

10-1-2008

## BS News

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# bs news

building services news



Environment  
Green  
Solutions  
Eco-friendly  
Energy-efficient  
Sustainable

Building Services  
Glass Definitely Half Full!

# The **BIG** Grundfos E-boost truck is coming your way!

## Mobile E-pump training facility

E-solutions from Grundfos offer pump users the power to be in control of their systems and over their power consumption. The E-boost truck has been sent on the road to make sure that this control is passed directly into the hands of the installer and user.

If you would like to see and try Grundfos' E-solutions for yourself, please contact your local Grundfos company.

Phone: 01 4089800

Fax: 01 4089830

Email: [info-ie@grundfos.com](mailto:info-ie@grundfos.com)

Website: [www.grundfos.ie](http://www.grundfos.ie)



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## opinion

### The Glass is Still Half Full!

While there is no denying the damaging impact the current economic climate has on all industry sectors, the fact of the matter is that building services is still faring a great deal better than others. The fall-off in construction output is very real but, equally real is the need for homes, offices, commercial and industrial enterprises to reduce their running costs. In fact, this need has never been greater.

Enter building services professionals and suppliers. The industry is currently awash with innovative new products and systems which have been specifically developed to provide enhanced living and work environments while, at the same time, reducing energy consumption and limiting environment-damaging emissions.

Apart from the plethora of new building regulations and standards which support and encourage the adoption of these new technologies, there is also a growing determination on the part of individuals and businesses at large to reduce their energy-related costs.

So, while the glass is undoubtedly half full in respect of trading opportunities, the fact of the matter is that it is half full, not empty. It is important to acknowledge the changed and very trying trading conditions prevailing at present but the emphasis should be on maximising the positives rather than dwelling on the negatives.

Building services has a great deal to offer in the current economic climate and has the answer to many of the pressing energy-related challenges facing the entire country. For challenges read opportunities ...

## trade news + product information



Brendan Sheridan

### sheridan project & contracts advice service

Brendan Sheridan (left), FSCS FRICS, has formed a new consultancy providing project management, contracts advice and business management services. Brendan is a chartered surveyor with over 30 years experience in the construction and property industry, in both Ireland and the UK.

A former President of the Society of Chartered Surveyors, his project portfolio includes East Point Business Park; Citibank Dublin HQ; Clarion Quay Mixed Development IFSC; National College of Ireland Docklands Campus; Carton House; and Irish Schools PPP Bundle 1.

With leading-edge experience in all three sides of the industry – consultancy, contracting and property development – Brendan offers a unique range of services from complete project/development management to task-specific issues such as project appraisal/re-appraisal, venture structures, PPP, construction contracts, dispute analysis/management, and commercial business consultancy.

Contact: Brendan Sheridan. Tel: 01- 676 6811; email:brendan@brendansheridan.ie

### TA & CCS join forces on legionella prevention

Tour & Andersson has formed a partnership with Central Chemical Services (CCS) to provide a comprehensive Legionella control system. It comprises an integrated, largely chemical-free and sustainable service that delivers the removal and prevention of Legionella bacteria in waterborne systems.

Tour & Andersson and CCS's four-stage process for a Legionella-control system is based on good practice in system design and comprehensive analysis – with Tour & Andersson's "Measure to Know" philosophy at its core.

Working together, Tour & Andersson and CCS provide a full service in the removal and control of Legionella and its biofilm breeding ground in all waterborne systems, both existing and new. Combining Tour & Andersson's TA-Aqua+ (which uses advanced oxidation technology) to successfully oxidise Legionella bacteria from a system, with CCS's regular testing and inspection, ensures that clients receive sustained Legionella-safe systems.

"This partnership means that clients benefit from the technical capabilities of both companies", said Tour & Andersson Managing Director Nigel Huggins, "While the TA-Aqua+ unit removes existing Legionella bacteria from a system, CCS's constant measuring and testing will ensure that this remains the case for the lifetime of a contract."

Contact: Ken Browne, Tour & Andersson. Tel: 087 - 280 1095;  
Maria Hooper, Tour & Andersson's Head Office. Tel: 0044 - 1582 866 377; www.tourandersson.ie

### lundy to lead aeci

The AECI has appointed Chris Lundy as Secretary/Manager. Chris is very well known within building services, especially in the electrical sector.

His appointment will result in a significant improvement in service to AECI members, along with better representation and liaison with other representative bodies in the industry.

This appointment, together with the opening of the new AECI office at Woodview Centre, Main Street, Celbridge and the continued back-up of Vicki Crone, reflects a renewed commitment on the part of AECI to become a greater representative force on behalf of electrical contractors.



Chris Lundy



## Room air conditioners to suit every environment

With environmental efficiency becoming the leading factor in many decisions, it's no wonder that SANYO Air Conditioners are the natural choice.

Our Shiki Sai Kan room systems have achieved Class A efficiency thanks to their use of non-ozone depleting R410A refrigerant. Fitted with high performance odour, germ and bacteria filters, they deliver clean air, as well as cost-effective operation, with lower energy consumption and quiet operation.

With a choice of 7 colours, and COP ratings of up to 5.0, SANYO's Shiki Sai Kan room air conditioners are green whatever the colour.

### ROOM AIR CONDITIONERS

- COMMERCIAL SPLIT SYSTEM
- ELECTRIC VRF
- GAS DRIVEN VRF
- CO<sub>2</sub> ECO HEATING SYSTEM



[www.sanyoaircon.ie](http://www.sanyoaircon.ie)

Tel: (01) 403 9900



Energy		Air Conditioner
Manufacturer		<b>SANYO</b>
Model		
More efficient		
A	▶	<b>A</b>
B	▶	
C	▶	
D	▶	
E	▶	
F	▶	
G	▶	
Less efficient		

## lowara PLM high-efficiency motors

Lowara's new PLM range of high-efficiency motors for its vertical multistage pumps have efficiency values that fall within the range normally referred to as Efficiency 1 and make the Lowara pump ranges among the leading performers in every class.

The PLM technology significantly reduces the power consumption of the pumps, making them a greener as well as economical choice, while also providing improved operational efficiency. A single 15kW pump operating for 12 hours a day could save 1857kWh a year with the new PLM motor.

The motor quality and reliability is claimed to be higher than in previous equivalent motors, with less heating within the motor to maximise operational life and reduced noise. They are now available on a range of Lowara multistage pumps for a wide range of uses, from water distribution and HVAC to irrigation and industrial applications.

In combination with the Hydrovar® variable speed controller, the efficiency can be even more dramatically improved. Hydrovar® can control up to eight pumps with intelligent drive, all from a single pump-mounted unit, to manage motor speed and match pump performance to a range of fluid applications.



Contact: Terry Murray, Lowara Ireland. Tel: 01 - 542 0266; email: [terry.murray@itt.com](mailto:terry.murray@itt.com)

## energy institute dinner

The Republic of Ireland Branch of the Energy Institute will hold its annual dinner in the Shelbourne Hotel, Dublin on Wednesday, 5 November next. Individual places and tables (normally of 10) can be booked at €120 per person.

This event is regarded as the premier social occasion in the calendar of the Energy Institute and generally attracts representatives from across the entire energy and construction-related sectors.

Contact: Deirdre Milligan, StatoilHydro Exploration. Tel: 01 - 611 9617; email: [deirmil@statoilhydro.com](mailto:deirmil@statoilhydro.com)



## SÜKA greener radiators

SÜKA (pronounced sue-ka) heating systems feature slimline heaters that provide virtually instant heat, are fully controllable and are powered by electricity. They use 15 minutes of electricity to provide 60 minutes of radiated heat via radiator units that are available in flexible size options to suit most applications.

SÜKA heaters provide low energy input for high heat output and work by imitating the sun's radiant warmth. Once the heat is absorbed into the radiator system, it is then radiated out in an intensive manner throughout the room.

They are claimed to be 100% efficient at the point of use as all the energy employed is turned into heat which is stored in refractory ceramic plates known as "chamotte". These plates are heated only when needed, unlike night storage heaters.

SÜKA heaters can be hard-wired into a radial electricity circuit, which is ideal for renovations or new build properties. However, they also simply plug in to any 13amp socket. Mounting is simple with the two supplied brackets, or they can be fitted with feet or castors.

Contact: Corinne Taylor, SÜKA Regional Manager. Tel: 01 - 526 2470; [www.suka.ie](http://www.suka.ie)

trade news + product information

mobile e-pump training facility



"Everyone knows that electronically speed-controlled pumps save time and money", says Gordon Barry of Grundfos. "However, knowing it and talking about it is one thing ... but it's not until you've seen it for yourself that you'll be convinced."

"We have put our E-solution demo systems and training materials into a truck, and put them on the road. This specially-adapted truck folds out into an air-conditioned, 30-person, conference room and training facility with six full-scale demo systems. This truck is currently touring Europe and is scheduled to hit various locations throughout Ireland in November."

The six working demos on board the E-boost truck demonstrate the variety of functions of Grundfos E-solutions, including a wide range of user-friendly new controls. The applications are groundwater; heating and air conditioning; water supply and pressure boosting; wastewater; industrial cooling and industrial wash down systems.

Among the products on board is a wall-mounted frequency converter, Grundfos CUE, which can be connected to any Grundfos motor and provides the same functions as an actual E-pump with integrated frequency converter. It can control the speed of virtually any Grundfos pump, irrespective of size, power range and application area.

In the mobile conference room training staff will instruct visitors on how to install and commission a CUE solution including, for example, how to convert an existing, fixed-speed, pumping system into a cost-saving E-solution.

"E-solutions from Grundfos offer pump users the power to be in control of their systems and over their power consumption", concludes Gordon Barry, "and we've put the E-boost truck on the road to make sure that this control is passed directly into the hands of the installer and user."

Details of when the E-boost truck will be in your locality are available directly from Grundfos.

Contact: Julie Monaghan, Grundfos. Tel: 01 - 408 9800; email: jmonaghan@grundfos.com

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## toshiba heat pump sound of silence



Regional radio station Northern Sound in Monaghan recently awarded the heat pump fit-out contract to Windy City Comfort who provided a number of ducted type units to serve the on-air studios, while cassette units provide cooling and heating to the general office areas. The Toshiba ducted units were chosen for the on-air because of the very low sound power levels emitted during operation.

Toshiba model RAVSM562BT produces up to 5.6kW of cooling and up to 6kW of heating for as little as 34c per hour. The resultant airflow from the indoor unit (at low speed) produces just 36dB(A) sound power level and, when coupled with duct work and outlet grilles, the noise levels drop even further.

Northern Sound is one of a long list of radio stations using Toshiba heat pumps. FM104, Today FM, Galway Bay FM, North West Radio, South East Radio and Waterford Local Radio (WLR) all benefit from using Toshiba heat pumps. INN, who provide national news to local radio stations, has also been fitted with Toshiba serving the on-air and edit studios.

Contact: Derek Phelan, GT Phelan. Tel: 01 - 286 4377;  
email: derek@gtphelan.ie

## scs strengthens project management team

Standard Control Systems (SCS) has appointed senior projects engineer, Neil Boksberger (right), to the position of Contracts Manager. Neil has been with the company for several years and is a highly-experienced controls system and BEMS engineer.

A graduate of DIT Kevin St, Neil holds a BEng (Hons) in electrical engineering. He has considerable experience within the healthcare and commercial sectors and is currently lead engineer on the prestigious Lansdowne Road Stadium Development.

Contact: Sales Department, Standard Control Systems — Dublin: Tel: 01 - 429 1800;  
Galway: 091 - 753 270; Cork: 021 - 455 5671; email: info@standardcontrol.ie



Neil Boksberger

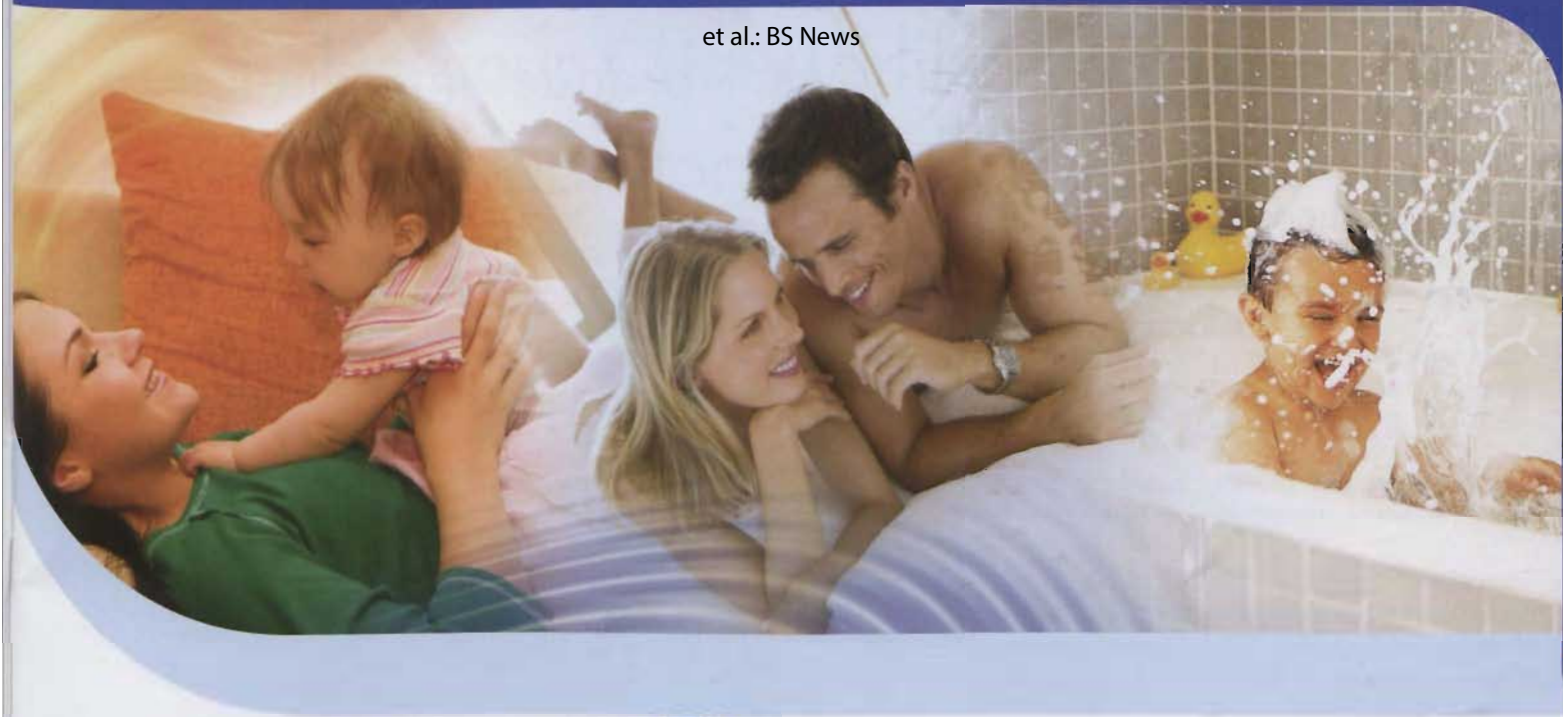
## daikin domestic hot water solar kit

Daikin's Altherma heat pump heating and domestic hot water system — which has nominal heating capacities between 5.75kW and 16kW and is claimed to be three to four times more energy-efficient than traditional fossil fuel boilers — has now been extended for use in conjunction with solar heating panels for the supply of domestic hot water.

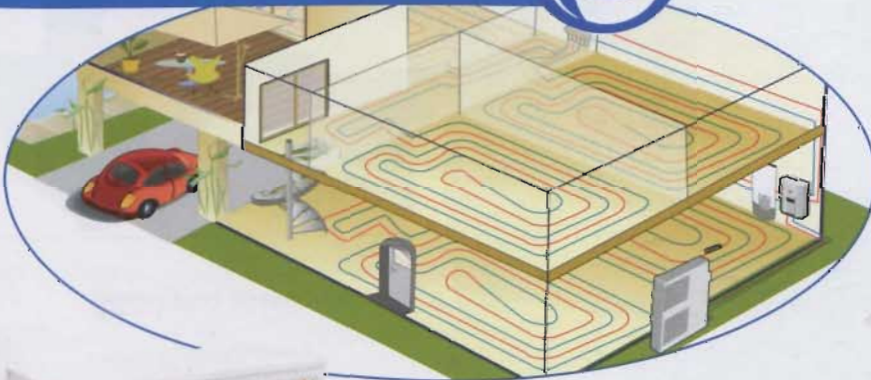
Altherma produces hot water in a purpose-designed stainless steel tank and the new Daikin solar kit enables this tank to be connected to a field-supplied solar collector. The kit can be connected to current solar heating systems and incorporates special control software, which enables it to prioritise hot water production via the solar collector.

The Daikin solar kit comprises a heat exchanger and an insulated circulator pump, which is mounted onto the existing 200 or 300 litre Altherma water tank, plus an electronic card providing the necessary communication between the various elements within the system.

Contact: Richard Smith, Daikin Europe NV (Irish Office). Tel: 01 - 642 3430; email: info@daikin.ie



## Air source systems

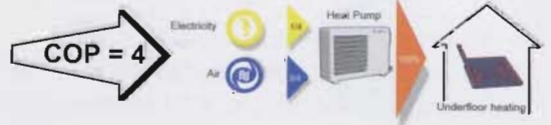


**Carrier's 100 years experience in design and manufacturing have shaped their range of air to water heat pumps.**

- Systems for new and existing installations;
- Systems work with radiators and underfloor heating;
- Designed specifically for Carrier Hydronic modules;
- Available in 5 to 30kW with a CoP of 4.0;
- Floating set point technology ensures optimum comfort and energy efficiency.



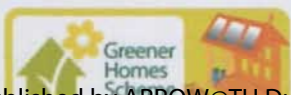
*Inverter*



## Core Renewables

nexa

Unit A6, Centre Point Business Park,  
Oak Road, Clondalkin, Dublin 22  
Tel: 01 - 409 8912;  
Mobile: 086 - 385 3858  
Fax: 01 - 409 8916;  
email: paul@coreac.com  
web: www.coreac.com



## bright lighting ideas

Bright Ideas, SEI's lighting roadshow, is running throughout Ireland during October and November 2008. It is geared towards those who supply or specify lighting in the non-domestic sector including: —

Manufacturers; suppliers; mechanical and electrical contractors; engineers; architects; interior designers; property management companies; lighting retailers; commercial sector users — retail, hotels, offices; and public sector users — hospitals, schools, council buildings.

The roadshow will provide an educational and networking forum for the entire lighting supply chain, along with practical, actionable advice on how to use lighting in an effective and efficient manner.

Remaining dates and venues include:

Dublin — Monday, 10 November, The Ballsbridge Court Hotel;

Wexford — Thursday, 13 November, Whites of Wexford;

Cork — Monday, 17 November, Silver Springs Moran Hotel;

Sligo — Monday, 24 November, Radisson SAS Hotel, Rosses Point.

Contact: [jackie.odowd@sei.ie](mailto:jackie.odowd@sei.ie)

## thermobile waste oil heaters

Galway-based C&L Industrial recently added the Thermobile range of waste oil heaters and hot water boilers to its growing product portfolio of energy-efficient industrial equipment.

Thermobile heaters and boilers are suitable for installations where waste oils are produced. These simple but effective heaters and boilers create clean dry heat and hot water by running off waste oils and so are ideally suited to installations where such oils are produced. This results in two major benefits to the user — a cost-effective method of disposing of waste oils and a "free" method of heating large spaces.

Colum Whelan, Managing Director of C&L, told *bs news*: "With energy prices continuing to soar and the alarming rise in oil prices, Thermobile heaters and water boilers can assist businesses in reducing their energy bills."

Established in 1998, C&L Industrial serves the Republic of Ireland through a network of local sales and service centres, located strategically around the country.

Contact: Colum Whelan, C&L Industrial. Tel: 091 - 733 422; [www.candlindustrial.com](http://www.candlindustrial.com)



## H&V09 at NEC, Birmingham

Over 60% of stand space has already been reserved for the forthcoming H&V09 exhibition which will be held in the NEC, Birmingham, from 24 to 26 February 2009 inclusive.

Confirmed exhibitors include leading industry players such as Dimplex, Quinn Radiators, China-based pipe fittings manufacturer Hemeng Fitting Co, Baxi, EnviroVent, ERICO, Mitsubishi Electric, Keston Boilers, Lochinvar, Polyair UK, &S Northern, Systemair, Vaillant and Viessman.

Under the theme of "Low Carbon Cooling & Heating Solutions", H&V09 will provide a platform for companies seeking to showcase new products, systems and equipment which can help specifiers, contractors, engineers and end-users improve heating and ventilating performance and reduce environmental impact.

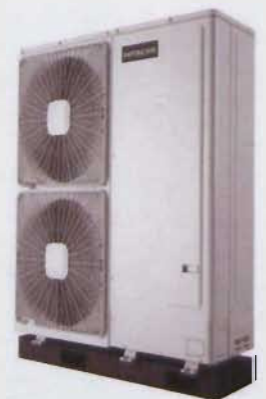
A full seminar and workshop programme will again be part of the show, which will also be co-located with RAC09, the industry event for the refrigeration and air conditioning sector. [www.handvexhibition.com](http://www.handvexhibition.com).

Do your CLIENTS like their old radiators/heaters?...

Then they will love the new YUTAKI Hi-Temperature Heat Pump!



Hitachi's YUTAKI heat pumps incorporate integrated features and controls which deliver all the functions of a fully-fledged heating system, making them the ideal replacement for a traditional, boiler-led, set up. YUTAKI heat pumps are ideal for retrofit or new-build applications and, thanks to constant water production at 65°C, ensure hot water production for the bathroom at all times. There are three models in the range with capacities from 8kW to 15kW. Because of the monobloc construction installation and commissioning is quick and easy. With temperature control regulated by DC inverter technology, YUTAKI units deliver a COP of as much as 4.28 when installed in accordance with instructions provided by Hitachi.



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**HITACHI**  
 Inspire the Next

## sanyo's top performing PACi

Sanyo Airconditioners (SAE) has marked 50 years of successful European business with the introduction of the Elite PACi, a new addition to its range of commercial split systems. Available in a new compact and lightweight design, the Elite PACi provides improved comfort and reduced power consumption for commercial applications.

"Sanyo's design engineers went back to the drawing board and completely overhauled our range of commercial split systems" explains David Colbert at Sanyo. "The result is the Elite PACi which is perfect for light commercial projects where efficiency and performance must not be compromised. A newly-designed heat exchanger and outdoor fan means that COP ratings of up to 4.05 kW can be achieved."

Sanyo's DC inverter technology offers outstanding heating and cooling power which is produced by variable compressor rotation speed. This ensures quicker control of room temperature than conventional air conditioners. Each unit also utilises the latest Sanyo twin rotary compressor, in which perfectly-balanced dual rotors revolve smoothly and efficiently to provide powerful, quiet and vibration-free performance. The Elite PACi is therefore very quiet with sound levels from just 53 dB (A).

Ideal for enhancing the air quality in shops, restaurants and other businesses, the new Elite PACi offers end-users total flexibility, allowing the installation of four indoor units on multi-split systems. There are eight different styles of indoor units to choose from. Meanwhile, piping length has been increased by 40% to 70m, aiding installation still further.

The Elite PACi uses non-ozone-depleting R410A refrigerant which gives increased system performance, increased energy efficiency and improved heat transfer. This allows for smaller pipe sizes and more compact indoor units. Meanwhile, the reduced refrigerant charge helps to comply with the F-Gas Regulation.

Contact: Dave Colbert, Sanyo Airconditioners. Tel: 01 - 403 9900;  
email: davidcolbert@sanyoaircon.com

## biofuels for home heating only?

The oil Firing Technical Association (OFTEC) has called for a new focus when it comes to biofuels production and use following the UK government's recent decision to slow down the introduction of biofuels for road transport.

The change in direction comes in the wake of a Government-commissioned report which suggests a cautious approach to biofuels for road transport, amid fears that it could contribute to greenhouse gas emissions and rising food prices.

Up to now the heating sector has taken a back seat when it comes to biofuels, perhaps because the sector is relatively small when compared with road transport. However, research has shown that biofuels used for heating will have a more positive effect on reducing carbon emissions than using biofuels for road transport.

Jeremy Hawksley, Director General at OFTEC explained: "We are currently looking at the viability of a bio-heating oil blend of at least 20% biofuel mixed with 80% kerosene, which would offer significant reductions in carbon dioxide emissions. The preferred bio-fuel would be waste vegetable oil, which would not contribute to rising food costs. We are also looking at a biofuel which will run on existing oil boilers, so that people won't have to invest in new heating equipment."

Contact: [www.oftec.org](http://www.oftec.org)

## Specify with Confidence

When it comes to air conditioning, GT Phelan has in-depth experience, technical capability and support services to assist designers to devise the most appropriate solution for any given application. Key strengths are:—

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email: [rodney@gtphelan.ie](mailto:rodney@gtphelan.ie) or  
[derek@gtphelan.ie](mailto:derek@gtphelan.ie)

### universal hydrostatic level indicator system

The new universal hydrostatic level indicator system from Manotherm consists of a display instrument with graphics and a submersible probe with integrated pressure transducer. There is a choice of read-out in either litres, m<sup>3</sup>, % or liquid level in mm.

Suitable for tanks from 1m to a max of 4m liquid height, the system is especially designed for modern housing technology. Remote indication is up to 15m.

When pre-set, fully-adjustable minimum or maximum level is reached, a visual or audible alarm is initiated at the indicator. Further relay contacts are provided for the connection via additional alarm units, or for level control functions, telecommunications and housing control technology.

Electronic measurement ensures high accuracy. Standard tank sizes are memorised and can be accessed while tank tables for special sizes can be pre-programmed. An additional float switch can be connected for high level.

Functions include selection facility for units to be displayed; total volume calculation; daily memorisation of fuel levels; consumption check; graphic display of consumption over last year, three or five years; coverage forward requirement; alarm and level control functions; sensor fault; and short-circuit indication.

Contact: Bob Gilbert, Robert Gilbert or Conor Stead, Manotherm. Tel: 01 - 452 2355; email: [info@manotherm.ie](mailto:info@manotherm.ie)



### BEMS vacancies

Standard Control Systems (SC) wishes to hear from experienced controls and BEMS personnel to work with its existing team of 16 commissioning engineers.

The company would also welcome applications from experienced project managers from within the BEMS sector.

Interested parties should forward their CVs, along with a covering note, to [info@standardcontrol.ie](mailto:info@standardcontrol.ie) quoting Ref: 089CE.

### energy institute programme 2008/09

Details of the Energy Institute's forthcoming programme have just been finalised. It includes a whole series of seminars devised around joint initiatives between the Institute, Engineers Ireland and the RDS respectively. Brief details are as follows:—

- 5 November 2008 — Gas transmission development;
- 19 November 2008 — Wind energy;
- 3 December 2008 — Institutional challenges re nuclear power;
- 21 January 2009 — Reducing your carbon footprint;
- 4 February 2009 — Oil supply security;
- 18 February 2009 — Hybrid and electric cars;
- 4 March 2009 — Insulation of existing housing stock;
- 11 March 2009 — Capturing tidal energy;
- 1 April 2009 — Low energy office building;
- 15 April 2009 — Energy from wood;
- 6 May 2009 — Corrib field development.

Additionally, a joint conference called "Partnering for Climate Change" — to be held in conjunction with Declan Waugh and other organisations — is scheduled to take place in Cork on 14 November.

Contact: [noeltierney@eircom.net](mailto:noeltierney@eircom.net)

# Reliability By Design

TopSon F3 Wolf solar panels carry the 'Blue Angel' ecology label due to their:  
High efficiency • Eco-friendly production • Re-usable materials  
Variable connections • 5 years warranty

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Meander coil and top deflector

Through flow fittings

60mm rock wool

Elegant, deep draws, aluminium tray



## Solar Hot Water Solutions... as dependable as the Sunrise.



The competence brand for energy saving systems

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For Information & Support: [renewables@pulsar.ie](mailto:renewables@pulsar.ie)

Sales Enquiries: [renewables@pulsar.ie](mailto:renewables@pulsar.ie)

Unit 1, Westgate, Business Park, Lehanaghmore, Togher, Cork.



Renewable energy...

It doesn't have to cost the earth



## PM group €30million contracts in poland

PM Group was recently awarded three significant projects in Poland valued at €30 million. The projects include a Quantum Physics Laboratory for the Nicolaus Copernicus University in Torun, an advanced manufacturing facility for 3M (Aviation) and a manufacturing plant for American Axle & Manufacturing (AAM).

Michael Shelly, Director of PM International said: "Our extensive experience in the creation of specialist laboratories and research facilities was a key factor in winning the contract to design the €8 million Quantum Physics Centre at the Nicolaus Copernicus University in Torun. 3M and AAM awarded the contracts based on successful projects undertaken for other high-profile clients in the region such as Colgate-Palmolive, Electrolux, NSK Steering Systems, Lincoln Electric Company and SCA Hygiene."

In Ireland, PM Group is currently working on a number of prestigious projects including the €350 million redevelopment of Lansdowne Road stadium, biomedical facilities for Wyeth in Dublin and the extension to Pier D at Dublin Airport.

Contact: [www.pmg.ie](http://www.pmg.ie)



David Mullen

## download operation & maintenance manuals

Engineering Documentation, which provides technical documentation to the construction industry, has unveiled an interactive website — [www.engdoc.eu](http://www.engdoc.eu) — which allows clients directly download site-specific operation and maintenance manuals, along with safety files.

There is a legal requirement for all construction businesses to produce complete O&M manuals on completion of each contract. This puts pressure on organisations that don't have the time or expertise to create these manuals. Engineering Documentation says it can produce this documentation cost-effectively and efficiently.

Engineering Documentation Ltd was established two years ago by David Mullen and Timothy King and is based on the Institute of Technology Campus in Ballinode, Sligo. David Mullen's background is as a mechanical engineer so he fully understands the requirements of the industry.

## dynamic simulation

Integrated Environmental Solutions (IES) recently unveiled v5.9, the enhanced version of its VE Compliance package for energy conservation Building Regulations in the UK and Republic of Ireland.

With the addition of UK DSM EPC (Dynamic Simulation Model Energy Performance Certificate) and Eire BER (Building Energy Rating) capabilities, IES VE Compliance now offers, among other features, Eire Part L (non-dwellings -- SBEM/NEAP\*) and Eire BERs (non-dwellings -- SBEM/NEAP\*).

As everything is undertaken from a central 3D model of the "real" building, data input is straightforward, the impact of design changes can be looked at easily, and compliance can be assessed alongside other performance parameters.

IES has also updated the Compliance and Training sections of its website to include comprehensive guidance on its compliance software solutions, training and links with Accreditation Schemes.

Contact: [www.iesve.com](http://www.iesve.com)

# STANDARD CONTROL SYSTEMS

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CORK



- Building Energy Management Systems
- Facade Management Systems
- Control System Validation
- Motor Control Centres

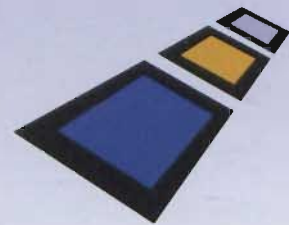
Dublin: Tel: 01 - 429 1800 Fax: 01 - 429 1801

Galway: Tel/Fax: 091 - 753 270

Cork: Tel: 021 - 455 5671 Fax: 021 - 486 1303

email: [info@standardcontrol.ie](mailto:info@standardcontrol.ie)

[www.standardcontrol.ie](http://www.standardcontrol.ie)



Standard Control Systems



## ITT

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The Hydrovar® variable speed controller from Lowara

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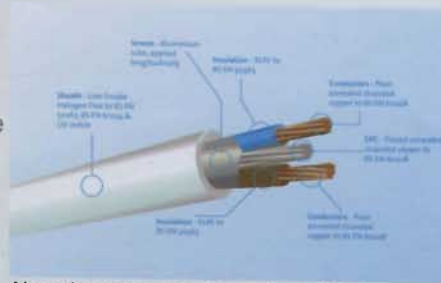


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 9, Broomhill Drive - Tallaght Industrial Estate Tallaght - Dublin 24  
 Tel. (+353) 01 4520266, Fax (+353) 01 4520725  
 E-mail: [lowara.ireland@itt.com](mailto:lowara.ireland@itt.com), Web site: [www.lowara.ie](http://www.lowara.ie)

## 'sustainable building show huge success'

The Sustainable Building Show and the annual Building Exhibition attracted 9,500 visitors to the RDS recently with a great deal of interest shown in the Seminar Theatre where a variety of topics were covered.

The most popular discussions were on building energy ratings; energy savings in the home; building sustainable communities; passive homes; and heat recovery ventilation and airtightness. The specially-built Eco Show House on display demonstrated all of the benefits of sustainable building.



New Product of the Show (Materials) winner: Irish Driver Harris for their Guardian cable

The Product of the Show Awards is a key element of the event and this year's winners were as follows:—

### Building Exhibition Awards

Product of the Show Award winner: Clantek/ Campion Homes;

Certificate of Merit: Allenkey Fittings.

New Product of the Show (Materials) winner: Irish Driver Harris;

Certificate of Merit: Newell Roofing product: Single Ply Membrane

New Product of the Show (Equipment) winner: ITW Construction Products;

Certificate of Merit: [www.2eva.ie](http://www.2eva.ie)

### Irish Sustainable Building Show Awards

Product of the Show Award winner: Zen Renewables;

Certificate of Merit: Econstruction.

New Product of the Show Award winner: Froling Heizkessel;

Certificate of Merit: Carey Glass.

## Iarnród plant first to use UV technology

NI Regional Development Minister Conor Murphy and Chris Mellor, Chairman & Chief Executive of NI Water (pictured left) officially opened Ireland's first wastewater treatment plant to use ultra violet light technology recently.



Conor Murphy with Chris Mellor

This new eco-friendly technology removes bacteria from the treatment process without the use of chemical disinfectants, leading to improvements to the water quality in the area.

Conor Murphy, Minister for the Department for Regional Development, said: "Using UV technology is better for the environment as there are less chemicals used in the treatment processes. It also allows an increase in the capacity of water which can be treated."

## shaws fireclay kitchen sink

The new Classic Waterside contemporary fireclay kitchen sink comprises a large single bowl in high-gloss finish with classic curved bow front. It weighs 45kg and measures 595mm by 530mm by 220mm and must be fitted in a bespoke cabinet with reinforced top.

An elegant alternative to the timeless classic Belfast sink, it comes complete with central 31/2" waste outlet to accommodate basket strainer or waste disposer, and round overflow at the back of the sink.

All sinks from the Shaws Classic Collection are available in white and biscuit finishes and the basket strainers come complete with ceramic indices with the Shaws logo to complete the look.

Contact: Shires stockists nationwide. Tel: 01 - 404 7600 for details; [www.shawsofdarwen.com](http://www.shawsofdarwen.com)

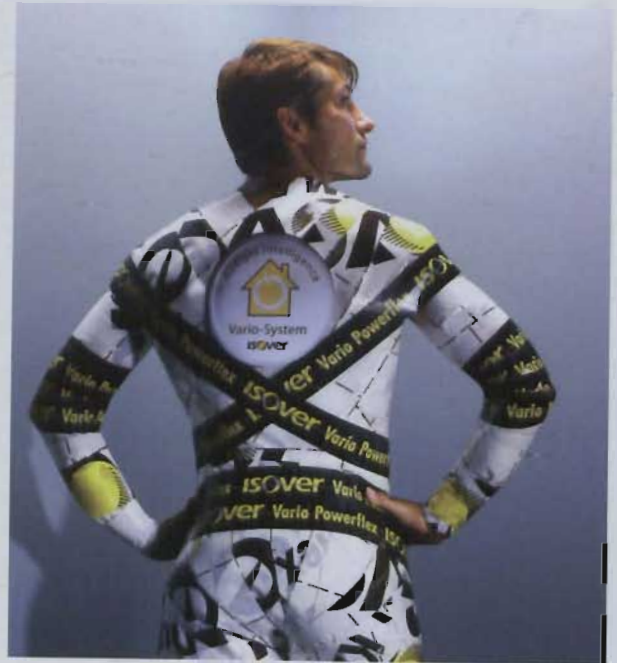
### part L requirements & air tightness

Vario from Isover is an airtightness and moisture management system specially designed to comply with, and even exceed, Part L requirements in respect of airtightness in buildings. It is said to have excellent variable Sd value, diffusing 25 times more moisture in summer than a structure absorbs in winter.

The Vario system integrates membrane, tapes and sealant. It is claimed to be exceptionally strong, its tensile strength being three times stronger than polythene. It is resistant to tearing which ensures that damage during installation is minimised and full value is obtained from each roll.

In addition, it is easy to cut and install due to markings printed on the membrane. Its UV protection is a major benefit during construction where a structure may be exposed to sunlight. It has been storm-tested up to 150km and allows timber dampened by rainfall during construction to dry out faster.

A demonstration DVD is available from Moy Isovar.  
Contact: Tel: 052 - 66100.



[www.kingspansolar.ie](http://www.kingspansolar.ie)

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# CIBSE News

## Irish Lighters Inaugural Competition



CIBSE Chairman Gerard Keating presenting €2000 to Kevin Kelly on behalf of CIBSE, Republic of Ireland Region, the organisation of the Irish Lighter 2009 Competition.

Details have now been formalised for the Irish Lighter competition which will take place in Dublin next April. It will be an all-Ireland competition and is open to any designer in Ireland producing a design in Ireland.

Submission date for abstracts — to comprise a 200/300 word narrative outlining project or research — is 31 December

2008. Best abstracts will then be peer reviewed and a shortlist of entrants invited to submit a full paper/presentation by 31 March 2009. The announcement of winners will take place on 30 April 2009 in DIT Kevin St.

Industry experts will sit on the review panel and the final judging panel. Criteria for judging will include:—

- Originality/innovation;
- Visual enhancement of environment;
- Engineering design
- Environmental impact/sustainability;
- Quality of paper/presentation.

This initiative is being jointly sponsored by CIBSE Republic of Ireland Region and *bs news*. However, an overall sponsor is also being sought. Companies interested should contact Kevin



SLL Council members present at CIBSE/SLL Headquarters in Balham, London when details of the new Lighter Competition were announced. They are Jim Patton, SLL Northern Ireland; Stephen Lisk, SLL President elect; Liz Peck, SLL Secretary; Patrick Baldrey, President SLL; and Kevin Kelly, Irish Lighters Co-ordinator.

Kelly, Irish Lighters Co-ordinator, direct.

Contact — email: [kevin.kelly@dit.ie](mailto:kevin.kelly@dit.ie)

## Commercial Buildings Energy Ratings



CIBSE Chairman Gerard Keating with Niall Coughlan

"Commercial Building Energy Ratings & the SBEM Calculation Method" was the title of an excellent lecture delivered by Niall Coughlan of Homan O'Brien at DIT Bolton St in the last week of September. Niall is a registered BREEAM assessor and was also among the first professionals in Ireland to become a Building Energy Rating assessor.

He is currently awaiting confirmation on his status as an

interim non-residential BER assessor, having recently sat the first official examination for BER assessors hosted by the Building Research Establishment.

His presentation covered the implementation of the BER procedures for different building types with the primary focus on the non-residential sector and the related legislation introduced in July of this year.

## Air Conditioning Inspection Courses

Carbon reduction through assessment of complex air conditioning systems is the theme of a forthcoming CIBSE seminar which will take place at the Engineers Club, Clyde Road, Ballsbridge, Dublin 4 on 19 November next.

The event will commence with a general introduction and then focus on key issues such as:—

- Scope of the inspection required by the EPD Regulations;
- Factors affecting air conditioning system efficiency;
- Provision of advice;
- Preparation for the inspection;
- Energy consumption

metering;

- Extent of the inspection;
- Guidance on good practice inspection and maintenance;
- Appropriate forms of inspection procedure.

Further information on the course content, along with a course booking form, is available from CIBSE.

Contact: [jrussell@cibse.org](mailto:jrussell@cibse.org)



# go!

## SmartAct

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**Auxiliary switch kit (optional)**

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**Mounting in any direction**

- For easy, cost-effective installation

**Function switch**

- Changes rotation direction
- Selects control mode
- Service/off position ensures fast and easy service

**Declutch button**

- Easy manual adjustment
- Simplifies installation

**Mechanical limits**

- Single-hand positioning for desired rotation angle

**Position Indicator (with auxiliary switch kit)**

- Clearly shows actual stroke angle

# Plan Expo 2008

This year's Plan Expo — RDS Simminscourt, 4 to 6 November 2008 — will feature a significant number of exhibitors representing building services, especially in the sustainable and renewables sectors.

The product mix will cover everything from heating systems through to solar panels and ventilation systems, along with a dedicated Voltimum Centre. Brief details of what visitors can expect, along with stand numbers, are as follows:—

## Unitherm Heating Systems



Unitherm Heating Systems is now recognised as one of the leading companies in Ireland providing integrated total heating system solutions. This includes many high-efficient and innovative renewable heat sources such as solar panel, geothermal heat pumps, Mitsubishi Electric air to water heat pumps, Alpha condensing gas boilers, Alpha gas saver and district heating substations, as well as full design and supply of underfloor heating systems. Unitherm's engineers offer full technical support and have the expertise to interact with all installers.

## Pulsar direct

Pulsar Direct has revolutionised the mechanical engineering market with its approach of supplying the trade with a comprehensive range of quality plumbing products. Pulsar Direct are the leading support for all renewable energy requirements, from solar through to geothermal, heat recovery, ventilation and biomass.



## EcoEnergy

M22

Underfloor heating, geothermal heat pump systems, solar panels, wood pellet/chip boilers, heat recovery ventilation, new absorber panels, a world first in energy bornassing.

## Kingspan Insulation

Kingspan Insulation is the European market leader in supplying rigid insulation to future-proof homes, offices or factories, and to achieve or exceed Building Regulations requirements.

N14



## Lindab (Irl)

T14

Lindab through Vent-Axia, the leaders in energy saving ventilation, will be unveiling a number of new energy efficient products and solutions. Vent-Axia low-carbon DC products can reduce power consumption by up to 90% and reduce carbon footprint by up to 1974kg per annum.



## Polytherm

D7



Sharing a stand with its parent company Hevac, who have been supplying heating products for nearly 40 years, Polytherm is Ireland's leading supplier of underfloor heating solutions. On display will be the Lampoassa V9 geothermal heatpump, just

one of the extensive range manufactured in Finland to suit almost every home; the Heatking airsource heatpump, used for homes and apartments where geothermal is not viable; Nature solar panels which can provide up to 40% of hot water requirements; Polycomfort, the complete underfloor heating solution; and Heatrack, the "dry" underfloor heating system suitable for joisted floors and retro-fit.

## Voltimum Centre

L12

The Voltimum Centre at Plan Expo will showcase its leading manufacturers and regulatory bodies, bringing to light the importance of the electrical industry in construction. Participating on the stand will be ABB, Legrand, MK, Nexans, OSRAM, Philips, Prysmian and Schneider Electric.

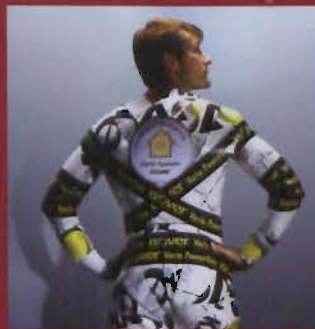
Voltimum Centre exhibitors will also present a series of invaluable seminars which will take place at the Information Exchange, giving attendees the opportunity to learn more about the latest hot topics relevant to the Irish electrical industry.



## Moy Isover

NI6A

Moy Isover, the Irish arm of Saint Gobain and the leading brand for fire safe thermal and acoustic insulation solutions, will introduce new thermal and air-tightness solutions for compliance with the new Part L Building Regulations. On display will be a wide range of thermal/acoustic/fire solutions for home owners, builders and specifiers to conserve energy and to reduce heating costs for new buildings and older buildings. Technical representatives will be on hand to explain the benefits of these innovative solutions and to give advice as to how to overcome typical on-site issues, as well as issues around the new Building Regulations.



## Glen Dimplex

A15

Dimplex has been developing and manufacturing innovative heat pumps for over 30 years and is recognised within construction as a producer products of the highest specification and quality. While renewable technology is relatively new to Ireland, for Dimplex it is business as usual. The Glen Dimplex renewable range includes heat pumps, solar thermal and Xpelair heat recovery and ventilation.

## Eurotech Underfloor Heating

Eurotech provides one of the leading heat management and control systems available on the market. The system will reduce running costs by as much as 50%. Visitors are invited to visit the stand to see a live simulation of the system.

T1



## Waste Refrigerant Recovery & Disposal Frequently Asked Questions



Seamus Kerr, Chairman, Refrigeration Skillnet

### Can anyone collect or transport waste, returned or recovered ODS and F-Gas refrigerants in Ireland?

No. The collection and transport of waste, returned or recovered refrigerants (ODS and F-Gas refrigerants) is controlled, to ensure environmental protection and compliance with waste law.

### Who is allowed to collect or transport waste, returned or recovered ODS and F-Gas refrigerants in Ireland?

The collection and transport of waste, returned or recovered refrigerants can only be carried out by a person that meets either one of the following requirements:-

- Holds a valid Waste Collection Permit for the geographical area(s) in which collections are taking place and for the relevant waste types;
- Has made a Prior Annual Notification to the Environmental Protection Agency, and where that

Prior Annual Notification has been accepted by the Agency.

In either case, waste, returned or recovered refrigerant gases must be brought to an authorised facility, i.e. a facility that has either a license from the Environmental Protection Agency (EPA), or a Waste Facility Permit or Certificate of Registration from the relevant local authority. Some of the refrigeration wholesalers will be registering for a license from the EPA.

### Which option is appropriate for RAC contractors?

It is expected that in most cases only waste collection companies and/or refrigerant wholesalers will fulfill the first requirement above. RAC contractors are far more likely to avail of the second option which became available to them as of 1 June 2008, with the coming into force of the Waste Management (Collection Permit) Regulation 2007 (SI No: 820 of 2007).

The new regulation provides an exemption from the requirement to hold a waste collection permit in the case of the collection and



transport of waste, returned or recovered refrigerant gases in refrigerant containers by persons that fulfill certain conditions.

These are:—

- such transport is incidental to the main business activity of the person concerned;
- the person concerned is operating on a small scale and is engaged in environmentally-beneficial operations facilitating the recycling, reclamation or destruction of recovered refrigerant gases in accordance with the relevant legislative requirements for the specific refrigerant gas type (this includes the use of certified personnel to recover the refrigerant);
- the quantity of waste, returned or recovered refrigerant gas transported in refrigerant containers by the person concerned is equal to, or less than, two tonnes;
- the person has given prior annual notification to the Agency (EPA) and has received an acknowledgement of this notification from the Agency;
- the handling and transport of the refrigerant gases is carried out in a manner that will prevent the venting or leakage of these gases to the atmosphere;
- no mixing of different refrigerant gas types occurs;
- the transport of the waste, returned or recovered refrigerant gases in refrigerant containers is to an

# Refrigeration Skillnet News

et al.: BS News



- authorised storage facility; the waste, returned or recovered refrigerant gases will eventually be recycled, reclaimed or destroyed at an authorised facility in accordance with the relevant legislative requirements for the specific refrigerant gas type.

## How do I submit a Prior Annual Notification to the EPA?

You can download the appropriate form, together with guidance notes on the legislation, by visiting the EPA website at [www.ozone.ie](http://www.ozone.ie) or by calling Tel: 053 - 91 60600. There is no fee for making a Prior Annual Notification.

Completed Prior Annual Notification forms should be returned via email to [PAN@epa.ie](mailto:PAN@epa.ie) or by post to the Resource Use Unit, Environmental Protection Agency, PO Box: 3000, Johnstown Castle Estate, Wexford.

A register of those Prior Annual Notifications that have been accepted by the Environmental Protection Agency will be maintained and made publicly available on [www.epa.ie](http://www.epa.ie)

## Do RAC contractors have to make a Prior Annual Notification to the EPA under the new Waste Collection Regulations?

RAC contractors that want to collect waste, returned or recovered refrigerants from site themselves must make a Prior Annual Notification in order to gain exemption from the requirement to hold a Waste Collection Permit. They can, however, choose instead to use the services of a company with the appropriate permits in place to make all collections on their behalf.

## Who is responsible for enforcement?

The Environmental Protection Agency has made it clear that it will be actively enforcing the regulations.

## Website References

Environmental Protection Agency. [www.epa.ie](http://www.epa.ie);

Department of Environment, Heritage & Local Government. [www.environ.ie](http://www.environ.ie);

Institute of Refrigeration Ireland. [www.instituteofrefrigerationireland.ie](http://www.instituteofrefrigerationireland.ie)



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# HEAT RECOVERY VENT

The complete range of MTD heat and energy recovery units are registered on Appendix Q for SAP and DEAP Building Energy Rating calculations.

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- Twin energy efficient brushless DC-EC fan motors
- Low energy consumption
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- Complies with new Part F regulations
- Essential in achieving a high energy rating on a dwelling
- Greatly improves indoor air quality

MTD work extensively through out Ireland and the UK with a dealer network covering sales, installation and maintenance.



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Ireland.

# VENTILATION

## Indoor Air Quality

Indoor Air Quality is important for health and general wellbeing, after all, we spend 70% of our time between 4 walls

## Air Distribution System

The air distribution system within your dwelling is probably one of the most important components in regard to your personal health and well being, apart from the structural damage that can be caused to a dwelling.



**solutions.com**

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Email: info@mtd-solutions.com



## Introducing the NEW:

The new compact

# Central Energy Unit (CEU)

from MTD Solutions combines all complex building services such as heating, ventilation and hot water generation all in one unit. It is based on a brine/water heat pump combined with the MTD Comfofond L and an MTD ERV heat recovery ventilation system. In addition to heating, ventilation and hot water generation, the MTD CEU can also cool the building. The optimally-matched, high-quality, components ensure efficient provision of all building services and problem free operation with little maintenance.



## Commercial Boilers

# Hevac — Formidable Armoury of Solutions

When it comes to commercial heating products, Hevac offers specifiers and installers a formidable armoury of solutions, irrespective of the application, fuel or specific requirement they may need. The composition of the product portfolio has been carefully structured to ensure that all needs can be satisfied with high-quality, brand-leading products from some of the worlds' foremost manufactures.

Package boiler houses, complete district heating systems, cast iron or steel boilers, burners, air heaters, water heaters, pumps,

boosters, radiators, gas detection, heat metering and billing, flue supply and flue installation are just a selection from the product portfolio of the Commercial & Industrial Division.

Capacities range from 45kW upwards and fuel types catered for include dual-fuel, natural gas, LPG, light and heavy oil, biomass and biofuel. Perhaps more than any other division within Hevac, the role of the Commercial Division is very much on a consultative basis with the customer base. Principally, this comprises consulting engineers, specifiers, architects and

mechanical contractors. Hevac offers technical assistance with the sizing of pumps, boiler

selection, distribution pipework selection, flue sizing installation, system expansion tanks and



# A single

Europe's largest comprehensive range of Condensing Boilers



Sirius FS



Sirius WH



Eurocondense two



Paramount two WH



## Hevac — Formidable Armoury of Solutions

also the controls associated with the whole installation.

The nature of the commercial and industrial sector demands close liaison between Hevac and the client so that equipment, fuel, location and costs can be best selected to suit the particular application and meet the specific demands of the project and the client. In addition to specification consultation at an early stage in the project, Hevac offers ongoing assistance throughout all the necessary stages, right from product

identification and selection through to installation and final commission.

Among the major brands represented within the portfolio are:—

**Herz Biomass Boilers** — Hevac's approach to biomass heating solutions combines Herz experience with practical biomass knowledge. 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;

**Hamworthy** — Hamworthy is BS EN ISO9001 accredited and supplies European CE Certified boilers, offering a wide range of modular systems. Hamworthy also manufactures high efficiency condensing and pre-mix modular boilers in a variety of configurations;

**Chappee** — Chappee's portfolio includes sectional cast iron, steel commercial and industrial boilers, along with a comprehensive designer range of modern and traditional cast iron radiators. Chappee also offers condensing technology

in its newest range of wall-hung gas boilers with outputs ranging from 45kW to 110 kW;

**Sime** — The Sime product range includes sectional boilers with outputs ranging from 20 kW to 270kW for use in association with pressure jet oil burners or blown gas burners firing on natural gas or LPG. Also available is a comprehensive range of cast iron atmospheric gas boilers with outputs ranging from 22kW to 279kW.

Contact: Karl Carrick, Hevac.  
Tel: 01 - 419 1919;  
email: kcarrick@hevac.ie

# solution

& Water Heaters. Two brand leaders under one roof.



MAXXflo



ECOflo



R300

## 'more efficient & cleaner with potterton & andrews'

Potterton Myson (Ireland) has strengthened its resolve to lead the field in energy efficiency and environmental awareness with the addition of innovative new products under the Potterton Commercial and Andrews Water Heaters brands.

The Potterton Commercial portfolio now comprises a wide range of condensing systems to meet the specific needs of today's marketplace. The choice of wall hung and floor standing models conform to, and exceed, all existing and anticipated industry regulations, and have been fully field-tested and proven before their general release.

Wall hung models include the Paramount Two (30kW to 115kW) and the Sirius WH (50kW to 110kW); the floor standing models include the Eurocondense Two (90kW to 500kW) and the Sirius FS (90kW to 160kW).

Other products in the Potterton Commercial range include prefabricated condensing modular boiler systems; atmospheric gas boilers;

pressure jet boilers; flue heat recovery units; and hot water calorifiers.

Andrews Water Heaters has also turned to condensing technology to further improve the performance of its extensive range of market-leading water heaters. For continuous production of hot water in domestic, commercial and industrial applications, Andrews has the perfect solution. All models conform to the various applicable regulatory standards and also carry the CE Mark.

Among the latest introductions to the portfolio is the award-winning MAXXflo Legionella-resistant storage water heater range. These stainless steel, high-efficiency condensing storage water heaters are available in tank options of 100lts capacity with an output of 30kW; and 200lts and 300lts capacities, each with four output sizes from 30kW to 120 kW.

An anti-legionella function is built-in to the design of MAXXflo to ensure it meets the highest specification in this respect, particularly as direct-fired storage

water heaters are increasingly incorporated into DHW systems in applications ranging from education, sport and leisure through to hospitals. The design and operating principle of MAXXflo, using closely controlled water temperature and carefully-regulated water flow, affords protection against the colonisation of legionella bacteria within the unit.

Temperature can be increased for legionella control over a set period. A sensor on the system return, for which a kit is available, will ensure the set temperature, less 5°C, is present for a minimum of 20 minutes (adjustable) to ensure system pipework is cleansed. The unit will then return back to its normal operating set point.

MAXXflo is designed to provide a further option in today's energy efficient market and was developed in line with the demands of the new Building Regulations.

Other recent additions to the overall portfolio:—  
— The Standard Hi-Flo range;  
— ECOflo condensing water storage heaters;



Among the latest introductions to the Andrew's portfolio is the award-winning MAXXflo Legionella-resistant storage water heater range available from Potterton Myson (Ireland).

- FASTflo continuous flow, wall hung, balanced flue, water heaters;
- SOLARflo glazed flat plate aluminium tray solar collectors.

Making up the remainder of the extensive portfolio are balanced flue water heaters; a fan flue range; Supa Flo water heaters; and an oil fired range.

Contact: Potterton Myson (Ireland).  
Tel: 01 - 459 0870;  
email: post@potterton-myson.ie

## Alpha CD50S & CD70S



Specifically designed for larger output requirements, the CD50S is suitable for central heating loads of between 10kW and 53.8kW and the CD70S for central heating loads of between 18.1kW and 72.8kW. Both are capable of being installed as a single unit or in simple modular formations for even bigger outputs.

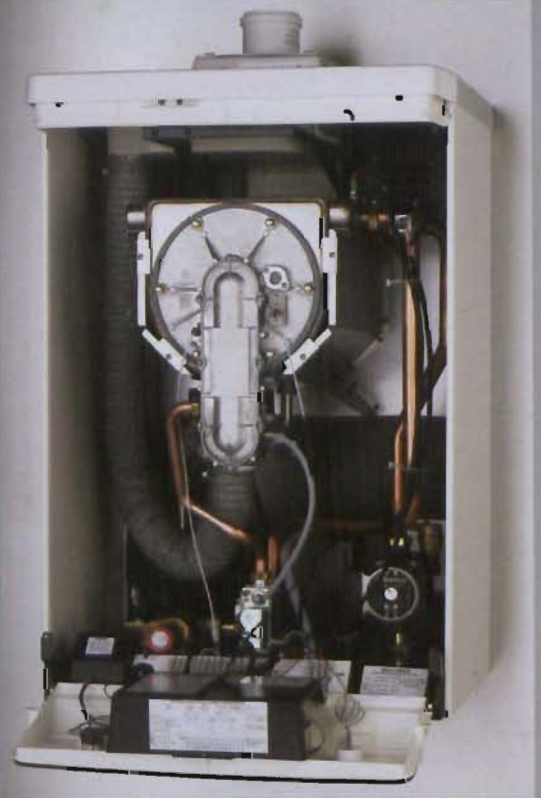
## Alpha Telescopic Flue Terminal



## Alpha Standard Features Overview

- 3 year guarantee;
- Seasonality valve;
- Designed in filling loop;
- Stainless steel heat exchanger;
- Automatic bypass;
- Anticycling device;
- Fully modulating low NOx burner;
- Daily pump kick;
- Frost thermostat;
- Available in both LPG & natural gas.

## Easy Accessible Parts





## Commercial Boilers

# 'alpha keeps carbon emissions & energy consumption to a minimum'



Among the latest introductions from Alpha are the CD50S wall-mounted, SEDBUK Band A rated condensing, fan-assisted, system boiler.

Alpha has been successfully supplying the heating industry for 40 years, during which time it has gained a reputation for developing innovative, high-performing, boilers which are manufactured to exacting quality-control standards. The benefits of the extensive Alpha range are now available from Alpha Therm Ireland who, since being appointed distributor for Ireland a few years ago, have captured a significant market share.

"With global warming and rising energy prices among today's most pressing issues", says Declan Kissane of Alpha Therm Ireland, "Alpha has developed a wide range of products which keep energy consumption, carbon emissions and energy

costs to an absolute minimum. This has been achieved by applying innovative thinking and new and existing technologies to meet the challenge presented".

Among the latest introductions from Alpha are the CD50S and 70S wall-mounted, SEDBUK Band A rated condensing, fan-assisted, system boilers. They provide heating-only for sealed central heating systems, or open systems, if required.

Specifically designed for larger output requirements, the CD50S is suitable for central heating loads of between 10kW and 53.8kW, and the CD70S for central heating loads of between 18.1kW and 72.8kW. Both models come with a three-year Alpha "no quibble" guarantee.

While these boilers are supplied with type B23 flue configuration (open chamber and forced draught) to allow for flexible siting, the configuration can be changed to type C (room sealed) with the use of a special flue adaptor kit.

Both can be supplied for use with natural gas or LPG and are capable of

being installed as a single unit or in simple modular formations for even bigger outputs.

Key features and benefits are as follows:—

- Three-year guarantee;
- Suitable for single-unit or cascade installations;
- High-grade stainless-steel heat exchanger;
- Fully modulating low NOx burner;
- Pre-wired, two-metre, flying mains lead;
- Open or concentric

push-fit flue systems:

- Built-in plume management;
- Easy access for servicing;
- Built-in commissioning and fault finding.

Contact: Declan Kissane, Alpha Therm Ireland (Dublin Office).

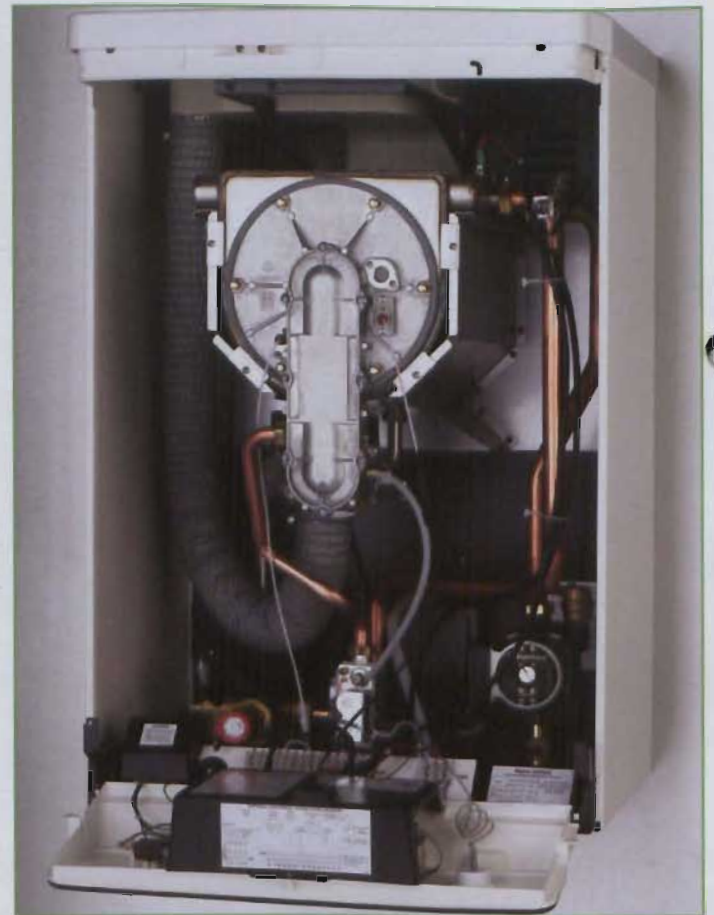
Tel: 01 - 610 9275;

Peter Lynskey, Alpha Therm Ireland (Galway Office).

Tel: 091 - 380 038;

email: info@uni-therm.net

web: www.alpha-boilers.com



Cut-away showing the key components and full product specification of the new Alpha units now available from Alpha Therm Ireland.

# Hevac

Muirfield Drive, Naas Road, Dublin 12.

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et al.: BS News

Furry Park Industrial Estate, Old Airport Road, Dublin 9.

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South Ring West Business Park, Cork.

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## Your *Partner* for Wood Pellet Systems

# Heiz



**pelletstar**  
BIOCONTROL

# Hevac Group Strengthens Sustainable Portfolio

With the growing emphasis on sustainability, especially in the heating sector, Hevac Group has strengthened its product portfolio with the addition of a new range of appliances from Herz Feuerungstechnik, the world-renowned Austrian manufacturer.

Herz was founded in 1869 and, over the years, has established a reputation as one of the key suppliers of heating products in Europe. Herz Feuerungstechnik — its dedicated boiler division — was established in 1983 and is now regarded as a leading specialist in biomass heating. Its main focus is on the development and manufacture of modern, cost-effective and environment-friendly heating systems. They are designed to provide the highest comfort levels as well as being user-friendly and energy efficient.

The Herz portfolio is extensive but Hevac has selected a number of key ranges to meet the specific requirements of the Irish marketplace. Brief details of these are as follows:—

## Herz BioMatic

This innovative compact system is suitable for wood chip or pellets and is intended for local heating and district heating network applications. It is one of the most compact biomass systems on the market and, in most cases, can be brought in to an existing oil or gas plant room.



Thanks to the lambda probe — which continuously monitors the exhaust values and reacts to different fuel qualities — perfect combustion is always possible. This means low fuel consumption and the lowest possible emission values, even when fuel quality varies.

The surfaces of the standing pipe heat exchanger are automatically cleaned during boiler operation while ash and klinker build up on the combustion grate is removed by vibrating plate. The ash this generates in the base of the combustion chamber and the heat exchanger modules is automatically conveyed to external ash boxes via independent augers.

Control is via the BioControl 3000 unit which incorporates a simple screen design and user-friendly menu. It is fixed within the boiler frame, thereby reducing installation costs, and includes integrated hot water supply, frost protection monitoring and holiday operation.

## Herz Log-Fired Systems

The next generation of wood burning boilers, the Herz Firestar wood gasification boiler, innovative technology for the most natural fuel. The Firestar is supplied with out-puts ranging from 14.3 kW to 30 kW with the revolutionary double vortex combustion chamber ensuring a constant high level of efficiency, low ash accumulation and guaranteed durability from the highly heat-resistant fireproof concrete combustion chamber. All Firestar gasification boilers are supplied as standard with a built in Lambda probe, which constantly monitors the flue gas values and responds to the most diverse qualities of fuel, perfect combustion values



and the lowest emissions are always achieved.

## Herz Wood Pellet Systems

Pelletstar Biocontrol performs with the highest efficiency providing optimal heat from minimal size. It has a low footprint and incorporates a central control unit for heating; hot water; return flow temperature; fuel buffer storage control; and solar system control.

## Herz Wood Chip Systems

Herz Firematic wood chip boilers are available from Hevac with heat outputs suitable for both the domestic and commercial markets. Boilers are available ranging from 7.3kW to 34.4kW for wood chip only applications and from 9kW to 150kW for wood chip and pellet applications. The Firematic unit incorporates burn back safety devices; split 2-zone combustion chamber; automatic exhaust and combustion monitoring; ash discharge screw for combustion and fly ash; variable speed-induced draught fan with combustion chamber under pressure control; automatic ignition using hot air blowers; and tipping mechanism for complete cleaning of the combustion grate.

Contact: Karl Carrick or Paul Devereux, Hevac.  
Tel: 01 - 419 1919;  
email: [kcarrick@hevac.ie](mailto:kcarrick@hevac.ie)  
or [pdevereux@hevac.ie](mailto:pdevereux@hevac.ie)

# 'Pulsar direct – More Technology, Choice & Innovation'

**P**ulsar direct, a member of Grafton Group plc, is one of the largest suppliers of plumbing materials to the mechanical and plumbing trade in Ireland. Its product portfolio comprises world-renowned, market-leading brands which are delivered direct to site in any location throughout Ireland. Quality products from brand-leading names, coupled with quality service, lie at the core of the Pulsar direct philosophy.

Pulsar's extensive product range caters for all types of systems and applications. Among the market-leading brands included are Wolf solar systems; Wolf boilers; Wolf heat recovery units; Rinnai instantaneous water heaters; Avenir heat pumps; Vaillant gas boilers; Dab rainwater harvesting; Laing Eco-Circ pumps; Lapesa Tanks; and Mira Showers.

To capitalise on its success to date, and as part of its strategic growth plan, Pulsar has formed a new Commercial Division. Paul O'Connell, Pulsar General Manager, says: "In conjunction with our suppliers, many of whom

are world leaders in their field, we are now in a position to provide solutions for those who work within the specification industry."

Pulsar's Commercial Division is headed up by Eamon Bradshaw, Commercial Manager, and Neil Gaffney, Regional Commercial Manager. Both Eamon and Neil bring extensive knowledge of the plumbing industry to their roles with over 30 years experience between them. "Our intention", says O'Connell, "is to provide the specification sector with the benefit of our accumulated knowledge to help meet all customers' needs in the most efficient and environment-friendly way. Part of this strategy is to develop closer relationships with contractors and installers, spending time on site to ensure the products provided are tailored towards the people using them."

Eamon Bradshaw adds: "The design and specification of systems for high-spec projects can be quite complicated and traditionally you would have to go to various suppliers to put an entire system together. Pulsar direct has been a leading supplier of high-spec systems for many years and has gained considerable experience in designing and supplying complete systems".

Both Eamon and Neil liaise where appropriate with the architect, engineer, builder or electrician at all stages of a project. The Commercial Team also includes a specialised technical sales force which has the ability to deal with all types of renewable energy. They are experts in the design and installation of underfloor heating, solar systems, showering systems, pressurisation units, infra red systems, concealed sanitary ware and all other aspects of the Pulsar product range.

Customer service and satisfaction is very important and, to that end, Pulsar has a team of 14 sales representatives strategically located throughout the country who are managed by a National Sales Manager and two Regional Sales Managers. There is also a dedicated Telesales Team who can be contacted at Tel: 1850 315 315 (Monday to Thursday, 8.30am – 6pm and Friday, 8.30am to 5pm). Additionally, Pulsar's Technical Support Team is always on standby to deal with queries and provide site assistance or installation information.

Pulsar has grown considerably over the last 15 years with year-on-year turnover showing a marked improvement. "Despite this success", concludes O'Connell, "we are reluctant to rest on our laurels. Instead, we aim to set the standards that others follow ... at Pulsar direct we deliver."

Contact: Eamon Bradshaw, Commercial Sales Manager. Tel: 087 - 121 9084; Neil Gaffney, Regional Sales Manager. Tel: 087 - 942 6522.



Neil Gaffney, Regional Commercial Manager, Pulsar direct



Eamon Bradshaw, Commercial Manager, Pulsar direct

# face to face

JOHN HARDY



If renewable energy is embraced by Ireland, the sector could become one of the country's largest indigenous employers", so says John Hardy, Secretary of the Sustainable Energy Association (SEA), a newly-established trade association representing the renewable energy industry throughout all of Ireland.

Primarily set up to give a voice to the industry, the SEA provides a channel of communication with Government, policy makers and the public. It also believes that the island of Ireland has the potential to be self-sufficient in energy and to become world leaders in green business.



"The renewable energy industry has grown significantly in the past 10 years, yet until now there has been no single body to represent the views of this important industry sector", says John. "By providing a voice for those engaged in renewables, we can promote the use of cheaper, cleaner energy for the benefit of all homeowners and businesses in Ireland, and highlight the expertise and skill of our members."

Key issues currently being focussed on with a view to influencing Government policy and public opinion are:—

- Grant support for installing renewable energy systems;
- Building regulations and planning controls on renewables;
- Government targets for emissions reductions;
- The all-island electricity market.



The overall aims of the SEA are:—

- To support the "Code for Sustainable Homes" which exists in England and to campaign to have it extended throughout the whole of the UK and Ireland, and to accelerate the implementation dates of this in Ireland.
- To represent the small-scale renewables energy industry in Ireland on issues affecting the electricity grid, planning regulations north and south, industry training, standards and fuel poverty;
- To enhance the role of energy assessors in the process of the sale of houses and in the measurement of value-for-money in energy efficiency and renewable energy grants;
- To represent the industry with government departments, political parties, Action Renewables and Sustainable Energy Ireland, and in the planning of the all-island energy market;
- To ensure the highest quality of customer service and quality standards within the industry.

The Association is currently campaigning in Northern Ireland to see that homeowners who progress to the second stage of installing renewables are rewarded. It also wants a government initiative which would tie in with the new

# face to face

et al. BS News

JOHN HARDY

*"The renewable energy industry has grown significantly in the past 10 years, yet until now there has been no single body to represent the views of this important industry sector", says John. "By providing a voice for those engaged in renewables, we can promote the use of cheaper, cleaner energy for the benefit of all homeowners and businesses in Ireland, and highlight the expertise and skill of our members."*



energy performance certificates introduced on 1 July last so that rates reflect the rating given by the Energy Performance Assessor and, as improvements are made, homeowners can avail of rate-relief benefits. It also believes that such an initiative should be tied into the Code for Sustainable Homes (a new standard for sustainable design and construction of new homes) and Building Regulations in order to achieve the target of zero-carbon homes in all new-builds by 2016.

Since its successful launch last February at Parliament Buildings, Stormont in Belfast, the SEA has experienced a 30% increase in membership. Over 100 people representing companies that employ approximately 1,430 people in the renewable energy sector across Ireland were in attendance for the launch and an even bigger turnout was expected for the Dublin launch which was about to take place as we went to press. This had the full support of the Minister for Communications, Energy and Natural Resources, Eamon Ryan TD, and was also formally supported by SEI. *bs news* will have a full report in the November issue.

"It is encouraging to see the level of support we have received so far from local companies working within the renewable energy industry", says Hardy, "and the intention now is to continue to drive awareness of our industry through other construction-related professions such as architects, builders, developers and estate agents. This will help them learn about the economic benefits of using renewable technologies and ultimately help to reduce Ireland's carbon emissions.

"We believe that the island of Ireland has the potential to be self-sufficient in energy and to become a world leader in green business. We welcome the recent report by the Commission for Energy Regulation which announced that with the enhanced grid connection, and modification, it would be possible to have 42% of Ireland's electricity supply from renewable energy.

"We also welcome the proposal by The Construction Industry Federation (CIF) to grant-aid the retrofitting of an estimated 900,000 houses to make them more energy efficient. Energy efficiency should always be everyone's first step and renewables form the second vital stage in the equation as zero-carbon standards cannot be achieved without renewable technology. We are really keen to see legislation which embeds this concept right from the outset.

"Ultimately, the SEA is committed to making Ireland sustainable and our members have the expertise to make this a reality. We want to use this opportunity to put in place a solid vision for the future of renewable energy in our lives. This objective is all the more critical given the looming threat of huge EU fines for countries that are in breach of their Kyoto limits for excessive CO<sub>2</sub> emissions. We now call on the Irish government to respond to the proactive initiatives of other EU member states, and show a real commitment to the role renewable energy can play in Ireland's future."

*John Hardy can be contacted at email:  
john.hardy@sustainable-nrg.org.*



Paul O'Sullivan  
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# designing BUILDING SERVICES

## food production hoods: air filtration & heat recovery solutions

Commercial catering facilities can be energy-intensive departments for any business/facility. They are extremely demanding on indoor climate systems with large variations on temperature and humidity requirements throughout the various different cooking and preparation processes. For the HVAC engineer they can present complex design challenges.

This article looks at the potential heat recovery benefits associated with ventilation cooking canopies/hoods as a result of the increasing use of UV filtration and subsequently, cleaner exhaust air streams. It concentrates specifically on the cooking ventilation hood, this being the central artery of a total kitchen ventilation system.

In exploring the possible benefits associated with heat recovery solutions for kitchen ventilations hoods and how this may be feasible due to improvements in efficiencies of grease filtration, designers should first consider the different types of grease extraction filtration.

### Mechanical Grease Extraction Filters

Traditionally, grease extraction has been by the use of

mechanical grease filters such as the baffle and multi-cyclone types highlighted in **Figure 1**. These have generally been able to extract up to a maximum of 85% of airborne grease in the form of both particulate and vapour.



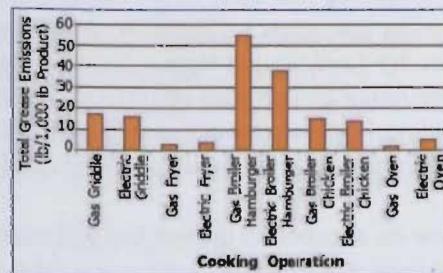
**Figure 1** shows the baffle and multi-cyclone type mechanical grease filters

ASHRAE completed a study of the different mechanical grease extraction filters and their ability to eliminate grease in the exhaust airflow [The Facts, Mechanical Grease, June 2003]. It found that the type of cooking process and cooking appliance utilised is important as the content ratio of particulate/vapour will have an impact on the max efficiency of grease extraction from the multi-cyclone and baffle type filters.

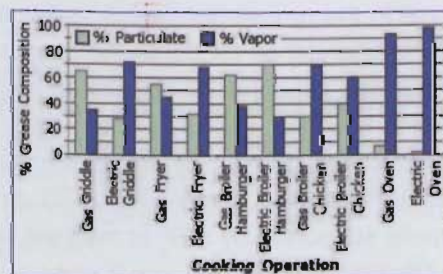
It is important to note that none of the mechanical filters tested by ASHRAE captured grease at a particle size less than 2.5  $\mu$ m.

**Figures 2 and 3** highlight the

differences in exhaust emissions at different cooking processes. It is important for the HVAC engineer to understand the cooking configuration when selecting a suitable ventilation canopy design. Reference to HVCA DW172 will highlight the different selection procedures.



**Figure 2** (above) and **Figure 3** (below) highlight the differences in exhaust emissions at different cooking processes



- ASHRAE also found that: —
- Cyclonic filters are far more efficient than baffle types at grease extraction;
  - Higher airflow results in higher pressure drop, meaning more entrainment of grease particulates. Efficiencies improved with increasing air volumes;

# food production hoods: air filtration & heat recovery solutions

- Total filter efficiency, even for the best grease extractors, does not reach 90% because mechanical filters cannot trap vapor effluents.

Even at this high level of filtration there can still be problems associated with grease build in exhaust systems, namely increased maintenance costs and fire safety issues. In an attempt to alleviate these issues further improvements in filtration have been developed, most notably UV filtration.

## UV grease filtration

The introduction of integrated ultra violet light to deal with the remaining small particles and vapour grease has become a common theme in recent years. The result of their introduction has undoubtedly increased both the capital and operational cost of commercial cooking canopies, (UV lamp life is approx 8,000hrs) but they have facilitated improvements in both fire safety, fire-rated ductwork requirements, and net energy consumption for kitchen ventilation systems in general.

While UV filtration in general is not a new science and has been widely used in other filtration applications, this recent ventilation filtration concept uses special UV lamps for the treatment of organic compounds, principally grease-laden and odorous extract air, by the processes of photolysis and ozonolysis.

There are two primary chemical reactions that take place in the UV oxidation process. The UV

lights emit radiation in the UV-C band, the shortest of the three bands (UV-A, UV-B & UV-C) and also create ozone in the vicinity immediately surrounding the lamps. The chemical process taking place when UV-C light directly hits molecular chains and breaks them into smaller compounds is called photolysis.

The photolysis reaction is most effective on small grease particles (especially vapor) since the light can only break the chemical bonds on the outer surface of the grease particle if it is large and has a double bond structure.

The second chemical process that takes place is when the ozone, created from the interaction of the UV light with the oxygen molecules in the air, continues to react with the grease molecules as they move through the exhaust ducts to the outside. This process is called ozonolysis.

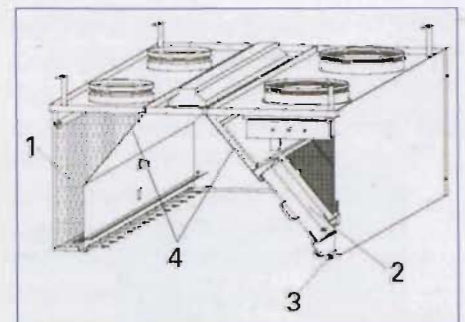
The repeated reaction of the ozone with the grease vapour will eventually break them down small enough to create the by-products CO<sub>2</sub> and H<sub>2</sub>O. These by-products of the oxidation process do not adhere to the duct surfaces and will be carried away by exhaust airflow.

The UV-C filtration process, taking place at the light and in the exhaust duct continuing to the external, facilitates improvements in grease extraction above the 90% level, making the air stream sufficiently

clean and more suitably-available for energy recovery.

## Ventilation canopy and ducted system solutions

UV filtration is normally supplied as an integral component of a ventilation canopy. **Figure 4** highlights the main components of an integrated supply and exhaust hood with multi cyclone mechanical filters, and UV filters in the exhaust plenum behind. The components of a ventilation hood supply and extract system can comprise the canopy with integrated filters and supply/exhaust plenums; the dedicated extract system from the canopy, which can be provided in stainless steel duct work to overcome issues such as moisture-laden air and the corrosive effects this can have; dedicated supply air to the canopy itself, supplied through a low velocity discharge face; and an extract fan and supply air handling unit.



**Figure 4 highlights the main components of an integrated supply and exhaust hood with multi cyclone mechanical filters, and UV filters in the exhaust plenum behind.**

1. Supply plenum
2. Mechanical grease filters.
3. Grease collection.
4. Testing and balancing port.



# food production hoods: air filtration & heat recovery solutions

Chapter 30 of the 1999 ASHRAE HVAC Applications Handbook and HVCA DW172 provides additional guidance on different ventilation canopy types.

### Energy recovery options

Where heat recovery is being considered there are different solutions available to the HVAC engineer. In terms of energy recovery the most efficient solution can be a hygroscopic adiabatic thermal wheel (Figure 5).

Performance of a rotating adiabatic thermal wheel will depend on the characteristics of the system, i.e., whether the inlet and outlet flows vary or are equal, whether the process temperatures are consistent or not. Efficiencies of 75% for no-hygroscopic wheel and 90% for lithium chloride covered hygroscopic wheels are possible.

Utilising a piped run-around coil solution is a proven energy recovery solution on ventilation systems and can give sufficient efficiencies (50/60%) to temper incoming air. Due to the particular conditions of the

supply and exhaust air more energy is available than required. For this reason designing for efficiency is not necessarily the most suitable selection criteria.

Extract temperatures can vary from between 30/50°C. With the application the concern is that the exhaust air volume will tend to be greater than the supply, generally around 80/85% following DW172 guidelines.

Generally, a supply air temperature of 18/20°C will provide good cooling effect at the canopy due to the immediately-surrounding air temperatures at around 25/30°C and the radiant heat emitted from the equipment.

This means that in summer full fresh air can be effective to provide cooling for all but a few of the warmer design days. Therefore, a decision to provide mechanical cooling should be carefully considered with the client and end-users as it may only operate for a few days of the total year.

### Theoretical Example

An example of the profile of energy recovery for varying on coil conditions is outlined as follows. The following system characteristics are taken from a particular case study (Table 1):

Utilising the base data above and assessing the performance of a run-around coil (RAC) solution over a winter external temperature range of -3°C to 10°C, the graphical data shown in Figure 6 highlights the leaving air temperature for both supply and exhaust air streams. Figure 7 highlights the kW capacity recoverable for each corresponding condition.

It is evident that from 5°C external temperature upwards there is sufficient capacity in the RAC selection to provide the full heating complement for the supply air system to the ventilation-hood. Even though the temperature efficiency of the energy recovery system is around 52%, this is still more than adequate for the required off-coil conditions.

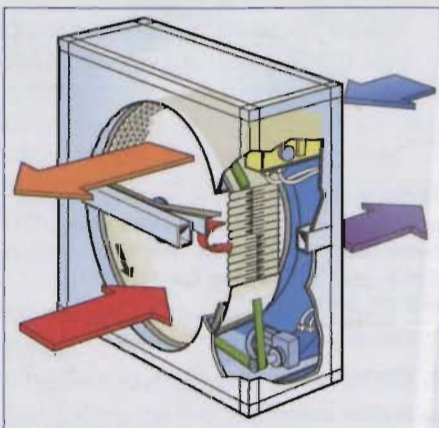


Figure 5 -- Typical heat recovery solution: Adiabatic thermal wheel

Element	Conditions
Extract AC	5.5 m <sup>3</sup> /s @ 30°C
Supply AC	3.5 m <sup>3</sup> /s @ 18°C
Heat Recovery Option	2 Pipe Run Around Coil
Temp Efficiency	50 - 60%

Table 1: Example ventilation hood conditions

# food production hoods: air filtration & heat recovery solutions

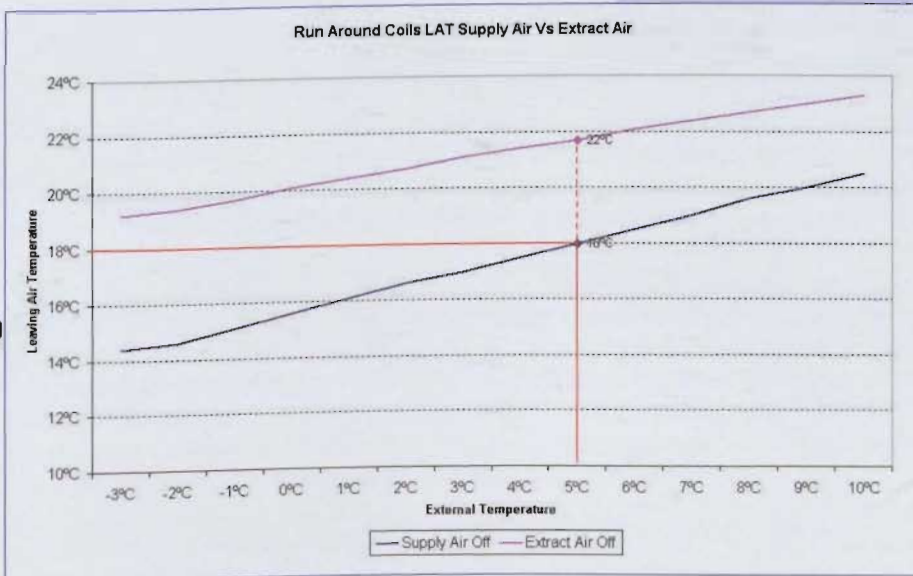


Figure 6 — The graphical data shown here highlights the leaving air temperature for both supply and exhaust air streams.

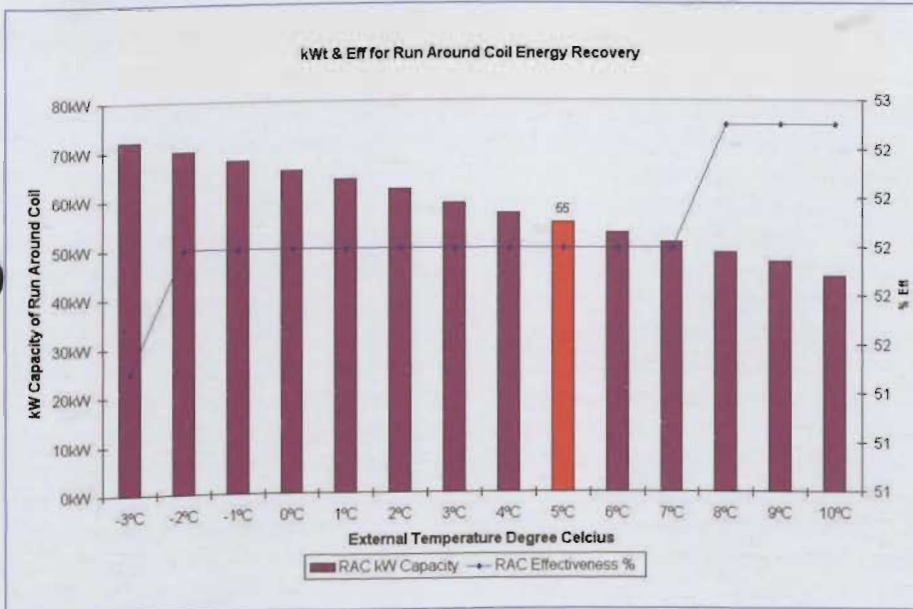


Figure 7 highlights the kW capacity recoverable for each

Even at -3°C supply air entering temperature, there is still approximately 83% of the heating requirements satisfied by the energy recovery system. This is clear evidence that integrated UV ventilation hoods are

capable of being almost stand-alone systems and relatively independent of the energy needs of the commercial kitchen.

Looking at the off-coil

temperature for the exhaust stream, it is also evident that there is still available energy discharging to atmosphere, approximately 19/22°C. A consideration at the design stage may be to increase the capacity of the exhaust air coil to recover additional energy to supply a combination of supply air coils in different applications of the project.

### The Economics

Providing an integrated ventilation canopy with heat recovery and UV filtration can almost double the capital investment of the specific installation, though with the correct data and equipment selections, paybacks of four to six years are very achievable. With a typical canopy installation lifetime of 10 to 15 years there are appreciable economic and environmental benefits to considering heat recovery and UV filtration in commercial catering facilities.

**Paul O'Sullivan is a Lead Engineer with PM Group based in Cork. He holds a Diploma in Building Services Engineering, an Honours Degree in Mechanical Engineering, and a Masters Degree in Building Services Engineering Management. Paul has seven years industry experience (in Ireland and France) primarily in the healthcare sector, along with the commercial and industrial sectors. He is a member of Engineers Ireland, has lectured in building services design at Cork Institute of Technology.**

# Jimmy Doyle — An Appreciation

The premature passing of James (Jimmy) Doyle last August had a profound effect on the many that had come into contact with him throughout his personal and professional life. Testimony to this was the huge gathering of people at Rathfarnham church who came to show their final respects to him and show support to his family.

Jimmy was a native of Rathfarnham and was born into a large family, the second youngest of five children. He played avidly and with great ability over the years as a non-compromising centre half for his local soccer team, Nutgrove Celtic. His love of soccer was always to the front of his conversation and his support for Manchester United was always impressed on those willing to challenge his colours.

He married Mary, his childhood sweetheart, in 1975 and they had six children — Elaine, Barry, Sharon, Steven, James and Kelly. He was also immensely proud of his four grandchildren — Chloe, Abbi, Robbie and Molly. Jimmy was a devoted family man and the pride and esteem he held for his family was always apparent to everyone he met. His admiration and respect was never spared while talking about his beloved family.

He began his professional career as a very young man in 1969 when he secured an apprenticeship as an electrician in Hammond Refrigeration. He then moved on to Pee Dee Refrigeration and from there to Walsh Refrigeration before setting up a new partnership called Flare Refrigeration.

In 1995 he went solo setting up JD refrigeration which latterly became known as Arkway Refrigeration. Later his good friend Gary Gerraghty became his business partner in this venture. Arkway Refrigeration has been a highly successful company over the years, operating predominantly in the beer cooling industry. Jimmy's work ethic and charismatic personality meant he struck up many friendships within his customer base. A lot of his customers have been loyal to him and his friendship over many years. This alone speaks volumes about the way he ran the company and the subsequent respect his clients afforded to him for his endeavours.

In every industry there are people who deserve the tag of "statesmen of the industry" and Jimmy was indeed such a person. These are people who earn the respect of all others within that industry as they show by example how business and relationships should be conducted. Jimmy Doyle was a person who truly deserved this honour. It is rare to come across someone like Jimmy who showed such humility and respect while dealing with others. He treated everybody as equal and always had a smile on his face, no matter what the challenge ahead was likely to throw at him.

Jimmy's personable manner and quick wit was obvious to everyone he met and it was also obvious that Jimmy managed this rapport with people effortlessly. The nature of the man is personified by the fact that so many of his customers, suppliers, employees, ex-colleagues all say that they could call Jimmy a friend as well as someone they knew through business.

The industry offers its sincere condolences to the Doyle family and to all those who knew Jimmy. *DB*



Jimmy  
Doyle

# Carrier Heating Controls Establish New Benchmark

The goal of all building service engineers is to design an energy-efficient heating system that will deliver maximum comfort at minimum cost to customers and to the environment. From the time Willis Carrier designed the first ever mechanical "apparatus for cooling air" in 1902, Carrier has been to the forefront in providing air conditioning, heating and refrigeration solutions to all sectors of industry.

Now, with the introduction of the NEXA range of domestic heat pumps and packaged heating/cooling controls, Carrier is yet again providing expert solutions at an affordable cost.

"As Carrier's distributor in Ireland for more than a decade", says Austin McDermott, Managing Director of Core Air Conditioning, "we are especially excited by the new opportunities NEXA systems afford us in this age of increasingly-higher environmental standards in building design and construction. Ultimately, it means we can deliver high-performing, regulation-compliant, cost-effective solutions for all kinds of applications."

While NEXA by Carrier offers an extensive range of domestic air-to-water and water-to-water heat pumps, it is the packaged heating controls systems that will be of most interest to design engineers working on district heating schemes.

NEXA's 25-year pedigree in producing high-end comfort control devices for the French residential market has been underpinned by its adoption of a "floating set point" system of control. This unique form of "weather compensation" uses a combination of a MicroNEXA controller, indoor sensor, outdoor sensor, fully proportional motorised valves, and a locally-mounted user interface to control and manage occupied space temperatures.

This versatile system has the advantage of being adaptable for any type of terminal unit, including mixed-use applications using underfloor heating, radiators and/or FCUs. Only this type of control from Carrier can provide the optimum levels of comfort required by modern high-end apartment owners while still working at the maximum levels of efficiency necessary for low energy building design. The NEXA range even includes an all-in-one device that can combine hot domestic water production with heating control.

While the use of district heating schemes should result in lower fuel bills for end-users, this is not always the case. A standard heating system using a constant temperature primary loop will require the provision of year 'round hot water at each apartment at, say 70°C. Even with the best of insulation, the heat loss on such a system will be substantial. Heat losses equate to inefficiencies and, therefore, higher fuel bills.

The question is what can be done to prevent this? Core's Paul Schweppe maintains that by installing a NEXA control system heating losses can be substantially reduced without any loss of comfort and/or control for the end-user.

"Specifically aimed at commercial mass market installations", says Schweppe, "the NEXA range of plug-and-play devices are easy to install, easy to operate and, most of all, cost effective. The XA unit is suitable for use on underfloor heating systems up to 14 kW (150m<sup>2</sup>) or radiator circuits up to 24 kW. When combined with the NEXA XBCi central hydronics module or XTC control-only device, clients can have up to 30 individual zones on their own floating set-point connecting to a single, weather-compensated, primary water loop. The fact that the temperature in the primary loop can be varied based on the ambient conditions will result in substantial energy savings".

Contact: Paul Schweppe, Core Air Conditioning, Tel: 01 - 409 8912; email: paul@coreac.com



With the NEXA XBCi central hydronics module (above) or XTC control-only device, clients can have up to 30 individual zones on their own floating set-point connecting to a single, weather-compensated, primary water loop.

# 'Self Builders Save the Construction Industry'

**S**ome commentators believe that house completions will fall to below 40,000 per year compared with a high, reached in 2006, of 85,000. The reasons for the fall are well documented and are ongoing as you read this, but the worst effects of the economic downturn and the global credit crunch are being felt mainly by developers and property investors. Estate agent C B Richard Ellis is sticking to its forecast of 50,000 completions this year because it believes that one-offs will keep it there.

"Self-builders in Ireland are a breed apart. They're not building for profit. They want a house that suits them in a place that suits them and their mortgage requirements are not great. The average self-build loan to value ratio is only 60%," says Clive Corry of SelfBuild Ireland Ltd, specialist self-build magazine publisher and show organiser.

So, while much of the construction industry has ground to a temporary halt, self-builders are still going strong at about 18,000 completions per year, which is between 30-35% of total houses built. In Galway, one-off housing is now 58% of all residential housing, an increase from 43% last year. In Mayo, self-builders represented 47% of house building last year and this year exceed 50%. In Leitrim, Sligo and Roscommon, self-build is



more than 40% of all housing output.

"As these figures clearly illustrate, it's not all 'doom and gloom'", says Corry. "Self-builders are literally saving the construction industry. Not only are they still building, they are 'building green'. Being generally older than first time buyers and with no funding problems, self-builders can choose to build sustainably and are far more likely to put in solar or geothermal heating, or consider wind turbines and photovoltaic panels. They will also go to great lengths to minimise waste and use sustainable building products".

It is against this background that the forthcoming SelfBuild Extend & Renovate Show at Millstreet is set. It will run from Friday, 31 October to Sunday, 2 November

and thousands of Munster self-builders are expected to visit the show to talk to the experts and see the vast range of products on display. Opening times are 1pm to 7pm on the Friday and 11am to 6pm on the Saturday and Sunday.

SelfBuild Extend & Renovate is one of five self-build shows run across Ulster, Munster, Leinster and Connacht. It is now the biggest annual exhibition in the Green Glens Arena, Millstreet, Co Cork and will be filled to capacity with almost 200 exhibitors displaying every product needed to build, extend or renovate a home.

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www.selfbuild.ie

sponsors Carel Ireland

# Perfect Conditions at Dungarvan

The RACGS were blessed with an excellent day for the recent outing in Dungarvan Golf Club. Playing conditions were perfect and the large turnout took full advantage to return some great scores.

Carel Ireland sponsored the day and put up a fantastic array of prizes. Carel's Dave Killalea, and his colleague Les Mason, were the perfect hosts. Les took all the photographs and also set them up in a rolling powerpoint display which ran in the background during the meal and presentation of prizes.



Frank O'Sullivan with Dave Kirwan, overall winner, and Captain Billy Queally

Winners were as follows:—

**Captain's Prize & Overall Winner**

Dave Kirwan (37pts).

**Class 1**

Winner — Ger Darcy (37pts);

Runner-Up — Brian Carey (37pts).

**Class 2**

Winner — Pat Lowry (32pts);

Runner-Up — Liam Carroll (30pts) on count back.

**Front Nine**

Billy Queally (19pts)

**Back Nine**

Vincent Barrett (17pts) on count back

**Visitors**

Winner — Sonny Landers (37pts)

Runner-Up — John Queally (34pts)



Frank O'Sullivan with Captain Billy Queally, Ger Darcy, winner Class 1, and Dave Killalea, Carel Ireland



Billy Queally, winner front nine, receiving his prize from Dave Killalea, Carel Ireland



Captain Billy Queally with Pat Lowry, winner Class 2, and Dave Killalea, Carel Ireland

Frank O'Sullivan with Captain Billy Queally, Sonny Landers, visitors' prize, and Dave Killalea, Carel Ireland



## racgs golfer of the year update

The much sought-after accolade of RACGS Golfer of the Year is, as always, a keenly-contested event which is now drawing to an exciting close.

Billy Queally is in the lead at present with 18pts, followed by Matt Butler on 12pts. Stephen Mahon and Zac Keane, both on 10pts, are closing in fast.

# better business

## Self-Employed & Want to Beat the Taxman?



Mark Reilly, Hibernian Life & Pensions

Beating the taxman is not easy but, by taking action in advance of the Revenue's deadline of the 31 October 2008\*, self-employed people in the building services sector can reduce their tax bill and build a financial cushion for retirement. Mark Reilly, Pensions Development Manager with Hibernian Life & Pensions, talks to *bsnews* about how to do it and why.

In the past many of Ireland's self-employed saw their business as their future financial security so they did not take out a pension. With the construction and property boom of recent years the building services sector is no different. With massive increases in volumes of business, many may simply not have had the time to consider how a pension could prepare them for their long-term future and improve their current income by significantly reducing the tax bill.

Now, as the construction boom subsides, with the combination

of increased tax relief limits on pensions and the broader array of pensions options now available, the time is ripe to invest in a pension and secure the future.

### Tax Relief

The 31 October 2008\* is the last date by which pension contributions can be paid into a Personal Pension Plan or Personal Retirement Savings Account (PRSA) and be offset against the tax due for 2007. Therefore, contributions invested prior to 31 October 2008 can be used to reduce the final tax liability due to be filed and paid on that date.

For instance, prior to the Finance Act 2006 individuals could contribute a maximum of 30% of net relevant earnings to a personal pension (depending on their age) and get full tax relief at their marginal rate on their contributions. Since the Act has been in place there has been a substantial increase in tax relief limits. **Table A** illustrates this increase and shows why it makes good

business sense for the self-employed to invest in a pension.

### Retirement Options

Further retirement options were introduced as a result of the Finance Act 1999 which saw the introduction of approved retirement funds (ARFs) and approved minimum retirement funds (AMRFs). These are funds managed by qualified fund managers in which you can invest the proceeds of your pension fund when you retire. Prior to the introduction of these funds it was compulsory for a personal pension/PRSA holder to convert their fund into an annuity that provided a guaranteed income for life. With the new legislation, self-employed people can now leave their pension fund invested in a tax efficient way after they retire, or alternatively encash the balance of their fund.

However, it is important to note that if the individual wishes to invest in an ARF or encash the balance of their fund, they must

**Table A — Tax Relief Limits**

Age	Maximum tax deductible limits as % of earnings
Under 30	15% of net relevant earnings
30 to 39	20% of net relevant earnings
40 to 49	25% of net relevant earnings
50 to 54	30% of net relevant earnings
55 to 59	35% of net relevant earnings
60 and over	40% of net relevant earnings

These limits also apply to Personal Retirement Savings Accounts (PRSAs) and Additional Voluntary Contributions (AVCs). The maximum Net Relevant Earnings on which tax can be claimed in 2008 is €275,239. The figure for 2007 was €262,382. A pension plan also benefits from gross rollup until retirement, plus the opportunity to take a tax-free lump sum.

# better business

## Self-Employed & Want to Beat the Taxman?

have a guaranteed pension income of €12,700 per annum. If this cannot be met then €63,500 of the balance of their fund must be invested in an AMRF and remain in place until age 75.

The purpose of a pension plan is to provide investors with the highest possible benefits at retirement and this objective can only be met by investing contributions wisely. To maximise the build up of a pension fund, contributions should really be invested in a range of funds.

### Investing pension funds in equity markets

For investors who want the tax benefits but really do not want to invest in a stock market fund just yet, there are deposit-based funds, which offer the security of high interest bank deposits but the flexibility to move into investment funds when the investor is ready. For example, Hibernian's Safe Haven Fund acts as a springboard for investments in the equity and property markets.

Offering the security of a high interest deposit account (ECB+1%, currently 5.25%pa) but total flexibility to take funds out of deposit to invest in equity and property markets, the Hibernian Safe Haven Fund is intended as a "stepping stone" for new investors looking to ultimately invest in the markets for the medium to long rather than short-term period.

### Great Opportunities

Retirement planning has changed considerably in recent

### Case Study

The following case study further illustrates the tax relief that can be enjoyed by a self-employed person by making pension contributions:—

Henry is self-employed, 35 years of age and a 41% taxpayer. In October 2008 he pays an initial pension contribution of €26,000 to a Personal Pension Plan and his net relevant earnings are as follows:—

2007	€60,000
2008	€70,000

Henry can claim up to 20% of his net relevant earnings in the current tax year (ending 31 December 2008) and under the backdating provisions he can now claim up to 20% of his net relevant earnings in the previous tax year (ending December 31 2007), provided he pays the relevant contribution before 31 October 2008. However, he must elect to have the relevant part of this €26,000 pension contribution offset against his 2007 income. His contribution will work out as follows:

Tax Year	Net Relevant Earnings €	Maximum Contributions 20% €	Tax Relief 41%	Net Cost €
2007	60,000	12,000**	4,920	7,080
2008	70,000	14,000	5,740	8,260
		26,000	10,660	15,340

This case study illustrates how by calculating Henry's final return, the Revenue allows tax relief on pension contributions which ultimately reduces Henry's overall tax bill.

years and there are great opportunities for the self-employed to make tax efficient contributions to either a Personal Pension Plan or PRSA.

Warren Buffet, the sage of Omaha and one of the world's richest individuals, is reputed to have said: "be greedy when others are fearful and be fearful when others are greedy". In the current uncertain and turbulent investment markets, with equities trading at low prices, using deposit-based funds offers a way to take advantage of those words of wisdom.

So, talk to your financial adviser and mark the 31st October in your calendar as it presents an opportunity for you to review your investment needs and beat the taxman.

*\* In 2008 individuals who file online using the Revenue Online Service (ROS) have until 17 November to make their returns.*

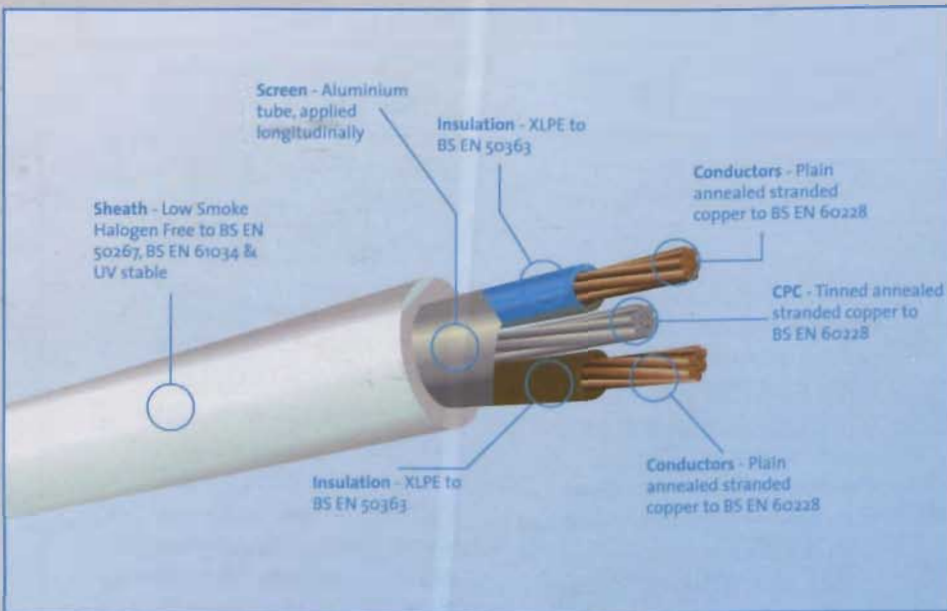
*\*\* This example assumes that Henry made no contributions to any other pension plan during 2007, and that no excess contributions have been carried forward from 2006.*



# IDH Guardian Electrical Cable Only BASEC- Approved Solution



Back: Christophe Bernigaud and Brendan Dunne. Front: Peter Ryan, Keira Doyle and Brian Giddings.



The past decade has seen a significant change in the design and construction of buildings, coupled with a significant evolution in the technology of the materials employed within the industry.

These changes have brought new challenges and building regulations have had to recognise the changing environment.

Electrical installations is a typical case in point. New legislation regarding the electrical wiring of buildings with partition walls, suspended ceilings and false floors has had to address the potential dangers of concealed electrical cables. Often these cables cannot be buried in the walls, ceiling or floors to a sufficient depth to safeguard against damage or penetration by nails or screws. Additionally, these cables may need to be embedded into expanded polystyrene, which will cause traditional PVC cables to break down. Also, the cables are frequently laid in trunking, conduit and trays beside sensitive data cables.

Against this backdrop Irish Driver-Harris (IDH), who has been manufacturing cables in New Ross, Co Wexford since 1934, has developed a new and innovative cable called Guardian which will fail-safe if damaged or penetrated by screws or nails. It is also resistant to polystyrene, is screened to prevent EMC, and is light in weight yet robust. This cable has been designed and approved to meet the new wiring regulation in Ireland, incorporated into the Irish National Wiring Rules ET 101 3rd edition. Clauses 522.6.3 and 522.6.6 in particular address the issue of concealed cables. It also meets the requirements identified in the UK's new 17th Edition IEE Wiring Regulations (concealed cable regulation 522.6).

In evolving Guardian cable, IDH

consulted with industry experts, including ERA Technology, and set about designing a cable to meet the requirements of cables to satisfy the new market conditions and regulations. ERA Technology works at the leading edge of advanced technology consultancy and design. The business was founded in 1920 and today provides specialist, high value-added, technology-based services including design and development, testing, assessment and expert advice.

The tests, which were designed specifically for this cable, included a nail penetration test. This test is performed on a live wired cable sample and involves using a specially-adapted rig to hammer a nail into the live conductors of the cable. The fault current is in excess of 200 amps and will trip the main circuit breaker. Other tests include impacting the cable with a chisel-edged weight at various temperatures from -20°C to 65°C, and also testing the EMC shielding capability of the cable.

The project was partly funded by an RTI grant through the IDA while a standard for this cable type was developed through the ETCI's technical council for cables, TC14. This standard was subsequently incorporated as an amendment to the Irish Standard IS 273. Shortly after adoption into the Irish Wiring Regulations the UK developed a standard of their own, BS8436.

Having tested the performance of the cables in-house and at the ERA, cables were submitted to BASEC for approval to both the Irish Standard and the UK Standard. BASEC awarded IDH full approval to both standards in July of this year and the product has attracted significant interest since then. BASEC is the recognised leader in product certification services for electrical cables, data/signal cables and ancillary products. Its teams of highly-skilled

engineers and auditors possess extensive in-depth commercial and industrial experience.

Commenting on the approval, Dr Jeremy Hodge, Chief Executive of BASEC said: "Guardian is a clever solution for protecting cables in

walls. As with all our approved products Guardian has been fully laboratory tested to the latest requirements and will continue to undergo BASEC surveillance as part of our ongoing assessment process."

IDH's Guardian attracted significant interest at this year's Building Exhibition at the RDS and won first prize in the New Product of the Year category, in recognition of its innovative design.

The product has recently been used in a wide variety of applications, including the Hull Royal Infirmary where the EMC screening and light weight made the cable ideally suitable to the date-sensitive areas. Installation times were claimed to have been reduced by 75%.

Vic Coupland of Hull worked in close op-operation with Hull & East Yorkshire Health Authority on the installation of cables in clinical areas. In such critical locations, patients are often linked to sensitive monitoring equipment, making it crucial to minimise electrical interference. The Guardian cable was chosen due to its aluminium screen which meant that steel conduit or trunking was not required, reducing time on site as well as installation costs. The cable screen

also offers reduced

electrical interference. Paul Chapman of Vic Coupland Ltd said: "In hospitals we often find that the suspended ceilings in corridors are already full of existing services, with cable trunking already at capacity. As Guardian is screened, all we need to do is clip direct into the void. This has made installation times far quicker, meaning we can offer a much more competitive price to the Health Authorities".

Another recent installation has been the new Marks and Spencer store in Tamworth. The Site Foreman Jon Potter said: "As it is shielded, Guardian can be installed alongside data cable for cash tills and phone lines for credit card transactions without additional shielding being needed. Where Guardian is buried in walls it offers a safer option where point of sale/promotions and posters are frequently mounted and demounted, using screws and nail. Guardian takes about 50% less time to install than SWA, retains its shape when mounted, and is tough enough to stand up to some serious banging around. The shielding is an insurance against needing to rewire because the data and communications systems are being interfered with by the power cables".

IDH Guardian is an exceptionally good product with multi-faceted applications. Made by a trusted Irish manufacturer in the business for almost 75 years, Guardian is not just here to last but has set the benchmark for all future development in the sector.



# Plumb Lines

heard it on the grapevine ...



## SOME 2020 VISION THIS!

First we had carbon credits, where high CO<sub>2</sub> producers could trade in "offsets" and so theoretically meet their regulatory emissions obligations without reducing the amount of CO<sub>2</sub> they produce.

Now we have carbon capture and storage (CCS) which, essentially, is a mechanism whereby fossil fuel powered plants can still generate vast amounts of CO<sub>2</sub> provided it is "captured" and then stored in strategically-chosen underground geological locations.

What do both schemes have in common? ... instead of encouraging a reduction in CO<sub>2</sub> emissions they promote mechanisms designed to facilitate the handling of CO<sub>2</sub> emissions, irrespective of the quantity produced. Furthermore, no one knows what the consequences are of storing such vast amounts of CO<sub>2</sub> deep within the bowls of the earth.

Sustainable Energy Ireland (SEI) and the Environmental Protection Agency (EPA) recently published a report on the potential for carbon capture and storage in Ireland. It identifies the Kinsale Gas field as having the potential to store up to 330 million tonnes of CO<sub>2</sub>. Even the EU expects to see the widescale deployment of CCS by 2020.

The whole concept of CCS is a contradiction in terms. What happened to the notion of simply reducing CO<sub>2</sub> production in the first instance and concentrating on greener energy sources?

Some 2020 vision this!

## GRAND THEFT SOLAR

Yes folks, Grand Theft Solar is the term now coined in California to describe a recent spate of burglaries which point to a new trend in solar panel theft. With energy prices soaring in the sunshine state, solar panels have emerged as a must-have power source.

Unfortunately, this increased demand has meant a lucrative market in stolen panels. So, while California is the leader in solar panel installations for both domestic and commercial applications, it is also the market leader when it comes to the theft of solar panels.

Householders, commercial property owners and even organic farmers have all been hit.

Industry experts, as opposed to law enforcement agencies, say that the most worrying aspect of the new trend is the level of sophistication shown by the thieves. They invariably demonstrate a level of product knowledge which suggests that it is industry insiders who are behind the thefts. This suspicion is supported by the fact that there is a massive shortage of new panels.

How ironic, here we are in Europe trying to convince people to go green when even the thieves in America are already fully converted!



## CAN'T ESCAPE FOOTPRINT MANIA!

Last month I made a plea for some respite from footprint mania but this month I concede there is no escaping it. How could there be? Some genius working for a London-based carbon company has come up with a way of keeping track of your carbon footprint irrespective of where you are or what you are doing.



Apparently, keeping a mobile phone on your person at all times is all that's required. Global positioning satellites will then work out whether you are walking, driving or flying and in turn use the information collected to calculate your impact on the environment.

Even George Orwell, despite his then-fanciful predictions in the novel *1984*, would be taken aback at the extent to which big brother is now watching over us all.

## WAKY WAKY ENDA!

Congratulations to Enda Hogan of Refrigeration Skillnet on the recent birth of his first child, a daughter named Lana, who entered the world at a bouncing and very healthy 7lb 6oz.

I understand mother and child are doing extremely well while Enda, on the other hand, is learning to come to terms with all of the downsides associated with sleep deprivation.

Apart from that, he is enjoying fatherhood thoroughly.

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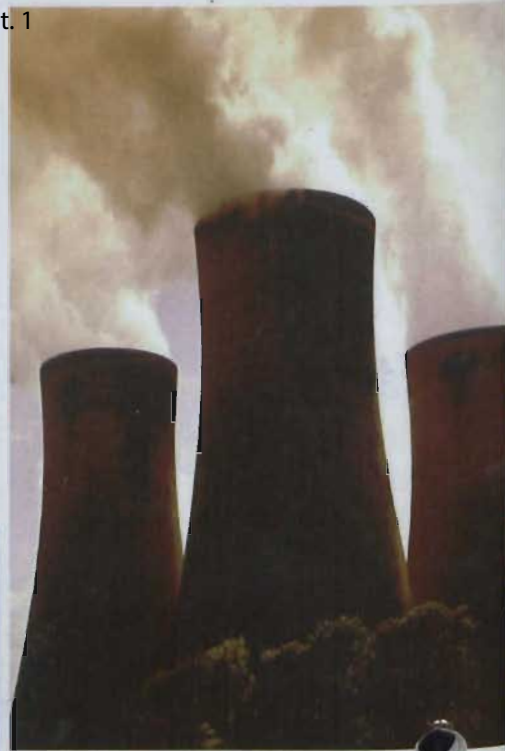
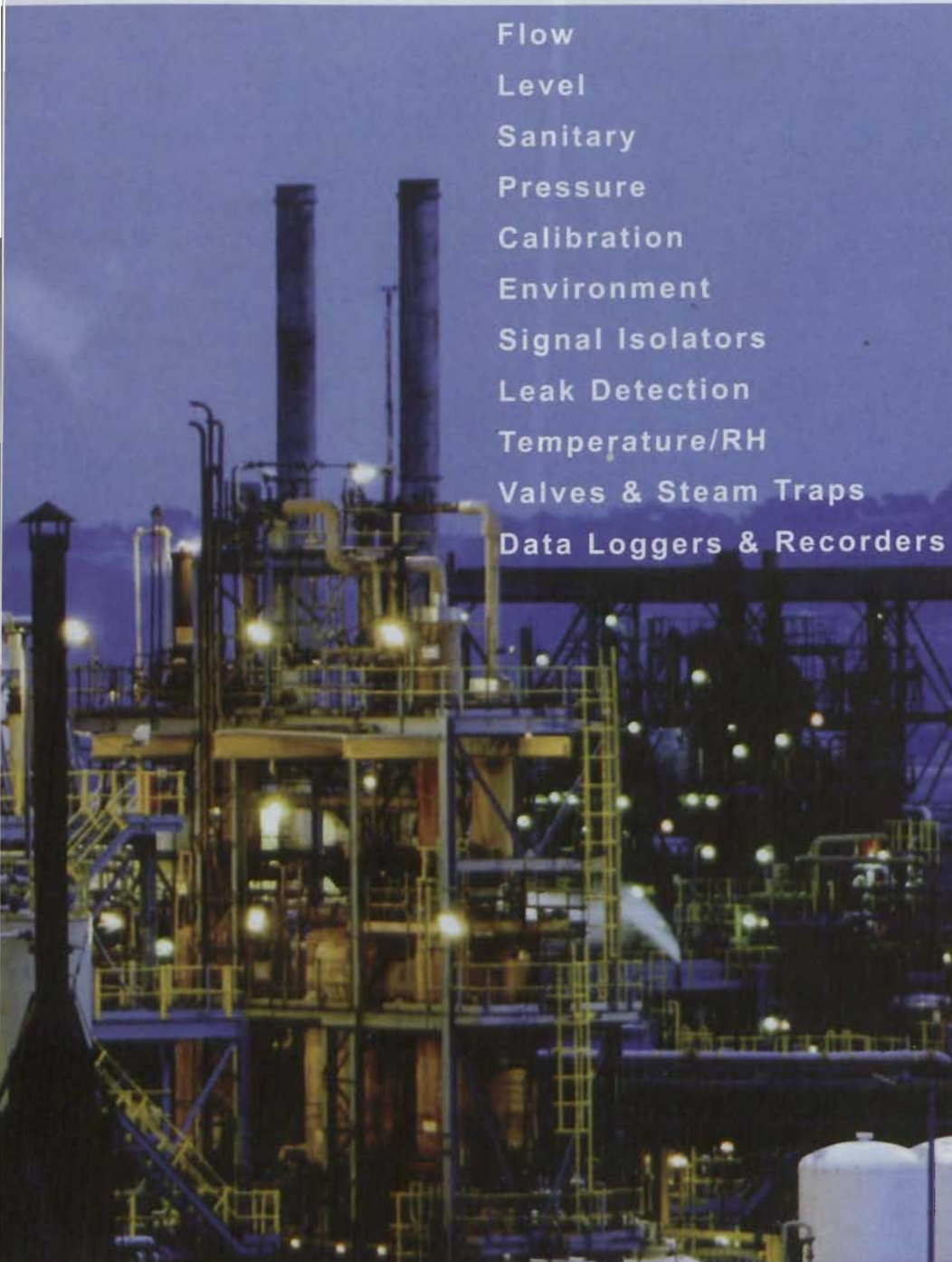
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