


7-1-2003

BS News

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et al.: BS News

BSN News

MECHANICAL & ELECTRICAL BUILDING SERVICES

JULY/AUGUST 2003

REFRIGERATION
20 Page Feature

**YORK — Making
Noise About How
Quiet They Are!**

$$\text{Efficiency} = \frac{\text{Return}}{\text{Effort}}$$

The more intelligent system wins.

The fastest underwater hunter is the shark. Its skin possesses excellent characteristics which enable the resistance to tides and currents to be minimised. The skin's surface is not smooth but scaly. Today airbuses are encased in a similarly-structured film, which results in a saving of up to 10% of kerosene.

Mother Nature demands top performance at all times in all places while expecting, at the same time, the lowest energy consumption. This is the ambitious goal that WILLO also aims at in its research and development programmes. With its high-efficiency pump, Stratos, WILLO has introduced a new yardstick.



Experience the technology of the future. The Wilo Stratos pump saves up to 80% of energy. It heralds the beginning of a new era of pumps, the generation of the high-efficiency pumps. Place your order for the High Efficiency folder with its wealth of information. And on Wilo's "Green Pages" on the Internet, you can find a list of qualified High Efficiency engineers and analysts.

Further details can be obtained from:
Phone: 061-227566
Fax: 061-229017
www.high-efficiency.com



Twice the efficiency!
Up to 80% less energy consumption!

**Pumping Perfection
and more...**



BSNews

MECHANICAL & ELECTRICAL
BUILDING SERVICES

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Readership Data

Irish Building Services News (formerly Irish H&V News) is Ireland's only Building Services magazine providing coverage of heating, ventilating, air conditioning, refrigeration, sanitaryware, plumbing, maintenance and environmental industries. It is the only publication catering exclusively for these industries and its circulation includes members of the following:-

Chartered Institution of Building Services Engineers (CIBSE); The Mechanical Engineering & Building Services Contractors' Association (MEBSCA); The Association of Consulting Engineers of Ireland (ACEI); The Mechanical Engineering Contractors' Association; The Institute of Domestic Heating Engineers (IDHE); The Registered Heating Contractors Association; The Maintenance, Energy & Environmental Technology Association (MEETA) which incorporates energy managers and maintenance managers; The Energy Conservation & District Heating Association; The Institute of Plumbing; The Irish Home Builders Association (IHBA); Builders Merchants/Trade Supply Outlets; Irish Property & Facilities Managers Association.

In addition, Irish Building Services News circulates to independent building services contractors and key executives in industry. Government, Semi-State and local authority bodies. Essentially, our circulation is virtually saturation coverage of all those with an interest and/or involvement in the industry.

O P I N I O N

Chill Out ...

Sorry for the pun with a 20-page special on refrigeration but that's it for the serious editorial comment in this issue.

It's summer time so, in association with Sanyo, the prize in this months competition (page 14) is a fabulous 28-inch flat screen widescreen Nicam TV. Get those entries in now!



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Interclima 2004

Interclima, the international HVAC exhibition, will focus on the energy performance of residential, service and industrial buildings in 2004. Besides offering the opportunity to meet all those involved in HVAC and refrigeration over its four days, Interclima will act as a unique European platform for information on the scope of application of the new European directive (Directive 2002/91/EC of the European Parliament and Council of 16th December 2002) and on the concrete effects that it will produce in various sectors.

Whether visitors are interested in the residential, services or industry sectors, Interclima will offer them personalised

visitor trails for the exhibition. Special signs will also highlight the products or solutions on show that satisfy the new requirements of the Directive. In this context the renewable sources of energy, in Hall 4, will be one of the major draws of the show.

Over 250 exhibitors have already confirmed their participation. Among others, they include Acova, Aldes, Camfil Farr, Cofriset, De Dietrich Thermique, ELM Leblanc, Frisquet, Grundfos, Halton Anemotherm, Hanrot, KSB, LG, Panasonic, Permo, Rolesco, Salmson, Samsung, Saunier Duval, Siemens Building Technology, Tecumseh, Viessmann and Weishaupt.

Contact:
www.interclima.com

Powrmatic Innovation For Warehouse Heating



A Powrmaster air rotational heater from Powrmatic (Ireland)

Powrmatic has developed a completely new approach for heating warehouses and manufacturing facilities that will provide both financial and operational benefits. Traditionally, these buildings have been heated by a series of suspended unit heaters or floor-mounted cabinet heaters. Additionally, overhead radiant systems have been used to provide more localised

the country. This latest innovation is available immediately from hardware stores nationwide and fully conforms with all building regulation technical requirements. As well as the telescopic extension, all AJs in the MFP range offer an improved tilt

heat.

However, Powrmatic's new range of Powrmaster air rotational heaters use high-efficiency axial fans to move large volumes of air and achieve a uniformity in the distribution of heated air that cannot be matched by conventional units alone.

Four range-rated sizes are available — from 88kW to 806kW — enabling precise selection for individual applications. Powrmaster achieves an average combustion efficiency of approximately 91%, 2% more than typical air heaters. This greater efficiency — combined with its unique heating distribution offering typically 2°C temperature differential corner to corner and from ceiling to floor — make Powrmaster the best option for energy efficiency.

Powrmaster is supplied with a comprehensive 2-year guarantee on parts and labour, while the heat exchanger has a 5-year guarantee and a further 15-year pro-rata warranty.

Contact: Tony Delaney, Powrmatic Ireland.
Tel: 01 - 452 2533;
email: tonydelaney@powrmaticireland.com

and rotate mechanism, with a gradient of 1:16. This facilitates alignment with uneven paving and rotation to fit the angles of buildings and footpaths.

Contact: MFP Sales.
Tel: 01 - 630 2600;
email: sales@mfp.ie

Get a Rise Out of This



The new AJ available from MFP

MFP has introduced a new generation AJ with a unique and revolutionary built-in height adjustment of 100mm.

The 2-piece telescopic AJ is completely watertight and eliminates the need for unnecessary risers, which require timely measurement and cutting to size. Made out of the highest quality PVCu and designed to satisfy the most demanding on-site situations, MFP's new AJ will save time, effort and money. MFP is one of Ireland's leading producers of quality plastic building products for the construction industry, public utilities and local authorities. Continuous product innovation and development have led to the introduction of the widest range of access junctions in



TRANE®



Air Conditioning the World's Leading Hotels

Trane Ireland Limited

F7 CentrePoint Business Park
Oak Road, Dublin 12
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20 Adelaide Street
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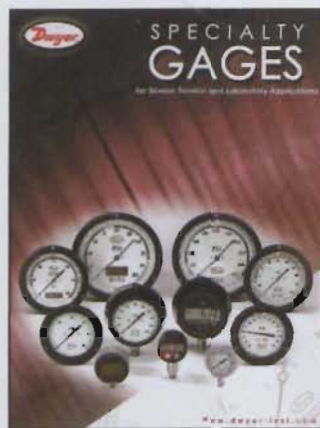
Speciality Gauges From Manotherm

Speciality gauges for severe service and laboratory applications need to perform to exacting and demanding tolerances if they are to be effective. Manotherm has the perfect solution in its Dwyer Instruments' range, details of which are contained in the newly-published catalogue which is now freely available.

Products that focus on pressure indication and measurement are a key feature of this range. Offering unmatched

durability, the Dwyer Spirahelic pressure gauges utilise a triple-wound, direct-drive, movement that suppresses conventional "C" tube technology.

This new range introduces innovative new product solutions for critical and severe service applications. These include the Series DPG-100 digital pressure gauge, a high-accuracy, full-featured digital gauge with NEMA 4X housing; and the Series 655 wet/wet differential pressure transmitter, a low-range, high-maximum working pressure unit that has 316/316L stainless steel



Cover of the new Dwyer Speciality Gauges catalogue now available from Manotherm

wetted parts.

Contact: Bob Gilbert, Noel Walsh/Robert Gilbert, Manotherm. Tel: 01 - 452 2355; email: manotherm@eircom.net

CAD Layering Convention

The Construction Information Technology Alliance (CITA), in conjunction with the RIAI, has developed the CITA CAD Layering Standards Convention. This standards' convention was developed to overcome the current lack of any broadly-accepted standard for CAD drawings, an ongoing problem that has hampered the effective use of IT within the construction sector.

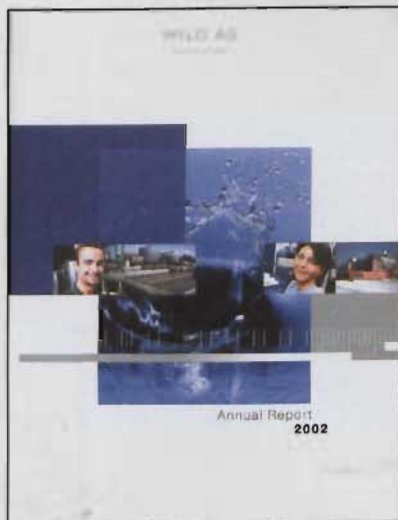
The standards' convention has been included in such documents as the RIAI Good Practice Guide and the CAD Implementation Guidelines for Local Authorities, recently published by the Local Government Computer Services Board.

To promote these standards, CITA, in conjunction with Paradigm Technology, is running a series of half-day workshops to show CAD users how to implement the CITA standards in their offices. The initial series of workshops are designed for users of Autodesk software including AutoCAD, Architectural Desktop, Land Desktop, AutoCAD Map and AutoCAD LT.

The workshops will be "hands on" with a maximum of eight attendees, with each participant having exclusive access to a CAD workstation.

Contact: akeane@paradigm.ie

'We Move Water ... and Pumps!'



Cover of the recently-published Wilo Group Annual Report for 2002

With overall Wilo Group annual turnover up 4% to €551 million and the first six months of 2003 showing equally-impressive growth, it can be said that Wilo not only moves water but also a considerable number of pumps.

Much of this expansion has resulted from continued investment in new markets, along with a complementary acquisition policy which earlier this year saw the shares of EMU Unterwasser Pumpen GMBH and AMU Analgenbau GMBH in Hof, Germany being acquired.

The EMU brand is well known in the water supply and sewage treatment market and will act as an additional cornerstone to consolidate the company's presence in these markets.

"Wilo in Ireland plays a significant part in this

process", says Tony Cusack of Wilo Engineering, "and we are proud of our contribution to overall Wilo Group results. Despite the uncertain global outlook we are confident that we can realise moderate growth in sales and profits in 2003. This we will do by continuing to strengthen our core lines of business, by intensifying our customer focus, and by systematically developing new products and new areas of application".

Contact: Tony Cusack, Wilo Engineering. Tel: 061 - 227566; email: sales@wilo.ie

SANYO

AIR CONDITIONERS

SPW-UR Ducted System

The **Sanyo SPW-UR** is designed with flexibility in mind. Available in the widest choice of capacities (2.2kW - 140kW) it is ideal for most commercial applications. Unlike many competitors it offers drain lift pump and prefitted spigots making installation simple and quick. The air-off sensor, fitted as standard, limits the air-off to 12°C in cooling mode to avoid 'cold air dumping' problems. What's more Sanyo controls allow this to be fully adjusted. So when you need a concealed ducted unit that offers maximum flexibility and great value, the **Sanyo SPW-UR** is the solution.



Sanyo Air Conditioners

41 Western Parkway Business Ctr
Ballymount Road, Dublin 12.

T. 01 456 8910 F. 01 450 7227

Designer Rads for the Domestic Market

Designer radiators have tended to be used on the prestige projects where their individual styling was the key issue. Often the choice though, came at a price. Literally, in that their pricing was high in relation to conventional radiators while longer delivery time and special ordering added indirect costs.

Now Barlo has introduced six designer-style radiators priced to be attractive in the highly-competitive domestic market so as to make their use more widespread. Additionally, the range is distributed through merchant stockists so that availability is not an issue. They are available either from merchant stock or within three to

four working days from Barlo.

The range of six styles gives the system designer more than distinctive styling. The wide choice also gives positioning flexibility. For example, the Opus vertical models, at two metres high, allow up to 2.355 kW in a length of only 600mm. On the other hand the Primo range has a 140mm high by 1800mm convector that can be used as a perimeter heater.

Opus comes in two styles – a flat panel or a striking flat tubular column design, both two metres high. Three lengths give a choice of outputs with a maximum of a useful 2355 Watts. Adagio combines elegant flat profile tubes running

between top and bottom headers. Adding to the visual strength of this simple concept is the silver-black hammer finish. Three Adagio models, all 600mm high, range up to 1400mm in length giving up to 1525 Watts output.

Simple clean lines and a high-quality white finish distinguish the Primo, one of the new Barlo Design Range of radiators. Primo comes in single or double panel formats, four heights and six lengths giving a selection of 20 sizes. This means that Primo can fit into most available spaces and also into some that are not so obvious.

Forza, one of the new Design range radiators from Barlo, solves the problem of giving high output with smooth elegant columns. Forza models have two, three or four columns giving an



Barlo Opus 11 radiator in modern house setting

exceptionally-wide choice of 22 sizes and up to 2927 Watts of output. The deep white enamel finish adds to the smoothness of the European designed classic.

Contact: Oliver Fitzpatrick, Barlo Sales.
Tel: 052 27377;
email: barlosls@indigo.ie

Vokera Condensing Range



A Syntesi wall mounted, high-efficiency condensing combination boiler available from Vokera Ireland

Two additions to Vokera's high-efficiency condensing range are available through merchants from July 2003 to complement the successful Hydra and Pinnacle condensing boilers which were introduced last year.

Syntesi is a range of wall mounted, high-efficiency condensing combination boilers with heat outputs of 25kW, 29kW and 35kW. The range boasts a SEDBUK Band B rating and combines simplicity, reliability and easy installation at a competitive price

Features of Syntesi include a uniquely designed heat exchanger that maintains a high level of efficiency regardless of the output conditions, a diagnostic display that assists the installer during both installation and commissioning, and full air/gas modulation that ensures output is constantly matched to demand.

Synergy is a wall mounted, fan-assisted, high-efficiency system boiler with a heat output of 29kW. Also with a SEDBUK Band B rating, it combines the cost-effective benefits achieved through its high efficiency

with the advantages of a system boiler and the value offered by its competitive price position.

Synergy incorporates a built-in pump, expansion vessel, safety valve, pressure relief valve, automatic by-pass and automatic air vent to provide a boiler designed for use on sealed central heating systems. This eliminates the need for a feed and expansion tank in the attic and the risk of damage from frozen pipes.

Contact: Margaret Glennon, Vokera.
Tel: 01 - 056 55055;
email: eire.sales@vokera.co.uk

Heating Systems, Plant & Control

In many climates buildings are unable to provide comfort conditions for year-round occupancy without the benefit of a heating system, and most HVAC engineers will routinely be involved with issues concerning the design, installation and performance of such systems. Furthermore, in temperate climates, heating of buildings accounts for a large slice of annual carbon emissions. The design of heating systems for maximum efficiency and minimum carbon emission is therefore now a matter of prime concern to all HVAC engineers.

A newly-published book — *Heating Systems, Plant & Control* — provides an up-to-date review of the design,

engineering and control of modern heating systems.

Part A deals with heat generating plant. While this concentrates on conventional and condensing boilers, small-scale combined heat and power systems and heat pumps are also discussed. Part B deals with heat emitters, pipe circuits and variable-speed pumping, hot water service, optimum plant size and the vital issues of plant and system control, including sequence control of multiple boilers. Techniques for managing the energy use and running costs of heating systems are also discussed.

Contact: Blackwell Publishing.
Tel: 0044 1865 776868.

Edina Wins Landfill Gas Project

Edina Ltd has been awarded the contract to supply, install and commission three 1.4MW gas engines which will operate on the landfill gas produced at the Arthurstown Landfill Project near Kill, Co Kildare.

Methane gas, which is the major constituent of landfill gas, will drive the engines which are coupled to generators and will provide 4.2MW of electricity to the ESB grid. The units can also provide heat and operate on natural gas, biogas and LPG.

The modules supplied have electrical efficiencies of up to 42%, overall efficiencies of up to 90%, and excellent performance on biogas and landfill gas. All CHP modules are suited to the specific requirements of the customer.

Overall, Edina is having a very successful year and has won a number of prestigious contracts to date. These include a 3MW project for Aer Rianta at Dublin Airport and a 143kw CHP unit for the Leisureworld Complex in Bishoptown, Cork.

'Extra Hour' From Honeywell



Honeywell's updated ST6000 Series electronic programmers have an "extra hour" button that extends the heating time for one, two or three hours. If the central heating or hot water is already on, the programmed off time is postponed. If they are off, it cuts in to provide one, two or three hours of operation. Suitable for most home heating systems. Contact: Honeywell Control Systems. Tel: 0044 1344 656000; email: literature@honeywell.com

Corrosion-Resistant Plastic Fans

Europe Environment has invested in a new production plant for manufacturing Europ-Plast, medium and high-pressure plastic fans. Protection of the environment, and especially air quality, is a major challenge. With its high performance range of plastic fans, Europ-Plast provides customised solutions, all highly suited to the standardisation of installations and control of industrial emissions.

Europ-Plast offers a full range of products from standard plastic fan accessories to "tailor-made" products using its experience in boiler works. This includes axial roof fans, VCP fans,

corrosion-resistant centrifugal fans, laboratory fans, helical fans and special extraction fans.

Europ-Plast manufactures medium and high-pressure plastic fans with volumes of up to 150,000 m³/h. Materials used are PP (standard), PVC, PE and PVDF. The sheet metal bodies and the impellers are designed and manufactured using plastic digital tooling. All products in the range feature high energy efficiency and are easy to install.

Contact: French Technology Press Bureau.
Tel: 0044 207 235 5330;
email: ftpb@ubibrance.com

Honeywell Air Cleaners make smoking problems disappear

et al.: BS News

Offering your customers a clean-air environment increases profits, encourages customers to stay longer and keeps staff happier in their jobs. Which adds up to better business.

Once installed, a Honeywell Air Cleaner will clean the air and you can banish the smoke, not the smokers. And see the type of gains that businesses with improved air quality typically report:

- increase in food sales
- increase in monthly profit
- increase in drink sales
- a quick payback on investment

Banish the smoke
not the smokers

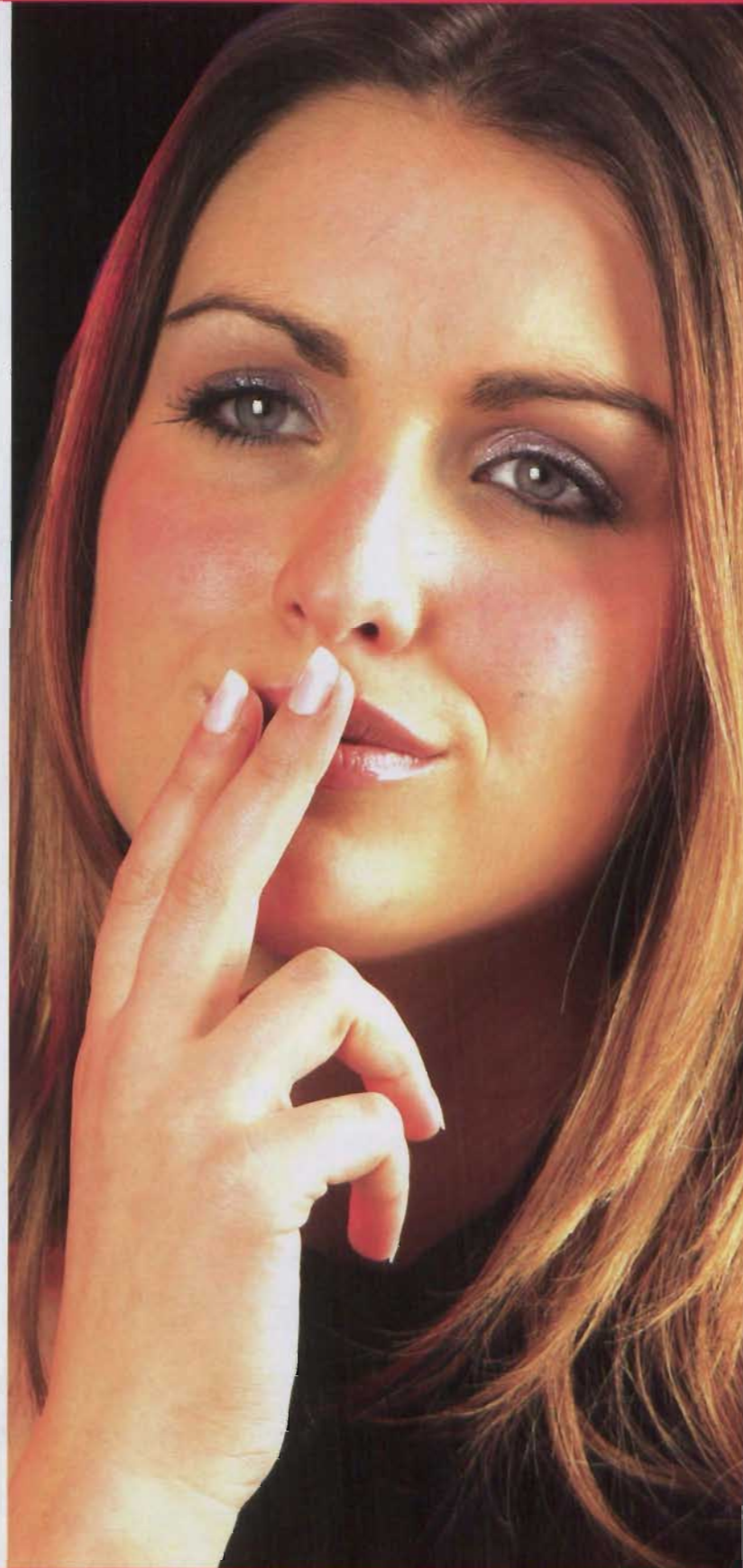
Find out more about Honeywell
Air Cleaners by calling

0044 141 9443906

or visiting our website at

www.honeywell.com/uk/air-quality

and watch your smoking
problems disappear.



Honeywell

Danfoss Invites You To Log On



Product information and technical support at your fingertips ... that's the promise from Danfoss when you log on to Danfoss Ireland's new website at <http://ie.refrignet.danfoss.com>

Apart from access to the online product catalogue for quick product selection, the site also offers:—

- Direct access to Danfoss technical data on all product ranges;
- Up-to-date news on product technology and applications;
- Free product selection and system design programmes;

- Training and education information;
- PED product conformity and certification;
- Technical data archives on earlier products.

In addition to the wealth of information presented on the site, a key benefit is that it is easy to negotiate, making access to that information simple.

Moreover, a free gift awaits the first 200 people to log on and register on the site.

Contact:
<http://ie.refrignet.danfoss.com>

'Building Sustainability — Value & Profit'

This year's CIBSE/ASHRAE conference will take place in Edinburgh, Scotland, from 24 to 26 September inclusive.

Full details of conference theme, venue and associated programme can be downloaded as a pdf file from www.cibse.org/edinburgh

Alternatively, call Tel: 0044 208 772 3660

Thermal Performance Part L Guide

Rockwool Ltd has published a guide for specifiers and engineers to help them understand and comply with the new regulations for thermal performance contained in Technical Guidance Document L. Part L of the new regulations underpins the government's goal to increase energy efficiency in all buildings — including extensions and refurbishment work — with an emphasis on higher standards of insulation for the building fabric.

The main changes to the regulations include the introduction of new U values to be used under an "elemental" (non trade-off) approach, and the adoption of new harmonised European U value calculation procedures. Alternatives to the "elemental" route are also explained.

Contact: Laurence Cox, Rockwool.
Tel: 0044 - 1656 862621; [www: rockwool.ie](http://www.rockwool.ie)

CIBSE Tees Off

Details of the forthcoming CIBSE annual golf outing have now been confirmed. Date is Friday, 12 September 2003 and the venue is Hermitage Golf Club, Lucan, Co Dublin.

The outing will comprise a 4-person team event/singles stableford competition for the PJ Doyle Trophy with the tee reserved from 9am to 2pm. Dinner and the presentation of prizes will

commence at 8pm.

Entry fees are as follows:—

- Golf only — €500 per team;
- Golf & Dinner — €700 per team;
- Dinner Only — €50 per person.

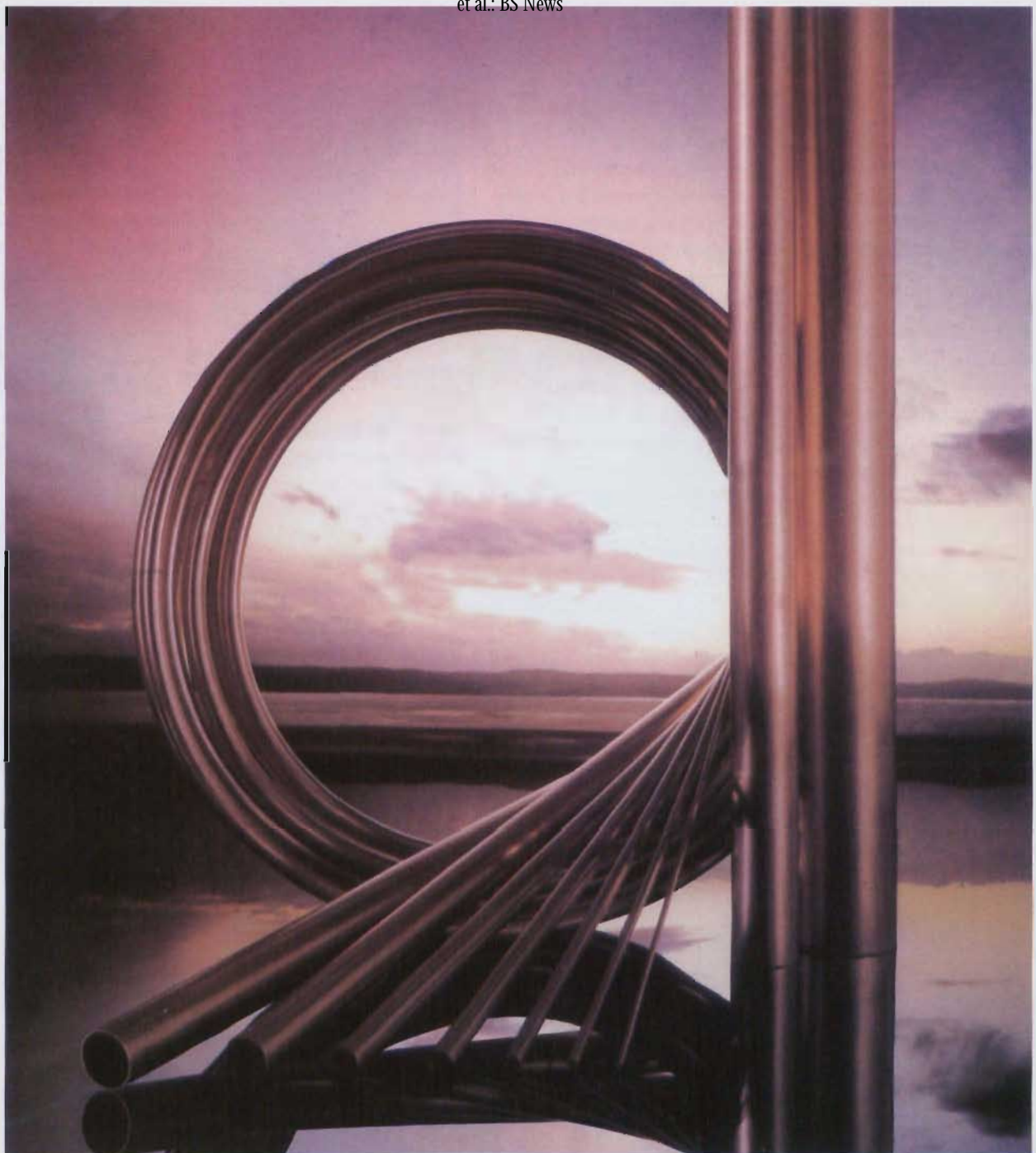
Contact: Colin Murphy, Homan O'Brien Associates.
Tel: 01 - 205 6300;
Fax: 01 - 205 6301;
email: colin.murphy@homanobrien.ie

Legionnaires Disease Training Course

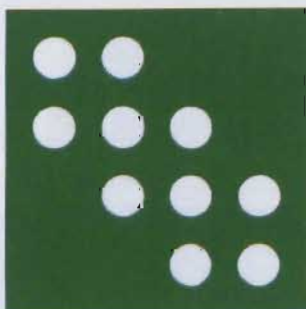
Following the response to our article in the May 2003 issue of *BSNews* on Legionnaires Disease, Mike Knight of Knight Consultancy & Training Ltd has now confirmed the date for the forthcoming training

seminar as 15 October 2003. Precise details of the venue are yet to be confirmed but it will be a Dublin location.

Contact: Mike Knight.
Tel: 0044 7966 196383.



All our tubes are up to the Mark



**IRISH METAL
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Irish Metal Industries supply a complete range of copper tube for hot and cold water installations, gas services, sanitation, central heating and numerous other building and engineering applications.

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Irish Metal Industries Ltd, 25 Spruce Avenue,
Stillorgan Industrial Park, Blackrock, Co Dublin.

IMI
A subsidiary of IMI plc.

Grundfos Split Horizontally

Well, not quite. However, Grundfos has further extended the scope of applications of its product portfolio with the introduction of the new HS Series, its first entry into the horizontal split-case centrifugal pump sector.

Featuring a robust housing design for excellent long-term performance, the HS Series covers a wide range of pump sizes providing reliable, economical solutions for today's industrial and commercial requirements.

Ideally suited to largescale municipal applications such a water supply for towns and large industrial complexes, the range also satisfies most of the needs of hydraulic services, air conditioning and heating systems.

There are 41 sizes with heavy-duty, through-bore design and high-efficiency impellers, and capacities up to 3500 m³.hr for both 50Hz and 60Hz.

To better understand the power of models within the HR Series



Grundfos horizontal split-case centrifugal chiller pumps for an underground cable ac system in a large industrial park

range, the capacities are best translated as equating to an ability to pump approximately five tons of water a second!

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

Further Developments at EJ Fidgeon

The scope of the EJ Fidgeon product portfolio — and consequently the applications catered for — continues to increase as Eamon Fidgeon brings on stream leading brand names which are complementary to one another.



A Cosmogas Series BTS boiler for indoor installation now available from EJ Fidgeon

As we went to press details of EJ Fidgeon's appointment as distributor in Ireland for Cosmogas were announced. This extensive range includes gas boilers up to 32kW, including a wall-mounted outdoor gas boiler, in addition to freestanding outdoor gas boilers.

There is also a Cosmogas air conditioning range of chillers, with capacities from 5kW up to 18kW. Indoor wall-mounted, ducted or floor-standing units suitable for use with chilled water are included.

This new addition complements the existing range, especially the Unico System, which is now widely installed throughout Ireland.

Bohar Community Hall in Mayo is a typical example carried out by Paul Walshe Plumbing & Heating, Balla, Co Mayo. The 1700 sq ft hall, with 5.5m high ceilings, is heated and air conditioned by 4260 Unico System (25 kW heating capacity). A Carrier 10 kW condensing unit provides cooling with 30 UPC 67 slotted outlets used.

The entire portfolio from Eamon Fidgeon will be featured at the forthcoming Self-Build & Renovation Houseshow at the National Show Centre in Cloghran, Dublin, on 10/11/12 October, and also at Plan Expo in the RDS on 6/7/8 November next.

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

Building IQ Seminar

The Institute of Electrical Engineers and the European Intelligent Building Group are sponsoring a two-day seminar series alongside the new show, Building Performance, which takes place in Olympia Two, London, on 16/17 September 2003.

Called Building IQ — Transforming the Concept of Intelligent Buildings into Profitable Practice — the event will comprise seminar sessions featuring leading end users, technologists and consultants discussing the business benefits and technological route map to creating intelligent buildings.

Speakers include John Lewis Property, HOK, Grimshaw Whitby Bird, University of Kent, and Arup. The Swiss RE building and the new Wembley Stadium are among the projects to be highlighted.

Topics to be covered include:

- Information management;
- The influence of new approaches to FM;
- The energy and environmental perspective;
- Life safety;
- Biometrics;
- Integration of IT and building services infrastructures;
- Fault management;
- EC standards.

Information and reservations: www.building-performance.co.uk

Controls *Made Easy*



The application scope now ranges from dedicated products for commercial and industrial HVAC projects. The philosophy behind the design of products is that they are easy to install, easy to understand and easy to operate. The result is an assorted selection of the best products as to design, functionality, applicability and user-friendliness.

34026



Aprilaire Appoint EJ Fidgeon



An example of an Aprilaire digital thermostat available from EJ Fidgeon

EJ Fidgeon has been appointed Aprilaire products distributor for Ireland. The Aprilaire range includes

thermostats, heat recovery equipment, humidifiers, electronic air filters, zone controls and HVAC automation

packages.

"The Aprilaire range complements our existing line-up of quality products, including Florida Heat Pumps, The Unico System, and Cosmogas boilers and air conditioning products", says company principal Eamon Fidgeon.

Contact: Eamon Fidgeon, EJ Fidgeon.
Tel: 01 - 044 84883;
email: info@ejfidgeon.com;
web: www.ejfidgeon.com

Health & Safety Expo at IRCHEM

With health and safety awareness — and compliance issues — very much to the fore, especially in the chemical and pharmaceutical industries, a dedicated section at the forthcoming IRCHEM exhibition will now run in tandem with the main show.

Venue: Greyhound Stadium, Cork;
Dates: 16 to 18 September 2003.

Contact: Louise Craig, SDL Exhibitions.
Tel: 01 - 405 5543;
email: info@sdlexpo.com

Win a Sanyo 28" Widescreen TV



Reader competition

Enter our reader competition and you could win a fantastic Sanyo 28" widescreen TV in our prize draw.

Simply answer the questions and complete the details, copy and fax back to BS News on 01 288 6966.

July competition

- 1) Who is the current Minister for Transport and Tourism?
a) Tom Kitt b) Seamus Brennan
c) Mary Hamey
- 2) In what year did Sanyo introduce the first ever GHP to the Japanese Market?
a) 1985 b) 1989 c) 1994

3) Who recently won the 2003 Smurfit European Open at the K-Club?

- a) Phillip Price b) Barry Hennessy c) Ernie Els

4) Which Australian Footballer recently signed for Liverpool FC?

- a) Craig Johnson b) Mark Viduka c) Harry Kewell

5) Which of the following is an anagram of the Editor BS News?

- a) Jan O'Werre b) Nile Buys Roe c) A planet eh?

Name: _____

Company: _____

Address: _____

Postcode: _____

Email: _____

Tel: _____

Fax back to BS News on 01 288 6966

Rules: Competition open to anyone over the age of 16. No limit to the number of entries made.

Sponsored by
SANYO
AIR CONDITIONERS

Sime Does it for Hevac

Hevac is one of the foremost building services suppliers in Ireland, its high industry standing earned over many years of providing state-of-the-art products from world-leading brands. It has long-standing agreements with these names, a typical example being Sime. Over the years Sime has introduced many industry "firsts", introducing innovations in respect of performance and efficiencies that have become industry standards.

The latest is the new Format System range of cast-iron, wall-hung gas boilers. Compact, reliable, efficient and economical, Format System boilers are fully modulating with two models ranging in outputs from 9kW to 23.4kW and 11.5kW to 28.8kW. Both have built-in frost stat.

Installation is simple with optional pre-fixing jig with spacing plate, and plug-in electromechanical timer. There is a multi-directional telescopic flue as standard but other flue options are available where extra flexibility is required.

Other, high-performance ranges in the Sime portfolio include the Superior cast-iron boilers with outputs from 40,000 Btu/h to 90,000 Btu/h. This is a room-sealed, fanned-flue appliance with the capability and versatility to be sited just about anywhere in the home. With turret flueing from the top of the boiler, left, right, rear and vertical flue capabilities cover all situations. The Sime Solo-Duetto-Aqua flexible integrated unit is an oil-fired system which provides excellent performances in a very small space. The units are



The new Sime Superior cast iron boiler from Hevac

available for central heating only, instantaneous DHW production, or through a 100lt storage tank. Perfectly-balanced combustion and high efficiencies enable substantial energy savings without compromising on performance. Also from Sime is the AR-1R-2R range of oil-fired, cast-iron boilers. Each boiler in the range is manufactured to enhance endurance, yield and

energy savings while managing the plant where it is installed. Equipped with complete and functional instrumentation, they can be combined easily with the most widely-used burners. Special configuration of the combustion chamber optimises the radiance of the burner flame and the combustion gas convention. Contact: Hevac. Dublin Tel: 01 - 419 1919; Cork Tel: 021 - 432 1066.

'No Need To Ban Smoking'

There is no need to alienate smokers or to impose an outright ban on smoking in public places, says Vincent Mahony of Walkair, distributors of Honeywell's electrostatic air cleaners for Ireland.

Commenting on the impending ban (scheduled for January 2004) he said: "Today's high-tech electrostatic air cleaners remove the discomfort of tobacco smoke and practically all the harmful particles, so they provide a cleaner atmosphere that allows

smokers and non-smokers to meet without discomfort and alienation.

"While we don't condone smoking, we can help with the smoke problem. Honeywell's reliable, well-proven air cleaning technology is excellent news for all venue operators who are uncertain whether to allow smoking, in which case non-smokers may avoid them, or to ban smoking and so alienate smokers with their friends, families and colleagues.

"Air cleaners provide the means to banish smoke, not the smokers, so operators really can have it both ways", he said. "Properly-sited and correctly-sized electrostatic air cleaners will clean the air to an acceptable level. We propose a 'middle way' of tolerance towards smokers through provision of designated smoking areas where practicable, and always provided adequate air cleaning and ventilation is installed".

Contact: Vincent Mahony, Walkair. Tel: 01 - 456 8070.

**BSNews
Next Month**

**UNDERFLOOR
HEATING
FEATURE**

**Contact:
Joe Warren @
Tel: 01 - 288 5001**



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Refrigeration Technology Skillnet '03/04 Programme

Refrigeration Technology Skillnet — the industry-led training network for the refrigeration sector in Ireland — has launched a new programme of training events for 2003. The network was established in December 1999 and since then has worked hard to (a) develop training programmes that are tailored to the needs of the sector, and (b) secure

support funding for the training.

In April of this year, the network secured support funding for network activity to the end of 2004. The board of management hit the ground running with a management seminar and official launch of the programme on 8 May. This was followed immediately by a series of technical training courses in May and

June. Table A gives the programme of events for September to December 2003.

The network has also launched a new website giving full details on all training courses and network events. Details are: www.refrigerationskillnet.ie

Contact: Enda Hogan, Refrigeration Technology Skillnet.
 Tel: 01 - 878 3773.

Table A — Refrigeration Technology Skillnet Training Schedule

4th & 5th September	Brazing procedures to meet PED
11th & 12th September	Introduction to refrigeration
18th & 19th September	Introduction to air-conditioning
26th September	Documentation & report writing
2nd & 3rd October	Fault diagnosis – refrigeration systems
9th & 10th October	Fault diagnosis – air conditioning systems
16th & 17th October	Fault diagnosis – electrical systems
7th November	Staff appraisal
13th & 14th November	Electronics & controls (ref & air con)
20th & 21st November	Refrigeration systems design
27th & 28th November	Air-conditioning systems design
4th & 5th December	Safe handling of refrigerants



Right: Speakers at the recent management seminar and launch of Refrigeration Technology Skillnet are Shelagh Ennis Lambe, Absolute Health & Safety; with Eamon Duffy, Department of Enterprise Trade and Employment; Seamus Kerr, RSL Ireland; and Adrian Brennan, Office of the Director of Corporate Enforcement

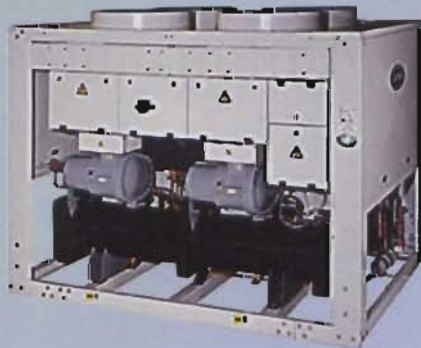


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Tel: 01 - 409 8912; Fax: 01 - 409 8916;

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Minisplits
Fan Coil Units
Controls

Liebert
HIROSS



Refrigerant 407c
Dualfluid
Freecooler
Chilled Water
Upblow/Downblow
Dx — Water Cooled
Close Control Air Conditioning

Capacity 4Kw to 100Kw



Supply Air,
Permanent Extract and
Heat Recovery Units

Air Flow Range
0.4 m³/s to 5.5 m³/s

Haier



Refrigerant 407c
Cassettes
Hi-Walls
Ducted
Cabinet
Console

Capacity 2Kw to 12.5 Kw

Refrigerant Recovery & Reclamation

In the wake of CFC phase-out, attention is increasingly focusing on the way industry uses refrigerants, and on encouraging a responsible attitude towards these products. Like all other chemicals, refrigerants have an impact on the environment if emitted — be they CFCs or HCFCs, new generation refrigerants such as hydrofluorocarbons (HFCs, marketed by INEOS Fluor under the KLEA brandname and distributed in Ireland by RSL Ireland Ltd) or traditional chemicals used as refrigerants such as hydrocarbons (propane, butane) or ammonia.

As our knowledge and understanding of environmental issues has increased, so has the need to minimise the impact of man's activities on the environment. Because of the CFC issue, the refrigeration and air conditioning industry has come under even greater scrutiny than most. In the majority of applications today refrigerants are sealed within refrigeration equipment and only impact on the environment if they escape from the system. Reduced leakage is one way in which industry can help to reduce the amount of refrigerant which reaches the environment.

Just as importantly at the end of a system's life, or during servicing (should the refrigerant need replacing), recovery and reclamation of that refrigerant helps prevent its emission into the environment.

Recovery and recycling, therefore, is one of the most effective means of cutting production and emissions of all refrigerants. Only by preventing emissions and avoiding environmental effects will the refrigeration engineer retain the freedom to use the best refrigerant for each job — confident that there will be no flammability hazard or smog from hydrocarbons, no global warming impact from HFCs, and no toxic hazard from

ammonia.

INEOS Fluor through RSL Ireland Ltd — at their warehouses at Cork, Belfast, Dublin and Galway — operates a recovery and reclamation service for all its refrigerants, including the "Arcton" range of interim products, and the new generation KLEA refrigerants. Because HFCs are non-toxic and non-flammable, they are easy to recover and reclaim.

Under its recovery service, INEOS Fluor will take back used refrigerant, and where there is a market for the product, reclaim it for resale. Refrigerants that cannot be purified to a high enough standard will have to be disposed of through high temperature incineration, the most environmentally-acceptable means of disposing of these products.

While recovery and reclamation can help to reduce emissions of refrigerants, it is preferable that it is carried out at, or near, the point of use. This is in keeping with a philosophy of "conservation at source".

INEOS Fluor has already extended its recovery and reclamation programme to include all of its refrigerant portfolio.

What does this mean to me?

CFCs/HCFC 22 - There are a number of actions you can take to help the recovery and reclamation of CFCs or HCFC 22:

- Evaluate your CFC and HCFC use;
- Check your workplace to see which CFCs or HCFCs you use;
- Make a full inventory, including purchases;
- Monitor equipment and servicing to identify leakage. Service Equipment;
- Use a responsible contractor when servicing equipment;
- Product should be recovered — not vented — from equipment during servicing (venting is illegal in many countries);
- Find out how waste CFCs/HCFCs will be disposed of. Will they be recovered or destroyed?;
- Duty of care documentation filled in correctly.

Ensure product is segregated

Keep different CFCs (11/12/113/114/115) and where appropriate HCF 22 blends (eg. R-502) separately in clearly marked containers from recycling (they can only be recovered and recycled if they are not mixed).

Disposal of used CFCs

Use a responsible licensed waste disposal company when disposing of used CFCs.

Contact: Gerry McDonagh, RSL.
Tel: 01 - 450 8011;
Fax: 01 - 456 7512;
email: gerry@rslireland.com



 **York**[®]
ACR FOR LIFE

YORK Q-PAK SONATA CHILLERS

Music to Your Ears!

Restructuring Creates More Dynamic Organisation



Frank Doyle



Andrew McEvitt



Dave Dorney

"As a market leader in both industrial refrigeration and air conditioning systems, the individual strengths of the two separate York International operations have always been immense", says Frank Doyle, National Sales Manager, York ACR in Ireland. "Now that they have been merged into one global organisation, the benefits are enormous. Bringing together the complementary technologies, skills and expertise of the two organisations has increased the opportunities to utilise our engineering and technology resources. As a result, we are able to enhance our product development processes in order to react much faster to market changes.

"In addition, we have been able to bring an imaginative approach to the through-life support of both ours — and other manufacturers' — equipment in the field via our ever-growing service business.

"The restructured organisation and more regional, market-driven philosophy is ideal for our customers here in Ireland. Now products and service support packages are being developed to suit our particular market requirements. They are based on information and feedback relevant to our market environment and conditions, not on generic global design platforms. Particularly important in this respect is the input of our National Service Manager, Philip Masterson, and his team of service engineers.

"The first of these new products is the Q-Pak Sonata range of air-cooled, screw compressor chillers. Models incorporate a pioneering approach to noise reduction, making them the quietest on the marketplace today.

"This new customer-driven philosophy is not limited to products and service packages. There is little point in having the best equipment and support systems unless they can be delivered in a fashion that benefits those customers. Hence also the re-defined culture within York International where management structures are now in place which facilitate delivery on this exacting requirement.

"This also applies to York ACR in Ireland where both the sales and service operations have been reorganised and strengthened. Of particular note in this respect is the appointment of Andrew McEvitt as Senior Sales Engineer operating out of the Dublin Office and Dave Dorney, Senior Sales Engineer, who is based in the Cork office. Both Andrew and David are widely known and respected throughout the HVAC industry and have extensive experience and knowledge of the particular requirements of the marketplace.

"From the outside it might seem like we have been quiet of late at York. However, as the foregoing clearly illustrates, while it has been calm on the surface, we have been beavering away under water. Now the fruits of that effort are being brought to the surface. We have been working hard at making our products more efficient and quieter. In this we have been extremely successful. Now we are ready to make a great deal of noise about how quiet we can be!"



York Sonata — Music To Your Ears

In response to customer demand, York International has developed a completely new range of competitively-priced, air-cooled, screw compressor chillers, specifically designed to operate with the minimum of sound. Called Q-Pak Sonata, the new range is ideal for office, leisure centre, hospital and hotel applications, or any such public area where equipment noise can create a problem.

Developed as a direct result of customers' demands for low-sound, high-efficient equipment, this range of products also meets both existing and impending European acoustic and efficiency legislation. Full Eurovent accreditation is confirmation that these objectives have been achieved.

Through rigorous testing carried out at York's state-of-the-art environmental and acoustic test facility in Basildon in the UK, the company's design engineers identified key noise-emission factors. Armed with this critical information, they then devised solutions to aggressively tackle the various problem areas.

Simple Installation

To provide installation convenience, a single power input is provided as standard and the evaporator water connections can be ordered in left or right hand configurations to simplify site pipework configurations.

The standard Sonata models can be customised through a comprehensive menu of optional features and accessories, including: desuperheaters or heat recovery, electrical power components, various control additions, high-pressure fans, and condenser coil fin material options.

www.yorksonata.co.uk

Imaginative & Innovative Solution



The Q-Pak Sonata range incorporates an imaginative and innovative approach to chiller design. Sonata's low sound pressure levels are the result of specially-configured two-speed fans and an acoustic enclosure that contains the compressors, oil separators, valves and piping system. When the fans are operating at full speed, the sound pressure level at 10 metres distance is 60.9 dB(A); at low speed, the sound pressure level at the same distance falls to just 56.7 dB(A). Low speed fan operation is automatically selected as reduced ambient conditions cause a fall in system pressure.

The Sonata range consists of six standard models offering cooling capacities from 377kW to 580kW. High-efficiency models will also be released shortly. A York twin helical screw compressor is incorporated in each of the two independent refrigerant circuits providing unit capacity control from 10% to 100%. Each circuit is charged with refrigerant R407C.



Advanced Microprocessor Control

A fuzzy logic control — consisting of an advanced microprocessor with a 40-character plain language display— provides accurate water temperatures, efficient compressor operation and maintains the unit within necessary safety limits. Like most of the other chiller components, this too is being manufactured in-house to ensure optimum quality control and ultimate performance.

About York International

York International is a world leader in the design, manufacture and service of air conditioning and refrigeration equipment and systems. With its parent company based in Pennsylvania, USA, York's European HQ is situated in its UK manufacturing facility in Basildon, Essex. Further European manufacturing facilities are located at Nantes in France, Barcelona in Spain and Arhus and Naestved in Denmark. The wholly-owned Irish operation has its headquarters in Citywest, Dublin with a regional office in Cork.

Products include water and air cooled chillers and heat pumps; absorption chillers; air handling units and air distribution equipment; split systems and packaged air conditioners; and marine and industrial refrigeration systems and controls.

York also produces all compressor types — hermetic scroll; open drive and semi-hermetic reciprocating; open drive and semi-hermetic screw; and centrifugal compressors.



Thermal & Acoustic Testing

York's state-of-the-art environmental and acoustic test facility was specifically designed for performance and sound testing. It is regarded as one of the most advanced such test facilities in the world with sophisticated computerised measuring equipment and a specially-constructed interior comprising:—

- Chamber dimensions: 20 metres long, 17 metres wide and 15 metres high
- 35 cooling capacities up to 750kW
- Ambient temperatures controlled between 0°C and 50°C \pm 1k
- Maximum air volume 120 m³/s
- Inverter driven fans to match the test subject air volume
- Humidity controlled to RH \pm 5%
- Chilled water temperatures between 4°C and 20°C \pm 0.05°C
- Hot water temperatures between 20°C and 60°C \pm 0.05°C
- Inverter driven pumps to match the test subject water volume
- Primary chilled and hot water supplied by two 800 kW multi-mode heat pumps
- Sound measurements to ISO 3744 for large units up to 7.5 metres long
- Sound measurements to ISO 3745 for smaller units

York ACR, Citywest Business Park, Naas Road, Dublin 22

Tel: 01 - 466 0177 Fax: 01 - 466 0198

York ACR, Unit 19, University Hall Industrial Park, Sarsfield Road, Wilton, Cork

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Website: www.york.com

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<https://arrow.tudublin.ie/bsn/vol42/iss7/1>

Aervent & Vent-Axia — The Perfect Combination

Following the introduction of the Vent-Axia air conditioning range to Ireland by Aervent (*BSNews* May 2003), interest in the brand and market penetration has already surpassed expectations. This is hardly surprising given the strength of the Vent-Axia name but, equally important has been the strength and scope of the support mechanisms provided by Aervent. Taken together, they make for a formidable package.

Contractors, consultants and clients all have first-hand experience of the benefits of the air movement solutions provided by Aervent. No problem is insurmountable, flexibility and scope of application ensuring that all situations and requirements can be catered for. Moreover, this is done in an efficient and pro-active manner which achieves optimum performance outputs and energy-efficiencies at very cost-competitive prices. Tailored finance options

can also be arranged.

The process commences with Aervent's in-house design team liaising with the consultant and/or contractor to identify precisely the client's needs, and then to devise the most appropriate solution. This includes direct access to Vent-Axia design engineers and technical support personnel, in addition to those of Aervent, so that all available resources are brought to bear on the project.

Aervent engineers are also available to provide on-site support, while a network of accredited independent installers is constantly on call to provide installation and commissioning if required. Apart from the standard range of after-sales service and maintenance packages, Aervent can devise tailored programmes to suit individual situations.

Individually, both Vent-Axia and Aervent have considerable strengths but their combined product

portfolios and service support packages means that Aervent offers the complete package solution, including ancillaries and accessories such as ducting, fans, etc. Stock availability, especially in respect of standard and commonplace items, is critical. Consequently, Aervent provides same day delivery in most cases in the Dublin region and next day delivery throughout the rest of the country on these items. The same applies to spare parts.

The Vent-Axia range of air conditioning systems are all microprocessor controlled, both to provide optimum settings and to protect against abnormal operation. The controllers are versatile yet simple to operate, which permit the user to select multi functions such as cooling, heating and de-humidification manually, or to set the system to an automatic mode, leaving the decision-making to the microprocessor.

The wall-mounted units have a wire-less hand-held controller, with ceiling cassettes and convertible ceiling/floor units having a hard-wired, wall mounted controller.

The individual wired controllers may be augmented by the optional Group Controller, which can individually set each unit from one central location. All Vent-Axia air conditioners will re-start automatically after a power cut, and retain

their previous setting. Besides the obvious convenience, this can also be useful for switching units on and off remotely. The automatic re-start feature may be overridden for specialised applications.

The Vent-Axia range incorporates innovative products and design ideas, an excellent example being the 600m x 600m ceiling cassette unit which is precisely the same size as a standard ceiling tile.

There has been concern over the ozone depletion properties of refrigerants, and some time ago the worst offenders were banned, and R22 became the standard for air conditioners. This however will also be phased out, mainly by R407C, which is a more environmentally friendly refrigerant, and is the standard refrigerant for the Vent-Axia range of air conditioning units.

All air conditioning units either have heat pump facilities as standard, or as an option. Heat pumps remove heat from the outdoor air, and use it to heat the required space. In this way, approximately 3kW of heating is obtained for every kW of electricity used. This helps to reduce pollution and save heating costs. The heat pump models function down to an outdoor temperature of -5 °C.

Contact: Dave Cussen,
Aervent Group.
Tel: 01 - 456 8200;
email:
aircon@aerventgroup.com



Vent-Axia group controller

Variable Capacity Cooling/Heat Pump Systems

3D Air Sales Ireland Ltd distributes an extensive range of air conditioning products manufactured by Mitsubishi Heavy Industries, Japan, throughout Ireland. These systems are supplied and installed through a dedicated network of specialist contractors who are strategically located throughout the 32 counties so that comprehensive national coverage is assured.

In the relatively short space of five years 3D Air Sales Ireland has emerged as one of the leading players in the marketplace, its success due as much to the quality and flexibility of the service and support packages provided, as much as the product range itself.

Single and multi-splits — which are primarily

dealer driver — account for approximately 65% of sales, with the remaining 35% on VRF systems which are consultant and mechanical contractor driven. In both cases the critical factor is the close working relationship enjoyed by Michael Clancy and his 3D Air Sales colleagues with the individuals concerned.

Once an enquiry is received 3D first determines that all the relevant data is to hand and then set about devising the most appropriate, cost-effective solution. By liaising back and forth with the consultant and the installer involved, nothing is left to chance and the collective input of all the expertise to hand is brought to bear on the scheme. Consequently, in presenting the final proposal everything necessary to carry out the project is incorporated. This includes full technical drawings and schematics for both the mechanical and electrical aspects, along with all relevant support documentation and installation guidelines.

Once the project commences the same support and involvement continues to on-site activity right up to pre-commissioning stage. Then, particularly with VRF systems, 3D's own dedicated team of commissioning engineers take over, double-check everything, and finally proceed to commission

the project.

Despite the quality of the products themselves and the excellent warranties provided, 3D invariably include in the contract provision for a comprehensive after-sales service and maintenance programme. This is a vital part of the overall package and emphasises once again the 3D intent on remaining involved throughout the working life-cycle of the installation.

Underpinning this overall strategy is a massive stockholding facility standing on 50,000 sq ft in the UK which has a daily delivery run to Ireland. Extensive spare parts are also held in stock and, where necessary, can be drawn down very quickly in emergencies.

Mitsubishi Heavy Industries has been manufacturing air conditioning systems for over 40 years. The range extends from small systems of 2.5KW cooling/heating to large modular systems for commercial buildings. Brief details of the product portfolio are as follows:—

Split Systems

A full range of systems is available, from small, wall-mounted systems of 1.8kW to multi-splits and large ducted heat pump systems up to 28kW.

FD Multi Systems

The FD Multi Systems are ideal for open-plan areas such as offices, retail outlets, gyms, etc. The twin, triple and quad systems — from 10kW to 28kW — are ideal where there is a requirement for large capacity

heating/cooling, but without the costs of multiple external units. The number of pipes entering the building is reduced, as is the number of external power supplies.

The application of twin, triple or quad ducted units can greatly reduce the costs of internal ducting and overcome problems where the ceiling void has structural beams or other services restricting the space available for ductwork. Ducted units (FDR) also include a factory-fitted condensate pump, allowing units to be installed close to the ceiling grid if necessary.

VRF Systems

MHI is a major manufacturer of VRF inverter 2-pipe and 3-pipe systems (R22 and R407C), including the K-MAX modular systems up to 126kW. The extensive KX and KXR inverter multi systems offer a flexible design approach for commercial buildings from 50 sq m to 10,000 sq m. The fuzzy logic control system provides variable capacity control, resulting in significant energy savings.

Full details, including downloads specifically tailored to consultants' and major contractors' needs, are available on the website. Log on to www.3dair.co.uk

Contact: Michael Clancy, 3D Air Sales Ireland.

Tel: 01 - 462 7570;

Fax: 01 - 462 7611;

email:

micclan1@eircom.net



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CLIVET[®]
feeling cool

Carrier Global Chiller — Conserving Nature at No Extra Cost

Right from when Willis Haviland Carrier first invented the basics of modern air conditioning in 1902, Carrier has been a world leader in the manufacture and sale of heating, ventilating, air conditioning, hvac systems and products. Essentially, the history of refrigeration and air conditioning reads like a history of Carrier, each new pioneering development setting new industry benchmarks.

The revolutionary new chiller technology contained Carrier Global Chiller is a typical case in point. This is an entirely new concept, its development the result of collaboration between Carrier's European, Japanese and American research and engineering

resources. Technological progress is combined with environmental responsibility to deliver the benefits of improved performance, greater safety and better energy usage.

With production of HCFCs (R-22, R-123, etc) capped since 1995 and and total phase-out due in 2015, Carrier sought to develop a new chiller capable of delivering even greater benefits than before but using a more environment-friendly gas. After a great deal of research and testing, Carrier opted for HFC-134a, a single-substance refrigerant which is non-toxic, non-flammable, and requires no additional safety considerations.

Critical to the success

of the Global Chiller range was the design and development of the Power3, a revolutionary new screw compressor that recovers the capacity-loss formerly associated with refrigerant HFC-134a. The rotors were specifically designed to suit this refrigerant, their exceptional rigidity allowing reduced clearances for increased efficiency.

The correct operating temperature is guaranteed by the use of an independent refrigerant supply while the piston loaders allow capacity control, are wear-resistant, and have no internal losses. The helical gears are quiet and very durable, the Power3 providing three times the cooling capacity of an equivalent reciprocating compressor.

The Carrier Global Chiller uses the latest

generation Carrier microprocessor controllers. The system constantly monitors all chiller parameters and precisely manages the operation of compressors, electronic expansion valves and fans for improved energy efficiency. Fuzzy logic algorithms provide a prognostic capability which improves system performance and reliability.

Principal benefits of Global are:—

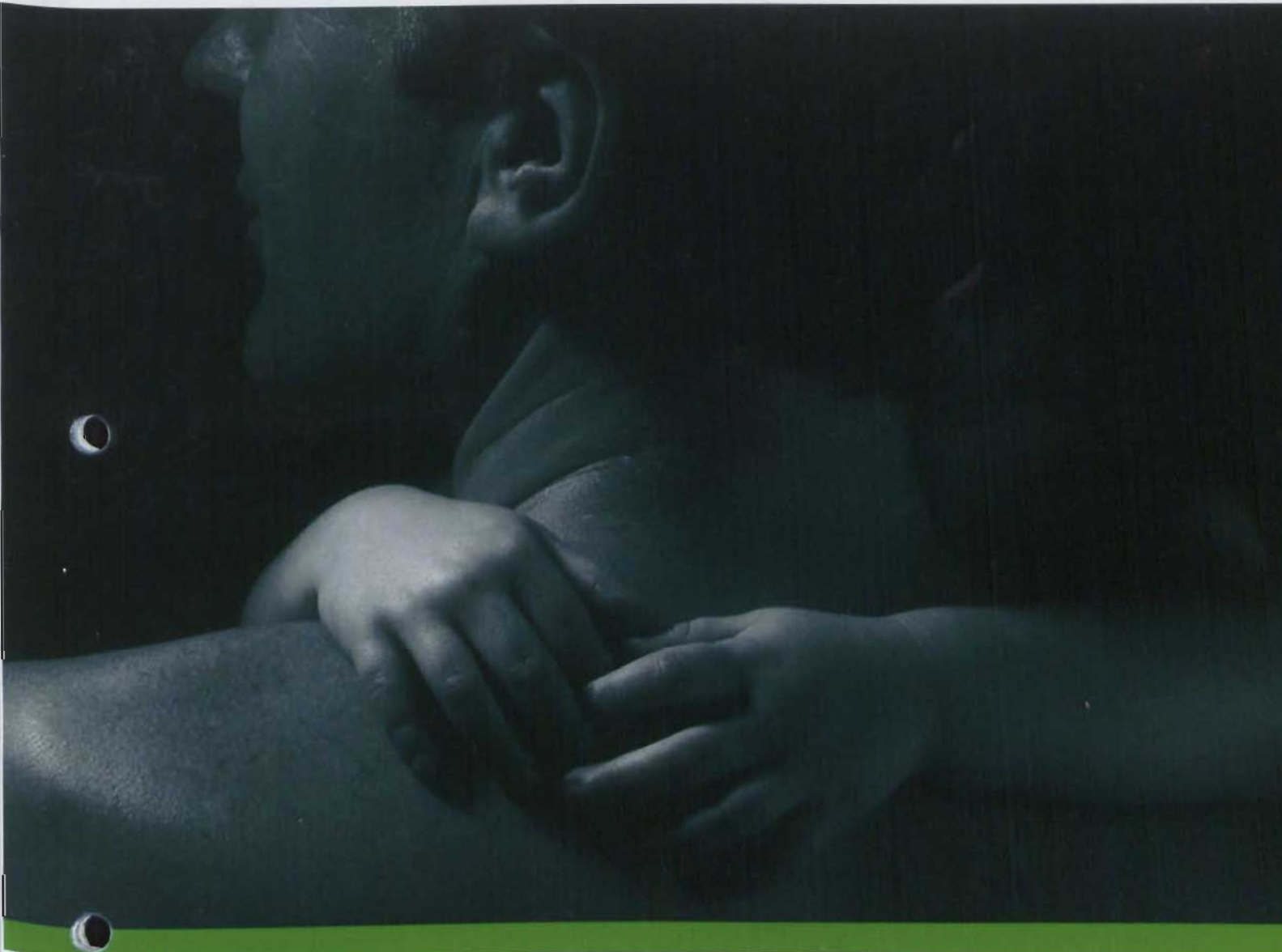
- Two independent refrigerant circuits and multi-compressor concept which guarantees chilled water production under all operating conditions;
- Use of unrestricted HFC-134a refrigerant;
- Longer service intervals;
- Simple maintenance, particularly with only three moving parts in compressor;
- Single-point power supply without neutral;
- Simple hydraulic connections to the evaporator;
- Reduced weight and size;
- Manufactured, tested and certified to ISO 9001.

Contact; Austin McDermott, Core Air Conditioning.
Tel: 01 - 409 8912;
Fax: 01 - 409 8916;
email: info@coreac.com



The new Carrier Global Chiller from Core Air Conditioning

Safe and secure



In a changing world everyone needs to feel safe and secure

You can feel safe with the knowledge that our KLEA range of refrigerants can help you to provide non flammable, energy efficient and ozone benign refrigeration and air-conditioning systems. Secure in the knowledge that INEOS Fluor continue to invest in a range of refrigerants, meeting customers' expectations - wherever they are in the world.

Next time you specify a refrigerant, ask for KLEA.

Contact your local ICI Klea distributor:

RSL Ireland Limited
45 Robin Hood Industrial Estate
Long Mile Road
Dublin 22
Tel: +353 1 4508011
Fax: +353 1 4567512

INEOS Fluor

PO Box 13, The Heath, Runcorn
Cheshire WA7 4QF, United Kingdom
Tel: +44 (0)1928 511192
Fax: +44 (0)1928 513890



www.ineosfluor.com

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The Essential Hotel Ambience Comfort Cooling

Whatever the reason you stay in a hotel — be it business or pleasure — the primary basic requirement is comfort. To be able to sit in comfortable chairs, comfortable beds, at ease with the décor, comfortably low noise levels, and a comfortable temperature level, are essential.

This is where a correctly-designed, installed and maintained air conditioning system can provide automatic year round comfort, for guests and staff, maintain good indoor air quality, (especially important in major towns and cities) and yet be sufficiently discreet and quiet that you do not notice it is there.

Most suppliers would want you to notice their product, Trane would be happy that you didn't notice it ... until you went



Trane has products to suit most applications and design requirements

outside into the heat or cold or humidity.

The two areas in a hotel that are probably the most susceptible to poor temperature control are the bedrooms and the restaurant. In the restaurant, the temperature and humidity will rise very quickly as the number of people increases and the food is served. If a guest is hot and sticky, food becomes unappetising, the smell becomes overpowering. When hot, the automatic reaction is to drink a lot of fluid, this fills the stomach and suddenly there is no desire to eat ... exit the restaurant.

Air conditioning plays a vital role in ensuring comfort in the restaurant. Not only by cooling — or at times heating — the air, but also by the system design allowing constant air changes, bringing in fresh air, reducing smells and replenishing the oxygen. Additionally, the filtration system ensures a dust-free environment. In the bedroom the body is very sensitive to temperature changes. If the room is hot and humid, sleep is impossible. To open the windows is very often impossible because of noise, so a cool room with the air conditioning unit quietly maintaining the comfortable conditions is essential for getting to sleep.

Indoor air quality is becoming the subject of much discussion, particularly in the licensed trade, as the European Directives may well enforce good quality air if it is not already provided.

To heat or cool is not sufficient. If air is just filtered, the temperature adjusted and recycled, it loses oxygen over a period of time and becomes stale, smells become apparent. Also, people working in this atmosphere can suffer headaches and even nausea.

The constant introduction of up to 10% of filtered, tempered fresh air into an air conditioning system will ensure that the oxygen is replenished, and the air remains fresh for both guests and staff.

But there is still one very important part in the process, the maintenance of the comfort by maintenance of the system. Building owners have a duty of care to the environment to ensure that any building services are operated efficiently. There is also the imperative to conserve energy to preserve the environment.

An air conditioning system that is badly maintained, or not maintained, will gradually become less efficient; it will consume more power to achieve the results, and the additional strain on the components could even

cause a complete failure.

A regular maintenance contract can ensure that all the systems are working at their best when needed. To have a system fail spells immediate disaster. Skilled air conditioning engineers are rarely waiting for a call.

Hotels with regular contracts can be assured that they have a clean, efficient system, that their guests will enjoy the best comfort and ambience, and that they have an edge on the competition.

Trane is a world-leading air conditioning company with 90 years of experience and a complete range of equipment and systems. There are products to suit most applications and design requirements. Trane has professional sales engineers and technical support staff. Trane also offers training for in-house staff to understand the basics of the system, and have highly-skilled service technicians available to commission and maintain the equipment.

Many of the best-known names in the hotel industry throughout Europe and worldwide already keep their cool — and their customers — with the help of Trane.

Contact: Maria Furlong, Trane Ireland.
Tel: 01- 460 6030;
e-mail: Maria_Furlong@trane.com

The Unico System[®]

The Alternative to Radiators, Under Floor Heating and Split Systems

Imagine the feeling of warmth from your head to your toe With the Unico System your entire room is the same temperature, floor to ceiling wall to wall no matter where you walk. No more hanging on to radiators to get warm, no more cold spots, no more drafts. With the Unico System you get superior comfort without radiators, without underfloor heating or split systems.



Unico System Ireland Offices, Mullingar, Co Westmeath

History

The Unico System has been manufactured in the USA for over 20 years and is used extensively throughout the States in varying climates — from the extreme cold of Alaska to the humid heat of Florida. Since 2001 The Unico System is distributed throughout Ireland by Unico System Ireland.

There are numerous Unico System installations throughout Ireland. Business owners and home owners are enjoying the superior comfort offered by The Unico System. The Unico System can be found in offices, custom homes, historic, remodelled and extended properties.

Some Unico System installations include:—

SMC, Finglas — Modus Media, Clonshaugh — Bord Na Mona — Two Way Freight, Dublin — Melbourne Motors, Cork — SC Jebb, Lisburn — AJ Plumbing Supplies, Newry — Patterson Pumps, Mullingar, as well as numerous residential installations throughout Ireland.

How It Works

The Unico System uses a principle called aspiration, eliminating drafts and keeping temperatures even and comfortable from floor to ceiling.

A jet of air enters the room through a small outlet. The air below the jet is depressed. The room air is pulled over to the incoming jet of air. In effect, air is gently pulled towards the outlet.

A great advantage of this method is that it will not make a difference where in a room the outlets are located. Multiple outlets can be grouped together if required.



Aspiration eliminates drafts

Quiet

The Unico System sound attenuated tubing is specially designed to fit into the tightest of spaces. The sound attenuator tubing acts as a silencer to eliminate any air noise from the system. The tubing can run between partition walls and between floor joists.



Sound attenuated tubing fits into the tightest spaces

Why you should use The Unico System

For new or existing offices and homes, The Unico System is the answer for high performance heating and/or air conditioning.

The Unico System **requires little or no remodelling** so you can maintain the architectural integrity of your building.

The Unico System is **quiet and barely audible** due to the flexible mini-ducts that are expertly designed to absorb sound and provide quiet air flow through small, subtle outlets.

There are **no drafts or breezes** from a Unico System — no complaints from customers or employees often associated with cassettes and wall mount systems.

There are large operating **cost savings** as The Unico System can heat using a gas or oil boiler versus using day rate electricity for heating.

Typically one Unico System can cover up to 2500 sq ft of office for both heating and cooling. Fewer systems cover a larger area compared to split systems leading to **lower installed cost**.

For further details contact Eamon Fidgeon on 044 84881 or 087 2231015

DISTRIBUTED BY:

Unico System Ireland

7B Lough Sheever Corporate Park
Mullingar

Co Westmeath, Ireland

Telephone: 00 353 44 84881

Facsimile: 00 353 44 84882

Mobile: 00 353 87 2231015

www.unicosystemireland.com

e-mail: info@unicosystemireland.com

CLIVETpack Stand-Alone Rooftop Units

The importance of environmental comfort, hygiene and security in all types of buildings is receiving much more attention from end-users and legislators alike. Clivet has answered these growing needs and modern demands with a vast range of air conditioning systems, each comprising products and systems designed to satisfy the most specific applications.

In doing so Clivet has gone beyond the concept of "the product" and has developed system solutions, made to measure for particular applications. These ensure quality comfort, optimise design and installation times, provide great efficiencies, and are not detrimental to the environment.

There is a wide choice to choose from, including hydronic, split system, packaged, terminal unit, geothermic and close control units. Capacities range from 1.5kW to 1800kW and cover everything from residential through to medium and large scale commercial applications.

Over the years Clivet has devised innovative products and "industry firsts", a typical case in point being the newly introduced Clivetpack, which is unique in that it incorporates all the functions normally covered by different appliances or systems interlocked to the main system.

It is equipped with an exclusive heat recovery system using a dedicated chiller circuit which means that equipment can always operate under optimum conditions, guaranteeing maximum energy efficiency. This feature also allows an increase in the number of capacity steps available to the system.

The logistics of the installation operation are greatly reduced because the packaged system incorporates all the necessary components. This reduces the number of specialist skills required and the actual installation time considerably, thereby saving on costs. The unique design also eliminates the need for external water pipelines and pumping units.

One of the key benefits of Clivetpack is that cooling and heating energy will be produced by the unit at the actual point of delivery, minimising the inevitable dissipation of the heat that occurs where long and convoluted ducts and pipelines are installed.

The power needed to drive fans represents a significant proportion of overall energy consumption in HVAC systems, and improving the efficiency of fans is a fundamental aspect of energy optimisation in this type of unit.

Clivetpack rooftop units are equipped with an original system of fans able to achieve a



CLIVETpack rooftop unit available from Coolair

drastically-reduced energy requirement in this department.

Clivetpack also actively recovers heat from the exhausted air. A dedicated cooling circuit captures the thermal energy (which would be lost if the stale air were simply vented to the atmosphere) and transfers it to the air directed into the building. This has considerable advantages in terms of reducing power consumed for pre-treatment purposes.

The adoption of a dedicated cooling circuit guarantees higher overall efficiency than that obtainable with traditional, direct recovery, systems. This is achieved because of the intrinsically superior performance of the thermodynamic cycle that characterises the circuit (better operating stability) and the lower power losses attributable to the recovery system (power absorbed by the fans).

This also extends the useful operating range of the unit during both the summer and winter months, making the Clivetpack suitable for installation in all climates.

To minimise the dissipation of energy, panels of 48mm overall thickness have been adopted, guaranteeing

better heat insulation, helping to reduce noise levels, and enhancing the performance qualities of the unit generally. The Clivetpack controller monitors temperature and relative humidity continuously and, whenever possible, will increase the intake of outdoor air to the point at which the compressors shut off, allowing operation of free-cooling mode.

Moreover, the post-heating with hot gas function means the temperature and humidity in the climate controlled environment can be regulated independently. The energy used to reduce the hot gas is free, as it comes from the condensation heat recovery system.

Finally, the operation of the Clivetpack is monitored and piloted by the Clivettalk module, a controller configured to enable connection to supervision systems. With its ability for integrated control of the various sensors and other devices that can be connected to the unit, this module succeeds in delivering total air quality.

Contact: Brendan Kilgallon, Coolair.
Tel: 01 - 451 1244;
Fax: 01 - 462 3434;
email: info@coolair.iol.ie

A breath of fresh air.

Vent-Axia. air conditioning

New For Aervent Group 2003

Wall Mounted Outdoor Unit



Holiday Air Conditioning Unit



Ceiling Cassette Unit



Wall Mounted Indoor Unit



Convertible Ceiling/Floor Unit



aervent group

Incorporating Season Control and Dan Chambers

Dublin Head Office

Nangor Road Business Park, Nangor Road, Dublin 12

Tel: 01 - 456 8200 Fax: 01 - 456 8210

email: dublin@aerventgroup.com www.aerventgroup.com

Cork Office

Unit 2, Young Line Industrial Estate, Tramore Road, Toghier, Co Cork

Tel: 021 - 432 0203 Fax: 021 - 432 0210

email: cork@aerventgroup.com

Unico Compatible With Any Condensing Unit or Chiller

The Unico System from Unico Ireland is a mini-duct central heating and air conditioning system that utilises compact, modular air handlers and flexible 88-mm outer diameter (50-mm inner diameter) supply tubing to supply conditioned air to homes and commercial spaces. The flexible supply tubing snakes through a structures existing cavities, eliminating the need for extensive remodelling or the construction of soffits or other concealments. This tubing terminates in round, 131-mm outer diameter (50-mm inner diameter) plastic or wood outlets, about the size of a CD, that can be painted or stained to match any décor. A 13-mm by 200-mm slotted outlet is also available. Once installed, the system is virtually invisible.

The Unico System has DX cooling and chilled water capabilities, the DX coils being available as cooling only or as heat pump. Three sizes are available for cooling — 5kW, 10kW and 17kW, an added benefit being that it is compatible with any manufacturers' condensing unit or chiller.

The Unico System also provides a better

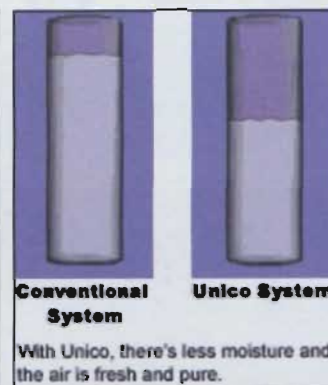
level of comfort than conventional HVAC systems. It's quieter, draft-free — because it works on the principle of aspiration instead of the "toss and throw" method — and provides even temperatures (with less than a 1.1°C variation) from ceiling to floor. Because of the unique design of the coils — with a greater surface area and air that is pulled rather than pushed across them — the Unico System, when in cooling mode, removes up to 30% more moisture from the air than conventional systems. End users enjoy fresh, pure air and feel more comfortable, even in areas of the country with high humidity.

The Unico System offers two methods of providing air conditioning — through use of its straight DX refrigerant coil or through the use of its chilled water coil. The surface area of each coil is greater than that of conventional systems and, unlike conventional systems, the Unico System pulls, rather than blows, air across the coil. This results in a greater reduction of humidity in cooling mode, allowing for greater comfort at higher thermostat settings and a significant

gain in energy efficiency.

As with cooling, there are two primary methods of providing heat with the Unico System — through the use of its heat pump coil or through the use of its hot water coil. The heat pump coil works best in temperate areas where the temperature does not fall below freezing and in areas where electrical rates are not highly expensive. The hot water coil is an excellent method of providing comfortable warm air with water supplied from a boiler or a hot water heater. The reverse effects of the cooling coil are evident with the use of a Unico System hot water coil. Because the source of heat is hydronic, the air is moist and comfortable, unlike the dry, "fried air" sensation one feels with a conventional gas-fired forced system.

The Unico System outperforms conventional heating and cooling systems by utilising a patented high velocity system of air. Instead of typical units which operate at 2.5 - 3 meters per second at the outlet, the Unico System operates at 10 meters per second. Consequently, while end users feel the comfort, they don't hear it. The air handler is designed to isolate noise and vibration. In addition, the uniquely designed supply tubes are lined with sound-dampening, spun-bond



The Unico System, when in cooling mode, removes up to 30% more moisture from the air than conventional systems

nylon, providing high performance yet quiet comfort.

The Unico System works on the principle of aspiration. Unlike conventional systems which often leave hot and cold spots as well as drafts throughout the home or building, Unico's streams of air enter a room and gently mix with the room's existing air currents. From floor to ceiling, air temperatures are even and drafts are eliminated.

Contact: Eamon Fidgeon, Unico System Ireland.
Tel: 044 84881;
email: info@unicosystemireland.com

3D Air Sales (Ireland) Ltd,
Unit 8, Greenhills Business Centre,
Greenhills Industrial Estate, Tallaght, Dublin 24.

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

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

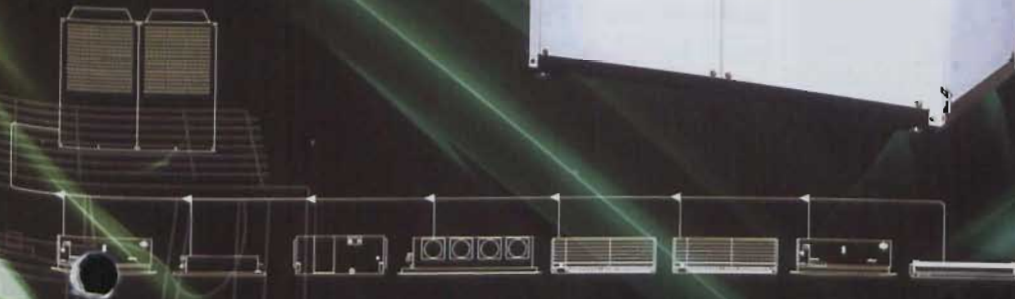


ACR NEWS
PRODUCT DISTRIBUTOR
OF THE YEAR 2003

www.3dair.co.uk

GHP Gas Engine Powered VRF Systems

Variable Capacity Cooling / Heat Pump Systems



VRF (variable refrigerant flow) systems are normally powered by electric driven compressors with an INVERTER for variable speed control.

The GHP is a VRF system, which has the compressor powered by an engine using natural gas as the input fuel.

This means that large cooling / heating systems can be installed in buildings which have a limited electricity supply. The GHP requires some electrical power for the fans and controls, but this is minimal compared to the power requirements of a conventional VRF, Chiller, or other type of system.

In winter, the heating performance is maintained in very cold ambient conditions, because the waste heat from the engine is utilised as a secondary heat source to enhance the output of the heat pump.

3D AIR SALES Ltd - Distributors of MITSUBISHI Split Systems, VRF Systems, and GHP in the UK and Republic of Ireland.



McQuay Appoint Marren Engineering

McQuay International — a world leader in the supply of equipment to the heating, ventilating and air conditioning industry — has appointed Marren Engineering as its distributor for Ireland. Worldwide, it has more than 2.2 million sq ft of manufacturing facilities at 10 plants on three continents. There are more than 5000 dedicated employees, an impressive array of joint venture partners, licensees, and sales distributors — including Marren Engineering — who make it a practice to put the customer first.

That McQuay should choose Marren Engineering is hardly surprising. Principal Tom Marren is known and respected throughout the industry for his equipment selection capabilities and the quality of support services his company provides. This includes everything from helping to devise the initial solution to overseeing the installation and providing after-sales service and maintenance support packages.

"This is an exciting development for our company", said principal Tom Marren, "as it strengthens our product portfolio and broadens the scope of the applications solutions we can offer. McQuay is



McQuay ALS chiller from Marren Engineering

long-established in the chiller market and just recently unveiled the new Series ALS range which represents a major step forward in chiller design".

The McQuay range of chillers is unparalleled and enables McQuay to offer various solutions ranging from mini chillers at 8kW through to high performance Centrifugal machines at 9000kW.

Air cooled products range from 40kW through to 1800kW utilising Scroll, Reciprocating and Screw Compressors with the latest refrigerants R134a and R407c along with

options of Ammonia. Water Cooled products range from 80kW through to 9000kW utilising Scroll, Reciprocating, Screw, Centrifugal and Absorption, again using all of the latest of refrigerants.

Installations to date include John & Johnson, Yaminochi, Smith-Kline Beecham and Hertz to name but a few.

Demanding clients such as the aforementioned expect innovative and technologically-driven solutions, and one which comply will all relevant regulations.

One of the most frequently-asked

questions during McQuay's initial development of its new chiller series was which refrigerant to go with?. Though HFC 407C refrigerant was the easier and cheaper solution, the huge advantages offered by HFC 134a were too evident to be ignored. Hence the decision to go with the latter.

Additionally, McQuay has always been very sensitive to "environment protection". One of the key reasons for driving the use of HFC 134a refrigerant was the low impact on global warming potential that this refrigerant seems to have.

HFC 134a is not a blend but a pure liquid refrigerant. Other advantages are:—
— No charging problems (gas or liquid state);
— Easy additional charge directly from the gas cylinder;
— Evaporating and condensing process at constant temperatures;
— Good superheat and subcooling control.

In spite of the visible advantages of R134a, many chiller manufacturers have opted for 407C refrigerant mainly due to increased costs and poor availability of screw compressors suitable for R134a on the market. McQuay has produced screw compressors within the group for many years and so addressed the



McQuay water cooled chiller from Marren Engineering

challenge to design and manufacture compressors particularly suited to, and optimised for, 134a. The results of extensive testing and field use has shown that the new single-screw compressors fitted as standard to McQuay Frame 4 and Frame 3200 series chillers deliver a better and more reliable response to the ever-more-stringent market demands.

The control of noise in the air conditioning business arena is also becoming increasingly important. Modern chiller design, as well as other industrial products, are influenced by the rules controlling sound emission, all of which are becoming more stringent by the day. McQuay International has always been a leader in the supply of noise-sensitive chillers and results have confirmed the competitiveness of McQuay following the supply of a wide range of super silenced air cooled water chillers. Sound emission levels lower than 65dB(A) at 1 metre. Without external acoustic lagging requirements. This low value has been achieved by locating and subsequently isolating all sound and vibration sources. McQuay International has traditionally developed innovative technical solutions and engineering

devices. The new Series ALS range represents yet another pioneering step forward in chiller design, the units in question being capable of satisfying even the most stringent of performance and sound emission requirements.

A chiller is required to operate at full load conditions for just a few thousand hours of its operating life. For the majority, it will supply a cooling load lower than its intended design. McQuay International ALS units are equipped with a continuously regulating refrigerant valve on two independent refrigerant circuits. This allows a very positive COP at partial load. COP (i.e. the coefficient of performance) is definitively higher compared to the standard values shown in the catalogue at 100% cooling capacity. This results in notable savings on the annual operation, therefore the user can very quickly recover the initial investment capitalising on an economic benefit during subsequent years of chiller activity.

Contact: Tom Marren, Marren Engineering.
Tel: 01 - 833 4144;
Fax: 01 - 833 4182;
email: t.marren@marrenengineering.com

Unitary Products

A full range of unitary products is available incorporating:—

- Fan Coils;
- Water-sourced heat pumps;
- Rooftop packaged units.

However, there are continuous innovative developments in this area with new products regularly coming on stream. With ever-increasing energy

efficiency demands from end-users and more stringent EU legislation, products such as water-sourced heat pumps will inevitably come more to the fore. They are ideal for hotel, retail and other similar applications, the McQuay range now available being a split-type unit to ensure ultra-low noise operating conditions.

Air Handling Systems



McQuay air handling unit from Marren Engineering

New Generation Easdale is recognised as the market leader for air handling units and is suitable for virtually all applications, ranging from the smallest units through to large systems up to and in excess of 40 m³/s. Units can be arranged in many configurations, be it vertical, horizontal, suitable for internal/external application, and with/without control systems.

Within the Easdale range of units there are four variations of specification, ranging from the high-specification fully-flexible New Generation system which allows total variation unit dimensions

in 50mm steps from 750mm square through to 3100mm high x 6000mm wide. Further standard ranges of equipment are available in 20 standard sizes for 50mm panel systems and 25mm panel systems.

The entire range of air handling equipment is supported by state-of-the-art selection, drawing and engineering software programmes designed to provide accurate fast information. Selection programmes are available for client use.

McQuay air handling units are already widely installed throughout Ireland, some of the prestigious projects including Intel, The Irish Times and Compaq.

Cut The Noise and Live Longer!

The latest range of motorised control valves from Danfoss is the result of dedicated development and close cooperation with customers in the design process. The series meets increasingly tougher demands on performance, comprises a compact design, and covers heating, cooling and steam applications. Benefits include reduced noise levels, improved control performance and prolonged lifetime. Danfoss has also extended the range to cover virtually every application, whatever the type and layout.

Control capabilities included in the range combine the advantages of linear and exponential characteristics, which means that the most difficult requirements of heating and cooling systems are met while still providing instantaneous hot water. This is made possible by stabilising control of the valve at the critical closing position. A variety of systems were tested during the development phase, so the company is able to recommend the

best combination of actuator and control valve for any application.

Within this range, specifiers/buyers can choose actuators with many different functions and features, as well as an optimum price/value ratio. The valve series is available in different materials, which fulfil the heavy-duty requirements, and is supplied with different connections. The range stands for progress in a number of essential areas, which meets the increasingly stricter requirements for control performance, features, compact design and best value for money. Examples of product features and benefits include:—

- Excellent control performance and split characteristic;
- Consistent low level of noise emission;
- Easy handling and compact design;
- Safety function;
- Increased product lifetime.

Danfoss has invested significantly in research on noise emission and is setting new standards on the market. For the range of motorised control



A selection from the range of motorised valves available from Danfoss Ireland

valves Danfoss optimised actuator and valve operations by improving motor and gear technology, as well as gear design.

The series has kept its characteristically easy operation and installation. The threaded coupling between the actuator and valve make it easy to connect and coupling allows for rotations, so that cable entry can be positioned as required. The actuator automatically adjusts to the end-position of the valve when the power is switched on, and the position indicator displays the movement and position of the valve. The range's compactness also caters for pre-manufactured units, and installations in confined spaces.

To avoid overheating special safety precautions may be necessary in

systems with high supply temperatures. The safety function activates in case of power supply failure or if the safety thermostat cuts off the power. It closes the valve within a certain time limit.

Finally, wear and tear is reduced when the motorised control valve operates in a system, together with Danfoss' ECL Comfort controller and differential pressure controls. A motor protection function is enclosed in the ECL Comfort controller. By means of settings in the controller the actuator and valve are protected against hunting, which prolongs the lifetime.

Contact: Brian F Maguire, Sales Manager/Bill Carbery, Technical Sales Representative, Danfoss Ireland.
Tel: 01 - 626 8111;
email: brian.maguire@danfoss.ie

York Goes Barking Mad At The Dogs!

York ACR went barking mad, literally, in Cork recently. A night out at the dogs proved enormous fun — even for those who failed to pick a winner on the night! Hosted by Dave Dorney, Senior Sales Engineer who runs the Cork office, the occasion was attended by a mix of consultants and contractors, along with York ACR National Sales Manager, Frank Doyle and Dublin-based Senior Sales Engineer Andrew McEvitt. Support from

York International was provided by Ian Lilley, Director of UK Engineered Systems Group, who also has a brief for the Irish market. Consolation for those who failed to back a winner was that they placed their losing bets from the comfort of the plush surrounds of a Corporate Box while enjoying a three-course, sit-down, meal. Our photographer was also present and he captured some of the fun of the occasion.



Frank Doyle, York ACR National Sales Manager, with Senior Sales Engineer colleagues Andrew McEvitt and Dave Dorney, and Ian Lilley, Director of UK Engineered Systems Group, York International



Tom Callaghan, IIF with Mike Scanlan, Project Management Group; Ciaran O'Connor, EEL; and Ian Lilley, Director of UK Engineered Systems Group, York International



Willie Neill and Cathal Farrelly, DPS Engineering with Paul Flynn, Sara Steele and Joe Bourke, Dornan Engineering



Ken Goodman, DPS Engineering with Donal Varian and Mark Murphy, IIF; Joe Mulligan, Thompsons Air Systems; John O'Connor, DPS Engineering; and Roger Holland and Chris Howard, Jacobs Engineering



Lee Harrison, Arup Consultants with Stephen Rose, McKeon Brothers; Mark Ryan, Project Management Group; and Martin Hurley and Claire Cronin, HA O' Neill



The Benefits of Accurate Benchmarking

Benchmarking is the process of searching for and achieving excellent levels of performance through comparing processes or performances. This is done with a view to identifying "best practice" or "best buy" and assessing how to emulate this.

In an increasingly cost-conscious market, property owners and occupiers alike are constantly seeking better value and ways to improve cost efficiencies in the management of buildings. By benchmarking property service costs and understanding the service level resources that drive them, it is possible to establish cost-effective and efficient use of the premises. Typical costs associated with the ongoing running of a building include the mechanical and electrical services, any security function required, the internal and external cleaning of the building, the maintenance of the building's fabric and décor, and of course the cost of providing energy, power and water to the premises.

The sums involved in providing property costs or estates services to an organisation often form a significant element of the organisation's overall expenditure and, in the majority of instances, forms the second highest overhead after staff costs. This determines the need for a systematic and structured approach to assess the organisation's costs and highlight any areas of service level inefficiencies and waste that could be deemed to be costing the business in monetary terms. You can be sure that such an approach will not only interest the Director of Finance but also keep his attention.

There are many challenges in providing accurate and meaningful benchmarking for



By Jason Finch,
BSc Hons MRCIS ASCS ,
Area Manager –
Facilities &
Consultancy
with Irish Estates.
Tel: 01 - 704 1400.

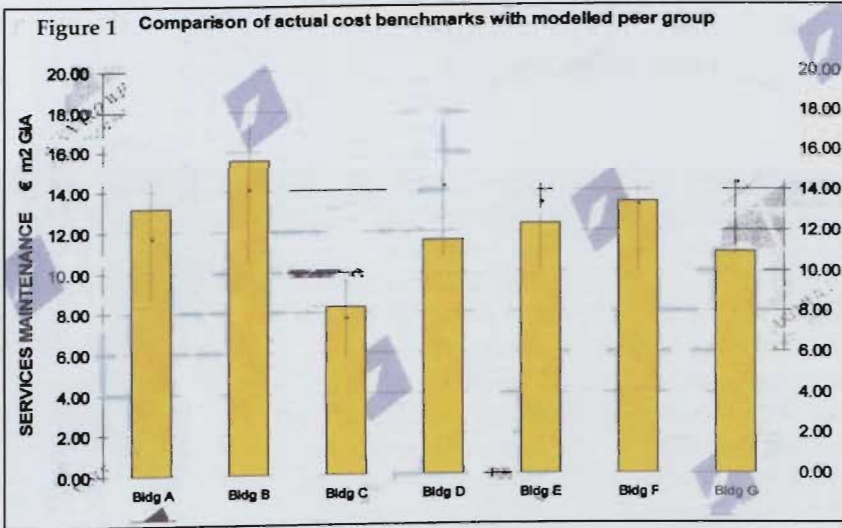
buildings. To enable true comparisons to be formed it is essential that the anomalies that will inevitably exist between buildings are carefully considered and factored in when drawing conclusions. Once these anomalies have been analysed it is necessary to draw conclusions from a comparison to other building peer groups. It is therefore crucial to have premises' costs from a range of buildings that can be verified as accurate and that are large enough to be of substance. Only the accuracy of this information and the ability to reach conclusions will determine successful benchmarking.

A common approach to premises cost benchmarking is for a "Benchmarking Club" to be established among organisations. Typical benchmarking club groups are chosen in accordance with the nature of the occupants' business, the age, size and quality of the building, the

extent of the engineering services, service level agreements, and of course the generic location. However, what is crucial to the entire success of a benchmarking club is that a knowledgeable professional with experience in benchmarking premises costs, and with a credible database, is tasked to oversee the process. This role is usually carried out by a consultant.

Some consultants specialise in benchmarking and therefore, in the course of their consultancy work and because of the size of their managed property portfolios, they are able to develop extensive databases of property costs and performance. For benchmarking in Ireland, Irish Estates have sole use of the "FRISQUE" system which is an internationally-recognised benchmarking support system for premises costs developed by BWA Associates in the UK. This provides a unique alignment of resources with a proven recognised benchmarking database served by a substantial amount of accurate premises cost information from within the Irish market.

When undertaking a premises cost benchmarking exercise for a client it is fundamental to collect relevant premises costs in accordance with a standard protocol. Discussion is required to ascertain gross and net internal floor areas, occupancy densities, local service constraints, particular business requirements, operating conditions, resource drivers, existing contracts and the relevant service levels in place. This information is then collated and analysed and a comparison made with a selected group of other buildings in the form of a report with appropriate conclusions and



recommendations.

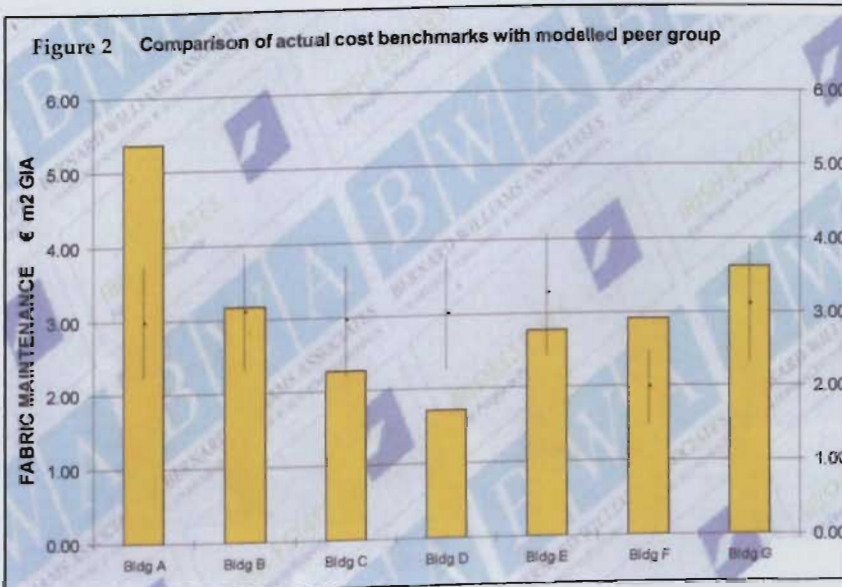
The graph illustrated in **Figure 1** provides an example of a number of different buildings and the costs for services maintenance expressed in terms of Euro per sq m Gross Internal Area (GIA).

The graph indicates what the building services maintenance is costing the organisation on a per square meter basis and how this compares with other comparable buildings or organisations. It also indicates an expected level of cost for the building given the data provided and taking into account any anomalies that may affect the service or cost.

As you can see across the comparative group, service maintenance costs vary from just over €8 per sq m GIA to over €15. Analysis points to the

fact that all the buildings fall within the expected range of costs for the buildings, however cost efficiencies and value differ across the group. In this example, buildings D and G benefit from on site service technicians which would appear to be creating costs efficiencies within this category. However, the extent of the engineering services at building B is far greater and this is reflected in the higher costs.

Further analysis can be carried out in a sectioned analysis to scrutinise and assess where the greater expenditure lies. This can aid analysis of any significant differences in expenditure on cost categories between buildings. In another example, as illustrated in **Figure 2**, a first strike benchmarking of building



fabric maintenance is carried out.

As you can see costs vary significantly from just over €1 per sq m GIA to just over €5. In this example building A costs are significantly higher as they chose to remedy various snagging items out of their own funds. However, building D has a very limited planned fabric maintenance regime in place.

In essence, simple benchmarking techniques alone are of little or no use in seeking to compare premises costs. The benefits of benchmarking when undertaken in a structured professional manner ensure the quality and appropriateness and likely accuracy of premises cost information and the services being delivered. It identifies premises service drivers and constraints, analyses cost performance of the service levels offered across sections of a sample group, and acts as an indicator to areas where service level improvements or reductions can be made without impacting overall business performance.

By carrying out accurate benchmarking of an organisation's premises costs a comparison can be made with similar organisations carrying out similar functions. Alternatively, internal benchmarks can be drawn across a range of properties that may be occupied by the same organisation and a best practice method adopted.

Once again with occupiers and landlords seeking new ways to improve the efficiency of their real estate portfolios, such innovations as benchmarking will come more and more to the forefront in the way property assets are managed.



Plumb Lines

Heard it on the grapevine ...

Plumb Lines

CLEAN UP WITH CLEAN AIR — With the impending **smoking ban** in public places set to come into force in January 2004, the hospitality sector has finally galvanised itself into action. However, it may be a case of too little too late. Recent weeks have seen a major PR offensive by the various representative bodies, all aimed at trying to get the Minister to change his mind. By emphasising the potential **job losses** — and citing the experience of **New York** as a prime example — their argument will possibly hold some sway. Nonetheless, potential job losses alone won't swing their case. They also need to demonstrate a willingness to **improve air quality** in their respective establishments by utilising the resources and products of the air movement sector. At a time when some ac market segments have slowed, the timing is **perfect** for the industry to come to the **rescue** of both the hospitality sector and the legislators. Problem is, very few people outside of the industry know of the **potential** that exists. Let's make some noise

about it before yet another **profit** opportunity slips through our fingers.

SILENCE IS GOLDEN — Frank Doyle of York is aiming to corner a sizeable percentage of the chiller market with York's new **Q-Pak Sonata** range of highly-efficient, **super-silent** chillers. Ever-more-stringent legislation — coupled with a public no longer shy about complaining — has made **noise** the new buzzword in the industry. Meanwhile, **Andrew McEvitt** has been recruited to make as much noise as he can about this new quiet development!

ENERGY: ANSWER IS BLOWING IN THE WIND — Britain expects a business boom similar to the growth of oil exploration in the 1970s and gas in the 1980s following a recent Government policy decision favouring coastal **wind generating** installations. The aim is to have the biggest offshore wind-generating capacity in the world within seven years. Germany has gone a similar route with an objective to produce up to **20 gigawatts** of electricity from offshore wind

generators — equivalent to 20 nuclear plants — by the year 2030. This will add fuel to the debate in Ireland where there are objections to **land-based** installations, let alone offshore wind-powered generators. While the pros and cons can be debated *ad infinitum*, the reality is that we must find **new, cleaner**, more environment-friendly means of generating energy.

NOW YOU SEE IT — In recognition of the tremendous response to the *BSNews/Sanyo* DVD player competition in recent months, this issue (see page 14) carries a prize of a **Sanyo 28" widescreen stereo TV**. So, get those entries in **NOW**. Meanwhile, congratulations to **Peter Hanna** of Brian O'Halloran & Associates in Dublin who was last month's winner. Happy listening and viewing Peter.



GRUNDFOS MOVIE INVITE — Want to see the forthcoming **SWAT** movie featuring Samuel L Jackson and our very own **Colin Farrell** at UCI, Tallaght, when its released in September? Then Gordon Barry of Grundfos is your man. He has issued an **invitation** to all domestic installers/contractors — each of whom can bring a guest — to join him at a **private premier** showing on Friday, 26 September. The occasion is the launch of the new Grundfos **Alpha** range. This will be the trailer movie — all five minutes of it! — before the feature presentation.

It Was 30 Years Ago Today!

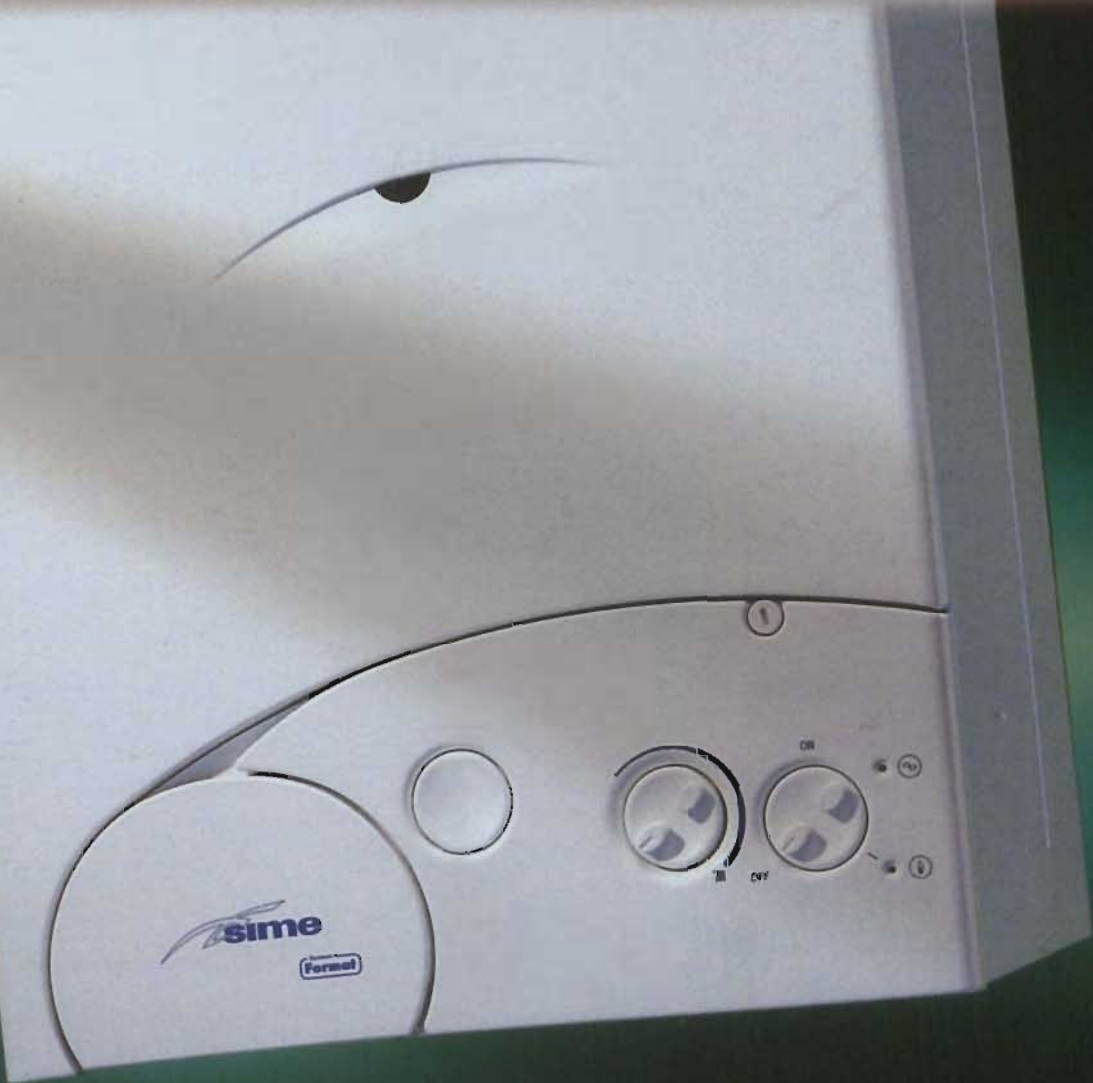


Remember Fanny McWhinge who was ripped off by the Sleeveen Heating Company and was rescued by Bibcock & Boyle ... oh, the good old days!

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