

7-1-2006

BS News

Follow this and additional works at: <https://arrow.tudublin.ie/bsn>



Part of the [Civil Engineering Commons](#), [Construction Engineering Commons](#), and the [Construction Engineering and Management Commons](#)

Recommended Citation

(2006) "BS News," *Building Services Engineering*: Vol. 45: Iss. 7, Article 1.

Available at: <https://arrow.tudublin.ie/bsn/vol45/iss7/1>

This Article is brought to you for free and open access by the Journals at ARROW@TU Dublin. It has been accepted for inclusion in Building Services Engineering by an authorized editor of ARROW@TU Dublin. For more information, please contact arrow.admin@tudublin.ie, aisling.coyne@tudublin.ie, vera.kilshaw@tudublin.ie.

bs news

building services news



Underfloor Heating —
16 Page Special

Join me at the top!



ALPHA Pro



MAGNA



ALPHA+



UPS



With the four new stars from Grundfos

The well-known energy label - now also for circulator pumps. A represents low-energy consumption and G high consumption. Selecting an A labelled pump gives energy savings up to 80% compared to the market standard pump marked D

Read more about the energy label on
www.energyproject.com

GRUNDFOS 

ISSN 0791-0878

Published by:

Pressline Ltd,
Carraig Court,
George's Avenue,
Blackrock, Co Dublin.
Tel: 01 - 288 5001/2/3 Fax: 01 - 288 6966
ISDN: 01 - 211 2338/9
email: bsnews@pressline.ie
web: www.buildingservicesnews.com
www.bsnewsbuyerguide.com
www.pressline.ie

Editor: Pat Lehane

Advertisement Director: Joe Warren

General Manager: Louise Byrne

Origination and Design:

Pressline Ltd. Tel: 01 - 288 5001

Subscription: One Year —€70

Printed by: Ebrook.

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

this issue



Trade News & Product Information	2
Sanyo Energy Saving Window on the Environment	14
Finheat & Liberty Celebrate Merger in Style!	16
Toshiba Mini-SMMS	17
PIR-ATC Pre-Insulated Panels from Irish Fan	18
Another Side Of ... James Byrne	19
Focus on Energy	20
Sustainability Centre at SelfBuild Show	21
RECI News	24
Underfloor Heating	30
Grundfos Annual Golf Day	43
Plumb Lines	44

july/august .2006

Published by ARROW@TU Dublin, 2006

et al.: BS News

opinion

Not So Much The 'Silly Season' Anymore

While the summer months are traditionally regarded as the "silly season", that is certainly no longer the case with construction and building services. Obviously, the vast bulk of holidays are taken throughout July and August but the overall level of activity within the industry now dips rather than comes to a total standstill. This is an encouraging development which, despite the extra burden on the project management team, demonstrates that the industry has moved forward and become more professional.

This month's issue of *bs news* reflects this ongoing activity. For instance, there are 10 pages of news alone featuring product launches, personnel appointments and company developments across all industry sectors.

Our primary product feature is underfloor heating. This covers 16 pages and confirms once and for all that underfloor heating has most definitely come of age.

On the same sustainable theme there is the forthcoming SelfBuild show at Punchestown; a new series called Focus on Energy; and the major new product launches by Toshiba, Sanyo AC, Mitsubishi Electric and Irish Fan Distributors.

But it's not all work ... we feature the Grundfos annual golf day, Finheat and Liberty celebrating their merger, and Another Side of James Byrne.

All in all, your July/August issue of *bs news* is a great summer read!

trade news + product information

energy efficient housing development

Dick Roche, TD, Minister for the Environment, Heritage & Local Government, recently formally opened an innovative new energy-efficient housing development in Oylgate, Co Wexford.

The development, which consists of 28 masonry-built semi-detached dwellings, has been constructed by Wexford County Council in conjunction with Bawn Developments Ltd and is supported by Sustainable Energy Ireland (SEI).

The houses are over 40% more energy-efficient than houses built under Building Regulations requirements, resulting in lower energy bills and reduced running costs for the owners. Some of the energy-efficient features of the houses include wood pellet boilers, active solar water heating systems, high levels of insulation and low E glazing.



'fill these boots' & represent ireland

Enterprise Ireland London, the government development agency for Irish industry, has launched a campaign called "Fill These Boots" based on an extensive network of leading Irish people working in the UK construction industry. The network — www.filltheseboots.net — comprises the main players in the Irish construction sector offering high-quality, cost-effective resources for the UK market.

Currently over 40% of Irish construction supply services and products are exported to the UK, a figure set to increase this year. So, by joining the network, companies can create opportunities to develop relationships with key UK businesses working in construction. This is especially so with the increasing number of large-scale projects proposed for the forthcoming Olympics in 2012.

To become part of this growing network visit www.filltheseboots.net

itt lowara expands circulator range

The new model ITT Lowara circulators feature an automatic running speed adjustment system that regulates the rotation speed based on circuit requirements. Thanks to this system power consumption and operating noise levels are kept to a minimum.

An important aspect of the new range is the wet rotor, with bearings lubricated by the pumped liquid and rotor chamber protected by a bronze filter. All the models are suitable for pumping hot or cold, chemically and mechanically non-aggressive liquids.

The range includes the TCR series for residential heating and air conditioning systems; TCB-TCS series for residential sanitary hot water circulation applications; TC-FC series for the civil and industrial sectors for water circulation applications in heating, air conditioning and cooling systems; ETCR series for the residential, civil and industrial sector and ETC-EFC series for the civil and industrial sectors, designed for water circulation applications in heating and cooling systems.

Contact: Terry Murray, Lowara Ireland. Tel: 01 - 452 0266;
email: sales-irl@lowara.ittind.com



SANYO Air Conditioners, proud to be the official sponsor of the PGA in 2006



A world leading commercial air conditioning manufacturer

SANYO
AIR CONDITIONERS

PGA



trade news + product information

over 3,500 renewable grants already approved

Sustainable Energy Ireland has already approved 3,500 renewable energy grants for households under the Government's Greener Homes Scheme. It is hoped that the approved systems — when fully installed and operational — will cut Ireland's annual oil consumption by 20,000 barrels and annual CO₂ emissions by almost 10,000 tonnes.

According to SEI, the average annual energy bill for a household is €1,850 of which heating costs account for €1000. SEI is advising consumers considering investment options for their maturing SSIA balance to make clean and efficient energy a lifestyle and investment priority.

ucc opens environmental research institute

University College Cork's international reputation for excellence in research has been further enhanced with the official opening of the new Environmental Research Institute building by Mr Dick Roche TD, Minister for the Environment, Heritage and Local Government recently.



The Institute comprises researchers from over 15 academic departments drawing from disciplines such as science and engineering, and incorporates four centres of excellence, including the Informatics Research Unit for Sustainable Engineering

The new headquarters building is especially appropriate for environmental research as it is a "green" building that has been designed and constructed to the highest standards of sustainable design and energy efficiency as part of Cork County Council's "Sustainable City" project.

€200 million centre gets go ahead

Chieftain Construction Ltd, developer of Coonagh Cross Shopping Centre in Limerick, has welcomed the decision by An Bord Pleanála to grant permission for the development of the €200 million Centre. Planned opening of the 21,764 sq m retail, leisure and entertainment destination is late 2007.

The site, set on 39 acres at Clondrinagh, Clonaconane on the Ennis Road outside Limerick City, will include a supermarket, department store, 8-screen cinema and a family centre

Established in 1992, the Limerick-based Chieftain Group is the parent company of Chieftain Construction Ltd. Since its establishment in 1992 it has successfully procured in excess of €1 billion worth of construction projects.

btu august weekend

The annual BTU Weekend will take place at The Mount Wolsely Hilton Hotel & Golf Resort from 25 to 27 August next. It is open to both members and their partners. Last year was very successful, the standard of accommodation and the course being excellent, although some of the singing left a lot to be desired!.

There are still some spaces available and those interested in participating should contact Graham Fay at Tel: 086 - 819 3059.

Swedish pioneer in pellets heating is seeking a distributor in Ireland

“Pellets Heating – so easy”



Janfire has developed pellets heating systems since 1983. As the oldest and most experienced company in the business, few can compete with our thoroughly tried and tested products.

Pellets heating is environmentally friendly, automated and reduces a country's reliance on imported fuels. It has always been of the highest importance for Janfire to deliver not just heating products, but complete heating solutions, by offering burners, boilers, storage and experience. Janfire produce both domestic heating solutions and heating systems up to 600 kW for larger properties, industry and local district heating.

We are looking for a skillful and dedicated distribution company who has experience in a related business area in the Irish market to sell and market Janfire's products here. In turn we will provide our distributors with indepth education of our products and support from our offices in Sweden.

Janfire will visit Ireland in August / September next to hold meetings with potential distributors.

If interested please contact us now.

For further information please contact:—

Jesper Öhrn, Country Manager at the Swedish Trade Council in Dublin.

Email: jesper.ohrn@swedishtrade.se or by Post to Swedish Trade Council, Embassy of Sweden, 13-17 Dawson Street, Dublin 2.

Tel: 01-474 4422 or 087-417 37 86

trade news + product information

customised health & safety officer package

Many companies find it difficult to absorb the cost of a full-time safety officer, particularly as site activity can fluctuate depending on the nature and stage of projects in hand. In such cases some fall into the trap of appointing a person already with the company who does not satisfy the definition of a "competent person". This is not the solution.

However, Malone Engineering provides an alternative. Its customised Health and Safety Officer package offers health and safety support which can be adjusted to suit the level of work being undertaken. Key to the service is a monthly safety meeting which looks at the status of projects and the level of site work. It also makes recommendations for the month ahead.

Among those currently availing of the service are CTS, Coolair, Cross Refrigeration, Easycool and Refrigeration Solutions.

Contact: David Gannon or Stephen Malone, Malone Engineering. Tel: 01 - 866 5890.

bac products & applications handbook

BAC Balticare has published a comprehensive *Product and Applications Handbook* covering the full range of BAC cooling towers, evaporative condensers, water saving wet/dry fluid coolers and ice thermal storage units, all of which are available from RSL Ireland.

The 480-page handbook is available to owners and operators, specifying consulting engineers, contractors, facilities managers and maintenance companies.

Copies of the handbook are available in either hardback or CD-Rom.

Contact: Seamus Kerr, RSL (Irl). Tel: 01 - 450 8011;
seamus@rslireland.com

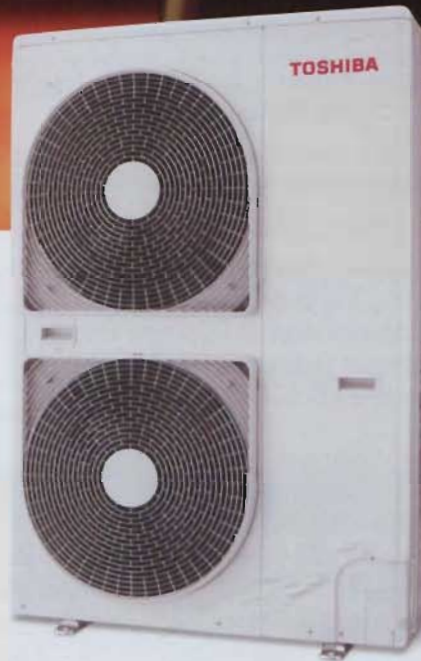
builders providers predict further growth

More than 75% of builders providers predict sales growth in the next 12 months, with around 40% estimating that sales will increase by over 10%, according to a recent survey by Deloitte.

However, respondents tempered that optimism by pointing to a number of key commercial and financial challenges facing the sector — customer retention; finding suitably-experienced employees; and the potential saturation of the market. Maintaining gross margins was identified as *the* most significant challenge by over half of the respondents.

In terms of future issues, approximately half envisaged moving to out-of-town sites in the coming years, with succession planning also identified as a significant issue likely to affect their business in the next five years.

Contact: Irene O'Gorman, Deloitte. Tel: 01 - 417 2200.



New VRF Series: R410A MiNi-SMMS

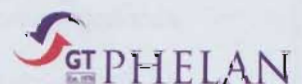
Designed for professionals by professionals. The MiNi-SMMS delivers the ideal comfort level in a compact, quiet and lightweight unit ensuring ease of installation and operation. Capable of operating up to 9 indoor units, from a choice of 13 designs including the new 600 x 600 mm ceiling cassette.

PERFORMANCE

- **Best COP in the industry, 4.61**
- Capacity range; 12 – 15.5 kW cooling and 12 – 18 kW heating
- Twin rotary compressors

FLEXIBILITY

- **Ultra-quiet utilising remote PMV kit (optional)**
- Automatic addressing
- Extended refrigerant piping capability



GT Phelan Ltd
Tel: 01 286 4377
or email:
gtphelan@eircom.net
www.gtphelan.ie

hi-velocity systems nominated for interbuild award



From left to right, Eamon Fidgeon of EJ Fidgeon, Leon Prevost CEO of Energy Saving Products Ltd. and John Harris of EJ Fidgeon.

Energy Saving Products' Hi-Velocity system was recently short-listed for the Best Building Services Product Award in Interbuild 2006.

Eamon Fidgeon of EJ Fidgeon, Ireland represented Energy Saving Products' Hi-Velocity system at the show and he told *bs news* that the reaction from architects and consulting engineers was particularly encouraging.

With green technologies being the way of the future, Energy Saving Products is leading the way with the development of the Hi-Velocity mini duct system which is suitable for use in domestic homes, offices, leisure centres and factories.

Contact: Eamon Fidgeon, EJ Fidgeon. Tel: 044 - 84883;
email: ejfidgeon@ejfidgeon.com

dwelling's energy assessment procedure

Sustainable Energy Ireland (SEI) has published details of the Dwellings Energy Assessment Procedure (DEAP). This is the procedure for assessing the energy performance of new dwellings for the purpose of demonstrating compliance with Part L (Conservation of Fuel and Energy) of the national Building Regulations. DEAP is recognised by Technical Guidance Document L (May 2006 edition) published by the Department of the Environment, Heritage and Local Government

The procedure consists of a Spreadsheet Workbook and User Manual which will be helpful to the designers and builders of new dwellings, and can be downloaded from www.sei.ie/epbd.

An official software tool will be developed over the coming months to allow for the production of Building Energy Rating (BER) certificates — ratings (A, B, C, D etc) will be related to the energy performance of new dwellings, as established under DEAP; and Advisory Reports to be attached to BER advising on how to improve building energy performance.

BER certificates and advisory reports are required by the EU Energy Performance of Buildings Directive — EPBD (2002/91/EC of 16 December 2002) — and will be mandatory for new dwellings in Ireland, with effect from 1 January 2007.

lg widens hi-wall range

LG has widened its range of wall-mounted indoor units to include inverter, non-inverter and cooling only models in an aesthetically-designed casing to suit all types of applications.

The new units are among the most compact in shape and size currently available on the market and are stacked with all of the advanced user-features of the LG range, including the Neo-Plasma air purifying system; Jet Cool™, which lowers temperature to 18°C within 30 minutes; and Gold Fin™ heat exchanger surfaces which are coated with anti-corrosive gold finish to be more durable than anodised and maintain high levels of heat exchanger efficiency.

All units come complete with an infrared remote control unit that allows the end-user to control air circulation/fan operation; room temperature checking; sleep mode operation; temperature setting; operation mode selection; and single event 24-hour timer function.

Contact: Austin McDermot, Core Air Conditioning. Tel: 01 - 409 8912; email: info@coreac.com



trade news + product information

suparule measures up to the test!



Suparule Systems Ltd is located in the National Technology Park in Limerick and sells test and measurement equipment which it develops, manufactures and supplies to the utility, industry, construction, surveying and commercial sectors.

It was recently appointed a Fluke distributor in Ireland, specialising in power quality instrumentation. It also represents a number of other market-leading suppliers such as LEM power quality and earth testers; Metrel installation testers and PAT testers; Bushnell optics binocular Leica Disto range; Clamp meters and multimeters; and C-scope cable avoidance tools.

Suparule is not just about supplying products and tools but about delivering all-embracing solutions. For example, its range of earth testers can also do selective and stakeless measurement, where access to ground is an issue (concrete).

Suparule also offers online engineering support such as product training and assistance in trouble-shooting, while a demonstration unit can be provided to ensure that the customer gets the product best suited to the application in question.

Additionally, Suparule has just launched a new on-line ecommerce store for Irish customers — www.suparule.ie — offering free shipment within Ireland.

Contact: Tom Barry, Suparule. Tel: 086 - 831 3248; Rose Cheevers, Suparule. Tel: 061 - 201 030; email: info@suparule.com; www.suparule.com

FRESH AIR, COOLING and HEATING

The new low energy fancoil replacement

Swegon's new comfort module PARASOL creates a superb indoor climate *without fans, drainage and filters* using condensate free cooling in one modular and versatile unit.

The new PARASOL comfort module is fitted with ADC[®] (Anti Draught Control), Swegon's own unique comfort system for easy regulation of the distribution of air and avoids draughts by suitably directing the air flows.

A low energy, quiet and draught free alternative to the fan coil systems on the market today.

Visit our website and read more about PARASOL and other products for an excellent indoor climate.

Swegon PARASOL™



Swegon manufactures products and system solutions to provide healthy indoor climates. Products are Swegon manufactures products and system solutions to provide healthy indoor climates. Products are manufactured in three advanced factories in Sweden. Swegon is represented in Ireland by Crystal Air Ltd in the Leinster region and by Comfort Cooling Ltd in the Munster region.

www.swegon.co.uk



Unit 7, Airport East Business Park,
Farmers Cross, Cork.
Tel: 021-4847100. Fax: 021-4847333.
E-mail: sales@comfortcooling.ie
www.comfortcooling.net



Unit 3, Butterstream Business Park,
Clane, Co Kildare.
Tel: 045-893228. Fax: 045-893229.
E-mail: info@crystalair.ie
www.crystalair.ie

Swegon
ENERGIZING INDOOR CLIMATE

trade news + product information

dinak tw flue systems

Hevac has introduced a new range of stainless steel twin-wall insulated flue systems from Dinak. Features include:—

- Low thermal inertia;
- Low thermal conductivity;
- High mechanical resistance to vertical and horizontal forces;
- Fire-resistant materials;
- Continuity of insulation in each element;
- Thermal expansion absorbed in each element so there is no requirement for expansion bellows;

Applications include domestic heating and hot water systems; industrial and commercial heating and hot water systems; bakery ovens; open fireplaces; ventilation and smoke extraction; and hot air generators.

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



success built on failure

InterConstruct '06 is the title of an international conference which will take place in the Burlington Hotel, Dublin, on 23/24 August next. It has been organised by the Institution of Occupational Safety and Health's (IOSH) Construction Specialist Group in partnership with a number of other leading, international, health and safety groups.

It will feature a number of case studies, including the new Wembley Stadium; Heathrow Terminal Five; and the Hong Kong Sky Rail. Each study will explore the challenges presented by these projects and detail how safety practitioners created a safe working environment.

"Success Built on Failure" is the theme of the event, the concept being to learn from past mistakes and to build a safe and profitable future.

Contact: Anne Smart, IOSH. Tel: 0044 116 257 3139; email: anne.smart@iosh.co.uk



new concept air handling from carrier

Carrier has introduced a new concept air handling unit called the Airostar 39SQ which was conceived as an easy-to-specify selection from the Airovision 39HQ range first made available 18 months ago. It is a stand-alone set of six standardised models taken from the most popular part of the 39HQ range.

Speed of delivery and quality are key features of the new range, with units available at prices similar to non-custom-built products. Ideal for medium-sized air distribution requirements, Airostar offers airflows between 0.4 to 4.7 m³/s.

Contact: Austin McDermot, Core Air Conditioning.
Tel: 01 - 409 8912; email: info@coreac.com

trade news + product information

flush-mount kit for magnehelics

The new Dwyer A-464 mounting kit from Manotherm provides a flush-mounting solution for Magnehelic gauge installations for applications such as clean rooms and mechanical equipment rooms. It can also be used as an alternative means to flush-mount Magnehelic gauges on control panels.

Mounting applications include sheetrock walls, control panel enclosures and air handling equipment. Finished in ABS plastic, the unit measures 15.9cm by 15.9cm by 0.6cm.

The space pressure reference port eliminates the need to drill separate holes and run tube long distances. Utilising the A-464 for Magnehelic installations reduces installation time while also producing an aesthetically-pleasing result.

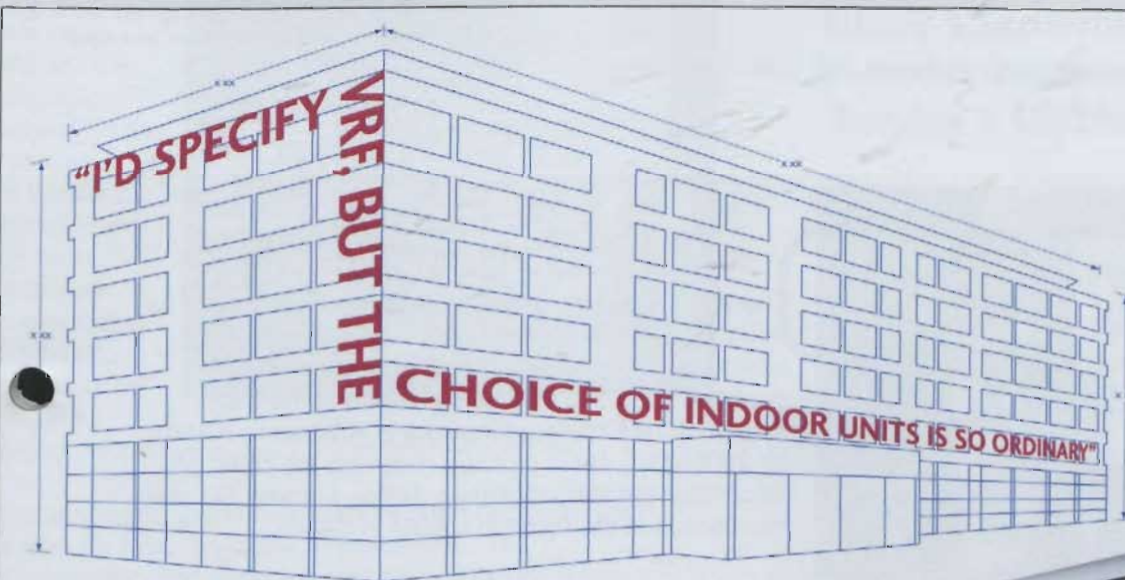
Benefits provided by the new A-464 kit include:—

- Space reference pressure integral to mounting plate;
- No need for special hole saws;
- Saves on installation time;
- Creates ultra-professional look.

Contact: Bob Gilbert, Noel Walsh or Robert Gilbert, Manotherm.
Tel: 01 - 452 2355; email: info@manotherm.ie



The new Dwyer flush-mount kit for Magnehelics from Manotherm



2000-2005
Global No.1

...YOU SHOULD TALK TO THE GLOBAL No.1

VRF is, without doubt, a highly sophisticated means of air conditioning, but matching that sophistication in terms of visual style in an indoor unit can prove difficult - unless you specify one of our Multi V VRF systems.

Because when you do, you can also specify our Art Cool series of indoor units and the incredibly stylish range of

MULTI V (VRF)

Available as either two pipe - Plus, running from 5hp to 40hp - or three pipe - Sync, running from 10hp to 40hp and featuring a highly efficient energy recovery system.

sizes, colours and finishes it offers - including the option to personalise them with bespoke graphics.

All the energy efficiency, flexibility and ease of installation of Multi V with the aesthetics of the Art Cool range - it's a unique combination you really should talk to us about.

ART COOL

The perfect blend of form and function - there are no indoor units quite like them.

**LG**

Air Conditioning

www.lgaircon.co.uk

+44 1753 876 772

trade news + product information

thermocold energy-e

Thermocold's Energy-E is a multi-function total recovery unit combining the technology of reverse-cycle and heat recuperator units to deliver hot sanitary water upon demand, regardless of load. Unlike conventional units which rely on a heat load, Energy-E is designed to provide 100% recuperation all year 'round.

Applications include office blocks, hotels, swimming pools and residential units.

Energy-E was showcased at Mostra Convegno in Milan earlier this year and, more recently, was introduced to the Irish market by distributors European Industrial Chillers at a series of presentations earlier this month.

Contact: Peter McMahon, European Industrial Chillers. Tel: 01 825 5155; email: chillers@eicl.ie

honeywell air cleaners

Honeywell electrostatic air cleaners remove destructive and damaging airborne dust and other pollutants when installed in hospital wards, offices, cafeterias and retail outlets.

They are available in various sizes and designs to suit the room size, layout and decor, in surface-mounted, recessed and even portable types that can be wheeled from room to room. All have high-efficiency fans for exceptional performance and are designed to provide an effective air distribution pattern while minimising draughts.

Contact: Honeywell Control Systems. Tel: 0044 1344 656000; www.honeywelluk.com



Honeywell's electrostatic air cleaners are available in a vast range of design styles and sizes



institute of arbitrators chairman

Chartered engineer Dermot F Roughan who heads up Roughan ADR Services of Dublin, a dedicated arbitration services firm that handles construction disputes, has been elected Chairman of the Irish branch of the Chartered Institute of Arbitrators (CI Arb) for 2006/2007. He is pictured receiving the chain of office from outgoing chairman James Macken SC after his election at the Institute's AGM in Dublin.

smart programmable relay

Building on the success of the original Zelio Logic smart relays, Telemecanique has introduced a new generation of expandable smart relays called Zelio Logic 2 which are ideal for building services applications.

With easy-to-use features and large LCD backlit screen, the Zelio is becoming widely used in pumping, alarm, lighting, access, heating and temperature, industrial and process control applications.

Contact: Schneider Electric. Tel: 01 - 601 2200; email: ie-sales@ie.schneider-electric.com

trade news + product information

kedco renewable wood energy solution

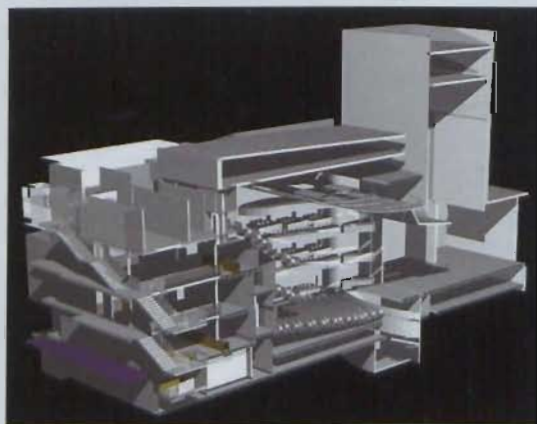
Cork-based renewable energy company Kedco has launched a new wood-based energy system range that caters for both the commercial and domestic energy needs. Managing Director Donal Buckley says the group has a projected turnover of approximately €10 million for 2006 and plans to invest €1.5 million over the next 12 months on research and development of renewable energy projects.

Commenting on the launch of its energy systems Buckley said: "Increasing energy costs and supply volatility are a major concern for Irish businesses and home owners. At Kedco we have developed a progressive alternative that provides a clean unlimited energy supply at a saving of some 15%-20% on traditional energy sources. This provides customers with energy cost control in uncertain times.

Contact: Margaret Barrett, Kedco Group. Tel: 087 -124 1262.

work to commence on wexford opera house

Cleary & Doyle Contracting Ltd have been awarded the €30 million contract for the construction of the Wexford Opera House. The main theatre will accommodate 750 theatre-goers and will include a



second performance space for smaller events.

Commenting on the announcement John O'Donoghue TD, Minister for Arts, Sport and Tourism said: "The reconstruction and refurbishment of the Theatre Royal in Wexford marks an important milestone in the development of the arts in Ireland.

Gordon Radloff, Managing Director, Cleary & Doyle Contracting Ltd, said: "As a Wexford-based company we are delighted and honoured at having been awarded the prestigious contract for the new Wexford Opera House. We are convinced that this illustrious new state-of-the-art facility will be a flagship for the county of Wexford and Ireland."

Construction will commence immediately in order for the Opera House to be built by summer 2008.

Architects, Specifiers,
Engineers, Surveyors,
Builders, Plumbers...

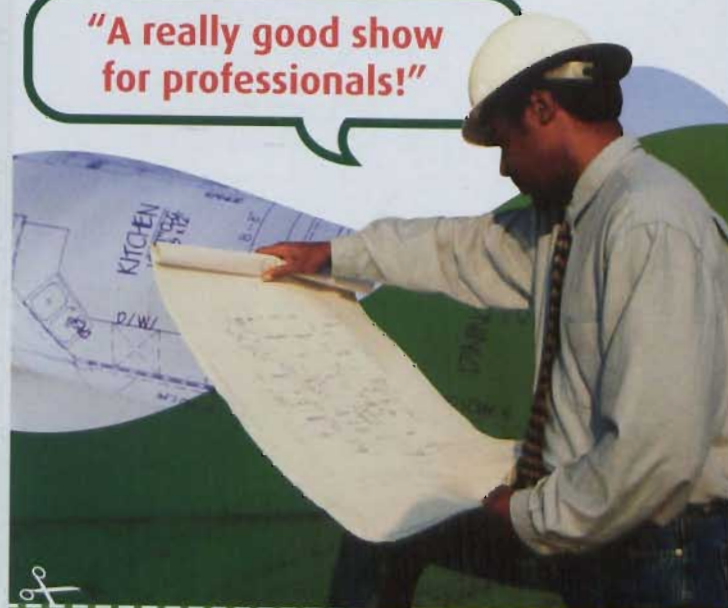
Visit the

SelfBuild
Extend & Renovate **SHOW**

Punchestown
Co.Kildare
1-3 September 2006

Friday 1 September 12 noon - 8pm
Saturday 2 September 11am - 6pm
Sunday 3 September 11am - 6pm

"A really good show
for professionals!"



SelfBuild

Extend & Renovate **SHOW**

ADMIT TWO

FREE
ENTRANCE

PUNCHESTOWN, CO.KILDARE 1-3 SEPTEMBER 2006

VALUE 150

Sanyo's Energy-Saving Window on the Environment

Energy saving is something which is becoming increasingly important for everybody involved in the air conditioning industry. *Barry Hennessy of Sanyo Air Conditioners* takes a look at this thorny issue and what can be done to help achieve it.

It is becoming harder and harder to plead ignorance on the subject of energy saving and its associated issues. Messages urging businesses to become carbon neutral are becoming more and more prevalent in the mainstream media.

The act of becoming carbon neutral is all about taking responsibility for the amount of carbon dioxide an individual or a business produces, and making an effort to offset this by taking part in some kind of carbon dioxide sequestering activity (traditionally tree planting). Many companies are already doing this, but the emphasis for real change is on the way businesses and organisations work. It is best to address the cause of the problem, if you like, rather than deal with its consequences.

The environmental implications of carbon emitting actions permeate almost every area of life and air conditioning is no different. Nor is the debate restricted to manufacturers and product technology; it is also about habits and how these products are used.

Earlier this year, researchers from Purdue University, Indiana, developed a method for 'pre-cooling' small office buildings to reduce energy consumption during times of peak demand. The method works by running the air conditioning at cooler-than-normal-settings in the morning, and then raising the thermostat to warmer-than-normal settings in the afternoon. Because the building's mass has been cooled down, it does

not require as much energy for air conditioning during the hottest time of the day.

Heat pump air conditioning is the most energy efficient way of controlling indoor temperatures. Heat pumps eliminate the need for separate heating and cooling systems as both actions can be carried out by one unit. Of course another significant advantage is a reduction in carbon dioxide emissions, especially with gas heat pump (GHP) technology.

Sanyo is totally committed to environmental protection. Using its business concept of Creating More Comfortable Living Environments and Enriching People's Lifestyles, its goal is to promote lifestyles that are comfortable and quality filled.

This commitment comes across strongly in its product offering and can be seen in action within the gas-powered product range. The new systems over 13 HP in this highly efficient GHP range have a newly-developed heat reclaim heat exchanger, which allows a system in cooling to supply waste heat from the engine into the hot water system, thus improving the system's coefficient of performance (COP) range. The Sanyo GHP system has



also seen an overall improvement in efficiency by using R410a refrigerant, and improved engine management. This has seen its COP ratings climb by 19% in gas consumption: 1.3 - 1.6, and in engine output performance: 3.5 - 4.32.

The Sanyo GHP range is a pioneering system that utilises mains gas or LPG as its main power source and single-phase electricity for start-up and fan operation. It is the only product to offer simultaneous heating and cooling, single phase power supply, the option of natural gas or LPG as its power source, 100% heating performance at -20°C, and a choice of DX or chilled water for indoor heat exchange.

As the foregoing illustrates, Sanyo is leading the way on environmental protection by bringing to market today products which help tackle the problems that the world will face tomorrow.

Ultimately, air conditioning manufacturers will be fighting for the key energy efficiency ground ever more voraciously to stay in the race for market share. Sanyo intends to be at the forefront of this battle.

Contact: Barry Hennessy or Sinead Duffy, Sanyo Air Conditioners.

Tel: 01 - 403 9900;

email:

barryhennessy@sanyoaircon.com;

sineaduffy@sanyoaircon.com.



The Sanyo GHP rooftop installation at Citibank, Belfast

Coming At Ya Soon!

The *bs news Product Specification Guide 2007/2008* is now being compiled.

All *bs news* subscribers will automatically receive their own personal copy, free-of-charge.

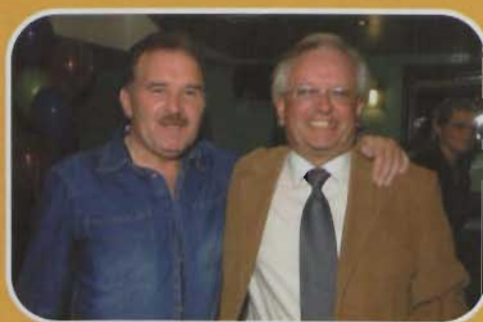
If you require additional copies place your order now. Copies cost €150 with discount for multiple orders of five or more.

Contact

Louise at Tel: 01 - 288 5001
email: louise@pressline.ie

Finheat & Liberty Celebrate Merger in Style!

Following the merger of Finheat and Liberty (see *bs news* May 2006), Jim King, Tim O'Flaherty and their colleagues hosted a celebratory evening in Dublin for invited industry guests and colleagues. The occasion was totally informal and featured a caricaturist, magician, hypnotist and security personnel who were best avoided! Our photographer was also present and the selection of photographs featured here accurately reflects the fun-filled atmosphere of the occasion.



Toshiba Mini-SMMS — 'Perfect Balance Between Large & Small'

The new Toshiba MiNi-SMMS is a small VRF system suitable for both private premises and commercial applications. Designed to bridge the capacity gap between versatile multi-split systems and larger-capacity VRF systems, the range of powerful, compact units offers flexibility and control, and operates on R410A refrigerant.

Simple piping instructions ensure fast and easy installation. The automatic system addressing can also be customised using the wireless remote controller during installation, eliminating the need for manual switch setting.

"The special compact design of this new outdoor unit is packed with advanced functions and money-saving benefits", according to Derek Phelan of Toshiba distributors, GT Phelan. "Thanks to Toshiba technology and the DC twin-rotary compressor, the new range of MiNi-SMMS offers the best solution in terms of energy efficiency with COP values of up to 4.61 for the 4HP unit".

The compact shape — 1340mm by 900mm by 320mm — and the weight of 117kg makes transport, handling and installation easy, especially on balconies and patios. Compared to the SMMS VRF 5HP unit, the MiNi-SMMS has a volume reduction of 70% and a footprint reduction of 60%. Extended refrigerant piping capability, multiple indoor combinations, and simple piping and wiring provide operational flexibility and labour and cost savings during installation.

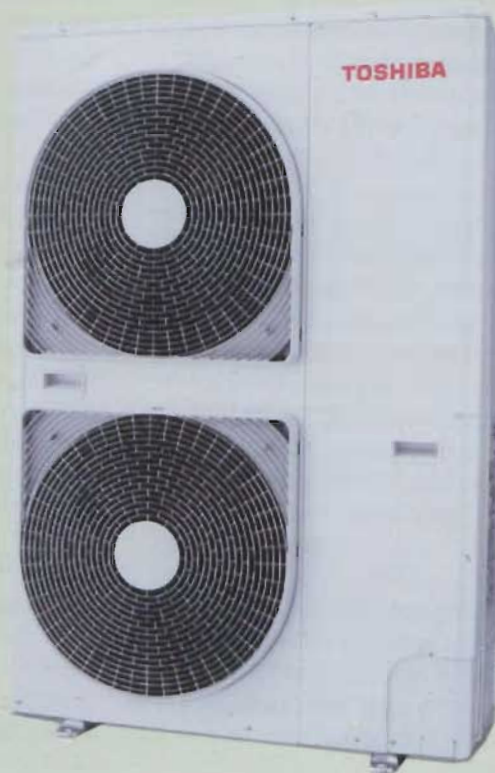
The system is fitted with a range of super-quiet, indoor fan coil units in 13 different styles, making for one of the most comprehensive choices of indoor units available in the marketplace. In fact, a total of 81 variations can be provided.

A new compact 4-way cassette — measuring 600mm by 600mm — with a reduced height of just 268mm is available in the capacity range 2.2kW to 5.6kW. The advanced design also fits any style of indoor decor.

There is also a new high-wall unit intended for small and medium spaces such as offices and small retail outlets. These units measure just 275mm by 790mm by 208mm and weigh 11kg.

The TCC Link control system is a standard interface with the full range of controls, as are SMMS controllers. PMV operation is used for areas where very low sound levels are required, making this the ideal solution for hotel rooms and private applications.

Contact: Derek Phelan, GT Phelan.
Tel: 01 - 286 4377;
email: gtphelelan@eircom.net;
web: www.gtphelelan.ie



PIR-ATC Pre-Insulated Panels from Irish Fan Distributors



PIR plates were always a product within the ATC portfolio distributed by Irish Fan Distributors but, with the latest range quality has been improved significantly, as have delivery schedules and the pricing structure.

The pre-insulated PIR-ATC panels are sandwich-like panels consisting of two sheets of pure aluminum embossed with an insulated interior of Polyisocyanurate (PIR) foam, not PUR as is the case with most similar products.

These panels provide many advantages, such as perfect air quality, as the air is strictly only in contact with aluminum; excellent insulation with a thermal conductivity coefficient of 0.025 W/m.k ; a complete seal as all the joints are sealed with glue and silicone; and lesser weight, $\pm 1.5 \text{ kg/sq m}$.

Fire resistance PIR-ATC plates are rated M1 Class according to UNE 23727 and smoke opacity was tested and meets class VOF4=4.1 in accordance to regulation NF-X10.702.

"However, one of the biggest advantages is the ease with which the material can be worked with", says Billy Wright, Managing Director of Irish Fan Distributors. "Anyone can be a manufacturer of rectangular ducts as it is more a case of assembling the ducts rather than constructing them. The tools

are extremely simple (a few knives) and all one needs to do is to follow the instructions in the manual provided. With PIR-ATC panels you can forget about transporting large ducts to site and instead simply assemble them on site.

"To ensure ease of assembly we also have our own profiles, flanges and accessories to match these panels. All of them are made from aluminum, meeting our high-quality standards. We even have a universal profile which in fact is a "triple" profile – chair, F and U in a single bar".

The new PIR-ATC range of panels is suitable for the construction of duct systems for air distribution, heating, ventilation and air conditioning systems and especially in applications requiring:—

- High hygiene capacities;
- Where ducting of fibre glass is traditionally used;
- Ducting of small and medium size;
- Low and medium-pressure levels ($< .000\text{Pa}$);
- Normal insulation capacities;
- Visible installations;
- Little loading on the building structure.

Thanks to the high number of closed cells (exceeding 95%), the panels have an initial thermal conductivity of 0.022 W/m.K at 0°C , according to EN 2667 standard. Fire reaction standards certification includes Class M according to UNE 23727 Spanish national standard; Class 0 according to British Standard BS 476 part 6; and Class according to British Standard BS 476 part 7.

Moreover, the panels can be used constantly in a temperature range from -40° to $+80^\circ\text{C}$ without any substantial differences in the thermo-ventilating insulating specifications. The lineal thermal expansion coefficient has a value of $40 \times 0.6 \text{ mm/mm.K}$.

Due to the thickness of the aluminum foil ($>50 \mu\text{m}$) the product can be considered as a vapour barrier. After 28 days of total immersion in water, the panel does not increase its weight by more than 5% according to EN 2087.

Contact: Billy Wright, Irish Fan Distributors.
Tel: 051 - 852 404;
email: sales@irishfandist.com

Another Side Of ...

James Byrne

When presenting James Byrne of Mercury Engineering with his bottle of champagne for being the first caller on 16 June in our bs news Wall Planner Competition, the subject of canoe polo came up in conversation. Not knowing anything about the sport we enquired further, presuming that it was a sedate, gentle pursuit where people in canoes gently tossed some kind of ball about. How wrong we were ... canoe polo sounds like the dodgems or roller ball on water!



James pictured with his team mates after they had won the Division 1 event at Killaloe Canoe Polo competition at the Brian Boru Festival.

During the day James spends his time drafting drawings, preparing OM manuals and co-ordinating document control. Invariably he is on site and is currently stationed at the massive Spencer Dock development in Dublin. He is also a part-time FÁS instructor.

However, in the evenings and at weekends his passion is being out on the water. When arranging a meeting with James for the first time it is easy to identify him ... all you have to do is keep an eye out for the car with the canoes strapped to the roof!

As a member of the Wild Water Kayak Club in Chapelizod, Co Dublin, James was introduced to the multi-discipline world of canoeing — slalom racing, canoe polo, river running and surf. He took to them all like the proverbial duck to water but, it was canoe polo which really captured his attention.

Now just in case there are any purists out there who know a thing or two about canoe polo, James did explain that the boats used are not in fact canoes ... they are kayaks. Nonetheless, they still call it canoe polo (don't ask!) so, for the purpose of this article, we'll stick with canoe.

James is undoubtedly drawn to,

and excited by, the cut and thrust of the sport. It sounds a bit like the dodgems and roller ball on water. Participants must wear a protective helmet, use special paddles which are designed not to cause injury, and canoes which are padded to minimise injury and damage.

"The sport in Ireland is especially physical", says James. "While there are rules and a referee officiates, the frenetic pace at which it is played — coupled with the enthusiasm of the participants — means that breakages are inevitable".

Over the years James has progressed up through the various competitive divisions and is now in Division 1. He and his team mates travel all over Ireland playing in competitions and just recently participated in their first overseas tournament in St Albert's Dock in Liverpool. "We did okay against the other Irish teams", says James "but found that the English teams were more disciplined and controlled. It's something we need to introduce to our game here in Ireland".

So, whether it is kayaking or canoeing, James Byrne seems unconcerned. What is obvious is that he is drawn to the thrill of the sport. Continue to enjoy James.

Focus on Energy

Active Solar Systems (solar DHW cylinders)



Gerard Berney
Senior Engineer
McCarrick
Woods

In this, the first of a new series of articles called Focus on Energy, Gerard Berney (CEng, MCIBSE, Eur.Ing) looks at the design and specification of a vented solar hot water cylinder. Gerard is now a Senior Engineer with McCarrick Woods but, before returning to Ireland from London in 2003, he worked on a number of "Green Cities" type demonstration projects paid for by the European Union.

The funding for these was designed to promote innovative energy-saving measures in buildings and Gerard worked on these projects for Housing Associations and Councils in the South East of England. Having recommended to his clients that they include these measures in their projects, he felt obliged to do the same himself in his own, all-electric, Gold Shield home in Dublin.

Gerard writes:— My experience in the UK had indicated to me that in no other technology is the present gap between the potential and actual supply of primary energy so large as with active solar systems. The failure of my neighbours' hot water cylinder (DHW) prompted me to make immediate preparations for the replacement of mine with a solar unit. In solar systems the design of the DHW cylinder is just as important as that of the roof panels.

Despite advice from some solar suppliers to convert my water system to mains pressure, to match their EU standard equipment, I

decided to go with a vented DHW design as this is the normal way that water services are installed in Ireland. While the solar circuit has to be pressurised, there is no reason that the DHW side has to change in any way.

My existing hot press was very small and the cylinder only 15" in diameter. By opting for a vented copper vessel I was able to have one made of equal diameter to the existing unit, and also to specify temperature indicators and sensor pockets not normally found on European glass-lined units. Solar cylinder design always includes a cold section at the bottom that cannot be heated in any way except by the roof absorbers. This ensures when the sun shines that there is always a cold mass of water to give the panels lots of work to do, and at their best operating efficiencies. I found that the four critical elements of the cylinder design were:—

- Overall capacity to suit the number of panels and a shape to encourage stratification;
- The ratio of solar coil section volume (Vs) to the boiler coil section (V);
- The length of the solar coil (i.e. its capacity) and its position as low as possible in the cylinder;
- Instrumentation and correct position of immersion pockets.

I used the following rules of thumb for sizing the panels in my home:—

- Daily DHW demand for a three-bedroom house @ 55L /bedroom = 165 L;
- My Danish panel supplier recommended 1 m² for each 50-65L of heated water;
- This made me select a single 3 m² panel;
- The collector supplier then recommend that the DHW cylinder should hold at least

50L-70L (better if 70-100L) /m² of collector area.

Therefore I needed a (3 x 70) = 210L cylinder to operate efficiently;

- The ratio of the cool lower section to the hot upper section Vs/V normally should not be less than 0.8 for gas and oil systems. In my Economy 7 type system I used a lower figure of 0.46 to ensure sufficient night storage was achieved. The cool section volume increases first thing in the morning, after showers are taken, ensuring that the solar volume is then sufficient for the day ahead.

The above rules resulted in the following cylinder specification:

Size: 210L.

Dimensions: 70" high x 15" diameter

Materials: 40psi, grade 2, Vented

Coils: 2 No

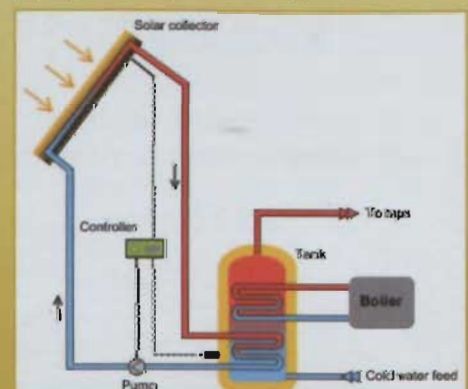
Immersion: 2 No

Temperature indicators: 3 No

Solar coil length: 6 M of 3/4" (use 1.5 m length per square m of panel).

The cylinder was manufactured and installed and has operated for the last three years without any problems whatsoever.

Next month I will look at the selection and installation of the solar roof panels, and piping, used in this case study.



'Sustainability Centre' at SelfBuild Show

Soaring oil prices have focused our attention on saving energy, but true sustainability goes way beyond that. It's about choosing materials which have the least impact on the environment and are made using small amounts of energy. It's about minimising waste, salvaging and recycling materials. In fact, sustainability is a way of life which reduces the overall negative impact on our planet.

The building industry is a huge consumer of materials and the choices can, at times, be bewildering. However, visitors to the SelfBuild, Extend & Renovate Show (Punchestown Event Centre from 1/3 September 2006) can visit a new "Sustainability Centre" which offers help and advice on all aspects of sustainability and how to build it into a home.

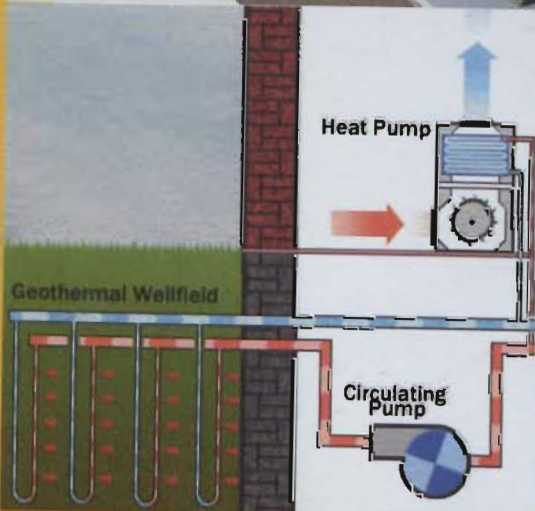
As well as regular talks, a panel of experts will be there throughout the show to answer questions on hot topics such as — How do you get your share of the €27 million on offer from the Greener Homes Scheme? What's 'Energy Labelling', and when is it happening? How do you build a truly Passive House?

SelfBuild will feature more than 200 exhibitors, many of whom have sustainable building products and/or expertise. Wood pellet and geothermal heating, wind turbines, solar and photovoltaic panels are just some products using the latest technology. There will also be high-performance insulation, heating controls and rainwater harvesting.

Clive Corry, Director of SelfBuild Ireland Ltd, organiser of the show, said: "This is a unique and dedicated event with no market stalls and no unrelated exhibitors. In addition to the new 'Sustainability Centre', visitors will find every possible product and service needed to build, extend or renovate a home. It's no longer just a question of timber frame versus traditional — you can now choose from insulated concrete formwork (ICF); structural insulated panels (SIPS); and log or even straw bale homes".

The Selfbuild Extend & Renovate Show opens Friday, 1 September 2006, at 12noon and runs through to 8pm. Opening times on the Saturday and Sunday (2 & 3 September) are 11am to 6pm. Venue is the Punchestown Event Centre, Naas, Co Kildare.

Contact: Clive Corry, SelfBuild Ireland. Tel: 048 97510570; email: info@selfbuild.ie; web: www.selfbuild.ie





Check out the benefits!



At last, a unique control system that provides flexible, energy saving air conditioning that's perfect for hoteliers everywhere!

The Mitsubishi Electric Programmable Logic Controller*1 (PLC) connects to our G50 control systems to provide maximum control for hotels everywhere. By simply programming the indoor air conditioning units to work in conjunction with existing key card systems, the PLC achieves the highest level of control.

When the hotel room is:

- > **Occupied with key card inserted.** The air conditioning is initially set to 'Auto' mode and 21°C*2. From this point onwards the guests then have full control.
- > **Occupied with the key card inserted and a window open.** When using the optional window sensor, the air conditioning is automatically switched off to save maximum energy.
- > **Unoccupied with no key card inserted.** The air conditioning is automatically set to 'Night Set Back' mode which maintains the room temperature between 16°C*2 and 26°C*2.

Using the PLC with our advanced control systems (G50 or Baby G50), enables all guest rooms to be easily monitored and/or controlled from a central point in the hotel, ensuring utmost comfort and maximum efficiency throughout.

It also:

- > **Ensures maximum comfort and efficiency** by preventing guest rooms being too hot or too cold prior to occupation.
- > **Saves energy** by avoiding guests inadvertently setting the wrong mode (ie. Heating/Cooling instead of Auto).

for **more** control than ever call 01-4198800

or visit www.mitsubishielectric.ie



Mitsubishi Electric (Ireland) Ltd.
Westgate Business Park
Ballymount, Dublin 24
Tel: 01-4198800
Fax: 01-4198890
Email: sales.info@meir.ie
www.mitsubishielectric.ie

*1 No dedicated computer is required
*2 Setpoint and temperatures are configurable



Licensing of Alarm Installers By PSA

The main functions of the Private Security Authority (PSA) are to control and monitor the private security industry generally, and to improve standards within the industry. This remit extends to both companies and employees involved in security guarding, door security, event management, alarm installation and receiving, private investigators, locksmiths and security consultants.

Alarm installation contractors are required to comply with EN 50131: 1997 for intruder alarms. Compliance with best practice in company formation, recruitment and training of staff are a key component of PSA licensing. Those elements are detailed in SR 40: 2005 "Electronic Security Service: Intruder Alarm, Access Control and CCTV Systems".

Certain aspects of this legislation require clarification and amendment. RECI is in discussion with the PSA on these matters.

New RECI Chairman

Thomas Heffernan has been appointed Chairman of RECI to succeed the outgoing Chairman Ivan Hammond. He is a prominent electrical contractor in the West of Ireland and been an AECl member since 1974. He served as President of the AECl for a period of three years. He is also a Peace

Commissioner for Galway City/County and surrounding counties. He has been a director of RECI for 10 years.



Electronic Completion Certificates

Use of the electronic cert system by contractors is increasing steadily. There have been some bugs in the system from time to time but this is to be expected in the development of new computer software. In general, the contractors using the system are very pleased.

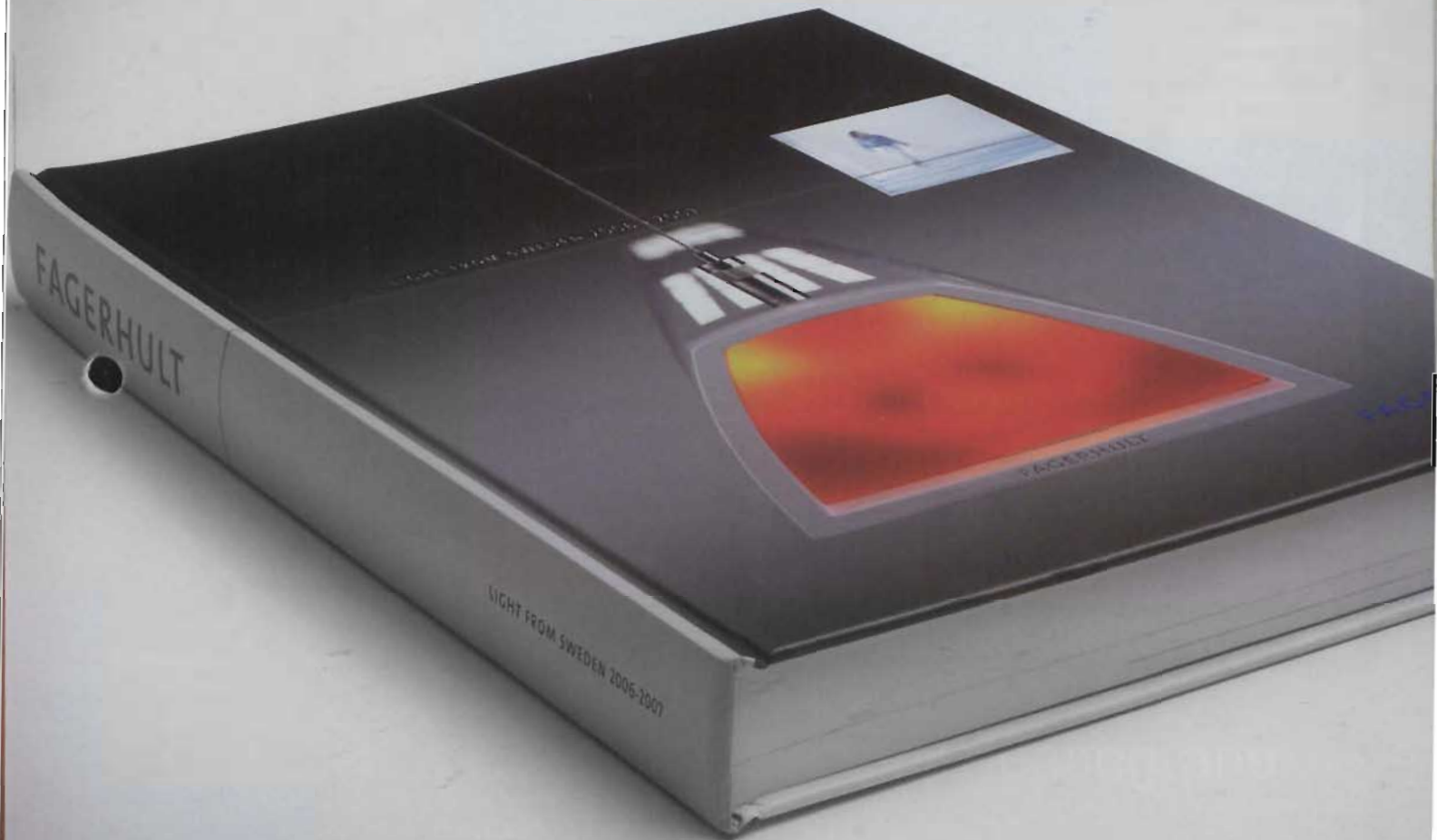
ESB networks are developing their computer systems to take account of the routing of completion certificates through the regulatory bodies and this will have a benefit for the electronic system as well. In future, when a contractor enters the MPRN to fill up an electronic completion certificate, he will be connected to the ESB MPRN site via a Web Services arrangement and the site address for that MPRN will automatically come up on his computer. If this address does not agree with the address he has been given by his customer, he must sort it out before filling out the Completion Certificate. This should prevent any mistakes whereby the wrong installation is connected.

Some of the benefits of using the electronic cert system are as follows:—

- No possibility of certificates getting lost or delayed in the post or mislaid during processing;
- A certificate cannot be rejected because it is not properly completed;
- Contractor has full control of certificates — no books of certificates to get lost;
- Easy reference to certificates at any time;
- The electronic certificate gives a good impression to customers.

NEW LIGHTING CATALOGUE

Light from Sweden 2006-2007



The new lighting catalogue from Fagerhult is on its way with lighting solutions for offices, schools, department stores, hospitals, industries and other applications. The technical information section has been substantially enlarged and contains everything you need to know about lighting planning, dimming, different sensors, light sources, etc.

This year's catalogue is more comprehensive than ever with new models and useful information for those working professionally with lighting.

If you work with lighting and have not received the catalogue, you can order it by sending an email to info@projectlighting.com



FAGERHULT IN IRELAND:
Project Lighting Ltd. Tel 01 426 0200 Fax 01 429 9606 info@projectlighting.com

FAGERHULT

reci — register of electrical contractors of ireland news

Tel: 01 - 492 9966; email: info@reci.ie; www.reci.ie

RECI

Completion Certificate Process Improved

The Regulatory Bodies and ESB Networks (ESBN) have agreed to make a number of improvements to the Completion Certificate process. These include:—

- Return of certificates directly to the regulatory bodies for validation before being sent to ESBN to improve safety and assign responsibility for validation to the appropriate parties;
- Validation that the MPRN address on the certificate matches MPRN and address on ESBN IT systems before certificates are returned to ESBN to further improve safety and eliminate subsequent delays caused by mismatches.

ESBN will set up a Web Services IT systems so that the IT systems used by the regulatory bodies to record the completed certificates and the Electronic Cert System used by contractors can call these Web Services to ensure that the MPRN and address is validated and the certification details are automatically sent to ESBN.

It is hoped that this initiative will go live in January 2007.

Cable Core Colours

ETCI has issued the following amendment to Chapter 51: Common Rules: Clause 514.3.4 (Amendment No 2) to be effective from Wednesday 24th May 2006:—

Delete the last paragraph beginning "*The following applies to insulated-conductor systems containing multi phase circuitsshall be brown*" and insert the following in its place:—

Note: "Where single-phase circuits are fed directly from a three-phase distribution board, the appropriate phase colours may be extended into the single-phase circuits fed from that phase. In all other single-phase circuits, the phase colours shall be brown."

RECI Comment: This means that where single-phase circuits are fed directly from a three-phase distribution board, the appropriate phase colours may be extended into the single-phase circuits fed from that phase or, alternatively, the single phase circuits may all be brown.

Too Many Serious 'Near Misses'

ESB Networks (ESBN) staff have experienced a number of very serious "near misses" throughout the country recently, some of which could have led to fatalities.

The main type of work that presents this problem is the wiring of apartments/commercial units. The usual scenario is that someone is moving in to an apartment/unit before ESBN have energised the meter covering that particular account. The electrical contractor "borrows" electricity from another meter, e.g. land lord or another meter, to energise the apartment/unit waiting for its own meter. This can create a dangerous situation for an unsuspecting Network Technician or others in close proximity to the metering position.

In the most recent incident the contractor connected another customer's electricity downstream of the "new customer's" main isolation/overcurrent device. This particular device was switched to the "off" position. Subsequently, the new customer's meter was fitted by ESBN and the contractor connected the new tails to this meter leaving the isolator open (note the customer's main isolation/over current device was still in the "off" position. He then closed the customer's main isolation/over current device and forgot to remove the "borrowed" cable.

In this new situation you had electricity feeding as before but now with different phases connected to the same circuit, separated only by an open isolator at the meter. The new meter's register did not advance and the customer complained that they had received no electricity bill. A follow up call by ESBN staff discovered the open isolator at the meter with a different voltage source at either side of the isolator and, worse still, a different phase, i.e. 400v. This standard of electrical work is unacceptable work.

underfloor heating from the global leader



Complete electric underfloor heating and
floor warming solutions

- Silent, invisible and maintenance free

Unlimited support from design through to
installation and after sales care

DEVI is the worlds leading electric underfloor heating manufacturer,
established over 40 years.

We have our own research laboratories, cable and thermostat manufacturing units.

We are a member of the International Group Danfoss, global leaders in research,
development and production of heating technologies.

Call our Project Sales Team to discuss your requirements

www.devi.ie

DEVI 

Tel: 01 460 2622

Underfloor Heating

Unitherm Heating Systems

The benefits of an underfloor heating system such as comfort, control, energy saving, aesthetics, a healthier environment, etc, are now well known and accepted. There is little doubt a properly-designed underfloor heating system, using quality products, offers the ideal heating solution for private dwellings, crèches, nursing homes, hotels, churches, offices, factory floors and public buildings.

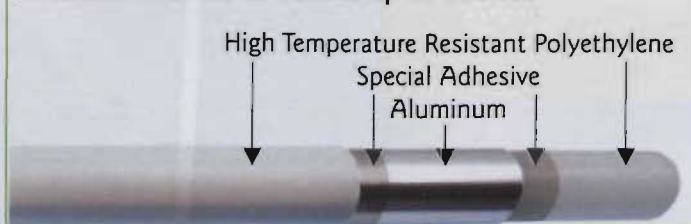
Many consultants, mechanical contractors and domestic heating contractors who, for historical reasons, were originally sceptical about the concept of underfloor heating have now embraced the technology, control and efficiency offered by an underfloor heating system.

For many years underfloor heating has been very popular for large private dwellings and the perception was that it was expensive.

However, underfloor heating has proven to be an ideal solution on many large housing developments and apartments where internal space is premium. Cost analysis carried out by Unitherm Heating Systems continue to show the cost of installing an underfloor heating system, coupled with condensing boilers, is now comparable to a traditional radiator system.

The Unitherm underfloor heating system is based upon German technology and experiences over the last 30 years. The system and the products are exported worldwide and have achieved an enviable list of approvals

Available in sizes of 16mm up to 63mm.



and accreditations in many European countries. The products are manufactured by renowned German companies such as Oventrop GmbH and Fränkische.

Unitherm Heating Systems offer PEX pipes with oxygen diffusion barrier in sizes 14mm, 16mm and 20mm. They also offer Turatec multilayer pipes (PE-ALU-PE) in sizes of 16mm, 20mm, 26mm and 32mm.

The central point of the system is an Oventrop stainless steel manifold or distributor which is corrosion-resistant and comes complete with lead-sealable topmeters. The topmeters regulate the heating circuit flow rate and can be read off a viewing glass. For ease of installation Unitherm offer the Oventrop

Regufloor regulation station. The station regulates the flow temperature of the heating medium at a constant value by using some of the return flow of the collector and a temperature regulator with contact sensor and a three-way mixing valve. The water in the circuits of the surface heating system is circulated by an electronically-controlled pump, e.g. to regulate flow rate according to demand.

If the system is operated alternatively with heating or cooling water, then the permitted flow temperature must be checked for the surface heating as well as for the surface cooling operation. Unitherm offers the Oventrop Regufloor HC for this purpose, which will keep the temperature of the medium at a constant set value, by

mixing it with some return flow. The three-way valve is operated here by a 3-point actuator which receives its signal for heating or cooling from a room thermostat.

In conjunction with underfloor heating systems geothermal heat pumps provide the optimal system solution for heat economy and in respect of protecting the environment. A heat pump draws a large part of the heating energy from the solar energy stored in the ground. Unitherm Heating Systems are associated with one of the leading heat pump manufacturers and energy solution designers in Europe. Outputs available are from 6kW to 26kW.

Unitherm Heating Systems also offer a complete range of modern high-efficiency gas boilers, wood burning pellet stoves and solar panels.

All Unitherm systems are individually designed and supplied with supporting mechanical and electrical layout CAD drawings. Unitherm offers a 10-year warranty on all systems designed, supplied and installed in accordance with BS EN 1264.

Contact: Unitherm Heating Systems.
Sales.
Tel 01 - 621 2939; 091-380038;
Peter Lynskey
(086 - 833 0051);
Declan Kissane
(086 - 833 0062);
Donny Bourke, Oventrop.
(087 - 239 7078).



Regufloor HC for heating and cooling



Nature's Heat Collected from
Surface Soil Boreholes or Lakes

uniPIPE

Unipipe Underfloor Heating Nibe Heat Pumps Nibe Stoves



Scandinavia's Most Popular
Wood Burning Stoves

A Perfect Match...like Coffee & Cream
Two of the Most Trusted Product Brands in
European heating
Unipipe & Nibe

Indoor Comfort Automatically Linked to the
Outside Weather giving greater Comfort with
No Wasted Energy



Unipipe underfloor heating



NIBE -Europe's Largest Manufacturer of Heat Pumps

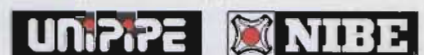


Harnessing Nature's Heat - House Design
by Fitzpatrick & Mays Architects

www.unipipe.ie

40 Southern Cross Business Park, Boghall Road, Bray, County Wicklow
T: 01 2864888 - F: 01 2864764
E: info@unipipe.ie - W: www.unipipe.ie

Distributors for:



Do it once.... Do it right!

Underfloor Heating

'Grundfos Circulator Sets Record in Energy Savings'

A power input of as little as 6W has secured the new Grundfos Alpha Pro an A-classification in the European energy-labelling scheme for circulator pumps. This result is a quantum leap forward in the development of energy-optimised circulator pumps and is based on the company's experience and technology which has already resulted in a significant reduction in the energy consumption of large pumps.

Using this expertise Grundfos has managed to develop a solution which sets completely new standards for the energy consumption of small circulator pumps. An annual energy consumption of only 90 kWh throws the

traditional average pump's consumption of 500-600kWh in relief — and even in comparison with other energy-optimised pumps this is a significant improvement. The combination of a frequency converter, a completely new and compact stator construction, and a unique permanent magnet motor technology makes all the difference.

According to Grundfos, this is the first time that circulator pumps this small have been equipped with a frequency converter and a certain amount of new thinking has been required in the pump construction. A new patent has been taken out on a new cooling system for the electronics, and the currents from the frequency converter are sinusoidal. Not only does this make it possible to regulate the speed accurately according to any given operational situation, it is also claimed to make the Alpha Pro the quietest circulator pump in the market.

The construction of the compact, segmented stator also breaks with tradition. Grundfos engineers have succeeded in designing a construction which makes it

possible to create a stator using considerably less copper wire. This results in a minimum power loss in the motor. The reduced consumption of copper is also of great benefit to the environment.

This is also the first time the revolutionary permanent magnet motor design is used in small circulator pumps. The combination of the highly-efficient frequency converter and permanent magnet motor ensures Grundfos' new ALPHA Pro of unparalleled energy efficiency.

The Alpha Pro is easy to install — even in places where space is limited. Once the mains plug has been installed, it is a question of "plug-and-pump". The pump's digital display tells the installer when the pump has been correctly installed. Following installation, the display shows the current power input.

Two buttons can be found on the control panel — one is used to automatically switch on and off reduced night-time duty. When ALPHA Pro records a reduction in the flow pipe temperature, the electronics reduce the pump speed to a minimum. In

80/90% of all installations it will not be necessary to change the pump settings following installation. However, the other button on the control panel allows house-owners to change the pump's feedback control. This is where advice and guidance can be found in a Quick Guide (positioned on the side of the pump), for example on settings to use with radiators, floor heating or old single-pipe systems.

Alpha Pro has an in-built de-blocking device, which by means of little vibrations in connection with start and stop, removes any particles or impurities that have accumulated in the pump.

Based on the energy consumption of an average, unregulated pump — which belongs in the E or D category — pumps are ranked according to consumption. The energy consumption of A-labelled pumps is on average 75% lower than in those pumps that are currently being installed. The energy consumption of the Alpha Pro has been reduced by more than 75 %.

Contact: Gemma Horan, Grundfos Ireland (Ire).
Tel: 01 - 408 9800;
email: info-ie@grundfos.com



A power input of as little as 6W has secured the new Grundfos Alpha Pro an A-classification in the European energy-labelling scheme for circulator pumps.

Underfloor heating solutions



WIRELESS AND RELIABLE

**Individual room temperature control —
comfortable temperatures in
any room at any time**

Honeywell

For more information
contact: Paul Manning
on + 44 797 445 1034

Underfloor Heating From Heat Merchants & REHAU

Heat Merchants and REHAU have been working closely together since 2002 to bring together a first class service in the supply of underfloor heating in Ireland, for both domestic and commercial installations. Over this time project design and development teams have been established, a sales network, over 38 branches nationwide have been developed, along with an approved installer panel.

Support is provided in the form of on-site visits and training. Technical support for



the large network of installers is only a phone call away.

Rehau has over 25 years experience in underfloor heating and supplies high-quality systems suitable for a wide range of applications, one of the reasons why Heat Merchants is selling and distributing the Rehau system. Over the years Rehau has extruded and installed millions of metres of its Pe-Xa pipe. Pe-Xa pipe is manufactured from crosslinked polyethylene and has a co-extruded Eval Oxygen diffusion barrier. It is quite simply one of the best pipes available on the market and is widely recognised across Europe as the most "fit-for-purpose" material for underfloor heating.

Rehau's fittings are manufactured from DZR brass and over 45 million have been installed. Their manifolds are manufactured from high-quality brass, the main body being a one-piece design. A compact mixer and a range of

controls that simplify the operation of the underfloor heating system are also available.

Control systems supplied by Heat Merchants are Horstmann, Mullenhoff, Heatmiser, OJ and Danfoss wireless system. The above controls are for the controlling of the underfloor heating system. We also supply weather compensation systems from Heatmiser, OJ and Danfoss.

The difference in choosing an underfloor heating system supplied by Heat Merchants is that each project is specifically designed. It is project driven and supported to a high level. Typical installations include domestic housing, sports halls, community halls, nursing homes, crèches, refurbished old cottages, factory outlets, showrooms, etc — the list is almost endless.

To support the Rehau underfloor heating system Heat Merchants are also able to offer a wide range of options for high-efficiency boilers from the Baxi and Keston commercial ranges; now the PZP Heatpump system; Aero and Geothermal; Solar panels from Absol; DJG stainless steel cylinders; and Wood pellet boilers.

At present, Heat Merchants stock over 250 Rehau products and aim to see this stock-holding and warehousing operations expand even further. Along with the Rehau underfloor heating system, Heat Merchants also stock Rehau's flexible pipe system that is suitable for all types of plumbing and central heating application. Pe-Xa pipe is the main component part of the system with 16mm, 20mm,



25mm and 32mm fitting being available. However, larger sizes such as 40mm, 50mm, 63mm, 75mm, 90mm and 110mm are available on special order should they be needed for a specific project.

Feedback on the flexible pipe system has been excellent which is good news for both Heat Merchants and Rehau where customer satisfaction is the number one goal.

The Rehau Rauthermex product, a pre-insulated pipe system for below-ground application, brought into the Heat Merchants range last year has become a popular product. This is available from stock in 25mm, 32mm, 40mm and 50 mm Duo. However, a variety of other sizes are available to order in the Duo (flow and return) and the Uno (single pipe). Applications include heating flow and return, hot and cold potable water, secondary water supply and secondary water circulation.

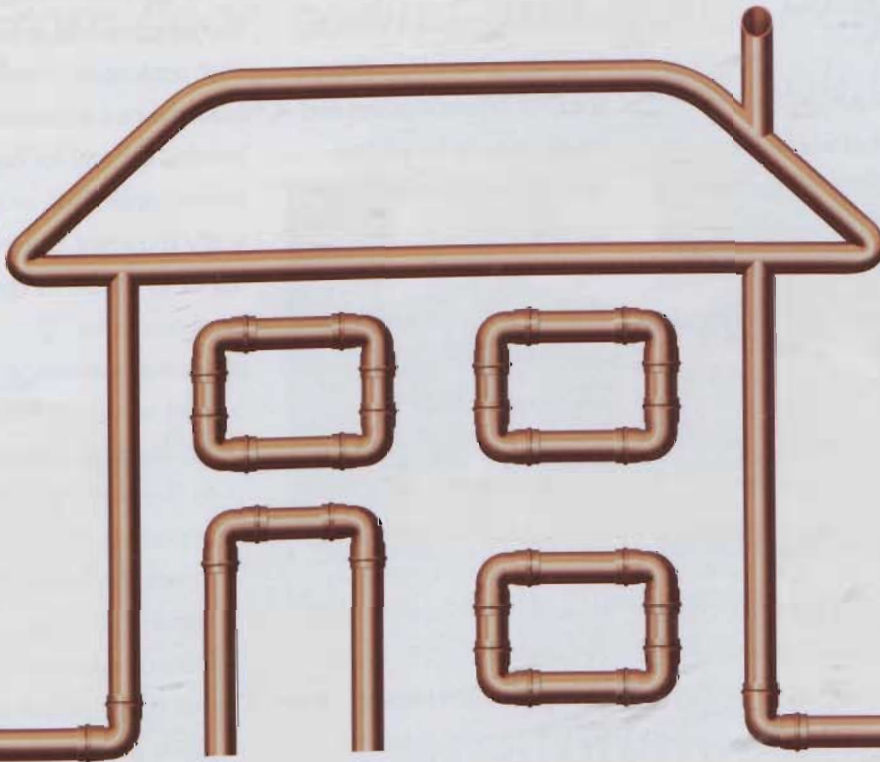


On the underfloor heating side of the business Heat Merchants now stock the Rehau "Smartsystem 16" which is a system designed for the conservatory and small extension market. The system is designed to run directly off the existing heating system within the property and is extremely easy to install. It can also be used as a separate heating system, with its own controls.

At present Heat Merchants holds a UFH training day on the second Thursday of every month covering the theoretical side of underfloor heating. Site training is still held when required. Controls training is being planned for the near future.

Heat Merchants aim is to supply the Irish market with high quality products that are supported with a high level of technical support. Working closely with Rehau they are well on their way to achieving this aim.

Contact: Your local Heat Merchants branch or Andrew Lightbody, Heat Merchants Product Development Manager & UFH Engineer, or Jean Furey, Leo McCormack or David Quinn. Heat Merchants UFH Engineers. Tel: 090 642 4083; 090 644 2309/11/21; email: ufhinfo@heatmerchants.ie; www.heatmerchants.ie

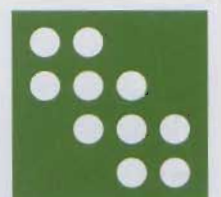


➔ IRISH METAL INDUSTRIES: TUBE WITH BUILT IN QUALITY

WHEN QUALITY AND RELIABILITY COUNT, SPECIFY TUBE FROM IRISH METAL INDUSTRIES

Thousands of properties in Ireland have a built-in quality product – copper plumbing tube from Irish Metal Industries. With its 25 year guarantee and carrying either the Irish Standard Mark or BSi Kitemark, our tube offers you proven and trouble-free service, year after year.

You can rely on Irish Metal Industries tube – so ask for it by name.



**Irish Metal
Industries**

Quality Systems, Design Excellence & Installation Guidance from Unipipe

With underfloor heating, rooms are heated by (lukewarm) water circulating in continuous pipe loops embedded in the concrete floors. To ensure total reliability, there are no joints in the pipes in the floors. Virtually any floor covering can be used but many people are surprised to see that the seemingly unlikely combination of wooden floors and underfloor heating are growing hugely in popularity.

Most solid woods can be used once dried slowly over the heated floor before fixing. Alternatively, some manufacturers of wooden floors such as Admont and Rappgo with their three-layer wide-plank floors (also supplied by Unipipe) carry a warranty for use with this type of heating.

The benefits of underfloor heating include:—
Comfort — The even feeling of comfort from radiant floor heating is the most common reason why people choose this form of heating over others;

Aesthetics — The only part of the heating system on view is a thermostat discreetly located in each room. The

manifold, which distributes the water to all the circuits, is usually hidden in a cupboard or press.

Lower Running Costs — Rooms feel warmer at lower thermostat settings. This, coupled with the lower water temperatures, results in running cost reductions up to 25%.

Control — Heat in rooms is individually, and accurately, regulated by their own thermostats. Other options include programmable room thermostats which give even more precise control;

Hygienic Heating — Because of the way underfloor heating works, less air is moved about and therefore less dust is deposited;

Silence — Unlike the constant background hiss of water passing through radiators, floor heating is totally silent;

Adding Value Property — Fitting underfloor heating makes a property more desirable for re-sale.

Latest innovation from Unipipe is the new lightweight construction system which consists of a basic

component with a "press-stud" row at the edge — a safe and solid joining of the plates is thus guaranteed. In meander-shaped installations, the heat emission plates and bends provide for a better heat transmission in the pipe bend area.

Due to the low height and the need of only one basic component, the Unipipe lightweight construction system is also an ideal stock product for wholesalers. Whether bifilar installation, meander-shaped installation or installation in 45° angles, the system components allow for individual layout of the heating loops.

As the foregoing illustrates, the principle of underfloor

heating and the benefits it offers are very straightforward. However, choosing the right system for each application — and making sure it is designed and installed to cater for each specific application — is vitally important. Unipipe can deliver to this demanding brief on all counts. Its comprehensive design support service includes:—
— Advice on boiler selection to ensure compatibility;
— Underfloor circuit layouts provided in AutoCAD colour;
— Controls selection and wiring layouts drawings which are easy to follow;
— Boilerhouse schematic diagrams;
— On-site instruction given to the installer;
— Design of specialist systems such as NIBE Heat Pumps;
— Special tools provided if required, along with all necessary collector or borehole dimensions;
— Hot and cold water services and relevant controls, including cylinder sizing.



The new Unipipe lightweight construction system makes for easy and secure installation, whatever the design and individual layout of the loops.

Contact: Paul O'Donnell,
Unipipe.
Tel: 01 - 286 2888;
email: info@unipipe.ie



Polytherm Heating Systems Ltd

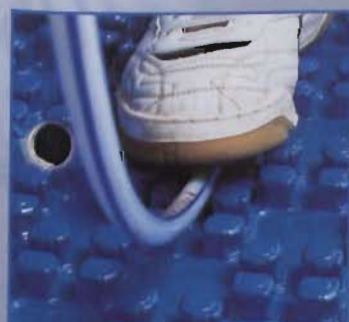
Radiant Heating Systems

*Warmth everywhere it's needed.
From floor, ceiling and walls, Polytherm has the
systems and ideal solutions.*



Muirfield Drive, Naas Road, Dublin 12.
Tel: 01 - 419 1990; Fax: 01 - 458 4808
email: info@polytherm.ie

www.polytherm.ie



New Build, residential and commercial.
Polycomfort®



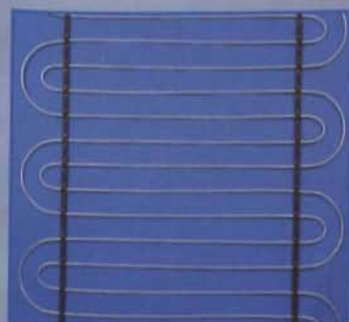
New Build and refurbishment.
Polydynamic®



New Build, refurbishment and wall heating. Suits joisted floors.
Heatrack®



For industrial applications and heavy loads.
Polycargo®



Wall heating using
Wallheating



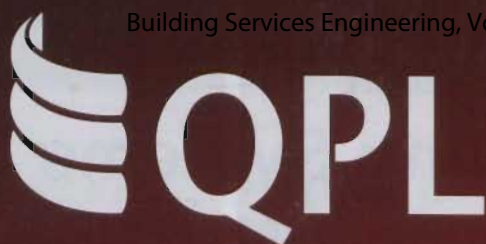
District Heating —
pre-insulated pipes.
Calpex®



Sprung flooring systems
for sports hall.
Polysport®



Heat pumps for
outdoor installation.
Geopack®



QUALITY PLASTICS LTD

Building Services Engineering, Vol. 45 [2006], Iss. 7, Art. 1

"Four Seasons in Six Months" with Cosy Home



For most homeowners the initial decision to add a conservatory to their home is their attempt to gain the maximum advantage from the sometimes unpredictable nature of our summer weather. A conservatory can allow us to enjoy some sunshine at the start and end of the summer period even if the

wind chill can be giving us a signal that the summer is really only three months long after all. For the rest of the year a conservatory is at best bright but cold, and at worst downright uninviting if one is sitting reading the Sunday newspaper in the middle of December. The simple fact is that most people give little attention to the heating requirements of a conservatory. A proper heating system can transform a "summer" room into a true "four seasons" extension to a property

Traditionally a heating system in a conservatory entailed the installation of a radiator. In other words heating the conservatory was treated in the same manner as heating a standard room. However a conservatory is very much a different type of room to the norm. The enormous amount of exposed glass surface,



even double glazed, is not conducive to holding in heat. The end result being that heat generated by radiators tends to dissipate quickly towards the roof of the conservatory leaving large cold areas that receive little or no heat.



STEP 2:
Lay Pipe on the 50mm
Polyurethane insulation
before pouring 75mm
Screed Floor



A much more appropriate method of heating your conservatory is to employ "Underfloor Heating". Underfloor heating consists of a pattern of pipes laid under the entire floor area of the conservatory that carry heated water. This heated water heats the floor itself which then in effect becomes a large radiator radiating heat uniformly throughout the conservatory. An additional benefit is that

once the floor is heated it acts like a storage heater, slowly releasing its stored heat over a prolonged period even when the heating is turned off. For sheer comfort and running costs Underfloor heating is simply a must have for a conservatory.



STEP 3:
Pushfit Connections to
Flow and Return of
Radiator Circuit and to
Underfloor Pipe Loop

QUALITY PLASTICS LTD.

<https://arrow.tudublin.ie/bsn/vol45/iss7/1>

"Conservatory Easy Steps Underfloor Heating Kit

et al.: BS News



STEP 6:
**Enjoy the Luxury of
Underfloor Heating**

STEP 5:
**Fix Protective White
Plastic Cover Over
Booster Pump Unit**



Quality Plastics Ltd. has developed a box kit that contains all the elements you need to install an Underfloor heating system in your conservatory or indeed in any room extension in your home.

As well as supplying comfortable, uniform heating throughout the conservatory or room, Underfloor heating removes any restrictions on furniture layout due to the absence of radiators. The Underfloor heating kit can be used on tile, floating timber or carpet floor finishes.

The kit which is supplied in a box contains a small number of components and simple instructions that will allow any plumber or DIY'er to successfully install the system. In just six simple steps you can be enjoying the luxury of Underfloor heating. The system connects directly into existing radiator pipework and utilises the hot water from the existing heating system. A boost pump and mixing valve ensures the correct temperature and pressure of water is supplied. A pre-wired wall mounted programmable room thermostat gives independent time and temperature control for the conservatory. It's simply a case of laying the pipework completing the easy to make connections to the flow and return of the radiator pipe circuit and to the Underfloor heating loop, and then plugging in to a three pin plug socket. Everything you need comes supplied even down to the pre-wired three pin plug. Simple, effective and affordable. With a recommended retail price of just €560.68 + VAT this kit can truly enhance your pleasure and utilisation of your conservatory.

STEP 4:
**Connect and Wall-mount
Programmable Room
Thermostat for Individual
Temperature Control**



Quality Plastics Ltd. P.O. Box 29, Whites Cross, Cork
Phone 021-4884700 Fax 021-4884701 WEBSITE www.qpl.ie

Underfloor Heating

Oil-Fired Range Cooker Provides Four-Zone Control Underfloor & Radiator Heating

In a unique installation at a stone cottage in Cornwall, in the UK, an oil-fired range cooker is providing mains pressure domestic hot water and four zones of energy-efficient underfloor and radiator heating. Honeywell wireless controls, cylinder thermostats and control valves are used throughout to maximise comfort, energy efficiency and speed of response. A Sandyford cooker and a Casaverde water interface cylinder ensure the whole system is very economic and responsive.

The two underfloor heating and two radiator heating zones are each regulated by a Honeywell CM60RF wireless programmable thermostat. Being wireless, they required no cabling and can rest on a surface or slot into a wall bracket. The Honeywell



wireless receivers (one per zone) operate Honeywell valves on the underfloor heating manifolds or radiator circuits, as appropriate. Each CM60RF is capable of six time/temperature changes per day.

The system is designed to maximise energy efficiency and minimise firing of the Sandyford's boiler to prolong

its life. Hot water from the Sandyford enters the top of the insulated cylinder and returns from the bottom. Domestic hot water at mains pressure is heated by passing through a coil in the top of the cylinder. The draw-off temperature is 75 °C, but is blended to provide 45 °C at the taps.

Whereas the radiator heating

circuits are fed by the boiler, water for underfloor heating is drawn from storage in the bottom third of the cylinder. Efficiency is assisted by accurate temperature regulation of the cylinder using Honeywell immersion thermostats and the relatively low draw-off temperature for underfloor heating — about 60 °C, blended down to deliver 50 °C to the manifolds. This ensures there are no large cycles of depletion and recovery within the cylinder. The lower temperature is also safer than is customary in conventional underfloor systems, where the boiler links with the manifolds directly.

Contact: Honeywell Comfort Controls.

Tel: 0044 1344 656000;
email
literature@honeywell.com;
www.honeywelluk.com

Unique Product Finder for IMI Copper Customers

Yorkshire Copper Tube — Irish Metal Industries Ltd's parent company, KMEuropa Metal AG, Europe's largest manufacturer of copper plumbing tube — has re-designed its website (www.yct.com) to incorporate several new user-friendly features, including a unique "Worldwide Product Finder" search option.

The Product Finder gives customers the opportunity to input tube specifications to

find the correct Yorkshire copper products that will meet their requirements. Customers can also view, request or download all of Yorkshire's comprehensive product and technical literature, as well as registering for email information updates.

Conor Lennon, General Manager, Irish Metal Industries Ltd, said: "The site has been re-designed to help customers find the products

and services that they need quickly and easily, as we are committed to being the copper tube supplier of choice.

"We also recently launched 'The Copper File', a range of brochures with extensive information on the company's product ranges and a comprehensive technical guide on the use of copper plumbing tube. The new look website is another demonstration of the

company's continuing focus on quality customer support."

The website also contains useful links to copper and plumbing industry bodies and organisations and will soon be accessible through Irish Metal Industries own web site www.irishmetalindustries.com

Contact: Conor Lennon, IMI.
Tel: 01 - 295 2344;
email: conor.lennon@irishmetalindustries.com

Unitherm

HEATING SYSTEMS LTD



Oventrop Stainless Steel Manifold and Regufloor



Pipe Laying with Adjustable Pipe Decoiler



Radiant Wall Heating

oventrop



Inch Heating



Geothermal Heat Pumps



Oventrop Regufloor H



Turatel Pipes

control
comfort
aesthetics
energy saving
healthier living
german technology

Unitherm Heating Systems Ltd

8A city east business park, ballybrit, co galway tel: 091 - 380 0038 fax: 091 - 380 0039
peamount industries, newcastle, co dublin tel: 01 - 627 2532 fax: 01 - 627 2532
email: info@unitherm.net web: www.unitherm.net

Polytherm Geothermal Technology Coupled with Underfloor Heating

Having pioneered the introduction of underfloor heating to Ireland many years ago, it's not surprising that Polytherm is now one of the market leaders in the country.

Underfloor heating technology has advanced considerably in recent years and Polytherm has travelled the world to identify and source the most efficient and cost-effective system. The result of that effort is Polytherm's Heatrack System.

Heatrack is a patented, concrete-free, underfloor heating system featuring single Heatrack panels which are aluminium-backed for greater energy efficiency.

Because they are pre-assembled and folded, the panels are easy to handle and transport. To install, the panels are unfolded, the sections interlocked and fastened to the sub-floor, and the Polytherm tubing "walked" in.

Supported by over 25 years of Pex production experience, Polytherm tubing's electronically-crosslinked polyethylene ensures the most uniform structure. The high-density tubing is constantly monitored and tested to assure the highest possible quality and longevity. It also meets the rigorous ASTM and DIN standards.

Polytherm complete floor



The new Geopack® dual-fluid system heat pump from Polytherm

heating solutions include a wide selection of expandable and pre-assembled solid brass injection stations and control manifolds. Complete with brackets, they are supplied ready to hang on the wall.

There is also a wide choice of non-electric and electric control systems, from single room monitors to the most sophisticated optimisation controls for any radiant heating system.

Among the other underfloor heating systems from Polytherm are:—

- *Polydynamic*: for new buildings and refurbishment of old buildings;
- *Polycomfort*: for new build;
- *Polyconstruct*: for commercial applications;

- *Polycargo*: for industrial and commercial applications;
- *Polysport*: a resilient system for sports halls.

Forever looking to further product innovation, Polytherm has just unveiled the Geopack dual-fluid system heat pump which comes fully assembled and ready charged with refrigerant fluid, ready to use, straight from the factory. It is designed for outdoor installation, perhaps against a wall or a house, or equally well at the end of a garden. It can be left out in the open or hidden away.

Geopack comprises a spiro-orbital scroll-type refrigeration compressor, a heat exchanger unit, and all the necessary safety-based control components. The complete compressor system, including the special

copper tube energy captor buried in the ground, is fully assembled and filled with refrigerant gas in the factory. This results in a compact, single unit which is ready to install and commission. The above-ground installation makes for easy servicing.

The water-based half of the system, together with the system control panel, is installed as normal in the house. Installation and commissioning is very simple and quick, and can be undertaken with normal plumbing skills. The skills of a qualified refrigeration engineer are not required.

The COP using R407C refrigerant is between 3.9 with the refrigerant at -5°C and water at 35°C, and 5.1 with the refrigerant at 0°C and the water at 30°C. These figures were tested by Cetiat and certified by Promotelec and Eurovent (water to water heat pumps).

Contact: Seamus English, Polytherm.
Tel: 01 - 419 1990;
email: info@polytherm.ie



Heatrack® underfloor heating system from Polytherm

think **renewable** think **heat merchants**



Solar Panels



Geothermal Heating



Wood Pellet Burners



Underfloor Heating

HEAT MERCHANTS



Branches nationwide. www.heatmerchants.ie

Contact:

Southern Ireland - Stephen Sheenan 087 2464231

Dublin Area - Eoin McKiernan 087 0505966

Midlands, West & North - Ken Lenihan 087 9978414

'Electric Underfloor Heating Now a Viable Contender in the Market'

As with virtually everything else in our day-to-day lives, electric underfloor heating has changed significantly from what it was 20 or 30 years ago. Then it was regarded, unreasonably, as a potentially dangerous system to have installed — especially in bathrooms — and seriously expensive to run, writes *Steve McCall, Managing Director, DEVI*.

The high cost of electricity was compounded by the comparatively poor building standards of the time. Furthermore, the situation was aggravated by the limited technology inherent in metering and heating control.

We've come a long way since the 1970s. Not only in terms of building standards and metering, but in a whole raft of other factors that contribute to the overall cost-effectiveness of electric underfloor heating.

Costs are better kept under control by the prevalence of effective insulation of the entire building envelope, as well as the insulation that is now an integral part of 21st century underfloor heating systems packages.

Taking the benefits of insulation as a whole, complemented by extremely accurate controls and with underfloor heating evenly

distributing heat gently circulating from the floor upwards, an average room temperature of 22°C can be reduced to 19°C without any loss of comfort and with an energy saving of 15%.

Back in the 1960s and 1970s and, indeed, right up until a very short time ago, control of heating output was pretty basic. For years there were thermostats that were set at specific temperatures, with separate timers that could switch on and off twice a day and no more.

Progress saw the timers extend to daily/weekly permutations, while the thermostats remained pretty basic, with most installations having a single thermostat reacting to the temperature in one room but controlling the radiators throughout the property. Radiator thermostats were a refinement of a sort but, compared with what is now coming on to the market they were — and still are — limited in their efficiency.

Technology has leapt forward in recent years, producing combined thermostats and timers that can not only be programmed in the usual way to come on and off at different times and at specific temperatures, but which also "learn" the temperature characteristics, both of the

floor and the room at large.

As a result, the time controller switches on the system at the appropriate time to ensure the heating is at the right level at the correct time, i.e. when the family is getting up in the morning or coming home in the evening.

In addition, controls can be programmed to react to room and/or floor sensors. This depends on whether the requirement is for floor warming, as the main source of heating for the property, or where the floor temperature needs to be limited. Another refinement now common for storage heating is an outdoor sensor.

At the beginning of this article I referred to underfloor heating sometimes being regarded as dangerous. People used to be worried about it in bathrooms in particular, understandable perhaps in the context of the presence of water. Inevitably, in our more closely-regulated

world, electric underfloor heating has to be manufactured to specific standards to ensure they are watertight and able to carry the current specified.

Cabling is screened, earthed and installed with an RCD relay and installation has to be done in accordance with the IEE Wiring Regulations and prevailing building regulations.

The cable screening would normally have the cable surrounded by a layer of insulation, then by an earthed screen and finally by another layer of insulation. Some would say this is a belt-and-braces approach, but it is this approach to performance, safety and cost that has taken electric underfloor heating back into the mainstream heating market.

Contact: Steve McCall, Managing Director, DEVI.
Tel: 01 - 460 2622;
email: mail@devi.ie;
www.devi.ie.



grundfos bray head golf challenge

There is no doubt that the Grundfos annual golf day has its own, somewhat unique, feel to it with both serious and casual golfers playing side by side in a team event that works extremely well. This year it moved to Bray Golf Club with the long, very tricky course putting even the low-handicap participants to the test. That said, scoring was not at all bad, the beautiful weather and surroundings making for a very pleasant and enjoyable day.

The formula on the day comprised approximately 40 invited guests playing in a team event and singles competition before retiring for the presentation of prizes and an excellent meal in the wonderful clubhouse.

This annual outing has an aura all of its own, the evening inevitably concluding with some mighty craic hosted by Grundfos personnel in their customary generous manner. Results on the day were as follows:—

Overall

Individual Winner — Bernard Costelloe;

Individual Second — Shay Cuddihy;

Individual Third — Richard Mason.

Class 1

Winner — Ger Hutchinson (Sponsored by Associated Pumps).

Class 2

Winner — Martin Smith (Sponsored by Euro Fluid).

Class 3

Winner — Pat Barry (Sponsored by IPP).

Winning Teams

Winner — Marc Hollingsworth;
Gerald O'Callaghan;
Gerry Fitzpatrick;
Paul Harrison.

Second — Joe Warren;
Richard Burke;
John Gillick;
Richard Mason.

Third — Colin Murphy;
Aidan Harney;
Francis Finnerty;
Niall Larrigan.

Nearest the Pin

Winner — Brian McPhilips.

Longest Drive

Winner — Seamus O'Donaghue.

Beat the Pro

Winner — PJ Phelan.

Par 3 King

Winner — Paul Harrison.



Winning Team — Marc Hollingsworth with Gerry Fitzpatrick; Paul Harrison; and Gerald O'Callaghan



Overall individual winner — Bernard Costelloe



Class 1, winner — Ger Hutchinson



Second placed team — John Gillick with Richard Burke; Joe Warren; and Richard Mason



Class 2, winner — Shay Cuddihy



Third placed team — Aidan Harney with Niall Larrigan; Francis Finnerty; and Colin Murphy

Plumb Lines

heard it on the grapevine ...



MOST SUCCESSFUL ENTREPRENEUR IN THE WORLD



MY JOB? ... CARBON ALLOWANCE TRADER

Is trading in personal carbon allowances the way to earn a living in the future? Probably not but, with various governments — including the UK — considering the introduction of personal carbon allowances, the idea is not as far-fetched as it seems.

Who knows, it might turn out that if you had a totally-sustainable home powered by solar panels and a wind turbine — and you avoided all carbon penalty-associated activities such as air travel, driving a car, travelling on public transport, etc — you could make money by selling your surplus carbon allowance. Attention the powers that be at FAS, DIT and even CIBSE — now is the time to start developing your Carbon Allowance Trader degree courses.



For the fifth consecutive year the final of the World Entrepreneur of the Year was held recently in Monte Carlo. The winner this year was Bill Lynch, CEO for Imperial Holdings, South Africa. However, my particular congratulations go to Gerald Engström, CEO of Systemair in Skinnskatteberg, who ran him a close race and finally finished in shared second place with some other competitors.

BORD GÁIS INFORMATION WEBSITE

The new Bord Gáis website — www.bordgais.ie/networks — provides information on a range of topics, from natural-gas-supplied areas and getting connected, to a listing of registered gas installers for customers to choose from. The "Registered Gas Installer" section provides lots of information for installers, including Installer Training; Technical Bulletins and details on how to become a Registered Gas Installer. A newly-developed "Construction Industry" section provides online access to technical support materials and safety advice. Designers and developers can email their project drawings to Bord Gáis Networks via plans@bge.ie where experienced personnel will complete the network design and return it via email.

Tenders are now being sought for the design, construction and financing of the landmark U2 tower at Dublin's Docklands. The 35-storey residential and commercial complex — which will also house the band's recording studio — offers massive opportunities for building services designers, mechanical and electrical contractors and of course product suppliers. Check it out on the Government's e-tender website.

CHINA GETTING GREENER

China is now officially committed to spending 2-3% of its GDP on environmental investments. ITT Flygt China recently received its largest pump order ever for a complete submersible pump/mixer package to be installed in a sewage treatment plant for the city of Zheng Zhou in the province of Henan. China is currently very ambitious on the environmental front, especially given the pressure it is under from the the World Trade Organisation and neighbour

countries to clean up its act. Perhaps its time for all those engaged in building services in Ireland — be it in product supply, consultancy services or contracting — to enroll in classes to learn chinese. We've successfully won business in places like the Middle East down through the years ... China should be no different.

GUESS WHO?

Pictured below is a caricature of one of the ac sector's founding father-figures. Can you name him? Bottle of champagne to the first caller correctly identifying him. Call *bs news* at Tel: 01 - 288 50



MITSUBISHI HEAVY INDUSTRIES
AIR CONDITIONING

High performance high specification VRF inverter systems

ecolution *KX4*: ultimate control



High energy efficiency
air conditioning systems
from 14.0kW – 136.0kW



MITSUBISHI
HEAVY INDUSTRIES, LTD.

AIR CONDITIONING



3D Air Sales (Ireland) Ltd,

Tel: 01 - 462 7570 Fax: 01 - 462 7611

email: micclan1@eircom.net

www.3dair.co.uk



Measurement Technology From Manotherm

Complete Solutions

- Individual sensors, power supplies and measurement display units
- National & International Approvals Certificates
- Perfect adaption to the process
- Entirely-engineered control systems
- Pressure: 0/4 mbar to 0/4.000 bar
- Temperature: -80°C to 600°C
- Level: 0/60cm to 0/100m



Bimetal and Gas Filled Thermometers

Resistance Thermometers

Level Measurement and Control Devices



Manotherm Limited

4 Walkinstown Road, Dublin 12.

Tel: 01 - 452 2355/452 2229; Fax: 01 - 451 6919;

email: info@manotherm.ie

<https://arrow.tudublin.ie/bsw/vol45/iss7/1> www.manotherm.ie

