Engineered HVAC Solutions

Marren Engineering and McQuay International are ideal partners. Both are engineering-based companies with McQuay to the forefront in the design and manufacture of air movement products, and Marren as a leader in devising engineered air conditioning and refrigeration solutions.

Innovation

Flexibility

Performance

Marren Engineering Limited
1 The Seapoint Building, Clontarf, Dublin 3
Tel: 01 - 833 4144  Fax: 01 - 833 4182
Email: info@marrenengineering.ie
**All Eyes On China**

There was a time when China was seen as the great Red Menace ... a threat to world stability and freedom. In between came the reconciliation phase, then the integration phase, with tentative links being established between the West and Chinese officials.

Finally came the major breakthrough ... the establishment of trade links between China and the rest of the world. With a population of billions the potential for product and service suppliers is seen as mind-boggling.

However, therein lies the rub ... such is the demand for basic raw materials such as oil, steel, etc that the boom in China is causing serious materials shortages on the world markets. The impact varies from sector to sector and is still more of a ripple than of tidal-wave proportions.

That said, it's imperative that the world's raw materials producers re-organise and re-structure so that the insatiable demands of China — which offer so much potential on the one hand — don't, on the other hand, undermine the stability of the West's economy.
Win a Sanyo Hi-fi
Reader competition
Enter our reader competition and you could win a fantastic Hi-fi in our prize draw. Simply answer the questions and complete the details, copy and fax back to BSNews on 01 288 6966.

May 2004 competition
1) Which soccer team has won the 2004 La Liga?
   a) Valencia  
   b) Real Madrid  
   c) Barcelona  

2) Which Asian country's Prime Minister recently visited Ireland for the first time?
   a) China  
   b) Japan  
   c) Korea  

3) How many new states joined the EU on May 1st, 2004?
   a) 4  
   b) 7  
   c) 10  

4) With a COP of 3.51, which Energy Efficiency level does the Sanyo SAP-KRV93EH achieve?
   a) A  
   b) B  
   c) C  

5) Which airline uses the flight code prefix of 'EI'?
   a) Ryan Air  
   b) Aer Lingus  
   c) British Airways  

Name: ____________________________
Company: __________________________
Address: __________________________

Fax back to BSNews on 01 288 6966

Rules: Competition open to anyone over the age of 16.

Matrix Make IT Happen

Matrix Electrical Ltd carried out the initial enabling works contract for the largest ever single retail project in Ireland, the 20,000 sq ft Roches Stores premises in Henry Street, Dublin 1.

The overall scope of works for this portion of the project was to supply solutions on a 24-hour basis to remove, replace, divert and reinstate services, which hindered the progression of all civil and structural works associated with the future main contract. It was agreed that these works would be carried out on the basis that the store was handed back capable of trading each day.

Later Matrix Electrical successfully won the main contract works on competitive tender. The contract consisted of the installation of all medium and mains voltage distribution; lighting and emergency lighting (8,500 fittings); general services (210 till positions); clean power and 60kVA UPS; fire alarm (1280 pts); voice evacuation and PA (400 pts); smoke extract system consisting of smoke curtains, vents, fans and dampers; voice and data cabling system (2,500 pts); intruder alarms; cash retrieval system; CCTV on each floor; the complete electrical installation associated with the mechanical installation to provide air conditioning to each floor via 10 air handling units, chillers and a VRV system.

Delivery restrictions applied from 7am to 7pm each day which required additional co-ordination and planning for the duration of the project.

Architect on the project was Newenham Mulligan Associates with J V Tierney & Co the consultants.
Sanyo, offering you the choice of tomorrow's technologies today.

Sanyo Air Conditioners
41 Western Parkway Business Ctr, Ballymount Road, Dublin 12.
T. 01 456 8910  F. 01 450 7227
www.sanyoaircon.com
**Tender Prices Bottom Out in 2003**

The recently-published Tender Price Index for 2003 from the Society of Chartered Surveyors (SCS) shows that tender prices, on average, finished the year just marginally lower than the second half of 2002. This stabilisation looks set to continue for 2004, with perhaps a modest increase, as the year goes on.

“The recovery in the second half of 2003 mirrors a general increase in the level of confidence within the industry,” says Derry Scully of the Bruce Shaw Partnership who led the SCS Quantity Surveying Division working party. “With this increase in confidence continuing it is likely that construction prices will show further modest increases, mirroring general inflation levels, for the immediate future”.

The SCS Tender Price Index will continue to monitor construction tender pricing levels and the Society’s Quantity Surveying Division plans to publish the results for the first half of 2004 in late summer.

The Index is based on actual tender returns for non-residential projects during the period for which it is undertaken. It is also based on predominately new-build projects with values ranging from €0.5 million to €10 million and covers all of Ireland. Thus the Index is a measure of average construction tender price increases across differing project types and locations.

Contact: Derry Scully, SCS Quantity Surveyors Division.
Tel: 01-241 3200.

**McInerney Appoints McMahon**

McInerney Homes has appointed Fergus McMahon as Chief Quantity Surveyor. A graduate of Galway MIT, he joined the company in 1992 and previously held the position of Senior Surveyor, based in Galway.

**Mark GS+ Condensing Unit**

The CE approved Mark GS+ suspended condensing pre-mix, high-efficiency unit air heater with axial fan from Mark Eire in Coolea incorporates a combustion chamber and heat exchanger made from stainless steel and casing of aluzinc finish. Featuring electronic ignition and advanced, room-sealed, combustion technology, the unit has efficiencies in the order of 95% to 106%.

Other user benefits include low gas consumption; low nox emissions; air grill with horizontal louvres; easy operation; low maintenance; long life; competitive price.

Options include modulating combustion and condensing unit; thermostat; 0 - 10 volt regulation; and high/low burner.

Accessories include isolator switch and air grille with vertical louvres.

Contact: Mike Donoghue, Mark Eire.
Tel: 026 - 45334; email: sales@markeire.com

**IPFMA Annual Launch**

Approximately 250 members and guests attended the IPFMA annual members lunch in the Burlington Hotel recently. Principal speaker was Senator Fergal Quinn while the occasion was also used to present certificates to the 21 graduates of the IPFMA’s one-year Diploma Course.

Picture shows Senator Fergal Quinn with IPFMA Chairman Jerome O’Connor of Hamilton Osborne King and Society of Chartered Surveyors Immediate Past-President Joseph Bannon of Harrington Bannon.
Unico On The Move

Unico System Ireland and EJ Fidgeon Refrigeration have moved premises and are now located at Curraghbrack, Rathconnell, Mullingar, Co Westmeath. Telephone numbers, fax and email remain the same.

Contact: Eamon Fidgeon, Unico System Ireland.
Tel: 044 84881/3; email: reception@ejfidgeon.com

New Gas Supplier

Vayu — a new gas supply company — has been licensed by the Commission of Energy Regulation (CER) as a supplier and shipper of natural gas in Ireland. This license allows Vayu to ship and supply natural gas to customers who are eligible to change gas supplier as part of the ongoing deregulation of the energy market in Ireland.

The threshold for eligibility is currently set at 500k standard cubic meters per annum, or large industrial and commercial customers. This threshold is set to drop further in the summer of 2004 to include all those using in excess of 73k kWh, opening up approximately 16,000 smaller industrial and commercial and SME customers.

Cathy & Pat Renew Partnership

Cathy Greene (nee Ryan) who has worked as Pat Byrne’s assistant for many years in a number of different companies has returned to join him as Office Manager at Lennox Ireland. Cathy took time out recently following the birth of her first child and is now looking forward to renewing the many business relationships and friendships she established over the years.

Contact: Cathy Greene, Lennox Ireland.
Tel: 01 - 429 9703.

Vent-Axia Acquires Baxi Clean Air

Vent-Axia has acquired the ventilation division of Baxi Clean Air Systems for an undisclosed sum.

The intention is to use the Baxi Clean Air Systems’ range to strengthen its position as a single-source supplier across the entire ventilation, heating and air conditioning sector.

It will also add to its expertise in the development, design, manufacture and supply of centralised ventilation and heat recovery systems.

1 in every 7 air conditioners sold globally is an LG unit
Put your trust in LG – you won’t regret it.

Core Air Conditioning Tel: 01 - 409 8912
LG Distributor for the Republic of Ireland

Published by ARROW@TU Dublin, 2004
'Definitive' R410A VRF Range From Toshiba

A large Toshiba SMMS from GT Phelan which can be connected to a 193kW of indoor unit cooling capacity

GT Phelan has introduced Toshiba's new "core" product — an R410A version of its modular multi VRF system to be known as Toshiba Super Modular Multi System or SMMS. GT Phelan's Sales Director Derek Phelan describes this new product as: "the future of VRF because it is the first 'dual-inverter system' in the industry. SMMS is more efficient than competitive technologies and operates with a larger number and wider range of indoor units. An EER of 3.8 is possible with this system while it also has the smallest footprint of comparable systems, and the greatest design layout flexibility."

All of the compressors are inverter-controlled in the new SMMS range and the Toshiba "dual" system can bring compressors in different units on at different times in order to lower starting currents and reduce wear. Dual control will run the fans on more than one unit without starting the compressors, to improve heat transfer efficiency and reduce noise. A 10hp Toshiba SMMS is claimed to be 15% more efficient than other comparable systems on the market.

The Toshiba Super Modular Multi System can be connected to as much as 192kW of indoor unit cooling capacity. Each outdoor system can be specified to run as many as 48 indoor units. This is the largest number announced by any system using inverter-controlled DX technology and R410A as the refrigerant.

There are 84 compatible units in the indoor unit range and nine models covering every possible size and style, from high-wall to high static ducted. There are five heat pump outdoor models in the range with capacities from 5hp to 48hp (14kW to 134.4 kW) cooling and 16kW to 150kW heating.

The 150 metre allowable separation between outdoor and indoor units and the 50-metre lift also support these large applications.

An active oil management system enables an increase in design layout flexibility for the outdoor and indoor units.

Using R410A improves equipment efficiency. Although working pressure is 60% more than it would have been traditionally for R22, the heat transfer rate is improved by 35%. Compressor friction losses are reduced 30% and compressor displacement by 30%. All of this enables smaller pipework to be used in the heat exchanger. Smaller tubes cause greater air turbulence — increasing heat transfer efficiency — thanks to the more efficient, grooved-tube, pipe design specially developed by Toshiba.

The air pressure drop through the outdoor heat exchanger is 30% lower than with R407C equipment designs, thus requiring less power for the fans, which in this instance are powered by high efficiency DC motors. This also reduces sound levels to within the most stringent planning control requirements.

Each SMMS outdoor unit uses two twin rotary DC compressors. These are controlled by the patented Toshiba inverter control system that controls both pulse width modulation and pulse amplitude modulation, enabling the compressors to run optimally at all times rather than stopping and starting to match demand calls.

In addition, a Toshiba patented vector-controlled Intelligent Power Drive Unit (IPDU) brings a 15% efficiency rise in the use of power across the whole range of compressor speeds. It is the IPDU that also controls the alternation of the start up of the various equivalent compressors in the system to reduce compressor wear.

Contact: Derek Phelan or Ken Lawlor, GT Phelan.
Tel: 01 - 286 4377; email: gtphelan@eircom.net

Fläkt Woods Move Premises

Earlier this month Fläkt Woods (Ireland) Ltd moved into its new headquarters which are located at Unit 1, Broomhill Business Park, Tallaght, Dublin 24.

Managing Director Mark Crimes told BSNews that this move will further strengthen the quality of the service provided by the company through its 40 employees. It is a central location which is easily-accessible with something like 6000 sq m of office space and 5,000 sq m of warehousing.

Contact: Mark Crimes, Fläkt Woods (Ireland).
Tel: 01 - 463 4600.
Modular Air Handling Units

- Full thermal break units tested to Class TB1
- Full stainless steel welded HEPA frame

- All units are Eurovent certified
- ATEX certified units also available
Sanyo Battles It Out At Killarney

Sanyo-backed rally driver Austin MacHale raced to second position in Killarney over the May Day Bank Holiday weekend after a thrilling battle at the top. Driving what is perhaps the most advanced rally car in the country, he performed brilliantly in the highly-popular Rally of the Lakes. This puts Austin second in the Irish Tarmac Championship and pushing hard for the top spot.

The weekend attracted huge crowds of over 70,000 people during the two days. Apart from the great weather, they also enjoyed great dogfights as the drivers wrangled over the top five places.

A real high point on the first day was when the MacHale team was visited by ex-world Rally Champion Colin McCrae from the MacHale team was visited by ex-world Rally Champion Colin McCrae who flew in by helicopter to land in the service area. Colin would have a lot of respect for Austin, particularly because his father Jimmy has fought many battles with Austin over the years. Sanyo Sales Manager Barry Hennessy greeted Colin in the service area.

Austin would have been in an even stronger position to contend for first place had it not been for a jump-start penalty the previous day but, by finishing comfortably second, he improves his overall position in the Irish Tarmac Championship from third to second place.

During the weekend Sanyo customers enjoyed corporate hospitality and full access to the team and service areas.

"The weather and the craic was great. Killarney is such a beautiful place. It is great to be able to offer our customers something different, a real experience," says Barry. "Bring on the Punchestown Rally Experience in July."

Contact: Barry Hennessy, Sanyo Air Conditioners.
Tel: 01 - 456 8910; www.sanyoaircon.com

ATP Movin’ On Up!
ATP — the specialist heating and pipeline products suppliers — has moved to a new purpose-designed office and warehouse complex located at Unit 219, Block C, Blanchardstown Corporate Park 2, Ballycoolin, Dublin 15.

Contacts: David Daly, ATP.
Tel: 087 - 261 1711; Alan Metcalfe, ATP Sales Office.
Tel: 01 - 885 3792.

Society of Chartered Surveyors President
Chartered valuation surveyor Desmond Byrne — who heads up the professional services department of Druker Fanning & Partners, Dublin — has been elected as the President of the Society of Chartered Surveyors for a one-year term of office (2004/2005). In his inaugural address at the meeting he questioned whether the Courts are the right place to resolve landlord and tenant disputes and called for a single Act in relation to Business Tenancies legislation, currently under examination by the Law Reform Commission.

Contact: Michael Clancy, 3D Air Sales (Ireland).
Tel: 01 - 450 9433; email: micclan1@eircom.net

Enhanced High-Performance AC
Following extensive market research and subsequent development, Mitsubishi Heavy Industries has just introduced its new EHPAC range to meet the needs of the commercial office and retail sectors. EPHC stands for enhanced high-performance air conditioning and represents a major overhaul and upgrading of the technical specification of the entire range, along with the significant step up to R410A refrigerant.

The benefits provided by the new EPHAC range are extensive and include COPs up to 3.76 on some systems; smaller diameter refrigerant pipes; reduced sound levels; upgraded group control for retail applications; new SKM multi-system; new slim-style SRK high-performance splits; wired controllers on all FD models; 7-day programmable timer as standard.

New models include smaller inverter sizes from 1.8kW to 4.7kW; inverter models: 2.2kW to 5.6kW and 2.8kW to 6.3kW; single-phase 10kW models; large capacity 14.3/16.2kW models.

Contact: Michael Clancy, 3D Air Sales (Ireland).
Tel: 01 - 450 9433; email: micclan1@eircom.net
GAS FIRED ABSORPTION CHILLERS
AND CHILLER HEATERS

- Total Flexibility
- Absolute Reliability
- Low Noise
- Low Maintenance
- No Compressors
- No Refrigerant Leaks
- Long Lifespan
- Simultaneous Cooling & Heating
- Minimal Electrical Power Requirements

Tel: 01 - 460 4066  Fax: 01 - 460 4077  email: tempar@circom.net
Consulting engineering firms and contractors seeking to employ successful electrical services engineering graduates should contact Kevin Kelly of DIT Kevin Street re the 24 Diploma students who will graduate from the full-time DT244 course this coming June.

Many of those on the K249 part-time equivalent electrical services engineering course — most of whom are qualified electricians — are also looking for employment. They will graduate in May 2005.

Contact: Kevin Kelly, Faculty of Engineering, Department of Electrical Services Engineering, Kevin St, DIT. Tel: 01 - 402 4771; email: kevin.kelly@dit.ie

Cork-based company Astech Air Conditioning Ltd requires an experienced refrigeration engineer to join a progressive company offering unrivalled maintenance and service of all air conditioning equipment throughout Munster. Top rates paid including pension, company vehicle, etc. If you are highly-motivated and capable of working on your own initiative to the highest standards, please email your CV to email: astech@isite.ie.

Contact: John O'Reilly, Astech. Tel: 01 - 021431848; Mobile: 087 266 2868.

Alma Engineering, the Dublin-based supplier to the mechanical building services industry for 30 years, is looking to recruit a Sales Representative.

The ideal candidate will be experienced in dealing with mechanical contractors and consulting engineers, as well as being motivated and capable of using their own initiative. This person will work with Alma Engineering’s existing customer base and be expected to expand this around the country.

The successful candidate will receive a good basic salary, plus commission and company car.

CVs — including contact telephone number — to David Holmes, Sales Manager, Alma Engineering, Ravens Rock Rd., Sandyford Industrial Estate, Dublin 18.

Thompsons Air Systems Ltd, a Mallow, Cork based HVAC contracting company require a qualified mechanical engineer to fill the position of HVAC Engineer.

The successful candidate will have at least 5 years experience in the HVAC sector. He/she will have experience of design, construction, installation and managing projects. The position will suit an energetic, ambitious candidate willing to take initiative and manage projects from enquiry to completion.

Contact: Joe Mulligan, Thompsons Air Systems. Tel: 022 - 21521 or email sales@thompsons-air.ie.

Consulting engineers, contracting companies, suppliers and building managers seeking to employ building services graduates should contact DIT Bolton St.

Graduates from the whole-time Honours Degree Programme in Building Services Engineering and the whole-time Diploma/Certificate Technician Programme in Building Services Engineering will be available to take up employment in June 2004.

Contact: Don Byrne, Head, Department of Building Services Engineering, DIT Bolton St. Tel: 01 - 402 3636; email: don.byrne@dit.ie

Due to the continued expansion of YORK ACR in the HVAC industry we are currently recruiting a self-motivated sales engineer to work from our Cork office.

The ideal candidate should have experience in the industry. The role will involve calling on our existing customer base, and expanding this base within the region.

The successful candidate will receive attractive salary and commission; company car; and excellent pension scheme.

CVs to Sales Manager, York Acr, Unit 19 University Hall Industrial Estate, Sarsfield Road, Wilton, Cork. They can also be sent via email to: dave.dorney@ie.york.com

Employers, if you have a position to fill please email brief details to louise@pressline.ie for inclusion free of charge in BSNews Jobs Corner.
Over the years, air conditioning professionals all over Ireland have insisted on the leading edge technology and unrivalled choice of Mitsubishi Electric Air Conditioning.

From the versatile M-Series and the easy-to-install Mr. Slim range to flexible City Multi models and energy saving Lossnay heat exchange systems, there's a Mitsubishi Electric climate control system to suit every application.

When it comes to the most extensive range of professional air conditioning systems, it can only be Mitsubishi Electric.

To find out more about how Mitsubishi Electric can help your business grow, phone **1800 543210.**
Vent-Axia Airtrack Duct Heaters

The Vent-Axia range of sheathed-element air duct heaters with built-in control system provides a safe method of air heating which is economical to install and operate. The circular duct heaters comprise electric resistance elements mounted in a pre-galvanised steel casing.

The elements consist of nickel/chromium resistance wire which is spirally bound, insulated by compact magnesium oxide powder, and fitted within a stainless steel tube. The ends of each element are sealed with silicone rubber while the elements themselves are return-bent and mounted in the terminal box with airtight fixing glands.

Every heater is fitted with a high-temperature safety cut-out at 120°C, complete with push-button manual reset.

Core AC Expansion

Core Air Conditioning has embarked on a major expansion programme with the inclusion of new names and new products to its portfolio, along with the appointment of two new sales engineers. "Over the years we have received tremendous support from specifiers and contractors", says Managing Director Austin McDermott, "mainly because of the diversity of solutions we offer and the technical support we provide. To maintain and strengthen that service, we have now added LG to the range (see page 15), and appointed two new sales engineers, Shane Satel and Kevin Myler (left)."

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

Jet AHU Make Inroads

Since Jet AHU was established — following its acquisition of the Kerry-based RVR air handling business — just over a year ago, the company made significant inroads into the marketplace. Trading from the former RVR premises in Killorglin, the company has introduced a number of innovative products and also strengthened the technical and after-sales support it provides. Sales Engineer Patrick O’Leary (above) has spent the last 12 months introducing the range and is now poised to unveil the new portfolio over the coming months.

Contact: Patrick O’Leary, Jet AHU.
Tel: 066 - 976 1666; email: poleary@jetahu.ie

Celebrate 40-Years With BSNews

This year marks 40 years of continuous publication of BSNews. Formerly established in 1964 as the Irish Plumber & Heating Contractor, the publication has evolved since then to become the title you know today.

Throughout that time the content and subject-matter covered has reflected developments within the business, the name also changing a number of times in tandem.

The July/August issue of BSNews will be dedicated to marking the occasion of our 40th birthday. Details on the format and how you can share in the celebrations will be announced shortly.
heating specialists

The extensive Potterton Commercial range of boilers consists of high-efficiency, floor-standing and wall-mounted units which incorporate advanced design and state-of-the-art technology.

Of particular note is the Paramount condensing wall-hung boiler and the Eurocondense floor-standing model.

**PARAMOUNT — 40kW, 60kW, 80kW**
- Low NOx Class 5
- Net Operating Efficiency up to 109%
- Fully Modulating
- Light, Compact, Small Design
- Quiet Operation
- Versatile Flueing Operations
- Automatic Digital Control

**EUROCONDENSE — 40kW up to 250kW**
- Low NOx Class 5
- Modulating Pre-mix Burner
  - Small Footprint
- Room Sealed Option
- In-Built Weather Compensation
- System Controls Options Available
- Efficient Aluminium Heat Exchanger

Published by ARROW@TU Dublin, 2004
No, not quite... it's just that Kevin Tracey simply loves all types of music. One of his favourite pieces is Elgar's Enigma Variations but, this Other Side Of is more concerned with Kevin's love affair with stringed musical instruments, and especially the mandolin and banjo.

Apart from the actual music, Kevin is equally interested in technical issues such as the quality of the instrument, the materials used in its construction, and the precision of the playing technique.

Kevin has a famed collection of musical instruments, ranging from mandolins, mandolas, bouzoukis, guitars and of course banjos. A large percentage of the instruments were hand-made specially for him, while others are unique by virtue of their age and country of origin.

More to the point, Kevin can — and regularly does — play them all. How he chooses one over the other simply depends on his mood at the time... music for Kevin is very much about the feelings and emotions it evokes.

While there is a story attached to every single instrument he owns, his customised Deering banjo is particularly important to him. Deering are a world-renowned, California-based, manufacturer who Kevin contacted over the internet. He designed a Deering banjo to his own specification, complete with a Tree of Life neck style which is inlaid with silver, abalone and mother of pearl. He then went to California on a three-week holiday, stopped off to examine the near-finished instrument and ask for some adjustments, before collecting the final version on his way home.

Strangely, Kevin's love affair with music began with the clarinet. His father was a renowned clarinet player who, among other things, played the solo clarinet at the Theatre Royal in Dublin. Kevin began playing the clarinet at a very young age but, in his early teens he got a mandolin and so began his lifelong love of stringed instruments. He was taught the mandolin and guitar by such eminent musicians as Andrew Robinson and John Feely.

Kevin played seriously in national competitions for many years and was a senior mandolin champion for three years in a row.

That said, Kevin also played in various groups, did the pub circuit, and even won Opportunity Knocks (the forerunner to today's Pop Idol TV shows).

Today Kevin has little time to devote to music. Business commitments and his involvement with CIBSE take up virtually all of his time. That said, he is still very keen and now that his term as CIBSE Chairman has ended, Kevin just might get around to making that CD he has always wanted to do.
LG Appoints Core Air Conditioning Distributor for Ireland

LG Air Conditioning — the Korean air conditioning manufacturer who will produce something like 13 million units in 2005 — has appointed Core Air Conditioning as distributor for Ireland. According to Austin McDermot, Managing Director of Core, LG's production and sales of ac units is double that of its nearest competitor. Its main base is in Chang Won, South Korea, but it also has plants in Turkey, India, Thailand, Vietnam, Brazil and Indonesia. In all it has a presence in 150 countries throughout the world and a global market share of almost 20%.

“The main reasons for the company’s growth and market acceptance is the quality of products, market prices and service excellence”, says Austin, “strengths which are all underscored by a commitment to investment in research and development of €5 million every day. This philosophy — and the ensuing product range — ideally complements our existing portfolio, especially that of Carrier.”

Apart from technical excellence, LG recognises the importance of air conditioning in interior design and has established a research centre in Italy to produce new styles. The Artcool range is a prime example. LG Air Conditioning accounts for 33% of LG Electronics, the parent group founded in 1947 and which also has separate divisions dealing with electronics and telecommunications; chemicals and energy; finance; and services.

LG and Core have revealed details of a major programme of product launches and additions, together with a comprehensive sales and marketing plan, for the 2004 season.

The company will continue its expansion in the splits market with new products, models and variants in split systems. It has also moved into the VRF market with the launch of two-pipe and the three-pipe which will be unveiled shortly.

New additions will include Free joint; Universal outdoor units; Inverter Multi; Multi V — the LG name for its VRF range; New Artcool; “Eco vent” — an energy reclamation unit; plus updates and additions to free-standing, cassettes, ducted and hi-walls.

“This year is set to be a very lively year for LG”, says Rob Barton, LG Air Conditioning General Manager, “and we regard the Core appointment as integral to our objective of further market development and penetration, not just in the splits market but also in VRF. Our product offering is innovative and imaginative, especially the Art Cool range, and I have no doubt that Austin and his team at Core will get a very favourable response from specifiers, installers and users alike.”

“This is obviously a very exciting development for us”, says Austin McDermot, “as it gives us an excellent spread of innovative, quality ac units. We can now cater for virtually every market segment with a product range which we can stand over with confidence.

“We are now looking to appoint strategically-located dealers throughout the country who have the technical excellence and business acumen to join us in establishing LG as the number one brand in air conditioning in Ireland. If you want to be part of that development process — and share in its success — then contact us immediately.”

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

The new ArtCool air conditioning unit from LG represents a significant step forward in making AC units compatible with modern interior settings

The new Multi V — the LG name for its VRF range

LG Appoints Core Air Conditioning Distributor for Ireland
Modern Building Automation — The Future Is Definitely Now!

Modern building control equipment and innovative building automation systems find their application in various types of commercial and public buildings. These include office and government buildings, hotels, auditoriums, university buildings, theatres and cinemas, indoor swimming pools and recreational centres. Nevertheless, the aims of building automation are, for the most part, identical, regardless of the type of application, and include optimising processes, providing all-encompassing safety in buildings, and efficient energy management.

The leading suppliers from the fields of building control equipment, building automation systems and energy-management systems presented a comprehensive information forum at Light+Building, the International Trade Fair for Architecture and Technology, held in Frankfurt last month. In combination with safety equipment, networking equipment, lighting equipment and systems related to building architecture, they demonstrated a broad range of products covering the entire field of architecture and technology.

In the case of hotels, for example, building automation systems are already being linked to their reservation systems. This has highly-beneficial effects on energy utilisation. The air-conditioning and telecommunications systems in guests’ rooms are automatically activated as soon as they register. In many cases, they will then be able to activate room ventilation systems and adjust the room temperature within pre-defined ranges on their own. However, hotel rooms are not the only places where certain building systems may be operated in this ideal manner. The same applies to seminar and conference rooms.

Office and administration buildings can be controlled efficiently (as regards energy consumption) and reliably with the aid of modern building automation systems. For example, data points, several thousand of which are already being defined and installed even in medium-sized buildings, may be utilised for tracking trends in, among other things, outdoor temperature, room temperature, other temperatures of relevance to energy utilisation, operating hours of blowers, compressors and pumps, as well as room occupation times.

Usually added to that list is consumption of electric power, gas, oil or heat from district-heating plants and water, where the choice of these trends to be tracked may vary with the type of building, type of building utilisation, and energy supply structures. In many cases, lighting control systems will also be linked to buildings’ automation systems.

Energy management systems — whose decisive benefit is that building operators may intervene in their buildings’ operations at any time and correct any irregularities, without having to wait until they receive their utility bills (which might take months) — are based on all that information. They will be kept up to date on everything of relevance, and if they should find that energy consumption at some data point or other has changed significantly, they may immediately undertake remedial action.

Largely due to rising energy prices, energy management has become a hot topic among building operators, who now need to develop innovative strategies and system solutions in order to counteract them, working in collaboration with suppliers of energy management systems, manufacturers, contractors and building automation experts.

In addition to energetic aspects, safety technology plays a dominant role in many areas, especially sensitive ones such as airports, government buildings, military installations, power plants and laboratory facilities. They are all good examples of areas where access control, presence control, fire protection, car park surveillance systems, video cameras and other safety-related equipment will have to be incorporated into integrated safety systems. This can only be based on carefully-engineered and tested building control equipment and innovative building automation systems.

Exciting and, in some cases, revolutionary trends have appeared in the field of building automation systems for hospitals, where their interaction with technical building equipment make subtle, but essential, contributions to patient care. Web-based systems allow assigning patients to rooms based on their medical reports in order to make certain that their rooms will comply with their personal and medical needs. Parameters, such as air temperature, humidity and pressures play an important role here, particularly as regards intensive care and quarantine units.

As the foregoing illustrates, the concepts, aims and objectives are clearly defined. What the following information illustrates is that manufacturers and system designers have risen to the challenge.
uniquely adaptable . . .

. . . and won't cost the earth

Effective building management will dramatically lower the lifetime operating costs of your facilities. **Fact:** Cylon's new UNITRONUC32 range of intelligent 32-bit controllers will do that, and much more. Our revolutionary UniPuts® give UNITRONUC32 the chameleon-like ability to fit any plant, eliminating unused capacity and providing a complete control solution. With Ethernet and web server capabilities, UNITRONUC32 is fully ′net capable. It will even upgrade the earliest Unitron system to a leading web-based architecture, extending lifecycles with minimum investment.

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www.cylon.com

* International Patents Pending
When it comes to variable speed drives, especially for the HVAC sector, Danfoss has no equal. From when it first introduced the VLT® way back in 1968, Danfoss has remained at the forefront of the technical evolution of ac drives. There have been major breakthroughs down the evolution of ac drives. This is the first in a whole new series of VLTs® and the forerunner of models which will also have HVAC applications.

A critical trend in manufacturing machine design during the recent past has been to replace the old, very inflexible mechanical technology with a much more flexible multi-motor drive concept. Now, manufacturing machines are typically driven by many motors – one motor per machine shaft. It is not uncommon for a manufacturing line to include several hundreds of motors.

A pre-condition for achieving this high flexibility is that all motors are controlled by electronic drives and are not connected direct on the mains. In most production lines performance requirements for various shafts differ greatly in functions such as speed accuracy, speed control range, dynamics, synchronising, positioning, CAM control, etc.

In order to fulfil these requirements cost-effectively – and with technical efficiency – machine manufacturers equip their machines with several drive series, such as low performance variable speed drives, voltage vector drives, flux vector or servo drives. Often these are of different makes while, in some cases, DC drives are used with AC drives.

Most variable speed drives are designed for single motor applications and do not fit very well into a multi-motor drive concept. It is common for up to three different drive series to be used in one machine, which has a lot of disadvantages. It poses challenges not only for the machine builder during engineering, mounting and commissioning, but also for the end-user during operation and servicing.

With the new FC300, a single process can now be fine-tuned without stopping the whole line. This allows the plant to handle adjustments, improve quality, reduce scrap, and increase output volume. Another important advantage is the easy change of set-up if shifting from one product variant to another which necessitates adjustment of speed ratios, ramps, torque or other parameters.

Moreover, fewer drive types means fewer spares and improved programming familiarity by maintenance staff, leading to faster commissioning and troubleshooting.

There are also other features, such as load sharing, kinetic back-up, external 24V supply, master-slave control via local bus, and easy mounting side-by-side in panels. In addition, much attention has been given to improving user-friendliness in areas such as automatic motor adaptation (AMA), a plug-in option concept, plug-in terminals, and up and download of parameters with Local Control Panels (LCP).

Using the VLT® AutomationDrive FC300 means there is, finally, a plug-in option concept, plug-in terminals, and up and download of parameters with Local Control Panels (LCP).

The development of the VLT® AutomationDrive demonstrates the strength and ability of Danfoss in taking established HVAC-driven technology and adapting it to suit other industry requirements. In this instance the target application was the manufacturing process and this tailored solution is already delivering substantial savings by way of less downtime and greater lifecycle returns.

To mark the introduction of the F300 Danfoss has created a dedicated website – www.AutomationDrive.com - and also devised a fun-based competition (see insert and Plumb Lines).

Contact: Brian F Maguire or Bernard Farrell, Danfoss Ireland. Tel: 01 - 626 8111; email: marketing@danfoss.ie
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- 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 - left or 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

- Decoupling 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

Honeywell Control Systems Ltd. - Honeywell House
Arlington Business Park, Bracknell, Berkshire RG12 1EB
Phone: (44) 13 44 65 62 40 Fax: (44) 13 44 65 62 40
www.honeywell.com/uk
Now We’re Really Talking!

It is appropriate that just a little over 10 years since Cylon first revolutionised the world of intelligent building controls with the Unitron building management system, it has now taken another quantum leap forward with the introduction of the UnitronUC32. This new system combines innovative 32-bit hardware with advanced controller engineering, ethernet networking and system inter-action via the web.

Moreover, thanks to Cylon’s unique UniPuts soft programmable universal inputs and outputs, control and monitoring points can be configured exactly as required and placed precisely where they are needed. This reduces and may even eliminate the expense of providing costly controller capacity that will never be used.

The unique design also eliminates premature replacement, thereby reducing the cost of ongoing management and maintenance.

UnitronUC32 can also be re-engineered at any stage to accommodate changes in requirements, either during initial installation or, even more significantly, at any time in the future.

Another massive advantage is that because it is supplied with ethernet connectivity as standard, UnitronUC32 can integrate with virtually any make of IT network or building services system using a wide range of inexpensive, readily-available components such as hubs, switches, routers and cabling solutions. This also means that Cylon can give gradual, stepped upgrades to its existing installed customer base.

“This is a major step forward in building management control”, says Sean Giblin, Cylon Managing Director and one of the company co-founders. “When we first conceived the Unitron concept just over a decade ago there was nothing like it on the marketplace. With UnitronUC32 we have once again taken a major step forward and pushed the boundaries of building management control to new levels of sophistication.

“Conversely, in doing so we have made the actual operation of the system far simpler, much more flexible, easy to upgrade, cheaper by way of installed cost base, and extended the true lifetime cost return on investment. Available from Cylon and our 10 ACSls throughout the country, it really is the future here and now.

“Apart from Ireland, we also have a strong market presence in Germany, France, the UK, Belgium, Italy, Sweden, Norway and Latvia. For the most part products and support services are provided by locally-based agents and distributors but, because of the nature of the market in Germany, we have just set up Cylon Gmbh.

“With thousands of customers across the globe, incorporating some of the most progressive projects, we take pride in understanding our customers’ business needs and in incorporating these requirements into our product plans. Over the past decade we have continuously set benchmarks which other manufacturers have strived to emulate. These ongoing enhancements to our products are proof of our commitment to delivering management systems which provide our customers with a competitive advantage in a constantly-changing marketplace.

“UnitronUC32 is the latest manifestation of that commitment and, I believe, in developing it we have truly defined the future shape of building management control systems”.

Contact: Sean Giblin, Cylon Controls. Tel: 01 - 245 0500; email: askus@cyilon.ie
Get in control at Heatmerchants.

From the state-of-the-art ChannelPlus range to the simple and effective CentaurPlus, from motorised valves to electromechanical programmers and thermostats, get Horstmann at Heatmerchants branches nationwide.
Honeywell’s new SmartAct direct-coupled actuator for heating, ventilating and air conditioning applications is crammed with features for fast installation, increased reliability and extended life. The features include a self-centring shaft adaptor for “plug-and-play” installation, the ability to mount in any direction, a detachable wiring box for easy connection, a rotation direction switch, and a position indicator.

SmartAct can replace existing actuators of most types and is ideal for operating air dampers, air handlers, ventilation flaps, louvres and VAV (variable air volume) units.

Installation is further simplified by a declutch button which allows easy manual adjustment, and single-handed positioning of the mechanical limits for the desired rotation angle.

SmartAct* is also characterised by distinctive modern styling.

Honeywell’s comprehensive portfolio of actuators, valves, sensors, controllers and centrals is already proven in more than three million buildings worldwide where they each work seamlessly together. This not only yields benefits in terms of planning and installation, it also assures trouble-free operation.

SmartAct is a typical case in point. Whether planning a new project or upgrading an existing installation, SmartAct is ideal, providing pre-wired connection, self-centering shaft adaptor, freely-selectable mounting position, rotation direction switch and many other benefits.

SmartAct covers VAV to fire and smoke damper actuation, spring return, non spring return, modulating, floating, on/off. Furthermore, it provides a complete damper actuator replacement for installed products in any application.

What is very beneficial to consultants — and essential to system integrators — is having a partner that can offer the whole portfolio of solutions needed to run a building. From room and zone to plant control; from heating, ventilating and air conditioning; to lighting and sunblind control; from a single device to a complete building management system.

SmartAct was designed and is manufactured in Honeywell’s Home and Building Control headquarters near Stuttgart in Germany. The built-in features and the high-quality manufacturing processes increase reliability and extend product life. A two-year warranty is given with all SmartAct devices.

SmartAct is designed as a universal platform that can easily be customised to cover very specific OEM needs. Wiring, labelling, cabling, switches, preset configurations, accessories, etc can all be supplied to a customised requirement.

Contact: Tel: 0044 - 1344 656443; e-mail; HVACProductsUK@honeywell.com; www.SmartAct.com

Honeywell SmartAct Sets The Lead
Mitsubishi Electric From Rink AC

Rink Air Conditioning has considerably strengthened its product portfolio with the addition of the Mitsubishi Electric air conditioning range. Long-established as one of the leading distributors to the sector, Rink has always provided a quality design and commissioning service in tandem with technologically-advanced products from some of the world’s key manufacturers.

Rink’s portfolio already includes Dunham-Bush chillers and Biddle fan coil units and the addition of Mitsubishi Electric split-type units is the perfect complement to that line-up.

The Mitsubishi Electric name is synonymous with quality, its pioneering approach to technology and continuous commitment to research and development establishing it as a market leader throughout the entire world. Its 50-year plus pedigree is an invaluable asset and resource to draw on and something which has been instrumental in establishing the mark as brand leader in Ireland.

The current product range includes VRF City Multi systems, M Series and Mr Slim split systems, and Lossnay fresh air heat exchangers.

Rink Air Conditioning will focus on the Mr Slim range which is ideal for restaurants and bars, retail outlets and offices. In fact, almost any type of premises can be enhanced by the benefits of a Mr Slim system.

As a split-system, it can be specified to provide cooling-only, or cooling and heating (heat pump type) for cost-effective year-round comfort. Being one of the quietest units available, users hardly know Mr Slim is there at all.

Different types include ceiling cassettes; suspended ceiling cassettes; wall-mounted units; and ducted units. In essence, there is a unit for every application.

For instance, the Mr Slim SLH units are the perfect size for 2-by-2 ceilings. While slim, attractive and weighing just 15kg, they are extremely powerful. Easy to install, servicing and maintenance is also easy with filter replacement reduced in frequency thanks to the 2500-hour long-life filters.

Another innovative example is the Mr Slim PCA Series of stainless steel suspended ceiling units. These offer new levels of hygiene for air conditioning units as the durable stainless steel is resistant to oil so that even grimy dirt and stains can be easily removed.

The oil mist filter offers 1.5 times more filtration efficiency compared to conventional types and this helps reduce the amount of oily smoke entering into the air conditioner. The washable grease filter is removable for hassle-free cleaning and can be easily removed by sliding out the handle.

The adoption of a fan casing that can be separated into different sections allows for easy fan cleaning. The drain pan can also be cleaned easily on site as the pipe connector can be quickly removed.

The foregoing are just a few examples of the innovative products which make up the Mitsubishi Electric Mr Slim range of split-type units, the full range of which is now available from Rink Air Conditioning.

Contact: Brian McDonagh, Rink Air Conditioning.
Tel: 01 - 456 9469; email: info@therinkgroup.com
Powerscourt Poses Stiff Challenge

The latest BTU outing at the new course in Powerscourt proved a stiff challenge for all participants. The weather added to the strain, being a typical Irish summer's day of four seasons in one!

The new course is magnificent but the greens are something else. As one wit was heard to remark "they must have buried elephants in them before grasing over".

Dave McMenamin was host for the day as Fläkt Woods (Ireland) were the sponsors. As usual they provided an excellent array of prizes and all credit to them for their involvement as the company was moving in to new corporate headquarters on the same day.

Details of the winners are as follows:

Overall Winner
Graham Fay (37 pts);
Class 1
Winner — Tony Delaney (36 pts);
Second — Eamonn Vickers (36 pts);
Third — Brendan Keaveney (36 pts);
Class 2
Winner — David Lynch (34 pts);
Second — Frank Lynch (32 pts);
Third — Joe Warren (32 pts);
Class 3
Winner — Garvin Evans (33 pts);
Second — David McMenamin (32 pts);
Third — Padraig Gillen (31 pts);

Front 9
Winner — John White (18 pts);
Back 9
Winner — Neil Ryan (20 pts);
Visitors
Winner — Ross Tobin (32 pts);
Second — Tony Reilly (30 pts).

Match Play — Scores of 28 points and one on 27 points qualified.

Overall Winner — BTU Captain, Gerry Tobin with Graham Fay; and David McMenamin of sponsors, Fläkt Woods (Ireland)
Winner, Class 1 — BTU Captain, Gerry Tobin with Tony Delaney; and David McMenamin of sponsors, Fläkt Woods (Ireland)
Second, Class 1 — BTU Captain, Gerry Tobin with Eamon Vickers; and David McMenamin of sponsors, Fläkt Woods (Ireland)
Winner, Class 3 — BTU Captain, Gerry Tobin with Garvin Evans; and David McMenamin of sponsors, Fläkt Woods (Ireland)
When it comes to professionalism and a pioneering outlook DID needs no introduction. Long established and now firmly positioned as one of Ireland's foremost electrical retailers, it has always been dynamic and forward looking.

Consequently, it was no surprise that it adopted the same approach when designing and fitting out its new flagship headquarters in Fonthill Retail Park, Dublin 22.

Comprising approximately 1200 sq m of private and open-plan offices, meeting rooms, canteens, reception area, computer room and a 6000 sq m warehouse, the complex presented a unique challenge in respect of indoor environment control.

From the outset DID executives insisted on a gas-fired system because of cost, energy-usage and environmental considerations. In doing so it turned to Damien Parlour and his colleagues at Tempar. In Robur Tempar had the perfect solution. That said, the multiple-use nature of the complex and the consequent different environment controls required presented a serious challenge when designing the system.

In the Robur gas fired absorption chiller and chiller heater range Tempar had the wherewithal to tackle the challenge. Based on the absorption refrigeration cycle, with the natural solution of water and ammonia for the production of chilled water, the range comprises 16 models with capacities between 17.49kW and 87.45kW for cooling, and from 32.5kW to 130kW for heating.

With a view to larger installations, factory-produced modules can be coupled together on site to provide cooling and heating capacities as required.

The units have the added benefit of very few moving parts which in turn means no capacity deterioration over time, relatively maintenance-free operation, long life and exceptional efficiencies and reliability. It is a system based more on physics and science rather than mechanical moving parts.

Tempar devised a solution whereby simultaneous heating and cooling is provided to the occupied areas of the premises by means of individually-controlled 4-pipe fan coil units—a mix of ceiling cassettes and false ceiling concealedducted units. Chilled water and low pressure hot water is provided to these terminal units from Robur-manufactured, gas-fired, absorption type (ammonia and water) modular chiller and heater units. An external compound houses the Robur units and associated pumps, expansion vessels, valves etc.

This bank of outside units serves the entire complement of indoor units. No one outdoor unit is dedicated to any one particular area or zone. Consequently, in the event of a problem with any one outdoor unit, the entire system may drop slightly in performance but does not fail altogether at any particular point.

Now that the building is fully operational, DID have found the system to be very user-friendly, efficient and cost-effective.

An added bonus for DID was that Tempar also looked after the entire building services requirement, including sanitary ware, water services, ventilation, ductwork, gas supply, etc.

"While challenging", says Damien Parlour of Tempar, "this project also gave us the opportunity to prove just how versatile, flexible and innovative we can be. It is the perfect showcase for us and demonstrates our all 'round capability in this area.

"In addition to the Robur modular gas-fired, absorption-type water chillers and gas-fired heaters for air conditioning purposes, we can now also provide modular gas fired, absorption-type low temperature chillers for refrigeration purposes; and modular gas fired, absorption-type heat pumps (air cooled and water cooled).

Contact: Damien Parlour, Tempar.
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One of the office interiors

The new state-of-the-art DID Electrical Logistics Centre and offices at Fonthill Retail Park, Dublin 22. The centre forms the hub of the retailer's distribution serving the branch network as well as home deliveries nationwide.
Marren Engineering is an engineering-based company providing design, supply and installation of air movement solutions using leading-brand products from some of the world’s foremost manufacturers. It has a strong trading partnership with these principals, a typical case in point being McQuay International, which is also well-established as a leader in devising engineered air conditioning and refrigeration solutions.

With 37 direct employees and 13 service vehicles on the road, Marren Engineering represents the cutting-edge of Ireland’s building service sector. All employees are highly-qualified; undergo regular educational updates; work according to clearly-defined management structures; adhere to strict operational procedures; and carry out their duties in accordance with recognised Best Practice in respect of safety and environmental issues.

When developing its range McQuay opted for HFC 134a because of the huge advantages it offers. These include higher efficiencies, greater performance, lower noise emissions and less environmentally harmful.

The range is extensive and caters for all applications, a typical example being the McQuay fan chiller range with capacities from 20kW up to 10,000kW.

Other examples are:
- **Water Source Heat Pumps**

  Water Source Heat Pump (WSHP) systems are one of the most efficient and high-performance systems that can move energy in a building from where it is not needed to where it is needed. It is perfect for buildings that require heating and cooling operation at different zones. The heat is rejected and added in a water loop which is kept from 10°C to 35°C. The units are easy to install, operate and maintain. With the lower power consumption, the operation and maintenance cost is very much lower than conventional air conditioning systems.

  The units, which use refrigerant R410, have a great flexibility for installation, the compact design and low height profile easily fitting the required space layout, thereby allowing maximum use of space.

  These units offer flexibility, reliability, efficiency and ease of installation. Capacity range is 1.7kW to 90.8kW. This decentralised, year-round heating and cooling system consists of a 2-pipe closed loop water circuit, through which non-refrigerated water circulates continuously throughout the building. Locating the piping within the building means no pipe insulation is required.

  A supplemental central heat source adds heat to the loop at the lower end of the range and heat rejecter equipment capable of removing heat at the high end of the range maintains the loop water temperature throughout the year in an approximate range of 10°C to 35°C.

  Ideal applications for this product are hotel and retail sectors. The split type McQuay WSHP system has a noise rating of NR20 which is perfectly suited for high-specification hotel rooms. These systems have an energy savings of up to 30% over conventional VRF/4-pipe fan coil air conditioning systems. In retail applications the large range of up to 80kW WSHP systems offer a wide variety of solutions while greatly reducing the installation cost to the tenant.

**Geothermal Technology**

Geothermal heat pumps utilise the natural properties of the earth to provide heating and cooling to a building. Heat addition and rejection take place below the ground, inside hundreds of feet of high-density polyethylene pipe, known as a ground loop. Fluid is circulated through the ground loop and into the geothermal units. The Geothermal heat pump unit simply amplifies and directs conditioned air to the desired location.

In the cooling mode, the earth acts as a heat sink enabling the circulating fluid to transfer the excess heat, absorbed by the unit, from the building zones to the earth where it is absorbed and stored for future heating requirements.

In the heating mode, the earth acts as a heat source, allowing the circulating fluid to extract natural heat from the earth and transfer it to the space where it can be used for heating.

Geothermal systems can also provide supplementary hot water to the building’s domestic hot water system, which amounts to “free” hot water. The benefit is two fold. First, “free” hot water is being provided to the building’s hot water system. Secondly, by rejecting some of the heat to the hot water system, less heat is rejected to the earth, making the loop more efficient.

Geothermal units are usually located inside the building space with the exception of a geothermal rooftop unit, which is placed on the roof or alongside the building.

Contact: Tom Marren, Marren Engineering.
Tel: 01 - 833 4144;
email: info@marrenengineering.ie
Michael Mcnerney was elected Chairman of the CIBSE Republic of Ireland Branch at the recent annual general meeting. In his acceptance speech he paid tribute to last year’s Chairman, Kevin Tracey, and the Committee, for their dedication, hard work and success in devising and implementing a very demanding programme.

Looking to the future, he outlined some of the objectives he has in mind. In doing so, he said he was anxious to build on advances made to date by way of making CIBSE more inclusive. In that respect he asked that members should provide the Branch with their emails. This is being done to some extent but communication could be significantly enhanced — and at a reduced cost — if everybody provided their email addresses.

A survey conducted by Brian Geraghty on the state of current membership in Ireland revealed a growing membership of 770 across the different grades. There are a further 40 new applications being processed as we go to press. There are also something like 60 non-members who attend some of the CPD events.

An interesting fact which emerged from Brian Geraghty’s work is that the number of email addresses listed among the various grades of membership varies but is rarely more than 60% of the total for each grade.

Consequently, Michael asks all members to supply their email addresses either on the physical membership form or through the Membership Page on the official website.

“The advent of 2005 will see many major initiatives by the government, which will affect and challenge those in the building services area”, he went on. “I intend to ensure that the CIBSE plays its part in these developments. The initiatives I speak of will include emissions trading, energy labelling of buildings, carbon tax, and possible changes to support for CHP.

“To assist members in contributing to these changes the overall theme of CIBSE lectures for the coming programme will be about sustainability, energy efficiency, and the changes in best practice”. Michael is also anxious to raise the CIBSE profile in the regions outside Dublin by presenting a significant number of lectures in both Cork and Limerick.

Other initiatives planned include more accessible CPD lectures for members in their own regions; further development of the website; and a membership drive.

In conclusion Michael reminded existing members who are considering the senior Mature Candidate route for chartered engineer status that the clock is ticking on the five-year window of opportunity. This year the Irish Branch welcomed several new Fellows into the CIBSE and it is hoped that more will take this route over the coming months.

As with last year, BSNews will work very closely with Michael, carrying comprehensive reports on the entire CIBSE programme.
The 43 AGM of the Association of Electrical Contracting Ireland (AECI) took place in Limerick last month. It was an exceptionally-positive meeting with vibrant discussion on all areas affecting the electrical industry.

The topic that took centre stage was the state of non-compliance encountered by members in their day-to-day business dealings. This non-compliance centres on contractors who are causing havoc in the industry by their tendering and pricing procedures. Because some contractors are not paying the legal rates of pay and providing their employees with proper benefits, they can afford to undercut contractors who are compliant. The situation is compounded by customers, from all segments and businesses — domestic, industrial, business and state organisations — apparently agreeing to give work to these contractors.

It was agreed unanimously that all regulatory bodies within the industry, plus the Departments of Finance and Social Welfare, be made aware of this situation without delay.

Training was another major topic of debate during the meeting. While the AECI currently organises and runs training courses in the contracting, estimating and tendering areas, it is planned to extend the training scope to cover other business areas in the autumn schedule.

It was obvious from the feedback at the AGM that members were no longer satisfied with what is happening in their industry in general. The Executive Council will ensure that every effort will be made to, not alone ensure that contractors have the facility to trade in a fair and equitable marketplace, but be given the “tools” to do so.

There is a very positive programme of events for the coming year, commencing with the Annual Conference being held in the Great Southern Hotel, Killarney later this month. It will also feature and electrical trade show. All the major suppliers will be exhibiting. National and international companies will be demonstrating their products with several new and innovative products being on display for the first time.

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Spelsberg Drives and Controls

Established Dublin automation specialist Drives And Controls is taking its service philosophy of technical support and problem-solving to electrical wholesalers with an innovative range of electrical distribution and junction boxes from European market leader Spelsberg els.

Drives And Controls is looking to expand its existing relationship with over 160 electrical wholesalers (built up through distributing the popular Wago terminals range) with a series of new products from Spelsberg, including the company’s Q4 and Q12 Quick Box enclosures, claimed to be the fastest-wiring enclosures in the world. Quick box enclosures are typical of the Spelsberg range, offering time-saving features such as instant press-in cable entries, integral cable retainers and hook locators for wiring hanging lighting, and click-shut sealing lids.

Managing Director Aidan McDonnell comments: “I believe we bring a different approach to the wholesaler market. Coming from a background of drives and automation system solutions, we are used to providing a technical solution to problems and have a very strong customer service and support ethos. This attitude has helped us develop quickly and enabled us to select innovative products such as those from Spelsberg.”

Other products from the Spelsberg range to be launched into Ireland by Drives And Controls include TK enclosures and AKe junction boxes.

TK enclosures come supplied with IP65 cable glands already moulded into the body of the enclosure, cutting cost, components, and offering fast, economic sealing. AKe junction boxes offer all the features of an attractive and safe quality electrical junction box for rail-mounted terminals and switchgear, but at a very competitive cost.

Contact: Aidan McDonnell Drives And Controls.
Tel: 01 - 460 4474;
email: sales@drivesandcontrols.ie
T he Irish Government has committed itself to an ambitious rollout target for broadband connectivity. However, Ireland continues to lag behind other comparable countries despite the increasing uptake rate for broadband. The cost of connection and the ongoing tariff have presented obstacles to the rollout. These barriers are being addressed to some extent by inter service provider competition.

Nonetheless, the one area that has received little attention is the approach to be adopted for internal distribution of such services within buildings. The programme to provide such services would have a greater impact if all premises — domestic, commercial and industrial — were configured to make use of video on demand, e-working, interactive gaming, always-on access, etc.

The principal issues that need to be addressed are the internal wiring and the availability of the trained personnel to set up the necessary hardware/software. The former is essentially a choice between hardwired and wireless technology. For example, in Britain recent proposals suggested amending the Building Regulations so that all new homes would have ducting installed to enable cabling for broadband. This would facilitate the wiring of networks without the necessity for drilling holes or tearing up floorboards.

Developers complained that this would add considerably to their costs. The proposal failed to take account of the developments in Wi-Fi wireless technology. Although the wireless networking is much easier to install than cabling, it is still too complex for the average developer.

The provision of trained personnel requires fresh thinking about the nature of the existing training programmes and the historical divisions between traditional electricians and IT installers.

At present, skilled electricians and electrical services technicians install entire lighting, power and security systems. In addition, they may install the cabling for networking systems. Another group then has to be employed to install and configure the hardware that uses this cabling.

A better and more streamlined solution would involve a single team that possesses the knowledge and practical experience to install the cabling and install and configure the associated equipment. Such teams could carry out the following functions in commercial, industrial and domestic settings as appropriate:—

— Install and configure integrated digital entertainment systems;
— Develop wired or wireless networks;
— Install computer-automated manufacturing and information systems;
— Set up integrated PLC systems;
— Provide the facilities for video on demand, virtual libraries, database servers, etc.

This list is not meant to be exhaustive.

To expedite this matter the following is suggested:—

— Provide electricians with optional modules that cover the installation and configuration of cabling and hardware for computer networks;
— Electrical services technicians courses of study should include the theory, operation and configuration of communication devices and systems;
— Electricians and electrical services technicians should be provided with certification that reflects the level of training and expertise.

In response to this the Departments of Electrical Services Engineering, and Communications Engineering, in the DIT have included a Digital Services option in its Electrical Services Bachelor of Technology Degree programme.

Any delay in the installation of the communications infrastructure will result in a loss of competitive advantage. Thus any obstacles to the widespread use of technology must be addressed as a matter of urgency. The absence of a properly-trained and streamlined workforce is a major obstacle.

I am grateful to my colleague Damon Berry for his assistance in compiling this article.
The first outing of the Refrigeration & Air Conditioning Golfing Society’s (RACGS) 2004 programme was held in the South County Golf Club last month. It was a perfect day for golf and the 30 participants enjoyed the occasion enormously, thanks largely to the excellent organisation of the committee and the generous sponsorship of 3D Air Sales (Ireland).

Tee times were reserved from 11.30am to 1pm with the meal and presentation of prizes held in the Club restaurant later that evening. The results are outlined below:

**Overall Winner**
Eamon Murphy (35 pts);

**Class 1**
Winner — Mick McLoughlin (34pts);
Second — Liam Hoctor (33pts);

**Class 2**
Winner — Don Ryan (32pts);
Second — Dave Killelea (31pts);

**Class 3**
Winner — Domnick Ward (30pts);
Second — Séamus Kerr (29pts);

**Visitor**
Jim Smith (23pts);

**Front Nine**
Iggy Malone (18pts);

**Back Nine**
David O’Brien (16pts).

Details of the RACGS outings for the forthcoming season are as follows:

- (a) Saturday, 26 June at Tullamore GC, 9.30 - 11.00am. Sponsor: Ardline Group;
- (b) Friday, 10 September at The Heritage GC, 2.00 - 3.30 pm. Sponsor: Danfoss (Ireland);
- (c) Saturday, TBA October at Thurles GC, TBA. Sponsor: Ryan Insulations;
- (d) Saturday, 27 November at Kilkea GC, 10.30 - 12.00pm. Sponsor: Sanyo Air Conditioners Europe.

To reserve your tee time please contact Angela Keane Tel: 045 - 893 228 as soon as possible.

**New members**
While the RACGS was established some time ago, it has always kept a low profile. However, that is not to suggest that it is “closed shop” with restricted membership. In fact, the opposite is the case. Secretary Domnick Ward told BSNews that the Society would welcome new members. The only criteria is that they are actively involved in — or have a particular interest in — the refrigeration sector in Ireland. Once again Angela Keane can be contacted for details.

**RACGS Committee**
**PRESIDENT**
Frank O’Sullivan

**CAPTAIN**
Roland Bradley

**TREASURER**
Brian Carty

**SECRETARY**
Domnick Ward

**HANDICAP SECRETARY**
Liam Hoctor

**COMPETITION COORDINATORS**
Michael Clancy
Martin O’Connor
Brendan Beirne

Winner, Class 1 — Michael Clancy of sponsors, 3D Air Sales (Ireland) with Mick McLoughlin and RACGS Captain, Roland Bradley

Overall Winner — Michael Clancy of sponsors, 3D Air Sales (Ireland) with E Murphy and RACGS Captain, Roland Bradley

Winner, Front 9 — Michael Clancy of sponsors, 3D Air Sales (Ireland) with Iggy Malone

Winner, Back 9 — Michael Clancy of sponsors, 3D Air Sales (Ireland) with David O’Brien

2nd, Class 1 — Liam Hoctor

Winner, Class 2 — Michael Clancy of sponsors, 3D Air Sales (Ireland) with D Ryan and RACGS Captain, Roland Bradley (left)
York’s new YMA Series of modular air handling units consists of 31 models having air volumes ranging from 0.25m³/s to 26m³/s and a total static pressure as high as 1600 Pascal. Custom-designed units with larger capacities up to 50 m³/s are also available.

All the units are made from extruded aluminium profiles and have flush-fitting panels and doors to provide aesthetically-pleasing lines. Standard attenuation sections with baffles of galvanised steel and hygroscopic material are available in six lengths from 600mm to 1800mm with perforated plate liners optional. All panels are removable.

The thermally-insulated enclosure is fully-sealed and has a high acoustic performance while accurate computer selection ensures cost-effective matching of all components to satisfy the specified conditions. Full technical specification and certified drawings are included.

Moreover, all units in the York YMA air handling range can be manufactured in varied configurations, with a wide selection of components to meet customer requirements. These may include combinations of any of the following:

- Site-assembled units;
- Air mixing boxes;
- Various Filter options;
- Cooling and heating coils;
- Humidifiers;
- Various fan types and drives;
- Sound attenuation;
- Factory-fitted controls;
- Miscellaneous components;
- York roof-top packaged air systems.

Heat recovery is an integral part of the units with either plate heat exchanger, heat pipe or thermal wheel forms available with the equipment.

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

Dave Dorney, York ACR Ireland.
Tel: 021 - 434 6580;
email: dave.dorney@ie.york.com
Grundfos Pumps for Underfloor Heating

With underfloor heating systems becoming more and more commonplace, the requirement for compatible pumps which can meet the particular needs of these systems has grown in tandem. The big difference between a radiator and an underfloor heating system is the operating temperature. A conventional heating system can be dimensioned for a flow temperature of up to 80°C and a differential temperature at 11°C to 30°C. However, in an underfloor system the flow temperature is never more than 40°C and the differential temperature never more than 5°C to 8°C. As a result, an underfloor heating system always needs a mixing loop to get the right flow temperature.

The new Grundfos Alpha Circulator is recommended for all underfloor heating systems.

In an underfloor heating system each room should have its own control, and all pipe circles should be balanced to have the same pressure loss. The pressure loss in the longest pipe circle (never longer than 120m) is used for dimensioning the pump. The high-pressure loss and the low differential temperature in such systems requires a bigger pump than that called for in a conventional radiator system. The flow will be variable and therefore Gordon Barry, Director of Grundfos Ireland, recommends the use of a speed-controlled pump such as the Grundfos Alpha+ or Grundfos UPE in all underfloor heating systems.

Features of both ranges include easy installation; water lubricated bearings; variable speed; very low noise levels; high-quality material; low energy consumption; long life-span; no need for motor protection; wide application range; and 2-year warranty.

Contact: Gordon Barry, Grundfos Ireland.
Tel: 01 - 295 4926; email: gbarry@grundfos.com

Ecofloor Underfloor Electric Heating From ATC

ATC Electrical & Mechanical Ltd was established in 1991 to provide quality mechanical and electrical products and services to the Irish marketplace. Through a continuous process of assessment and re-evaluation, the product range and scope of applications has expanded considerably and now includes electric heating, ventilation, hand dryers, water heating and ancillary equipment from some of the world’s leading manufacturers.

Just recently ATC secured the distribution rights in Ireland for a leading brand name in underfloor heating.

Ecofloor electric underfloor heating is fast becoming the preferred form of heating for bathrooms, kitchens and conservatories, in addition to general living areas. There are many benefits with this CE-compliant system — it is easy to install; has low running costs; is maintenance-free; has a 10-year warranty; is silent in operation; minimises dust and air movement; and frees up space normally taken up by conventional heating equipment.

ATC Ecofloor underfloor electric heating systems are ideal for re-modelled floors and new construction projects, especially where ceramic or stone tiles are laid. The cable mats or cable can be installed to give two heating levels — 160W/m² for direct heat (say in bathrooms) or 100W/m² for background heat (kitchens).

ATC’s team of engineers can offer solutions to a host of heating and ventilation applications, utilising equipment from the comprehensive range of stock. This particularly applies to underfloor heating where full calculation and design assistance is provided. Moreover, ATC also runs a series of underfloor installation courses throughout the country for the benefit of contractors.

Contact: Sales Office, ATC Electrical & Mechanical.
Tel: 01 - 462 5111; Fax: 01 - 452 0887; email: sales@atc.ie web: www.atc.ie

The ATC Ecofloor Comfortmat Kit for an underfloor electric heating system
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Radiant Heating Systems

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Muirfield Drive, Naas Road, Dublin 12.
Tel: 01 - 419 1990; Fax: 01 - 458 4808
email: info@polytherm.ie
www.polytherm.ie
Quality Plastics Ltd was established in 1970 as a pipe extruding company and, in 1996, the Qual-PEX Underfloor Heating Department was set-up to deal with quotations, queries, design and technical support, both in-house and on site.

The QPL design engineers are continually in liaison with architects, consulting engineers and mechanical contractors across the country, involved in the installation of the most comfortable and efficient heating systems possible including churches, apartments, nursing homes, etc. The truth is that underfloor heating is suitable for virtually any type of building.

QPL engineers use a specialist software package to produce a detailed design specification specific to each individual project. The key feature of this quality system is the Qual-PEX barrier pipe, which is BS 7291 Class S approved and carries a 25-year guarantee.

Over the years it has become clear to QPL that comfort levels are greatly improved by using a control system based around constant circulation (variable water temperature). The Automix series of controls are thought to be ideal for this type of system and are the most advanced on the market. Automix controls by QPL are the Automix 20, Automix CT and the Automix 30Q and all are pre-wired for easy installation.

A single Automix 20 typically controls a group (zone) of rooms of similar occupancy. An electronic programmer is positioned within an index room of the rooms to be heated. This programmer calculates the proper heat output required and continually resets the mixing valve and thus water temperature. A night set-back facility and freeze protection are built in.

The Automix CT is an electronic constant temperature control that controls the operation of a motorised mixing valve and supplies water at a pre-determined temperature which is simple to set. Weather compensation can be achieved by using the Automix 30Q control which can be used with just the outdoor sensor controlling the mixing valve or, alternatively, individual thermostatic zone control. A comprehensive night set-back facility, freeze protection and a booster function are built into this control.

The state-of-the-art type of temperature control mentioned above — along with a comprehensive design specification and on-site support before, during and after the installation of a QPL design system — ensure an efficient, comfortable and trouble-free system which ultimately benefits everybody.

Contact: Sales Team, Qual-PEX Underfloor Heating Department, Quality Plastics Ltd. Tel: 021 - 488 4700; email: underfloor@qpl.ie
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REHAU Ltd, 9 St John's Court, Business Park, Swords Road, Santry, Dublin 9
Tel: 01 816 5020 Fax: 01 816 5021
An underfloor heating system employing accurate and reliable temperature control from Honeywell controllers is protecting exhibits at the Liskeard and District Museum, Cornwall. The complex 11-zone underfloor heating system provides precisely-controlled temperatures in each room using a control system specially designed for the project.

Each heating zone is controlled through zone valves by a CM67 time/temperature programmer linked to an unobtrusive temperature sensor in the room it serves.

In addition to its versatility and accuracy of temperature control, the underfloor heating system is exceptionally efficient and so reduces fuel consumption, while the architect imposed strict limitations on the components visible in the public areas.

Eleven Honeywell CM67 time/temperature controllers are mounted together in the museum boiler room and are linked to unobtrusive Honeywell remote temperature sensors in the public rooms. This eliminates the need to hide bulky components within boxes in public rooms and enables all adjustments to be made conveniently from the boiler room, as the manifolds for the 11 heating zones are also mounted there.

Two Honeywell ST6400 programmers are also mounted on the same control board to switch the museum's gas boilers — a 60,000 btu/h gas condensing boiler from Ideal for the underfloor heating and a 30,000 btu/h Baxi high efficiency boiler with a Telford Tornado cylinder store supplying hot water taps.

Interestingly, electrical consultant Alan Gregory opted for an unusual combination when selecting the boiler for the project. "Underfloor heating manufacturers specify a single boiler for heating and hot water, usually of 100,000 btu/h. However, my experience of installing such systems is that they operate inefficiently due to running at 70/80°C to satisfy washing needs, so the boiler is not condensing for much of the time.

"I opted to use a separate boiler to provide hot water to the kitchen and washrooms - a very cost-effective solution as we calculated that the second boiler will pay for itself in 30 months through fuel savings."

A Honeywell Automatic Time Set Module (ATS) module has been clipped to the side of one of the 11 CM67 units. This adjusts its displayed time by reference to the national radio time signal, so providing an accurately maintained time source.

Just one ATS module has been installed, as any other clock that has drifted can be adjusted manually to show the exact time during standard maintenance checks as necessary - it only takes a few seconds per clock.

Contact: Freephone: 0044 800 521121.
email: literature@honeywell.com
Web: www.honeywell.com/uk/homes.htm
Ecofloor Underfloor Heating For Comfort & Style

ATC Ecofloor electric underfloor heating systems are especially suited for remodelled floors and new construction projects. They are ideal for bathrooms, kitchens, conservatories and any general living areas where ceramic or stone tiles are laid. Underfloor heating takes up far less space than conventional systems, thereby freeing space for other use. The cable mats or cable can be installed to give two heating levels 160W/m² for direct heat (say in bathrooms) or 100W/m² for background heat (kitchens).

Service Provided:
ATC’s technical sales team offers solutions to a host of heating applications using underfloor heating. On receipt of drawings they provide a full system design, along with on-site/off-site technical installation support. Comprehensive after-sales service support is also provided.

Other Benefits:
- Easy to Install
- Environmentally Friendly
- Low Running Costs
- Maintenance Free
- Minimises Dust
- CE Compliant
- 10-year Warranty

ATC Electrical & Mechanical Ltd
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e-mail: underfloor@qpl.ie www.qpl.ie

IRELAND’S NUMBER ONE UNDERFLOOR HEATING COMPANY

Published by ARROW@TU Dublin, 2004
Myson Radiators is a leader in the supply and manufacture of a wide range of heating appliances, including panel and decorative radiators, fan convectors, towel warmers and valves. However, it is now also emerging as a major player in the growing underfloor heating market.

Underfloor heating is a method originally utilised by the Romans but now Myson is using the latest technology to bring the system up-to-date. Advances in new material technology and research into heat transfer have made it possible to achieve cost-effective warm water underfloor heating that provides both energy efficiency and high quality performance.

Underfloor heating has become an increasingly popular choice and is now widely acknowledged as one of the most effective methods of obtaining uniform heat distribution and high comfort levels. It also has numerous benefits. Some select it for its delivery of heat at low level, while others enjoy the design freedom it gives owing to its concealed pipework. The system also has low maintenance costs and frees up valuable wallspace.

The Myson underfloor heating system can be used in all floor areas and is ideal for glazed rooms such as conservatories where there is little or sometimes no wall space. It is suitable for use with all types of wet central heating systems including gas, oil or solid fuels and conventional, combination or condensing boilers. It can also be introduced into mixed heating systems, for example, underfloor heating could be used on the ground floor with radiators upstairs.

To work effectively, underfloor heating requires water temperatures of between 45°C and 55°C. This is easily obtained by blending flow water and return water from the underfloor with the thermostatic mixing facility supplied. Systems can either be simple loop for an individual room up to approximately 16sqm floor area, or double or multiple loop systems for larger areas.

The Myson underfloor system is designed for all floor types. The most popular system utilises screeded floors. It comprises an edging strip, which is laid against all walls, providing both edge insulation and an expansion zone for the screed.

Flatjet insulation is laid onto the concrete slab and a flow and return manifold is fitted in a central location. Difustop cross-linked polyethylene pipe is connected to the flow manifold and is then laid out in the required pattern. Myson supplies the recommended heating layout pattern. The pipes are held in place with U-clips and finally the pipework is connected to the return manifold.

Myson underfloor heating systems are suitable for most floor finishes, including ceramic tiles, timber and carpets. However, some modifications need to be made for certain surfaces. For example, a flexible adhesive should be used on ceramic floor tiles and it may sometimes be necessary to include a reinforcing mesh in the top quarter of the screed. This will accommodate the expansion and contraction of the floor due to heating and will avoid cracking of the tiles.

With plastic surfaces, the floorcovering and the adhesive used should be suitable for temperatures of 40°C.

Both wood and carpets will restrict the heat transfer and this must be taken into account at the design stage. When using timber, it is essential that one with a low moisture content is used. If a timber with moisture content of more than 10% is used there is a risk of shrinkage during heating, resulting in gaps between the planks. Carpet and underlay combinations must not have a thermal resistance of greater than 1.5 Tog. Also, if carpets are to be stuck down, adhesive used must be suitable for temperatures of up to 40°C.

Myson offers a complete heating design service, which specifies underfloor pipe layouts, controls and boiler applications. This results in a unique integrated heating system with a performance guarantee supported by Myson’s expertise.

Contact: Sales Office, Potterton Myson.
Tel: 01 - 459 0870; email: post@potterton-myson.ie
Unipipe (Irl) Ltd,
40 Southern Cross Business Park,
Boghall Road, Bray, County Wicklow
T: 01 2864888 - F: 01 2864764
E: info@unipipe.ie

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- One pipe...no waste...offcuts from one application can be used elsewhere on the job.

- Unipipe provide a specialist design service for floor heating, heat-pumps and plumbing.

- From Sweden NIBE offer both ground-source and exhaust air heat pumps.

www.unipipe.ie

Distributors for:

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NIBE Heat Pumps from 3 to 300kW
A sister-company of Hevac Ltd, Polytherm Heating Systems was specifically established a number of years ago to serve Ireland's growing underfloor heating market. Indeed, Polytherm was in at the very early stages of the market's development and can be credited with having pioneered its acceptance and penetration to the point where it is now more commonplace.

In that time the technology has evolved considerably, with Polytherm conducting widespread market research and exhaustive market analyses — both in Ireland and abroad — to identify and source the most efficient and cost-effective system. The result of that effort is Polytherm's Heatrack System which is claimed to be the easiest and cleanest way to install an underfloor heating system.

Heatrack is a patented, concrete-free, underfloor heating system featuring single Heatrack panels which are 1.2m long by 12mm thick and aluminium backed for greater energy efficiency; special U-turn Heatrack panels (filler strips) which help to make installation neat and easy; and pre-assembled Heatrack panels which offer the same benefits as single panels with the added advantage of being pre-assembled for dramatically faster installation.

Because they are pre-assembled and folded, these panels are easy to handle and carry. To install, the pre-assembled 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 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.

As the Polytherm tube is supported by a resilient structure, the Polytherm tubing is highly uniform and can be credited with being pre-assembled and ready charged with refrigerant fluid, ready to use, straight from the factory.

There is 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.

The entire 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 Cetia t and certified by Promotelec and Eurovent (water to water heat pumps).

Contact: Seamus English, Polytherm. Tel: 01 - 419 1990; email: info@polytherm.ie
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- Highest reliability you ever get
- Lowest energy cost

WWW.GRUNDFOS.COM
The new Danfoss ECL Comfort Controller range strengthens the scope of applications solutions from Danfoss Ireland in relation to underfloor heating, radiators and ventilating systems. It consists of three controller series:

- Traditional analogue unit ECL100M for small and simple heating systems;
- Digital ECL 200 for small systems requiring digital display;
- Digital ECL 300 with an exceptional application scope for larger systems.

Additionally, the range includes remote ECA room controllers.

Danfoss ECL controllers enhance the control of underfloor heating systems and traditional radiator heating systems, controlling the system as the out-side temperature varies. Principal features and related benefits include:

- Optimiser;
- Year clock and automatic changeover between summer and winter;
- Return Limitation;
- Weather compensated return temperature limitation;
- Max/Min flow temperature limitation;
- Frost protection;
- Heating cut-out;
- Night set back;
- Hot water services priority.

The introduction of the ECL range complements the already-extensive controls portfolio which includes Danfoss easy-to-install, self-acting temperature controls. These are ideal for individual floor-heated rooms or smaller mixed underfloor/radiator systems. These controls — Danfoss FHV valves fitted with either FJVR or RA2000 sensor elements — provide the most simple, cost-effective and accurate way to achieve either constant floor surface or room temperature. Underfloor heating, with annual market growth of 20 - 30% a year, is fast becoming a significant and profitable part of the Irish heating market that installers cannot afford to ignore. Firmly established in mainland Europe for three decades, it offers a number of user advantages over conventional “wet” radiator systems.

Perhaps the most important of these is that underfloor heating greatly enhances comfort levels by spreading warmth evenly across the entire room and from the floor upwards. Also, without the need for radiators, it provides additional usable room space, improves interior aesthetics, eliminates a major problem in room redecoration, and allows greater flexibility with furniture placement.

A return-mounted Danfoss FHV-R valve with its self-acting FJVR temperature limiter is a long-proven control method that is easy to use and simple to install. It requires no wiring, is completely trouble-free, costs nothing to run and provides the most satisfactory, energy-efficient modulating control, providing a constant floor surfacing temperature. This is a very important feature in, for example, bathrooms with ceramic tile floors. No other controls can do this in the same way.

With the FHV-R and the FJVR sensor, small underfloor heating systems, e.g. for extensions, bathrooms or conservatories, can be added directly to existing radiator systems very easily and can be a source of valuable additional earnings for installers.

The Danfoss FHV-R, used in conjunction with the plug-on FJVR sensor element, is a basic two-connection valve that is supplied in two versions — with an air vent and bleed key. The two similar FHV-A models, used with the widely-proven Danfoss RA2000 sensor, provide accurate room temperature control plus the additional advantage of being quickly and accurately pre-settable for the correct flow rate. All products are supplied with compact, customised and easy-to-fit wall enclosure boxes and covers within which the valve fits and all connections are made. Special optional mounting tool equipped with a spirit level is available if desired.

Danfoss, unique with its long UFH experience and in being able to provide the total range of underfloor heating controls, can be relied upon for proven products and quality support.

Details of FHV valves and other controls are available on request.

Contact: Brian F. Maguire, Danfoss Ireland.
Tel: 01 - 626 8111;
email: marketing@danfoss.ie
Unipipe (Irl) Ltd distributes Uponor’s premium brand of piping, Unipipe Systems, with multi-layer composite pipe technology. The Unipipe Systems range also includes solutions for other areas of heating, water services, compressed air, etc., and pipe sizes now go up to 110mm diameter through all common sizes.

Unipipe is rated at 95°C/10 Bar and can accommodate short-term loads of 110°C, making floor heating one of its least stressful applications.

"While our initial interest in Unipipe was for floor heating", says Managing Director Paul O'Donnell, "other applications naturally followed. Unipipe is practical and cost saving to use over traditional steel or copper, its press-fit system allows a contractor to join the pipe with 100% reliability in about five seconds. Also, there are no flames, welding, or even dirt from threading."

For hot and cold-water services, radiators etc., Unipipe now also has 16/20/25mm piping available in pre-insulated rolls.

Unipipe has a strong network of recommended installers throughout the 32 counties and provides ongoing training on system and control technology, as well as heatpumps.

Unipipe (Irl) is also distributor for Europe’s largest manufacturer of heat pumps, Nibe Heating from Sweden. Given the low water temperature needs of a floor heating system, ground-source heat pumps are ideal. Heating and cooling can be catered for. Nibe also manufactures domestic exhaust air heat pumps, and a new range of air-to-water externally-fitted machines. Nibe’s heat pumps also work with radiators and all models come with on-board pumps for both heating medium and collector fluids. Weather compensation and floating condensing technology are on all models.

The full portfolio — including a new range of Nibe heatpumps — will be unveiled at Plan Expo 2004 this coming November.

The most common heat pumps are the ground source where energy is harnessed from surface soil, but can also be taken from lakes, rivers and boreholes. Unipipe provides borehole depth and collector size calculations and, through the Uponor connection, now stocks special Uponor Energiesysteme polyethylene piping, fuse-weld fittings, borehole equipment, etc.

Collecting heat from boreholes is expensive in the initial outlay, but often it's the only solution in large or existing buildings. Through Sustainable Energy Ireland (www.sei.ie) there are certain grants available but not, unfortunately, for individual homes.

Unipipe (Irl) initially targeted the self-build market with great success and is now supplying developers with multiple-house and apartment projects. Want to know more? Visit Unipipe’s new heat pump warehouse and training facility which is heated from a borehole and visitors (by appointment) are welcome. Unipipe also runs training trips on heatpumps to Nibe Sweden, in addition to in-house or on-site CPD courses.

Contact: Unipipe.
Tel: 01 - 286 4888;
email: paul@unipipe.ie
Heatmerchants and REHAU have worked closely together since 2002 to develop and supply an underfloor heating system for Ireland for both domestic and commercial installations. Over this time project design and development teams have been established, a sales network, over 34 branches nationwide, has been developed, along with an approved installer panel. Support is provided in the form of on-site visits and training with technical support for installers 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. Over the years it has extruded and installed millions of metres of its Pe-Xa pipe which is manufactured from cross-linked polyethylene has a co-extruded eval oxygen diffusion barrier. It is widely recognised across Europe as one of the most "fit-for-purpose" materials for underfloor heating.

REHAU's fittings are manufactured from DZR Brass and over 40 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 Heatmerchants to manage the underfloor system are Horstmann, Mullenhoff, Heatmiser and the Danfoss wireless system. There are also weather-compensation systems from Heatmiser and Danfoss.

Typical installations include domestic housing, sports halls, community halls, nursing homes, creches, refurbished old cottages, factory outlets, showrooms, etc.

To support the REHAU underfloor heating system, Heatmerchants also offers a wide range of options for high-efficiency boilers from the Baxi or Keston commercial range; high-recovery calorifiers from Assos; and now the Dunstar Heatpump system.

Heatmerchants stocks over 200 REHAU products and aims to expand the warehousing operation even further. 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.

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Heatmerchants stocks over 200 REHAU products and aims to expand the warehousing operation even further. Along with the REHAU underfloor heating system, Heatmerchants also stocks its flexible pipe system that is suitable for all types of plumbing and central heating applications. Once again, Pe-Xa pipe is the main component part of the system, with 16mm, 20mm, 25mm and 32mm fitting being available. However, larger sizes, 40mm, 50mm, 63mm, 75mm, 90mm and 110mm, are available on special order.

The REHAU - RAUTHERMEX product, the pre-insulated pipe system for below-ground application has also become a popular product. This is available from stock in 25mm, 32mm, 40mm and 50mm 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 Heatmerchants now stocks 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. Heatmerchants holds an underfloor heating training day on the second Thursday of every month, which covers the theoretical side of underfloor heating. Site training is still held when required. Controls training is being planned for the near future.

Heatmerchants aim to supply the Irish market with high-quality products that are supported with a high level of technical support.

Contact Andrew Lightbody, Heatmerchants Product Development Manager & UFH Engineer; Eoin McKiernan, Heatmerchants UFH Engineer.

Tel: 090 642 4083 / 090 644 2321; email: ufhtinfo@heatmerchants.ie; www.heatmerchants.ie
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There are real benefits to having a waste management strategy in place. Waste Management Strategies can result in significant cost savings, they ensure compliance with legislation and are an important element of corporate social responsibility. We have found that waste management strategies can achieve recycling levels of over 40% in the first month of operation.

What is the relevant legislation?
The Waste Management Act of 1996 provides the national framework legislation. The 1996 legislation obliges all producers of waste to ensure that they dispose of their waste in a responsible and legal manner, and that they do not cause environmental pollution through its storage, transport or disposal. The act also requires that waste is only disposed of by Local Authorities or authorised persons.

There have been a number of amendments to the 1996 Act, including the Waste Management (Amendment) Act 2001. The Protection of the Environment Act 2003 has also strengthened some of the original provisions. The Waste Management (Packaging) Regulations, 2003 gave effect to Directive 94/62/EC which requires producers of specified packaging waste to recover waste.

The legislation requires that companies ensure that their waste is collected and transported by an authorised waste contractor and that the waste is disposed of in an EPA licensed landfill. In practice this is best achieved through keeping records of Waste Permits, IPC licenses, waste dockets and recycling certificates. Contracts are a useful way of proving responsibility and it is important to note that the producer of the waste can be held liable even though they believed that their waste was being...
disposed of correctly.

The waste management legislation provides stiff fines and penalties for individuals and companies who are deemed to have neglected their duties or illegally dumped waste. In a recent High Court case the directors of a company were held personally liable, in addition to the company. It is considered significant that the veil of incorporation was lifted to give full effect to the “polluter pays” principle.

What should I look out for in future?
The National Waste Prevention Program (NWEP) — which was developed by the EPA — envisages mandatory annual waste and material audits. Companies who implement waste management into their organisations will find it easier in complying with future legislation and will have a head start on their competition.

This year the government is examining the possibility of applying economic instruments on chewing gum, ATM receipts and fast food packaging. Restrictions on the disposal of waste electronic and electrical equipment will soon be introduced.

What is the national situation?
Ireland faces many challenges in relation to waste management in the coming years. Complying with our national targets and our international obligations will require major efforts from the business community, householders and government.

Nationally, landfill remains the largest waste disposal route with almost 8.3 million tonnes of waste being disposed of to landfill in 2001. While the national landfill capacity has increased from six years in 2001 to 10 years capacity today, waste continues to grow at unsustainable levels. Despite the fact that the quantity of waste being recycled has grown, the overall quantity of waste generation has also grown, resulting in increased quantities of waste being disposed of to landfill. In the Dublin area alone municipal waste increased by 31% between 1998 and 2001.

Ireland has a number of ambitious targets in relation to recycling and diversion from landfill. This includes diverting 50% of household waste from landfill by 2013, recycling 35% of municipal waste by 2013, recycling 85% of construction and demolition waste by 2013, and 50% of packaging waste by 2005.

It seems certain that the cost of waste disposal will continue to rise and that other methods of waste treatment, particularly recycling, will become more attractive as a result.

If you have any queries on the above article, please contact the Health, Safety & Environmental Department at Irish Estates on 01-704 1419.
Technology Turns Killer — While there is no denying the value of innovative technology and its positive impact on products and services, it’s ironic how misuse of developments such as emails are, in fact, becoming a hindrance to good communication. Of course there are many advantages and benefits to be derived from communication via the email but it is no substitute for face-to-face or telephone communication. Words accompanied by body language and voice intonation speak volumes, emails are mere words on paper.

Double Whammy For Doyle! — Congratulations to Frank Doyle and his wife Louise on the recent birth of their twin daughters, Laura and Sarah. As the demands of this double-celebration take their toll the rest of us can look forward to taking the money from Frank on the golf course throughout the summer. That is, of course, assuming that Frank actually makes it to the golf course in the first instance!

Vroom Vroom! — Have you noticed the growing penchant for flash cars within the industry. There was a time when the car a person drove somehow reflected your perception of them as a person. Lately though I’ve noticed myself doing a double-take on seeing certain individuals drive by. Flash and sporty is the order of the day. Can’t decide whether it’s sour grapes on my part or mid-life crises on theirs.

Product Specification Guide — Calling all product suppliers. We are now in the early stages of collating information for the forthcoming BSNews Building Services Product.
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