Alan Wins Gold!

National Installer Federation

Finheath Ltd Company Profile

Also


Octabuild Awards 2005
SmartAct

Wins Every Installation Race

SmartAct
Direct-Coupled Actuator
www.smartact.com

Self-centering shaft adaptor
• Enables real "plug and play"
• Adjusts automatically to any shaft - square or round
• Greater reliability due to less mechanical stress

Detachable wiring box
• Easy connection
• Saves additional junction box

Auxiliary switch kit (optional)
• Switch point, selectors and position indication
• Easy field installation - right access with detachable access cover

Mounting in any direction
• For easy, cost-effective installation

Function switch
• Changes rotation direction
• Selects control mode
• Service/off position ensures fast and easy service

Declutch button
• Easy manual adjustment
• Simplifies installation

Mechanical limits
• Single-hand positioning for desired rotation angle

Position indicator
(with auxiliary switch kit)
• Clearly shows actual stroke angle
OPINION

Domestic Installers’ Register Imperative

The need for a nationally-recognised Register of fully-accredited domestic installers is more imperative than ever now that the draft action plan for implementing the EU Energy Performance of Buildings Directive (EPBD) has been published. Once transposed into law, the owner of any building newly-constructed, sold or rented out must provide the prospective buyer or tenant with a Building Energy Rating (BER) Certificate. With sale and rental transactions in Ireland currently running at 170,000 per annum, that’s an awful lot of certificates.

The cowboy brigade must already be rubbing their hands in anticipation. From the onset of the solid fuel bonanza right through the oil conversion phase and then natural gas, they have had a field day. A booming marketplace with no regulatory controls inevitably attracts the get-rich-quick merchants whose only objective is to maximise their take while providing the minimum service. That cannot be allowed to happen with BER Certification, if for no other reason than it will be a wasted exercise if the certificate is not issued by competent, fully-qualified, accredited installers.

Thankfully, bona fide domestic installers already recognise this. Irrespective of the impending EPBD, strong locally-based representative organisations serving Dublin, Cork, Kerry, Galway, Clare, Dundalk/Drogheda and Donegal have emerged to champion the industry’s cause. Some of them already sit on Government-related bodies looking to regulate the industry and their opinions and suggestions are being taken on board.

Even more encouraging still is that, as we went to press, they met with one another to establish a national Federation (see page 34) to speak with one voice when dealing with relevant Government Departments, regulatory authorities, and business organisations. BSNews not only supports this initiative but is very much an integral part of it.

There is no denying that the domestic installation sector is at an all-time low, not because of the lack of work but rather because of the lack of regulatory controls, accreditation processes, relevant education/apprentice schemes, etc. However, the good news is that the problem areas have been identified and are being addressed.

Moreover, the industry finally has the ear of the Government and regulatory authorities. They now recognise that, to successfully implement new gas safety measures and the EPBD, they need to work in partnership with the business. This is a recipe for success but one which will rise or fall on the quality, care, energy and enthusiasm with which it is mixed.
Cylon Convention Ushers in New Era

Cylon Controls Ltd — the largest privately-owned manufacturer of building controls in Europe — recently held its biggest and most successful Irish Dealer Convention. Attended by over 40 specialists in the building controls industry, the convention focused on the experience with the migration to Industrial Ethernet across the 132 hectare site of 300,000 m² treated floor area.

The Cylon dealer network is well established throughout the country with members regularly undergoing accreditation programmes to maintain unique training and support service to our ACSIs®, commented Sean Giblin, Managing Director at Cylon. “We also use our own building as a live showcase environment for new products which is very helpful for our integrators”.

It was in this purpose-built corporate headquarters in Dublin that the most recent convention was held. Encompassing over 18,000 sq ft, the state-of-the-art facility is fully controlled by the Unitron building management solution.

Contact: John Fallon, Cylon Controls.
Tel: 01 - 245 0500;
www.cylon.com

€65 Million Carrick Town Centre

Carrick-on-Shannon will receive a massive boost in the form of a new 25,000 sq m mixed-use shopping, leisure, commercial and residential scheme which has just received a positive decision from the local authority.

Situated on a prime 1.22 hectare town centre site, the development is located in the heart of Carrick-on-Shannon and was designed by OBK Architects. It includes 20 retail units ranging in size from 53 sq m to 253 sq m and incorporates a 3,728 sq m anchor store. The new centre will also provide a number of restaurants and cafés, along with a 5-screen cinema. The residential aspect of the development provides 60 two and three bed apartments with the benefit of valuable capital allowances. The residential element of the scheme is located above the commercial centre with all apartments served by balconies or private terraces.

Contact: Caitriona O’Riordan, OBK Architects.
Tel: 01 - 01 475 0880;
email: Caitrionaoriordan@obk.ie
Your flexible friends

Flexi Multi R410A Multi splits: 5.6kW to 9.0kW

The new range of Flexi Multi systems are the ideal, flexible solution for providing quiet and efficient heating or cooling to 2, 3 or 4 areas from a single outdoor unit. The units combine the latest SANYO DC inverter technology and R410A refrigerant for excellent energy efficiency, wide operating ranges and long pipe separations.

- 2, 3 or 4 way multi split systems
- Provides heating or cooling
- 5.6kW, 6.8kW and 9.0kW cooling capacities
- DC inverter technology for precise control
- 1 amp start currents
- 6 indoor model styles
- EEL category A

Simple to apply, install and maintain, the SANYO Flexi Multi range also qualifies for the Enhanced Capital Allowance Scheme.

SANYO - a flexible solution all round.
Smedegaard 50% Less Energy Consumption

If all family houses changed to the new Smedegaard MiniWatt, the savings could be equated to the output of a medium sized power station, according to Graham Fay of Calpeda Pumps, who distribute Smedegaard throughout Ireland.

"With more and more attention being paid to the energy consumption of household appliances such as light bulbs, TVs, VCRs, dishwashers, etc, we now also need to focus on items such as domestic circulators", he says. "Domestic circulators often have high-energy consumption but this can be rectified with the new easy-to-install and low power circulator from Smedegaard. With a maximum power consumption of only 35 Watts, the savings during the lifetime of the circulator can be considerable" (see Table 1).

The energy consumption for a standard dome Circulator is usually between 500kWh per hr and 600kWh per year, giving a saving of approximately €275 calculated over a 10-year period.

JFC Wins UK Plastic Industry Award

John Concannon, JFC Manufacturing Managing Director, accepting the "Best Environmental Initiative" Award at the 2005 Plastics Industry Awards in London. Also in the photograph is MC Dominic Holland of the BBC, David Eames of BASF, sponsors, and Lee Clayton, General Manager, JFC Delleve

JFC Delleve — the Stratford-upon-Avon concern acquired by Tuam-based JFC Manufacturing — was the winner of the 'Best Environmental Initiative' category at the recent 2005 UK Plastics Industry Awards.

The finalists for this year's "Best Environmental Initiative" reflect the growing concern over what happens to plastic, particularly packaging, after the end of its useful life. All those selected as finalists are involved in the recycling of post-use plastics.

JFC Delleve takes bottle waste collected principally by local authorities, both in Ireland and the UK, and turns it into a high-value, high-specification product. Making the economies of recycling plastics work has been a tough challenge for the industry, and the JFC solution was to install a ground-breaking facility at its site in St Helens.

JFC is a family-owned business set up in 1987 to supply specialised plastic products to the agricultural industry. The company has since grown to employ 150 people and now sells to a variety of sectors based worldwide, with exports accounting for 60% of total sales.

Oventrop at Barberstown

Oventrop valves have been used to control the heating system throughout the new extension at Barberstown Castle, Straffan in County Kildare, which was a design and build project by mechanical contractor BMD.

The radiator heating system in the new premises is controlled using over 100 Oventrop Series A TRVs and Combi 2 lockshield valves, commissioning sets, isolation valves and strainers.

Contact: Donny Bourke, Oventrop.
Tel: 087 239 7078; email: donnybourke@oventrop.ie

Mini-Watt Energy Consumption

<table>
<thead>
<tr>
<th>Flow %</th>
<th>Flow m³/h</th>
<th>Operation Hours %</th>
<th>Operation Hours</th>
<th>Power P1</th>
<th>Energy kWh/year</th>
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<td>45</td>
<td>3942</td>
<td>29</td>
<td>114.3</td>
</tr>
</tbody>
</table>

The energy consumption for a standard domestic circulator is usually between 500kWh per hr and 600kWh per year, giving a saving of approximately €275 calculated over a 10-year period.
McGrattan & Kenny Go
From Strength to Strength

McGrattan & Kenny are about to commence the multi-million euro mechanical services contract at Park Place, Hatch Street in Dublin. This is a 40,000 sq m development on the site of the old Dunlop factory comprising high-quality office space in three separate inter-connected buildings around a common atrium.

The complex has eight storeys of offices over a basement car park with a unique retail passageway created from the vaulted substructure of the former Harcourt Street Railway Terminus. The architectural expression is modern while energy efficiency is achieved with the "ice bank" cooling system and the use of solar control louvres.

The ice bank cooling system provides up to 35% reduction in electrical consumption compared to a conventional air cooled liquid chiller chilled water system, while the high-efficiency, low-emission, fully modulating gas boilers will reduce gas consumption when compared to traditional cast iron boilers. Heat recovery runaround coil systems between the air handling units will provide excellent energy savings.

John Sisk Builders are the main contractors on the project with Varmings responsible for the mechanical and electrical requirements. RSL Ireland supplied the ice banks.

One of the five ice bank thermal storage units being lifted into place at the Dunlop Centre site.
ChillPAC — York’s Ammonia Range

York International designed its new range of ChillPAC ammonia chillers with a focus on compact size, light weight and a minimal refrigerant charge. Other design parameters included efficiency, energy costs and environmental impact — with an additional spotlight on safety and reliability. Capacities range from 229 kW to 1439 kW of cooling.

The York ChillPAC is based on a new design of flooded evaporator, using an ammonia charge some 60% less in volume than an equivalent standard design. Even compared with ammonia chillers on the market that use plate heat exchanger technology, the ChillPAC range uses an exceptionally-low refrigerant charge. This results in safer installations and lower life cycle costs.

York has a wealth of experience with ammonia systems, both on site and within its own research and development department. To remain at the forefront in this market segment, it has concentrated on providing a chiller system not only with the lowest possible refrigerant charge, but also using a refrigerant that is future-compatible. Other important factors include a very small footprint, with even the 1439 kW model being only 1m wide, and a high coefficient of performance (COP).

Other significant advantages of the YORK ChillPAC ammonia chillers include fully-welded heat exchangers, pre-formed pipes and many built-in features and functions to improve safety and reliability.

Contact: Andrew McEvitt, York ACR. Tel: 01 - 466 0177; email: yorkdublin@ie.york.com.

ATP Sponsors for IPHE Student Awards

Advanced Technical Products (ATP), the specialist heating and pipeline products supplier, was one of the sponsors at the recent IPHE student awards. The awards ceremony was held at the FAS training centre in Athlone and over 100 people attended.

The event, which is growing every year, awards students who undertake a set project, which is in turn adjudicated on by a distinguished panel of judges. The awards are divided into three categories — gold, silver and bronze medals.

ATP managing director David Daly remarked: “We are proud of our association with the IPHE and feel encouragement at this level is essential for the future of our industry”.

Contact: David Daly, ATP. Tel: 01 - 885 3792; email: dalymail@eircom.net

Sunny Side Up!

The International Solar Energy Society’s (ISES) Solar World Congress 2005 will take place in Orlando, Florida from 8 to 12 August 2005.

Members and other renewable energy professionals are urged to attend, especially as this landmark event will celebrate both the 50th Anniversary of ISES and the enormous growth in renewable energy use in recent years.

A special conference topic will be “Bring Water to the World”, addressing the close relationship between renewable energy and sustainable, universal water provision.

Contact: www.swc2005.org

York Appoint New MD

York International has appointed Markus Gruen Managing Director for the UK and Ireland. He retains his title of Vice President for Air Conditioning and Unitary Products in Europe, a position he took up last year. Prior to this he was responsible for the management of York’s three plants at Monterrey and Durango, Mexico, and San Antonio, Texas.

https://arrow.tudublin.ie/bsn/vol44/iss6/1
AC — Is This the Year of the Domestic Market?

In today’s ever-changing environment the pressure is on to produce the ‘right’ solutions. Since the introduction of the world’s first heat pumps in 1960, Sanyo Airconditioners have remained at the forefront of air conditioning technology, introducing a comprehensive range of products to suit every application. Consequently, Sanyo’s current portfolio is one of the most flexible and energy-efficient on the market with solutions for virtually every application. Moreover, it has been specifically developed to cater for the needs of European market conditions and requirements.

New products are constantly coming on stream, one of the latest being the Sanyo Flexi Multi range of heat pump multi-split systems. These are the ideal domestic solution, providing quiet, efficient air conditioning to two, three or four areas from a single outdoor unit. Offering a choice of up to six different indoor unit types, Sanyo can provide the variety of options necessary to suit the most specific of designs. Incorporating DC inverter technology for precise temperature control, low start current and leading cost efficiency, these units are available in capacities of 5.6kW, 6.8kW and 9.0 kW.

With their modern design and quiet operation the Sanyo SAP range of Flexi Multi split systems will blend into the most complicated or the simplest of locations, providing contractors and installers with multiple solutions.

Barry Hennessy, National Sales Manager of Sanyo Airconditioners, says: “When considering the level of investment in the residential market throughout Ireland, and the sheer scale of developments nationwide, one can easily appreciate the growing demand for domestic solutions. Over recent years the need to create a comfortable and suitable living space has become a basic requirement. Even if the requirement is to condition just one room, then Sanyo’s range of 1:1 split system DC inverters are the answer.”

Contact: Barry Hennessy, National Sales Manager, Sanyo Airconditioners Ireland. Tel: 01 - 403 9900; email: aircon@sanyo.ie
Siemens Dampers with Fewer Actuator Controls

With the latest OpenAir™ range of electronic damper actuators from Siemens Building Technologies, only three types of actuator are needed to cover every normal HVAC application, making the units easy to specify and economical to stock. In addition, the simple, clear part-numbering system used for the actuators makes ordering fast and straightforward.

OpenAir™ actuators are offered for applications requiring small, medium and large positioning forces. All types incorporate the unique Siemens cats-eye indicator system which provides instant visual confirmation of the damper position, even if auxiliary switches are fitted, and all feature a novel self-centring system for the driven shaft which clamps the shaft on all sides, eliminating the risk of slippage.

Installation is simplified by the provision of pre-fitted cables for both the actuator and, if used, the auxiliary switches, and by the incorporation of a convenient manual override facility. Quiet operation makes the units an ideal choice for use in noise-sensitive areas such as hospitals and offices, and availability with industry-standard operating voltages ensures compatibility with control systems of all types.

Contact: Ian Ellis, Siemens Building Technologies. Tel: 0044 1784 412 564; email: ian.ellis@siemens.com

Canadian Building Energy Labelling Arrives

One of the first Super-E® certified energy efficient houses was launched in Westport, County Mayo recently in advance of the introduction of mandatory energy labelling for dwellings next year. Speaking at the launch, Noel Treacy, TD, Minister for European Affairs at the Department of the Taoiseach said: “Given the hunger for new houses that is felt throughout the entire country, the entry into the market of Canadian timber frame houses is particularly timely”.

Super E® homes are said to offer quality and comfort through proper insulation and draft-free living; durability featuring the leading-edge Canadian rain screen system; cost effectiveness; affordability; lower operating costs; energy-efficiency; and healthier indoor air quality.

Rob Williams, General Manager at Interhabs Canada, said: “Our Super-E®-standard homes incorporate excellent energy-efficiency with high-quality Canadian materials and Canadian technology. As a Super-E® structure, all would achieve an A rating label when energy certification comes into force in Ireland”.

Contact: www.super-e.com

Refrigeration Technology Skillnet Courses

A full programme of courses from Refrigeration Technology Skillnet is now underway for the remainder of the year. They are based in Dublin, Portlaoise and Cork and cover a broad range of subjects. Details are as follows:

- PED Workshop, Dublin. Thursday 7 July;
- Brazing Approval, Cork. Thursday/Friday 14/15 July;
- Advanced Troubleshooting for Refrigeration Systems, Dublin. Thursday/Friday 1/2 September;
- Advanced Troubleshooting for Aircon Systems, Dublin. Thursday/Friday 8/9 September;
- Advanced Troubleshooting for Electrical Systems, Cork. Thursday/Friday 15/16 September;
- Introduction to Refrigeration, Dublin. Thursday/Friday 22/23 September;
- Introduction to Air Conditioning, Dublin. Thursday/Friday 29/30 September;
- Introduction to Electricity, Portlaoise. Thursday/Friday 6/7 October;
- Introduction to Electronics & Controls, Dublin. Friday 14 October;
- Safe Handling of Refrigerants (C&G2078), Dublin. Friday 21 October;
- PED Workshop, Cork. Friday 11 November. Contact: Enda Hogan, Refrigeration Technology Skillnet. Tel: 01 - 878 3772; email: enda.hogan@dit.ie
The new HIMOD S range from Liebert-HIROSS raises the bar of performance in precision air conditioning setting new standards in terms of energy-efficiency, compactness and sound emissions, while still offering unmatched environmental control and reliability.

MATRIX S is the new chiller range from Liebert-HIROSS, covering cooling capacities between 40kW and 280kW. The units have been designed in order to satisfy the requirements of differing applications. It is available in several configurations and with many options.

The HIMOD range from Liebert-HIROSS is the solution for systems demanding uncompromising reliability and precision, year after year. It is used for conditioning critical systems in a variety of key applications, such as computer rooms, the telecommunications industry and technological sites.

MATRIX is the new Liebert-HIROSS product line of air-cooled chillers designed to combine the best performance in terms of efficiency and reliability with the lowest impact on the environment.
Vokes-Air Appoints Aervent

Air filtration specialist Vokes-Air has announced the appointment of Aervent Group to distribute its products throughout Ireland. The Vokes-Air portfolio of filtration products includes Vokes-Air and Luwa filters. This comprehensive range of products and systems is designed to satisfy a diverse range of applications, from indoor air quality to critical containment systems.

Aervent Group’s Managing Director, John Kennedy, said: “We were keen to team up with a strong, high-profile manufacturer of premium quality products, so we had discussions with Vokes-Air. We see this as an exciting opportunity to supply high specification filters, taking us into more technical markets, such as the pharmaceutical industry.”

Anthony Kelly, Aervent Group’s Sales Director, employs a filtration sales team led by Sales Manager Stan Johns and Regional Sales Manager Michael Sweeney, supported by an internal and external sales force, who will work closely with Vokes-Air’s Sales Manager for Ireland, Norman White.

Contact: Anthony Kelly, Aervent Group.
Tel: 01 - 4568200;
email: sales@aerventgroup.com

Aervent’s Sales Director, Anthony Kelly with Vokes-Air’s Sales Manager for Ireland, Norman White, and Aervent’s Filtration Manager, Stan Johns

ITT Flygt’s Sludge Pumping Solution

One of Flygt’s solutions for handling and transporting sludge is the new progressive cavity pump range

ITT Flygt has developed an efficient and cost-effective solution for handling and transporting sludge. The solution utilises the company’s new series of Progressive Cavity (PC) pumps and macerators, combined with its existing range of mixers and N-pumps.

Alison Kirwan, Director and General Manager of Flygt Ireland, says: “As the nature of sludge changes rapidly in a sludge processing system, it can be difficult to find the right pump to cope with the varying demands, especially as in some processes different head losses are created as the sludge is pumped through a pipe network. With the addition of PC pumps and macerators, Flygt has a complete product portfolio to cover all sludge pumping applications and a strong base for further growth in the sludge market.”

Conventional centrifugal pumps are often prone to clogging in sludge treatment, which led to Flygt’s introduction of the N-pump with its unique clog-resistant impeller design. The N-pump has proved very effective in general sludge handling applications. In fact extensive field tests in Europe and USA showed the pumps can handle between 60% and 70% of sludge pumping requirements.

For tougher sludge applications Flygt has introduced a range of self priming, Progressive Cavity pumps. The pumps incorporate a helical screw rather than an impeller. The screw forms a series of cavities that progress uniformly from the suction point to the discharge, transporting the liquid and any solids within them. This design is also resistant to clogging and produces an accurate constant flow.

Contact: Alison Kirwan, ITT Flygt.
Tel: 01 - 452 4444;
email: flygtireland@flygt.com

https://arrow.tudublin.ie/bsn/vol44/iss6/1
Versatile Agencies has taken the traditional concept of heating and given it form. This is achieved by applying its own extensive knowledge and experience to the product portfolios of cutting-edge, innovative, brand leaders like Jaga, Runtal Zehnder, Sabiana and Vogel.

Heating solutions are custom-designed to facilitate each application. Where visible, the heat emitters contribute to the aesthetics of the setting; however, they can also be unobtrusive to the point of being invisible.
Second-Generation ArtCool From LG

Austin McDermot of Core Air Conditioning has now taken delivery of the second-generation LG ArtCool units, featuring further innovations in design, health benefits, noise reduction and improved energy efficiencies.

The distinctive styling of LG’s ArtCool has earned a reputation for contemporary, aesthetically-pleasing styling which closely resembles an interior design accessory rather than a wall hung air conditioner. Its slim contours mirror that of an art frame, putting it on a par in design terms with familiar domestic consumables such as plasma TVs and DVD/CD players.

Newly-incorporated features include the neo plasma air purifying system; an optional oxygen generation kit; an easily-changeable decorative front panel; and premium LCD display.

The outdoor unit has also been re-styled. It now incorporates piping cover and a pre-coated metal cabinet for extra durability and improved aesthetics.

Additionally, using a variable speed compressor inverter technology means that the unit’s cooling and heating capacity can be varied to meet indoor heat load. Furthermore, it guarantees low noise level.

Compared to conventional units, it improves the heating capacity up to 120% and saves 44% of energy consumption.

Oventrop Appoints Unitherm

Oventrop has appointed Unitherm Heating Systems as the sole distributor of its underfloor heating system in Ireland. A leading manufacturer of valves and controls for the building services sector for over 150 years, Oventrop products and systems have been distributed and installed all over the world. The underfloor heating system was developed in Germany and is now one of the most widely-used systems in Europe.

Unitherm Heating Systems was established by Declan Kissane and Peter Lynskey last year after a spell of over 20 years with Hevac/Politherm Heating Systems. They have already achieved an enviable reputation for the quality of their underfloor heating products and designs, and are involved with many prestigious projects throughout Ireland. With offices in Dublin and Galway, they offer a fast and efficient response to all enquiries.

In addition to underfloor heating products, Unitherm Heating Systems carry a comprehensive range of multi-layer pipe and fittings, from 16mm to 63mm, for sanitary and radiator systems.

Donny Bourke, Area Sales Manager for Ireland, welcomes the appointment. “The wealth of knowledge and experience offered by Unitherm made them the ideal choice of partner for Oventrop. Together we have already introduced our underfloor heating system to many consultants and specifiers and the response has been very encouraging. We’re now looking forward to a long and beneficial partnership with Unitherm”.

Contact: Declan Kissane. Tel: 086 - 833 0062; Peter Lynskey. Tel: 086 - 833 0051; April McHale. Tel: 091 - 380 038; Dublin Office Fax: 01 - 627 2532; Galway Office Fax: 091 - 380 039.

SCS Elects New President

Declan Kissane and Peter Lynskey, Unitherm Heating Systems

Derry Scully (left), Managing Partner of the Bruce Shaw Partnership, Dublin, has been elected President of the Society of Chartered Surveyors (SCS) for 2005/2006. He is pictured receiving the chain of office from outgoing president Desmond A Byrne, a partner of Druker Fanning & Partners, Dublin, at the society’s headquarters at Wilton Place, Dublin, after his election at the SCS Annual General Meeting.
maXima
SEDBUK 'A' RATED

Maxima 35 S

Maxima 35 C

Maxima 35 S display

Maxima 35 C display

1. Summer/Winter mode button
2. Reset button
3. Central heating temperature control
4. Simple L.C.D user interface
5. Hot water temperature control
6. Power button

For further information contact:
Sean Meally - Tel: 087 263 0782
Pat Kavanagh - Tel: 087 799 5080
Sales Office - Tel: 01 - 450 8166
email: sales@heatovent.ie

Published by ARROW @ U Dublin, 2005
Patrick Atkinson has been appointed Marketing & Development Director, Gypsum Industries Ltd. Patrick was previously with Wavin Ireland Ltd. He is a graduate of DCU with Bachelors and Masters degrees in Business and International Marketing and, more recently, was awarded a postgraduate Diploma in E-commerce from the National College of Ireland. He is a member of the marketing institute of Ireland since 1989. Another Gypsum appointment is that of Tom O’Callaghan as Group Sales & Marketing Director for the following — BPB Gypsum Industries; Irish Gypsum; BPB Rawlplug; and Moy-Isover. Tom is a member of the Irish Building Materials Federation Council and represents Gypsum Industries on the Gypsum Products Development Association. He is a former chairman of Octabuild.

The Electro/Vap MC electrode boiler humidifier from JS Humidifiers can now be used in a master/slave system with up to 11 units chained together capable of providing as much as 990kg/h of steam to an air handling system. Predicting and managing maintenance is made simple because the 11 units within the chain are fully proportional with the humidifiers, providing equal output and taking equal wear.

The humidifiers straightforward design and operation makes its extremely reliable and its micro-processor control provides responsive control over output. An easy-to-read back-lit display panel gives data on real-time humidifier performance, humidifier configuration and the opportunity to easily change the operating parameters of the unit. A remote feedback for BMS users is also standard on every unit.

Units come with solid stainless steel as standard which increases the life of the boiling cylinders. This makes it more cost-effective to run and allows the unit to work on softened and low-conductivity water. Individual ElectroVap MC units are available in seven capacities from 5kg to 90kg of steam per hour, with either cleanable or disposable cylinders.

Contact: David-Marshall George, JS Humidifiers. Tel: 0044 - 1903 850200; email: dmarshallgeorge@jshumidi fiers.com

The new Dwyer Instruments’ Series 641B Air Velocity Transmitter available from Manotherm

Manotherm Ltd has just released the new Dwyer Instruments’ Series 641B Air Velocity Transmitter. This new unit is ideal for monitoring air velocities in polluted environments with its protected heated mass flow sensor.

Proper sensor performance can be maintained in dirty air environments by easily removing dust and debris from the sensor which is problematic for Pitot tubes and other flow-sensing transmitters.

The Series 641B is extremely versatile with its 8 field selectable ranges, from 0-250 FPM to 2000 FPM (0-1.25 MPS to 10 MPS).

This is one of the latest additions to the Dwyer portfolio which incorporates a broad range of measuring and control instruments for pressure, temperature, level and flow, and other related applications.

Contact: Bob Gilbert, Robert Gilbert or Noel Walsh, Manotherm. Tel: 01 - 452 2355; email: info@manotherm.ie
All of this → In this single unit

- AHU’s
- Control Panels
- Chillers
- Pipework
- Wiring
- Builders Work

Gives you
- Cost Savings
- Easy Installation
- Faster Installation Time
- Better Supplier Control
- Better Delivery Control
- Easy Maintenance
- No Plantrooms

Lennox offers a full range of products including:

AHU’s; Chillers; Fan Coil Units; Split Systems; Close Control Units; Rooftop Solutions; Package Solutions; Service; Commissioning and Maintenance.

Lennox SALES TEAM

NORTHERN IRELAND
Mechanical Installations & Maintenance NI Ltd

LEINSTER
ACMSL Aircraft Ltd

MUNSTER
Comfort Cooling Air Conditioning Ltd

SALES AGENT
Philip McEvitt

for catalogue or further information contact Pat Byrne

3A Avonbeg Industrial Estate, Long Mile Road, Dublin 12
Tel: 01 - 429 9703  Fax: 01 - 429 9706  Mobile: 087 984 7696
email: info.ir@lennoxeurope.com
www.lennoxireland.com

Published by ARROW @TU Dublin, 2005
BTU At Woodbrook

With 47 members and their guests teeing off from early morning, the BTU outing at Woodbrook was a busy, action-packed day with some fine scoring. Fläkt Woods (Ireland) was the sponsor and, as usual, presented an excellent array of prizes with BTU President Michael Murphy doing the honours on their behalf.

The course was in marvellous condition with all who participated having a thoroughly-enjoyable day’s golf, even if some felt they could have done better on the scoring front!

Dermot Ryan was the overall winner with a score of 40 pts. The full results were as follows:

| Class 1  | 1st | Ger Hutchinson | 38 pts; |
|         | 2nd | Michael Kearney | 35 pts; |
|         | 3rd | Michael Matthews | 32 pts. |

| Class 2  | 13-16 |
| 1st | Gerry Tobin | 38 pts; |

| Class 3  | 17+ |
| 1st | Des Haughton | 37 pts; |
| 2nd | Padraig Gillen | 33 pts; |
| 3rd | Michael Hannon | 31 pts. |

BTU Honorary Secretary Michael Morrissey with Jim Smith (2nd, Class 2) and BTU President Michael Murphy

HOH Partnership Step Up a Gear

Building services consultants HOH Partnership have moved to new 2500 sq ft offices in The Seapoint Building in Clontarf, over-looking the East-Point Business Park, Dublin. The practice, which was formed four years ago, has a staff of engineers, technicians and administration personnel and is currently recruiting additional engineers and CAD technicians.

HOH Partnership was founded by Jerry Hedderman in 2001 with Peter Byrne joining the practice in the beginning of 2002, having worked with PH McCarthy and Cuthbert Condron Associates as a Senior Electrical Engineer. Completing the senior management line-up Tony Grey joined as a Partner in the practice at the beginning of this year.

The size of the practice allows Jerry, Tony and Peter to maintain a very direct involvement with every project to ensure that the very best experience and advice is provided at all stages.

Contact: Tony Grey, Jerry Hedderman or Peter Byrne, HOH Partnership.
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FÉRROLI
HEATOVENT
PARTNERSHIP

Férroli began producing heating appliances and equipment in Italy during the 1950s. Today, the company is still family-owned but now operates nine ultra-modern factories in Europe, employing 2,200 people and producing more than 500,000 cast iron and welded steel boilers per year, making Férroli one of the largest and most successful heating appliance manufacturers in the world.

With environmental concerns becoming more and more important, humans need to ensure protection of the world’s resources and the reduction of emissions of harmful greenhouse gases into the atmosphere. With that in mind Férroli has developed a new generation of high-efficiency gas condensing boilers called the Maxima, comprising of the system boiler range called Maxima 35 S, and the combination boiler range called Maxima 35 C.

These units are designed specifically to burn less gas and therefore reduce CO₂ emissions and NOₓ, thereby saving homeowners money while conserving energy and protecting the environment. By using a large heat exchanger, condensing boilers extract more sensible heat from the flue gases. In addition, by cooling the flue gases below 54°C, a change of state occurs when the water vapour in the products of combustion condenses. This releases the latent heat of the vapourisation — which is normally lost to the atmosphere via the flue — into the system.

Maxima can produce up to 16.5 litres/min of domestic hot water at 30°C rise and 14.2 litres/min at 35°C rise. This is achieved by way of its highly-efficient heat exchanger and two circulating pumps, one for central heating and the other for domestic hot water. This gives total control without the use of a diverter valve.

The use of a large ceramic plaque burner means that flames are spread evenly which in turn ensures ease of ignition and exceptionally-quiet and efficient operation. Being pre-mix gives the ceramic burner longer operational life, greater reliability and a cleaner burn.

Maxima is a room-sealed, wall-hung, fan-flue appliance with a wide range of flue options that enable it to be installed anywhere. No air for combustion is required from the room in which it is installed and it can be hidden away conveniently in kitchen cupboards or in airing cupboards.

Maximum control and operational flexibility is assured because of the specially-developed control software while other features include multi-functional display; solar panel link-up; and easy linking to underfloor heating systems.

Main features of Maxima 35 C and Maxima 35 S are:
- Sedbuk A rated;
- Ultra-quiet operation;
- Simple LCD user interface;
- Auto output selection;
- Energy efficient compliant;
- Easy access to components;
- Pre-mix fan assembly;
- Fully modulating control, filling loop included;
- Automatic air vent;
- Appliance frost protection;
- Outside temperature compensation.

Also new from Férroli is the Optimax range of high-efficiency condensing boilers, comprising system (Optimax 25 S), open vent (Optimax 25 OV) and combination (Optimax 25 C) boilers.

Main Optimax features are:
- Sedbuk A rating;
- Lower emissions;
- Ultra-quiet operation;
- Easy access to components;
- Self-diagnostic;
- 7.3kW to 24.7kW outputs.

Both Maxima and Optimax are brought to the Irish marketplace by Heatovent from which Férroli and been working in close partnership for the last 10 years. Together they have spearheaded innovative market changes in Ireland for over a decade and the introduction of the Maxima and Optimax ranges is yet another example of their collective determination to ensure that high efficiencies and maximum outputs are achieved while, at the same time, the environment is afforded greater protection.

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Sales Office — Tel: 01 - 458 8166.
email: sales@heatovent.ie

New from Férroli is the Optimax range of high-efficiency condensing boilers, comprising Optimax 25 S, Optimax 25 OV and Optimax 25 C.
The annual CIBSE North v South Golf Challenge was held in Headfort Golf Club recently. The event takes the format of an eight man team from the North taking on a similar team from the South. It is a singles Stableford competition with the best six cards from each team counting towards an overall score. There is a Challenge Cup for the winning team and each member of the winning team receives a small trophy.

In addition, there are individual prizes for the top three individual scores, as well as a nearest the pin and longest drive.

The challenge took place on the old course which was in superb condition and, despite being a little breezy, the weather held up well.

The North were defending the trophy, having won it for the last two years. However, it was with great delight that the South emerged triumphant on the day, even if it was by a meagre 1-point margin.

The overall individual winner was Gerard Keating, playing off a handicap of 14, with a score of 42 points.

Contact: Colin Murphy, Homan O’Brien. Tel: 01 - 205 6300.
finheat ltd

unique services solutions for innovative building design
For automated building services.
Intelligent bus controller.
Suitable for heating / air conditioning from -10 up to +110 °C.
80% energy savings.*
Highly efficient.

Wilo-Stratos high-efficiency pump.

The Wilo-Stratos is the first high-efficiency pump in the world. Thanks to its innovative ECM technology it permits energy savings of up to 80% compared to standard pumps. This applies both for heating systems and for air-conditioning and cooling systems. In conjunction with its intelligent bus controller this makes it the ideal solution for building automation. Ingenious?
We call it Pumpen Intelligenz.
Modern-day building services is a dynamic, vibrant industry sector. It is constantly changing and evolving, the impact of advanced technology, innovative products, stricter regulatory controls and ever-more-demanding clients putting enormous pressure on product and service suppliers. They too need to be dynamic and vibrant.

Enter Finheat Ltd who, for just on 30 years now, has been to the forefront in not just meeting — but also anticipating — the industry’s needs. Managing Director Jim King and fellow-Director Pat Keane lead a team of experienced, highly-qualified engineers who between them have a wealth of knowledge and know-how representing more than 100 years.

Specialising in air movement, pumps and controls, Finheat works closely with building services designers to devise tailored solutions for a vast variety of project types.

Complementing this relationship is an equally-strong partnership with leading-brand product suppliers whose support in respect of technical and engineering matters is on a par with the quality of the actual products they provide. This all-embracing service is what distinguishes Finheat from others in the sector.

Moreover, while the marriage of engineering excellence, advanced technology and innovative products is a complex process, the delivery of the final solution is uncomplicated and simple. It is also energy-efficient, environment-friendly and cost-effective.

Whatever the building services requirement Finheat — while working closely with the services consultant — has the perfect answer.
Split systems/units & Water Chillers

Multi-simultaneous system cassette
CAV 254 R

Ductable split units
GRV 360/480

Reversible water chillers with built-in hydraulic module
PMHRV 2044-2072

Water chillers with built-in hydraulic module
CMHG 2050-2080
Galway Clinic, Doughiska, Co Galway

Architect: Campbell Conroy Hickey Partnership
Consulting Engineers: Varmings (VMRA)

Bank of Ireland Asset Management HQ (BIAM), Mespil Road, Dublin

Architect: Henry J Lyons & Partners
Consulting Engineers: McArdle McSweeney Associates

Lapp's Quay Development, Cork

Architect: Scott Talon Walker
Consulting Engineers: RN Murphy Ltd

Pfizer Offices, Citywest Business Campus, Co Dublin

Architect: FMDesign
Consulting Engineers: Delap & Wolfr

Areas of Application
Commercial Offices; Financial Institutions; Hotels; Hospitals; Pharmaceutical; Clean Rooms; Industry; Universities & Colleges

Published by ARROW @TU Dublin, 2005
Gilberts, THE name in air distribution products, providing engineered solutions to air distribution projects for over 40 years.

With our class leading range that includes a mix of both leading edge and traditional designs, as well as standard or bespoke, we have the product to suit your project and your budget.

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So if you're looking for the best in air distribution, why not contact Gilberts. Today.
UCD School of Nursing, Dublin

Architect: Murray O’Laioe Architects  
Consulting Engineers: Varmings (VMRA)

St James’ Hospital, Dublin

Architect: Moloney O’Beirne Hutchinson Partnership  
Consulting Engineers: Varmings (VMRA)

Marriott Hotel Druids Glen, Co Wicklow

Architect: Henry J Lyons & Partners  
Consulting Engineers: Delap & Waller

EBS Headquarters, Burlington Road, Dublin

Architect: Brian O’Halloran & Associates  
Consulting Engineers: Arup

Hilton Hotel & Apartments, City Junction, Dublin

Architect: James Smyth Architects  
Consulting Engineers: Delap & Waller
Diffusion Heating & Cooling has over 40 years of experience within the air movement and air treatment sector. Through its partnership with Dublin-based Finheat, Irish clients are offered products and systems specifically designed to provide optimised, bespoke solutions for each application. Apart from the manufactured quality of the products, a key element is the quality of the engineering and design support provided.

So, whether it is heating and cooling for an office block; overdoor heaters for a retail outlet; or indoor air conditioning for a listed building, Diffusion Heating & Cooling have the experience, design know-how and products to provide an energy-efficient, cost-effective solution.

The Heating Range
- Overdoor Heaters
- Air Conditioning Systems
- Space Heaters
- Fan Convectors
- Trench Heating
- Air movement and Ambient.

The Cooling Range
- Fan Coils
- Kampmann Floor Duct
- Kampmann Trench Cooling

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et al.: BS News

Heatrae Sadia Invests in the 'Perfect Cylinder'

As one of Europe's leading water heating companies, Heatrae Sadia has completed a €8 million, two year investment programme to create what the company believes is "the perfect cylinder". As part of the investment, a unique €3 million state-of-the-art piece of automated plant has been commissioned at the company's factory in Norwich. Utilising renowned German technology, the equipment has the ability to create what the company believes is the "perfect cylinder" for its Megaflow HE and PremierPlus unvented water storage systems — with flawless welding, an extremely precise cylindrical shape and exact, smooth-cut edges.

An unvented storage water heater is fed directly from the cold water mains, ensuring a powerful, consistent flow of water at high pressure to all taps and showers, without a significant loss of performance if more than one tap is used simultaneously.

Large unvented systems are proving the ideal solution for domestic and commercial premises where a number of sinks and/or showers are in use simultaneously. In fact, research by the WMA (Water Heating Manufacturers Association) and MODUS (Manufacturers of Domestic Unvented Systems) suggests that the demand for this type of system increased by 30% during 2003 and this growth is continuing year on year since.

Since unvented systems are fed with mains pressure water, it is vital that the storage cylinder is extremely strong, durable and corrosion resistant.

Heatrae Sadia manufactures its Megaflow HE and PremierPlus cylinders from high-grade stainless steel, having pioneered the use of this material over a decade ago. Since then the market has recognised stainless steels benefits — namely excellent corrosion resistance, tolerance of high flow rates, strength, relatively lightweight, ease of fabrication and excellent durability — and it has become the preferred material for unvented cylinders.

The materials' excellent resistance to corrosion eliminates the need for a sacrificial anode. Inferior grades of stainless and glass-lined steel require an anode to achieve a degree of corrosion resistance. Anodes need to be inspected annually to check if they are still providing corrosion protection or need replacing.

Megaflow HE is the UK's market leading unvented storage water heating system, and its cylinder is manufactured from Duplex stainless steel. Its structure has a very high resistance to stress corrosion cracking and increased resistance to fatigue, erosion and chloride ion attack, which are enhanced qualities over normal grade stainless steel. Heatrae Sadia has always been synonymous with high quality, durable, premium products and brands. Heatrae Sadia's ability to closely monitor and control production has also been significantly enhanced.

For longer life, Megaflow He's Duplex stainless steel cylinder also undergoes comprehensive post-weld treatments. Enhancements to this post-weld facility formed part of the investment programme and Heatrae Sadia believes no other manufacturer can match that technology.

Heatrae Sadia has developed the large unvented market through a combination of innovation, the use of quality stainless steel and in-depth customer support. The company's investment in a "perfect cylinder" for its Megaflow HE and PremierPlus large unvented systems will help to ensure the Heatrae Sadia and Santon brands continue to be seen as the first choice for commercial water heating — leading through innovation, performance, reliability and energy efficiency.

Potterton Myson Ireland are proud to be associated with such quality as it reflects its own company ethos.

Contact: Sales Office, Potterton Myson (Ireland). Tel: 01 - 459 0870; email: post@potterton-myson.ie
The ACV HeatMaster from C & F Quadrant is a high-performance, direct-fired, hot water storage heater which has indirect heat transfer due to its tank-in-tank construction. Ideal for use both as a combined boiler and water heater, or as a stand-alone water heater, it is capable of operating at very high temperatures and with highly-corrosive water.

At the heart of the HeatMaster is a stainless steel cylinder through which the flue tubes pass. This is surrounded by a mild steel shell containing the primary water (neutral fluid). The outer shell extends down to the combustion chamber and even around the flue tubes. The area of the heat transfer surface is therefore much greater than that of standard direct-fired water heaters.

A circulating pump fitted to the primary circuit moves the water around the tank, heating it faster and maintaining an even temperature across the primary jacket. The burner fires on to the primary water which indirectly heats the stainless steel cylinder containing the DHW. As with all tank-in-tanks, this is corrugated over its full length and suspended in the HeatMaster by its hot and cold water connections.

Key benefits of the Heatmaster concept are:
- Limescale build up is prevented because the cylinder expands and contracts during use and cold water does not come into contact with the intense heat of the burner flame;
- There is no need for sacrificial anodes because of the scale-resistant features and the corrosion-resistance of stainless steel;
- Because it heats the DHW with a primary circuit, this primary water can be used to provide central heating as well;
- Most hot water and heating demands can be met simply by connecting two, three, four or more HeatMasters together in a module;
- When used in conjunction with HR and Jumbo hot water storage tanks, the HeatMaster can supply even the largest hot water requirement;
- The combustion efficiency of the HeatMaster is 92%. This high figure is due to its water-cooled, closed, combustion chamber;
- HeatMaster is able to provide domestic hot water at temperatures as high as 90°C;
- Since the total volume of water is stored at more than 60°C, there is no possibility of legionella bacteria growing within the appliance;
- Room-sealed operation (no chimney) — This type of operation is possible due to the use of a sealed combustion chamber and an exterior air supply. It is necessary to ensure that the installation conforms to the relevant regulation applicable.

The reliability of ACV steel boilers needs no proving. It is not uncommon to find 30-year old ACV boilers still operating. Additionally, they are almost the only cylinders which can be considered to be auto-descaling.

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Sales
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Fax: 01 - 295 2163
email: info@irishmetalindustries.com
web: www.irishmetalindustries.com
Go Green With Envy

Powrmatic Ireland has introduced a brand new suspended gas unit heater – the NV range. Design input from equipment specifiers, installers and users throughout the two-year development programme has resulted in a range that Powrmatic believes is superior to any other products currently available in the market.

The tubular heat exchanger and automatic ignition in-shot gas-fired burners combine to give a combustion efficiency of 92%. In fact, the range easily qualifies for the Enhanced Capital Allowance (ECA) scheme, the UK government initiative offering tax relief to businesses that invest in low carbon technologies. One hundred percent capital allowance can be claimed in the first year against the supply and installation cost of products listed in the scheme. The tubular heat exchanger design offers little resistance to airflow, enabling a lower power motor to be used for air movement, reducing energy costs still further and making for much quieter operation.

One of the NV’s many design features is the ease and flexibility of installation. NV’s can be installed conventionally for horizontal discharge, or alternatively they can be turned through 90° for vertical downward discharge. Four fixing points on the top and four on the rear are fitted as standard to facilitate either option.

Installers have the option of using either a conventional flue, or room-sealed flue by simply selecting the appropriate system. A comprehensive range of pressure-tight single-wall components and twin-wall balanced flue terminals are available to give greater choice for all applications. Furthermore, the exhaust fan can be easily rotated to enable top or rear flue discharge.

The NV is equally easy to maintain, as access to the burner, heat exchanger and controls is all from one side. A comprehensive two-year parts and labour guarantee is standard and the product is supported by a national network of Powrmatic engineers.

High quality modular duct accessories include DX coils, condensers, mixing boxes, dampers, louvres and components that allow total application flexibility. Specifiers can apply the product as a simple heating system, cooling system, or a more complex multifunctional system providing heating, cooling and ventilation. Commenting on the launch Phil Magnall, Powrmatic Sales Manager said: “This is a significant development for the company. The NV range strengthens our leading position in the air heater market and the introduction of cooling options gives a low cost solution to customers demanding comfort control throughout the year”.

The introduction of the NV range is in keeping with the dramatic changes Powrmatic has made to its product portfolio in recent years. Just 12 months ago it took the major step of entering the commercial AC sector with the introduction of its first ever split air conditioning range.

Already renowned for the quality of its warm air heaters, flue systems, ventilation and hot water products, adding air conditioning drew a positive market reaction to its ability to provide complete heating and cooling solutions from a single source.

Sales Manager Phil Magnall says: “The new air conditioning range was an important development for Powrmatic. It was a timely introduction given the ever-changing market requirements and one which is yielding significant returns even in this early stage”.

The new range includes both wall-mounted and cassette type units, all of which are suitable for R410A refrigerant. Prices are competitive and large stocks are carried to ensure immediate availability. All units come with a 3-year parts and labour warranty.

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Fax: 01 - 630 5706
email: sales@cfquadrant.ie
web: www.cfquadrant.ie

HM 60 / 70 N / 100 N / 150 JUMBO

HM 60 N / 70 N / 100 N
With ACV BG 200-S premix gas burner

HM 60 N / 70 N / 100 N
With ACV BM 101 oil burner

HM 150 JUMBO
With ACV BM 151 oil burner
Copper tubes are generally used in buildings for the following services:

- Domestic hot and cold water supplies under pressure, usually up to mains pressure (typically 60psi or 4bar or maybe up to 10bar) or head pressure from a storage tank;
- Sanitary waste water drainage;
- Wet central heating systems (with radiators/convectors);
- Underfloor heating;
- Gas services for heating and cooking;
- Oil services for heating;
- Chilled water and refrigeration;
- Fire sprinkler systems;
- Air conditioning;
- Steam;
- Medical gases;
- Pneumatics;
- Hydraulics;
- Waste water.

These various applications impose as many stresses on the tubes as the different conditions of use. The key considerations are:

- Wide variations of pressure;
- Expansion/contraction phenomenon due to temperature variation;
- Chemical attack due to external materials or the characteristics of internal fluids;
- Stresses imposed on the tubes due during installation (or manufacture).

It is therefore important to know details of the environment to which the pipework will be exposed, and also the stresses to which it will be subjected in order to assess the behaviour of the tubes. Either way copper tube is the perfect solution.

Copper is highly resistant to corrosion by most traditional building materials such as brick, plaster or concrete based on Portland cement. However, it should not be allowed to come into contact with acid plasters, acid cements or coke breeze.

Except for underfloor heating systems, the installation of copper tubes or fittings within solid walls or floors is not recommended, unless they can be readily exposed. Alternatively, they may be installed in a sleeve or duct where they may be readily removed or replaced.

Any tubes passing through solid walls (by the shortest route) must be sleeved.

Unprotected copper pipes should not be laid in screeds containing ammoniacal foaming agents, nor allowed to come into contact with cleaning fluids which may contain ammonia or its derivatives.

Copper also has high corrosion resistance to attack by soils, but again there are well known conditions that are aggressive to all metals, even to copper. These include "made-up" ground containing wet ashes or clinker, poorly drained sites with a high chloride or sulphate content or wet soils containing decaying vegetable matter or indigenous fertilisers.

Furthermore, the laying of underground services in contact with contaminating materials such as foul soils, or passing through any sewer, drain or cesspit is prohibited. Underground services should be installed using thick walled copper tube, (formerly designated Table Y) and all the fittings should be immune or resistant to dezincification. Any compression fittings should be of the manipulative type to BS EN 1254: Part 2, Type B.

Unless the building materials or soil are known to be non-aggressive to copper, it is advisable to use factory-supplied-plastic-coated copper tube, or to protect the tubes and fittings by means of a suitable waterproof wrapping.

The primary reasons why copper has dominated the market for the past 40 years can be summarised as follows. It is:

- Tried, tested and proven;
- Versatile;
- Long-lasting;
- Healthy and safe;
- Good value for money;
- Recyclable;
- Resists heat, corrosion, pressure and fire;
- Non-permeable;
- Excellent support.

Moreover, research has also concluded that copper pipes reduce the risk of Legionnaires' disease.

According to a study undertaken by KIWA, the Dutch water quality research Institute, copper pipes reduce the growth and spread of the bacteria responsible for Legionnaires' disease.

Legionella concentration in water conveyed by copper pipes was found to be 90% less than in cross-linked polyethylene pipes, one of the most commonly-used types of plastic piping in plumbing.

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For details on the full range of Heatrae Sadia and Santon products contact:

Potterton Myson (Irl) Ltd
Belgard Road, Tallaght, Dublin 24
Tel: 01 - 459 0870    Fax: 01 - 459 0880    email: post@potterton-myson.ie
www.heatraesadia.com
At a historic meeting in Portlaoise earlier this month representatives from regional installer bodies throughout the entire country came together to form a National Installer Federation. This is a unique development and one which was long overdue.

However, the timing is perfect as impending developments within the business — both legislative and commercial — are about to transform the entire domestic installation sector. Before the year end the Government will introduce a Register of Gas Installers, thereby preventing those not on the Register from working on gas installations. Additionally, there are the vast implications of the Energy Performance of Buildings Directive (EPBD). This too will require that those wishing to work in the sector must undertake all relevant educational/training programmes and, more to the point, achieve the necessary standards of accreditation.

Moreover, such is today’s trading environment that domestic installers can no longer operate on an ad hoc basis. They must realise that they are not just tradesmen practicing a craft but rather businessmen.

On the face of it this seems like a daunting scenario but, in truth, the means for installers to realise these objectives are already in place. A constituent member of the Federation — Renewable Energy Skillnet — already has a successful modular education/training programme up and running.

Even more important still is that significant funding has been secured through the Government-backed Skillnet Programme to minimise the participation costs for installers. Further funding will be sought this coming September for an additional four-year period starting January 2006.

On the broader front the constituent group members of the Federation — from Dublin, Cork, Dundalk, Drogheda, Donegal, Ennis, Galway, Limerick and Kerry — will henceforth talk with all Government Departments, and bodies such as the CER and SEI, as a single entity. BSNews is also an active participant with Editor & Publisher Pat Lehane serving as co-ordinator and “neutral” Chairman.

As individual organisations the constituent Federation members already have excellent working relationships with Government and legislative bodies but now have a shared responsibility to transform the entire installation sector. Indeed, this initiative will continue to run, be national, and there are attendant administrative costs which they can no longer absorb.

Hence the proposal that all installers wishing to support the initiative, and share in the widespread benefits already accruing, pay a nominal membership fee. The initiative already has a level of support which is evident. Indeed, the figure has yet to be determined but will obviously depend on the scale of the initiative.

To help determine what that may be, please complete the form (right) to confirm that you are supportive of the initiative and that you will join. Return as directed.
Secure Your Future — Join Now!
Please complete and return to:—
Pat Lehane
Interim Chairman
National Installer Federation
c/o BSNews
Carraig Court, George’s Avenue
Blackrock, Co Dublin.

NOTE
This information will not be given out to third parties. It will only be used to assess the level of support for the initiative and to ensure that those interested are copied directly with all relevant information and updates through BSNews.

Name

Title

Company Name

Address

Telephone

Email

Public Consultation:

The Draft Action Plan for implementation of the EU Energy Performance of Buildings Directive (EPBD) in Ireland, published on 27th April 2005, has been prepared as a consultation document setting out the proposed national arrangements and development tasks required to implement the EPBD in Ireland.

The general public, and all with a role or interest in the construction and property sector, are invited to submit comments on the Draft Action Plan. Copies of this document and of the template for submitting comments can be downloaded from www.epbd.ie.

The closing date for receipt of comments on the Draft Action Plan is 29th July 2005. Details on any information evenings will also be posted on www.epbd.ie.

Sustainable Energy Ireland promotes and assists the development of sustainable energy.
With 110 students currently on the whole time programme, 140 on the part-time one and considerably-increased numbers set to participate in both next year, the success of the electrical services engineering courses run by DIT, Kevin St, is in no doubt.

The two-year certificate whole time programme on electrical services engineering was unveiled in September 2000 with school leavers gaining entry through the CAO system. A part-time modular programme suitable for personnel already working in the electrical services industry was also launched at the same time, matching the learning outcomes of the day programme.

The design of the part-time programme also took account of accredited prior learning, experiential learning, and work-based learning. This had the effect of drastically reducing the class contact hours for the part-time students. However, a requirement of the programme was that students must be currently working in the electrical services industry.

The part-time programme has proved very popular with qualified electricians who gain exemption from Year 1. They see this qualification as giving them career choice and potential for further development.

Both programmes proved very popular and plans for a Diploma option were immediately put on the books. Students who had completed their Certificate programme were able to carry on to the Diploma year without a break.

Ordinary Degrees were introduced in 2004 in line with the National Framework of Qualifications at level 7, and this year will see the first group of students graduating with Bachelor of Technology in Electrical Services Engineering.

All graduating students have succeeded in securing employment to date and feedback from industry is very positive. Progression to higher degrees is set out in the Bologna Process presently recognised by 45 countries. In line with this process, DIT Kevin St have plans to shortly introduce a Masters Degree in Electrical Services Engineering, which will be delivered in a modular format. The present cohort of students is very interested in this option, a fact which reflects not just the calibre of the programmes themselves but also their quality content and the excellent manner in which they are delivered.

Kevin O'Connell and his team at DIT Kevin St have established electrical services engineering as an invaluable, stand-alone, discipline within building services which has prospective employers queuing up to employ its graduates.

On the broader front it confirms the importance of closer and stronger ties between industry and educators (see page 37).

Contact: Kevin O'Connell, Head of Department, DIT Department of Electrical Services Engineering. Tel: 01 - 402 4616; email: kevin.oconnell@dit.ie
It's often said that there is nothing so uncommon as common sense. This holds true for a great many disciplines and activities, including the building services sector. Very often the striving for excellence leads to a degree of sophistication which ultimately obscures the fundamental objective. Some argue that this has happened with consulting engineering, be it mechanical or electrical.

However, emerging grassroots developments refute that notion. New companies such as Synergy Engineering Ltd reflect the new face of consulting engineering. Indeed, they no longer refer to themselves as consultants but rather as engineering designers. They represent a multi-disciplinary approach to engineering design based on best practical design and project management.

To achieve that they employ young, dynamic engineers who complement the extensive experience of principal Directors Tony Delaney and Andrew Coffey. Moreover, many of these engineers are first and foremost trades-qualified personnel who, for the most part, earned their engineering degree qualifications while still working at their trade. This in fact is the route Tony took so perhaps it is no surprise that Synergy are staunch advocates of this approach.

Of course Synergy Engineering also employs graduate engineers who are not trades-qualified. Naturally enough, they take a little time to learn the practical aspects of applying engineering design principles to a site situations.

"There is nothing sophisticated about it", says Tony, "it really is common sense. As a trades-qualified engineering student you are ideally positioned to understand, and relate to, the academic content of the degree course. You also know how to apply it better since you will invariably have come across many of the scenarios presented in exercise format while working on site".

Andrew concurs, adding: "It is only recently that the likes of the DIT has recognised the potential for development in this respect. In particular, all credit must go to Kevin O'Connell of DIT Kevin St who pioneered new part-time (as well as full-time) degree courses in electrical services engineering. We now have three employees on the part-time course and they are proving an enormous resource.

"These are driven young individuals who are earning significant salaries in full-time employment but who, nonetheless, see fit to give up three nights a week for classes and numerous weekends for study and project work. It says a lot about them but also about the course content, and the tutors, who obviously keep them involved and interested."

Kevin O'Connell clearly identified an industry need when devising the new electrical engineering courses. Tony Delaney and Andrew Coffey are among those who have responded to that initiative and, in turn, brought it to the marketplace in general, which was crying out for a fresh, uncomplicated approach.

That the formula works is in no doubt. Despite being a start-up operation in the competitive world of engineering design just four years ago, Synergy Engineering now has 18 employees and an order book of current and impending projects which will require additional personnel coming on board sooner rather than later. No prizes for guessing where they will find them!

Contact: Andrew Coffey, Tony Delaney, Synergy Engineering. Tel: 01 - 460 5017; email: info@synergyengineering.ie
RACGS At Rathsallagh

RSL laid on an excellent day at the RACGS outing in Rathsallagh with Gerry McDonagh, Paul Lynch and Seamus Kerr ensuring everything went according to plan. Roland Bradley acted as president in the absence of Frank O’Sullivan and he welcomed back a couple of familiar faces from the past. Liam Hoctor, Captain, congratulated Rathsallagh on a superb course with exceptional service.

Details of winners were as follows:

**Overall Winner:** Ger Darcy — 36pts

**Class 1**
1st Liam Hoctor 33pts;
2nd Paddy Smee 33pts;
3rd Michael McLaughlin 33pts.

**Class 2**
1st Dave Kirwan 33pts;
2nd Vincent Barrett 31pts;
3rd Roland Bradley 31pts.

**Class 3**
1st Joe Brennan 29pts;
2nd Mark Kiely 27pts;
3rd Domnick Ward 25pts.

**Visitors**
1st Thomas Curran 32pts;
2nd Tom Fitzpatrick 24pts.

**Front 9**
1st Brian Carty 18pts.

**Back 9**
1st Joe Cribben 16pts.

Members should also note the new date for the next outing. BTU Captain Liam Hoctor has chosen the Heritage in Killenard as the venue for 25 August 2005. The time sheet is open, and like last year, will be restricted for the popular venue. Please register with Kaye at Tel: 045 - 893 228 as soon as possible.

https://arrow.tudublin.ie/bsn/vol44/iss6/1
Liebert’s Himod air conditioning system provides precise temperature regulation, humidity control and air filtration required by electronic equipment in computer rooms, telecommunications sites and other high tech environments. Featuring total front access for installation and service, the Himod fits easily into cramped spaces, leaving more room for critical electronic equipment. Low noise levels make it a user-friendly solution.

The combination of a scroll compressor, with its high EER (Energy Efficiency Ratio) and the motorised impeller fans gives unrivalled efficiency with high sensible heat ratios and energy efficiency. The use of motorised impeller fans with variable speed features, combined with a specially-designed larger air chamber, provides low noise characteristics which are demanded in today’s applications.

To address environmental concerns, the new Himod is constructed of double-skin panels using CFC-free insulation materials and all components can be recycled. In addition, it is designed to operate on zero ozone depletion potential refrigerant R407C (R22 models are also available until December 31, 2009, when production is prohibited).

The Himod portfolio comprises four principal ranges, each incorporating specific features designed to cater for particular applications. Brief details of each are as follows:

— The Himod dual-fluid range provides both direct expansion and chilled water technology within the same unit. They get chilled water from the central loop whenever it is available. Continuous cooling is assured by the DX system, even in the case where there is no more CW fluid feed. Perfect for buildings that run chiller only in summer for comfort air conditioning, dual-fluid makes the most of the lower operating cost of the central system and keeps on cooling technological equipment in winter;

— Direct expansion units, equipped with scroll compressors, are available with air-cooled or water cooled. Condensers offer 22 cooling capacity sizes, from 4 to 99 kW, most of which are available with single or double refrigerant circuit.

These units are characterised by high energy efficiency for technological applications where the operational costs are by far the most significant consideration.

Himod Constant is the solution for systems requiring precise control of temperature and humidity for the most demanding installations and stringent standards. These include metrological rooms, laboratories, textile, pharmaceutical, tobacco, paper and precision mechanical industries.

Matching remote condensers and dry coolers are available in standard and low noise configuration;

— Himod free-cooling units make the most of low winter temperature, saving electrical power of compressors. Air delivery patterns are downflow suction from the top and delivery from the bottom plate.

Downflow units blow under a raised floor with grilles with double function: air delivery duct and carrier for technical items, like pipes and cables. Upflow units can be connected to any ceiling channel through a complete range of plenums from 500 to 1200 mm in height.

As an alternative, an easier solution consists of blowing the air in horizontal direction through the plenum with grille;

— Matrix S (cooling capacity 40-280kW) incorporate new-generation sickle-profile fans, specifically designed condenser coils, particularly silent scroll compressors and ad hoc nozzles to provide unrivalled low sound levels. The optional EC fans can reduce sound emissions still further, by as much as 10dB(A) in partialisation, when compared with traditional fan speed adjustment systems.

Free-cooling technology also has a considerable impact on consumption. It allows optimum use of external air according to the specific climatic conditions, reducing energy consumption and wear and tear of the main components.

The Matrix Range S is available in six versions to meet the different application needs, allowing genuine customisation of the system.

Contact: Austin McDermott, Core Air Conditioning.
Tel: 01 - 409 8912;
email: info@coreac.com
Sustainable Energy Ireland (SEI) recently published the draft action plan for Ireland’s implementation of the EU Energy Performance of Buildings Directive (EPBD). The plan, prepared by an inter-Departmental working group drawn from the Department of the Environment, Heritage and Local Government and the Department of Communications, Marine and Natural Resources and SEI, is open for public consultation until 29 July, 2005.

The EPBD will affect virtually all buildings — residential and non-residential — which in Ireland account for an annual energy expenditure of €3.5 billion and give rise to about 45% of energy-related CO₂ emissions in Ireland. Once law it will mean that when a building is erected, sold or rented out, the owner must provide a Building Energy Rating (BER) certificate to the prospective buyer or tenant. This will be similar to the energy labelling of household appliances or the miles per gallon (litres per kilometre) rating for a car. To attain the BER, the property owner will be obliged to have an energy assessment carried out by a registered assessor and must then provide prospective buyers or tenants with a copy of the BER. The BER will be accompanied by an Advisory Report setting out options for improving the building’s energy performance.

The Directive is to be transposed into national legislation by each of the 25 EU member states in 2006. However, in relation to the BER boiler and air conditioning requirements, member states have the option to schedule implementation up until 2009 if necessary to allow for the provision of adequate numbers of qualified assessors and inspectors. The draft plan estimates that up to 2000 assessors will be required to service Ireland’s housing market alone. Who better to do this than domestic installers?

Commenting on the Directive Noel Dempsey TD, Minister for Communications, Marine and Natural Resources said: “We see the new Directive being positive for consumers, giving them another point of comparison when buying or renting a property. The advice provided in the Advisory Report will also give building owners practical guidelines on how to improve the energy performance of their properties.

“Over time, and as a result of informed investment decisions, it will lead to a rise in the quality of the building stock”.

The Directive will also require member states to introduce provisions for improving the efficiency of larger boilers and heating systems and to provide for inspection of air conditioning systems. For new buildings and major refurbishments, minimum energy performance requirements must be set. For planned new buildings of over 1000 sq m in the feasibility of alternative energy options, such as renewable energy and combined heat and power, must be assessed.

David Taylor of SEI commented: “In common with other member states it is clear that meeting our obligations under this Directive will be a formidable challenge. This is not just a case of meeting initial deadlines. Successful implementation will demand that systems are in place to ensure day-to-day delivery of the assessment and inspection services by trained and qualified people. As such we have opted for a phased implementation schedule which we feel is balanced and realistic”. The draft action plan sets out the proposed approach, specific tasks and responsibilities, and time schedule under which Ireland can meet all the requirements specified in the Directive. It is proposed to phase in the commencement of mandatory BER elements in three steps: —

- BER of New Buildings 1 January 2007;
- BER of New Buildings (other than dwellings) 1 January 2008;
- BER of existing dwellings and other existing buildings, when offered for sale or rental. 1 January 2009.

The draft action plan is available for public consultation online on www.epbd.ie or in hard copy by request from Tel: 1850 376 666 until 29 July, 2005.
If we do not succeed in reducing the energy consumption drastically, the small heating circulators in all European households will, in the year 2030, consume almost 43,000 GWh of electric power per year – this is the conclusion of a forecast by the International Energy Agency (IEA) in Paris, according to Tony Cusack of Wilo Engineering. Moreover, because of the continuing expansion of the EU, this value will rise to about 60,000 GWh.

As part of the Kyoto agreement, European governments are making efforts to considerably reduce the output of CO2. An important control instrument for this is the energy labelling of household appliances which consume relatively large amounts of energy, such as washing machines and refrigerators in order to inform the consumers of the amount of energy consumed, and to help them to select appliances which consume less energy. This instrument has already led to a considerable global reduction in the amount of energy consumed by such appliances. At the moment, however, there is no corresponding EU regulation for the pumps used in heating systems.

In order to contribute to the saving of energy, leading European pump manufacturers such as Wilo have now declared that they will voluntarily label their pumps with respect to their power consumption. This means that dealers and end users can see, with the aid of an already well-known classifications system, whether the product they select is particularly energy-efficient.

The energy efficiency of heating circulators is classified by means of measurements. The power consumption of the heating pump is measured at four different operating points in accordance with the load profile. Since a Dp-variable regulation characteristic is advantageous, this curve is used as the reference. Deviations from the reference curve result in higher characteristic energy values. The measured power consumption figures at the four operating points are weighted with the durations of these operating points in the load profile. The resulting average power consumption is then compared with the typical power consumption of comparable heating circulation pumps with the same hydraulic output. This is the so-called reference power consumption, which was determined from measurements made on many commercially available pumps. The result of these calculations is the Energy Efficiency Index EEI (see Table 1).

The smaller the EEI, the less electrical energy the pump consumes and the better its energy classification.

Although the energy requirements for Class A pumps are very high, pumps of this best energy class are already available for the complete power range, from a single-family house to a large building. This has been made possible by the new generation of DC motors with electronic commutation, with which wet-running pumps with very high efficiency can be built. The high-efficiency pumps of the Wilo Stratos series have, due to their extreme energy efficiency, set the standard for Energy Class A.

In addition to the energy classification, other factors affect the energy consumption of a pump. This is where an expert planner is absolutely necessary as further savings can be achieved by suitable design of the piping, by matching the components of the system to each other and by avoiding idle-running phases.

"We are totally committed on the collective Europump initiative", says Tony Cusack of Wilo Engineering. "but, from our own point of view, we will also continue to spearhead innovative developments such as those incorporated in the Wilo Stratos range to underscore that commitment".

Contact: Tony Cusack, Wilo Engineering, Tel: 061 - 277 566; email: sales@wilo.ie

<table>
<thead>
<tr>
<th>Energy Class</th>
<th>Energy Efficiency Index (EEI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>EEI &lt; 0.4</td>
</tr>
<tr>
<td>B</td>
<td>0.4 ≤ EEI &lt; 0.6</td>
</tr>
<tr>
<td>C</td>
<td>0.6 ≤ EEI &lt; 0.8</td>
</tr>
<tr>
<td>D</td>
<td>0.8 ≤ EEI &lt; 1.0</td>
</tr>
<tr>
<td>E</td>
<td>1.0 ≤ EEI &lt; 1.2</td>
</tr>
<tr>
<td>F</td>
<td>1.2 ≤ EEI &lt; 1.4</td>
</tr>
<tr>
<td>G</td>
<td>1.4 ≤ EEI</td>
</tr>
</tbody>
</table>

Table 1 shows the division of the energy efficiency index into seven different energy classes.
Ganly's of Athlone, Homevalue Hardware has won the national Octabuild Builders Merchant Award 2005. The award was presented by Tom Kitt, TD, Minister of State at the Department of the Taoiseach and Government Chief Whip, at a ceremony in Dublin recently.

Ganly's also won the Connacht/Ulster Regional Award and the County Roscommon award. A previous national winner in these awards, Ganly's has been in business for 16 years. It employs 126 full and part-time staff in a new state-of-the-art retail and trade store.

The other Regional Award winners were Wallaces Homevalue Hardware & Builders Providers, Wexford, who took the Leinster Award and MD O'Shea & Sons, Killarney, who won the Munster Award.

In addition to the 26 County Awards, eight special awards were presented.

Sean Garvey of Garvey's Roscommon received a Lifetime Achievement Award while his company picked up the Marketing Award. Meanwhile Cork Builders Providers received two presentations in the Support for Irish Products category. In addition to the Octabuild award, they received a second honour from Guaranteed Irish.

The other special award winners were:

- Small Business Award
  - Flynn's of Moate Homevalue Hardware.
- Large Business Award
  - Telfords Portlaoise.
- Family Business Award
  - Doyles of the Shamrock, Carlow.
- Heavy Goods Award
  - C&D Providers, Wexford.
- Most Improved Business Award
  - Heiton Buckley Limerick.

Introducing the awards the outgoing Chairman of Octabuild, Paddy Kelly, said that this year was probably the most competitive of the recent awards. “The overall average mark was just over 84%, up from 75% in the last awards and only 6 percentage points separated the top 16 merchants going into the final selection.”

All entries were judged on the basis of Customer Service, Merchandising, Housekeeping, Health & Safety, and Management Systems. The judging panel included representatives from the Irish Hardware & Building Materials Association and the Irish Home Builders Association.

Octabuild companies who organise the Awards are — BPB Gypsum Industries; Evo-Stik; ICI Dulux Paints; Irish Cement; Moy Isover; Sanbra-Fyffe; Tegral and Wavin. Between them they have over 650 years manufacturing experience in Ireland, directly employ over 1,400 people here and have over 20,000 quality products available every day for Irish builders merchants.
Congratulations to Alan Parr of Coolrite
Refrigeration in Cavan who won Gold in the recent World Skills event in Helsinki. This year was the first time the Refrigeration Section in DIT, Bolton St, put forward an entrant in the refrigeration section and all credit to Garret Keenanaghan from DIT for the drive, enthusiasm and expertise he brought to the effort.

Under Garret’s direction Tony O’Brien in DIT, Bolton St and Barry Leech, Dave O’Riordan and Jim McInerney of CIT in Cork devised an extensive training programme for Alan, which also incorporated the support and involvement of Danfoss Ireland, GT Phelan, and of course his employers Coolrite.

Alan embraced all elements of the programme to such an extent that, when he arrived in Helsinki, he was undoubtedly one of the best-prepared contestants in the entire event.

Nonetheless, once the finals got underway he was on his own. It was a daunting challenge, not least because he was the first person from Ireland to compete in the Refrigeration Section of the World Skills event. He also wanted to live up to the belief his back-room team had in him.

As it turned out he need not have worried. He delivered the ultimate performance, taking gold when the winners were announced. To say that he and the team were excited is an understatement ... the celebrations in Helsinki will be re-told as legend in the coming years.

Co Meath, for Welding. This year’s international showcase for trades was attended by almost 180,000 visitors with over 630 apprentices competing from 43 countries.

On the broader front, Ireland did equally well in a number of other categories. We also won gold in Automobile Technology and Restaurant Services, while taking one silver, one bronze and nine Certificates of Distinction. The latter included John Doyle, Co Carlow, for Mechanical Engineering; Sean Stack, Co Kerry, for Industrial Control; Robert Stapleton, Dublin, for Sheet-Construction Steelwork; and Matthew Brearton, around the world.

Inter-agency preparation of the Irish team for Helsinki took place in co-operation with the Department of Education & Science, Fáilte Ireland, IVEA, and the Dublin and Regional Institutes of Technologies. The Irish team ranked seventh overall in the competition.
Cool Biz

With emissions of ozone-depleting gases rising rather than falling, Japan has turned to fashion to tackle the problem. Apparently, much of the harmful emissions in Japan come from air conditioning units and so, the government has decreed that as and from this month all AC thermostats must be set at 28°C.

Acknowledging that AC units will rarely come on, the government has come up with the idea of Cool Biz, an initiative designed to get the notoriously traditional Japanese office worker to discard sweat-inducing suit jackets and ties in favour of lighter, open-necked, casual garments.

Former Prime Minister Tsutomu Hata already spearheaded a similar initiative by simply chopping the arms off his suit jackets at the elbow. Not surprisingly, this trend never took off.

This time 'round the present government has commissioned top fashion designers to devise styles which it hopes will be embraced and adopted by the country's ultra-conservative businessmen. I kid you not!

White Collars Discarded

According to Kevin Gilna of the CIF, people are leaving banking and stressful white collar occupations to take up well-paid crafts jobs in the construction sector. He says the traditional bias in favour of third level education when post Leaving Certificate opportunities were being discussed is now being questioned with more girls also taking up apprenticeships to become electricians, plumbers, plasterers and painters.

Lady Leads IPFMA

Patricia Crisp of commercial property consultants Garly Walters, Dublin, has been elected Chairperson of the Irish Property & Facility Management Association (IPFMA) for 2005/2006. This is a landmark appointment in that Patricia is the first ever lady chairperson of the Association.

Congratulations Patricia.

Calpeda Golf Triumph

Calpeda won the BPMA (British Pump Manufacturers Association) Golf Day at Celtic Manor Golf Club last month. Pictured are the members of the winning team — Graham Fay, Calpeda Ireland; Stephen Harris, Harris Heating; Dave Christie, Lambarts UK; and Ken Hall, Calpeda UK.

Office Containers

While in the west make a big deal about our recycling efforts, the people of Mozambique simply get on with it, and very cleverly too.

With massive imports into the country and precious little exported, shippers find it more cost-effective to sell off or simply dump shipping containers rather than bring them home empty.

However, instead of vast steel mountains aka our butter and beef mountains, Mozambique uses them to erect commercial centres housing retail outlets, cafes and offices.

Simple, direct, practical and to the point.

Boom ... What Boom?

Developers and investors in residential and commercial property markets expect the current building boom to continue according to a survey conducted at the recent Ulster Bank CBRE Gunne Property Conference 2005. Boy it's well for some!

While developers and investors are enjoying massive profits, the rest of the construction chain is not so lucky. The building services sector is particularly hard done by with unrealistic tender prices driving margins down to the point where neither contractors nor product suppliers are making money.

Developers and investors, thank you for the admission that you are enjoying the boom. Can you please share the benefits with those who make it all possible?
ECOLUTION is the new generation of split, multi-split and VRF inverter systems from Mitsubishi Heavy Industries Ltd.

Packed with new features, our intelligent design ensures high performance combined with ultra energy efficiency. All models are now quieter, smaller and lighter, allowing a simple and neat installation for applications from a single room to an entire building.

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- Temperature: -80°C to 600°C
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