Disaster Planning
Energy Use — Binding Reduction Agreements Imminent

Scaling New Heights in Air Quality Control
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Wilo TOP-E range

From the company who patented the first circulator back in 1929 and introduced the first electronic circulator in 1989 comes a heating circulator with completely in-built pump management:

- Micro processor controlled inverter drive
- Infinitely variable performance
- Energy savings of up to 50%
- LCD, giving operating parameters at the pump head
- Suitable for new or replacement applications
- Digital link to BMS
- DN32-DN80
- Potential free contacts for simple fault indication
- Integrated motor protection

WILO ENGINEERING LTD
Enterprise Centre,
Childers Road
Limerick, Ireland

Tel: 061-410963
Fax: 061-414728
E-mail: sales@wilo.ie
Internet:www.wilo.com
Nonetheless, the pressure on tender prices - within turn is eating into margin on product prices - suggests that many people expect quality and value-for-money at give-away prices.

Using the competitive market situation to drive prices downwards in a never-ending cycle is self-destructive. Unless the true value of building services products and related ancillaries is reflected in tender prices, it is inevitable that the orderly and professional base which underpins the entire industry will be eroded.

Bona fide product and services suppliers know their worth and endeavour to charge prices which will support all relevant legal and moral obligations. They understand that quality counts ... value for money counts ... after-sales service support counts ... product guarantees count ... technical support counts... and that prices charged must be able to sustain these benefits.

Nonetheless, the pressure on tender prices — which in turn is eating into margin on product prices — suggests that far too many people expect quality and value-for-money at give-away prices.

Such a scenario is not sustainable. Nor is it of any long-term benefit to the client. Short-term gains will always come back to haunt a project. How many instances of product and/or system failure have occurred where the supplier is gone out of business, leaving the client high and dry?

Of course the ultimate decision-maker has an obligation to get the best value for the client. However, the idea that best value equates with lowest price is a nonsense. Very often the lowest price means cheap products and cheap workmanship.

It's time to stop fudging the issue and act responsibly.

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Extension for Wavin Balbriggan Plant

Work has begun on a €3.2million extension to Wavin’s main extrusion plant in Balbriggan, Co Dublin. The new facility will extend Wavin’s production capability significantly, and has already resulted in the creation of ten new full time positions.

“We have consistently upgraded the Balbriggan facility and the current expansion is part of an on-going investment in our business”, said Larry Carr, Wavin’s Managing Director. “For example, our Distribution and Logistics centre, officially opened by An Taoiseach, Bertie Ahearn not too long ago, has had a major positive impact on our customer service.”

Wavin is Ireland’s largest manufacturer and distributor of pvc pipe systems. The company provides in the region of 3,000 products. Wavin’s extrusion operations produces pipe for a wide range of uses for the building/construction industry, local authorities, utilities and the farming sector.

The main Wavin manufacturing and distribution centre is in Balbriggan, County Dublin. The company also has sales and distribution centres in Cork and lisburn.

O'Muiré RIAI President

Dublin-based architect Toal O’Muiré has taken up office as the President of the Royal Institute of the Architects of Ireland (RIAI) until the end of 2003. Mr O’Muiré is one of the founding partners of OMS Architects.

Toal O’Muiré graduated in architecture from UCD, where he later obtained postgraduate degrees in Housing Research and Business Administration. He has also been a Fulbright Scholar at the University of Pennsylvania, where he studied the economics and management of urban renewal.

Since joining the Council of the RIAI, Mr O’Muiré has served in various capacities, including terms as Honourary Secretary, as Vice-President, and as RIAI Practice Committee Chairman.

Pictured on the site of the new extension are Fergal McGough, Production Manager (left) and Larry Carr, Managing Director, Wavin Ireland.
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.
Flow Switch for Pool and Spa Industry

Ideal for monitoring water and other compatible media flow, the Dwyer Series V12 FloTect® flow switch from Manotherm is a low-cost, versatile line of switches that can be used in a wide range of applications and configurations.

Mountable in any orientation, the Series V12 flow switch utilises a free-moving shuttle that is displaced by the liquid flow, activating an isolated sealed reed switch. Models can be used in media that are compatible with Noryl®, GFN3, stainless steel and Teflon®. Flow rate settings from 0.5 to 5.0 GPM (1.892 to 18.924 LPM).

Applications for the Series V12 include monitoring media flow for the pool and spa industry; protecting equipment due to loss of coolant or lubricant flow; processing system operations; and monitoring chlorinators, water filtration, reverse osmosis and evaporators.

Contact: Bob Gilbert/Brian Harris, Manotherm. Tel: 01 - 452 2355; Fax: 01 - 451 6919; email: manotherm@eircom.net

The Dedicated Plumbing and Heating Show — PHEX

The PHEX domestic plumbing and heating exhibition returns to Belfast and Dublin in 2002. The format is the same as the proven successful series of exhibitions organised by B & M Publications in the UK and Ireland over the past eight years.

The PHEX show 2002 is a must for anyone with responsibility within the domestic plumbing and heating industry. The show will start in The Kings Hall Conference Centre in Belfast on 15 and 16 April 2002, and will then move to Dublin to the Red Cow Complex for the 17 and 18 April 2002. The shows will be open between 6pm and 9.30pm on the first day at each venue, and from 11am to 3.30pm on the second day.

A broad cross-section of exhibitors means the visitor will be able to view the latest offerings in boilers, controls, fires, pipes and fittings, radiators, sanitary ware, showers and tools.

Among exhibitors already confirmed for the PHEX 2002 show are — Alpha Boilers; A O’Smith; Ariston; BES; BetzDearborn; Biasi UK; Caradon Ideal; Caradon Commercial; Caradon Stelrad; Corgi; DAB Pumps; Delta Fluid Products Ltd; Domus Ventilation; Fernox; Geberit; Honeywell Controls; Horstmann Controls; IBP; IOP; Levermore; Marcrist; OFTEC; OSO Hotwater; Polypipe Bathrooms; Polypipe Building; Ravenheat; RWC; Saniflo; Testo; Vent-Axia and Wavin.

PHEX is supported by the majority of leading manufacturers in the industry and their distributors, both in the North and the South of Ireland.

With time at a premium during the working week, the local nature of the shows and the convenient opening times provide the busy installer with maximum opportunity to visit the exhibition without disrupting work schedules. In addition, the organisers are providing a free buffet for all visitors and a chance to win prizes at the roulette tables. Both exhibitions will provide the opportunity for visitors to discuss business, and also enjoy themselves at the popular roulette evenings, which has proved a great success at previous shows.

Contact: PHEX Hotline. Tel: 0044 208 680 4200.
Get Your CDP Points from Hevac!

Hevac Ltd is now a recognised CPD course provider for the Chartered Institute of Building Services Engineers (CIBSE) offering seminars on the following subjects:
- Boiler Technology;
- Boiler System design;
- Gas (Heating);
- Heating and Water Heating;
- Heat Exchangers;
- Water Heating;
- Underfloor Heating.

The subjects are programmed to be one hour long to fit in to either the lunch break or at the end of the working day, and include a question and answer session to conclude.

A full list of course notes will be available to the delegates, along with a certificate indicating the amount of points allocated to the subject. All speakers have years of experience in the building services industry.

For further information, or to book a seminar, contact one of the following people:
- Alan Callister, Tel: 01 - 419 1919; (Mobile): 086 604 0578; email: alan@hevac.ie
- Karl Carrick, Tel: 01 - 419 1919; email: karlc@hevac.ie.

Kitchen Extract Fans

In many hotel and restaurant kitchens, a major potential danger is the possibility of fire in ductwork caused by a build up of grease. To help reduce this danger, Victoria Fans have introduced a modified version of their bifurcated/emergency smoke extract fans to facilitate easy cleaning and degreasing.

Access doors are fitted in both sides of the main body of the fan. These allow for easy cleaning and are fitted with lockable, steel, spring-loaded, easy-release clamps. Long life is assured by suitability for up to 200°C continuous operation as well as 300°C for one hour emergency use.

Other standard features include — guards on both ends of the motor pod, sturdy fully-welded galvanised casings, and 1p 55 motors. Performance testing is to BS 7346 part "2" 1990 and Fire Testing compatibility BS 476 part 24.

Contact: Jim Bollard, Chambers Ventilation.
Tel: 01 - 830 3222; Fax: 01 - 830 8888; email: jimbollard@danchambersventilation.ie
Honeywell has expanded the topics covered in its two industry-standard, intensive one-day installer training courses to include the revised Part L of the Building Regulations, which will have a significant effect on all new domestic central heating installations. In particular there will be advice on methods for bringing older systems up to modern standards in line with the statutory requirements, effective from 1 April 2002.

Honeywell offers two one-day courses — Installer Training Course and Upgrade for Profit — both costing only £25, and including a comprehensive training manual and lunch. The Installer Training Course combines theory and "hands on" experience covering all aspects of installation and energy conservation," said Richard Edwards, Manager of Honeywell's Trade products business in the UK and Ireland. "The course explains to installers the impact that the new Building Regulations will have on the way they work. It gets installers up-to-date on control selection, fault-finding and wiring skills. "It has been rewritten to incorporate Smartfit — the new standard for central heating controls."

Upgrade for Profit includes topics such as combi boiler controls, frost protection, unvented systems, thermal store systems and zoning controls. It extends to more advanced controls, notably both the Smartfit system and "wireless" units that use radio communication within the home such as the Honeywell CM60RF series of programmable controllers. This course also includes a refresher session on sales techniques that will help installers boost their profits.

Honeywell has arranged courses throughout the country to bring them conveniently close to installers. Forthcoming courses for Dublin are scheduled for 7 March and 27 June next.

Enquiries and bookings can be made online with payment by cheque or credit card.

Tel: 0044 1344 656352.

Internet at www.honeywell.com/uk/homes/training.htm
York Appointments Recognise Calibre of Irish Personnel

York ACR Ireland — the Irish office of the world’s largest independent manufacturer of air conditioning and refrigeration systems — has announced a number of key appointments which reflect on the high standing and calibre of the members of the Irish operation.

Pat Byrne, who formerly headed up the Irish operation in addition to carrying out an international role in strategic accounts, has now been appointed to a European position as Vice President Strategic Accounts Europe.

Ray Ring, who has worked in a number of capacities for York International over the years, both in Ireland and abroad, now takes over from Pat as Sales Director for York ACR Ireland.

Further reinforcing the status of the Irish office is the fact that Philip Masterson, York ACR Ireland Service Manager, has been seconded to international duty and is currently carrying out a specific project at York International’s operation in South Africa.

Noel Gaffney, formerly Financial Manager for Ireland has been appointed as UK and Ireland Finance Manager, based in the UK.

Environment-Friendly Educational Project

Oppermann Architecture is working on a major educational project for Sacred Heart National School in Huntstown, Co Dublin. The project, due to start in early 2002, is valued at over 5 million, and is the first of its kind in the country to incorporate a number of the guidelines contained within the soon to be mandatory Kyoto Protocol.

When Oppermann Associates won the Huntstown Project they put forward the idea that it was ideally suited to the principles of passive solar design and could also be used as a Kyoto Protocol pilot scheme. As a result, they sought and were granted “Environmental Test Cast Status” by the Department of Education and Science for the project.

The project involves the design of a 16-classroom extension to the primary school, incorporating an atrium at the heart of the school and using passive solar design principles to reduce heating, lighting, electrical and fuel requirements. The building has been insulated to the extent that the loss of heat through the building fabric once gained from the sun or boiler is substantially reduced.

Oppermann Architecture has also addressed the thorny issue of acoustics in school design. Pitched ceilings provide marginally better acoustic space than flat ones, in addition to creating a well of fresh air to be drawn upon.

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110 Kw Wilo Pumps for Coca Cola

Wilo Engineering Ltd recently supplied and commissioned two large long-coupled end suction pumps from their NP range to Ballina Beverages, Co Mayo, which is a bulk concentrate plant for Coca Cola.

The pumps, with 110 Kw motors, operate duty / standby, and each can supply a flow rate of 185 litre/sec of chilled water used for process cooling in the plant.

Wilo has also launched an additional model to its successful TP macerator range. The new model TP 40 S/25 is suitable for pumping domestic waste water and sewage from individual residential buildings and small capacity installations.

The patented macerator reduces the solids content of the waste to small particle size, enabling them to be pumped easily. The pump has an Ex-Rated motor and stainless steel motor housing as standard, and can be supplied in either single- phase 230V or three- phase 400V options. The pump can achieve duties of up to 12 m3/hr. and up to 24 metres head. A full range of control panel options are also available to complete the system.

Contact: Damien Gernan, Wilo Engineering.
Tel: 061 - 410 963; e-mail: sales@wilo.ie; Web: www.wilo.ie

Bord Gáis Welcomes License Award for Northern Ireland Pipelines

Bord Gáis has welcomed the decision by the Director General of Gas for Northern Ireland to approve a natural gas transportation license.

The proposed pipeline will be 450mm in diameter and approximately 260km in length. It will be developed in two phases over a five year period. Phase one will comprise a 110km pipeline connecting the Scottish Northern Ireland Pipeline (SNIP) outside Belfast with the new CCGT power plant at Coolkeeragh.

Phase two will comprise a 150km pipeline connecting Gormanstown in County Meath to Belfast.
Energy Use — Binding Reduction Agreements Imminent

The business climate for achieving reductions in energy spend in Ireland continues to be very difficult, according to Joe Jacob, TD, Minister of State at the Department of Public Enterprise, who was speaking in Dublin at the launch of the Annual Report of the Self-Audit Scheme for 2000/2001.

"Volatile fuel prices, coupled with market uncertainty, have made it extremely difficult for Irish industry to achieve significant energy savings", Minister Jacob said. Already, the total energy spend by the industrial and commercial sector in Ireland has increased by almost €114.3 million as a result of increasing fuel prices.

The Annual Self Audit Scheme — co-coordinated and organised by the Irish Energy Centre — is a voluntary programme designed to assist significant industrial energy users to achieve greater energy efficiency and reduce energy costs and consumption. The latest annual report brings together the results achieved by 76 member companies in the scheme. The total energy spend of these companies is in excess of €311 million per year.

Minister Jacob said, “Each of the companies in the Irish Energy Centre’s Self-Audit Scheme is to be congratulated on their initiative and their efforts, which will pay dividends to them, not only in terms of savings and impact on the environment, but also in giving them a head-start in complying with planned binding agreements for Irish industry”.

Minister Jacob added that industrial sector involvement will be vital in achieving a more sustainable future for Ireland. “Large industry in Ireland could potentially save over €57.1 million in energy costs each year, through greater energy efficiency. Irish industry now accounts for some 20% of the total carbon dioxide emissions, which is the main global warming contributory gas”, he said.

In line with this, the implementation of negotiated binding agreements with industry for specific reductions in energy use is imminent. Under the new agreements, it will be impossible for industry in Ireland to ignore the steps required to ensure that significant reductions in energy use and energy-related emissions are achieved.

Copies of the Report are available from the Irish Energy Centre or can be downloaded from the website. (See panel)
Mitsubishi Electric
Innovative and Intelligent

Mitsubishi Electric is synonymous with excellence across a wide variety of industry sectors, not least in air conditioning where it has achieved market dominance in quite a number of individual market segments.

Technologically-advanced, innovative products are the hallmark of the Mitsubishi Electric air conditioning portfolio, a typical example being the City Multi Y and Super Y Series. This unique product range offers a simple yet very flexible solution where there is a demand for changeover capability between heating and cooling, thereby ensuring constant indoor climate control.

The City Multi Y Series offers a choice of from 60 indoor units and capacities from 8hp to 20hp. Up to 20 indoor units — depending on the capacity of the system — can be connected in a single system, with a cooling only variant also available.

The Super Y Series is a development of the Y Series which allows for its use in larger situations while still providing temperature control in individual rooms. It works as a combination of the standard 16hp and 20hp Y Series outdoor units and non-inverter type 8hp and 10hp Y Series units to create a single, high-capacity, refrigerant circuit.

Capacities range from 24hp to 30hp, with up to 32 indoor units on a single refrigerant circuit.

Equally innovative is the Citi Multi R2 and WR2 Series. The R2 Series provides simultaneous heating and cooling through two pipes, smooth automatic switching which accurately maintains the set temperature, and the ability of the BC controller — effectively an "exchange" for the transfer of energy within the system — to act as a balanced heat exchanger under optimum operating conditions.

The WR2 Series is a refinement of the R2 Series which takes advantage of the water cooled condensing units to broaden its potential for use in an even wider range of applications.

Combining the WR2 Series with alternative energy sources such as geothermal or CHP provides other unique application solutions.

Niall Tormey, who heads up Mitsubishi Electric's Air Conditioning Division in-house design department, Niall liaises closely with consultants and the company's air conditioning dealers to provide engineering support, autocad facilities, P&ID schematic facilities, heat gain/loss calculations, system layout designs, product information and spare parts support.

Mitsubishi Electric outdoor unit

Mitsubishi Electric indoor ceiling cassette unit
As everyone knows, controlling energy usage costs is now of critical importance. Good practice — and indeed more and more penalty-driven Regulations — demand that all air conditioning systems are intelligent and can function at the optimum performances levels while, at the same time, using energy wisely and cost-effectively.

Consequently, the Mitsubishi Electric range of controls incorporated into its air conditioning products is designed to work with, and effectively interface with, leading controls names in the industry. These include Trend, Siemens, Satchwell, Honeywell, Andover Controls, Cylon and Echelon.

Also new from Mitsubishi Electric is the City Multi S R407C all-in-one air conditioning solution. It can connect up to eight indoor units to a single outdoor unit and enjoy all the benefits of the new R407C refrigerant. Total capacity of the indoor units ranges from 50% up to 130%.

Contact: Mike Sheehan, Mitsubishi Electric. Tel: 01 - 419 8800; Fax: 01 - 419 8890; email: michael.sheehan@meir.mee.com

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**Haeir From Core Ac**

As we went to press, Haeir — the Chinese-based air conditioning manufacturer who last year sold 5.8 million units throughout the world — had appointed Core Air Conditioning Ltd as its Irish distributor. Haeir’s products are sold in over 90 countries with sales for the year 2001 reaching €8.4 billion.

“This is the perfect addition to our portfolio”, says Austin McDermott, Managing Director of Core Air Conditioning. “The Haeir product range is ideal in that it perfectly complements our current ranges, and affords us the opportunity to provide air conditioning solutions for applications we previously did not serve”.

Full details in the next issue of *BSNews*

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**Stulz Modular Series**

Stulz modular system units feature a small footprint requiring minimal floor space; are sized to fit through standard doorways for easy transportation, handling and installation at site; are aesthetically-attractive and feature functional cabinetry. The modular concept allows easy future expansion, automatic duty sharing, 100% redundancy, and stand-by capacity to meet peak loads.

The new Stulz advanced CompTrol 6000 microprocessor provides precise control of all functions, monitors unit status, and indicates any malfunctions with alarms. The controller is user-friendly, in plain language, and allows set points to be easily entered via the unit keypad, by an open interface to central building management systems, or by modem to remote sites. Interfaces are provided for PC, printer and diagnostic testing.

Stulz — the modular design of modular-line provides an economic solution in an attractive design. The systems integrate into modern office environments. Details from Walkair
HYDRONIC SYSTEM
Aquasmart
The Complete Water Based Air Conditioning System
TOTAL SYSTEM CONTROL

Unit C1, Three Rock Road,
Sandyford Industrial Estate, Dublin 18.
Tel: 01 - 294 3110; Fax: 01 - 294 3115;
E-Mail: info@coreac.com
Website: www.coreac.com
Intelligent AC — GT Phelan

A new, highly economic, environmentally-friendly, inverter-controlled split air-conditioning system is now available from Toshiba. The new Toshiba RAS Multi Split has been designed to allow four, infrared-controlled, high-wall indoor units to be run off one large-capacity outdoor unit. A multi-split can be one of the most cost-effective solutions possible for small commercial or domestic installations. The Toshiba inverter-controlled range has a COP of up to 5 and can produce energy savings of up to 30%.

In effect, these are "plug and play" units — they don’t need any additional refrigerant, just a pipework run and connecting up. It is possible to use a mix of different-sized indoor units up to total cooling and heating capacities of 8kW and 9.2kW respectively.

The Toshiba RAS range uses R410A as its refrigerant. Accordingly, service access points are 5/16" flare. Only single-phase connection is required, enabling these split products to be applied easily in domestic situations. This is further supported by the significant heating capacities achievable.

Also new from Toshiba is a range of four “European style”, slim-look, bright white, high-wall units. The cabinet of the new unit is 30% smaller than previous models and has been designed with "horizontal cut-back" to look even smaller and neater when mounted high on an indoor wall.

Known as the P3, it is available in cooling only and heat pump versions, and has cooling capacities from 2.5kW to 5.7kW and heating capacities from 2.8kW to 6.7kW. They are very quiet, even at high speeds, with dBA ratings ranging from 47 to 53 at high fan speed or in the low thirties during normal operation.

The units come packed with a range of sophisticated features such as motorised louvres, washable filters, four fan speeds and a large number of control options to enable compatibility with other products, including Toshiba’s interactive AI control system. Only single phase power is required and the units come pre-charged with the environmentally-friendly refrigerant R407C.

The introduction of five models of fresh air exchangers to complement its ranges of VRF air conditioning systems has also been announced by Toshiba. These products supply fresh air and reject room air at balanced rates from 250ms up to 1000ms for fresh air systems. They are installed in the ductwork within the conditioned space and contain air filters.

They can be used to temper the air and for indirect heat recovery where applicable.

Additionally, two new fixed-speed split system models have been introduced by Toshiba to their RAS range of room air conditioners. The Toshiba RAS 18 and 24 are both available in heat pump and cooling only versions and they extend the capability of the standard RAS range to 6.4kW cooling and 6.9kW heating per one to one split system.

Three levels of filtration can be selected — a washable particle filter, a passive electro-static filter or two Zeolite filters that can purify the air from smoke and pollutants for up to five years and regenerate on exposure to sunlight. Five fan speeds are available as well as auto, to increase comfort and management of energy use.

Contact: Derek Phelan, GT Phelan. Tel: 01 - 286 4377; Fax: 01 - 286 4310; email: gtphelan@eircom.net

The new Toshiba RAS Multi Split from GT Phelan.

European-style Toshiba hi-wall unit from GT Phelan.
From April 1st 2002 our new address and phone numbers will be:

Ventac & Co Ltd,
Fitzwilliam House,
Industrial Estate,
Blessington,
Co Wicklow
Tel: 045 - 851500
Fax: 045 - 851501
Email: sales@ventac.com

www.ventac.com
Industrial Range

New Ventac
Technical Binder & Price List
available from
April 1st 2002.
Email your request to:
mmoran@ventac.com

1877; Fax: 01- 667 1055; Email: sales@ventac.com
Aquasmart — Simple Operations via Sophisticated Controls

In today's air conditioning systems the various components—such as fan coil units, cassette, air handling units, etc—very often operate independently without a communicating element.

However, this is becoming more and more unacceptable because of the exacting performance criteria expected by users and the demanding requirements in respect of energy usage Regulations.

It is against this background that Carrier's Aquasmart was developed. Designed as a complete system of perfectly-matched components with product-integrated electronic control, it provides fast, easy installation, connection and operation, and a single source of everything for the installer.

Additionally, the control intelligence in each component is complemented by the System Manager, which fully integrates the system to provide better control and energy management by linking all the componentry in the system. Using an 8-line dot matrix display, it also has text and graphics capabilities.

Aquasmart provides the widest possible range of control functions including cooling or heating, alarm reporting, time scheduling, and access to each component to reset setpoints. It replaces service tools, making life easier for the installer, and it is built on a CCN Bus, so all Carrier's electronic tools are compatible, including remote supervision.

It can control from five to 128 units, and have four time schedules a day per week for a maximum 32 zones. The menus are easily accessed at two levels of security, and are user-friendly with two one-touch adjustment buttons, four menu buttons, and four navigation buttons. Instant individual control is achievable in each zone.

Consoles, cassettes, hi-walls, and ducted fan coil units can all be matched more precisely than ever before.

The user-friendly interface in each zone allows adjustment of the temperature in accordance with the occupier's wishes. Maximum and minimum temperatures and fan speed are individually-adjustable, depending upon programme configuration.

During unoccupied periods, the air conditioning is automatically switched off. However, the occupant can select occupied mode for a specified duration.

During weekends or holiday periods, a programmable minimum temperature is maintained in the building.

The system's capacity range is broad enough, and its component choice varied enough, to offer complete flexibility in the application of this system for most medium-sized building applications.

The Aquasmart system is tested and connected at the factory. It incorporates an Aquasnap chiller or heat pump with its integrated hydronic module, complete with a water pump, expansion tank, water flow switch and valves — everything the installer needs. The auto-adaptive control protects the compressors and eliminates the need for a buffer tank.

Centralised monitoring of the installed system cuts diagnostic and intervention time and completes the establishment of peace of mind for the contractor and the end-user. Further remote access is also possible via the Carrier Comfort Network or the Internet. A CD-based selection programme has also been developed to ensure the ease of specification of the system.

Contact: Austin McDermott, Core Air Conditioning.
Tel: 01 - 294 3110; Fax: 01 - 294 3115; email: info@coreac.com
Advanced INVERTER Technology

MITSUBISHI air conditioning & heat pump VRF systems

- Flexible control of heating and cooling from any terminal unit simultaneously, with energy recovery between warm and cool areas.

NEW

SYSTEMS WITH UP TO 16 CONNECTABLE INDOOR UNITS

MITSUBISHI HEAVY INDUSTRIES, LTD.

3D Air Sales (Ireland) Ltd
www.3dair.co.uk
For information call: Michael Clancy
Tel: 01 450 9433
New St£2m Test Lab for York Europe

A £2 million state-of-the-art Environmental Test Facility has been completed at York International’s European chiller manufacturing facility at Basildon, Essex. The 23,000 sq m factory produces air and water cooled chillers and heat pumps for markets throughout Europe and the Middle East.

The laboratory, which is a purpose-designed, self-contained facility, has been built for complete thermal and acoustic testing of air and water cooled chillers and heat pumps in excess of 750kW. It will be used to verify cooling and heating performances for Eurovent capacity/sound certification, as well as for new product development.

The chilled and warm water services to the laboratory are supplied by four dedicated York multimode heat pump chillers sited nearby. "We are extremely proud of our new facility which is the best of its type in Europe", said Rodney Hightower, York’s Vice President & General Manager Air Conditioning Operations, Europe, at the recent official opening. "It will accelerate the development of new super-low sound chillers which will become the industry benchmark in European markets”, he added.

The heart of the new Test Facility is an hemi­anechoic chamber that is used to identify the location and level of noise in the component parts of a chiller within a range of 50Hz to 8000Hz. The internal dimensions are 17.3m x 13.6m x 7m high.

The environment within the chamber can be maintained at temperatures ranging from 50°C to 0°C to an accuracy of 0.5°C. The humidity can be measured with an accuracy of plus or minus 0.1%. Conditioned air can be supplied in a wide range of air volumes up to 100 cu m sq.

The Facility is named after Jack Scott, the former Vice President, York Europe, who made the commitment to build the facility prior to his recent retirement. He was present at the dedication ceremony.

York is the world’s largest independent manufacturer of air conditioning and refrigeration products. It currently employs 24,500 people in more than 100 countries, including Ireland, and has 30 manufacturing plants worldwide.

York’s extensive range of air conditioning and refrigeration products includes water and air cooled chillers and heat pumps; absorption chillers; air handling units and air distribution equipment; split systems and packaged air conditioners; marine and industrial refrigeration systems; and controls.

Additionally, York produces all compressor types — hermetic and scroll; reciprocating; and centrifugal compressors. (See BSNews January for full range).

Contact: Ray Ring, York ACR.
Tel: 01 - 466 0177;
Fax: 01 - 466 0198;
email: ray.ring@ie.york.com

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York air cooled chiller in the new York Test Laboratory. The walls are lined with acoustic wedges which create a free field sound environment.
Reconair
Reconair Services Ltd.
Reconair Engineering Ltd.

COMPLETE AIRCONDITIONING PACKAGE

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Tel: 01 - 842 5200  Fax: 01 - 842 5880
e-mail: hvac@reconair.ie
www.reconair.ie
Daikin Totally Integrated Control

Daikin, an innovator of air conditioning systems, now presents a new series of VRV systems utilising the ozone-friendly refrigerant R407C. Daikin is the sole air conditioning company in the world that manufactures every component, from refrigerant to complete air conditioning systems, itself. Driven by a commitment to offer the best for people as well as the environment, the company has been inspired to develop new systems that makes the most effective use of energy resources, while also protecting the ozone layer.

Daikin, the first in the industry to develop a VRV system, has now enhanced the R407C with the Plus Series that features an upgraded capacity of up to 30 horsepower, a new addition to the R407C VRV system to further refine all of the features of the R22 VRV system. This new refrigerant signals the start of a new era in air conditioning for the 21st century.

Daikin’s control systems feature sophisticated technology that ensures highly-precise and efficient air conditioning control.

Intelligent Touch Controller — This is a highly-advanced central control air conditioning management system that gives complete control of the air conditioning equipment. This “all-in-one” graphic controller mounts neatly on the wall while not taking up any space in rooms like that of BMS-style systems. Intelligent Touch Controller — with its touch-screen and colour LCD display — gives ease of use for any user. With Daikin’s unique DIII-net wiring and this all-in-one system, this small wall-mounted unit can be installed in no time.

Intelligent Manager — This is a dedicated system that enables anybody to easily control all the VRV System functions. It represents a dedicated system that employs Daikin’s unique DIII-net data communication method, which allows it to provide complete monitoring and control of VRV System functions.

The Intelligent Manager ensures easy use of effective centralised air conditioning control for small and medium-sized buildings, or buildings without BMS.

BACnet Gateway — This is an integrated control system for connecting the VRV System with a BMS. Utilising the BACnet data communication protocol, it serves as an open system that provides a seamless connection between the VRV System and BMS.

This allows for the creation of a variety of control and monitoring systems that feature linked operation with other installations, and remote monitoring over telecommunications lines.

Contact: Paul O’Neill, Coolair.
Tel: 01 - 451 1244;
Fax: 01 - 462 3434;
email: info@coolair.iol.ie
VRF
Simultaneous Cooling & Heating

INCLUDING

- 4-way Cassette
- 2-way Cassette
- 1-way Cassette
- High-wall
- Ceiling Type
- Ducted
- Built-in
- Small Duct Type
- Floor Standing
- Concealed Floor Standing

Walkair Ltd, Unit 901 Western Industrial Estate, Dublin 12
Tel: 01 - 456 8070; Fax: 01 - 456 8098
Email: sales@walkair.ie
TRANE OPTIMISATION — BALANCING ENGINEERING COMPETENCY WITH MARKET AWARENESS

At Trane Ireland we provide the customer with exactly what he wants, especially when it comes to the design and manufacture of air handling units. Being the world leader in this field, we have a very broad range to offer, from our commercially-focussed CCGA unit to the custom-engineered ISM unit. The choices available within each product range are comprehensive, whether it is to do with choosing filter grading or the configuration of the supply/extract fan. Each unit is optimised to ensure that the design package we develop balances engineering competency with market awareness. How do we achieve this balance? We listen carefully to our clients, we get to understand the requirement, and then we devise a tailored solution. The process very often starts with a simple 'phone call and gradually progresses through to system design, manufacture, site delivery and final installation and commissioning within a matter of weeks!

Detailed here is a typical scenario.

Stage 1: The Initial Enquiry
We receive an enquiry for an outdoor supply and exhaust type air handling unit for a hotel application. Space restrictions on site, strict boundary noise constraints and short lead times are just some of the issues raised during the initial conversation. The Trane CCGA air handling unit is the obvious solution but, rather than go with immediate impressions, we further tease out just what precisely CCGA offers in respect of the client’s requirements. Among the benefits is a diverse and varied range of market-leading components to choose from. Typical options we offer our customers are:

Fans — ABB Centriflow / Nicotra
Coils — Trane/Custom
Humidifiers — JS/VPAC/Spirax Sarco
Gas Burners — Garbutts/GRE
Electric Heater Batteries — Hotline
Plate Heat Exchangers — Hoval/Greenbox
Thermal Wheels — Eurex Energy
Filters - Camfil
Silencers — Sound Attenuators
Controls — Trane factory-mounted controls

Stage 2: Examining the Options — The Unit Design Criteria
As well as considering the usual design criteria — air volumes, external static pressures, filtration type, cooling/heating mediums, unit dimensions, sound emissions etc — we go further. During the selection process we also consider the fin spacing on coils, fan optimisation, space saving, air and water pressure drops, cost optimisation, and component service access. Each selection is case-specific.

Stage 3: Developing the Concept — Unit Configuration
With aid of our UTA selection program we develop an air handling unit proposal. In this scenario the unit configuration chosen is a stacked supply and exhaust outdoor unit with plate heat exchanger (heat recovery) and silencers positioned on the supply/exhaust to minimise the system noise levels. Such a configuration will provide a balance between the air conditioning requirements within the space, dimensional restrictions on the roof, budgetary limitations, and environmental considerations.
Stage 4: The Optimum Unit Design - Selecting the Components

During selection we have the option of a Trane or custom manufactured coil in our selection program. A number of design options are analysed balancing cooling capacity with initial cost. Why is the Trane cooling coil the obvious choice?
- Higher Face Velocities (up to 3m/s) without risk of carry over
- No Drop Eliminator, meaning cost savings and reduced unit length
- Coil manufactured and tested in factory

One particular design situation requires a delicate balance between acoustic performance and initial cost. The technical performance of both forward and backward curved supply/extract fans are evaluated. A comprehensive acoustical analysis across the frequency range coupled with costing evaluation leads to us opting for the forward curved supply & extract fans in this application.

Stage 5: Order Placement & Manufacture

On refining our proposals further over the following days an order was placed for the given unit and other air handling units for the project. The production and delivery cycle for the CCGA unit is typically four to six weeks. Given a total manufacturing space of 45,000 sq ft and the demand-flow manufacturing techniques currently used, shorter cycles are an option.

Stage 6: Meeting the Customers Needs

Once the air handling unit nears the end of the production cycle, the customer is contacted and arrangements for delivery are put in place. Specific provisions are made in cases where road closures or craneage are involved.

When the air-handling unit is delivered to site the communication lines with the customer remain active throughout the commissioning process right up to the completion of the warranty period. The Trane Service Team can then offer the customer a range of options with regard to the future maintenance of the Trane product.

CONTACT
Dermot McMorrow,
Trane Ireland Ltd,
F7 Centrepoint Business Park,
Oak Road, Dublin 12.
Tel: 01 - 460 6030; Fax: 01 - 460 6039;
email: dermot_mcmorrow@trane.com
Energy Efficiency from Hitachi

Renowned for excellent reliability and quiet operation, the Samurai range of air cooled chillers from Hitachi is set to improve market share with some new impressive features. A new “Economiser Circuit” maximises the capacity of the chiller by monitoring the cooling demand to improve the available capacity of the machine. This results in costs savings and longer life expectancy. It also enables Hitachi to offer not only a wider range but a significant footprint and weight advantage. Additionally, the range has been boosted from 10 to 17 models, covering 40Hp (106kW) to 400Hp (1030kW). At the heart of the chiller is the Hitachi twin-lobe screw compressor. The enhanced “Z type” is now able to provide continuous capacity control from 25% to 100%, enabling the cooling load to be closely matched, for precise water temperature control. This can improve energy efficiency by around 10%.

The compact, high-efficiency, low-noise and low-vibration design incorporates an onboard Hitachi microcomputer, allowing extremely accurate set point control. As would be expected from one of the leading names in the industry, the Hitachi Samurai range includes a multi-point fault and alarm diagnostic system, through the 4, 7 segment LCD displays. The dual refrigerant semi-hermetic screw compressors are directly coupled with the built-in type motor, eliminating the need for a shaft seal and related maintenance. The inherently-quiet and vibration-free screw compressors; are further mounted on rubber anti-vibration mountings, and the patented “double-casing” structure ensures even quieter and smoother operation. Either R407C or R22 factory-charged refrigerant options are available as standard.

Contact: Paul O’Neill, Coolair.
Tel: 01-4511244;
Fax: 01-4623434;
e-mail: info@coolair.iol.ie

Sentinel Close Control

The Sentinel range has been designed for heat-sensitive environments such as telecommunications exchanges and switching stations. The units are fully packaged incorporating integrated evaporators and condensers. Modular design allows units to be supplied in individual sections, each providing up to 7.5kW of cooling. Up to four sections can be supplied and networked in a master/slave formation for linked control. The Sentinel’s modular design provides complete flexibility to match the requirements of each individual application as well as providing greater reliability. A special feature of Sentinel is its free-cooling cycle allowing fresh air to be utilised when the external temperature falls. When external conditions are right, the unit automatically switches from a refrigeration cycle to a fresh cooling cycle. This reduces energy consumption and running costs.

Contact: Paul O’Neill, Coolair.
Tel: 01-4511244;
Fax: 01-4623434;
e-mail: info@coolair.iol.ie
modular multi
intelligent, energy efficient and versatile

- Full Three Year Warranty
- Extensive Range
- All equipment operates using environmentally friendly refrigerant
- Full range of control options
  - BMS - Internet - Central Control - Infrared
- Refrigerant leak detection
- Single indoor/group energy monitoring
As part of Masterair Sales Ltd commitment to ongoing improvement in manufacturing quality, technical innovation, and competitive pricing, we are pleased to announce the introduction of our new “Cold Bridge Free” (CBF) air handling unit structure. This high quality AHU casing is designed to meet the exacting requirements of the latest AHU mechanical standard – IS-EN 1886-1998.

Masterair Sales Ltd new CBF range of air handling units is unique in that it offers zero metal to metal contact between the inner and outer AHU skins – i.e. a true “Cold Bridge Free” construction.

CBF 60mm Construction

The Masterair Sales Ltd new CBF panel is double skin foam filled construction, 60mm thick. The foam filling is water based, CFC free, closed cell, and non-shedding. U values, air leakage, durability, and thermal bridging are as noted in the table right, according to IS-EN 1886-1998.

AHU Range

The Masterair Sales Ltd CBF range of AHUs offers air volume capacities from 0.2m³/sec to 44.2m³/sec over 17 model sizes. AHU construction is modular, offering total flexibility in selection and application. With the ‘total package’ concept, Masterair offer fully pre-wired and pre-piped plug-in units with on board controls and built-in control panels or BMS outstations.

Due to the modular nature of Masterair Sales Ltd new CBF structure, retrofitting of equipment on existing sites, and on-site assembly under restricted access conditions is now possible over a very large range of AHU sizes.
The IS-EN 1886-1998 standard outlines the minimum requirements of AHU casings over a range of applications, and our new CBF construction comfortably meets or exceeds the highest of these standards.

### Table: IS-EN1886 Requirements vs CBF Casing Rating

<table>
<thead>
<tr>
<th>Category</th>
<th>IS-EN1886 Requirements</th>
<th>CBF Casing Rating</th>
<th>Advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>U Value W/m²k</td>
<td>Class T2 0.5 &lt; U &lt; 1.0</td>
<td>0.59</td>
<td>Reduced Energy Loss</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Higher Thermal Efficiency</td>
</tr>
<tr>
<td>Air Leakage</td>
<td>Class B 0.44 l.s.m²</td>
<td>0.05 l.s.m²</td>
<td>Reduced Thermal &amp; Pressure Losses</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reduced Input Power</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Improved Aerodynamic Performance</td>
</tr>
<tr>
<td>Durability</td>
<td>Class 2A max deflection 4 mm.m</td>
<td>0.77mm.m</td>
<td>Longer Service Life</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reduced Corrosion Risk</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lower Maintenance Costs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Longer Lifetime</td>
</tr>
<tr>
<td>Thermal Bridging</td>
<td>TB2 0.6 &lt; kb &lt; 0.75</td>
<td>kb = 0.72</td>
<td>Reduced Energy Loss</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eliminates Condensation on External Surfaces</td>
</tr>
</tbody>
</table>

The fixtures and fittings have also been expanded and improved to compliment the new CBF AHU casing. Where specified these will include the following:

- Double-glazed inspection windows
- Fully sloped and insulated drain trays integrated into the AHU casing
- Flush-mounted magnehelic gauges
- Dampers with integral blade seals and drive cogs out of the air-stream
- 900mm wide access doors to all fan chambers, for easy service access

The new Masterair Sales Ltd CBF range of AHU’s are supplied finished to an attractive grey RAL 7032 colour as standard, with all other colours to BS4800 available on request.

VISIT OUR WEBSITE FOR DETAILS OF FULL PRODUCT RANGE AND CBF ELECTRONIC CATALOGUE

Masterair Sales Ltd, John F Kennedy Park, Killeen Road, Dublin 12.
Tel: 01 - 460 2188  Fax: 01 - 460 2193
email: cbf@masterair.ie  Website: www.masterair.ie

The Total Package
New Force Representing 200 Years of Experience

January 2002 saw the launch of a brand new company, the Fläkt Woods Group (www.fläktwoods.com) that is the merger between Fläkt (formally owned by ABB), and Woods Air Movement (formally owned by Marconi).

"The new group brings together two of the world’s leading names in the air movement and treatment industry, namely Fläkt and Woods Air Movement. The group also owns other strong brands including, Solyvent Ventac and American Fan” says Mark Grimes of the Irish operation – Fläkt (Ireland) Ltd.

“As a combined business” he continued, “the global Fläkt Woods Group will have outstanding opportunities to strengthen its close cooperation with its business partners around the world, and of course here in Ireland. The business has a wide and deep technology base and global market coverage, which will prove extremely beneficial for our diverse customer base. The Fläkt Woods Group can offer products and services many other companies in the generally-fragmented industry cannot match.”

The new Fläkt Woods Group has operations in more than 30 countries, employs over 4000 people and has a turnover in excess of 600 million. It will operate through five main business areas – Indoor Climate; Air Distribution; Fans–Building Services and Industrial; Fans Heavy Duty and Components.

With demand for improved air quality growing and the need for increased safety in the extraction and treatment of air, the Fläkt Woods Group is ideally placed to set new standards in the industry. They will be able to offer customers the very best in air movement systems and solutions in the world.

The same product lines that were previously associated with ABB Building Systems have now been transferred to Fläkt (Ireland) Ltd. These include Climaventa Chillers, Landis & Steafa Controls – Domestic and Industrial; Dirivent Ventilation; Cylon Building Management Systems; and all of the former ABB ventilation products. Additionally, the Woods range will now be a part of the product portfolio.

The company will remain in its existing headquarters at Belgard Road, Tallaght, Dublin 24, and Cleve Business Park, Monahon Road, Cork. All existing telephone, fax numbers and e-mail address remain the same.

Contact: Fläkt Ireland
Tel: 01-4057300;
Fax: 01-4057324;
Website: www.fläktwoods.com

Perfect Air Quality from Honeywell

From specification to installation and after sales service, it is reassuring that the most professional indoor air quality advice is only a phone call away. The hospitality industry has been demanding tailored responses for a high level of indoor air quality and Walkair can satisfy this demand by using a combination of air filtration with ventilation equipment to provide the overall solution.

Walkair delivers a complete service to ensure full compliance with all regulatory requirements and anticipated future legislation.

Using the best integrated technology from Honeywell air cleaners and air handling units, Walkair will enhance the quality in any venue.

Research shows that providing good quality clean air can be self-funding exercise in most locations with wet sales rising by an average of 12% and food sales rising from an average of 32%.

Contact: Ian Johnson, Walkair.
Tel: 01 - 456 8070;
Fax: 01 - 456 8098;
email: sales@walkair.ie
today you have a choice
www.betterairconditioning.com

Rink offers a complete range of turnkey solutions, including design, installation and service packages throughout Ireland.

Whatever your needs, Rink has the solution that is right for you.

Rink rooftop installations offer
- Increased flexibility
- International Support
- Economical to run
- Improved performance
- Ease of installation
- Ease of maintenance

Think Rink

The Rink Group • Unit 1 Ballymount Business Park
Dublin 24 • IRELAND
Tel: +353 (0)1 456 9469 • Fax: +353 (0)1 450 4314
e-mail: sarah@rinkairconditioning.com
www.therinkgroup.com

WHY NOT CLAIM YOUR FREE RINK DUCTULATOR TODAY!
Visit www.betterairconditioning.com
or
Tel: 01 - 456 9469
AC Controls from Danfoss

The Danfoss 8000 Series advanced air conditioning thermostats comprise multi-stage programmable thermostats which are suited to all types of domestic and commercial air conditioning systems, including multi-stage air-to-air heat pumps.

All 8000 Series thermostats are installer settable for 24-hour, 5/2 day or 7-day operation. Their sophisticated control operation is based on a PI algorithm and chrono-proportional output with adjustable cycle rate. Heating temperatures can be controlled within the range 6-30°C and cooling set to come in between 26-40°C, with a thermal differential of less than 1°C. A choice of “Off” or “Setback” is provided independently for both heating and cooling. Installers can select a minimum dead zone between 1-4°C.

Advanced features provide excellent control flexibility and security. These include installer advanced setting-up and programming, installer service mode option, adjustable delay on all compressor stages, lockable keypads, limitation or locking of both high and low set points on heat and cool ranges, limitations of temperature override, limitation of event extension period, and a 99-day holiday programming option.

The clear LCD display can be set to show time or temperature, with a choice for °F or °C scaling and either an AM/PM or 24-hour clock.

Type HC8000 heat/cool thermostats, designed for the automatic sequence controls of fan-coil units and packaged/split air-conditioning units, are available in 1-stage heat/1-stage cool and 2-stage heat/2-stage cool versions, with either single or three speed fan outputs.

Danfoss has also introduced the new 6000 Series programmable thermostats for fan coil unit control. Attractively styled and easy-to-use, the 6000 Series thermostats combine the functions of thermostat and time control in one unit. They enable the programming of either two or four time/temperature events for each day, selectable at the time of installation.

The range includes models that can be configured for either heating or cooling applications, typically for 2-pipe non-changeover systems; heat/cool models for 2-pipe changeover systems; plus split systems and heat/cool models for 4-pipe non-changeover systems. Non-programmable models are also available.

Heat/cool models incorporate dual set-point adjustment, allowing independent heating and cooling settings, with an adjustable minimum dead-band setting to prevent overlap of heating and cooling.

Non-change-over versions which offer heating or cooling, selected at the time of installation; change-over versions that offer either heating or cooling, dependant upon system water temperature; and versions that provide sequence control of both heating and cooling, are also available.

Fan output is provided with selected models having manual 3-speed selection. Fan mode selection includes Smart-fan, which allows fans to be on during the day but revert to “Auto” over night. Additional features available for heat/cool models include manual changeover for two-pipe systems, auto changeover versions for 4-pipe systems.

Contact: David Holmes, Danfoss Ireland
Tel: 01-626 8111; Fax: 01 - 6269334.
E-mail: marketing@danfoss.ie

6000 Series programmable fan coil thermostat from Danfoss Ireland
Less dear to run. Kinder to the environment.

The Best of Both Worlds

Now you can enjoy the best of both worlds with the new range of advanced Mitsubishi Electric Air Conditioning systems.

They're up to 45% more energy efficient so it doesn't cost the earth to enjoy air-conditioned comfort all year 'round.

In fact, by using 10 heat pumps in a "typical" 10,000ft² building you can save up to 20% in electricity costs every year.

What's more, all City Multi systems are now 100% CFC-free making them the most environmentally-friendly systems in the world.

Less dear to run and kinder to the environment. It's no wonder Mitsubishi Electric Air Conditioning makes the Ireland's most popular air conditioning systems.

For further information

FREEPHONE 1800 543 210
MHI — New VRF Cassette

The new single-discharge cassette from MHI is a “remarkable achievement” in innovation and compact design. This new model, the FDTQ comes in three capacity sizes — 2.2, 2.8 & 3.6KW.

The concealed part of the unit is only 570 x 565mms, and is only 250mm high, representing one of the most compact VRF terminal units on the market. The fascia panel, which includes the return air filter, can easily be removed for service access. An extended panel is available for installation in a solid ceiling.

In most hotel applications there is very little space for the installation of an air conditioning unit. The location is usually in a bulkhead at the side of the bathroom, where there are often other services competing for the limited space.

One of the most difficult problems to overcome is the removal of condensate from the air conditioning unit. The FDTQ cassette provides the design consultant with an ideal solution to these problems.

The standard specification includes a condensate lift pump, which is virtually silent in operation, and capable of pumping up to 600mm. This allows the unit to be installed in the bulkhead at a height to suit the architectural layout, irrespective of the height of the gravity drain connection.

There is a horizontal duct connection for the air discharge, where it is required to supply the air through a grille built into the bulkhead. An alternative fascia panel is available which has no air outlet slot.

Alternatively, a completely concealed unit is also manufactured — the FDQM (3.6KW) — suitable for return and supply air duct connections.

The ducted unit also includes the condensate lift pump. The duct resistance is up to 30Pa.

The multi-function controller is unique in its design, allowing the installer to adjust and eliminate some of the functions and displays, in order to simplify the operation.

The remote controller also has an “alternative temperature sensor” which can be utilised to operate the heating and cooling functions. The thermistor is located in a small ventilated pocket within the controller casing, and is activated by a dip-switch which is set up at the commissioning stage.

Where ducted units are installed, a room sensor very often provides a better degree of control than a return air sensor.

This new compact VRF terminal unit is not only suitable for hotel bedrooms, it is also ideal for small cellular offices, doctor/dentists surgeries, beauty treatment rooms, and small meeting rooms. The adjustable louver of the single discharge cassette can help to

FDTQ single-discharge cassette from MHI.

RCD wall-mounted controller.

eliminate draughts in small rooms.

The FDTQ cassette, and the FDQM ducted VRF units, are compatible with the Mitsubishi Heavy Industries KX 2-pipe and KXR 3-pipe systems, which can have a maximum of 16 connectable units, and which provide energy-efficient heating and cooling using ozone friendly R407C refrigerant.

Contact: Michael Calncy, 3D Air Sales (Ireland).
Tel: 01 - 450 9433;
Fax: 01 - 450 9799;
email: info@mitsubishiairconditioning.com

Model FDTQ is also available with a horizontal duct connection.
The Wraps Are Off

Daikin Europe's unique new

**VRV Plus Heat Recovery - R407C**

The ONLY heat recovery system in the world that is connectable to 32 indoor units and utilises R407C refrigerant

This line up from 25kW to 90kW of cooling covers an extensive range of 64 indoor units comprising 11 different types and 11 capacities.

For further details of the new range please contact info@coolair.ie or Tel: 01 - 451 1244
Panasonic VRF Simultaneous Heating and Cooling

Panasonic has just introduced its new range of simultaneous cooling and heating systems. There are two capacities of outdoor units available — 22.4kw and 28.0kw nominal cooling, 25.0kw and 31.5kw nominal heating — in both R22 and R407C versions. Walkair Ltd, official distributor for Panasonic air conditioning units in Ireland, will initially introduce the R407C version.

There are ten different indoor unit types available:
- 1-way cassette
- 2-way cassette
- 4-way cassette
- Small duct type specifically designed for hotel rooms
- Built-in type
- Ducted Type
- Hi-wall
- Under ceiling
- Floor-standing
- Concealed floor-standing

Indoor units range in capacity from 2.2 to 28.0kw cooling, 2.5 to 31.0kw heating, offering a total 61 units to choose from. A combination of a triple-pipe system and heat recovery boxes enables simultaneous heating and cooling operations to respond to diverse and individual air conditioning needs in offices.

Exhaust heat generated by the cooling operation is utilised for the heating operation, thus reducing power consumption by up to 53%.

Walkair has also introduced a range of Panasonic control solutions, UM-NET and M-PLS.

UM-NET is the network for Panasonic Urban Multi and Urban Split series of air conditioning units. It offers a centralised control system allowing flexible combination of various controllers to suit specific users needs.

The UM-NET can also extend to the Panasonic M-PLS control solution through a Gateway. The M-PLS system provides a PC-based management system and integration with a BMS system.

The M-PLS management system is PC-based software (Windows TM), and not only provides the controls in various levels corresponding to users needs, but also makes it possible to respond to individual demands other than air conditioning.

As well as the new simultaneous heating and cooling systems, Walkair has also introduced two other Panasonic Multi Split Systems, the MXi(R) and MAIR Series. Both are inverter driven heat pump systems.

This is in addition to a Panasonic new range of R407C split systems.

Contact: Vincent Mahony, Walkair. Tel: 01 - 456 8070; fax: 01 - 456 8098; email: sales@walkair.ie

The Panasonic MAIR Series from Walkair is inverter driven with a single refrigerant piping for easy installation, reduced cost and space saving.
Controlling your energy usage & costs is an increasing consideration in today's business environment. Danfoss offer a full and complete range of automatic controls for heating and building service applications to ensure optimised and efficient control of your heating requirements.

- Thermostatic Radiator Valves for close room control and effective energy savings.
- Zone Controls and Programmers to ensure heat is where you need it, at the right time and right level!
- Butterfly Valves, Motorised Valves, Pressure Regulation Valves and Variable Speed Drives for pumps & fans to protect and maintain your system.

Danfoss Ireland Ltd
Nangor Road Business Park
Dublin 12
Tel: 01 626 8111 • Fax: 01 626 9334
E-mail: marketing@danfoss.ie
Rink Rooftop Solutions

The Rink Rooftop range of packaged solutions offers the ultimate in choice and flexibility. Specially designed to meet the needs of the European market, the range of heat pumps and air conditioners cater for all requirements, whether they need cooling only, heating and cooling, or simply to supply fresh conditioned air into a working environment.

All Rink Rooftops are designed to be easy to install and require only standard duct work and electrical connections. This reduces installation costs and minimises construction work. They are also carefully designed to reduce maintenance costs and maximise performance, giving a better return on your investment.

Rink offers a choice of solutions to suit almost any industrial or commercial application. Available in a wide range of sizes and power outputs, the Rink Rooftop range offers affordable power in a tough weatherproof package that can be easily installed and maintained. Rink Rooftops are particularly suitable when space is at a premium because of their compact size and smaller footprint. All Rink Rooftops are supplied with discreet programmable controllers giving total control over the environment all year round. Options include free cooling and return air fans.

Rink Air Conditioning was established over 18 years ago and is now a recognised leader in the air conditioning field. The main focus is on delivering quality and reliability with a range of products backed by a professional design, and consultancy service. Rink's technical support and after sales service has resulted in continued growth, much of which is driven by repeat sales.

With Rink clients can be sure advice is not limited to today's particular project, but that the company's personnel are also available when expansion, growth and maintenance is required.

“Think Rink and claim your free ductulator today”.

Contact: Rink Air Conditioning.
Tel: 01 - 456 9469; Fax: 01 - 450 4314; email: sarah@rinkairconditioning.com

特别适合空间有限的情况，因为它们的紧凑尺寸和较小的脚印。所有Rink屋顶式系统都配备了隐藏式可编程控制器，可以全年控制环境。选项包括免费冷却和回风风扇。

Rink Air Conditioning成立于18年前，现已成为公认的空调领域的领导者。主要关注点在于提供优质和可靠的产品，以及一个产品系列，这是由专业设计和咨询服务支持的。

Rink’s technical support and after-sales service has resulted in continued growth, much of which is driven by repeat sales.

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“Think Rink and claim your free ductulator today”.

Contact: Rink Air Conditioning.
Tel: 01 - 456 9469; Fax: 01 - 450 4314; email: sarah@rinkairconditioning.com
Air Comfort Is Mark’s Business

Coolena-based Mark Eire has always enjoyed significant market success, not just on the home front but also in the international marketplace. Driven by a never-ending quest for product innovation and performance excellence, vast resources are put into research and development every year. This means exciting new and technologically-advanced products are continuously coming on stream. The R&D team is currently working on a new heat exchanger concept, details of which will be announced in the coming months.

Mark Eire employs 70 people using state-of-the-art production equipment and modern manufacturing techniques and practices. Over the last two years alone €1.2 million has been invested in new plant. A typical example is the C&C computer-controlled punch which loads itself, punches out the die cuts, stacks the finished article, gets rid of the scrap, and all without human intervention or assistance. It is frequently left running overnight to facilitate production runs the next day. Where necessary, output can be easily increased by the addition of an extra shift. At present something like 60% of production is for the export market with the remaining 40% going to Ireland.

The Mark product range is extensive and includes air handling units complemented by a unique range of heaters and other ancillary products. Given that this is the air movement and air quality feature, herewith are brief details of the various options offered by the company.

Mark GS Units - The Mark GS gas-fired suspended unit air heater is an all 'round product, ideally suited to industrial applications. Available in suspended balanced flue room-sealed or conventional type (18kW to 104kW from 20.4kW to 95.8kW), in either axial or centrifugal fan models for free blowing or ducted systems.

Mark Calflo - The Mark Calflo make-up air heater is suitable for applications where large quantities of polluted air are extracted such as spray booths, welding halls, machines factories the plastics industry, etc. The fully modulating burner makes an optimum balance of required heat and ventilation possible;

Mark Roof top - The Mark rooftop air handling units incorporate centrifugal fan and heat exchangers, filters, dampers, attenuators, supply and extract fans ranging from 18kW to 95.8kW single module units, up to multiple arrangements in excess of 415kW;

Mark Ventilation - Mark’s ventilation range includes purpose-made extraction or input units manufactured to specific requirements. Ancillary components such as filters, dampers, attenuators, etc may also be incorporated;

Mark Calfo - The Mark Calfo make-up air heater is suitable for applications where large quantities of

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Wolf Targets Pharmaceutical Sector

As a leading manufacturer of air handling units, Wolf has just introduced its latest new products, the KG Gigant Hygiene air conditioner range. Applications are wherever sterile, hygienic conditions are required, such as operating rooms; clean room technology; biotechnology; laboratory technology; pharmaceutical industry; computer and microchip production; food processing, etc.

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Ventac — For the Widest Stock Range of Ventilation Products

**AcTech**
AcTech offers an extensive range of noise control and anti-vibration products and offers a design and installation service for specific applications and tailor-made solutions;

**Ventac Acoustic Air Technology Ltd (AAT)**
AAT manufactures galvanised steel, stainless steel and plastic attenuators to customer specification offering guaranteed acoustic performances using acoustic tests carried out in the Ventac Noise Control Research Laboratory (NCRL) facility. They also offer a range of Acoustic Louvres and Acoustic Doors;

**Ventac Alldays Peacock**
Industrial centrifugal fan range designed and constructed to customer specification for applications such as high temperatures, corrosive atmospheres, explosive/flammable atmospheres, marine and mining applications, etc. These units can be manufactured in a wide range of materials ranging from painted mild steel; stainless steel; aluminium; bronze; hastology; titanium; etc;

**Ventac Actioner Equipment Ltd**
The Actioner range of dampers includes smoke dampers; vent dampers, fire dampers, volume control dampers; and shut-off dampers. These units are available with a wide range of accessories including actuators, installation frames, micro-switches, control panels, etc, and can also be supplied in 430 and 316 stainless steel;

**Ventac Bonotec**
Bonotec manufacture a range of high specification modular panels for the manufacture of AHU cabinets and Acoustic Enclosures;

**Ventac DEC**
DEC manufacture and supply a wide range of flexible ducting accessories. The range includes flexible ducting; flexible attenuators; semi-flexible ducting; disc valves; duct tape; duct sealant; jubilee clips; smoke emitters for testing and commissioning work; etc;

**Ventac Dust Control Products**
Ventac offers a wide range of dust control packages such as dust collectors; filter units; material handling fans and cyclones;

**Ventac Fumex**
Fumex supplies a range of local exhaust arms ranging from 50mm to 200mm in lengths from 800mm to 5000mm. They also supply various rail mounted and hose reel solutions for local exhaust applications, together with all necessary accessories;

**Ventac Gebhardt GmbH**
The Gebhardt range of direct and belt-driven centrifugal fans is the industry's most widely-recognised name. The range includes single and double inlet centrifugal fans built to various specifications. These units can be used for cabinet mounting; duct mounting and roof mounting; and are available with a wide range of accessories;

**Ventac Imp Klima**
Imp Klima offers a wide range of specialised air terminal devices and accessories. The range includes steel grilles; steel diffusers; steel louvres; combination steel backdraught shutters and louvres; roof-mounted louvered air discharge towers; displacement diffusers; swirl diffusers; and motorised diffusers;

**Ventac Matthews and Yates (M&Y) Ltd**
M&Y manufactures a range of heavy duty axial fans offering volume flow rates from 3000m³/hr to 30000m³/hr. They are available in high-temperature, explosion/flame-proof and corrosion resistant versions and are available with a wide range of motors and accessories;

**Ventac Mietzsch GmbH**
Mietzsch manufactures a wide range of industrial plastic fans. They are available in direct and belt-driven formats and can also be supplied with duty and standby motor arrangements (belt-driven only);

**Ventac S.E.A.T.**
The S.E.A.T. range comprises a number of polypropylene centrifugal fume cupboard fans for volume flow rates from 100 to 4500m³/hr;

**Ventac Soler & Palau (S&P)**
S&P offers an extensive range of ventilation products for the domestic, commercial and industrial markets.
The range includes items such as plate and cased axial fans; roof-mounted fans; in line fans; window fans; special application fans; etc;

Ventac Ventur
Ventur manufactures a wide range of side channel blowers; industrial centrifugal fans; and wood chip extractors;

Ventac VIM
VIM manufactures domestic and commercial central ventilation and heat recovery systems with a wide range of accessories including filters; valves; sound absorbers; air flow regulators; constant volume devices; air intakes; and roof outlets; etc;

Ventac Waterloo
Waterloo offers a wide range of air terminal devices available in various sizes and colours;

Ventac Wozair
Wozair offers a wide range of heavy-duty stainless steel air terminal devices for the pharmaceutical; microelectronic; nuclear; and off-shore industries.

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€12.7 million Available For Energy Efficiency in Public Sector Buildings

As the biggest user of energy in Ireland, it is of vital importance that the public sector leads by example in the field of energy conservation and energy efficiency. That is according to Peter Brabazon of the Irish Energy Centre who recently encouraged decision makers in the public sector to make use of €12.7 million in government funding which has been made available to improve energy efficiency in non-commercial public sector buildings. The monies have been broken down into a number of programme elements, as follows:

- €2 million for Government Departments, Agencies and non-commercial state bodies towards the cost of undertaking energy-efficient design studies (Design Study Support Scheme);
- €9.1 million for upgrading energy-related features in existing and new building projects (Model Solutions Investment Support Scheme);
- Shortly to follow will be €1.6 million towards establishing new Energy Management Bureaux. Commenting on the work programme, Peter Brabazon said: "In Ireland, energy use in buildings accounts for over 40% of the total final energy consumption. When considered as a single entity, the public sector is the biggest user of energy in the country, with current annual expenditure in the order of €180 million. Furthermore, significant growth in energy use is expected in line with the ambitious building programme scheduled under the National Development Plan. It is essential that such developments incorporate energy-efficient solutions as an integral part of building specifications. The public sector must lead by example in energy conservation and energy efficiency", he concluded.

Under the Design Study Support Scheme, €2 million is being made available to ensure that state bodies employ the very best in energy-efficient design strategies in all new building and refurbishment projects. The ultimate goal is to ensure that all new and future public building projects have improved energy performance levels.

Under the scheme, financial support will be provided for the purposes of procuring external professional expertise to report on the feasibility of energy-efficient design and technology solutions in new building and refurbishment projects. Financial support of up to 50% (excluding VAT) of the cost of undertaking the design study will be provided, up to a maximum of €20,000. The scheme, like the other programme elements, is open to all non-commercial public sector organisations including: all Government departments, local authorities, health boards, educational institutions and defence forces.

The Model Solution Support Scheme was launched in August 2001. Under this scheme a €9.1 million fund has been allocated to provide direct support for upgrades of energy-related features in existing buildings and new building projects. Support of up to 50% will be available to either underwrite risk or offset the marginal cost of additional energy-saving features. The support limit, except in exceptional circumstances, will be €500,000.

Both the Design Study Support Scheme and the Model Solution Investment Support Scheme are expected to remain open for applications up to 2004. Further funding of €1.6 million will also be allocated in support of the establishment of a number of Energy Management Bureaux. These bureaux will collect energy data, and monitor and report on energy use in the largest energy consuming groups of buildings occupied by public bodies. This funding will be available from mid-2002.
Controls Systems — The Future

In today's modern building environment there is a greater demand to utilise building management, fire management and security management systems that make full use of up-to-date technologies and common communications protocols that reflect the type of business that the organisation is participating within. This benefits both the specifier and the end user by means of ease of specification, procurement, and choice of manufacturer/systems integrator. It also increases the ease with which these systems can share information.

The recent CIBSE seminar on control systems held in The Engineers Club, Clyde Road, Dublin 4, was intended to give delegates an understanding of the technologies and protocols available, and commonly used, in the marketplace today. It focussed primarily on:—

— LonWorks systems integration
— LonWorks technology
— The LonMark standard
— Introduction to net
— BACnet standards
— Comparison between BACnet and LonWorks.

Principal speaker was Vincent Aspell and an excellent turnout ensured that a lively discussion and Q&A session followed his presentation. Our photographer was also present and he captured some of the participants as they relaxed before the formal session commenced.
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  logging intervals
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