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Bathroom, Taps, Mixers & Fittings
- World Market Worth Nearly €9 Million

Published by ARROW@TU Dublin, 2003
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The building services sector is a vital part of Ireland's construction industry. It must not sell itself short. If everyone from the client down through the construction chain thinks building services is a soft touch, then it will become a soft touch.

The net result is a building services sector with all the involved parties — from consultants through to contractors and product suppliers — earning less and less at a time when material and labour costs have risen significantly.

Clearly, such a situation is unsustainable. While there is no escaping the harsh reality of a reducing marketplace, common sense — if not economic sense — must prevail.

The building services sector is a vital part of Ireland’s construction industry. It must not sell itself short. If everyone from the client down through the construction chain thinks building services is a soft touch, then it will become a soft touch.

It’s time to say no to this downward spiral. As tender prices fall, building services must not become the fall-guy.

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KD Fans From Systemair

Since it introduced the first circular duct fan in 1974 Systemair has worked on developing the concept. Over the years there have been many improvements and developments, one of the latest being the KD-series. These fans have mixed flow impellers with a design where the air passes through at an angle of approximately 45° to the shaft.

The mixed flow fan provides more air flow than a corresponding radial fan and higher pressure capacity than a corresponding axial fan. The design also has several other advantages such as compact fan with small outer measurements, quieter operation and easy installation and service.

KD fans have a high capacity in relation to their compact design. The bearings are maintenance-free while the casing and impeller are manufactured from galvanised sheet steel. The fans are delivered with a blue powder coated finish.

The fan is claimed to be quieter than other solutions with the same performance and creates a sound which is evenly distributed over the octave bands.

The KD fans are available with connection diameter 200-500 mm. Brackets are supplied with the fans to make installation easier. The accessory FK mounting clamp also facilitates easy installation and removal and prevents the transfer of vibration to the duct.

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

€500,000 Mater Energy-Efficient Building Project

Sustainable Energy Ireland has granted funding of almost €500,000 to the Mater & Children's Hospital Development Ltd towards incorporating energy efficiency features in its building project.

The Mater & Children's Hospital Development incorporates the Mater Hospital, significantly extended and developed, as well as a new purpose-built Children's Hospital. The New Children's Hospital will replace the existing Children's Hospital in Temple Street. It is estimated that the energy efficiencies which will be incorporated into the development will achieve a 32.5% improvement in energy performance in comparison to a typical hospital building. This will result in saving almost six million kWh of energy and over 4000 tonnes of CO₂ annually.

The gross floor area of the Mater and Children's Hospital Development project is 55,000 sq m and is one of the largest building projects of its kind, and the largest health project funded through the National Development Plan at a total value of €340 million at 2002 prices.

The anticipated end results of the energy efficient measures include:

- Reducing the dependency on AC systems: approximately 25% of gross floor area will be naturally ventilated, considerably reducing the conditioned and heating loads for the structure. Natural daylight will also be maximised in these structures;
- Energy savings of 15% through the use of a mechanical ventilation system, when compared to a conventional system;
- Developing a procurement schedule/database of all electrical equipment, including cooling and ventilation plant and hot water consuming equipment.

Details of the energy consumption and heat emission of every item of plant will be included. Commenting on the funding, Peter Brabazon, Programme Manager, Sustainable Energy Ireland, said: “Energy use in buildings now accounts for over 40% of our total energy consumption in Ireland and therefore warrants the focus that these funding programmes are bringing. Already, Sustainable Energy Ireland's public sector programme is supporting approximately 40 projects, which on completion will result in annual energy cost savings of over €2 million.”
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ACEI Becomes Association of Member Firms

Mr Seamus Brennan, Minister for Transport with Anne Potter, Executive Director, ACEI and Mr Noel Kane, President, ACEI

The Association of Consulting Engineers of Ireland (ACEI) has amended its constitution to become an Association of Member Firms, whose business is impartial engineering advice and management of projects.

For more than 50 years, the ACEI represented individual professional consulting engineers.

"Having an Association for Member Firms reflects the huge growth and expansion of consulting engineering firms in Ireland in recent years", explains Noel Kane, President of the ACEI.

"Over the last decade firms in which our members were employed geared up to provide high-capacity, high-quality, multi-disciplinary services to meet the major challenge of delivering the National Development Plan 2000-2006. Many traditional firms evolved into limited liability companies, either internally owned or, increasingly, with external shareholding. The new reality is reflected in our change from individual membership to Member Firms."

ACEI is a member of EFCA, the European Federation of Consulting Engineering Associations and FIDIC, representing engineering consultancies worldwide.

Project Manuals Go Digital

A new technology service, the Digital Project Manual (DPM), has recently emerged that benefits both client and contractor by reducing the mountain of paperwork following the handover of a construction project.

Integrated Facilities Solutions converts all documentation into a secure digital format, complete with CAD floor plans and an easy-to-use browser tool that can view and access all the as-built project information. The DPM reduces the documentation from 10 banker's boxes to simply one CD, thereby freeing up storage space significantly.

The burden on the builder to manage the time-consuming gathering of all documentation is also reduced, making the construction process faster and more efficient. It has received industry backing from prominent figures such as Paul Sullivan, Health, Safety and Environment Manager for John Sisk & Son Ltd, who said:

"to my knowledge this is the only bespoke electronic package available that fulfils the requirements of the construction regulations in regard to the safety file."

Contact: Owen Sisk, Integrated Facilities Solutions.
Tel: 01 - 809 7518; email: osisk@infacsolutions.com

VenTac Mietzsch Plastic Fans

VenTac is now supplying the Mietzsch range of industrial plastic fans.

Mietzsch manufacture a wide range of plastic centrifugal fans such as direct and belt driven single inlet fans (type VRF); roof mounted fans (type VRR); and inline fans (type VRK).

They also manufacture a wide range of plastic accessories to complement the fan range such as plastic attenuators, ducting, cowls, grilles, etc.

Although VenTac has only been dealing directly with Mietzsch for the last two years, their trading relationship dates back nearly 25-years. This is because Mietzsch were previously the manufacturer of the Gebhardts range of plastic fans but now market their range under their own name.

Their range is capable of duties from 150 to 150,000m³/hr and pressures up to 4500psi.

They manufacture in materials such as PVC, PP, GRP, PPEL, FVCX, etc and can supply explosion-proof, flame-proof and gas-tight versions.

Contact: Mark Moran, VenTac Ltd.
Tel: 045 - 851500; email:mmoran@ventac.ie
JET AHU Acquires RVR’s Air Handling Unit Business

RVR Ltd is to divest its air handling unit (AHU) manufacturing business to JET AHU Ltd, a consortium of local and UK businessmen which has been looking to broaden its interests in the AHU market.

The acquisition of the RVR air handling business represents an ideal match in terms of JET AHU’s strategic growth plans. Importantly, the move will also generate substantial inward investment.

JET AHU will take over the existing RVR premises in Killorglin, Co Kerry, which will become its manufacturing and technical centre of excellence, as the company commits to supporting the existing customer base and business growth in key European markets.

The management of RVR decided to sell the air handling side of the business to concentrate on its core competencies, which include the manufacture of gas appliances and the distribution of condensing gas boilers.

Acting in a technical support capacity within the new JET AHU operation, RVR’s Managing Director, Michael Hayes is expected to help ensure a smooth transfer of ownership. JET AHU will also benefit from his wealth of experience in the sector.

John Rice, formerly Export Sales Director at RVR, has been appointed Managing Director of JET AHU and will oversee day-to-day business operations. He will also assume responsibility for raising the company’s profile and exploiting new business propositions.

“At the same time as we push for business growth, we are determined to ensure that the existing customer base continues to receive the high standards of service it has come to expect from RVR over the years”, says John.

“We are therefore delighted that Michael Hayes has agreed to stay on in a consultancy role and value his support. He has been instrumental in helping us meet our commitments to existing customers by agreeing that RVR will uphold warranties currently in operation.”

Contact: John Rice, Managing Director, JET AHU Ltd.
Tel: 066 - 976 1666;
email jrice@jetahu.ie

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Thermelec Ltd, Old Naas Road, Bluebell, Dublin 12
Tel: 01 - 456 8111; Fax: 01 - 456 8108; email: sales@thermelec.ie
Sanyo Sign Up MacHale

Sanyo Air Conditioners have become the chief sponsor for Austin MacHale, the leading Irish rally driver, as he competes in both the Irish and British Rally Championships. Austin will be looking to reaffirm his position as the number one driver in Ireland. His new Subaru is the car in which Tommi Mäkinen, the four times world champion, competed in the 2001 World Rally Championships.

The Easter weekend saw him compete in the Circuit of Ireland Rally where, in his first outing with the new car, he finished in third place. The next event saw him competing in the Pirelli Rally over the weekend of April 26-27, which was held in Scotland but the car returned to Ireland for the International Rally of Lakes in Killarney on May 3-4.

“We will be keeping you informed of his progress over the year as well as welcoming some of you to forthcoming events as our guests,” says Barry Hennessy, Sanyo.

“By offering opportunities later in the year to experience the excitement of rallying first hand, Sanyo Air Conditioners really are putting the fun back into business.”

Contact: Barry Hennessy, Sanyo Air Conditioners Europe. Tel: 01 - 456 8910; email: b.hennessy@sanyo.ie

Unico System — Ideal AC & Heating Solution

The Unico System from Unico System Ireland is the perfect alternative to radiators, underfloor heating and split systems. Using the principle of aspiration this innovative central heating and air conditioning concept heats and cools without drafts or noise.

Put simply, a jet of air enters the room through a small outlet. The air below the jet is depressed. The room air is pulled over to the incoming jet of air. In effect, air is gently pulled towards the outlet. The advantage of this method is that it makes no difference where in a room the outlets are located. Multiple outlets can even be grouped together if required.

The Unico System is the ideal solution for high performance heating and/or air conditioning. It requires little or no remodelling, thereby helping maintain the architectural integrity of the building. There are also significant operating cost savings as the system can heat using a gas or oil boiler as opposed to using day-rate electricity for heating.

Check out the new Unico System Ireland website at www.unicosystemireland.com where a complete list of approved installers and updated technical bulletins are available, along with photographs of recently-completed projects from around Ireland. These include Patterson Pumps, Mullingar; Bord Na Mona, Newbridge; Tao, Cork; and SC Jebb, Lisburn.

See also the Unico System Ireland advertisement on page 9 of this issue.

Contact: Eamon Fidgeon, Unico System Ireland. Tel: 044 - 84881 or 087 - 2231015.
Diaphragm Seal for Pressure Switch

The new Series XTBX Diaphragm Seal from Manotherm is constructed from PVC and Teflon, making it perfect for corrosive applications that would damage metal wetted material pressure switches. The XTBX is available directly-mounted on all Mercoid Series D pressure switches with ranges under 100psi (6.9 bar). The D Series pressure switch, with installed XTBX, is ideal for commercial pool/spa applications for pump shut down to prevent injury from excessive vacuum.

Available in 1/2 inch, 1/2 inch, 3/4 inch, 1 inch, 1-1/4 inch and 1-1/2 inch process connection size, the Series XTBX is priced extra over the D Series switch price.

Mercoid is a division of Dwyer Instruments Inc, which produces a broad range of measuring and control instruments for pressure, temperature, level and flow applications.

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

Wilo On The Move

Wilo Engineering Ltd and Wilo Pumps Ltd have moved to new, purpose-designed premises. Both companies are now located at Unit B1, Corcanree Business Park, Dock Road, Limerick.

Tel: 061 - 227566;
Fax: 061 - 229017;
email: sales@wilo.ie

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.

April competition

1) Which Rugby team recently completed a famous victory over Leicester in their Heineken Cup Quarter Final?
   a) Ulster Q b) Leinster Q c) Munster Q

2) What size ceiling tile does the Sanyo SAP XR cassette unit fit exactly into?
   a) 1000 x 1000 Q b) 600 x 600 Q c) 200 x 200 Q

3) Who is the current Irish Minister for Health?
   a) Charlie Haughey Q b) Eamon Dunphy Q c) Michael Martin Q

4) Where are the headquarters of Sanyo Air Conditioners Ireland based?
   a) Killarney Q b) Belfast Q c) Dublin Q

5) Which Golfer recently won the US Masters Tournament?
   a) Mike Weir Q b) Tiger Woods Q c) Padraig Harrington Q

Name: ____________________________
Company: ____________________________
Address: ____________________________________________
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Sponsored by SANYO

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

Noel O'Kane, ACEI President with Mark Taylor, Secretary, NI Branch; Tom McKenna, Institution of Structural Engineers; and Eoin Kenny, Past-President of CIBSE

Donal and Miriam O'Callaghan with Eoin Quinn

Paddy Horgan with Sean Flynn and Niall Daly

Audrey McGuinness with Clive Walsh

Kevin Tracey with Brian Sterling, CIBSE Republic of Ireland Branch Chairman, Lynn Beattie and Gerry Baker

Willie Bennett with Stephen Costelloe and Eddie McIntyre

Denzyl Dinsmore with Patricia Crisp and Brian Hunter

Margaret Dolan with Alan Duggan and Liam Kavanagh

Seamus Homan with Bob Venning, CIBSE President, and Eamon O'Brien
The Alternative to Radiators, Under Floor Heating and Split Systems

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

History

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

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

Some Unico System installations include:

How It Works

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

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

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

Why you should use The Unico System

For new or existing offices and homes, The Unico System is the answer for high performance heating and/or air conditioning. The Unico System requires little or no remodelling so you can maintain the architectural integrity of your building. The Unico System is quiet and barely audible due to the flexible mini-ducts that are expertly designed to absorb sound and provide quiet air flow through small, subtle outlets.

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

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

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

For further details contact Eamon Fidgeon on 044 84881 or 087 2231015.
At last the decision to move to a new premises has been passed by the Board. For the next 12-months you will be honeymooned by your professional team and pressurised into agreeing design, finishes and viewing various systems. So at what point will you find out what the ongoing maintenance and running costs of your new facility will be? When will you know whether or not your new working environment is practical to work in?

High specification premises inevitably lead to high specification costs but that should not mean that the systems chosen should be inefficient or impractical.

It is imperative that when your team are designing your premises, they are at all times considering the needs of your organisation and your staff. The premises should not be designed as a trade mark to previous projects teams designs, but address your particular requirements.

How often do members of the design team revisit previous projects to determine the areas where they got it wrong or where improvement was required? Unfortunately the answer is not often enough. So the access to the atrium and its featured lighting or the marble flooring in the reception that staff and visitors slide across when the floor is wet continue to be installed without consideration.

The cost from a claim due to a slip or a trip at this point may have been better spent ensuring a non-slip surface or safer access was provided for at design stage.

So at what point do you appoint your Facilities Provider and how do you maximise resources and experiences?

The professional team will not welcome them with open arms because the last thing they need will be another professional throwing their two pence worth into a project that inevitably has its own problems. Our experience has been that if a company is planning to outsource its facilities operation, a discussion at planning stage can save on expense and inconvenience at the occupancy stage. It is at these discussions the client can benefit from the experience of the facilities management company — eg. will the building have a restaurant facility and if so, how will deliveries and waste be catered for; will there be a post room; and will it be accessible to couriers; will the building have security and will it be 24-hour, seven day?

In one particular instance the question of the practicality of a window cradle system led to savings in excess of £180,000 by advising the client on other means of safe access.

It is often at these discussions that consideration can be given to outsourcing certain facilities. The move in general can then be seen as an opportunity to examine the organisation’s operating systems and procedures. The facilities management company can advise and
When you need to stay ahead of the game, the only choice for reliable and durable plumbing and heating installations is copper. If your systems are under pressure you cannot afford to second guess or gamble your reputation – copper is tried and tested, and still the preferred choice for plumbing professionals.

It's time to vote off the weakest link. Say goodbye to plastics.

DONT LET PLASTICS BE YOUR WEAKEST LINK

The Professional Choice for Plumbing & Heating Systems
To obtain the best from the facilities management company, the client should include the facilities management team at the final design meetings so that they can understand the difficulties if any that are being incurred by suppliers, installers or contractors. This can benefit the facilities management company when agreements have to be made with any inherited service provider.

anticipate service charge costs, expected rents from sub-tenants and municipal or public area costs, as well as moving costs and once-off associated costs.

The next time the facilities management company will appear will be three to four months before practical completion. It is within this period that the building will either be completed on schedule to the agreed standard or hastily finished resembling a Hollywood movie set with contractors working behind the scenes to complete the works while occupation has commenced.

To obtain the best from the facilities management company, the client should include the facilities management team at the final design meetings so that they can understand the difficulties if any that are being incurred by suppliers, installers or contractors. This can benefit the facilities management company when agreements have to be made with any inherited service provider.

lead to discomfort or annoyance to staff when the building is occupied.

It is worth noting for example that early dissatisfaction with the air conditioning system can lead to an ongoing perception that the air conditioning never works. When the installation contractor leaves site it is the facilities management company that inherits the problem of trying to rectify these faults and very often no funding is available because the client expects the installer and the design team to ensure all the systems operate.

One way to avoid this is to incorporate all the contractors in a demonstration of their installations in a handover seminar. The seminar should be arranged by the design team and should involve the installers of the various systems: BMS, audio-visual, air conditioning, lighting, etc. The seminar should be used as an opportunity by the consultant to advise on the documentation in the operation and maintenance manuals. These manuals should then form part of the overall safety file for the premises.

The safety file should include:

- Construction drawings, specifications and bills of quantities, used and produced during construction;
- General design criteria;
- Details of the equipment and maintenance facilities;
- Maintenance procedures and requirements;
- Operational manuals with the appropriate certification for lifts, electrical and mechanical installations, window cleaning equipment and any other specialist equipment;
- Details of the location of utilities and services, including lift safety systems.

The file should also include RAL numbers, door and furniture suppliers, wall and ceiling finishes.

It is worth remembering the relocation of staff to a new premises is frequently a stressful experience. A structured hand-over process can go a long way to ensuring that the new working environment meets with expectations from day one of occupation for all concerned.

The use of an experienced facilities manager will ensure that any problems you encounter are dealt with efficiently and by the responsible parties, and also that a planned preventative maintenance programme is put in place to ensure your asset is maintained to the highest standard at a competitive cost.
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World and UK Market Figures & Trends

According to the latest BSRIA Report*, the world bathroom equipment market stood at over US$10 billion (approximately €8.5 billion) in 2002 and is expected to grow at over 2% per annum up to 2006 (Figure 1). By volume the market is expected to grow at around 4% and is predicted to reach 270 million units by 2006.

The fittings market is expected to grow at around 3% per annum by value and over 3.5% by volume up to 2006. This means that the fittings market is expected to stand at just over 171.4 million units by the end of 2006.

One-handle mixers are the biggest segment of the fittings market, accounting for around 46% of volume sales in 2002.

China has the largest sales of bathroom equipment in the world by volume accounting for approximately 26% of the world market. The USA is the biggest by value with a 27% share.

The fittings market by volume is dominated by both China and the USA who hold approximately 42% of all sales between them. By value the market is extremely different with the USA alone representing around a third of total fittings sales (Figure 2).

While there are no precise figures available for the Irish market, a look at the accurate figures and trends for the UK is always useful when considering and trying to predict what will unfold here in Ireland.

The third largest bathroom equipment market in Europe by volume and third by value in 2002, the UK accounted for 17% of all value and nearly 15% of all volume sales. The UK is the only one of the "big 5" Western European markets to experience growth between 2001 and 2002. It is expected that between 2001 and 2006, the UK bathroom equipment market will increase nearly 3% per annum on average.

The UK market has experienced growth because the UK has not been as badly affected as other European countries by the global economic downturn. In conjunction with this, UK end users attitudes to the bathroom have changed with it now being considered increasingly as a room for relaxation, hence more renovation work is being completed. In addition, more houses are now having a second or even a third bathroom added.

There has been growth in the irregular-shaped standard baths market as companies are introducing new types of baths for space-saving or shower baths for optimising the space in the bathroom. Irregular baths, which are bigger at one end, are increasing their sales as they fit better with power showers, which are increasing in sales.

Although pedestal basins have traditionally been the most popular type of basin sold in the UK, their market share is expected to reduce (despite their increasing sales). The main beneficiary of this has been cloakroom basins, illustrating the fact that all new houses have a downstairs toilet with cloakroom basin. Despite this the UK is still the largest pedestal market in Europe and the fourth largest in the world.

Closed-coupled WCs are also tightening their grip as the dominant toilet type with concealed types also increasing their share significantly. The main losers have been the low and high level types.

Three suppliers dominate the ceramic sanitaryware market in the UK representing around 65% of all sales. The levels of imports into the UK have grown in recent years as entry barriers have reduced and manufacturers find it more profitable to source their products from overseas. Just under 25% of all bathroom equipment sold in the UK in 2002 was imported (Figure 3).

The fourth largest fittings market in the world by volume and value and the biggest in Europe in 2002, the UK accounts for nearly 17% of all volume and 23% of all value sales in the region.

Unlike the other large Western European taps and mixers markets, the UK is experiencing substantial growth of just over 4% by volume on average between 2001 and 2006 and 9% by value.

The growth in this market has been led by shower fittings, which are expected to increase around 13% per annum on average between 2001 and 2006. This growth is the result of more end-users in the UK preferring to install a shower in their

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*BSRIA Report*
bathroom, something that was less common 10 years ago. In addition, the penetration of showers into UK homes is said to be only 65% so there is still considerable room for growth in this sector.

The UK market is still dominated by pillar-type taps. However, their share is slowly being eroded by one and two-handle mixers in the bath and basin sectors.

The shower fittings market is led by thermostatic mixers, which are increasing share mainly at the expense of two-handle types, despite its already prevailing position.

The strength of pillars and thermostatic mixers is illustrated by the fact that the UK actually has the third largest market for these products in the world by volume.

The UK market is quite product specific with five groups accounting for around 70% of all shower fitting sales and four representing about 70% of other bathroom taps and mixer sales.

It is estimated that by value around 45-50% of all taps and mixers are imported. The majority of these are sourced from Italy, the Middle East and the Far East, as it has become easy and cost-effective to do this rather than manufacture.

*BSSIA's Report — "The Worldwide Market for Sanitaryware" — was published in February 2003 and consists of separate reports for bathroom equipment and taps and mixers for 22 countries: Brazil, Canada, Mexico USA, Australia, China, India, Japan, South Korea, Taiwan, Belgium, France, Germany, Italy, Netherlands, Poland, Russia, Spain, Sweden, Turkey, the UK and South Africa.

Reports can be purchased individually by country for each product area. Overviews are also available giving a complete global and regional coverage.

The study complements BSRIA's newly-researched in-depth Western European and China reports, which give detailed information for six major country markets in separate volumes.

Contact: Karen Runacres, BSRIA.
Tel: 0044 - 1344 426511;
email: karenr@bsria.co.uk

The Bathroom Fittings Show

The Salone dell'Arredobagno (The Bathroom Fittings Show) will be held at the Fiera Milano from 2 to 6 March 2004, during the 34th edition of the Mostra Convegno Expocomfort.

The "bathroom world" has been going through a transformation in recent years. Materials have changed, as have the various factors and trends influencing purchases. The bathroom is increasingly being seen as a place in which to relax, where the necessary attention can be devoted to caring for both body and well-being. It is no longer a room to "shut off" but rather one to "show off".

The purpose of the Bathroom Fittings Show is to represent these changes, directed as it is towards all professionals in the field (architects, designers, interior decorators, showroom managers, installers and technicians). The focus of attention is on the bathroom environment, the most up-to-date technical solutions and the most in-depth knowledge of the market, anticipating the tastes and lifestyles presented to consumers.

Website: http://mce.fmi.it

Ideo Bain — 100 Bathroom Ideas

The second Idéo Bain — Paris Expo, 4 to 9 February 2004 — is another exhibition forum catering for the bathroom sector. Nearly 100 exhibitors have already booked, representing many of the world’s leading market players.

In 2002, Living Bathroom “100 Bathroom Ideas” was a major success and it made Idéo Bain unique within Europe. For 2004 the organisers have entrusted the set design for this space to Daniel Rozenzstroch and François Muracciole. The layout will be based on the points of the compass and the bathrooms of the world.

Daniel Rozenzstroch, style consultant and editorial adviser to "Marie-Claire Maison", has worked on the implementation of the Resonance concept and well aware of visitor expectations, since he himself frequents them assiduously. François Muracciole is a qualified architect and works closely with Daniel Rozenzstroch.

Design-Led, Technology Driven
Bathroom & Heating Solutions
Radiator? What Radiator?

The first and the last thing you'll notice about the trench heating from Versatile Agencies is the subtle styling of its tailored grilles. That's because every unit is seamlessly aligned with your flooring, which means you can achieve heat-efficiency and durability without the need for bulky, above-floor radiators. Our grilles are also available in a variety of finishes, from wood to stainless steel, so you can match them to your interiors. To see this truly unique range of Jaga Heating Designs together with our exclusive line in Bathrooms and Tiles, why not drop by our new, specialist showrooms in Beechmount Industrial Estate, Navan, call (046) 29444 or visit our website - www.versatile.ie.
Welcome to Versatile, your ideal trading partner when sourcing bathroom and heating solutions. As a family-run business we take pride in the quality of the service we provide and, even more so, the manner in which that service is delivered.

Despite our dedicated professionalism and attention to the smallest of details, we offer an open, friendly service. Indeed, it is this very philosophy which underscores and strengthens that professionalism. That is how we get to understand your need and to subsequently identify the perfect solution. It is a true partnership.

The same can be said of our relationship with product suppliers. Take it as read that we deal only with market-leading brands who share our desire to provide technology-driven, design-led solutions to meet your specific need.

Together we treat your project as a stand-alone situation requiring a tailor-made answer. You get the benefit of our wealth of experience and design know-how, along with all the resources of international manufacturers.

Whether you are an architect, consulting engineer, mechanical contractor or property developer, you can rely on us to devise, deliver and oversee the installed project to exacting specifications. To date we have supplied solutions to some very high profile projects throughout the 32 counties of Ireland.

To those of you with whom we already share a relationship we say thank you. To those of you we have not yet met we say, why not come and join our circle of successful friends?

To contact us call Catherine, Andrew or Bill at Tel: 046 - 29444 or visit us at www.versatile.ie
Design Radiators off the shelf

Never looked so good, never priced so good

Opus 2

Adagio

Opus 1

Primo

Forza
As they expand and develop into larger concerns, small, family-run, local business ventures very often lose sight of the core values which made them successful. It is as if the very strengths which contributed to their growth in the first instance are sacrificed in the pursuit of professionalism and more structured management procedures. So too it often happens with the second generation to enter the business.

However, an exception to the rule on both counts is the Navan based Versatile Group of companies. While family run and firmly rooted locally, Versatile provides an ultra-professional nationwide service to architects, consulting engineers, major contractors and developers seeking unique and innovative bathroom and heating solutions. Be it commercial, industrial or housing projects, Versatile has the answer.

High-specification, design-led, technology-driven product ranges are combined with carefully-devised, tailored systems that best suit each individual situation. This invariably entails sourcing customised products rather than merely selecting from stock product items.

However, this tight, disciplined approach is provided in a consultative, supportive manner which identifies precisely the clients' needs and delivers the most appropriate, performance-led, solution. Flexibility, energy-efficiency, and life-cycle cost-effectiveness are also incorporated.

The Versatile Group comprises three distinct areas of activity with Catherine Treacy looking after bathrooms and tiles, Bill Treacy responsible for radiators, and Andrew Treacy running the agency/distribution side of the business.

Given the design, quality and technology-driven nature of the service provided, Versatile’s principal suppliers are all market-leading brands, renowned as inventive pioneers in each of their respective fields of expertise. Moreover, where necessary and/or appropriate, Versatile will go to an international manufacturer of repute to have product made up to its own designs.

Ultimately, it is about identifying the client's genuine requirements and providing the best solution bearing all relevant factors in mind. As an ultra-professional organisation Versatile delivers to this exacting brief time and time again but, as a family-run concern, does so in a flexible, friendly manner.
From traditional stonecarved sinks to contemporary brushed steel radiators, if you're looking for style, quality, and range look no further that Versatile Showrooms, Beechmount Industrial Estate, Navan, Co Meath.
Tel: 046 29444/22633. www.versatile.ie

American Standard Plumbing (Irl.) Ltd
Email americanstandarddublin@aseur.com Web www.thebluebook.co.uk
Catherine Treacy’s skills and experience as a bathroom designer are much sought after, be it for one-off, individual, luxury homes; up-market housing developments; apartment complexes; or commercial applications. Catherine works with a team of fully-qualified designers and together they play a very active and supportive role in satisfying customers’ requirements. This includes the policing of the installation process to ensure that the project is executed as per the intended specification.

Every project is approached as a blank canvass with Catherine and her team assessing all that the marketplace has to offer before making brand selections. There are no limiting factors and everything is considered with the company specialising in stone, marble and ceramics. Nonetheless, among the brands most closely worked with are American Standard, Sottini, Grohe and Roper Rhodes.

These, along with many others, are strongly featured in Versatile’s award-winning showroom to which architects, consultants and contractors send their clients — along with their own staff — for inspiration and ideas. Purpose-designed to reflect the designer-led services provided, the showrooms incorporate four distinct sections — Bathrooms & Showers; Bathroom Accessories; Stones & Ceramics; and Designer Heating Products. Just recently it received the prestigious Master Retailer for Bathrooms Award as the best-designed showrooms in the British Isles.
Discover the Range that made a **Market Leader**

Merriott Radiators Ltd,
Unit 8, Broomhill Business Park, Broomhill Road, Tallaght, Dublin 24.
Tel: 01 - 494 0101; Fax: 01 - 494 0125.
Email: sales@meriottradiators.com
www.merriottradiators.com
Bill Treacy originally established the Versatile business as a specialist supplier of designer radiators and today they are still an integral part of the enlarged business with Merriott and Veha featuring very strongly within the portfolio. Bill’s experience within the heating sector spans 25 years and he is widely respected throughout the industry, not just for his technical knowledge and expertise, but also his integrity in the execution of projects. Hence the long-standing relationship with many clients for whom Bill and his team have been devising designer-led radiator solutions for over 20 years.

Once again the strength lies not just in the product portfolio but in the quality of the assistance and technical support provided at the design and specification stage by Bill and his colleague William Tracy (not related) who is also well-known and respected throughout the design-led radiator sector. They get involved at the earliest possible stage with the mechanical consultant and play a very active and constructive role in devising the final solution.

Looking back over the last 25 years Versatile’s portfolio includes landmark projects such as the Aer Rianta Duty Free in Moscow; St Patrick’s Basilica at Lough Derg; Merrion Hotel, Dublin; Royal Opera House, Belfast; Waterfront Hall, Belfast.

*Hilton Hotel & Waterfront Hall, Belfast*
The emergence of Versatile Agencies was a natural progression as the company developed. As its reputation grew, too did the number of enquiries and the diverse nature of the heating-related solutions sought. Versatile Agencies is the vehicle through which this market segment is served.

Andrew Treacy spends the vast bulk of his time liaising with clients, architects and consultants helping them devise customised systems to best serve the end-use requirement. His contribution is to assist in identifying design-led solutions, to source the constituent technology-driven products involved, and thereafter to ensure that the entire system is professionally installed and commissioned as per the design specification. The finished result is as much an art form as it is a heating system.

As per the overall Versatile Group philosophy, only products from market-leading, quality-driven, standards-accredited manufacturers are used. While all possibilities are fully explored, Versatile Agencies has a very strong trading relationship with Jaga, Wolf and Aestus.

**Ballymun Civic Centre, Dublin**

**MINI LOW H₂O**

Size is not important, as shown by this super-small Low-H₂O radiator. The Mini is a real muscleman that converts the chill of a room into a pleasant heat. It has but 1/7th the water content of a traditional radiator and delivers 1kW from the 8cm high unit. Benefits include rapid heat response, very high output, no latent heat and excellent efficiency.

**LOFT**

The Loft radiator offers the combination of a high output radiator with pure functional design, incorporating as standard a glass shield to increase convection. Manufactured from stainless steel, aluminium and glass, the Loft has an uncompromising style all of its own. Loft is available in four lengths and two fin diameters — 180mm and 120mm. It will always be polished stainless steel.
Wolf solar technology uses proven flat collector panels which are performance-accredited and perfectly matched through control technology to fully-accredited upright storage tanks. A fully operational Wolf TopSon solar heating system can be installed and operational in a matter of hours. Moreover, Wolf TopSon TX collector panels also integrate effortlessly with existing heating systems.

Mini Canal Trench
The Mini Canal in the floor leaves the glass wall completely free. The cold draught from glass walls is fully neutralised and the super-quick Low-H₂O radiator reacts lightning-fast to any change in temperature, so that it is comfortably cosy and warm everywhere. The Mini Canal can be used as a primary heat source, but also as a booster for other radiators or under-floor heating.

Canal Plus Trench
Canal Plus was designed for a low boiler temperature and provides ideal temperature distribution. The Canal-Plus is installed in the floor and covered with a grille that can be combined perfectly with the floor or window frames.
Innovation From Versatile

**CAST-IRON RADIATORS**

The elegance of days gone by, but with the efficiency of modern technology, the cast iron radiator range from Versatile is produced from the 1920's design. Supplied with traditional style valves and finished in a primer coat ready for painting. Fittings are solid brass, including feet.

**STRADA**

The sober design tells you what this radiator really is—a classy, muscular heating machine. The technology behind the shape is just as impressive as the unique design. It comprises a super-powered Low-H₂O element, guaranteeing ultra-fast and perfectly regulated heating. Outputs of 5.6kW can be achieved using a 1-metre long unit with no fans.

**IGUANA CIRCO**

Simplicity at its best. With the Iguana Circo wall-mounted or free-standing model, the slim triangular radiant pipes are placed alongside each other in half a circle.

**IGUANA VISIO**

With the Iguana Visio the slim triangular radiant pipes are placed alongside each other in a slightly curved plane, with a mirror in the middle.

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**Beechmount Industrial Estate, Navan, Co Meath**

Tel: 046 - 29444; Fax: 046 - 27705

Web: www.versatile.ie
New Barlo Design & Towel Radiators

Designer radiators offer greater choice to the homeowner or builder as well as a great profit opportunity for the installer. Stylish towel radiators are what every bathroom deserves and every housewife puts on her “must have” list. Barlo, with the introduction of their new Design & Towel Radiator ranges, has brought both products into play for every installation. Firstly, because they are realistically priced, and secondly because they are easily available from Barlo stockists.

Design radiators have been individually styled by some of Europe’s leading industrial designers. Four models make up the range. Opus comes in flat profile or tubular, both specifically developed for towel rails. Its new and patented self-sealing 1/2” valve-to-radiator connection makes for an elegant and easy installation. The towel rail valve includes a matching lockshield valve with drain-off function. Both valves and sensor are available in two shades of white, soft white (RAL9010) and bright white (RAL9016), as well as a highly-polished chrome version, matching most common towel rail colours.

The valve has been developed particularly for “ladder” design towel rails but is also perfectly suitable for any designer radiator, provided it has a standard 1/2” connection. With its smooth surface, cleaning is made easy, making the valve ideal for installation in a bathroom environment.

As the RA-URX is based on Danfoss TRV technology, high temperature control accuracy and reliability are guaranteed. The elegant and compact design allows the sensor to be mounted underneath the towel rail, parallel with the wall, avoiding the risk of accidentally knocking the sensor.

Contact: Brian F. Maguire or Robert Fitzpatrick, Danfoss (Ireland).
Tel: 01 - 626 8111; email: marketing@danfoss.ie

Designer Towel Rail Valve From Danfoss

Danfoss Ireland Ltd has added a new self-acting towel rail valve to its product range. The RA-URX is a thermostatic radiator valve specifically developed for towel rails. Its new and patented self-sealing 1/2” valve-to-radiator connection makes for an elegant in a vertical 2-metre high format and three lengths so it can be fitted into narrow reveals for example, while making a style statement in the room. Adagio has a distinctive flat waterway profile and comes in a unique silver black finish.

The Primo models are flat finished with a subtle rounding at the edges, finished in white, and offering a wide choice of 20 sizes and outputs. Forza is a new approach to column radiators, useful perhaps in refurbishment projects in older homes. The white finished column models come in 22 sizes across 2-, 3- and 4-column widths.

The Towel Radiator range offers six models, in curved, straight and framed rail styles. Quality of finish is a key feature. The chrome finished Sapphire and Diamond models use the highest, Grade 1 quality of chromium plate for an exceptionally bright finish that will last and last. The Emerald and Jade models, Opal and Pearl with contemporary tubular look, are all finished in high-quality sparkling white to complement any bathroom or shower room wall. Outputs are easy to choose, with 35 height and width options.

Oliver Hynes of Barlo emphasised the opportunities the new ranges offer the installer: “With sensible prices and delivery from their stockist, the new Barlo Design and Towel Radiator ranges mean that the new rads can be offered as part of any installation. Result? Happy customers and a better, more profitable installation.”

Brochures and stockist information from Barlo.
Tel: 052 - 27377.
Fernox Flux and Fernox Powerflow

Fernox Flux — a heat-activated flux from Hevac

Following the introduction of Fernox Flux and Fernox Powerflow by Hevac late last year, installers and contractors have reacted very favourably, especially to the performance qualities and ease of use of the products. Fernox Flux was developed following two years of extensive research and extended field trials. It is a heat-activated flux which means that the whole piping system can be cut and assembled before returning the solder to the joints, saving time and money. Also, because the cleaning action is only activated during the heating process, the flux does not continue to attack the metal surface after the soldering is complete.

Being non-acidic and non-toxic, Fernox Flux is extremely safe to use and is WRAS approved for both gas and potable water systems. Ideal for copper, mild steel, galvanised iron, silver, tin, zinc and malleable iron. It can also be used with lead-containing and lead-free solder.

It is available from Hevac in tubs of 125ml and 250ml.

Fernox Powerflow is a new flushing machine designed to satisfy the increased emphasis on power-flushing. The units incorporate a number of unique features such as bi-directional direct flushing; acid resistance; a high temperature operation facility (80°C); and a 370W/32m head Grundfos pump in 316 grade stainless steel which allows for a domestic central heating system of up to 200lt capacity (about 20 single radiators) to be effectively and speedily cleaned.

Contact: Hevac Dublin.
Tel: 01-419 1919;
Hevac Cork:
Tel: 021-432 1066.
Towel Design Radiators

High quality, High Design, Low cost

Broomhill Business Park, Broomhill Road, Tallaght, Dublin 24, Ireland
Telephone +353-1-4940101 Fax +353-1-4940125
Multikwik Launch New Macerator & Multiflush System

Multikwik has introduced two new products through MFP Sales which incorporate features and benefits suggested by feedback from installers who already use established products in the Multikwik line-up.

The first is the new Multikwik Macerator which allows toilets and bathrooms to be sited where previously impossible, away from soil pipes or even in basements.

The sleek, aesthetic lines, quiet operation and short run times raise the bar and set new standards in the marketplace. The Multikwik Macerator uses a charcoal filter to eliminate odours and is supplied with a genuine Multikwik connector for a guaranteed seal and peace of mind with every installation. Every unit is supplied with a 2-year parts and labour manufacturers guarantee.

Customer demand for this new product is expected to be high due to its aggressive shelf edge pricing, technical benefits, and good looks that will grace any bathroom a world away from the current utilitarian offerings.

Attractive packaging featuring full colour photography and product applications and benefits will ensure that the Multikwik Macerator has a high shelf profile leading to increased sales.

Turning to the Multiflush dual volume flush valve, this has been so popular that Multikwik has been asked by its customers to produce a cistern complete with a Multiflush valve to enable plumbers to fit a water saving valve when installing a new cistern at a competitive price without having to throw away any components.

The cistern comes complete with a brand-leading fill valve and flush pipe and comes in two versions — TRC1820 for side fill and TRC1821 for bottom fill applications. The Multiflush used has the 80cm long activation cable suitable for mounting in a vanity application. This cable-operated action takes less pushing force than pneumatic activation and is therefore easier to use, claim the manufacturers.

This new product from Multikwik is ideal for any application where the cistern is concealed, and with an internal overflow already trimmed to suit the cistern it is easy to install.

Contact: Dudley Foster, MFP Sales.
Tel: 01 - 630 2500;
email: sales@mfp.ie
Irish Metal Industries supply a complete range of copper tube for hot and cold water installations, gas services, sanitation, central heating and numerous other building and engineering applications. All our tubes are manufactured to the stringent requirements of EN: 1057 and we are licensed to engrave them with the coveted Irish Standard Mark which is the registered mark of the National Standards Authority in Ireland. What's more we give a unique 25 year guarantee against manufacturing defect. So what ever your requirements you'll receive nothing but the best quality, service and reliability with copper tube from Irish Metal Industries.

Service Line: For orders and further information. Telephone: (01) 295 2344/295 2137. Fax: (01) 295 2163

Irish Metal Industries Ltd, 25 Spruce Avenue, Stillorgan Industrial Park, Blackrock, Co Dublin.
Research recently commissioned by the UK Copper Board has found that copper continues to be the dominant material for heating and plumbing pipes in domestic installations. The findings were overwhelmingly supportive of the key role copper still has in today’s plumbing practices, writes Conor Lennon, IMI.

The research involved focus groups of professional installers across the country and from various age groups – from students starting out at 18 to those with years of experience at 55.

The majority of plumbers who were interviewed preferred using copper as it creates a professional installation, offering both pride in their work and peace of mind. One interviewee pointed out that using copper ensured he retains a professional image to his customers as well as helping his business grow: “It’s your name, you’re better off putting more time into a job to avoid call backs, which keeps your schedule straight and could lead to recommendations.”

Additional advantages are that copper is familiar, traditional, and more available and reliable than substitutes – principally plastics. Versatility was identified by one interviewee as a benefit of using copper: “Any job is suitable for copper...you can use it for everything.”

Durability was another key advantage: “Copper has a proven record, it’s tried and tested and it’s too early to say that for plastic.”

It also looks better, particularly when the pipework is exposed, and does not have any of the DIY connotations that are associated with most alternatives such as plastic.

Plumbers recognise that copper’s strong position in the market helps to safeguard the professionalism of plumbing as a trade. Participants also allied the future of the plumbing profession to the long-term sustainability of copper in the industry.

New copper flame-free technologies have a growing role in plumbing practices. Push-fit fittings are the technology that the greater number of installers are familiar with, and were identified as a particularly useful option for emergencies. Press fittings were considered most appropriate for commercial or industrial applications.

The research found that overall, plumbers are committed to using copper in their installations as it’s high quality and durability provides them with job satisfaction and a sense of professional pride. Copper therefore convincingly remains the professional installer’s choice. As one interviewee pointed out: “I bet we all use copper in our own homes.”

Contact: Conor Lennon, Irish Metal Industries. Tel: 01 - 295 2344; email: conor.lennon@irishmetalindustries.com.
Myson Towel Warmers

Elegant and stylish, Myson towel warmers will enhance the appearance of any bathroom. Economical and efficient, they also add to the comfort of the room, as well as keeping towels warm and dry.

There is a wide range of standard units of different designs to choose from, or you can have one manufactured to your own personal requirements. These modifications include size, shape, colour, changes to tapping size and position, dezinc proof units, and copper panel radiators.

Myson operates stringent quality controls to ensure that the highest standards are maintained, with every unit being pressure tested before leaving the factory.

Latest introduction to the range is the new “Eco” collection of ladder-type towel warmers. These highly-efficient warmers from Potterton Myson come in a choice of attractive designs and are competitively-priced.

Bringing together quality and craftsmanship, designed and manufactured by the market leader, Myson Towel Warmers are available nationwide.

Contact: Vincent Broderick, Potterton Myson (Irl) Ltd.

Tel: 01 - 459 0870;
Fax: 01 - 459 0880;
email: post@potterton-myson.ie

From the classic range of Potterton Myson towel warmers

MFP DRAINAGE SYSTEMS

Developed and manufactured right here in Ireland, MFP Drainage Systems are the obvious choice for professionals. As one of the most cost effective, professional systems around, quality and value are guaranteed when you choose MFP.

The comprehensive range of products from MFP conforms to national and international standards.
Monitoring & Controlling Lift Stations

Most wastewater pipelines operate via gravity. Sewer pipes are laid at a slight decline to let the waste flow downward. This is a very economical and reliable way to transfer waste. Further, if you have a leak, you do not have to worry about waste spewing out at 75psi. As waste can only flow down so far, it needs to be raised or lifted. Thus the need for lift stations.

A lift station allows the accumulation of wastewater up to a certain level. Once this level is reached the station then pumps the wastewater up (lifting) to start the gravity flow again. A lift station normally consists of the following—a collection container, at least two submersible pumps, and some type of level control system. In normal operation only one pump will be needed to control the level of the lift station. The second pump is needed in case the first one fails or if there is an unexpected increase in the level.

There are a wide variety of submersible pumps. Two features that almost all submersible pumps have in common are seal failure probes and an over-temperature switch. There are two seals on a pump that protect the pump’s motor from the wastewater. There is a chamber between these two seals that contains oil and the seal failure probes. If the first seal breaks or starts to leak, water enters into the chamber. The seal failure feature uses conductivity to detect the presence of water. When water is detected, a seal failure light is turned lit on the pump control panel to warn the user of the broken seal. The user can then replace the seal without further damage to the pump. If this feature is not used, the user will risk completely losing the pump if the second seal breaks and the water enters into the motor.

The over-temperature switch is also a safety feature that shuts off the pump automatically when the pump motor overheats. There is also an over-temperature light to indicate to the user that the pump has overheated. Normally a clogged pump will cause an over temperature condition. The indication allows the user to fix the pump. Pump over-temperature is more critical than seal failure, because with seal failure the pump does have the second seal to protect it. That is why in some cases, users will let the seal failure pump stay in service, while they do take the over-temperature pump out of service.

Pump controllers lengthen the pumps life by alternating them. The alternating of the pumps is commonly called lead lag. The first pump to come on is the lead pump, the second pump to come on is the lag pump. Because the pumps alternate, the lead pump and lag pump will change. If pump A comes on first as the lead pump, the next time the pumps are needed, pump A will be the lag pump. By doing this you use both pumps equally.

If the pumps were not alternated the lead pump (first pump to come on) would quickly wear out. It is necessary to see exactly how long each pump has been running. This is accomplished by installing hour meters on the pump control panel to verify the pumps are being used equally.

The seal failure, over temperature, hour meter, and alternation are all features protecting pumps, not controlling them. The majority of lift stations currently use five floats and a relay board to turn on the pumps. This is the simplest and lowest initial cost to control the level of a lift station. The initial cost is low, but problems associated through the life of floats are high. Because you have five floats dangling (two for each pump, one for a high level alarm), they can get tangled, thus causing an overflow condition.

Another common problem is grease coating the floats weighing them down, again causing overflow conditions resulting in services calls, not to mention the labour it takes to clean up an overflow wastewater incident.

The MPC (Mercoid Pump Controller) and the PBLT (Mercoid’s submersible level transmitter) from Manotherm provide an economical solution to continuously monitor and control a lift station. The MPC has built-in seal failure indication, over temperature indication, alternation, and pump run time. In addition, it has a built in power supply to power the submersible level transmitter. The MPC has a 4-20 mA retransmission standard. This feature would commonly be fed into the municipality’s SCADA system. A SCADA system is a system that monitors multiple facilities and lift station from one central location.

Another feature is the time delay alarm. The time delay is needed to protect against false alarms. The only option
is Modbus communication. This would allow the SCADA systems to see the seal failure and over-temperature conditions, pump runtime, and alarms.

The PBLT is extremely sturdy and durable. The body and diaphragm are 316 SS. The transmitter has an accuracy of 0.25%, so on a 10psi range (10psi = 23.1ft) you have an accuracy of 0.7”. The cable is equipped with 220-pound tensile strength, shielded, vented, Tefzel cable. The 316ss and the Tefzel cable are important to withstand the very harsh environment.

The transmitter also features built-in signal conditioning and lightning protection. Lightning can travel up to half a mile away through sewer pipes in the ground. This is a common point of failure of submersible transmitters that do not have this feature. The most important thing to facility managers is reliability and the PBLT delivers it.

Lift stations are not only for city and county municipalities, but exist in commercial applications also, like shopping centres, car dealerships, and shopping malls. In these applications, wastewater is collected in a lift station resulting in the reduction of the number of sewer lines feeding into the city’s main sewer line. Car dealerships using excessive amounts of hydro-cleaning could utilise lift stations.

With the Dwyer MPC and PBLT, Manotherm provides an economical and reliable solution for the needs of the municipal and commercial lift stations.

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

Cooling Towers — New Basin Cleaning Approach

Keeping unwanted solids contaminants from accumulating in the tower basin or remote sump not only eliminates manual basin cleaning and blowdown routines, but also effectively protects heat exchangers and helps control legionella and other bacteria-based problems. Now packaging its systems for just such use, the makers of LAKOS separators have joined forces with RSL Ltd in Ireland and combined their centrifugal-action separators with a pump, electrical control panel and solids-handling device to make an easy-to-install, easy-to-apply solution.

Based in Dublin with branch offices in Cork, Galway and Belfast, RSL represents a leading line of cooling towers and water treatment systems. Their expertise and the technology of LAKOS promises solutions for applications throughout Ireland.

A key component of this packaged system is LAKOS’ exclusive arrangement/installation of their patented HydroBoosters into the basin or sump to sweep unwanted solids across the tower basin and into the LAKOS system’s pump intake for removal of solids and return of water to the HydroBoosters for continuous sweeping/cleaning action.

Preventing unwanted solids build-up is now widely recognised (and suggested by organisations such as the American Society of Heating, Refrigeration & Air-Conditioning Engineers – ASHRAE) as an effective means for preventing the breeding ground for bacteria that could otherwise contaminate the water and, eventually, the air.

LAKOS TowerClean Systems are selected based on the actual floor area of the tower basin or remote sump. The recommended rule is one US gpm per sq ft of surface area. Pre-planned HydroBooster patterns have been developed for all makes of cooling towers, suitable for both new installations and retrofits.

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

A LAKOS TowerClean system available from RSL Ireland
Air & Dirt In Heating & Chilled Water Systems

As a company involved in the pump industry for many years, Industrial Pumps & Process Ltd (IPP) is only too aware of the problems that air and dirt causes in heating and chilled water systems. Primarily, from a pump point of view, the problems manifest themselves in the failure of mechanical seals, and pump cavitation. This can be an expensive and troublesome problem from a maintenance point of view.

Air in systems causes many problems such as noise in pipework, pump noise (cavitation), and cascading water in radiators, with dirt causing corrosion, pump wear, etc. But, even more serious problems can follow including corrosion, reduced efficiency and poorly-heated or cooled areas. This inevitably leads to shorter plant life, unnecessary maintenance costs, and ultimately a dissatisfied end-user.

Air in systems occurs in two forms — “free air” and microscopic or “microbubbles”. Free air is easy enough to treat with automatic air vents strategically placed. However, microbubbles are not so easy to get rid of although they cause the most long-term problems due to their oxidation effect, and resulting corrosion. Traditionally, this problem was addressed by using chemical inhibitors, which needs to be an ongoing process, as air (like a bad penny) will always come back.

One approach to solving the air/dirt problem is by installing Spirovent deaerators and dirt separators, which is a permanent maintenance-free solution. Spirovent is the industry market leader and is claimed to be the only product which guarantees the complete removal of all gases and dirt down to 0.5 microns.

IPP Ltd has supplied Spirovent to the Irish HVAC sector for a number of years now, and has supplied the Spirovent SV2 series combined air and dirt separator to several large projects, with impressive results.

One particular example is where IPP is involved in the maintenance of pump plant for a large facility in Dublin where Spirovent is installed along with 86 Grundfos end-suction centrifugal pumps on both heating and chilled water systems. The plant has been in operation since 1998, and to date the water remains “clean”. More importantly, the number of mechanical seals which have had to be changed is just three.

On the other hand, IPP was recently involved in the repair of pumps in another Dublin office development where a de-aerator and dirt separator had not been fitted and which had a history of pump mechanical seal failures. On investigation, it was found that there was dirt in the system, probably caused by corrosion due to air, which was continually fouling up the seals causing the pumps to leak. It is fair to say that the results speak for themselves.

Contact: Brian Harrison or Frank Nugent, IPP.
Tel: 01 - 298 9560;
email: info@ipp.ie
Energy efficiency should be one of the prime criteria when designing or upgrading air conditioning systems. Since 1 April 2001, power used in industrial and commercial premises has cost 15% more. In the overall budget, energy could become a major concern in the future. Does this mean that air conditioning will be considered non-essential? Nothing could be further from the truth, writes Aidan Flannery of Trane Ireland.

Unless a building is designed from a blank piece of paper, can be correctly orientated to minimise solar gains, small windows, triple glazing, shades etc etc, it is unlikely that in many cases air conditioning will not be needed. For industrial buildings, it is the process that determines the cooling load required, and while construction design plays a part, it can rarely eliminate the need for cooling.

There is, of course, a larger picture behind all this. Protection of the environment and the reduction of greenhouse gases, so that we can slow the effects of global warming. This is the intention of the Kyoto agreement, which is now the subject of much discussion and disagreement.

Ireland is committed to reducing emissions by 8% and the energy efficiency in buildings will be critical. However, there is a deep concern that air conditioning systems will be discarded as using too much energy.

So ... do we need air conditioning? The simple answer is yes. Factors such as higher concentrations of people in better-insulated buildings using a whole plethora of heat-emitting electronic devices cause all manner of complications for air comfort and air quality. This also affects employee performance. Efficiency for employees means efficient air conditioning.

So, how can people make an informed choice? There are standards available for performance of systems, Eurovent for example which certifies the manufacturers stated claims. Microprocessor control systems ensure that optimum efficiency can be achieved using the in-built logic systems.

Refrigerants should no longer be an issue. CFC’s are completely phased out, HCFC’s are now being phased out, HFC’s for the present time are not under legislative proposals. The choice of refrigerant should only be linked to the system efficiency and long-term operation at full and part-load.

The system should be designed for the loads as certified. With certified performances it is no longer necessary to build in “factors” — commonly up to 10% over-sizing of the equipment — “just to make sure”. For critical installations, run and stand-by can be considered.

Review all the design options on the complete system, including primary and secondary pumps with variable speed drives, if applicable. Widening the “standard” water-on to water-off temperature range (DT) and reducing the flow rate can save energy on the pumps and the system overall.

Air handling units with controls which are installed during manufacture have sensors placed in optimum positions to ensure efficiency. Difficult on-site unless you have a 2ft high controls engineer! Fresh air and indoor air quality — Here is where, by necessity, an air conditioning system must use more power. Systems can be designed without fresh air, and they will be more energy efficient, but not beneficial to the occupants. They can suffer headaches, dry throats, days off through sickness. Why? An air conditioning system can filter the air, and cool the air, but it cannot replenish oxygen without fresh-air make-up. So, at the end of the day, the occupants are breathing a high percentage of CO2 and hence the symptoms. Can we afford the social cost of poor indoor air quality?

Having installed an energy efficient system, it must be maintained to ensure that it remains efficient. Simple things like dirty filters increase the power used by the motors, and this applies to air filters and water filters. Cleaning fin surfaces on outdoor air heat rejection equipment allows efficient heat exchange and keeps energy use to the minimum.

It is essential that a regular and thorough maintenance routine, undertaken by trained and skilled air conditioning engineers, is in place.

Further in the future, scheduled for 2006, is the EU directive on the Energy Performance of Buildings when an energy efficient system will be essential.

Environmental awareness, and EN14001, should ensure that measures are in place for the regular maintenance and monitoring of the energy efficiency of all systems in buildings, either as the responsibility of the occupier or the landlord.

In many commercial and industrial environments air conditioning is essential. We just need to ensure that it is efficient, as future-proof as possible, and doesn’t cost the earth.

Contact: Maria Furlong, Trane Ireland.
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The Benefits of Heat Recovery Systems

When the outdoor air temperature is lower than the indoor air temperature ventilation will always cause energy consumption. If we remove the stale indoor air in our homes and buildings, the extracted air will be replaced by the colder outdoor air through ventilated openings and leakage in the building. This air will be heated up by whatever heating equipment is being used to heat the space. As a consequence, you have massive waste of energy, writes Niall Horgan of Systemair.

If we wish to limit the energy consumption due to the temperature difference between the outdoor temperature and the required indoor temperature, we need to use a heat recovery system.

There are two main types of heat recovery system in use today:
- Plate heat exchanger
- Thermal wheel

Both liquid coil heat exchangers and heat pipe heat exchangers are used less frequently.

Plate Heat Exchangers

With this system both fresh air and exhaust air flow on each side of a number of dividing plates. This type of system is not as efficient as the thermal wheel. However, it does have the major advantage of keeping the two air currents separate. As a result this type of installation has a wider application range.

The exhaust air in this type of system has a tendency to condense and, as a result, the heat recovery unit must be fitted with a condensate drain. Also, with the possibility of low outdoor temperature the unit may freeze and consequently a common defrosting method is to run the external air in a bypass circuit past the exchanger when the pressure drop across the exchanger has reached a certain level.

Thermal Wheel

There are two types of thermal wheel:
- Hydroscopic
- Non-hydroscopic

It is critical when using a thermal wheel that correct pressure conditions are maintained in the unit in order to prevent the transfer of pollutants from the exhaust air side to the fresh air side. It is because of this that thermal wheels have a smaller application range than the plate heat exchanger. However, their major advantage is they have an efficiency of between 75 – 85%.

As with the plate heat exchanger, this unit must also be fitted with a condensate drain. Frosting problems are rare on thermal wheels though there is a risk below -10°C. If this is a possibility, a defrosting system is needed for this application.

Heat Recovery Pays

Why install a heat recovery system? As well as the environmental benefits, the other major advantage is the cost saving to the end-user. To calculate the cost savings firstly you must know something about the climatic conditions for the particular installation. To do this we must know how long the heating season lasts.

The length of the heating season is mainly calculated up until the mean outdoor air temperature reaches 10°C. We must also know the number of degree days and these can usually be found in tables of climate data or from the local Meteorological Institute.

Take for example a building supplied with 10,000m³/h. We will calculate the energy consumption over the year for heating the supply air using the following criteria:

1. Without heat recovery
2. Thermal Wheel (L = 0.80)
3. Plate heat exchanger (L = 0.60)

- Average outside year temperature = 8°C
- Length of heating season = 200 days
- Room Temperature = 20°C
- Operating time of the ventilation system = 24h
- Correction for weekend = 5/7 (5 day operation)

As the calculation using the foregoing information clearly illustrates (see Figure 1) heat recovery systems save money!

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Figure 1 — Heat Recovery Systems Save Money

(1) \( E = \frac{(10,000 \times 0.335)/(20-8)(1-0) \times 200 \times 10 \times 5/7)}{1,000} = 57,428 \text{ KWh} \)  
57,428 x 0.14 (cent per KWh) = 8,039.92

(2) \( E = \frac{(10,000 \times 0.335)/(20-8)(1-0.8) \times 200 \times 10 \times 5/7)}{1,000} = 11,485 \text{ KWh} \)  
11,485 x 0.14 (cent per KWh) = 804.00

(3) \( E = \frac{(10,000 \times 0.335)/(20-8)(1-0.8) \times 200 \times 10 \times 5/7)}{1,000} = 20,098 \text{ KWh} \)  
20,098 x 0.14 (cent per KWh) = 1,407.00
The fruits of months of strategic planning which led to new management structures and manufacturing procedures at the Aervent Group are now beginning to impact on the marketplace. Penetration of the various market segments already served by the company is steadily growing, while distribution agreements with new principals has opened additional market opportunities.

The appointment of Jim Bollard as Business Development Manager was particularly significant as Jim brings a wealth of knowledge and experience to the Group. He has worked in the business for over 20 years and is widely known and respected across the entire building services spectrum.

"Joining the Aervent Group at this time is an exciting prospect", says Jim. "I'm ready for a new challenge and it's fortunate that the Group is equally poised on the brink of a carefully-planned investment and expansion programme which will see it emerge as one of the dominant players in the business. This plan envisages reinforcing and strengthening the markets we already serve and bringing new complementary product lines on stream to broaden our area of activity.

"To do this successfully we realise that new product lines are not the sole answer ... it is also important that we fully support our product offering by providing the necessary infrastructure to get those products to the marketplace, where and when the client requires them. To that end we also have plans to expand our branch network.

"With our headquarters in Dublin and a very successful branch outlet in Cork serving the Munster region, we have plans to open a new branch in Galway to serve the west of the country. Ideally located at Unit 2 in the Ballybrit Industrial Estate, this 3000 sq ft outlet will carry significant off-the-shelf quantities of standard items and operate a fully serviced trade counter.

"On the products side we have also expanded the scope of the service provided by taking on the Systema agency for radiant strip heating. Apart from being the country's first oil-fired radiant system, it combines a recirculating system that burns up to 80% of all waste products from the heating process, so increasing efficiency to around 95% net.

"The oil-fired option is proving very popular with commercial and industrial users whose choices have been restricted because of their location in rural areas, where they have no access to the mains gas network.

"Systema's OHA heater combines recirculation with its already highly-efficient design that allows over 130 metres of radiant strip to be served by a single burner in many applications. Whereas similar systems often require multiple burners to supply such an area, the OHA's single burner system delivers maximum energy efficiency and considerably reduces maintenance. The burner can also be installed on the outside of the building to reduce internal disruption and to ease access for servicing.

"Radiant heating has many benefits such as the ability to direct heat to where it is actually needed rather than wasting energy on heating empty air pockets; low air turbulence reduces dust movement so improving comfort; and there is very little noise pollution from these units. Now, with the addition of such an energy efficient innovation, people are really sitting up and taking notice."

"It can be an extremely versatile and energy efficient solution, and the development of the recirculation technology is a real opportunity to take this message to a wider audience. This is what we at Aervent intend to do", concluded Bollard.

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New Appointment Sets Direction For Hitachi At Ardline Aircon

Hitachi has re-energised its approach to the Irish climate control market with the selection of a new national distributor for its air-conditioning systems and the announcement of a significant investment in market development. Newly-formed Ardline Aircon has wasted no time in implementing this ambitious strategy with the appointment of Damien Byrne BSc(Eng) as Technical and Business Development Manager. Damien holds a BSc in Engineering from Trinity College and has worked in manufacturing engineering and process technician positions for PWA, the Pratt and Whitney air-engine maintenance subsidiary, and Motorola Ireland. He was most recently Process Engineer at Donnelly Mirrors, the Naas-based high-tech vision systems manufacturer, where he was involved in clean-room operations and project management for new facility development. This practical knowledge will be invaluable in his new position.

Damien will be responsible for Ardline Aircon’s relations with building services consultants and contractors throughout Ireland, and will work closely with Hitachi’s distribution operations in Ireland and its European technical support centres in Swindon and Frankfurt. He will also provide project management support for specialist installations based on his extensive knowledge of climate control technology in industrial and commercial applications.

"Hitachi has the benefit of a high-tech image that is among the best in the world", says Damien. "The company motto — 'Inspire the next' — shows it is totally focused on the future, and its climate control technology reflects that drive".

"Like every other operator in this sector, we will be concentrating on the 'bread-and-butter' installations in commercial buildings and the retail sector, where the Ardline Group already has a strong position, particularly in refrigeration", Damien continues.

"But we know that Hitachi climate-control innovations have already made an impact in the engineering profession and we will be building on this to gain access to more specialist markets, especially in the industrial and pharmaceutical sectors."

Hitachi equipment comes in a wide range of configurations that includes 4-way cassette, ceiling suspended, ducted, wall-mounted and floor standing. The RAC (Room Air Conditioner) range is popular for domestic and light commercial applications with capacity ratings from 1.6kW to 8kW, and provides cooling only and heat-pump options and an extensive choice of inverter/single and multi-split systems.

The Utopia range for domestic, commercial and industrial applications offers a 2 to 12 HP power span in a choice of cooling-only/heat-pump models, using the low-noise low-vibration Hitachi scroll compressor and R407C refrigerant throughout.

The Set-Free Variable Refrigerant Flow range incorporating the highly-sophisticated CS-NET 'intelligent building' control and network system comes with with two-pipe (3-30 HP) and three-pipe (8 and 10 HP) installation options.

Allied to this will be the benefit of an established national service network in Ireland. Ardline Aircon has been formed by a consortium of companies already well-established in the building and commercial services sector, who will provide installation and maintenance back-up from locations in Dublin, Cavan, Kilkenny and Limerick.

"These will be our 'first line of defence', if you like", Damien says, "with Hitachi-trained technicians and a stock of replacement parts and fittings. Even though a part can be moved from Frankfurt to any part of Ireland within 24 hours these days, there is no substitute for a man in a van on the job with a part in his hand. That's the overall approach we're taking to customer service, and that's why Hitachi has chosen this distribution route rather than any other. It's all about service."

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Ardline Aircon’s regional service centres can be reached at:
Tel: 042 - 966 5460 (Cavan); 056 - 772 1310 (Kilkenny); and 061-316797 (Limerick).
Hitachi’s website: www.hitachi.com
'Energy Agreements’ Mean Supplier Opportunities

by Chris Hughes, Sustainable Energy Ireland

As part of the EU burden-sharing arrangement under the UN Kyoto Protocol, Ireland is committed to limiting total emissions of the main greenhouse gases to 13% above 1990 levels in the period 2008 - 2012.

The Government’s National Climate Change Strategy proposes a comprehensive range of actions in all sectors to address this issue, including industry and commerce. In line with these actions, Sustainable Energy Ireland (SEI) is implementing a pilot project to test approaches to binding negotiated energy agreements with industry. One of these, a draft agreement on boilers and heat distribution, will involve dialogue with suppliers of boilers and related equipment and services. If successful, the pilot project could have a significant impact on the market, creating an increased demand for energy efficient installations and for improved boilerhouse and energy management.

It is envisaged that Negotiated Agreements will be introduced in parallel with a new carbon tax, the idea being that companies which sign up to such agreements and meet their obligations within them will be able to claim back a significant proportion of their carbon tax bills. Within this broad framework, there are a variety of different approaches. Potentially, agreements can be negotiated with individual companies, in the case of exceptionally large energy users, or with groups of similar companies where appropriate. A third possibility is the development of agreements, which focus on one specific energy end use or technology, such as steam and hot water boiler installations.

The thermal agreement ‘strand’ of the pilot project involves some 15 companies working closely with SEI. It will include hot water and steam boilers, plus heat distribution.

However, use of thermal energy in actual production processes will not be included. The idea is that the working group will develop a ‘pro-forma’ agreement covering these areas, and that such an agreement would then be available for all companies to sign up to, no matter what their sector or size. Thus, the agreement could represent an ‘off-the-shelf’ package quickly available across the industrial and commercial sectors, and would avoid the need for companies to be directly involved in a costly and lengthy negotiation process.

The 15 companies participating in the development of the draft thermal agreement have each undergone a thorough energy audit of their thermal installations, carried out by an external energy auditor against an audit specification commissioned by SEI. From these audits, a list of potential actions will be developed, with the aim of ensuring that participating companies will bring their installations and management systems up to international best practice. IBEC is also represented in the project.

It is clear that such an agreement could have a considerable impact on the market for boilers and ancillary equipment, and for the service industry. It should create a significantly-increased demand for energy efficient installations and for improved boilerhouse and energy management. For this reason alone, it is important that the supply side should be aware of the project and its potential impact.

But there is a further possibility in relation to an agreement aimed at a specific technology or end use. The supply side itself could support such an agreement in some way.

For example, there might be an agreement to provide training, information and other supports to boiler operators that would assist in raising the energy efficiency of installations. There could be special promotional campaigns. Another possibility would be that suppliers and servicing companies would specify best international practice in relation to thermal energy efficiency, wherever possible.

Ultimately, there might be movement towards adoption of a code of practice that would ensure the most energy efficient installations possible.

As indicated above, a thermal energy agreement with industry could have a major impact on the supply of thermal equipment and services in Ireland. Potentially, it offers great potential both for an improved business environment and for development of the support relationship between supplier and customer.

SEI is encouraging all suppliers interested in receiving more information on the pilot negotiated agreement schemes to contact them.

Contact: Chris Hughes, SEI. Tel: 01 – 808 2076; email: chris.hughes@sei.ie
Heard it on the grapevine ...

Who was it? ... You tell Plumb Lines at Tel: 01 - 288 5001. All correct entries will go in the hat for draw for bottle of champagne. Clue: Bow-tie!

very obvious and positive implications for suppliers of energy-efficient products and related services. Indeed, there is talk of a "best practice" initiative in relation to the whole issue, and maybe even a code of practice.
Apart from improving the trading relationship between end-users and product and service suppliers, it also offers great potential for new opportunities and an improved business environment.
Chris Hughes of SEI is the man to contact.

He’s back ... Great to see Jim Bollard back active within the business. Jim — despite still looking as young as ever — has been around for more years than he cares to remember. He’s now putting that extensive experience and knowledge to work as Business Development Manager with Aervent.

AUSTIN MCDERMOTT there’s a ladder in your tights! Sorry Austin, the idea of you in full medieval dress during the recent Carrier get-together in Shakespeare country in the UK was too much of a revelation not to share with our readers. Despite some gallant work you’ll be glad to hear that we failed to locate a photograph.

CIBSE ANNUAL GOLF OUTING — This year’s annual outing will be held at at a much later date — Friday, 12 September 2003. Venue is Hermitage Golf Club.
Details from Colin Murphy. Email: colin.murphy@homanobrien.ie

IPFMA Graduate
Eighteen graduates of the Irish Property & Facility Management course were presented with their diplomas at the Irish Property & Facilities Management Association (IPFMA) annual luncheon in Dublin recently.
Two hundred and fifty members and guests attended the function which was addressed by Felix McKenna, IPFMA, Chairman.
The growing number of qualifying graduates of the IPFMA course is further proof that property and facilities management has indeed come of age.

CONGRATULATIONS GERARD HÖY — Gerard, of Lord Consulting Eng, in Navan, was the lucky winner out of the hat in our March “Win a Sanyo DVD Competition”.
Many thanks to all of you who entered. It was no surprise that, for the most part, over 90% of the entries were correct.
However, the bogey question was “How many BTU/h to 1kW”. This stumped a few of you. The answer of course is 3412.
Many thanks again to all who entered and remember, there is another competition featured on page XX of this issue. Good luck!

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