

1-1-2007

BS News

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



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

Recommended Citation

(2007) "BS News," *Building Services Engineering*: Vol. 46: Iss. 1, Article 1.

Available at: <https://arrow.tudublin.ie/bsn/vol46/iss1/1>

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

bs news

building services news

Pump
Up Your
Profits!

Finheat — 12
Page Special

**Grundfos has the
piece of the puzzle
you need...**

Building Services Engineering, Vol. 46 [2007], Iss. 1, Art. 1



When replacing a circulator pump, there is more to think about than simple mechanical dimensions. Like a jigsaw puzzle, where the motif as well as the size of the piece must match, fitting a new circulator requires many elements to mesh.

Dealing with us puts you in touch with one of the world's largest manufacturers of circulator pumps. Several of our pumps feature A-ratings on the energy labelling scale. We believe that our extensive knowhow, experience, complete product range, and attractive price points allow us to provide you with just the piece of the puzzle you need.

The right shape, the right benefits

Grundfos glandless pumps offer numerous benefits, and all are characterised by reliability and energy efficient operation.

- No risk of leakage
- Quiet operation
- Energy labelled
- Maintenance free



Reading the table

The table to the right provides you with a brief overview of the different types of Grundfos glandless pumps. It allows you to make a general recommendation based on some simple criteria. Please refer to the technical information further on in this booklet for more precise sizing and selection information.

ISSN 0791-0878

Published by:

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

Editor: Pat Lehane

Advertisement Director: Joe Warren

General Manager: Louise Byrne

Origination and Design:

Pressline Ltd, Tel: 01 - 288 5001

Subscription: One Year — €70

Printed by: dck/ebrook.

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

cover

Iris Bay, Dubai
(see Plumb Lines)



News & Product Information	2
Face to Face ... Mark & Michael, Kirby Group Eng	14
RAC07 and H&V07 Preview	16
Finheat Group — 12 Page Brochure	17
Pumps & Circulators	29
CIBSE News	38
Mitsubishi Electric Training Centre	39
Electrical Services Engineering	40
Energy in the Context of Business	42
Another Side Of ... Sean Brady	43
Plumb Lines	44

opinion

If You Make It Sustainable ... Then The Entire Business Becomes Sustainable

Sustainability is the new industry buzzword, and rightly so. Architects, consultants, contractors and product suppliers are at least paying lip-service to the need for a sustainable approach to building services.

There is no point pretending that everyone has wholly embraced the concept as yet. Witness some of the blatantly unsustainable products still on the marketplace, and the very obvious lack of any constructive consultation between the design professions on some projects.

That said, there is a groundswell in favour of genuine sustainability beginning to permeate the industry. It is slowly, but surely, gathering pace and will — sooner rather than later — gain sufficient momentum to sway those still sitting on the fence.

In the meantime, it is imperative that those already converted to the process continue to press ahead, even in the face of resistance. It is even more important that they champion *genuine* sustainability — we have an uncanny knack in this country of superficially embracing all manner of idealistic objectives on the surface while, at the same time, continuing to fly in the face of those objectives by our actions.

For the most part those who don't support (and even oppose) sustainability do so in the mistaken belief that somehow it will cost them money. It's time those people got real ... unless they embrace and actively promote sustainability then the very business they so depend on for their livelihoods will, in itself, become unsustainable.

If sustainability becomes the core objective of building services, then the entire business will become sustainable.

the future of lighting controls

Astrotek recently completed the installation of an intelligent lighting control system for Wyeth Pharmaceuticals in Newbridge. The system was specified by Fluor, installed by Suir Engineering, and has system hardware and software provided by Delmatic.

The key to the technology is flexibility in that lighting control hierarchy can be easily reconfigured from a desktop PC, thereby avoiding expensive rewiring when changes are made to how a space is used. As well as daylight harvesting, occupancy detection, programmed switching, scene-setting and remote control, individual users can control the lighting over their workspaces. All these factors contribute to greatly-reduced energy bills.



John Hughes



In addition, preventative maintenance is enhanced due to the availability of data such as hours-run, failures, or deteriorating battery pack performance on emergency luminaires.

Installation can be made using labour and time-saving plug-in modules where luminaires plug in directly via a six-way Wieland plug or by using Delmatic modules where a twisted pair is daisy-chained to all luminaires.

As well as installations at Kildare County Council's HQ offices and Fingal County's offices, Delmatic systems are operating at HSBC Canary Wharf; Emirates Towers (see left), Dubai; and Swiss Re, London (the Gherkin building).

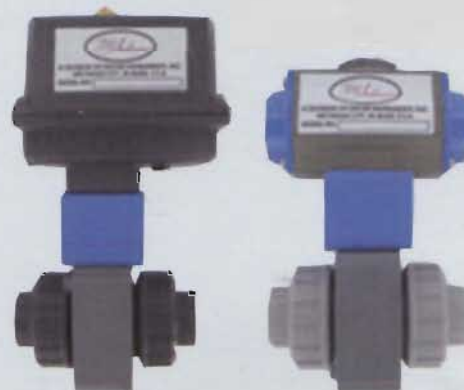
Contact: John Hughes, Astrotek. Tel: 01- 456 8009; email: info@astrotek.ie.

automated ball valves

The Series PBV automated ball valve range from Manotherm is ideal for use in pool and spa applications, as well as for potable water. The valve features a sheer-proof stem designed to prevent leakage in the event of damage, reinforced TFE seats and EPDM seals for longer life, and an all-plastic construction (PVC or CPVC) for heavyweight durability at lightweight cost. Valves also come with selectable NPT or socket process connections.

The PBV is an economical automated valve package with either an electric or pneumatic actuator. Electrically-actuated models are weatherproof, NEMA 4, powered by standard 115 VAC supply, and are available in either two-position or proportional control. Actuator features include thermal overload protection to withstand stall conditions, visual position indication, and a permanently-lubricated gear train.

The pneumatic double-acting actuator uses an air supply to drive each of the actuator ports. Sprint-return pneumatic actuators use the air supply to drive the valve stem in one direction, and internally-loaded springs return the valve to its original position.



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



Super-efficient VRF technology, no matter how long you use it.

From daybreak to sunset, the energy-efficient choice is the ECOi 2 Way Multi Electric VRF. Specifically designed to reduce power consumption and CO² emissions by using the latest DC inverter technology, it provides a class-leading COP rating of 4.1.

Simple to install and maintain, it connects up to 40 indoor units on one system. With cooling down to -15°C and sound levels from just 54dB(A), it's the hard-working system for hard-working people.

Tel: (01) 403 9900 www.sanyoaircon.com

The natural choice.



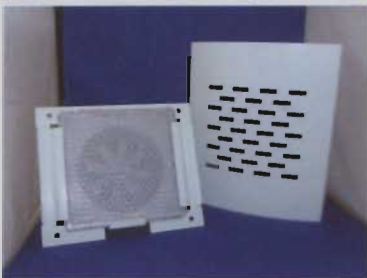
SANYO
AIR CONDITIONERS

eco-designed grilles & fans from MTD



The Eco-Air AirKleen grille from MTD Solutions Ltd is available in 100mm, 125mm and 150mm diameters and comes complete with integral air flow damper and mesh filter, which makes it ideal for kitchen extraction.

Manufactured from mild steel and powder-coated with a slotted finish, it can be used with almost any ventilation system. However, it is best suited for use with the MTD-MVS energy efficient centrifugal multipoint silent extract unit.



Also new from MTD Solutions is the MTD-MVS 9G energy-efficient centrifugal fan capable of moving 225m³/h @ 180Pa. The unit is controlled by a wireless remote control and consumes only 5.1 watts (0.06 Amp) at low setting. Manufactured from 100% recyclable impact-resistant ABS, it is supplied to 'VO' flame extinguishing quality standard and has silent operation. Applications include houses, apartments, offices or commercial units where reducing the CO₂ emissions is a priority.

Contact: Ciaran King at MTD-Solutions. Tel: 045 - 900590; email: ctking@mtd-solutions.com

plumbing & heating code of practice

The National Standards Authority of Ireland (NSAI) has commenced work on devising a Code of Practice for the *Design, Installation and Commissioning of Plumbing & Heating*. This is the last area within the construction industry that needs radical standardisation and something which is long overdue.

Peter O'Reilly, Standards Officer, NSAI, has assembled a broad group of experts from various sectors of the industry and that Technical Committee will now help formulate and develop the new Code of Practice. The Committee has already had a very successful first meeting and now plans a series of get-togethers over the coming months.

Contact: Peter O'Reilly, NSAI. Tel: 01 - 807 3804; email: peter.oreilly@nsai.ie

new jobs & €10 million investment at smarthomes

Taoiseach Bertie Ahern recently opened the new headquarters of Smarthomes at the Finnabair Industrial Park, Dundalk and announced a €10 million investment by the company which will create 100 new jobs over three years.

Smarthomes design and manufacture cabling solutions for new homes, centrally controlled from one streamlined box. The range of services covered includes telephones, broadband, computer networking, wall mounted plasmas and LCD screens, home cinema, digital and satellite TV, CCTV, multi-room audio, mood lighting and provision for a home office.

Commenting on the announcement Sean Gallagher, Managing Director of Smarthomes, said: "Over the next three years this investment will help us to double the existing market for technology in new Irish housing developments, and will help us to strengthen our position as the market leader."



Minister for Foreign Affairs Dermot Ahern TD, An Taoiseach Bertie Ahern TD, Smarthomes Director Derek Roddy, and Smarthomes Managing Director Sean Gallagher

Pressed For Time? Joints in 3 Seconds!



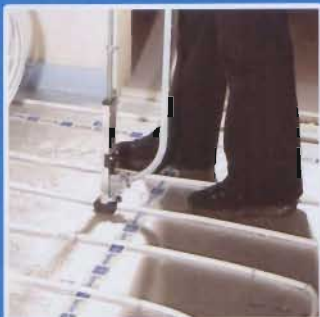
Unipe Press Fitting System



Unipe Controls



Nibe: New Air-to-Water Heat Pumps



Unipe Floor Heating



Ecoflex Pre-insulated Piping

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



uniPIPE

- Unipe (by Uponor) multi-layer pipe offers a proven alternative to steel, copper and plastics for mechanical services.
- Available in straight lengths (all sizes 12 to 110mm) and coils (to 32mm).
- Corrosion proof, faster, cleaner. No welding screwing or painting. Longer lasting and lower installed costs
- One pipe...no waste...offcuts from one application can be used elsewhere on the job
- From Sweden NIBE offer ground-source, Air-to-Water and exhaust air heat pumps. NIBE are Europe's largest producer of heat pumps.

trade news + product information

volcano — all-in-one heating & ventilation

Modern design, technical innovation, competitive pricing and quality excellence are the key features of the Volcano VR range of heating/ventilation products from J.O'B. Heating Supplies in Cork. Designed to operate on the principle of closed circulation air, the units incorporate a water heater for heating and axial ventilator for circulation.

The connecting collectors of the copper-and-aluminium exchanger are located on the rear board of the units with the aluminium blades to the front. Key features are said to be high efficiency, low energy consumption and silent operation. Individually-regulated air guides allow the stream of warm air to be directed in four directions.

There are two models in the range — Volcano VR 1 (10kW to 30kW, 550 m³/h); and Volcano VR 2 (30kW to 60kW, 520m³/h).

The injection-moulded casing of each unit is resistant to high temperature, corrosion and mechanical damage. Specially-designed fixing holders allow for horizontal turning between 0° and 180° and, where these are not suitable, there is a mounting sleeve which makes for easy and secure mounting with the help of special bolts.

The Volcano VR range is intended for applications such as sports centres, retail outlets, car showrooms, warehouses, supermarkets, shopping centres, factories and greenhouses. All are high-profile applications where the units are visible and need to blend in with the local environment/decor. Hence the system of replaceable colour covers so that the units sit comfortable in any interior.

Contact: Hugh Egan, JOB Heating Supplies. Tel: 021 - 432 2500; email: hugh@jobco.ie



calpeda pumps move

Calpeda Pumps Ireland Ltd has moved into new, purpose-designed premises located at Unit 5, Old Quarry Campus, Kilshane Park, Dublin 15. Telephone and fax numbers remain the same for the present.

Contact: Graham Fay, Calpeda Ireland. Tel: 825 8212; email: sales@calpedaireland.com

new president of construction industry federation

Hank Fogarty has been elected President of the Construction Industry Federation (CIF). Mr Fogarty is a Director of SIAC Construction and has served as a member of the CIF Executive Body for some time, the past two years as Senior Vice-President.

Speaking following his election, he outlined many of the key issues facing the construction industry for the years ahead, citing in particular the need for continued investment in infrastructure.

Within this context the CIF has prioritised a number of key areas including ongoing training and development and improved health and safety measures.



Water Tight Solutions

Multi-Layer Composite Plumbing Systems

- Suitable for heating and drinking water installations for both Domestic and Commercial Systems.
- Available in sizes 12mm to 110mm.
- Safe, Secure jointing systems
- Both flexible and formstable, with an enclosed aluminium layer to ensure 100% oxygen diffusion tight and low expansion rates.
- Nationwide availability

uponor - The Shape of things to Plumb

WRAS
APPROVED
PRODUCT

Uponor Housing Solutions Ltd

T 01 895 7430

F 01 895 7434

E hsequiries@uponor.co.uk

W www.uponorhousingolutions.ie



Check out the benefits!



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

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

When the hotel room is:

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

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

It also:

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

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

or visit www.mitsubishielectric.ie



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

*¹ No dedicated computer is required

*² Setpoint and temperatures are configurable



'must not sacrifice ventilation for energy-efficiency'

Despite the fact that numerous research programmes have confirmed that good ventilation makes people feel and perform better, new homes continue to be built with poor ventilation. Moreover, says Niall Horgan of Systemair, the emphasis in Ireland on energy-efficiency and the drive to create sealed building envelopes is making the problem even worse.

Hence Systemair has developed a new range of heat recovery units aimed specifically at the residential sector. These include the VR 300 TK/B and the VR 250 EH/B.

The VR 300 TK/B is designed for individual homes and intended mainly for wall-mounting. However, it can also be installed horizontally, i.e. in a false ceiling. It is a double-skinned compact unit, fully insulated and equipped with centrifugal fans for supply/extract air; rotating heat exchanger; filters; and thermostat-operated heater battery.

The VR 250 EH/B, on the other hand, is intended for the ventilation of smaller apartments. It is painted white and designed for installation on the wall or ceiling. It is delivered double-skinned, fully-insulated and with complete control functions; centrifugal fans for supply and extract air; rotating heat exchanger; reheater battery; and filter.

Extract from the cooker hood is led directly to the extract fan, by-passing the exchanger block. Anti-vibration ceiling mounting brackets and inspection doors on both sides makes the unit easy to install and clean.

Contact: Niall Horgan, Systemair. Tel: 01 - 862 4544; email:sales@systemair.ie



white young green sustainability director

White Young Green, the multi-disciplinary consultant to the built, social and natural environment, has reinforced its commitment to sustainable development with the appointment of Richard Linger to the role of Sustainability Director.

Ray Moore, Group Managing Director for WYG Ireland, said: "The creation of this new role underlines the importance that White Young Green places on sustainability. Richard's expertise, coupled with our Sustainability Bureau, means that we are in a position to advise clients on how to develop new buildings and other projects that deliver benefits today without putting a burden on future generations."

Richard is a civil engineering graduate from University College Cork and has worked in industry for 17 years. He has experience in sustainable development, environmental policy, power generation technologies and emissions trading.



GT Phelan Ltd
Tel: 01 286 4377
or email: info@gtphelelan.ie
www.gtphelelan.ie

trade news + product information

sanyo champions sustainability

As we went to press Sanyo revealed details of three new ground-breaking developments, all of which feature innovative features and are in line with the company's GAIA philosophy. These are pioneering initiatives and demonstrate Sanyo's commitment to developing sustainable products and systems. Brief details of each are as follows:—



Solar Power — Sanyo has been involved in rechargeable and renewable energy research for nearly 50 years but today is looking to a higher power for inspiration — the sun. Sanyo solar cells have already harnessed the energy of the sun to power homes and to irrigate African deserts by desalinating seawater. In 1990, a plane powered by Sanyo solar cells was the first solar-powered plane to fly across America. Now Sanyo has taken the next step forward — an air conditioning system which uses solar power to improve efficiency.

Virus Washer — In recent years people have become increasingly concerned with the quality of the air that they breathe, the outbreak of SARS in the Far East and the threat posed by the Avian Flu virus making them even more fearful. Up to recently there has not been an effective method to suppress airborne viruses, bacteria and allergens, especially in large spaces. However, Sanyo has now introduced the "Virus Washer", a system that effectively eradicates airborne viruses and bacteria in areas up to 100m².

The "Virus Washer" system utilises Sanyo's patented proprietary electrolysed water technology to produce hypochlorous acid from the chloride ions present in tap water. This acts as a powerful disinfectant, removing the spikes from a virus and thereby rendering it harmless. In independent tests at the Kitazato Institute in Japan, the "Virus Washer" was found to be effective in suppressing more than 99% of viruses in the air passing through the disinfectant element in a single pass.

CO₂ Water Heater — Said to be both user and environment-friendly, Sanyo's CO₂ water heater system uses natural refrigerant (CO₂) to provide hot water with very low GWP compared to HFC. Capable of operating under low ambient temperatures, the units are also extremely economical with high system efficiency, low running costs and low installation cost. Already popular in Europe, they are particularly suitable for residential applications.

Contact: Vincent Mahony, Sanyo Airconditioners; Tel: 01- 403 9900; www.sanyoaircon.com

safe handling of refrigerants

Refrigeration Skillnet has organised a preliminary programme for those seeking training and assessment leading to the City and Guilds Certificate in Handling of Refrigerants (C&G2078). Throughout February two UK assessors will provide C&G2078 training and assessments at the following venues on the dates stated:—

Cork — Monday, 12 February & Tuesday, 13 February

Great Southern Hotel, Kinsale Road, Cork Airport, Cork;

Kilkenny — Wednesday, 14 February & Thursday, 15 February

Days Hotel, Smithsland South, Springhill, Kilkenny;

Dublin — Friday, 16 February & Saturday, 17 February

Central Block, Docklands Innovation Park, 128-130 East Wall Road, Dublin 3.

Contact: Enda Hogan, Refrigeration Skillnet Network Manager.

Tel: 058 - 44211; email: refskill@eircom.net

trade news + product information

uponor housing solutions training academy

Uponor Housing Solutions, one of the leading suppliers to the plumbing and underfloor heating markets, has moved into new purpose-built headquarters in Swords, Co Dublin.

The company has experienced considerable growth in recent years and the expanded warehousing and office facilities, along with the new dedicated installer training facility, will make for a much-enhanced service.

The training academy will be run in conjunction with the sales team and features customer-driven courses that will tackle the technical/theoretical aspects of Uponor UFH and flexible non-demountable pipework systems. Detailed information will be provided on how to maximise the products' potential.

The current sales team consists of Adrian Gatford, Regional Director; Donal Stafford, Regional Sales Manager; Austin Kennedy (Specifications); Gavin Osborne (Merchant & Installers, Republic of Ireland); and Eddie Magill (Merchant & Installers, Northern Ireland). Full technical support is also provided.



Contact: Donal Stafford, Uponor Ireland. Tel: 01 - 895 7430;
email: hsenquiries@uponor.co.uk; www.uponorhousingsolutions.ie

ecobuild — sustainable design & construction show

Ecobuild is one of the most comprehensive UK-based events dedicated to sustainable design and construction. Venue is Earls Court 2, London and the dates are 27 February to 1 March 2007.

Ecobuild is co-located with four other events, each one focusing on a key theme and each providing a dedicated conference, series of seminars and an exhibition. They are:—

- Cityscape: place-making and the refurbishment of the public realm;
- Futurebuild: more efficient and effective ways of building;
- Regenex: regeneration and its impact on urban construction and social policy;
- Building for Health: planning, design, construction and management of healthcare facilities.

Contact: www.ecobuild.co.uk

marshall-tufflex 'quicksilver'

Marshall-Tufflex, one of the leading manufacturers of cable management, rainwater and window systems, is among the sponsors supporting Nigel Macknight and his boat, Quicksilver, in the World Water Speed Record Challenge in 2008.

The company will be taking advantage of some of the opportunities open to corporate sponsors, including dinners with world class sports stars and the chance to view Quicksilver at its base near Nottingham East Midlands Airport.

Quicksilver is powered by an awesome Rolls-Royce Spey jet engine and generates 25,000 horsepower. To keep up with progress on the project visit www.quicksilver-wsr.com.



MICHAEL HENNESSY & MARK FLANAGAN



When *bs news* came face to face with Mark Flanagan and Michael Hennessy of Kirby Group Engineering Ltd in Galway earlier this month, it quickly became apparent that the west is very much awake from a building services point of view. Construction activity in Galway is currently at an all-time high and Kirby — by virtue of the all-embracing scope of the services it provides — features prominently on all the major projects underway.

We initially met in the company's Galway office in Ballybane but then visited a number of key sites — Abbott Laboratories and Boston Scientific among them — to view projects on the ground. Wherever we went throughout the city the feeling of enthusiasm and vibrancy was very much in evidence. There is a strong mix of new-build and refurbishment/change of use. Moreover, the heightened activity levels include a broad spectrum of market segments so that the overall pattern is more inclusive and sustainable.

This is an ideal scenario for Kirby as the company is specifically structured to provide engineered building services solutions across all industry segments. Apart from serving the needs of industrial, commercial and public sector projects, Kirby also has dedicated divisions catering for the pharmaceutical, medical and process instrumentation sectors. In addition, Kirby has its own ductwork fabrication facilities.

Originally established as an electrical contracting company in Limerick in 1964, Kirby Group Engineering is now one of Ireland's leading electrical, process instrumentation, mechanical, calibrations and data communication companies. To better serve its broad customer base it has six dedicated divisions:—

- Electrical;
- Mechanical;
- Process Instrumentation;
- Facilities Management;
- Data Communications;
- MV/HV Installations.

Growth has been steady and carefully-managed, national coverage being cultivated on the back of locally-based, regional offices of which there are now four — Limerick, Dublin, Galway and Cork. Employment levels stand at 640 with a predicted turnover for the current year of €65+ million.

The company has built up an excellent reputation for the quality of its work, and especially its ability to complete complex projects on time, within budget, and to a very high standard of installation. Equally important is the manner in which this service is provided, from project inception through to design, installation, commissioning, manuals hand-over, and subsequent maintenance.

face to face

et al.: BS News

MICHAEL HENNESSY & MARK FLANAGAN

"Kirby's core philosophy is based on genuine commitment to provide a good quality product that is designed and installed for durability, longevity and optimum energy efficiency. It is about value for money."



Michael Hennessy & Mark Flanagan

Kirby's Maintenance Division offers either a call-out or total planned maintenance service. Management structures can be put in place on site to manage and control all project-related work and maintenance, including electrical, mechanical, data, cleaning, painting, refuse disposal, landscape maintenance, etc.

The health, safety and welfare of its employees — and that of personnel on sites where it is engaged — is another key priority. Kirby Group's "Safety Ethos & Site Safety Management Systems" form an integral part of the overall company strategy. They are applied uniformly across all operating divisions via a structured management process which is rigidly policed and enforced. It also includes significant annual investment in safety training and safety-related incentive schemes. Kirby Group Engineering is a member of the National Irish Safety Organisation and has won safety awards every year since first partaking in the Organisation's awards scheme in 1998. In fact, last year it received three 'Highly Commended' safety awards from NISO / NISG.

As you would expect from the foregoing, there are many career opportunities within Kirby Group Engineering. Apart from vacancies for senior, experienced engineers across all disciplines catered for, there are employment opportunities for:—

- Engineering Graduates;
- Electrical Apprenticeships;
- Electricians;
- Instrument Technicians;
- Data Installers;
- Welders;
- Pipe Fitters;
- Plumbers;
- Plumbing Apprenticeships;
- Sheet Metal Fabricators;
- Sheet Metal Fabricator Apprenticeships.

In summation, Kirby's core philosophy is based on genuine commitment to provide a good quality product that is designed and installed for durability, longevity and optimum energy efficiency. It is about value for money. By adopting a systematic and practical approach to project management, through careful planning and organisation, Kirby Group delivers to this demanding objective.

H&V07 RAC07 & H&V07 — Two Shows in One

rac07

A vast number of refrigeration and air conditioning companies — representing major brands, first-time exhibitors and international manufacturers — will be exhibiting at RAC07 in the NEC, Birmingham (27 February – 1 March 2007). Everything from compressors, components and split systems through to cases and cabinets, air movement and process cooling systems will be featured. All the major international brands are participating but there are also many new companies showing for the first time.



Although remaining separate shows with their own distinct and very individual identities, co-location will provide an extensive and complementary mix of visitors, with free movement between the two events. It will also allow those visitors who want to concentrate on the one show to do just that.

Manufacturers, contractors and maintenance companies within the refrigeration and air conditioning sector all rely on fleets of vans – and what's inside them — to run their businesses and provide reliable, effective service to clients. The dedicated "In the Van" Service Zone will take visitors inside the van, providing an insight into some of the latest innovations available to make working life on the road easier for the service engineer. Featured will be a top-end demonstration vehicle from one of the leading van manufacturers, equipped with all the latest on-road gadgets.

Visitors can also take a close-up look at other invaluable tools of the trade, including refrigerant leak detection equipment, EPS systems, gloves, goggles, power tools and other devices. Information will also be available on fleet van leasing and insurance schemes available to service and maintenance companies.

Following its debut last year, H&V07 is set to build on its success as new companies swell the ranks of those already committed to the event. Boiler brands Vokera and Wolf will show alongside Baxi Potterton, Férroli, Lochinvar, Powrmatic, Vaillant and Viessmann, while air movement

and ventilation exhibitors will include Airflow Developments, Flaktwoods and Systemair.

Other leading companies signed up for the show cover automation, ductwork, fan coils, pipework, valves and a host of other equipment areas and services.

H&V07 will also feature a comprehensive interactive programme of seminars and workshop-type demonstrations with a strong emphasis on renewable and sustainable energy technology.



Seminar Programme

The seminar programme for both events is extensive and offers a unique opportunity to hear industry experts discussing key issues. Booking is required for these sessions as spaces are limited.

Service Engineer Skills Centre

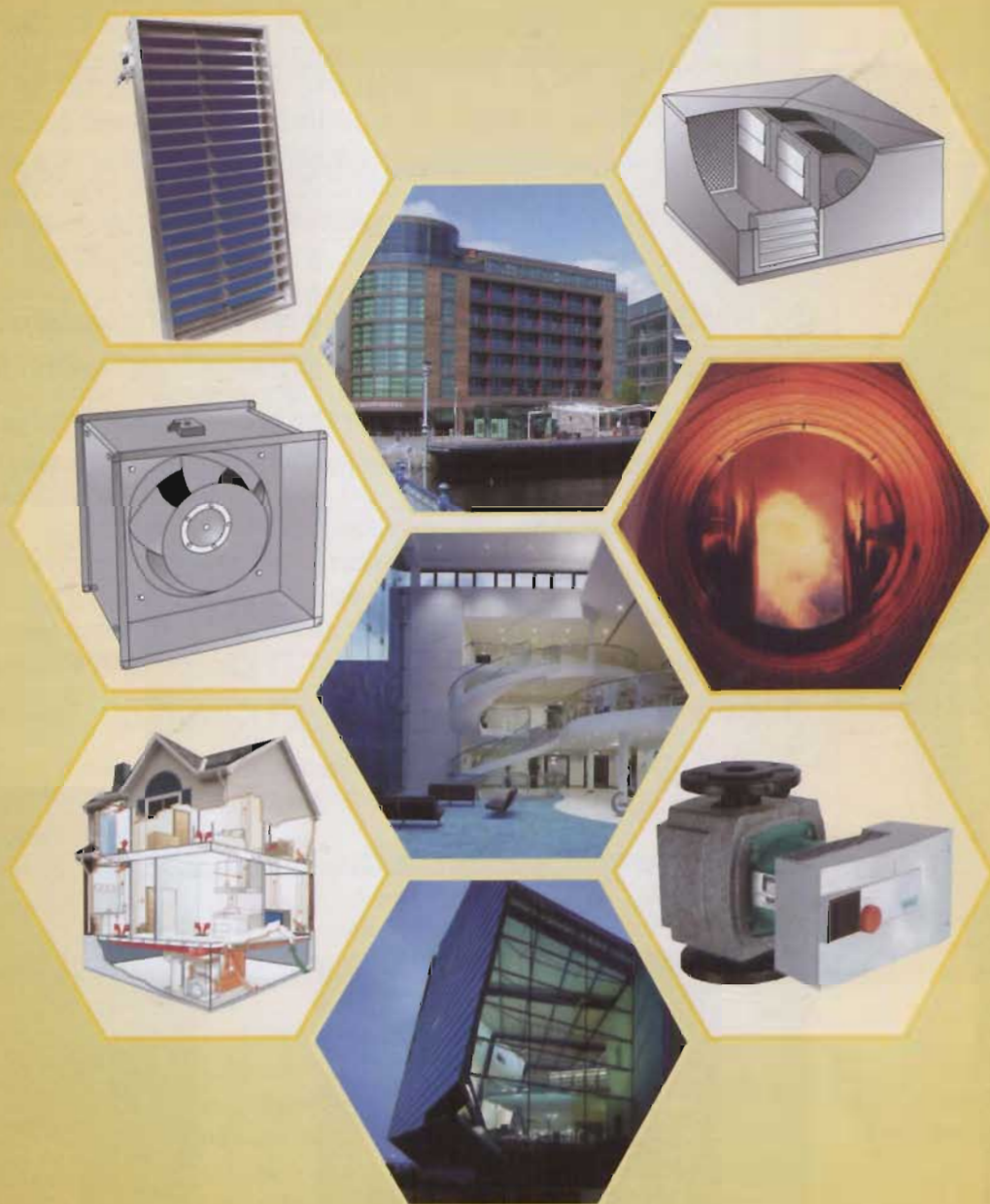
This will feature an ongoing programme of practical demonstrations at both shows for installers, engineers and contractors. There is no need to book these sessions, just turn up on the day and join in.

Contact: RAC07 —
www.racexhibition.com;
H&V07 —
www.handvexhibition.com

The theme of RAC07 is "Sustainable Solutions For The Future". The event will embrace many of the energy and environmental issues facing the industry and explore the related changes to technology, legislation and regulation for visitors. Apart from product presentations, there is also a full technical seminar programme and the Service Engineer Skills Centre. Other attractions will include a display of Fantastic Fridges (running in association with a monthly feature in RAC Magazine) and a special "In The Van" Zone for service engineers.

RAC07 will co-locate with H&V07, the biennial national event for the heating and ventilating industry.

FINHEAT GROUP



Air Quality Solutions

DIFFUSION

Heating & Cooling

Heating & Cooling Specialists

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

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

The Heating Range

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

The Cooling Range

- ☐ Fan Coils
- ☐ Kampmann Floor Duct
- ☐ Kampmann Trench Cooling



Finheat Group

78 Cherry Orchard Industrial Estate,
Ballyfermot, Dublin 10.

Tel: 01 - 623 4222 Fax: 01 - 623 4226
email: sales@finheat.com

Longline Fan
Convactor/Trench Heater

Chameleon Overdoor Unit

Diffusion Ambassador

Cassette Fan Coil Unit

Swanish Overdoor
Warm Air Heater



Delivering indoor air quality solutions to the exacting requirements of today's marketplace is a challenge many companies aspire to but few actually meet. A combination of restrictive health and safety legislation, onerous environmental considerations, and an ever-more-demanding client base mean that the problems posed are enormous. This scenario is further exacerbated by the myriad of applications which must be catered for, and the unique factors of each situation.

However, two separate companies — Finheat and Liberty Air Technology — did rise to the challenge and have successfully championed an innovative approach to devising indoor air quality solutions for the past 25 years. Individually, they established market-leading portfolios which boast premier international brands, vast experience, and unrivalled technological know-how. Now that they have come together under the guise of The Finheat Group makes for a unique force of incomparable status in the marketplace.

There are three primary divisions within the Group — Finheat, Liberty Air Technology and Spiro Grilles & Dampers. While they operate independently to provide dedicated sector-specific solutions, their collective strengths can also be harnessed and brought to bear in a cohesive, cooperative manner on larger, more all-embracing projects. It is in this respect that The Finheat Group is commanding greatest respect.

The core Finheat Group strengths are:—

- The leading-brand status of suppliers such as Diffusion, Gilberts, Senior Hargreaves, Technibel, Dynamic Modelling, Wilo, Wolter, and Lifebreath (see inside);
- The enormous reservoir of support available from these suppliers;
- The vast experience and technical knowledge of its own, highly-qualified personnel.

However, perhaps even more crucial is the streamlined management structure and pervading “family” culture which makes for a seamless interchange of the aforementioned strengths. Professionalism underpins the entire operation but the service provided is open, consultative, cooperative and flexible. It is perhaps this, more than anything else, which makes for the comfort levels architects, consultants, contractors and clients talk about when dealing with Finheat. If you have an indoor air quality challenge to deal with, rest assured Finheat can devise the most appropriate, environment-friendly, cost-effective solution.

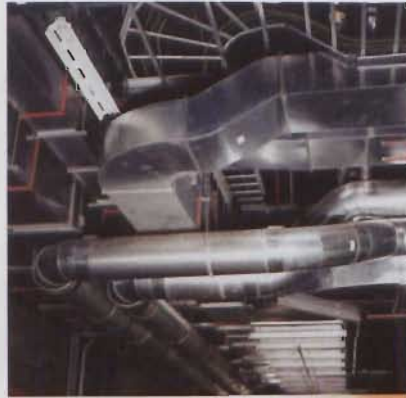
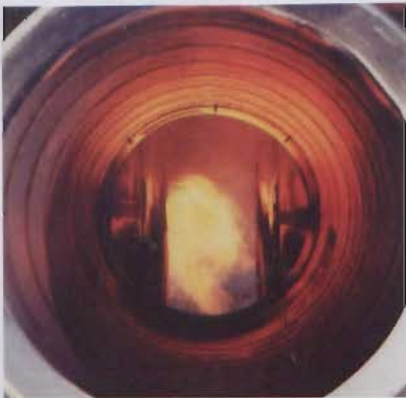




SENIOR HARGREAVES

HFD FIRE RESISTING DUCT PRODUCTS

Setting the Standard



Finheat Group

78 Cherry Orchard Industrial Estate,
Ballyfermot, Dublin 10.

Tel: 01 - 623 4222 Fax: 01 - 623 4226

<https://arrow.tcd.ie/issn/vol46/iss1/1>

Underground Car Park Ventilation & Smoke Exhaust

Dynamic Modelling Ltd is an engineering company which specialises in computational fluid dynamics (CFD) to provide flow simulation services covering the following:—

- Airflow in buildings for comfort and energy problems;
- Airflow around buildings and pollutant distribution;
- Industrial ventilation, air containment and extraction;
- Smoke propagation and smoke removal;
- Fire spread and heat transfer.

By virtue of its partnership with Dynamic Modelling, Finheat can provide all of the above services. However, the real bonus lies in the fact that, armed with the results of the flow simulation service, it can then design the most appropriate solution and provide the products and equipment to solve the problem.

This is especially so with car park ventilation as Finheat is also the distributor for Wolter Jet Fan Systems. Jet fan technology is derived from the longitudinal ventilation systems found in most road tunnels and is fast becoming the preferred choice for underground car parks over conventional ventilation concepts.

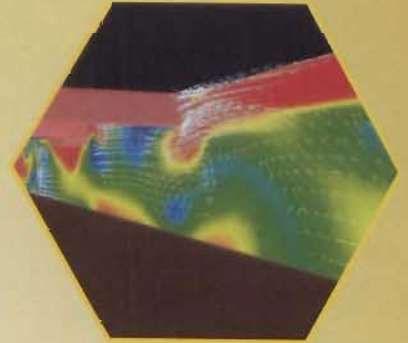
Essentially, a stream of air is injected into the tunnel by a series of free-blowing axial fans, thus inducing an air movement in addition to the natural ventilation. The decisive parameters of capacity are the air volume and velocity, and therefore the thrust of the fan.

By installing an adequate number of jet fans in an enclosed car park, a constant air movement can be created, thereby ensuring that the CO concentration all over the car park is maintained in line with Building regulations. Moreover, a well-designed system of jet fans means that the accumulation of exhaust fumes in dead areas can also be avoided.

Apart from compliance with regulatory requirements, the use of a jet fan system also makes for significant cost savings. Ductwork is rendered obsolete while the required total capacity of fans can be reduced as pressure drops created by the ducting are also eliminated. Another advantage is that the virtual fire compartments created by jet fans allow for more open-plan design of the car park.

If required, Wolter jet fans can be produced in a high-temperature configuration that will ensure operation at both ambient temperature for CO ventilation and elevated temperature of 300°C for at least one hour.

The ventilation of underground car parks is a highly-contentious area and one where developers are facing ever-more-stringent legislation and regulation. Planning permission is increasingly being withheld unless a professionally-authenticated engineering solution is provided with the initial application. Finheat can do precisely that.



Split systems/units & Water Chillers

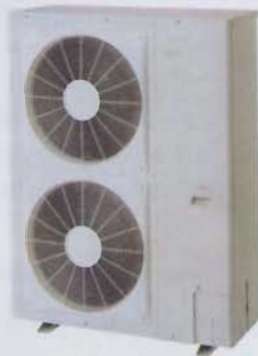
Multi-simultaneous system cassette

CAV 254 R



Ductable split units

GRV 360/480



**Reversible water chillers with
built-in hydraulic module**

PMHRV 2044-2072



**Water chillers with
built-in hydraulic module**

CMHGV 2050-2080



Finheat Group

78 Cherry Orchard Industrial Estate,
Ballyfermot, Dublin 10.

Tel: 01 - 623 4222 Fax: 01 - 623 4226

email: sales@finheat.com <http://www.finheat.com/bsn/vol46/iss1/1>

LIFEBREATH[®]

CLEAN AIR FURNACE

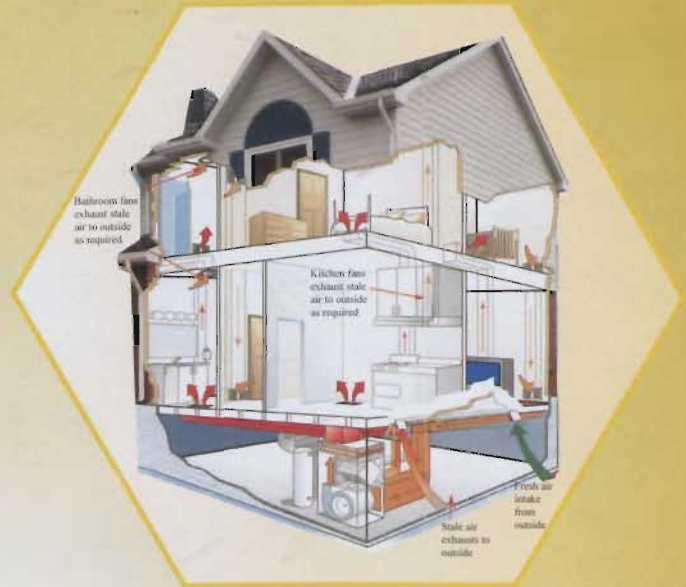
The Lifebreath Clean Air Furnace combines the fresh air benefits of a heat recovery ventilator with the comfort and efficiency of a water heater/air handler. This combination heating system provides constant ventilation and a steady stream of warm air to create a very healthy and comfortable home environment. It also offers very high efficiency ratings and therefore lowers energy costs.

The high-efficiency unit has a built-in heat recovery ventilator (HRV) that replaces stale air with fresh. Outdoor air is brought in through the built-in HRV, ensuring fresh, healthy heating for the cost of a high-efficiency furnace.

When heating is not required, the ventilation component of the HRV provides a constant stream of fresh air.

Lifebreath operates safely and quietly. Instead of the periodic bursts of hot air distributed by conventional furnaces, a steady stream of warm air is released throughout the house.

Finheat also supplies the new Lifebreath whole-house TFP + HEPA air cleaner. TFP (turbulent flow precipitation) incorporates unique technology which traps most of the dirt particles in air. When combined with a HEPA filter, the combined effect is claimed to remove 99.97% of all health-threatening particles from the air.



WILO

Pumpen Intelligenz.

Wilo is synonymous worldwide with the tradition of first class German engineering and Finheat has been associated with the brand for over 25 years. Wherever a pump is needed, Wilo has a solution to match the need at hand.

The Wilo product portfolio offers pumps and systems of every description – in nearly all sizes and output classes. Beyond this, tailored solutions can be devised that meet the specific demands of a particular requirement or application.

Today's range of pumps and pump systems offers solutions for heating, air conditioning, cooling, water supply and sewage. Applications include commercial buildings, communal facilities, industry and private homes.

Finheat constantly feeds back customer queries, requests and problems to Wilo and this close cooperation with clients has helped develop and shape the nature of new generation pumps and pump systems being brought to the marketplace.



LIFEBREATH®
HEAT RECOVERY VENTILATORS (HRVs)



Breathe easy

Lifebreath
saves energy
costs and lets
your family
breathe easy.



Finheat Group

78 Cherry Orchard Industrial Estate,
Ballyfermot, Dublin 10.

Tel: 01 - 623 4222 Fax: 01 - 623 4226

email: sales@finheat.com





Technibel was established in 1958 and, over the last 48 years, has won an international reputation in the field of air conditioning and heating solutions. Since 1992 it has been part of the Air Conditioning Branch of the AER.FI. Group and unveiled a new image in 2005, along with notable additions to the product range, new software to optimise installation proposals, and a more tailored technical support service.

This vast resource of product excellence and industry experience is available to the the building services sector in Ireland from Finheat who continue to forge an ever-stronger trading relationship with Technibel.

Technibel products are manufactured at two sites in Europe (one in France and the other in Italy), the "manufacturing islands" system used making for self-contained workstations which allow more flexible production, shorter lead-times and higher quality.

One of the most recent introductions is the new range of air to water heat pumps which are suitable for underfloor heating systems and standard heating and cooling applications. There are two models in the range — the PHR (capacities from 6kW to 18kW) and the PHRT (capacities from 9kW to 18kW).



SENIOR HARGREAVES

Given that the company was established in 1872, it is hardly surprising that Senior Hargreaves' today enjoys market-leading status as specialists within the ventilation sector. It has an unrivalled depth of expertise in the business and combines that with the results of dedicated research and the latest technical and manufacturing techniques to produce an extensive portfolio of ventilation and ducting products. No matter what the requirement Senior Hargreaves has a solution.

In fact, the pioneering range of Hargreaves Fire Ducts (HFD) are now setting industry standards. The HFD range was specifically developed in response to today's need for stringent safety standards and building control regulations.

As no one standard system will meet all requirements, each individual customised system is comprehensively tested to ensure compliance with all relevant standards, performance requirements and legislation.

DIFFUSION

Heating & Cooling

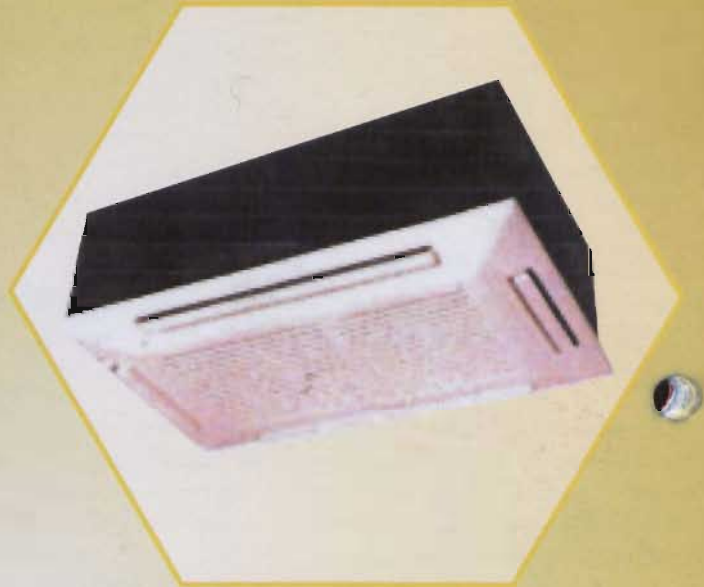
With over 40 years of experience within the air movement and air treatment industry, Diffusion Heating & Cooling offers a full range of products designed to optimise the quality of the working and living environment.

Finheat has long been associated with Diffusion and is responsible for the distribution of its entire portfolio throughout Ireland, including fan coils, over-door heaters and air conditioning systems

Recognised as a "best of class" designer and manufacturer of bespoke heating, ventilation and air conditioning (HVAC) equipment, Diffusion continuously invests significant resources in research and development.

Today, more than ever, life-cycle costs and energy efficiencies are the key issues which concern specifiers and end-users alike. Finheat goes to great lengths to identify the current and future needs of the Irish marketplace and then works hand-in-glove with Diffusion to ensure that they are available when required.

It is this close working relationship which underpins the strength and market penetration of the Diffusion brand throughout Ireland.



GILBERTS

Air Distribution, Smoke And
Fire Control Products

Gilberts is a leading designer and manufacturer of grilles, diffusers, louvres and smoke/fire dampers for the heating, ventilating and air conditioning industry.

The company was originally established to manufacture domestic warm air heating grilles but has since grown to become a multi-product based company with separate Divisions specialising in grilles and diffusers; smoke, fire and volume control dampers; VAV terminals; external and architectural louvres; and domestic warm air grilles.

Gilberts has a reputation for providing an extensive range of competitively-priced, attractively-styled, well-engineered products, a reputation which in turn is now associated with Finheat by virtue of its long-standing trading relationship with the company.

New and innovative products are the lifeblood of the Gilberts range, one of its latest pioneering introductions being the Series 52 smoke evacuation damper. Made from 1.5mm galvanised steel, this advanced unit features motor open, motor closed or spring-return operation; smooth parallel blade operation; low leakage rate; high free area design; and optional decorative fascia grilles.



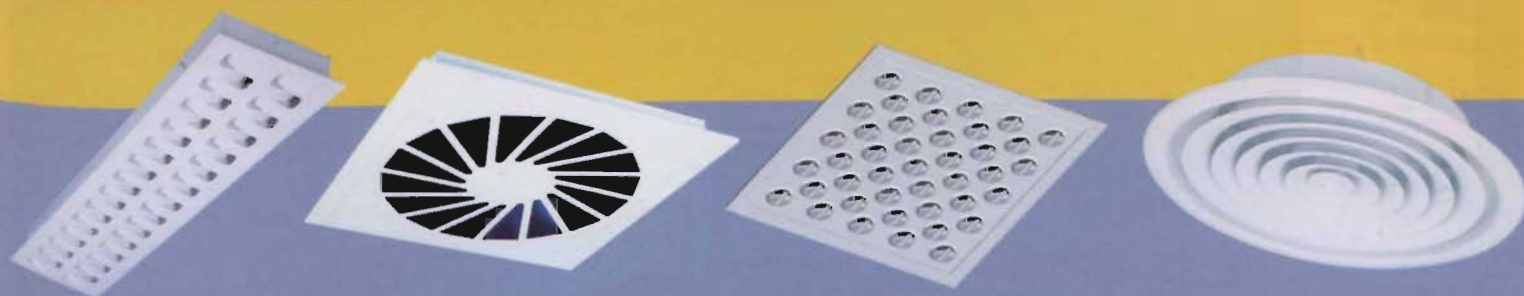
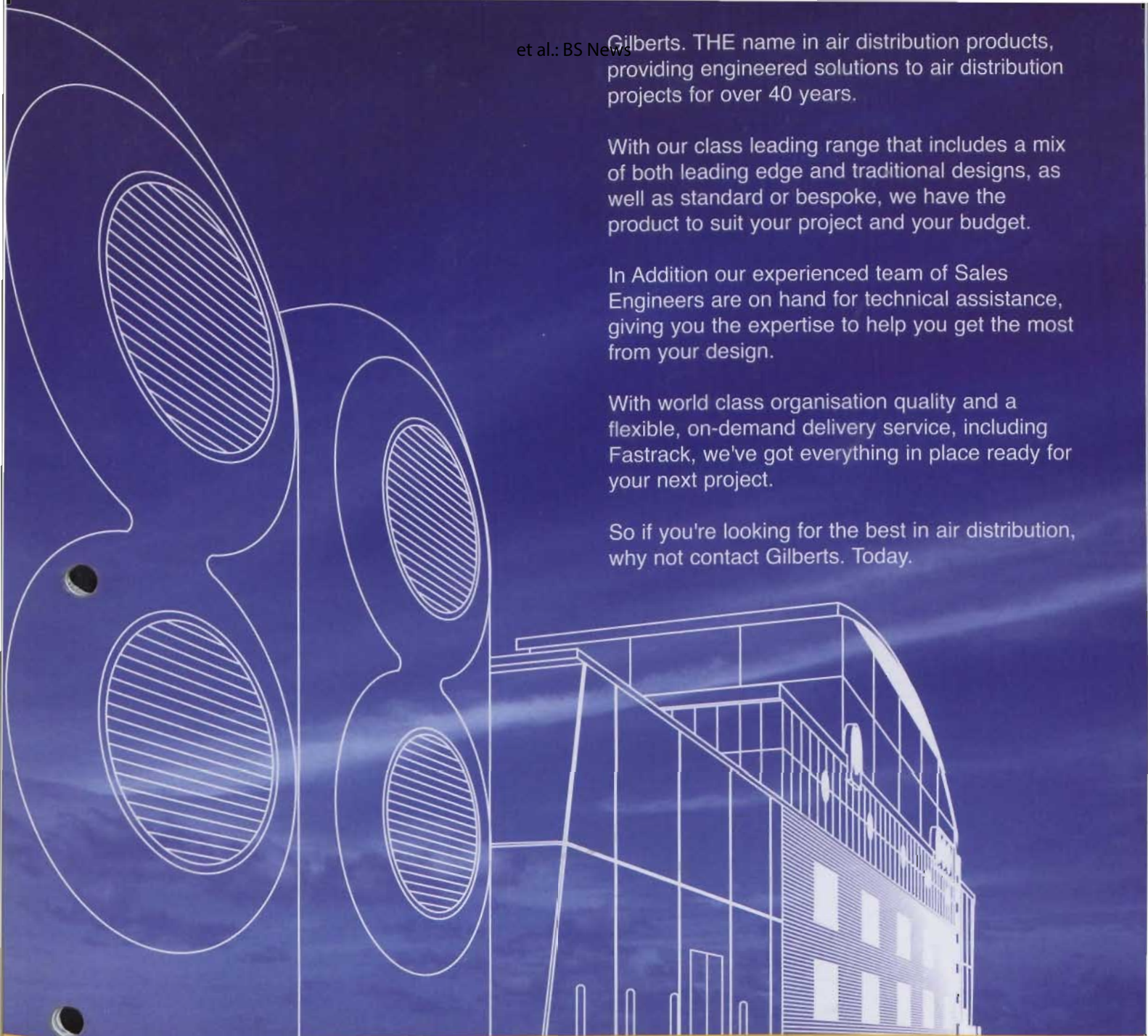
Gilberts. THE name in air distribution products, providing engineered solutions to air distribution projects for over 40 years.

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

In Addition our experienced team of Sales Engineers are on hand for technical assistance, giving you the expertise to help you get the most from your design.

With world class organisation quality and a flexible, on-demand delivery service, including Fastrack, we've got everything in place ready for your next project.

So if you're looking for the best in air distribution, why not contact Gilberts. Today.



Grilles
Diffusers
Louvres
Smoke/Fire Dampers
V.A.V



GILBERTS



HEVAC

Published by ARROW@TU Dublin, 2007

Gilberts (Blackpool) LTD, Clifton Road, Blackpool FY4 4QT
t 01253 766911 f 01253 767941
sales@gilbertsblackpool.com
www.gilbertsblackpool.com

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



Wilo-Stratos high-efficiency pump.

The Wilo-Stratos is the first high-efficiency pump in the world. Thanks to its innovative ECM technology it permits energy* savings of up to 80 % compared to standard pumps. This applies both for heating systems and for air-conditioning and cooling systems. In conjunction with its intelligent bus controller this makes it the ideal solution for building automation. Ingenious?
We call it Pumpen Intelligenz.



WILO
Pumpen Intelligenz.

* Electricity for the heating / air-conditioning pump.

Pumps & Circulators

europump — prime concern commitment to energy saving



Europump, or as its present full name defines it — Association Européenne des Constructeurs de Pompes — now has 18 national association members representing more than 450 pump companies with a collective annual production worth in the region of €6 Billion.

Europump works daily with national and European programmes/agencies which aim to promote and implement energy efficiency measures and energy management. For instance, it supports the "Motor Challenge Programme" (MCP), a voluntary programme initiated by the European Commission which aims to help industrial companies improve the energy efficiency of their electric motor-driven

systems. The core of the programme is an Action Plan, by which an MCP partner commits to undertaking specific measures to reduce energy consumption. These partners will receive aid, advice and technical assistance from the Commission and from participating National Energy Agencies in formulating and carrying out their Action Plan.

Prompted by increasing concern about energy consumption and the need to foster the use of energy-saving pump products and systems, Europump has devised progressive initiatives which contribute significantly to the adoption of sustainable practices within building services.

One such initiative is Ecopump. For several categories of pump systems, Europump foresees the adoption of various guidelines, tools or new standards to significantly improve in each targeted market segment the energy efficiency and environmental impact during both installation and operation. All actions under this initiative will be flagged with the new "Ecopump" logo.

Ecopump aims not only to achieve eco-efficiency of

pump systems in several market segments but also, and most importantly, to communicate Europump efforts to:

- all pump customers and end users of the importance of energy consumption and environmental protection;
- government institutions and stakeholders at European and member states level in order to express the preference of the industry for voluntary commitments rather than legislative measures.

Another major Europump initiative is the adoption of an energy-labelling policy. This labelling scheme offers consumers an easy way to identify which circulators are the most energy efficient.

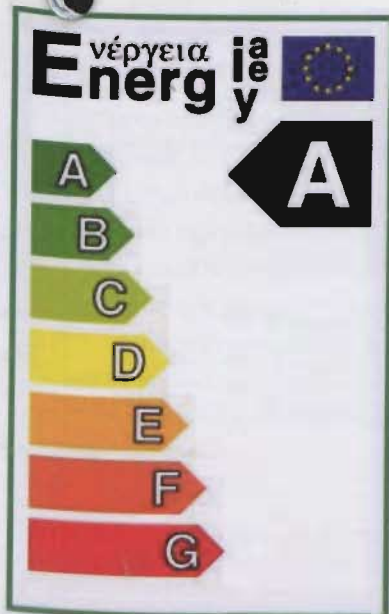
Circulator pumps in heating systems induce "hidden" energy consumption and account for up to 15% of the electricity of an average European household. By driving the European market towards more energy-efficient circulator pumps, the average European household will save up to 10% of its total consumption of electricity.

The European Commission clearly sets a priority on energy efficiency (Energy

using Products Directives 2005, Green Paper on energy efficiency 2005). In 1992 a series of directives were adopted in order to introduce the mandatory labelling of energy-using products. Although they were not covered by this legislation, some circulator pump manufacturers, in consultation with the EC, voluntarily decided to put in place a scheme using the energy label designed for the implementation of the directives.

In less than a year this initiative has received support from the EU Commission, other related industries, and national agencies with responsibility for the promotion of energy savings. The first products actually labelled are now appearing on the market and Europump intends to closely monitor the influence on sales and report on the evolution of the demand for such products. Other initiatives include publication of the Europump guides — *Life Cycle Costs Analysis for Pumping Systems* and *Successful Applications in Variable Speed Pumping*.

Contact: email:
secretariat@europump.org



Pumps & Circulators

wilo — intelligent pumps for intelligent building services

The demand for intelligent building services is ever increasing and within building management systems the use of smaller pumps and applications is on the rise. This means, for example, that heating and hot water circulation can now be controlled even more accurately, more economically and with more comfort. In this respect, Wilo AG has extended its high-efficiency "Stratos ECO" range of pumps to meet new design requirements.

The new "Stratos ECO-BMS" (Building Management System) pump is now available for these applications. It can be remote-controlled via a BMS and is equipped with an integrated output control for both variable differential pressure and constant differential pressure. The "Stratos ECO-BMS" can be switched on and off remotely and, if required, it

Wilo-Drain LPC



can also be operated directly using the red button. In this way, important settings such as variable speed can be controlled locally or remotely; it is also possible to send a collective fault signal.

As well as the aforementioned version for heating applications, there is also a "Stratos ECO-Z-BMS" version for domestic hot water return (DHW) systems and a "Wilo Stratos ECO-ST" version for use in solar-thermal systems. The latter has a cathaphoretic coating that prevents oxygen inclusions and therefore corrosion.

According to Wilo, all high-efficiency pumps of the "Stratos ECO" series provide safe starting and a high degree of reliability utilising a starting torque that has a 3 to 1 ratio as part of the innovative ECM drive.

Operational safety is ensured by a filter disk in front of the cartridge as well as integrated anti-blocking software.

All the new versions also meet the demands of energy efficiency class A, like the currently available high-efficiency pumps of the "Stratos" and "Stratos ECO"

series. Due to the EC motor technology that enables (among other things) an extremely low power consumption, up to 80% more power can be saved, compared to unregulated pumps.

The "Red button technology" that has established itself internationally on Wilo products is again utilised so that all functions can be controlled with a single button. Thanks to innovative motor technology and optimised hydraulics, "Stratos" pumps are the world's only glandless high-efficiency pump which are also suitable for air-conditioning and refrigeration applications.

As part of its drainage programme Wilo has added a new self-priming drainage pump with a number of applications to its range. The "Wilo-Drain LPC" is particularly suitable for pumping dirty water with coarse contamination and has been designed to enable the pumping of water with a high proportion of grease or mineral oil.

It is available with either an electric motor or a petrol-driven motor, so that it can be



Stratos ECO-BMS™ (Building Management System) pump

used without depending on a mains electric supply. Most versions are also available with a trolley, thus providing users with both mobile and stationary application options for domestic, construction, agriculture or industrial applications.

The "Wilo-Drain LPC" range has a particularly robust and maintenance-friendly design and is suitable for fluid temperatures from 5°C to 80°C. All models have a free ball passage of 6mm or 12 mm. They are designed for maximum delivery heads between 19m and 29m (electric models) and of 27m or 47m for the petrol versions. With the benefit of 130 years of experience, Wilo will continue to develop, innovate and expand its product range, and incorporate the most advanced technology available, for the benefit of the building services industry.

Contact: Wilo Engineering.
Tel: 01 - 426 0000;
061 - 227 566.
email: sales@wilo.ie

Pumps & Circulators

'Quality & Reliability' — Pumps From Potterton Myson

Potterton Myson's pump range is extensive, offering all manner of pumping solutions across the entire building services spectrum. Range details are as follows:— The "Compact" range of domestic heating circulators offers the installer assured reliability, high performance, and ease of installation for all domestic heating systems.

Special features include: 3-speed pump with a static head range of 2-6 metres; manual restart knob; large terminals with clearly-marked captive screws; automatic

vent on initial start-up; motor head can be replaced or repositioned without moving the pump from the system.

Uniquely, all compact pumps are guaranteed for 30 months.

The "SE" pump range offers a comprehensive selection of pumps as cast iron light commercial circulators, or secondary hot water commercial circulators.

The "SE" pump range has a host of special features and is available in 1 1/4", 1 1/2", or 2" as cast iron, and from 1" up to 2" in bronze.

Using disc induction motor technology, these pumps deliver a high ratio torque for effortless low-speed start-up.

The use of a single static "O" ring seal eliminates the need for time-consuming, routine seal maintenance.

In addition, Potterton Myson offers a range of high-performance shower pumps for boosted water pressure, called the Aquaboost.

With a specialist team of field and in-house technical

engineers to take customer queries,

Potterton Myson has been providing expert advice on specification and installation for 30 years. Full after-sales service and spares are available, and these are complemented by the company's unique training facility which is located on the Belgard Road, Dublin.

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

Ireland's Lowest Hire Prices Guaranteed !

Quality service with the best technical advice and super fast delivery - On time, every time.



At Cross Hire we like to keep things simple but effective:

- ✦ If you're cold we'll warm you up
- ✦ If you're hot we'll cool you down
- ✦ If you're wet we'll get you dry
- ✦ If it breaks we'll fix it or change it
- ✦ If your not sure we'll advise
- ✦ If you can't collect we'll deliver nationwide

Visit our website: www.heatinghire.ie



Ireland +353 (0)45 888957 / 1890 247 266 Northern Ireland 0845 603 4135 Fax +353 (0)45 888970 Cross Hire Ltd, Unit J7, M7 Business Park, Naas, Co Kildare.

Pumps & Circulators

electronic motor protection dedicated to pumps

Grundfos has just introduced its new electronic motor protection unit, the MP 204. Unlike other proprietary motor protection units on the market, the MP 204 was designed especially for pumps by pump specialists, ensuring a perfect match between the protection unit and the technology it protects. Its main benefits are that it prolongs the lifetime of customers' pumps, promotes system reliability, and is easy to install and set up for operation.

This addition to the Grundfos product range makes Grundfos the only pump manufacturer capable of offering the full package of pumps, pump motors, and motor protection. The MP 204 is designed for use with the Grundfos SP, CR, NB/NK, TP, and BM ranges.

The operating principle of MP 204 is based on providing efficient protection through power monitoring. No matter how reliable a pump, there is always the question of how reliable the mains power supply may be. This new unit from Grundfos is designed to protect pump motors against under and over voltage, and any other variations in power supply.

The MP 204 also monitors pump power consumption. As reduced power consumption is a strong indication that the

pump is about to run dry, the MP 204 will immediately stop the pump if the power consumption drops below 60%. Should the application call for combined power consumption monitoring and temperature monitoring, it is worth noting that the PT 100/1000 temperature monitoring units are perfectly compatible with the MP 204. Moreover, with the SP range, the TempCon feature offers additional options.

Simple installation and set-up was a major priority during development of the MP 204. Mounting is done by means of four screws or by sliding the unit onto a mounting rail, and the entire set-up can be completed in just two minutes. The simple menu is used to set four parameters: rated motor amps, nominal voltage, trip class, and number of motor phases.

On its own, the MP 204 will handle currents up to 120A. For applications involving greater currents, the unit can be fitted with external current transformers available from stock at Grundfos (200/5A, 300/5A, 500/5A, 750/5A, 1000/5A).

While most customers require motor protection only, the MP 204 is also capable of expansion if requirements change in future. It allows for monitoring and communication via GENbus — a Grundfos-

designed bus for exchange of pump data, alarms, status information, and setpoints. This enables users to connect the MP 204 to e.g. SCADA systems.

The MP 204 unit is an electronic motor protection relay specially designed for use with 1 and 3-phase asynchronous motors. Technical details are as follows:—

- Enclosure class: IP 20;
- Ambient temperature: -20 to +60°C;
- Relative humidity: 99%;
- Voltage range: 100 — 480 VAC;
- Current range: 3-999A;
- Frequency: 47 — 63 Hz;
- IEC trip class: 1 — 45;
- Special Grundfos trip class: 0.1 — 30s;

- Voltage variations: -25/+15% of nominal voltage;
- Approvals: EN 60947, EN 60355, UL/CSA 508;
- Marking: CE, cUL, C-tick;

Monitoring parameters include insulation resistance before start-up; temperature (Tempcon, PT sensor and PTC/thermal switch); overload/ underload; over voltage/undervoltage; phase sequence; phase missing; power factor; power consumption; harmonic distortion; current asymmetry; run and start capacitor (single-phase); and operating hours and number of starts.

Contact: Grundfos (Irl).
Tel: 01 - 408 9800;
email: info-ie@grundfos.com



Lowara pumps and booster sets. Controlled pressure at the office.

Safety in any workplace should be a priority. As well as the building's water supply, Lowara pressure booster sets and pumps maintain supply for its fire fighting applications. Certified to European standards, high levels of performance and reliability guaranteed.
Excellence in water technology.

www.lowara.com



 **LOWARA**



ITT

Engineered for life



itt lowara — pumps engineered for life

Lowara, one of the recognised market leaders in Ireland in the residential and commercial pump market, is part of ITT Industries, the world's largest producer of pumps and complementary products for water and industrial fluid applications. It is widely recognised as one of the most innovative companies in the sector with a dynamic range of efficient and reliable products designed to cater for the requirements of water supply and pumping needs in the residential, irrigation, building services and commercial markets.

Founded in 1968 and based in Montecchio Maggiore, near Vicenza in Italy, Lowara has been serving customers across the entire pump and pump-related sector for more than 30 years. It operates its own branches throughout Europe — such as Lowara Ireland Ltd — and uses the distribution network of other ITT Lowara Group companies to serve other marketplaces.

Lowara is committed to studying, developing, manufacturing and distributing pumps and pumping systems for water technology applications. As a member of ITT Industries, Lowara also shares the most advanced research, design and industrial engineering skills with other Group companies. This wealth of knowledge enhances Lowara's innovation capabilities.

Lowara's concept of competitiveness involves developing top-quality and extremely reliable products at competitive prices to optimise the level of customer

satisfaction and service it delivers. Its management quality system is certified to ISO 9001 and it constantly invests economic, human and technological resources in training and research, thereby continuously improving its design and production processes.

The reliability of Lowara pumps is ensured by the company's decision to make extensive use of AISI 304 and 316 steel. This makes its products safer and harder-wearing and confirms the importance it places on technological innovation. Furthermore, laser cutting and welding are unique features of Lowara pumps — these technologies generate long-lasting products featuring precise and unalterable shapes, detailed and functional design, and additional solidity and

resistance towards chemical aggression.

Lowara research is a continuous process as this is the only way of combining quality with innovation, research with excellence, and maximum performance with total reliability in each and every product manufactured by the company.

Technical assistance is provided through an extensive network of locally-based subsidiaries and sales offices, such as Lowara Ireland, and a Distribution Centre located at its headquarters. This makes it possible for the company to offer efficient and reliable support, both directly and indirectly. The Lowara technical assistance network is structured according to leading-edge organisational methods so as to provide rapid, accurate and local

servicing, consulting and information along the whole supply chain.

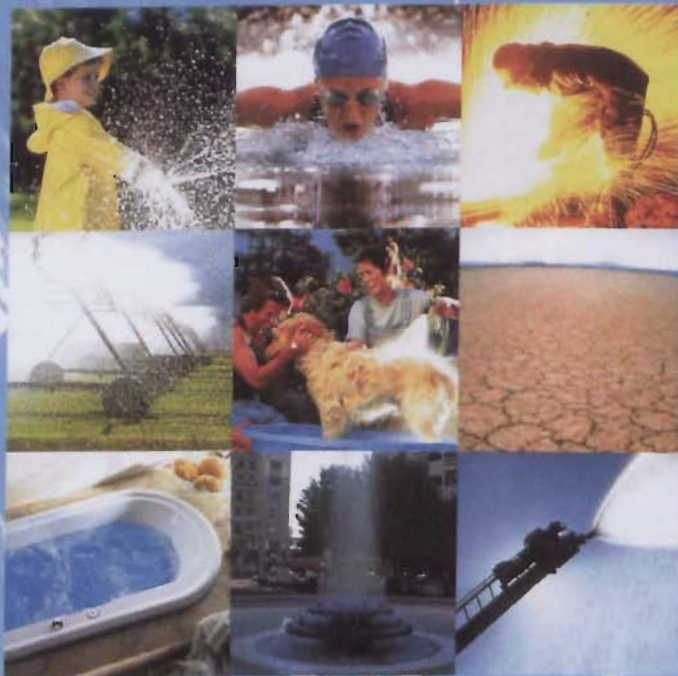
Lowara Ireland offers a complete range of pumps for residential, agriculture and industrial applications, along with comprehensive system-design and pump-selection advice, plus full technical and after-sales support. Brief details are as follows:—

- Pressurisation, fire protection, conditioning, drainage: Lowara's new range of in-line pumps has been designed to meet the requirements of the most innovative heating and conditioning systems. Booster sets for pressurisation and fire-fighting sets are available with fixed or variable speed controls and can also be made to order;
- Agriculture, gardens, parks: even in the presence of large amounts of sand, the Lowara pumps for deep and shallow wells maintain their integrity and efficiency. Also available is a range of self-priming jet pumps, designed to work correctly even at low temperatures;
- Water treatment, industrial washing equipment, machine tool cooling and conditioning systems. Advanced variable speed systems enable efficient operation with substantial energy savings. They also offer the possibility of remote control for enhanced reliability.



Contact: Terry Murray,
Lowara Ireland.
Tel: 01 - 452 0266;
email: terry.murray@itt.com

Creative Technology



“Calpeda Pumps — The Complete Package”

Calpeda Pumps (Ireland) Ltd

Unit 5 Old Quarry Campus, Kilshane Park,
Mitchelstown, Dublin 15

Tel: 01 - 861 0055 Fax: 01 - 861 0056

email: sales@calpedaireland.com

web: www.calpedaireland.com



CREATIVE TECHNOLOGY

Pumps & Circulators

all-embracing pump solutions engineered by calpeda

Calpeda is renowned throughout Ireland for the quality of its pump range and the scope and diversity of applications catered for. Whether it is booster sets, variable-speed circulators or fire-fighting systems, Calpeda can tailor a solution for virtually any application which is high-performing, efficient and cost-effective.

For instance, Calpeda's NCE range of high-efficiency, energy-saving, variable speed circulating pumps was designed for small domestic heating systems. A key feature of all models is the permanent-magnet synchronous motor which is controlled by an on-board inverter.

The patented "square chamber" eliminates any possibility of rotor stoppage as the operational characteristics of the synchronous motor allow for a larger gap between rotor and rotor chamber. Being a permanent ceramic magnet, the rotor is less subject to limestone deposit while the intelligent electronics can sense and resolve any rotation difficulties.

Main benefits include Class A energy efficiency rating; high savings; n flat curves in a wide working area; low noise; easy adjustment of right working



point; compact dimensions; self-cleaning; and low energy consumption.

The same design and life-cycle parameters apply to booster pump sets. The newly-commissioned booster pump station to serve the town of Balbriggan in North County Dublin is one of a number of such pump stations designed and installed by the company for Fingal County Council in recent months.

Located at a site called the Kilsough Reservoir in the middle of a housing estate, one of the primary requirements was that the noise levels had to be minimal. That said, the system installed has a massive capacity and is designed to serve a population of up to 50,000 people. It is capable of delivering 500cu m of water per hour, which is the equivalent of 12 million litres of water per day.

Other benefits of the new system include variable speed control; constant pressure with varying demand; fully-

programmable control; dry running and burst mains protection; auto rotation of duty pump; and volt-free contacts for remote monitoring and alarms.

Just recently Calpeda's strength in providing customised fire-fighting systems has become apparent.

"Critical to fire-fighting systems", says Graham Fay, Managing Director of Calpeda Ireland, "is that they perform when you really need them. They are not a lifestyle choice but a key, potentially life-saving, element of all building services installations. As such it is vital that they perform as intended when the need arises.

"Essentially, fire-fighting systems are all about fail-safe operation in emergencies and, to that end, Calpeda offers a wide choice of many different configurations to suit each particular application. Included are high and low pressure units, high and low flow units, close-coupled and long-

coupled arrangements, and electric and diesel-powered units.

"In designing fire-fighting systems we take a belt-and-braces approach. All our systems incorporate a jockey pump to maintain system pressure in the piping network at all times. There is also an automatic weekly test function to ensure the pumps are working correctly. Each fire pump operates independently with its own electrical supply and control panel.

"We also recommend a diesel-powered unit for standby use. These are direct-injection engines fitted with their own electric control panel, fuel tank, starter batteries and silencer. They too are subject to pre-programmed, automatic (or manual) weekly testing."

As the foregoing illustrates, Calpeda Ireland provides engineered pumping and pump-related solutions for every conceivable industry requirement. It is extremely strong in each sector, a factor which strengthens its ability when it comes to delivering total solutions across all aspects of a project.

Contact: Graham Fay/Stephen McDowell, Calpeda Pumps (Ireland). Tel: 01 - 825 8212; email: info@calpedaireland.com

For automated building services.
Intelligent bus controller.
Suitable for heating / air conditioning
from -10 up to $+110\text{ }^{\circ}\text{C}$.
80 % energy savings.*
Highly efficient.



Wilo-Stratos high-efficiency pump.

The Wilo-Stratos is the first high-efficiency pump in the world. Thanks to its innovative ECM technology it permits energy* savings of up to 80 % compared to standard pumps. This applies both for heating systems and for air-conditioning and cooling systems. In conjunction with its intelligent bus controller this makes it the ideal solution for building automation. Ingenious?

We call it Pumpen Intelligenz.



Pumpen Intelligenz

CIBSE News

Sustainable Design — CIBSE Conference

Sustainable Design in Building Services is the theme for this year's CIBSE annual conference which will be held in Clontarf Castle on Thursday, 22 March 2007. Last year's inaugural conference at the same venue proved an enormous success and it is anticipated that demand for places this year will exceed capacity so early booking is advised.

The aim of the event is to raise awareness of the issues of sustainability among those directly involved in the design and construction of buildings and to ensure there is a good understanding within the industry in Ireland of the changes taking place, both within the professions and legislatively.

While SEI is the main conference sponsor, a limited number of additional sponsorship opportunities are available to building services product suppliers. For a contribution of €350 they will be allocated a free delegate place, plus prominent exposure at the conference by way of signage, in addition to an acknowledgement on all related literature contained in the delegate pack.

Representatives from a broad range of groups, such as building services engineers, architects, construction companies, property developers, local authorities and financial institutions will attend on the day and presentations will be given by a number of high-profile experts in each of these fields.

Among the topics to be addressed by speakers are:—

- Renewable energy systems;
- Green buildings — case studies and costings;
- New technologies;
- Integrated sustainable design;
- EPBD;
- Sustainable communities and urban development;
- Passive design: building services;
- Holistic design: architecture;
- Department of Education new schools policy;
- Software guidance on assessment of alternative energy solutions.

Cost per delegate is €125 for CIBSE members and €175 for non-members. Lunch — along with a full conference pack containing all the papers on disc — is included. Bookings, along with a cheque for the appropriate amount, should be sent to:—

Gerard Keating, CIBSE Honorary Secretary, Homan O'Brien Associates, Booterstown Avenue, Blackrock, Co Dublin, Tel: 01 - 205 6300; email: gerard.keating@homanobrien.ie



Biennial Dinner, The Burlington

The CIBSE biennial dinner will take place in the Fitzwilliam Hall, Burlington Hotel, Dublin 4 on Friday, 16 February 2007 (7.30pm for 8pm). This is one of the Institution's main events of the year and one which comprises a unique mix of social and business interaction. The cost per person is €100 and members are invited to book individual tables to accommodate 10/12 people. Smaller groups and individuals will be placed together on shared tables. Printed invitations are currently being prepared and these will be forwarded on receipt of a cheque for the appropriate amount.

Requests for tickets — accompanied by cheques — should be sent to Ms Judy Murphy, L Lynch & Co Ltd, 16 Fonthill Industrial Park, Fonthill Road North, Clondalkin, Dublin 22.

Mitsubishi Electric Turns Trainer & Educator

Mitsubishi Electric Ireland has invested in a purpose-designed training centre at its Ballymount headquarters in Dublin which rivals, and even surpasses, similar such facilities anywhere throughout Europe.

The state-of-the-art centre is designed to provide the air-conditioning industry in Ireland with a credible base where eligible personnel — from all companies and every relevant sector of the industry — can attend a vast programme of training modules. In addition to providing sound product understanding and a broad knowledge base, the programmes will also incorporate technical sales and support training sessions.

The fully-equipped centre includes lecture theatre and workshop-type facilities with the comprehensive training courses providing both academic content and hands-on experience. The latter is facilitated by the fact that operating examples of the Mitsubishi Electric indoor and outdoor air-conditioning units, and control systems, can be observed in operation.

Indeed, accessible versions (with the cabinets removed) of virtually the entire Mitsubishi Electric product range can be observed and worked on. These include City Multi Basic; City Multi Advanced; Controls Basic; Controls Intermediate; Controls Advanced; Mr Slim; PAS and RAC.

The courses are based on a modular foundation so that companies can send personnel to attend training over a pre-planned time period with the emphasis on their individual and



Andy Keegan who will oversee operation of the new Mitsubishi Electric Training Centre — including all workshop programmes and seminars — at the company's headquarters in Ballymount, Dublin 24

unique needs. This system of education can then be tailored to enable a policy of training to requirement, whether contact with the Mitsubishi Electric product is through installation, service, maintenance, facilities management or sales.

The training room is designed and built with a focus drawn from the experiences of a European service network and refined for the Irish market. This historic database of everyday problems encountered by a field engineer is combined with current problems to create a comprehensive diagnostic structure.

Training programs have been designed to meet needs specific to the Irish market and to meet and create an awareness of legislation governing refrigeration and air-conditioning trades in this country. The courses explore energy, materials and time

conservation in installation, commissioning and start-up. A more efficient installation and after sales service will reduce down-time and help eliminate emergency call-outs.

"Ultimately", says Mitsubishi Electric's Mike Sheehan, "Our objective with the new centre is to provide those who undergo the training programmes with an accredited track record in product understanding, best operating practice, after sales service and maintenance. Any company whose operatives complete the various courses will enhance its market standing, strengthen its core knowledge base, and improve its financial stability and profitability."

Contact: Andy Keegan, Mitsubishi Electric Europe.
Tel: 01 - 419 8800;
email:
andy.keegan@meir.mee.com



Mr Kevin O'Connell,
School of Control Systems
and Electrical Engineering,
DIT Kevin Street.

email: kevin.oconnell@dit.ie



Home Automation — Essential to 'Future Proof' at Construction Stage

It is quite a challenge for the normal person to get a grasp on what kind of high technology can, and should, be fitted to one's home. There is a vast amount of "gadgetry" available at present and this is growing exponentially year by year. Unfortunately, so-called new technology rapidly goes out of date almost before it is installed as "new improved" versions appear on the market.

Can we afford to ignore these advances of science and engineering in the hope that they will go away and not affect us or, should we face up to these new developments and take advantage of what they offer? These are the questions I will explore in this month's article.

Before we can make an informed choice we must of course know what is on the market and what it

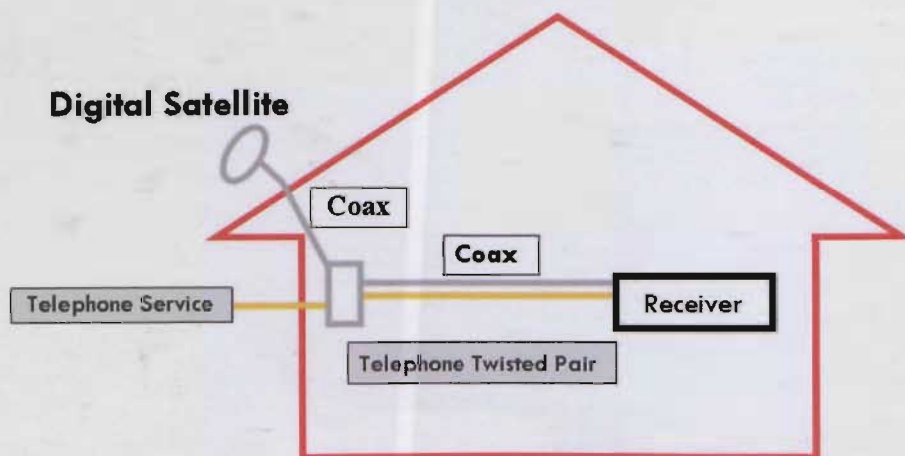


Jim Fogarty, CIBSE Society of Light & Lighting representative with Brendan Jones, Avnet Technologies and Kevin O'Connell, DIT. They are pictured prior to the CIBSE presentation given by Brendan on developments in information technology at DIT just before to Christmas.

can offer us to make our lives easier. However, one thing is obvious from the outset — our homes should be "future proofed" at construction stage so that new technology can be availed of as it rolls out. Therefore, a communications infrastructure should be put in place to meet the

requirements of current technology while, at the same time, being flexible enough to accommodate future developments.

Some of the necessary communications in the home may be carried by radio wire-free receivers/transmitters. However, there is a very clear additional requirement for "hard-wiring" in the form of co-axial and Cat 5 cables. These cables should converge from virtually every room in the house to a "communications hub" located centrally. This takes the form of a "Patch Panel" which essentially is a racking system that marshals cables and facilitates interconnection of services. It is the size of a domestic refrigerator. It is essential that the architect/engineer



Home Automation — Essential to 'Future Proof' at Construction Stage

makes provision for this when designing the building.

There can be as many as 120 Cat5/co-axial cables entering this panel. The use of modern cable management techniques is very important. It is not good enough to "run in" a large bundle of cables for sorting out by someone else without colour coding and the use of proper labelling and identification. You can see already that, despite my best intentions, a lot of jargon is being used in the discussion.

The next question to be addressed is to identify the areas of technology that are most commonly required in homes.

These include televisions; telephone and data; access control and CCTV; audio systems; lighting schemes; heating, ventilation and air conditioning systems; home automation; and security.

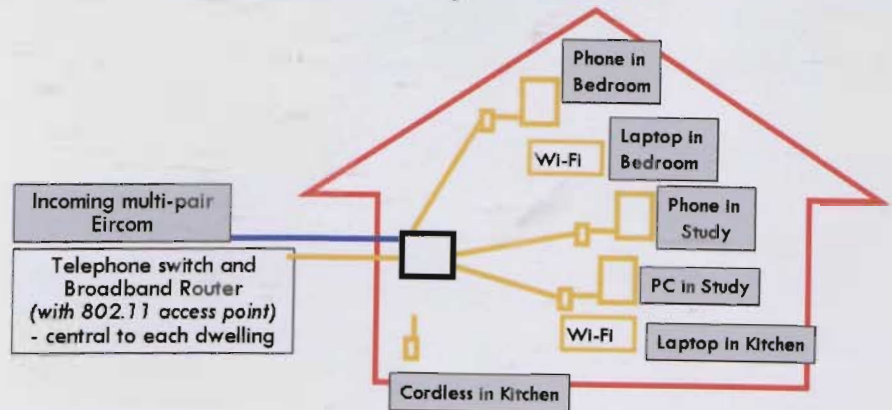
As a rule of thumb there are four clear stages — from concept to delivery — which must be considered. These are:—

- Design;
- Advanced Residential Cabling;
- Equipment Fit-out;
- Programming and Handover.

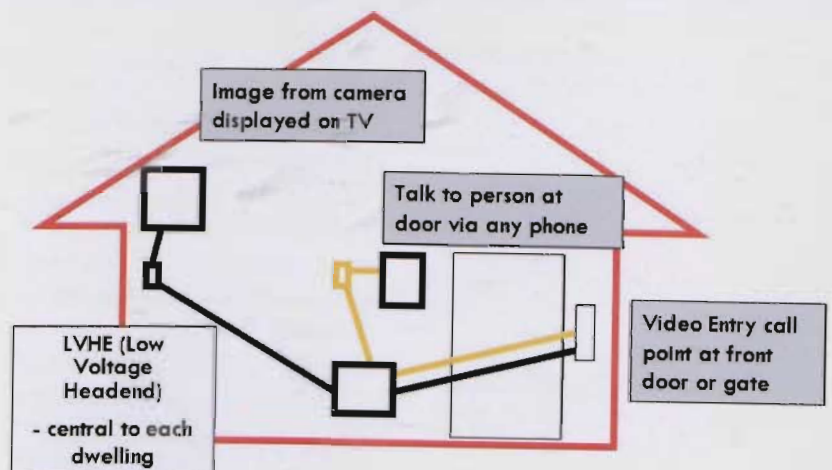
In conclusion, early consultation with the client — and of course all those involved in the design and installation process — is key to a successful conclusion.

Kevin O'Connell of DIT would like to acknowledge the assistance of Avnet Technologies in the preparation of this article and for their permission to use the explanatory diagrams which they provided.

Telephone & Data - Best practice

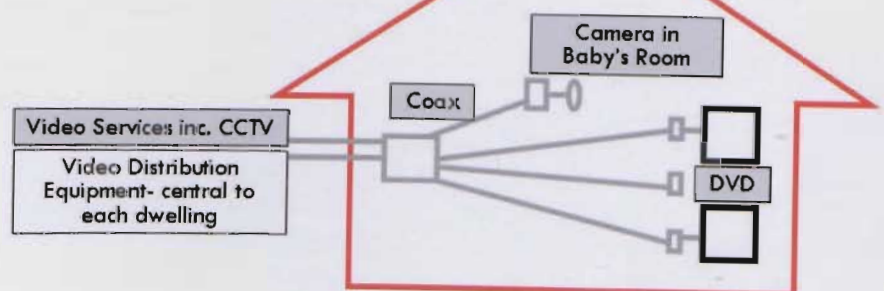


Access Control - Best practice



Best Practice Wiring (star-wired)

View Camera, VCR from any TV





At Last — A Masters Degree That Integrates Energy, Environmental Issues and Management



The new Energy and Business Management MSc course at Kevin St, DIT, was devised in response to the building services industry's need for a master's degree programme that integrates energy, environmental issues and management. It will enhance the present and future effectiveness of managers, engineers and scientists by providing an opportunity to study the theory and practice of current developments, laws, standards, technologies, management, economics and finance associated with European energy and environmental issues.

Graduates from the programme will be effective managers of environmental technology with an in-depth awareness of resource management under financial and environmental constraints.

The programme is designed primarily for engineers, but will also be of interest to scientists, managers and multi-discipline professionals such as environmental health officers, architects and planning officers.

The main theme of the programme is the integration of the following three areas:—

Energy

The lifestyle currently enjoyed by people in the western world is fast being replicated in developing countries. This is already beginning to place a strain on current fossil fuel production as existing supply systems strain to keep up with demand.

A new system for the production of energy will have to be devised that seeks to maximise the useful energy output of fossil fuels, as well as looking at alternative energy sources.

Environmental Issues

The protection of the environment is recognised as a major international issue that has prompted new environmental legislation from the International Standards Organisation (ISO 14001). Many industrial and commercial organisations are experiencing political, social, and economic pressure and will be obliged to accept their share of the responsibility and adopt and conform to new legislation for the protection of the environment.

Management

A reliable energy supply is seen as vital to the economic and political stability of a country. It is vital for a nation to produce, and efficiently manage, sufficient supplies of low-cost, safe, energy and raw materials. The objective of the new MSc programme is for the participants to develop the ability to assess the current legislation, economic pressures and social obligations, and to apply them to the various situations they encounter in their future places of employment.

Programme's Aim

- To provide a much-needed higher qualification in energy and business management that integrates business, law, finance, energy, environmental and managerial issues;
- To meet the educational requirements of current and future energy managers and others in the energy field.

Having completed this programme graduates will be able to:

- Develop appropriate strategic energy policies for a variety of commercial and industrial energy users;
- Discuss strategic energy supply issues at boardroom level;
- Identify and evaluate present and future issues facing the energy supply industry;
- Compare alternative energy sources such as sustainable and renewable energy technologies;
- Conduct feasibility studies on, and evaluate, the use of energy-efficient technologies;
- Interpret the requirements of the EU Directive on Energy Performance of Buildings;
- Advise on implementing sustainable energy design in new and used buildings;
- Advise on the implications of relevant European legislation and regulation in the energy sector, and evaluate the effects of recent changes;
- Implement and manage a complex energy strategy in a commercial/industrial facility;
- Evaluate the environmental issues surrounding energy supply and use;
- Discuss the impact of international protocols on energy use and the environment.

Given the way the whole issue of energy usage, energy management and the need for truly sustainable design in building services has developed, a course such as this was long overdue. All credit to Kevin O'Connell and his colleagues in DIT Kevin St for once again identifying an industry need and devising a speedy and appropriate programme to satisfy that need.

Another Side Of ...

Sean Brady

When Sean Brady signed for Finheat Group late last year bs news wondered if Jim King had got his football codes mixed up. As everyone knows, Jim is an avowed Celtic fan and rarely misses a game. However, Sean is a senior Cavan inter-county footballer. Now, there was a time when football in this country was Gaelic football and soccer was soccer but, that has all changed since soccer hijacked the term football. So, did Jim know what he was getting in employing Sean?



Of course he did. Sean Brady is first and foremost a recently-qualified mechanical engineer who graduated from UCD. He joined Finheat Group last September and now brings his considerable skills as an engineer to bear on improving still further the technical sales support and design assistance provided by the company. Nonetheless, it is Sean's skills as a footballer that bs news is concerned with in this article.

Sean is one of the emerging stars on the Cavan senior inter-county team. Like most of his teammates he is relatively young to be playing at this level but has already demonstrated that he can compete with, and perform against, the best. He first broke into the senior team a couple of years ago and is now firmly established as first-choice full-forward.

Sean began playing in his schooldays and always had the ambition to progress to senior level. His commitment and dedication throughout the years saw him enjoy considerable club success at junior level with his local team in Castlerahan. This in turn led to his first county representative game at Under 16.

He continued to hone his skills in the ensuing years and gained

further recognition with selection for the minor panel before his call-up to the senior squad at the relatively young age of 19. At this stage he was studying mechanical engineering in UCD and, not surprisingly, featured prominently in the UCD senior team. Indeed, last year he was a member of the victorious UCD side that won the Dublin Championship, much to the annoyance of the anti-UCD lobby who argue that they should not be allowed enter the competition at all.

Lest the foregoing suggest that it is all a carefree, easy-come lifestyle, Sean is quick to point out that to win and hold your place at senior level on any inter-county panel takes a massive commitment. Once the season is in full swing the training regime is ultra-professional. In his case there is the added burden of travelling to Cavan from Dublin (where he now works and lives) for training twice a week. In the off days he does gym work. Diet is also carefully monitored and controlled, leaving little or no room for the social pursuits many of his non-footballing friends and colleagues enjoy. That said, Sean would have it no other way.

While remaining neutral, bs news wishes Sean all the best in the current campaign.

Plumb Lines

heard it on the grapevine ...



CHRISTMAS CHEER? ... NOT LIKELY!

Just when I thought the average Joe Soap had got the "switch if off if not necessary" message, along comes Christmas to shatter the illusion. I don't want to sound like a killjoy but, did you ever see so many homes festooned with extravagant exterior lighting?



Then there were the interior decorations. Most homes I visited had at least two, and sometimes three, Christmas trees throughout the house, all of which had three/four sets of lights. Add the energy consumption from these to the increased use of video games, additional heating, more cooking and extra television viewing, and it makes the 12 days of Christmas sound like an energy consumption fest.

Bah humbug I hear you say ... it was Christmas. Sure it was but now is the time for new year resolutions. There is no need to become neurotic about it, simply careful will do. Get started on the small things, it will make a difference.

PAT BENSON MEMORIAL LECTURE

Chris Hughes, Public Sector Programme Director, Sustainable Energy Ireland (3rd from left) delivered the Pat Benson Memorial Lecture at DIT Bolton St recently. He is pictured here with Ken Beattie and Brian Geraghty, Chairman, CIBSE Republic of Ireland Branch.

NOT SO DEVINE POWER

Bishop Chartres, a senior Church of England bishop, has called on his colleagues to install solar panels on the rooftops of cathedrals, churches and other places of worship. Sounds like a great idea and the good bishop should have left it at that.

However, his subsequent comments — when he said that taking holiday flights and buying a big car without taking the environmental consequences into account were a "symptom of sin" — made him sound like a crank. It's all very well advising people to look heavenly for inspirational power but equating conspicuous energy consumption with sin is taking it a bit too far ... or is it?

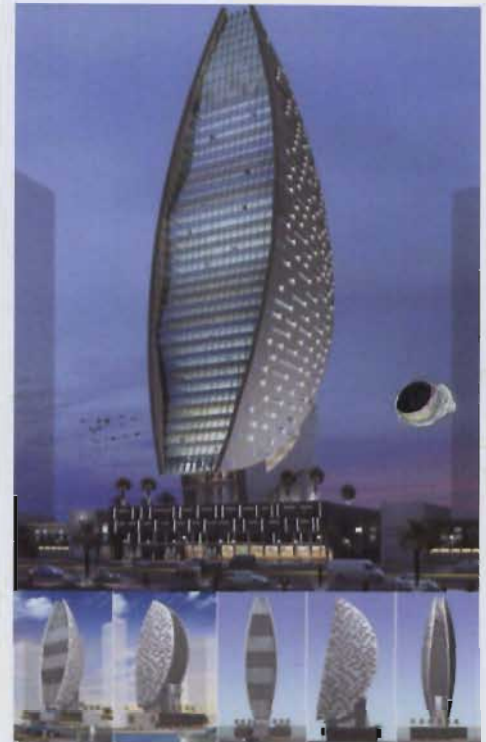
COMPANY FAILURES TELL IT LIKE IT IS!

Despite misrepresentation in the media that everyone engaged in construction and related industries is raking it in, figures just released on voluntary liquidations, receiverships and examinerships for 2006 paint a different, more accurate, picture.

While the overall figure for company failures decreased in 2006, it is a telling tale that 116 of them (34%) were in construction and engineering. This is in stark contrast to the so-called "buoyancy" within construction. Despite misleading reports to the contrary, it is a tiny minority — most notably developers — who are creaming in the profits at the expense of service and product suppliers.



JUST GET ON WITH IT!



At a time when there is considerable debate about what is, and is not, permissible in respect of the Irish architectural landscape, other countries are just getting on with it. The Iris Bay development in Dubai is a typical case in point.

Work has recently commenced on the Atkins-designed 32-storey commercial tower which comprises two identical double-curved pixelated shells which are rotated and cantilevered over the podium. The rear elevation is a continuous vertical curve punctuated by balconies, while the front elevation is made up of seven zones of rotated glass.

The tower sits on a four-storey perforated podium that floats over a double height arcade housing retail and commercial space. The building services solution is equally unique and incorporates both passive and active environmental features.

It's definitely worth a Google!

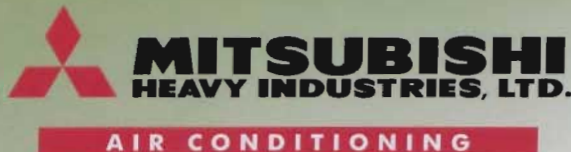
mitsubishi heavy industries
air conditioning

High performance high specification VRF inverter systems

ecolution **KX4**: ultimate control



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



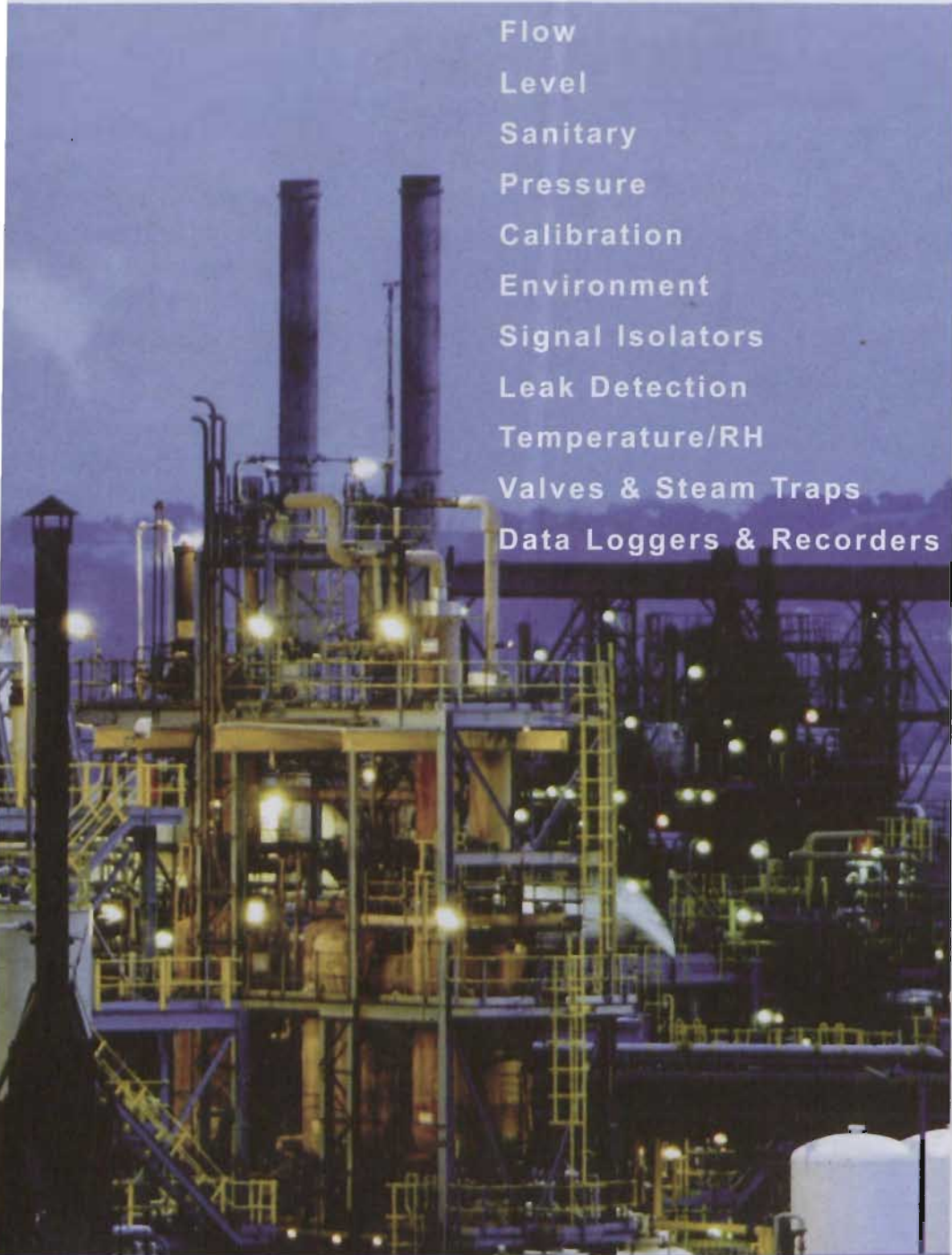
3D Air Sales (Ireland) Ltd,
Tel: 01 - 462 7570 Fax: 01 - 462 7611

email: micclan1@eircom.net www.3dair.co.uk



Fit & Forget Instruments & Controls

Manotherm Ltd provides a broad range of precision instruments for measuring, transmitting and controlling pressure, temperature, level and flow. In addition to providing quality precision instruments, Manotherm is committed to exceptional customer service, including knowledgeable, courteous technical support that generates and maintains long-term relations.



Flow
Level
Sanitary
Pressure
Calibration
Environment
Signal Isolators
Leak Detection
Temperature/RH
Valves & Steam Traps
Data Loggers & Recorders



The Controls Centre,
4 Walkinstown Road, Dublin 12.

Tel: 01 - 452 2355/452 2229

Fax: 01 - 451 6919

<https://arrow.tudublin.ie/bsn/vol46/iss1/1>

sales@manotherm.ie

[web: www.manotherm.ie](http://www.manotherm.ie)