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 WILO also aims at in its research and development programmes. With its high-efficiency pump, Stratos, WILO 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
The industry is never consulted on any of these issues. How could it be when legislators and representative bodies from other construction-related industry segments don’t know where to turn?

This situation must be addressed immediately. There are examples galore of how effective representative bodies can be in promoting and safeguarding the interests of various industry sectors. Building services should be no different.
Cutting Edge Split System form Carrier

Carrier Air Conditioning is meeting the growing demand for increasing energy efficient split system air conditioners by launching a new inverter-controlled range called X Power, with cooling capacities between 1.1kW and 8.3kW in single split and multi-split formats up to 4:1.

X Power uses the non-ozone-depleting refrigerant R410A and operates particularly quietly indoors and outside at 26dB (A), which is approximately four decibels lower than a soft whisper. As they are heat pump systems they are able to provide cool air in summer and warm air in winter.

X Power achieves its outstanding energy efficiency characteristics by controlling the speed of the compressor motor and dual rotor compressor via a state-of-the-art DC inverter.

An infrared remote controller sets up the functions of the indoor unit and the required room temperature. The electronic controller in the indoor unit calculates the differential between ambient and desired temperature and sends the information to the outdoor unit. The energy-saving electronics are installed in the outdoor unit.

In a conventional split system the compressor has a fixed speed and has to constantly stop and start using power efficiently. In the X Power an electronic converter transforms the single phase main AC electrical current into DC. The inverter controls the frequency to the compressor to match its rotational speed to the cooling or heating capacity it needs to produce, maintaining optimum efficiency.

In multi-split applications even higher efficiencies can be achieved with the application of Carrier’s DC Plus technology. In this system two different electronic management logics optimise the compressor operation — Pulse Amplitude Modulation (PAM) generates maximum power for the compressor on start up and at peak loads, whereas Pulse Width Modulation (PWM) optimises speeds once the required temperature is achieved.

The compressor itself is a DC twin rotary compressor. Having two rotary compression cylinders offset from each other at 180° reduces noise and vibration. Thanks to the availability of the DC current units fan motors can be of the more efficient DC type.

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

Legionnaires Disease Training Course

The management and control of Legionnaires’ disease is a subject that is taken very seriously by the Health and Safety Commission in the UK. They have produced a new Approved Code of Practice (ACOP) and Guidance document (L8). The ACOP applies whenever water is stored or used in a way that may create a reasonably foreseeable risk of legionellosis.

Where assessment shows that there is a reasonably foreseeable risk, then the person on whom the statutory duty falls should ensure that there is a management regime in place for the proper maintenance of systems as detailed in the ACOP.

Those appointed to carry out the control measures and strategies should be suitably informed, instructed and trained and their suitability assessed. They should be trained to a standard that ensures that tasks are carried out in a safe and technically competent manner.

Regular refresher training should be given and records of all initial and refresher training maintained.

The courses organised by Knight Consultancy and Training Ltd will help fulfil these training needs and will be given by Dr John Alvey, an experienced water treatment consultant and risk assessor. He is a Fellow and current Chairman of the Water Management Society. A course is planned for Dublin over the coming months. Details are available directly from Mike Knight.

Contact: Mike Knight 0044 7966 196383;
email: mikehknight@blueyonder.co.uk

Carrier X Power — the completely new inverter-controlled range of split system air conditioners from Core Air Conditioning
Providing The Close Control Environment

Trane Ireland Limited
Easy-To-Use Handheld CO Meter

Quickly and accurately measure toxic carbon monoxide with the new Dwyer Model 1209-1 handheld CO meter from Manotherm. The Model 1209-1 is an ideal tool for any application where carbon monoxide needs to be monitored.

Using only one button, Model 1209-1 automatically calibrates at power on and can read CO levels from 0 to 2000 ppm in increments of 1 ppm. The lightweight design and large LCD make testing easy and straightforward for anyone to use.

Model 1209-1 has a temperature limit range from 32 to 140°F (0 to 40°C), and an operating relative humidity level of 10 to 90% RH (non-condensing). The sensor is made up of an electrochemical cell and the housing is composed of ABS plastic. Each unit comes equipped with a 9V battery and an instruction manual.

Some typical applications — HVAC; facility maintenance personnel; service and repair of commercial and domestic appliances; chimney flues; and boiler maintenance.

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

Grindex Pumps

Grindex Pumps are designed for pumping water that may contain abrasive particles up to the size of the strainer holes, pumping ground water and pumping raw water. Drainage pumps can be immersed to a maximum depth of 20m and will operate up to 40°C with acidity of pH 5-8. No supervision is required as the air valve allows the pump to run dry without damage.

The Grindex sludge pump range is designed for pumping water with high content of solids up to the size of the pump inlet opening diameter, water that contains abrasive particles, different types of mud and sludge and light slurry. These pumps will also operate to the same depth, temperature range and acidity levels as for drainage pumps.

For those requiring a highly portable, durable, easy-to-use submersible pump Tuff Line meets that need. Tuff Line pumps are ideal for unforeseen situations where reliability is required ... flooded excavations and basements, for construction worksites and for draining inspection chambers, etc. The Tuff Line consists of three models — two for dewatering and the Tuff Solo for sludge handling. All three offer high performance despite being compact and lightweight. Capacity ranges from 385 litres per minute up to 690 litres per minute and the Tuff Solo can handle solids in suspension up to 40mm diameter.

Contact: Joseph Lavelle, Euroflo Fluid Handling. Tel: 01 - 640 4100; web: www.grindex.com

Interclima 2004

Interclima, the international HVAC exhibition — Paris Expo, 3 to 6 February 2004 — will focus on the energy performance of residential, service and industrial buildings.

Besides offering the opportunity to meet all those involved in HVAC and refrigeration, Interclima will act as a forum 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 effects it will have on various sectors.

Interclima 2004 will also offer a programme of workshops designed to offer specific and personalised responses for particular areas of activity. In this context the renewable sources of energy, in Hall 4, will be one of the major draws of the show.

Information: www.interclima.com
Soaring to new levels of indoor climate

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t: +353 (0) 21 491 7700 f: +353 (0) 21 491 7706 w: www.flaktwoods.com
Solar Power Ventilation

Continuing its theme of bionics and looking to nature for building services solutions, Wilo cites the example of how termite nests provide a fascinating example of efficient air-conditioning.

African termites construct different types of nests, depending on whether they live on the Ivory Coast or in Uganda. The closed structures of the Ugandan species are especially interesting. Here, a volume of air that is permanently being exchanged, circulates between the damp, cool “cellar” and the upper “cathedral”. The required oxygen diffuses in, and the CO₂ produced by the termites in their mould gardens diffuses out, through the porous material of the termite nest.

The circulation functions by means of the action of the sun and the body warmth of the termites, and is therefore solar-powered, at least in times of strong sunlight. The circulation however functions only because of the porous building material that the termites produce using sand and saliva. It dries as hard as stone, but still allows the gas molecules to penetrate. This creates good ventilation without any draughts, and can be controlled accurately to within a few degrees Celsius and also with regard to air humidity.

At the University of Saarbrücken, bionics specialists under Prof. Nachtigall are working to design a transparent insulating material with similar pore ventilation.

Contact: Tony Cusack, Wilo Engineering.
Tel: 01 - 061 - 410 963.
email: sales@wilo.ie

Solar Power Ventilation

Bathroom Products for the Less Able

In this, the year that Ireland is hosting the Special Olympics, it is appropriate that Heatmerchants has introduced an extensive range of sanitary ware and related accessories for less able people. The large selection is available from both Heatmerchants and Tubs & Tiles with a special display dedicated to products for the less able at most nationwide branches.

The choices offered are extensive and cater for people who have difficulty using standard product types. They are intended for use by people living in their own homes, with or without assistance, to those in sheltered accommodation, nursing and residential homes, and hospitals.

For instance, the Apollo award-winning bath uses water pressure to lift the seat out of the bath and is suitable for varying degrees of mobility. If water pressure is a problem, an optional booster pump is available to ensure trouble-free bathing.

Available in three sizes with a choice of colour options and tap locations, the Apollo is suitable for many situations.

Apollo includes a comprehensive range of shower trays — with level-entry or ramped access — with half-height enclosure offering left or right-hand entry.

The Elegance Series is a range of baths offering enhanced features to cope with different assisted situations. As well as the benefit of a removable seat in this range, there is also an option of an open-fronted seat to allow for complete personal hygiene.

Additionally, there is a model supplied pre-assembled on a support frame, thereby reducing the floor preparation required and making installation easier.

Completing the line-up is a vast collection of related brassware and accessories such as thermostatic mixer taps, grab rails, special toilet seats, etc.

Contact: Heatmerchants branches nationwide.

Bathroom accessories for the less able from Heatmerchants
The improved design of Sanyo's SPW-XR is the ultimate in quiet convenience. Now, with sound levels as low as 31dba and fresh air intake, this four-way cassette delivers all the benefits of Sanyo's advanced engineering. 50m pipe runs on all split systems from 5.6kW to 12.6kW and 100m when connected to the Sanyo Eco Multi range, make it the convenient choice. The SPW-XR, offers great flexibility at an affordable price.
Shhhh ... Can You Hear That?

As acoustics and general noise control become more of an issue because of comfort, statutory health and safety requirements, consulting engineers and architects are increasingly looking for innovative, design-led, solutions on all manner of projects.

This is true right across the entire building services sector where, to date, many of the established solutions are based on inflexible product types. However, a new Irish company — AP Acoustics Ltd — now offers a more design-friendly, attractive range of solutions from leading manufacturer Allaway Acoustics Ltd.

Established by Austin McDermott (also Managing Director of Core Air Conditioning) and his partner Trish McDermott, the intention is to provide the complete noise control package to all industry sectors.

“Available in any number of design permutations”, says Trish, “the Allaway range caters for all market segments with products which can be customised to complement the aesthetics of any project, while also meeting the most exacting acoustic performance requirements.

“However, AP Acoustics is not just about bringing quality products of proven performance to the marketplace. Equally important is choosing the correct product or system for the application in question. To that end we offer a comprehensive design and selection service whereby we work closely with the consultant and/or architect to devise the most appropriate noise control solution for each project.”

Allaway Acoustics Ltd is a long-established manufacturer of noise control products with a proven track record. The range is extensive and caters for all requirements, including attenuators, acoustic doors, acoustic plenums, etc.

Contact: Trish McDermott, AP Acoustics.
Tel: 01 - 285 6652;
Fax: 01 - 285 6653;
email: apacoustics@iol.ie

Systemair Rotovex Heat Recovery

The Rotovex heat recovery unit from Systemair is one of the most technologically-advanced heat recovery units on the market. It has a high-efficiency rotating thermal heat recovery wheel and EC fan motors. What are EC motors? EC stands for electronically-commutated ... in other words they are brushless DC motors.

Put very simply, this type of motor maintains its efficiency even when speed controlled, unlike AC motors whose efficiency drops dramatically when speed controlled. These motors drive centrifugal plug fans which provide a constant airflow function via the units integral control system. The entire unit is pre-wired and ready for use on delivery. Rotovex is tested according to Eurovent F1886.

Other units in the heat recovery range from Systemair are the VVX units for use in small houses and apartments, and the Maxi units for use in small commercial and industrial applications. Each of these units use plate heat exchanger technology.

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

Belfast Concert Hall is one of the many prestigious projects featuring Allaway acoustic solutions.
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

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Unit 2, Young Line Industrial Estate, Tramore Road, Togher, Co Cork
Tel: 021 - 432 0203 Fax: 021 - 432 0210
email: cork@aerventgroup.com

Published by ARROW @ TU Dublin 2003
Trane Close Control Precision Air Conditioning Systems

Trane's range of precision air-conditioning units are specifically designed to provide advanced, reliable technological solutions for high specification clean rooms, laboratories, telecommunication centres, and internet sites. Trane Mercury and Jupiter precision AC units are available in upflow and downflow configurations with either DX or chilled water cooling. The option of air or water cooled condensing units provides the complete solution. All units are manufactured to ISO and Eurovent standards.

In this high tech, high specification market sector it's critical to keep ahead of market needs and changes through continuous product development, that's why 5% of the sales turnover is invested into research and development, and over 800sqm has been dedicated to laboratories and test rooms. In addition, Trane has the ability to simulate design operating conditions for internet and telecom centres in a purpose-built test facility.

As well as Eircom in Ireland, over ninety telecom companies worldwide use Trane precision air conditioning units. They are well reputed for build quality and reliability. Trane's confidence in the range is such that it offer 3-years parts warranty on all Mercury and Jupiter units.

Compact, modular and equipped with different microprocessor systems selected to suit the application, Trane systems can be configured and re-configured as required to suit changing capacities, building layouts, and client demands.

Contact: Maria Furlong, Trane Ireland Limited.
Tel: 01 - 460 6030; fax: 01 - 460 6039; web: www.trane.com.

LG €75 Million R&D Centre

LG, the world's largest manufacturer of air conditioning products, has opened a €75 million research, design and testing centre dedicated to its expanding range of commercial and conditioning products.

The five-storey purpose built building, named the Whisen Tower, has over 230 engineers with state-of-the-art testing facilities for each and every operation and facet of commercial air conditioning systems, particularly on VRF types.

"The company has built a building to simulate site conditions to exacting standards in every possible manner — separation, noise, efficiency, comfort ... the lot! It is, without any doubt in my mind, the best and most advanced of its kind," says Andy Stanford of LG distributor Diffusion.

BTU Matchplay — 1st Round Draw

Ray Byrne v Brian Keaveney
Michael Wise v Derek Whelan
Eamonn Vickers v Gerry Tobin
Michael Kearney v Dave Cranston
Sean Brady v Michael Morrissey
Tom Scott v John Doyle
Neil Ryan v Brendan Bracken
Brendan Keaveney v Jim Smith
Sean Smith v Dave Harris
Michael Melligan v John Littlefield
Terry Maher v John Lavelle
Eamonn McGrattan v Bob Daly
Steve Jones v Martin McKeon
Frank Lynch v Padraig Gillen
Ger Hutchinson v John Hunter
Michael White v Shay Kearney
RAGS to Golfing Riches

The Refrigeration & Air Conditioning Society (RAGS) programme got underway earlier this month with a very well attended outing at Mount Wolsey Golf Club in Tullow, Co Carlow.

Scoring was good on the day, overall winner Paddy Dwan coming out on top with 37pts, playing off 16. Other winners were as follows:

- **Class 1** — First: Billy Quelly 36pts (11)
- **Class 2** — First: Paddy O’Brien 30pts (14)
- **Class 3** — First: Dominic Ward 28pts (28)
- **Visitor** — Liam Carroll 26pts (23)
- **Front 9** — Michael Clancy 20pts
- **Back 9** — Michael Hannaway 14pts

Future outings:
- Tulfarris Golf Club, Saturday 26 July
- Dunravar Golf Club Sat/Sun 30/31 Aug
- Tullamore Golf Club Thursday 25 Septem
- The K Club Thursday 9 October

Contact: Michael Nolan, Hon Sec, RAGS. Tel: 01 - 450 6001.

Solar Energy Conference

"See the Light — No Bills From the Sun" is the title of the forthcoming SEI solar conference and study tour.

Venue — Botanic Gardens, Glasnevin, Dublin
Dates — 19/20 June
Contact: Tel: 023 - 42193
Web: www.sei.ie

Sanyo Subaru Sets the Pace

The Irish Rally Championship continued this month with the Rally of the Lakes at Killarney (3/4 May), a thrilling onslaught in which Austin McHale and co-driver Brian Murphy demonstrated their considerable abilities in the Sanyo Subaru.

Much of the excitement of the race was provided by their tit-for-tat battle for first place with Eugene Donnelly and co-driver Paul Kiely, with McHale and Murphy taking the lead by two seconds after Stage 17. However, a combination of cold tyres and an unlucky slippery patch caused the Impreza WRC S7 to go off the road on the next stage, setting Donnelly and Kiely up for victory.

McHale, driving the car used by four times world champion Tommi Makinin in the 2001 World Rally Championships, is considered a strong contender this year. He will have an opportunity to prove himself on the next leg of the British Championships at the Scottish Rally on 13/15 June.

Rallying enthusiasts can follow the action-packed race schedule and the progress of the Sanyo-backed driver, on RTE, Channel 4 and Sky Sports or www.irishrallying.com
Contact: Barry Hennessy, Sanyo Air Conditioners.
Tel: 01 - 456 8910; web: www.sanyoairecon.com

York National Manager

Frank Doyle is the newly-appointed National Sales Manager of York ACR. Frank has been in the building services industry all his working life, working primarily in the HVAC sector. He has worked as Airside Manager with York ACR for the last four years. In his new capacity of National Sales Manager Frank will be responsible for sales of the entire York range throughout Ireland.

Contact: Tel: 01 - 466 0177; Fax: 01 - 466 0198; Mobile: 087-2216266; email: frank.doyle@ie.york.com
Potterton Myson Ireland announces the re-introduction of one of the leading names in commercial boilers — Potterton Commercial. This extensive range of boilers consists of the newest generation of high-efficiency floor-standing and wall-mounted incorporating advanced design and state-of-the-art technology. Of particular note is the new Paramount condensing wall-hung boiler and the Eurocondense floor-standing model.

PARAMOUNT — 40kW, 51kW, 80kW
- Low NOx Class 5
- Net Operating Efficiency up to 109%
- Fully Modulating
- Light, Compact, Small Design
- Quiet Operation
- Versatile Flueing Operations
- Automatic Digital Control

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

Potterton Myson (Irl) Ltd
Belgard Road, Tallaght, Dublin 24
Tel: 01-459 0870  Fax: 01 - 459 0880   email: post@potterton-myson.ie
To further strengthen its standing in the wastewater and sewage pump sector Grundfos Ireland has established a dedicated division within the business to cater for this growing market segment.

To that end it has appointed James Whelan as Sales Engineer with specific responsibility for wastewater and sewage pumps. James has extensive experience in this area, having previously worked with Sarlin Pumps (since acquired by Grundfos) throughout central Europe, the Far East and the Asia Pacific region.

James will spend most of his time in the field while John McCormack, his Technical Sales Support colleague, will provide the dedicated in-house back-up on wastewater and sewage products.

"This is a fast-expanding and challenging marketplace", says James. "On the environmental front Ireland has until 2006 to put wastewater and sewage treatment plants in place which will end the all too common practice of pumping untreated waste directly into the sea. A massive modernisation and upgrading programme is currently underway, supported by grant aid from the EU.

"When you consider the life-time of such treatment plants, which can be decades, then the quality and reliability of pumps is absolutely crucial for the functioning of the entire facility. Proper pump selection, sizing and installation is very much a part of this."

"Consequently, what we at Grundfos offer is a comprehensive range of quality products, aligned with professional advice and support whereby we work closely with the specifier to identify and devise the most reliable and cost-effective solution for any given situation."

Contact: James Whelan, Grundfos Ireland.
Tel: 01 - 295 4926; email: jwhelan@grundfos.com j mccormack@grundfos.com

Grundfos Forms Dedicated Wastewater & Sewage Division

PolyPanel From Polytherm

Short construction times are increasingly important, the need to save time — which directly correlates into money savings — being of paramount importance on all manner of building projects.

Not surprisingly, wooden frame homes are becoming more commonplace in house construction because of their short construction times. In order to make use of this "time-saver" feature, architects, planners and developers increasingly look to floor-heating systems in dry constructional styles, such as PolyPanel from Polytherm.

However, the versatility of PolyPanel means that it is equally suitable for conventional first floors where joists are of the floor construction type. As there is no need to carry screed or cement through the house or notch joists, the structural integrity of the floor joists remains intact.

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

https://arrow.tudublin.ie/bsn/vol42/iss5/1
Is Building Performance on your Agenda?

Building Performance 2003 is a two-day conference and exhibition geared to helping architects, M&E consultants, contractors and corporate end users and their agents to reduce building running costs, while increasing property values, sustainability and performance.

Sponsored by key industry bodies — including the British Property Federation, RICS, CIOB, IEE, BIAT, ABE, the IFMA and the UK Open Systems Association — the combined exhibition and conference will take place in Olympia, London, on 16/17 September next.

The Building Performance exhibition brings together facilities management providers, consulting engineers and equipment suppliers that have a demonstrable record of improving the performance and cost-effectiveness of the built environment.

Those exhibiting include Mitsubishi Electric, ABB, Danfoss, George S Hall, Dalkia, Echelon and Schneider.

Contact: www.building-performance.co.uk

Potterton Training Courses

Education and training is the lifeblood of any industry so, to that end, some companies invest substantially in providing such services. Potterton Myson Ireland is a typical case in point.

Having spent a small fortune designing and building a state-of-the-art education and training centre at its headquarters in Dublin, Vincent Broderick and his colleagues run a continuous programme of sales training and technical training courses open to all within building services sector.

Contact: Vincent Broderick, Potterton Myson Ireland. Tel: 01 - 459 0870;
email: post@potterton-myson.ie;
Web: www.potterton.co.uk.

Win a Sanyo DVD

Enter our reader competition and you could win a fantastic DVD player in our prize draw. Simply answer the questions and complete the details, copy and fax back to BS News on 01 288 6966.

May competition

1) Where will the All-Ireland GAA Football final be held this year?
   a) Pairc Ui Caoimh  
   b) Croke Park  
   c) Stanley Park

2) What is the address of the Sanyo Air Conditioners website?
   a) www.sanyoaic.com  
   b) www.airconsanyo.com  
   c) www.sanyoaircon.com

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.
Potterton Commercial Re-Introduced

Potterton Myson Ireland has re-introduced the Potterton Commercial range, initially on an ex-factory basis but with selected units coming into stock over the next few months. The range consists of the latest generation high-efficiency floor and wall mounted models with outputs ranging from 40kW to 2500kW.

Of particular note is the new Paramount condensing wall-hung boiler with outputs ranging from 40kW to 80kW, and the Eurocondense floor-standing model with outputs ranging from 40kW to 250kW.

The Paramount is available in outputs of 40kW, 51kW and 80kW and even the highest output model maintains its compact dimensions — just 480mm wide. For light commercial applications, the Paramount is perfect for modular installations with multiple banks of boilers and with this type of installation comes a high degree of flexibility. There is also the option of re-fabricated low-loss pipework headers and versatile flue arrangements, the clear logical layout of components facilitates easy installation, use, and maintenance.

With its aluminium/silicon heat exchanger it provides energy efficiency up to 109% net plus advanced ultra-low NOx performance, exceeding Class 5. Contributing to its flexibility is the silencer system that ensures quiet operation and prevents resonance, thus opening up the scope for choosing where in a building to position the boiler.

The Eurocondense comes with a corrosion-resistant aluminium-silicon alloy heat exchanger, the complete boiler enclosed within insulated powder-coated mild steel panels finished in beige.

Tallaght Hospital Thanks Don Collins

The Don Collins Golf Classic held in City West last month proved exceptionally successful. Organised by his close friends as a personal tribute, the event was planned as a fundraiser to raise sufficient money for a special sterilising unit for Tallaght Hospital.

The machine previously used in the hospital’s ICU unit took eight hours to sterilise equipment but the new machine now in place thanks to the Don Collins Golf Classic does the same job in 30 minutes. Moreover, such was the industry response that the projected target was exceeded and that, coupled with a VAT waiver on the cost of the machine, meant that additional features could also be provided.

On the day 140 people played golf with 110 of those remaining on that evening for the meal, raffle and auction. Jimmy Breton did an excellent job as auctioneer, his patter milking the maximum for an Ireland soccer football shirt signed by the squad in Brian Kerr’s first international. This was provided by Tony McEvoy with Dave Harris of Harris Heating donating a DVD player and TV for the raffle.

While all enjoyed the golf on what was a beautiful day, the results are unimportant, other than it was fitting for Don’s son David to win the longest drive competition on the 18th.

That Don’s industry friends undertook such a massive task in his memory is a measure of how deeply he touched their lives. The fact that the industry in general responded so generously demonstrates that he touched a vast cross-section of the business in a similar way.
American Standard At Portmarnock Links

The BTU season kicked off in style last month with the American Standard-sponsored outing at Portmarnock Golf Links. It was a bright and sunny day but the rather windy conditions — coupled with the greens not being at their best because of the long dry spell — made for quite difficult playing conditions. In the circumstances the scoring was excellent.

In what appears, at least, to be a male-dominated industry, it was great to see Sheila Kilbride, Managing Director, American Standard, make the presentations. At the risk of being sexist, it is also important to note that perhaps it was her influence which showed in the choice of very attractive and imaginative prizes.

Given that it was the first outing of the season — and the fact that it included the Matchplay qualifying (see page 10) — there was a very large playing field. Winners on the day were as donated in the panel below.

### Portmarnock Golf Links
Sponsor: American Standard Plumbing (Ireland) Ltd

<table>
<thead>
<tr>
<th>Overall Winner</th>
<th>Niall Ryan</th>
<th>(20)</th>
<th>41 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>0-12</td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>Michael Kearney</td>
<td>(11)</td>
<td>35 Points</td>
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<tr>
<td>2</td>
<td>Eamonn Vickers</td>
<td>(10)</td>
<td>35 Points</td>
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<tr>
<td>3</td>
<td>Michael Morriseey</td>
<td>(8)</td>
<td>34 Points</td>
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<tr>
<td>Class 2</td>
<td>13-15</td>
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<tr>
<td>1</td>
<td>Tony Gillen</td>
<td>(13)</td>
<td>35 Points</td>
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<tr>
<td>2</td>
<td>Michael White</td>
<td>(14)</td>
<td>34 Points</td>
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<tr>
<td>3</td>
<td>Frank Lynch</td>
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<td>34 Points</td>
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<tr>
<td>Class 3</td>
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<td>1</td>
<td>Steve Jones</td>
<td>(24)</td>
<td>35 Points</td>
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<tr>
<td>2</td>
<td>Gerry Tobin</td>
<td>(16)</td>
<td>32 Points</td>
</tr>
<tr>
<td>3</td>
<td>Padraig Gillen</td>
<td>(20)</td>
<td>30 Points</td>
</tr>
</tbody>
</table>

| 1st Nine       | Derek Whelan  | 19 Points |
| 2nd Nine       | Michael Melligan | 19 Points |

| Visitors       | Joe Redmond   | 34 Points |
|                | Paul Kelly    | 34 Points |

Sheila Kilbride with Eamon Vickers, second Class 1

Sheila Kilbride with Vincent Broderick

Sheila Kilbride with Tony Gillen, winner Class 2

Sheila Kilbride with Gerry Tobin, second Class 3

Sheila Kilbride with Michael Melligan, winner Back 9
Danfoss Introduces Revolving Technology Bi-Directional Breakthrough

Danfoss Randall’s new, innovative range of Revolver “flow selectable” bi-directional TRVs provides the total answer to system noise linked to bi-directional TRVs and overcomes wasted time and costs arising from associated call-backs and re-plumbing.

Bi-directional radiator thermostats — energy-saving room temperature controls introduced in the late 1990’s — are a tremendous boon to the installing trade because they operate noiselessly, despite being fitted quickly in either flow or return without the need to check flow direction. Well, that is the theory. In practice a limited number of installations (probably less than 5%) create annoying and intolerable system noise if the flow enters on the “wrong” side of the valve cone.

The reasons for the problem are extremely complex. Briefly, every hydraulic system exhibits its own dynamic characteristics that arise from system rigidity, differing pipe bores, pipe runs, pump pressures and the water volume circulating within the system. Completely unpredictable, these characteristics change significantly with heating loads as TRVs and other valves open and close. System noise (water hammer) generally arises from pressure pulses occurring, typically, when a TRV slams shut. These pulses can reach many times the normal differential pressure seen in the system and tend to increase in magnitude the longer they are sustained. Unfortunately, simply fitting an automatic bypass valve cannot prevent them.

Following extensive market needs research during the 1990s, the first “bi-directional” valve bodies were introduced by a number of manufacturers. The designs for these were based on the original unidirectional concept, with modifications to optimise the valve cones, valve chambers and springs. In most installations, these valves have been very successful, allowing hassle-free installation in flow or return, either horizontally or vertically, and noise-free operation. Unfortunately, as many installers have learned,

Now you can be 100% sure water is flowing through the TRV in the right direction!

Flow in

Refer to mark

For these valve positions and flow directions align DOWNWARD pointing arrow with reference mark 1

Introducing the RAS-C² Revolver

the only ‘flow selectable’ bi-directional TRV...
these "adapted" valves do not provide the answer to system noise every single time. Whenever this problem occurs, due to the dynamics of a specific system, the only solution until now has been to remove the valve and refit it so that water-flow through the valve was from below the cone. In the small percentage of installations where noise problems did occur, the resultant frustration and became unacceptable to the installing trade.

After an in-depth research programme into the problem Danfoss established that there was no way of ensuring that any of these "first edition" bi-directional valves could provide noise-free operation every time. The only way ahead was to produce a new, redesigned product.

The solution — the new Danfoss Revolver "flow selectable" valve — has a similar valve cone design to those in previous bi-directional valves and can be installed without regard to the direction of flow. It will give trouble-free, silent operation in the vast majority of installations.

However, should system noise occur, the problem can be cured quickly and permanently simply by manually rotating a setting collar. There is no need to drain down, refit the valve, or use any tools.

The Danfoss Revolver valve body incorporates a patented, rotatable flow direction selector, a cleverly-designed moulding located within the main valve chamber. Water flows through this flow direction selector, which is sealed at the chamber inlet. Just a simple 180° rotation of the setting collar changes the flow from one TRV inlet to the other (see Figures 1 & 2), making it possible to ensure the inflow is always from below the valve cone and thus eliminate any possibility of system noise.

Danfoss has also introduced a new generation thermostatic radiator sensor - RAS-C2 - a modern, compact alternative to the RAS-C.

The RAS-C2 is competitive in terms of price and is ideally suited to both the domestic and commercial markets.

Contact: Brian F. Maguire, Danfoss Ireland. Tel: 01 - 626 8111; email: brian.maguire@danfoss.ie

Figure 2 — Diagram showing the Revolver mechanism correcting the water flow within the valve in situations of reverse flow.
BACnet to the Future

In January 2003 the International Standards Organisation (ISO) confirmed its adoption of the BACnet protocol as a communications standard for the integration of building automation and control products – ISO16484-5. Due to a parallel voting mechanism between ISO and CEN technical committees, BACnet has also been accepted as a Comité European de Normalisation (CEN) pre-standard. Developed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) BACnet joins a select group of protocols that are officially recognised as suitable for integrating different manufacturers’ systems, writes Sean Giblin, Managing Director, Cylon Controls Ltd. Many of us are familiar with, or may even have experienced, a degree of integration or inter-operability between building services systems. Examples would be linking building management systems to stand-alone chiller or refrigeration controls, or collecting information from intelligent field devices such as meters and variable speed drives. While numerous benefits are promoted for integrated building systems, the promise of truly open systems is yet to be realised in the majority of buildings.

A number of standard protocols now exist for use in building systems, including Modbus/J-Bus and Echelon’s LonWorks, each of which has strengths in particular areas. Yet it is apparent that true inter-operability in open systems requires a protocol that embodies all — not just some — of the control and communication facilities required of a fully integrated and automated building. For those with an eye to the future BACnet promises much.

BACnet is a data communication protocol (a set of hardware and software rules) for building automation and control networks. The BACnet protocol governs the characteristics of the network, for example, signalling, device addressing, error checking, data compression and formatting of messages. In addition, it contains a data model that standardises the requirements for building automation and control. The data model was originally developed by the International Organisation for Standardisation (ISO) back in the early 1980s. Manufacturers can also add their own proprietary elements or complete proprietary device profiles to extend the functions of a BACnet system.

BACnet permits communication over a number of physical networks. This leaves developers of BACnet-compatible devices free to make the most appropriate choice for their products or systems.

Part of BACnet’s appeal is that it is an open rather than a proprietary standard. Another appealing feature is that its development is ongoing, under the guidance of an ASHRAE Standard Steering Project Committee – SSPC 135.

The most recent BACnet development, BACnet/IP, is perhaps the most exciting of all. It provides a means to integrate BACnet with internet protocol networks, without the need for routers to “tunnel” BACnet messages.

The introduction of BACnet/IP allows BACnet to leverage the huge array of standard networking products available for Internet/Intranet communications. Furthermore, it insulates BACnet devices from the

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>RS485</td>
<td>Using BACnet MS/TP protocol</td>
</tr>
<tr>
<td>LonWorks</td>
<td>BACnet uses LonWorks as a data transport mechanism. This is an alternative to LonTalk so it does not support interoperability with LonMark devices</td>
</tr>
<tr>
<td>ARCNET</td>
<td>BACnet can employ various physical ARCNET media for higher speed data transport</td>
</tr>
<tr>
<td>Ethernet</td>
<td>For the highest available communication speed</td>
</tr>
<tr>
<td>TCP/IP</td>
<td>The latest addition to the BACnet communications suite. Employs standard Internet Protocol (IP) to link BACnet devices over any available TCP/IP network</td>
</tr>
</tbody>
</table>
BACnet — future perfect?
At anything other than a rudimentary hard-wired level, sharing information between building systems presents a formidable commercial and technical challenge for even the most established manufacturers of building controls. In consequence, BACnet’s development cycle has been long and protracted.

Despite its evident technical merits, only a few manufacturers of building control systems have embraced the BACnet concept fully, although many have already planned support for BACnet in the future. However good BACnet may be, experience would suggest that if truly integrated automation in buildings is to progress, it will need to be more than just one of a portfolio of standards available to specifiers and developers.

BACnet supports RS232 —
For point to point communications between devices or systems

Contact: Sean Giblin, Cylon Controls.
Tel: 01 - 245 0500;
email: askus@cylon.ie

BACnet/IP allows devices to link to a TCP/IP network using a standard UDP port. If developed in conjunction with a sockets-based interface, many different physical communications media can be supported simply by reconfiguring an operating system or TCP/IP stack.

BACnet systems can now seamlessly coexist with other network devices in Local or Wide Area Network (LAN/WAN) applications. For WAN applications BACnet/IP uses BACnet Broadcast Management Devices to broadcast messages which are not usually routable with UDP.

BACnet/IP uses separate IP port numbers so it can coexist with newer web-based interfaces for building management. BACnet/IP allows data interchange between systems, and the web browser provides a convenient graphical user interface. As the web does not offer data capability between devices, the combination of BACnet/IP and a web server can deliver a complete IP solution for truly open building automation.

BACnet supports IP networks far more effectively than was previously possible.
Safegard Systems have been supplying Actionair with the Safegard V3 System since 1999. Actionair brand this system as the Actionpac system which they exclusively market and sell throughout the UK. This has been recognised as the most advanced smoke/fire damper control & monitoring system in the world.

SAFEGARD SYSTEMS ARE ALSO THE IRISH REPRESENTATIVES FOR:

OTHER SAFEGARD PRODUCTS INCLUDE:

SAFEGARD V3
INTELLIGENT SMOKE/FIRE DAMPER CONTROL & MONITORING SYSTEM

SAFEGARD 32
INTELLIGENT SMOKE/FIRE DAMPER CONTROL & MONITORING SYSTEM

SAFEGARD CMP
SMOKE/FIRE DAMPER CONTROL & MONITORING PANEL
Safeguard Systems are pleased to announce our appointment as the Irish representatives for Actionair dampers and air control products in the Irish market.

ACTIONAIR HAVE BEEN THE MARKET LEADER IN SMOKE, FIRE AND AIR CONTROL DAMPERS OVER THE LAST 30 YEARS.

Once again Actionair are set to lead the market with their Smoke/Shield PTC smoke/fire damper by being one of the very few damper manufacturers to achieve compliance with the new international ISO 10294-1 and EN 1366-2 fire damper test standards.

THE ACTIONAIR RANGE OF PRODUCTS INCLUDES:

- SMOKE/SHIELD
- FIRE/SHIELD
- HOT/SHIELD
- AIR/SHIELD
- ENERGY/SHIELD
- A-60 MARINE FIRE DAMPER
Honeywell Enterprise Building Integrator™

Honeywell Enterprise Building Integrator™ (EBI) lifts enterprise performance to another level. It is a powerful suite of integrated facility management solutions harnessing complete control of an entire facility. Providing a single, seamless, sophisticated control and information base for all building management systems, EBI integrates with other business processes to yield a high return on investment and drive growth through improved productivity and efficiency-gain. It is the first solution that effectively manages day-to-day operations while providing decision-makers with unprecedented insight into how their facilities are performing.

Integrated control of core building systems — EBI provides control of all core building systems — services, security, data capture, asset location and compliance — as well as unrivalled integration of real-time and historical information from different enterprise subsystems. These include key business functions such as manufacturing and process automation, financial and HR databases, environmental controls, and supply chain databases. It can also link to existing systems so preserving earlier investments. EBI's open architecture provides a "window" to all data and operations, enabling users at all levels to manage key performance indicators such as reduced operating costs, asset utilisation, optimal maintenance and improve productivity through reliability and reduced downtime. Armed with this information, senior executives can integrate facilities management into their growth strategy; critical decisions can be made quickly, with positive effect on operating margin.

The EBI system technology has been developed alongside Honeywell's Industrial Solutions, which have a well-proven track record around the world in mission-critical applications. EBI is scalable to the size of an enterprise and easily expanded as the organisation grows or becomes more sophisticated. It uses PC-based client server LAN/WAN-based architecture on Windows NT to provide cost-effective connectivity to any enterprise data infrastructure without the need for proprietary IT hardware. This means that databases and applications can be integrated to provide various local, network and internet client access to monitoring, control, past performance and management reporting/compliance. Each integral software application manages a particular facet of a building, yet works in tandem with the others to cover a total enterprise:

Building Management — integrates and controls HVAC, lighting, hydraulic and energy systems, products and (sub)systems;

Security Management — integrates control and monitoring of electronic access, security management and CCTV at one or more installations. It provides centralised alarming, cardholder management and the ability to acquire and use data from HR databases. It has comprehensive reporting capabilities with pre-configured standard reports as well as the ability to create reports customised to customer needs;

LifeSafety Management — provides primary monitoring and full control of a building's life safety functions, including smoke and fire detection, sprinkler supervision and emergency communications. Its combination of event information, response prompting and tracking, make it an exceptional incident management and regulatory compliance tool;

Asset Locator — monitors real-time location and status of equipment and people for improved asset utilisation and management, more productive personnel and enhanced safety and security;

Digital Video Manager — a scalable, digital closed circuit television surveillance solution that sets new standards in flexibility and performance. Integration with EBI allows for event and alarm activated recording so as to capture the footage needed, when it is needed most. Video images are stored in the DVM database for quick and easy location/viewing using the solution's advanced search capabilities;

Whether a school, factory, financial institution, manufacturing plant, hospital or office complex, EBI provides customer centric solutions that guarantee delivery of the information needed to advance productivity and efficiency across an entire enterprise. Contact: Honeywell Control Systems. Tel: 0044 1344 656 000; Web: www.honeywell.com/u
Decisions that can effectively improve the safety, security and productivity of your total enterprise, depend on the quality of information available and the speed at which it can be accessed.

The need to protect assets, see trends, analyse data, put realtime and historical information into perspective and reduce costs, places an ever increasing demand on facility management teams.

Now Honeywell provides the total solution – The Enterprise Buildings Integrator™ system.

The EBI system pulls together all core building systems and integrates information from many different enterprise subsystems, to provide quality information that can lead to more cost-effective solutions to critical decisions – faster.

The Honeywell EBI system provides a powerful window into your entire operation – enabling you to boost productivity, improve safety standards, maximise assets and drive down costs.

Invest in the future for your organisation, call 0044 1344 656000 NOW for more details.

Or write to Honeywell Control Systems Ltd, Honeywell House, Arlington Business Park, Bracknell, Berkshire RG12 1EB.
Standard Control Systems (Distribution) — Delivering Market-Leading Products At Competitive Prices

Standard Control Systems (Distribution) Ltd has had many years of successfully distributing products such as the market-leading Trend building management system to various system houses throughout Ireland. This has been achieved by a combination of quality products and services, underpinned by a dedicated technical support team.

Over the past decade they have had many opportunities to take responsibility for a plethora of other building services related products. Never wishing to be regarded as mere agency collectors however, they have focussed assiduously on cutting-edge products, which make a real difference to what happens within a building.

For nearly a decade now they have been distributing their excellent quality DriSteem humidifiers and Air Monitor airflow measurement stations directly to the pharmaceutical, medical and microelectronics sectors.

For example, within the past 12 months SCS (Dist) Ltd has supplied in excess of 400 custom-built Air Monitor airflow stations to the Wyeth Bio-Pharma facility in Dublin. Some of these airflow grids are the largest ever built by the company. SCS (Dist) Ltd worked closely with the design team to ensure on-time delivery of products which met the client’s exacting specifications.

The Wyeth project also demanded DriSteem humidifiers in areas where extremely accurate humidity control was called for. The second criterion that had to be met was that of a guaranteed steam absorption within very short duct distances. DriSteem is the only company that could guarantee to meet these requirements with their Rapid-Sorb® dispersion products, which are custom-built for each application.

Standard Control Systems (Distribution) Ltd has recently been appointed sole agent for the excellent Joventa range of damper actuators. These will be available from next month at prices which are bound to cause a stir within the HVAC industry.

SCS (Dist) Ltd’s intention is to enhance their product offering going forward. To this end, they have recently added strength to their sales and marketing teams and their pledge is to continue to deliver market-leading products at competitive prices.

Contact: Sales Team, Standard Control Systems (Distribution) Ltd.
Tel: 01 - 429 1800;
Fax: 01 - 429 1801.
STANDARD CONTROL SYSTEMS (DISTRIBUTION) LTD

For quality products that make a positive contribution to your buildings

TREND

DRISTEEM
HUMIDIFIER COMPANY

Air Monitor Corporation

JOVENTA
The Actuator Maker

Standard Control Systems (Distribution) Ltd
Riverview Business Park, Nangor Road, Dublin 12
Tel: 01 - 429 1800 Fax: 01 - 429 1801
Wallace Homevalue Merchant of the Year

Wallace Homevalue Hardware & Builders Providers, Wellington Bridge, Wexford is the National Octabuild Builders Merchant of the Year. The company, which has been in business for over 60 years and employs 34 full and part-time staff, also won the Leinster Regional and County Wexford awards.

The Octabuild Builders Merchant of the Year Awards has been honouring the best builders merchants in Ireland since 1984. This year 38 awards were made, including County, Regional and National Awards, and an award for the best support for Irish products.

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

The Lifetime Achievement award went to John Walsh, Brooks and the Support for Irish Products awards was won by Brooks Hanley, Sligo.

The Octabuild companies who organise the awards are — BPB Gypsum Industries, Evo-Stik, ICI Dulux Paints, Irish Cement, Moy Isover, Sanbra Fyffe, Tegral and Wavin.

Between them they have over 650 years manufacturing experience in Ireland, directly employ over 1400 people here and have over 20,000 quality products available everyday for Irish builders merchants.

**REGIONAL AWARDS**

Connaught/Ulster — Campy’s of Athlone Homevalue Hardware
Dublin — T.J. O’Mahony & Sons Homevalue Hardware
Leinster — Wallace Homevalue Hardware, Wexford
Munster — Stakelums Homevalue Hardware, Thurles

**SPECIAL AWARDS**

Lifetime Achievement — John Walsh, Brooks
Small/Medium Business — Bolgers Homevalue Hardware, Ferns
Family Business — Flanns of Moate Homevalue Hardware
Heavy Goods — C&D, Wexford
Marketing — Eddies Hardware, Drogheda
Support for Irish Products — Brooks Hanley, Sligo
Large Business — Brooks Ballina
Most Improved Business — Doyles, Tullow
Vent-Axia Air Conditioning From Aervent Group

Vent-Axia has been the market leader in ventilation products for many years, with a reputation for quality and reliability. The launch of a dedicated air conditioning range is the natural next step in a changing world where comfort cooling is becoming a necessity in many applications.

The present range includes R407C wall mounting, ceiling cassettes and floor/under ceiling split systems. With an extensive product development plan over the next 2/3-years, Vent-Axia — through its distributor Aervent Group — is aiming to be one of the leading suppliers of air conditioning equipment in Ireland.

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. This is particularly useful in a large installation, where units can be switched on and off, or the settings altered, without having to go to each room individually.

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 over-ridden for specialised applications.

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 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.

The Vent-Axia air conditioning systems have been designed to provide a pleasing appearance compatible with a wide variety of décor, coupled with quiet operation.

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

A Vent-Axia ceiling cassette from Aervent Group

A Vent-Axia wall mounted indoor unit from Aervent Group

A Vent-Axia ceiling cassette from Aervent Group
April was a very special month for members of the Republic of Ireland Branch of the Institute of Plumbing with the presentation of Master Plumber Certificates and the Annual Apprentice Awards on two consecutive evenings.

The first presentation of six Master Plumber Certificates took place in the Dublin Institute of Technology, Bolton Street, the recipients all being Corporate Members of the Institute of Plumbing and lecturers from the Plumbing Department of the School of Construction. The recipients were Michael Nicholson, Fergus McGuinness, Eamon McDonnell, Tom McCormick, Tony Hayes and Peter Ó híoch.

The certificates were presented by Geoff Marsh, Director of Industry Liaison with the Institute of Plumbing, who had travelled from the UK with his wife Ann to present the certificates. Commenting on the presentations, Geoff stressed the importance of Master Plumber practitioners to the future of both the Institute of Technology and the Institute of Plumbing. He also stressed the importance of the mentoring aspect of the Master Plumber Charge, which he read aloud and which was agreed to, by each of the recipients in turn.

The second presentation, of the sixth Annual Apprentice Awards and three more Master Plumber Certificates, took place in the Teachers Club, Parnell Square. These awards, comprising Gold, Silver and Bronze medals and certificates, are presented to three categories of apprentices, corresponding to the three “off-the-job” phases of their apprenticeship. Beginning with Phase 2, which is delivered in the FAS training centres and continuing on to Phase 4 and 6, which are delivered in the Institutes of Technology around the country.

The presentation of the Annual Apprentice Awards has now grown to become the biggest event in the Republic of Ireland Branch’s calendar. This year’s presentations were attended by over 150 people and were sponsored by a number of Industrial Associate members of the Institute of Plumbing, namely Wavin, MT Agencies and BSS, in conjunction with Crane Fluids and PG Industrial Supplies.

Apprentices from all three phases are nominated by their instructors and lecturers and are set a technical
project, designed by the Institute of Plumbing Management Committee, the complexity of which is matched to the knowledge expected of an apprentice on the particular Phase being attended. The projects are judged by a panel drawn from industry, training, education and the Institute. The reputation of the competition and the awards has grown steadily over the past six years, to the extent that this year, over 160 apprentices, from all over Ireland, applied to take part.

The apprentice awards were presented on the night by Alan Carlyle, President of the Institute of Plumbing.

During his speech Alan congratulated all the prizewinners and the members of the management committee for the organisation of an excellent evening and went on to say that the future success of the Branch would be assured with such talented apprentices joining the industry.

The President also presented Master Plumber Certificates on the night to three Corporate Members of the Institute of Plumbing — Martin Duff, John Riordan and Gerry Bradley. These bring the total number of MPC's awarded to members of the Republic of Ireland Branch to 10. The Master Plumber Certificate is awarded in conjunction with The Worshipful Company of Plumbers and the City and Guilds Institute.

Contact: John Smartt, Institute of Plumbing. Tel: 01 - 402 4025; email: john.smartt@dit.ie
Get Electrical Safety Off PAT

Safety Health and Welfare at Work (General Application) Regulations
The Safety Health and Welfare at Work (General Application) Regulations, 1993 state that "all electrical equipment shall at all times be so maintained as to prevent danger. Regular inspection of equipment should be part of any preventative maintenance programmes". The regulations are framework in nature and state principles of electrical safety. The regulations do not prescribe how such inspections should be carried out. However, clear guidance can be obtained from the "Code of Practice for In-service Inspection and Testing of Electrical Equipment", published by the Institution of Electrical Engineers.

Portable Appliance Electrical Safety
Portable appliances are designed for electrical safety on a "double-knock" principle. In other words, appliances are designed such that protection from electric shock is provided by at least two methods so that no single fault can cause the user to receive an electric shock. The corollary to this of course is "three strikes and you're out". The means by which safety is designed into an appliance depends on the appliance class.

Class I Appliances
Class 1 appliances achieve protection primarily through the use of insulating materials. This forms a physical barrier preventing the user from coming into contact with any live electrical parts and preventing any exposed conductive parts from becoming live. The second level of protection is provided by means of a protective conductor more commonly known as an earth wire. Should any exposed metal components become live the current is safely directed through the earth wire to earth and again the user is protected. If both the insulation and the earth wire fail then the user is at serious risk of shock. Class I appliances therefore must be provided with a three-core cable, a three-pin plug and be connected to a suitable earthed socket. Due to the temporary nature of the otherwise very convenient plug and socket arrangement, portable appliances can be a particular hazard. Flexible cables may be subject to wear and tear, particularly in the case of appliances designed to be moved while in use, or used under high risk conditions.

Class II Appliances
Class II appliances also provide primary protection against electric shock by means of insulating materials. Secondary protection is then provided by means of further supplementary or reinforced insulation. No provision is made, or required, for protective earthing. Class II equipment is provided with a two-core flexible cable. For compatibility it is usually fitted with a three-pin plug but the earth terminal is not connected. It is identified by means of a Class II construction mark. This mark is readily identifiable and comprises two small square boxes, one inside the other similar to the following symbol.

Several other classes of electrical appliances are available. However, these are somewhat specialised. They are found in,
for example, the construction industry but are not normally used in a business, retail or domestic environments.

Frequency
The frequency with which portable appliances should be formally inspected or inspected and tested depends on the class and type of equipment and conditions of use. For example, stationary equipment on a construction site should be inspected monthly and tested every three months regardless of its class, whereas Class II office equipment may be formally inspected every two years and testing may not be required at any stage. The IEE Code of Practice provides useful guidance for the initial frequency of inspection and testing. However, this should be modified in the light of actual experience.

Visual Inspection
Visual inspection includes items such as assessing the environment and use of the appliance, a detailed inspection of the flexible cable and plug-tops and verification that the fuse is of the correct rating. The inspector should check all these items for evidence of unsuitable environment or installation, damage or overheating.

Testing
An earth continuity test checks that there is continuity between the earth pin on the plug of the appliance under test and any earthed metalwork on the appliance. The resistance should be no greater than 0.1 ohm plus the resistance of the earth wire in the flexible cable. The current applied in the course of this test is of the order of 5-25 amps. For equipment containing sensitive electronic components, typically IT equipment, that may be susceptible to damage from high current or voltages some PAT testers have a facility for carrying out a so-called “soft test” using a low value of current of the order of 100 milliamps. An insulation resistance test bonds the live and neutral connections of the appliance together and measures the value of the insulation between them and the earth pin on the plug of the appliance. The voltage used is of the order of 500 volts and the insulation resistance should generally be not less than 1.0 megohm for Class 1 appliances and 2.0 megohm for Class 2 appliances. The insulation resistance test also has the potential to damage equipment containing sensitive electronics and this test should not be applied to such appliances unless they comply with BS EN 60950.

Where the use of an insulation resistance test is not appropriate, other tests, such as an earth leakage measurement, may be substituted and these tests are available on the more advanced types of portable appliance testers. A detailed record of test results should be kept and appliances which fail testing must be immediately removed from service pending repair or replacement.

Functional checks
Following completion of inspection and testing appliances which pass should be returned to service and a brief functional check carried out to verify that the appliance is apparently operating correctly. In many instances the functionality of the appliance will be more apparent to the user than the inspector. However, a load test is useful, particularly for heating appliances as this can identify open-circuited heating elements and similar malfunctions that may not be otherwise apparent. Portable appliance testing is not the complete answer to electrical safety but it is becoming an increasingly important element of safety and helps to minimise the risk associated with ever-increasing numbers of portable appliances.
Call For More Inclusive Institution

The Annual General Meeting of the CIBSE took place in Dublin recently with a sizeable attendance hearing a resume of the successes and achievements of the last 12 months and incoming Chairman, Kevin Tracey, outlining his plans for his term of office. The normal formal AGM activities such as the election of new officers, etc also took place and details are outlined here, along with extracts from Kevin Tracey’s incoming address.

“I am delighted to be honoured with the role of Chairman for the Chartered Institution of Building Services Engineers, in the Republic of Ireland.

“Firstly, I wish to congratulate last year’s Chairman, Brian Sterling and the Committee, for their dedication, hard work and success in carrying out last year’s busy schedule.

“CIBSE plays an important role in raising the profile of building services engineering and bringing together the professionals in all associated disciplines. In this, my year as Chairman, I hope that we can make CIBSE a more attractive Institution for all building services engineering disciplines.

“My intention is to encourage electrical technicians and electrical engineers to join our Institution. Nonetheless, while CIBSE is the natural professional home for electrical personnel involved in building services engineering, my aim is to establish a balance between mechanical and electrical interests. As technology and the Institution develop at an increasingly fast pace, I believe that it is vital that all building services engineering disciplines should share and embrace new ideas and best practice in order to improve the performance and operation of buildings in the 21st century.

“The formation of an Electrical Services Group (ESG) and an equal and parallel Mechanical Services Group (MSG) in the Republic of Ireland will assist greatly with this objective, in addition to reversing the general perception that CIBSE is narrowly focussed.

“My main focus as Chairman is set out as follows:—

- To establish an Electrical Services Group (ESG) in Ireland which will provide CPD lectures of an electrical nature on a continuous basis and encourage growth of the electrical membership.

With the establishment of an Electrical Services Group for Ireland in mind I invited Dr Tony Sung, Chairman of the Electrical Services Group UK, to a meeting at the IEI in early January, 2003 in order to discuss the strategy. Dr Sung is fully supportive of the idea and has agreed to assist with our Electrical Services Group CPD lecture programme. I propose that the Electrical Services Group CPD lectures should take place at the Dublin Institute of Technology, Kevin Street so as to encourage the electrical services engineering students to become members and also for them to participate in our continuing professional development programme.

Based on this initiative we are due to receive a large number of membership applications from the students of the
Brian Sterling, outgoing Chairman, presenting Kevin Tracey, newly appointed Chairman, Alan Duggan, Honorary Treasurer and Tony McKinley, Social Secretary

Margaret Dolan, Honorary Secretary with Michael McNemey, Vice Chairman, Kevin Tracey, newly appointed Chairman, Alan Duggan, Honorary Treasurer and Tony McKinley, Social Secretary

electrical services engineering courses at the Dublin Institute of Technology, Kevin Street.

— Similarly, I intend to establish a Mechanical Services Group (MSG) in Ireland to continue with CPD lectures focussed on the interests of mechanical services engineers. There is no doubt that equal emphasis will be placed on this Group during my term as Chairman.

— I am introducing the first CIBSE/SLL Student Awards event at the Dublin Institute of Technology, Kevin Street, for the electrical services engineering courses. This June the first students of the Diploma in Electrical Services Engineering will graduate from the Dublin Institute of Technology, Kevin Street. I am also introducing the first Lighting Project Award from the Society of Light and Lighting at the Dublin Institute of Technology, Kevin Street. This yearly CIBSE/SLL students award event will be similar to the Bolton Street CIBSE student awards event which has been running successfully for many years.

— It must not be forgotten how CIBSE (or CIBS as it was then) was initially formed in 1976 resulting from the amalgamation of the IHVE and the IES (Illuminating Engineering Society, dating from 1909), the forerunner to the Society of Light and Lighting. I wish to continue with the development of the Society of Light and Lighting in Ireland. Membership of the Society of Light and Lighting includes individual and sustaining members. Over the last year sustaining membership (which is company or organisation membership) in Ireland has grown considerably.

“Following on from the success of the Lighting Masterclasses at the Dublin Institute of Technology, Kevin Street on 27 February, 2003 I have now commenced discussions regarding an International Lighting Symposium for Dublin in 2004. In my role as Chairman I will be delegating the role of Society representative to a new member of the committee. I am also introducing a Society committee member to continue with the work of improving the profile and membership of the Society of Light and Lighting.

“The coming year will be a very busy one with many planned events, including ongoing emphasis on Continuing Professional Development (CPD). It is important to stress that the goals and activities of the Branch can only be achieved by the enormous efforts of the committee members. I am therefore relying on the assistance and cooperation of all committee members.

“In that respect I am especially happy to name Michael McNemey as the Vice-Chairman. I am looking forward to working closely with Michael over the next 12 months and my wish is that all efforts will be made to sustain my objectives after my term as Chairman.

“I am also delighted to introduce our new local website: www.cibseireland.org. Suggestions for improvements to the website are always welcome.”

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COR Blimey ... Its A Sheila! Rumour has it that there really are lady members of the BTU but, judging by attendance at outings, one could be forgiven for thinking that they are not just an endangered species but extinct altogether. How refreshing then to see Sheila Kilbride of American Standard take such a prominent role at Portmarnock recently when she sponsored the first BTU outing of the season. Well done Sheila, and I’m told the prizes also showed a more imaginative and innovative approach.

DO MY EYES DECEIVE Me? — Strange sightings have been reported around Dublin recently. Someone swears that Sean McCarthy is back in the industry as an advisor to a leading AC company, while Fred Cooney was also reportedly seen on a site, complete with overalls and a full set of tools! To my knowledge both are enjoying a very active retirement away from the business but, you never know.

WELCOME Elliott — Celebrations at Rink Air Conditioning have been non-stop since Sarah recently gave birth to a bouncing baby boy whom she and her husband have named Elliott. Congratulations Sarah.

SEEN Much Talent Today? — This is the slogan being used by the Northern Ireland construction industry to promote its Construction Skills Registration Scheme. Here in the Republic the HSA has set 1 June as the deadline for compliance with its new operator certification scheme.

It covers a whole range of construction-related skills such as crane operators, excavator drivers, certain types of roofers, etc. The quicker it is applied to — and enforced on — all building services-related activities the better.

GORDON Tries To Catch The Wind — What is it with Gordon Barry of Grundfos and his choice of sporting activities? First it was golf, then skiing. All the while he has been dabbling in sailing. Now I hear that sailing has come to the fore with the ski equipment and golf clubs firmly locked away in the closet. Ship ahoy Gordon!

ROSco Gets Bucko’s Fizz! — Last month’s Who Am I? quiz attracted a great deal of interest. All entries were correct ... the beard and bow tie making it dead easy. Indeed, reading through the names of those who rang was like reading through a who’s who of the AC industry of the last 25 years. Most of them had worked for or with Michael Buckley at some stage, it being no surprise that Gerry Ross was the winning name pulled out of the hat. Enjoy the bucks fizz on Bucko Gerry.

BUBBLE Burst — Sad to finish on a sour note but this month saw the closure of two ventilation companies. No need to panic but do be vigilant.

IT Was 21 YEARS Ago Today!

The following article is a selection from the 2003 edition of 'Building Services News'.

Flicking through some H&E News (now BSNews) back issues recently, I came across this appointment shot of Brendan Kilgallon of Coolair. The year was 1982 and the caption said that Brendan had just been appointed Sales Director of Alpha Controls Ireland. It also mentioned that Brendan was the 1980 Smurfit Group Executive of the Year. Not a lot of people know that.
There are fittings...
then there's CONEX

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