin Keane, CIBSE Committee and Sisk Building Services Division (sponsors).
Ditch the dog and keep the 4 x 4!
The authors of a provocative new book claim that pets are bad for the planet—they consume vast amounts of precious resources; produce mountains of noxious waste; and can be a disaster for wildlife.

For instance, it is claimed that it takes 0.84 hectares to keep a medium-sized dog fed while, in contrast, as little as 0.41 hectares will provide enough energy to build a Toyota Land Cruiser and power it for 10,000km a year. If you want to trade down a little, the eco-footprint of a Volkswagen Golf equates with that of a cat.

So, next time your dog-walking neighbour glares at you as you trundle by in your 4 x 4, glare back knowing you’ve got the moral high ground!

Wow – Carrick has a chin!
Who’d have thought it—after more years than he cares to remember, Karl Carrick has finally gone clean-shaven (well almost). As I revealed last month, Karl and many of his Hevac colleagues participated in the Movember moustache-growing campaign to raise funds for the Irish Cancer Society throughout the month of November.

However, Karl has always sported a full beard and so, in keeping with the spirit of the exercise, he shaved to a point where he—like his colleagues—ended up sporting a classy-looking moustache at the end of the month.

See page 2 for a group picture of all the Hevac Movember participants.

Senior figures pay homage to Gilroy
The excellent food and general bonhomie of the CIBSE Annual Lunch is always a draw in itself but, the numbers attending and the industry cross-section they represent can also be influenced by the guest speaker.

This year was a case in point with a capacity attendance turning out to hear Pat Gilroy, Managing Director of Dalkia Ireland and Manager of the Dublin senior football team give the main address.

Among them were senior industry figures Teddy Bourke and Paddy Clonan. While both have attended their fair share of lunches down through the years, I think they came solely this year to get their photograph taken with Pat.

Great to see you guys.

Spooky or what?
An organisation called Optimum Population Trust (Opt) has done a cost-benefit analysis which claims that for every €4.50 spent on contraception, one tonne of CO2 is saved. It proposes an offsetting scheme (called PopOffsets) whereby individuals and companies can offset their carbon emissions by supporting family planning services where none currently exist.

In comparing the scheme with other initiatives, it says a similar gain in tree planting would cost €8.80; wind power €16.50; solar energy €34.20; and hybrid vehicle technology €61.70. Apparently, the 10 tonnes of CO2 emitted by a return flight between London and Sydney could be offset by the avoidance of one birth in a country such as Kenya.

A claimed added bonus is that, apart from reducing emissions, the scheme would also reduce the number of people falling victim to climate change.

Is this spooky or what?
IRISH METAL INDUSTRIES: TUBE WITH BUILT IN QUALITY

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