



## Compressed Air Filter Replacement: More Safety and Efficiency

Pages 22 & 23

18-25

Compressed Air Feature

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CMMS Feature

32-35

Lubrication Feature

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# Minimize system integration risks with the Beamex Business Bridge

Business Bridge is a standardized, but configurable software solution for connecting Beamex CMX calibration management system to an ERP/CMMS system.



Staying within the original project budget and timetable can be a challenge, specifications and scope of work keep changing constantly during the project and system maintenance of a finished, highly customized integration solution turns out to be difficult and expensive. Beamex minimizes these system integration risks by introducing the Business Bridge.

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## Contacts

### Publisher

Michael Dominguez

### Editorial

editors/contributing: Jon Barret, Christer Idhammar

### Advertising

Steve Aslett  
Paul Miles  
Brian Simpson

### Production

Tom Britten

### Email

[Info@engineeringmaintenance.info](mailto:Info@engineeringmaintenance.info)

### Website

[www.engineeringmaintenance.info](http://www.engineeringmaintenance.info)

### Phone

tel: +44(0)1634 731646

Fax: +44(0)1634 731644

### Address

MSL Media LTD, Cobalt House, Centre Court,  
Sir Thomas Longley Road, Rochester, Kent,  
ME2 4BQ



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## Olivo Contain Dry Ice Pellets

Olivo portable insulated containers have been manufactured for over fifty years and are the market leaders in the distribution of temperature-sensitive food products.



In the dry ice sector, Olivo containers are used by many leading names- Air Liquide, Messer, Linde, BOC, Praxair, Coljet, Yara, etc. The combination of high quality insulation and robust plastic construction with steel fittings ensures that the containers have a very long life. The ease of movement on casters or feet makes the containers very easy to handle so that the dry ice pellets for blast cleaning can be taken direct to the point of use and still at exactly the right temperature.



Contact:  
Sales - Bill Gilmour - 01952 408070  
Email: [bg@olivo.eu](mailto:bg@olivo.eu)  
Website: [www.olivo.fr](http://www.olivo.fr)

## Softsols Expands Operational Experience With New Team Members

SoftSols Group, based in Wakefield, West Yorkshire has seen a buoyant start to 2013.

Their market leading maintenance and facilities software, Agility is currently being implemented by major new clients including Farrow and Ball and Hanson Building Products, and Agility version 5 has just been launched in April. The success of Agility has meant that the UK Operations Team has been expanded to support the strong pipeline of customer implementation and development projects.



The UK Operations Team is headed by newly appointed, George Apostolakis. George has significant operational and IT experience gained from Airedale. The team also sees 3 new members, Simon Mauborgne, Lee Crowley and Steve Pickup extending SoftSols' experience in training, customer service and the facilities management sector. The company has also created a new Marketing role which has been filled by Kate Pullen and Justine Carter has joined the Product Development team.

David Hipkin, SoftSols Group Managing Director says, "This year we are celebrating 30 years of experience in our field, which is outstanding for any technology company; we are proud to say that we are the same age as Microsoft and 3 years older than Apple, so we have a great deal of experience and expertise we are able to share. Increasingly organisations across the board are seeing tighter controls on spending, we and our Agility product are able to help our customers implement efficient and cost-effective maintenance and asset management programs.

Our recent expansion is a sign of our healthy pipeline and our commitment to innovation and customer service. Our new Operations Team give us real strength to deliver what our customers now expect from Agility and SoftSols. We are well on our way to achieving our sales budget for 2013, which sees 38% growth on 2012, which was in turn 43% up on 2011 and our newly expanded team are key to driving us forward in our next phase of growth."

SoftSols (EMEA) Ltd | [www.softsolsgroup.com](http://www.softsolsgroup.com) | Tel: 01924 200344

## Densoclad 70 Protects 1Km of Pipework in Brinefields Gas Area

Cofely Fabricom GDF SUEZ are near completion of a contract to install 1 km of protected multi technical underground gas systems for gas storage in the Cheshire brine fields.



Image - Left:  
Winn & Coales Densoclad 70 being applied to a pipeline section in the Cheshire brinefields

The coating selected was Winn & Coales Densoclad 70, this having been applied to 'in situ' field joint locations by the Cofely Fabricom GDF SUEZ organisation on erected pipework sections ranging from 2" to 30" Diameter.

Winn & Coales Densoclad 70 medium to heavy-duty tape is designed for anti-corrosion protection of medium and large diameter pipes, welded joints, bends and fittings, and is applied over Denso primer. The extremely tough PVC backing combined with polymer bitumen adhesive ensures complete protection and exceptional resistance to damage by impact, poor backfill or aggressive ground conditions.

Winn & Coales (Denso) Ltd, Chapel Road, London SE27 OTR  
Tel: 020 8670 7511. Fax: 020 8761 2456  
e-mail: [mail@denso.net](mailto:mail@denso.net) web: [www.denso.net](http://www.denso.net)

# Maintenance Management - Defining, Clarifying “Reliability” by Torbjörn Idhammar

The purpose of this column is to raise questions and challenge plant leadership on strategy, vision and execution of reliability and maintenance management.

Reliability is often used by plants to define future improvement efforts and set expectations for employees and managers. In several recently written mission statements, I've seen expressions such as “to increase profitability through increased reliability.” But when companies are asked to define what the words mean, what reliability is and how it's measured, it's unusual to get a comprehensive answer.

The manufacturing and process industry may not have defined the meaning of the word reliability, but you would think the service sector would have done so by now. It has not. Consultants start the trends and use these words in order to sell the industry a new concept. We sometimes, however, fail to define the meaning of the terms we invent.

The goal for any plant is to increase overall production reliability, meaning the maximization of output with current resources by reducing waste in equipment reliability and process reliability (the latter is often used in process industry; it may be called “manufacturing reliability” in discrete manufacturing). Equipment and process reliability jointly create reliable production.

This can be measured using overall production reliability (OPR). Traditionally, this measurement is called overall equipment effectiveness (OEE). OEE and OPR refer to the same measurement, but I use the name OPR since it better describes what is actually measured. It should be called OPR because it includes all possible production-related waste, not only equipment-related waste.

#### OPR is calculated as:

$$\text{OPR} = \text{Quality (\%)} \times \text{Speed (\%)} \times \text{Time Availability (\%)}$$

Speed, Time Availability and Quality describe all losses in a production or process line. OPR is, therefore, an excellent measurement to use when setting reliability goals jointly for operations, maintenance and engineering.

Operations' primary responsibility is process reliability, where the process, or manufacturing, is operating with as little waste as possible. Examples of process waste are quality and production losses due to operating parameters such as setting of pressures, machine speeds, cutting tool selection or concentration of chemicals.

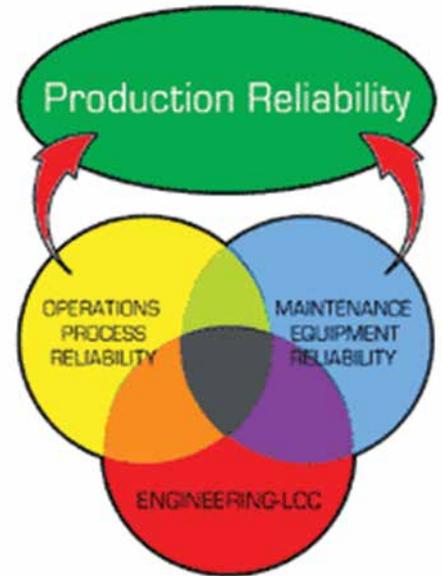
Maintenance's primary responsibility is equipment reliability. Lack of equipment reliability creates waste due to failing components, quality losses for the reason of equipment problems, or speed losses because of component wear or breakdowns.

Engineering should focus on supporting equipment and process reliability through life cycle cost (LCC) design. LCC is used to consider the cost of buying and owning equipment. It's common that engineering departments only focus on making sure a new installation is on time and under budget. Reliability and maintainability aspects of the equipment design are forgotten. For example, why would someone buy a motor or gearbox without jacking bolts (pushbolts used when aligning equipment) installed?

We know world-class shaft alignment is virtually impossible to do with a sledgehammer, so why don't we specify jacking bolts as part of the design?

In conclusion, most companies need to better specify the term reliability. It will help employees understand what the goal is when we refer to, for example, “production reliability.”

In maintenance management, we primarily focus



on equipment reliability. In my next column, we'll discuss how plant maintenance management can set goals by clarifying “equipment reliability” for their co-workers.

#### Torbjörn (Tor) Idhammar

Is partner and vice president of reliability and maintenance management consultants for IDCON Inc. His primary responsibilities include training and implementation support for preventive maintenance/essential care and condition monitoring, planning and scheduling, spare parts management, and root cause problem elimination. He is the author of “Condition Monitoring Standards” (volumes 1 through 3). He earned a BS in industrial engineering from North Carolina State University and an MS in mechanical engineering from Lund University (Sweden).

Contact Tor

On 800-849-2041

or e-mail [info@idcon.com](mailto:info@idcon.com).

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Phone: +44 (0) 23 9220 5500,  
Email: [micro@fugroemu.com](mailto:micro@fugroemu.com)

### Free Chlorine Sensors for Water Treatment and Disinfection

Real-time free chlorine measurement FCL500 series sensors from Sensorex

Garden Grove, California (16 May 2013) – Sensorex's FCL500 series free chlorine sensors use advanced amperometric measurement technology to provide highly accurate monitoring of free chlorine in process applications. With three models covering the 0-2ppm, 0-5ppm and 0-10ppm ranges, FCL500 sensors can be used in new installations or as a field replacement for existing sensors in drinking water disinfection and distribution applications, food and beverage production, cooling water, and other industrial water treatment systems.



The new device has an upgraded temperature correction curve for improved performance. Its new membrane design features a mesh reinforcement clamp for increased stability and added durability. The 4-20mA isolated signal output is enhanced to eliminate ground loop errors, reduce noise, and block high voltage transient surges.

For real-time free chlorine monitoring, the FCL500 series sensors interface with PLC, SCADA and other process control systems via the 4-20mA output. A large electrolyte reservoir with an easily replaced membrane cap and solution reduce maintenance intervals and maximize sensor life.

To learn more about FCL500 sensors, as well as the company's full range of sensing products, visit [www.sensorex.com](http://www.sensorex.com) email [sales@sensorex.com](mailto:sales@sensorex.com), or call +1 714-895-4344.

## Alternative Filter Elements Save On Time, Energy & Money

Hi-line Industries Ltd have considerable experience in the supply of alternative filter elements which are 'copy exact' replacements for original equipment fitments.

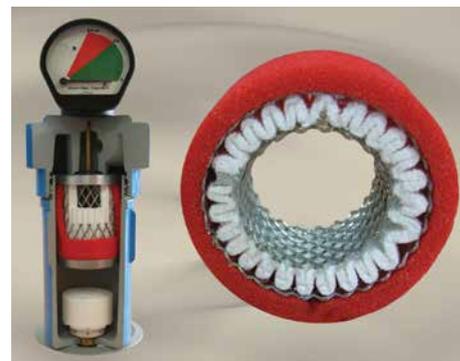
Filter elements are consumable wear parts that are essential in providing the maximum protection to downstream equipment and production processes. However these products can also fall in the 'fit and forget' category, with damage caused to capital equipment or production output if they become blocked with particulate or otherwise operate at high differential pressures.

With over 147,000 different filter elements to cross reference from utilising their own electronic software, the supply of appropriate alternative filter elements from Hi-line has never been simpler. Their aim is to provide a 'one-stop' filtration service for industry, whereby they can undertake to supply both original filtration equipment as well as optional, highly-economic alternative cartridges wherever applicable. Their range of filter elements fit into existing filter housings without modification, and will be of equal performance as the original branded products, or in many cases will outperform them.

The Hi-line elements are all manufactured to ISO

8573-1:2010 with a pleated media construction which provides more than four times the filtration area than conventional wrapped or rolled media filters. In addition they ensure less oil carry-over, with longer service life and lower differential pressure. The larger cross section filtration areas require a much lower energy source during operation, and the Hi-line alternative filter elements can also be less expensive than original part replacements.

Replacement filter elements can be supplied for a wide range of fluid applications including compressed air (coalescing, air drying and vacuum), hydraulics, water, grease, gas (using microfibre technology) and chemicals (absolute and semi-absolute). Special purpose filters can be supplied for compressors (filters, separators and intake) autoclave (venting), panel filters (reloadable filter frames), bag filters and filter baskets. The varying specialised filtration functions cover self-cleaning and backflushing, stainless steel filters and strainers as well as Duplex and Simplex strainers. Specialised media available includes activated carbon and HEPA



filters, together with spun bond polypropylene and wound cartridges. Process filtration can be supplied for breweries, dairies, pharmaceutical and general manufacturing, together with sterile filters for medical, laboratory and dental applications.

Further information is available from: Hi-line Industries Ltd,  
5 Crown Industrial Estate, Oxford Street,  
Burton on Trent, Staffordshire DE14 3PG  
Telephone: 01283 533377  
Fax: 01283 533367  
e-mail: [enquiries@hilineindustries.com](mailto:enquiries@hilineindustries.com)  
[www.hilineindustries.com](http://www.hilineindustries.com)

# Beamex Open Day Seeks To Further Enhance The Beamex Experience

by providing users an excellent opportunity to learn more about the latest products, best practise and technology for industrial process calibration.



Beamex strives to continuously enhance the "Beamex Experience" for their customers by using key principles such as the training cycle to better define student needs helps us: Better determine learning requirements, set out clearly defined and agreed learning objectives, design appropriate "Beamex Experience" learning material that can be delivered and sustainably supported, and improved with continual assessment and evaluation.

Of course the formal training session is still requested by some customers but Beamex believes this path is best augmented by additional "Beamex Experiences". A recent Open Day event was a showcase for this customer experience.

The Beamex open day was held at a central venue, at the end of May, and was a well attended and well received event. The concept of the day was that as a user or potential user of Beamex equipment the relationship with Beamex doesn't stop once the goods are delivered and paid for. Beamex strives to help with continuous improvement and offer service support and training and advice to allow the end user to get the best out of our equipment. To add

to the customer focus of the event a guest speaker was invited to present from a customer point of view. The event was open to both long term existing customers, new and potential customers. The agenda was set to be educational and informative. The day began with a series of presentations which included the guest presentation by Andy Roberts & Mark Donnelly of Roxspur Measurement and Control Ltd on the importance of calibration accreditation and SAE AMS2750 pyrometry standards. The Beamex factory Product manager, Heikki Laurila, then outlined the Beamex product roadmap highlighting new products and upgrades.

The presentations continued with information shared from the Beamex Professional Services team Marcus Teague and Michael Frackowiak by introducing the Business Bridge - a standardized, but configurable software solution for connecting Beamex CMX calibration management system to an ERP/CMMS system. A summary of the flexible on and off site and customer support services and training packages was also provided.

Delegates from a wide range of industries attended



including representatives from the Power & Energy, Oil & gas, Pulp & Paper, Aerospace and the Calibration Service industries. Lunchtime provided a fantastic opportunity for some intra and inter-industry peer to peer networking amongst the attendees and exchange of best practice ideas

The afternoon took on a more informal atmosphere with hardware and software workshops in which the delegates were encouraged to participate in demonstrations and a chance to get "hands on" with Beamex calibrators and software, to chat to our team and find ways of getting the best return on their investment.

The Beamex Experience is all about delivering to our customers an internal environment that promotes teamwork, collaboration and the shared goal to be the most desired partner in calibration. In hosting this kind of open event we are showing our commitment to our customers to reach and maintain this position.

Beamex will be holding further open events around the UK this autumn please check the seminars and webinars section of our website [www.beamex.com](http://www.beamex.com) for details or contact [liz.fletcher@beamex.com](mailto:liz.fletcher@beamex.com) to register your interest.

### Switchgear Weather Cover moves to Rotational Moulding Rotationally Moulded Cover Generates Savings

Acknowledging that the fibre reinforced plastic switchgear cover currently in use was susceptible to damage, SSE was keen to source an alternative, recyclable solution and contacted Leaffield Solutions, a division of Leaffield Environmental.

Leaffield Solutions proposed a new type of cover, rotationally moulded in highly durable MDPE (Medium Density Polyethylene). Designs were proposed and reviewed with the SSE procurement and policy teams, the overriding considerations being operational safety and functionality. It was critical that the design was sufficiently deep to provide optimum weather and tamper protection for their switchgear.

The requirement was for a lift-on, lift-off cover with frontal access and a minimal but effective method for securing it in place. Being a lift-off item it had to fall within manual handling, safe lifting guidelines. Several fixing types were trialled by SSE before design was finalised and order quantities were jointly agreed to ensure optimum use of transport.



The finished cover, complete with handles and fixings proved to be less expensive than its GRP counterpart and is expected to have a longer useful life, proving that Rotational moulding can be a superior and economical alternative to GRP.

Further information from Stuart Forrester  
Tel: +44 (0) 1225 816500  
Email: [Stuart.Forrester@leaffield-environmental.com](mailto:Stuart.Forrester@leaffield-environmental.com)

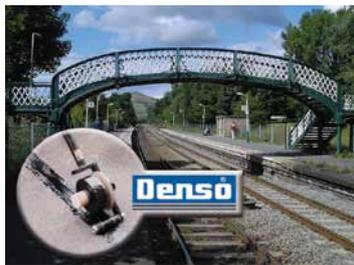
### Denso Overbanding Tape for Hope Station Platform

Gary Fletcher (Surfacing) Ltd of Dronfield, Derbyshire, has recently completed a refurbishment contract at the rural Hope Railway Station.

Following trenching work on the raised platforms it included repairs to tarmac surfacing.

Following application of Denso Primer, 250 metres of Winn & Coales (Denso) Ltd's Denso Overbanding Tape was applied in order to bond new asphalt areas to old. The Overbanding Tape was also applied where new asphalt areas meet the concrete platform edge sections.

Denso Overbanding Tape is a cold applied polymer modified bituminous tape for surface sealing of open seams or cracks up to 5mm width in road pavements.



Above: Hope Railway Station with insert showing application of Denso Overbanding Tape

Winn & Coales (Denso) Ltd  
Chapel Road, London SE27 OTR  
Tel: 020 8670 7511. Fax: 020 8761 2456  
e-mail: [mail@denso.net](mailto:mail@denso.net) web: [www.denso.net](http://www.denso.net)

### The Proven Value of Wireless Utility Monitoring

Wireless utility monitoring products from HWM's Radio-Tech brand have been used by Verco Advisory Services to reduce a major UK food producer's water consumption by almost 10% and gas consumption by over 5% in 5 months, with projections showing savings of around £1m in only 2 years.



When implementing sustainability improvements, companies need reliable, traceable data to target their efforts effectively and efficiently. It can, however, be difficult to rationalise the expenditure and disruption of installing such a system against results that may seem too speculative or distant. The speed of return on investment from wireless monitoring is substantially quicker than for hardwired systems, and the costs can be easily identified up front to ease and simplify the specification process: there are no potential wiring or access problems when the battery-powered devices can simply be fixed into place, meaning the most appropriate equipment within budget can be identified and used from the very beginning.

Verco, the energy management consultancy, has been working with its client for several years, focussing in 2012 on improving the company-wide sub-metering of resource consumption across its 15 UK sites. To do this, Verco has used Ecochirp transmitters and Wi5 data concentrators from HWM's Radio-Tech range, which have been installed to enable rapid, centralised data collection from all areas of the business. The wireless devices were chosen largely because of their modular nature, integrating easily with the Carbon Desktop energy management system and requiring minimal ongoing maintenance and management. Easy to specify, install and expand, they have proven to be effective at providing a visible return on investment in the fastest possible timeframe.

Radio-Tech is one of the UK's leading names in remote energy monitoring and smart metering products. The company's small, battery-powered transmitters are coupled with their 'Wi5 data concentrator', which collects local readings wirelessly before sending all the information back via GPRS to the user's choice of computer or server. For Verco, this approach has provided a quick return for evidence of real savings: a tangible reduction in consumption through targeted measures, significantly reduced spend on utilities and a more thorough and detailed picture of the company's resource usage throughout its business operations and locations.

HWM-Water Ltd.  
Ty Coch House, Llantarnam Park Way, Cwmbran, NP44 3AW  
Tel: +44 (0)1633 489 479 | Fax: +44 (0)1633 877 857  
E-mail: [sales@hwm-water.com](mailto:sales@hwm-water.com) | Website: [www.hwm-water.com](http://www.hwm-water.com)

## Full marks to Sonatest Ltd, together with LA Design, as the Prisma wins the “red dot award 2013” for product design.

The innovative skills and expertise of Sonatest Ltd, in partnership with LA Design, impressed the 37 strong jury of industry experts who judge the “red dot award: product design awards in 2013” with the new Prisma, leading to the winning announcement.

Those who succeed in winning their class group are able to associate themselves with the red dot branding and positioning within an internationally recognised field of product design appreciation and expertise. This year the red dot competition received 4,662 entries in 19 different categories. Only the best designs are able to win the enthusiasm of the jury, and this is exactly why the Prisma received the red dot recognition for its successful design creation.



Previous winners in 2012 of the Red Dot design awards from the Industry and Crafts competition include: Atlas Copco, Faro Scanner Production, Bosch, Karcher, Samsung, Hilti Corporation and Flir Systems amongst others; so Sonatest are proud to be recognised with the Prisma's Product Design at this level. Other industry leading companies who are also recent Red Dot Design winners are Apple Inc, Ozaki, Electrolux Italia, Sony, AEG, Lenovo, Volkswagen and Hewlet Packard to name a few.

Designed for non-invasive material testing (NDT) in the most extreme environments; the Prisma incorporates advanced real-time imaging and 3D scanning, making flaw interpretation much easier, therefore reducing technician time on site. Recognized design features include the advanced heat dissipation design, shock absorbing over-moulding, anti-vibration mounts, high-end waterproofing, outstanding user ergonomics and a highly engineered skeleton for enhanced robustness. These integral design features combined with advanced software and unique multiple inspection modes, enable the Prisma to step up to all testing applications in a variety of challenging environments; from oil, pipelines to high-end aerospace components. With integral data recording and automatic PDF report generation, the Prisma has wireless and ethernet connectivity allowing the unit to be easily upgraded or diagnosed remotely.

Prof. Dr. Peter Zec, initiator and CEO of the red dot, has pointed out that strong design competence and economic success nowadays go hand in hand: “The winners of the ‘red dot award: product design 2013’ are the protagonists of a highly developed design culture and design industry. These days it is becoming more and more difficult to distinguish between well-designed products. It is often only in the details that the special qualities become apparent. However, those product creations that pass the test before the critical eyes of the international red dot jury will not fade into the crowd and will be able to fend off global competition.”

Winners of the red dot recognition also benefit from their products being displayed in the red dot design museum. With around 2,000 products spread over an area of more than 4,000 sqm, the museum houses the largest exhibition of contemporary design worldwide.

Sonatest Ltd are very proud to acknowledge that this is the second award that the Prisma has won this year for outstanding product design and would also like to acknowledge and thank all those in the Sonatest and LA Design teams that have worked on this product development project.

For further information please contact:  
Corinna Cuciureanu, Marketing Communications Manager  
Sonatest Ltd. Tel: 01908 525904, Email: corinna@sonatest.com

csm-products.com



## Data Logger UniCAN 2



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### Software

- ▶ Recording of signals and messages in groups
- ▶ Triggers
- ▶ Communication protocols (optional)
  - ▶ CCP
  - ▶ J1939
  - ▶ XCP on CAN
- ▶ Software extensions (optional)
  - ▶ CANsend
  - ▶ CAN Stimulation
  - ▶ Seed & Key



**CSM GmbH**  
Computer-Systeme-Messtechnik  
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Phone: +49 711 77964-20 • Fax: +49 711 77964-40  
info@csm.de • www.csm-products.com

# Independent SGS Services for UTC Heat Exchangers at Brazilian REFAP Refinery

**SGS was awarded a contract to conduct on and off-site inspection and testing on heat exchangers at the Refap refinery in Brazil by UTC.**

In January 2012, UTC, a diversified company providing a broad range of high-tech products and services to the global aerospace and building systems industries, awarded SGS a contract to conduct on and off-site inspection and testing on heat exchangers at the Refap refinery in Brazil.

Since then, an on-site SGS mechanical team has been opening, inspecting and testing heat exchangers. The agreement is scheduled to expire in December 2013.

Heat exchangers or changers, which efficiently transfer thermal energy from one medium to another, are common and essential equipment in chemical and petrochemical plants. Constructive and operational characteristics determine which qualify as pressure vessels under the Brazilian NR-13 regulations and therefore require initial safety inspections prior to operational use.

Extensive experience and unrivaled competence in projects of this kind made SGS the clear choice for UTC decision makers.

## Refap, UTC & Petrobras

Named to honor Brazilian Senator Alberto Pasqualini in 1968, the Refap refinery is located in Canoas, Rio Grande do Sul state and, as the fifth-largest refinery in the Petrobras system in Brazil, has an installed capacity of 200,000 b/d of oil. In addition to petrochemical naphtha, propylene, liquified petroleum gas, jet fuel, fuel oil and asphalt, diesel and gasoline make up most of the refinery's production.

Dated January 2011, the original contract between UTC, Refap and Petrobras Engineering set out to

construct a new on and off-site diesel hydrotreating unit (UHDT II) to enable the production of a more pure diesel with sulfur content reduced from 500 to 10 parts per million (ppm) and meet the requirements of the domestic and international markets.

Since the beginning of the year, SGS engineers have been opening, inspecting and testing heat exchangers at the Brazilian location. This process includes opening the equipment covers, removing the tubular bundle, measuring the thickness and performing a hydrostatic test and closing the equipment covers. Certain types of heat exchangers may require up to three pressure tests on the hull, bundle and floating lid.

Depending on the size and location of the heat exchanger, removing the bundle might only be possible with the implementation of a bundle-puller, a load-bearing device for bundles weighing less than five tons with a length of up to five meters and installed higher than ground level. Bundle-pullers reduce risks associated with this activity, such as danger to personnel and damage to equipment.

In the Refap project, SGS will have twenty-one on-site and two off-site exchangers requiring bundle-pullers. Bundle-pullers are exclusively operated by highly-trained professionals to provide a safe work environment and enable quality inspection and testing.

SGS Heat Exchanger Life Assessment System (HELAS)

SGS HELAS has been developed to quickly and efficiently inspect heat exchangers in which corrosion is expected only on inside tubing.



Data collected is directly analyzed to produce a complete life time assessment of the inspected heat exchangers to include a wall thickness report. HELAS measures the ultrasonic immersion length converted into corrosion depth on the inside of cooling water and air fin tubes.

Based on the highest value of corrosion measured, extreme value analysis is performed to estimate the remaining life-expectancy of the heat exchanger by evaluating the maximum possible corrosion depth throughout the heat exchanger. SGS offers a comprehensive inspection and testing services package in and around heat exchangers to provide complete, easily accessible and ready to use data.

In Brazil, SGS inspectors are conducting safety inspections before heat exchangers are put into use at the Refap refinery to ensure safe and reliable operations.

SGS is extremely pleased to have been chosen for this project and looks forward to a successful project completion.

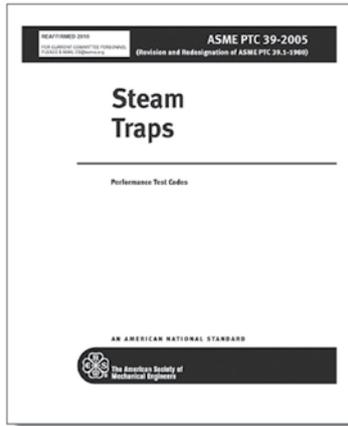
For further information, please contact:

SGS Industrial Services  
Marcio Freitas  
Industrial Services Director  
SGS - Brazil  
Av.: Andrômeda, 832 - 6º andar  
CEP 06473-000 - Alphaville - Barueri/SP  
t: +55 11 3883 8878  
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# A Summer Of Discontent For Commercial Air Conditioning Users

Every organisation involved in the use or provision of air conditioning needs to be aware of the changing regulations and issues this summer.

June 2013 saw the Met Office hold a workshop for the UK's pre-eminent meteorologists, to discuss the unpredictable British weather.

Top of their agenda was to better understand the drivers of our unusual weather patterns. However, despite some distinctly cool summers, UK business is becoming increasingly reliant on climate control equipment to keep the workplace within the "Goldilocks Zone" - not too hot, not too cold - providing suitable conditions for temperature-dependent industrial processes and a comfortable and productive environment for employees, visitors and nomadic guest workers such as clients.

In fact the Health & Safety Executive (H&SE) workplace regulations stipulate a duty of care for employees which amounts to providing a sufficient supply of dust free fresh or purified air at a reasonable temperature and ensuring workplace equipment is in efficient and clean working order.

Whether factory, office or larger public venue, every organisation involved in the the use or provision of air conditioning needs to be aware of the changing regulations and issues as this summer, a combination of factors has the potential to cause serious disruption.

## BS EN 15780 ductwork cleanliness legislation

British Standard EN 15780 deals with cleanliness of ventilation ductwork in commercial buildings and focuses on providing proper assessment criteria for cleanliness and cleaning procedures. The legislation applies to existing, new and recently modified systems, the duty of care being to ensure that work is inspected and cleanliness mainless.

Necessary cleanliness criteria depends on a building's use and occupancy. Levels of acceptable dust accumulation are very specific - for example the

ductwork in treatment area in a hospital or laboratory would need to comply with 0.3 g/m<sup>2</sup>, whereas a room used for storage only may need to be clean to a level of 0.9 g/m<sup>2</sup>.

## What are the consequences of non compliance?

Dust mites, E. coli, salmonella and more are found in dirty air ducts and pose a potential health risk to anyone in the building. However, many organisations do not realise that the responsibility for BS 15780 lies with the end user - not the landlord, regardless of who commissioned the building work or contract cleaning. This means that if any employee has a medical issue - such as allergies or asthma - related to improper cleaning of air ducts, it could be said that the employer will have failed in their duty of care. There is a risk that a case of negligence and non compliance could be brought, leading to fines or long and expensive court proceedings.

## R22 refrigerant legislation

Many people are now aware that the new legislation around R22 refrigerant comes into effect from 2015. Although R22 has long been an industry standard for air conditioning, it is now being phased out due to environmental concerns. New substances like R410-A will be used instead, requiring specialist, qualified installation engineers to manage the changeover. This is could be costly and disruptive, depending on the size of the system. This may then leave facilities without air conditioning for a significant length of time.

## General maintenance issues

As with any area under close cost scrutiny, facilities managers can lose sight of the importance of air conditioning maintenance. However without routine maintenance, once these systems come under load due to extended operation or a heat wave they can fail catastrophically.



## Why is all of this a concern now?

There is a very real danger that many air conditioning systems will soon not be fit for purpose this summer. However many organisations will not realise how precious their supply of cool air is until it's taken away - either during essential works to meet compliance or by way of a complete breakdown.

When temperatures force air conditioning units to work at or beyond capacity, having a system that is ill-equipped to cope can at best create unpleasant and unproductive working conditions, and at worst seriously disrupt business-critical processes. Also, as users and providers realise these issues, the HVAC industry is likely to experience a capacity crunch - so there are no guarantees that experienced engineers will be available to help in an emergency situation. Portable air conditioning is a cost effective temporary solution to help minimise disruption.

Any organisation who pays little attention to the issues surrounding air conditioning this summer does so at their peril - it could lead to expensive remedial work and potential legal action further down the road.

## Author Bio:

Article written by Stewart Owen at Andrews Sykes. The company is the UK's largest specialist air conditioning hire company and has been supplying offices and other workplaces with temporary air conditioning for over 25 years.

## Visit:

<http://www.andrews-sykes.com/>

# Pumping Technical Slurries with Hydra-Cell

Positive displacement pumps play a major role in the pumping of highly concentrated slurries at high levels of efficiency but they have a poor reputation for pumping abrasive slurries.



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Although Hydra-Cell pumps are generally regarded as very successful high pressure pumps they offer a whole range of benefits for low pressure applications such as the controlled pumping of technical slurries. With no dynamic seals, cups or packing, Hydra-Cell pumps have a high resistance to wear by abrasive particles in suspension and require little maintenance. They have a repeatable and accurate, virtually pulse-less output that doesn't deteriorate over time, as might be expected from other positive

displacement pumps.

A further benefit of the Hydra-Cell pump is its ability to run-dry indefinitely, enabling feed tanks to be completely emptied and guarding against operator error.

Because of their multi-diaphragm, multi-valve design, Hydra-Cell pumps virtually eliminate product damage during pumping. They have demonstrated success in handling shear sensitive materials such as latexes, polymer emulsions, and crystal slurries and have a proven track record for pumping a wide range of abrasive slurries from lime and alumina to

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Hydra-Cell pumps handle these tough applications by reducing pump wear, the need for maintenance and replacement parts costs while increasing up-time and, in the case of shear sensitive materials, product yield.

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# Target Set on Record Growth

When Oswald Record showcased their extensive new range of products at Plantworx last month, thanks to three exclusive new dealerships, it signalled an ambitious growth programme for the long-established supplier to the UK construction industry.



The leading distributor of pneumatic and hydraulic equipment has added IHIMER compact excavators, Dingli scissor lifts and CompAir portable compressors to its comprehensive product portfolio and it hasn't stopped there.

Oswald Record Commercial Director Frank Iszard comments: "We're now the sole importers of all IHIMER and Dingli product lines in the UK and Ireland and the sole UK dealer of CompAir's portable compressor range. The deals are part of an extensive dealer expansion programme to meet customer demand across the UK and Ireland and we're looking for other exclusive partnerships where we see clear benefits for our clients."

Oswald Record's construction customers can look forward to a wider choice of compact excavators, skid steer loaders, tracked dumpers and tracked aerial platforms, through Italian-based manufacturer IHIMER, which also has exclusive rights for European distribution of the full range of IHI compact excavators from Japan.

"Compact excavators are particularly popular with developers and contractors who need the flexibility to work in confined spaces and IHI technology has led the field in that area," said Frank. "IHIMER is well known for quality and innovation across the construction and powered access industry and the brand also has a very strong following with clients in the landscaping and garden nursery sectors, where we are looking forward to further expanding our customer base."

As sole UK and Ireland distributor for Dingli, the China based aerial lift manufacturer, Oswald Record is now able to supply the biggest and lightest scissor lift in its class.

"The Dingli 1612DC was a show-stealer at Plantworx," said Frank. "But the Dingli range has more than 80 models, so we're able to meet a wide range of needs across the construction industry, including road, rail, airport and shipbuilding contracts as well as major bridge-building and power station commissions."

Oswald Record are also now sole suppliers for Dingli's entire range of self-propelled telescopic booms, articulating booms, scissor lifts, personal lifts, mast-climbing work platforms and aerial order pickets.

Leading global manufacturer of high performance and low operating cost compressors, CompAir, has also appointed Oswald Record as its sole UK dealer.

"We're delighted with the early success of our partnership with CompAir," said Frank. "All five of our UK depots have reported high demand for their



products, including the new C14 which is proving to be a powerful alternative to electric tools."

CompAir's C Series has over 30 models, from the smallest single axle model, powering a single pneumatic tool, to innovative Turboscrew machines. Customers can tailor each compressor to their specific requirements using an extensive range of accessories.

Oswald Record is a leading national distributor of pneumatic and hydraulic equipment supplying more than 350 product lines from a wide range of major international brands including IHIMER, Dingli, CompAir, Sullair, Padley & Venables, Chicago Pneumatic, TOKUGAWA, JCB, STIHL, Trelawny, Belle Group and Viking.

Providing repair and maintenance support through National Service Repair Centres, the construction and landscaping specialist operates from depots in Chesterfield, Enfield, Manchester, Grangemouth and Birmingham.

For further information see:

[www.oswaldrecord.co.uk](http://www.oswaldrecord.co.uk)

or contact Commercial Director

Frank Iszard:

e-mail [frank.iszard@oswaldrecord.co.uk](mailto:frank.iszard@oswaldrecord.co.uk).

# Oswald Record

Construction Plant Sales & Service

## FOR THE RECORD...

Oswald Record has added IHIMER compact excavators, Dingli scissor lifts and CompAir portable compressors to its comprehensive product portfolio for the construction industry.

The leading UK distributor of pneumatic and hydraulic equipment is now sole importer of all IHIMER and Dingli product lines in the UK and Ireland and sole UK dealer of CompAir's portable compressor range.

The new partnerships add to Oswald Record's extensive product range from leading international brands in the groundworks, groundcare, plant and specialist tools sectors.

Operating from depots in Chesterfield, Enfield, Manchester, Grangemouth and Birmingham, we also provide repair and maintenance support through our National Service Repair Centres.

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Commercial Director Frank Iszard,  
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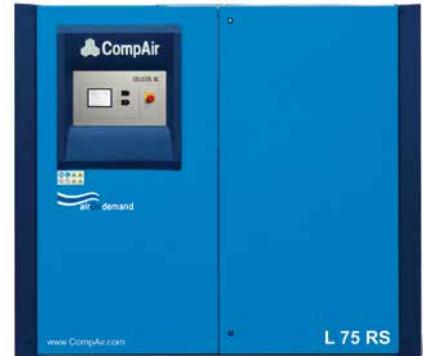
**CompAir**

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# Just Trays Keeps Energy Costs Watertight With CompAir

Less than six months after installing a new L75RS regulated speed compressor with heat recovery from CompAir, Just Trays, the UK's leading manufacturer of shower trays is on target to achieve annual energy savings in the region of £23,000, with a fast payback on return on investment.



Comments Ricky Dumbleton, Senior Production Manager at Just Trays, "We carried out a week-long air audit to help us develop a better understanding of our growing compressed air demands.

"Based on the results of the audit, we asked a number of compressed air suppliers to put forward their recommendations.

"CompAir identified that, by installing a new, lubricated screw L75RS regulated speed compressor, as well as a heat recovery system, we could benefit from considerable energy savings.

"Our previous 110kW compressor was too big for our current air requirements, which led to costly idling. Working 10 hours per day, 4 days per week, the regulated speed technology in the L75RS produces the correct amount of air to match our fluctuating requirements and peak demand of approximately 12.5 m<sup>3</sup>/min, meaning the compressor is always running at optimum efficiency. This is set to provide cost savings in the region of £15,000 per annum.

***"In addition, the L75RS is capable of operating at up to 13.76 m<sup>3</sup>/min; meaning we have the capacity to cope with further increases in our air demands."***

### Heat recovery

Typically, almost all of the energy that is used to power a compressor is converted to heat and is then wasted.

Using heat exchangers, CompAir was able to develop a system to recover the heat produced during the compression process.

This heat is transferred to Just Trays' vacuum forming process, whereby a sheet of plastic is heated to a forming temperature, stretched onto a single-surface mould and held against the mould by applying vacuum between the mould surface and the sheet.

Prior to the CompAir installation, Just Trays' vacuum forming process required the use of four 9kw heat exchangers to achieve the required water temperature of up to 90°C.

The heat recovery system installed by CompAir enables the water feed to be preheated, meaning only one heat exchanger is required, providing additional savings of over £7,000 per annum.

### Energy savings

Ricky Dumbleton concludes, "Since installing the new compressor and heat recovery system, we are on target to achieve annual energy savings in the region of £23,000. With these energy savings, we're also set to benefit from a fast payback on return on investment."

### Application Details

Based in Leeds, West Yorkshire, Just Trays has recently undergone a period of investment, with the aim of improving its equipment and processes to ensure the consistent production of high-quality shower trays.

Compressed air is used throughout the manufacturing process to help produce over 800 models of shower tray in six ranges, from engineered installation solutions through to hand-made contemporary designs.

### Inefficient air

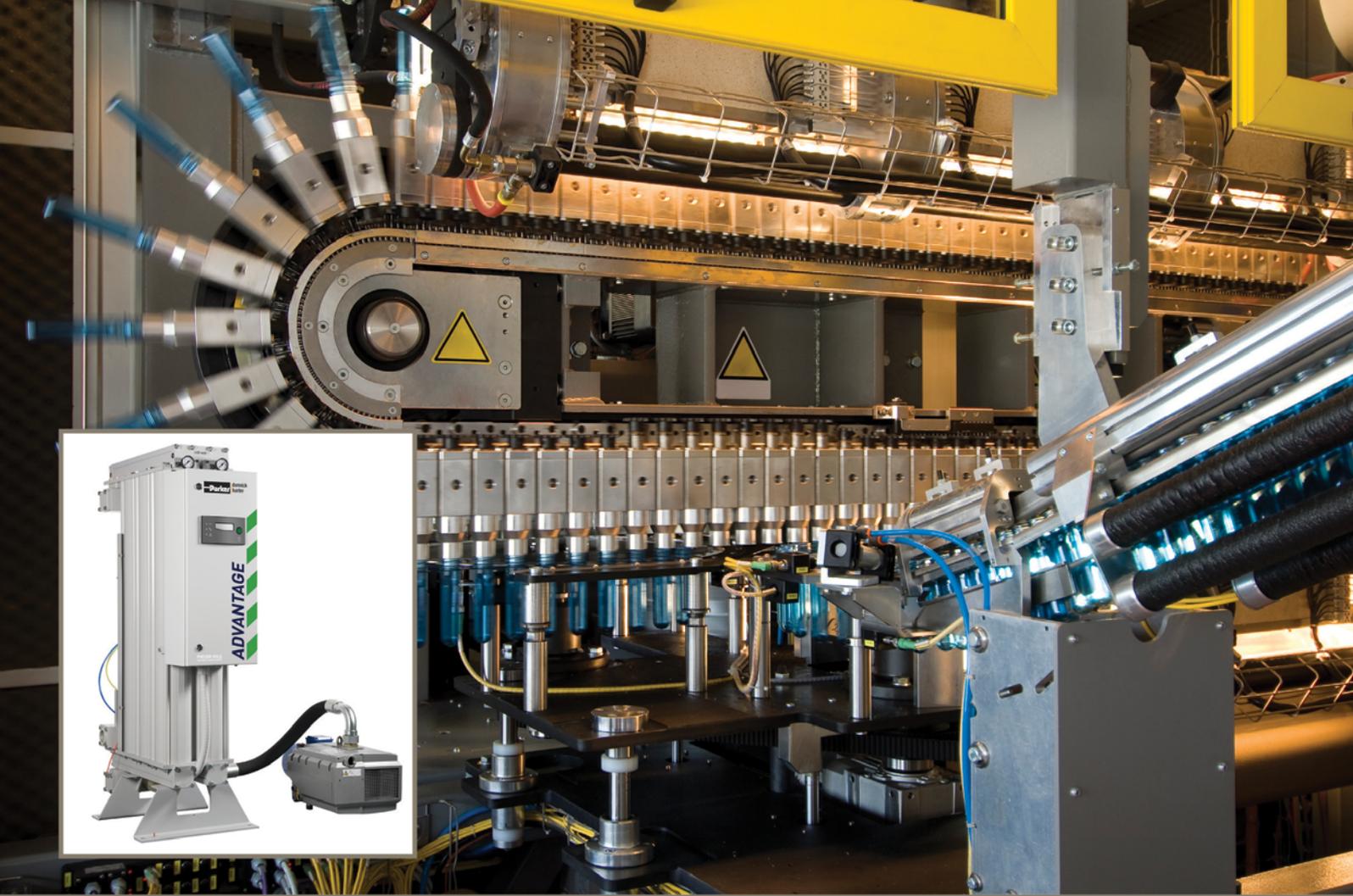
The plant's existing unit, which was around 20 years old, was no longer providing an efficient source of air, so Just Trays opted to review its compressor system.

For more information, please contact:

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# COMPRESSED EFFICIENCY IN A SINGLE BOX

**Compressors are responsible for 10% of all the power consumed in a mature industrial society like the UK and Ireland.**

Frequently 10% or more of this air will be wasted because of leakage caused by poor maintenance, bad design of air lines, acidic condensate attacking seals and joints just to name a few of the possibilities. Therefore it makes sense to do regular audits on the power consumed, flow, pressure, dew point and leakage as a starting point. Is this commonly done?

Matthew Harrison, Regional Sales Manager at BEKO TECHNOLOGIES says, "No this type of extensive measurement is rare but smart companies are realising that you can't know too much about what is happening within your compressed air network. You can avoid problems and be sure that you are operating to an efficiency that is acceptable if you regularly even better have a permanent output of key parameters within the system. Now that the BEKO Data Logger is available it is very easy for me and BEKO TECHNOLOGIES colleagues to monitor up to 12 outputs per BDL installed which is plenty for the normal compressed air system.

These outputs are not limited to the devices that we market but could for example use pulse

outputs for gas metering or PT100/PT1000 or KTY temperature sensors and many others. The BDL has the capability of 12 inputs, but can also be offered with the option of 4 or 8 inputs. What is important is that these inputs can be digital or analogue. Before with the older unit we only had the capability of 2 digital and 2 analogues, so we were not able to offer multiple measuring points.

This makes it very easy for BEKO TECHNOLOGIES to give the client a complete picture of his system tailored to the KPIs that are important to him."

Many clients are offered a free audit and in today's economic climate it makes sense to take up these offers doesn't it? Harrison again "Yes to a point the information is worth having but for example if a survey consists of clamping the incoming phases of the compressors then converting that to flow without measuring actual flow then this could be misleading and mask issues that need correcting. I would certainly choose to have that data but then I would still have 11 other options that can be measured. I would certainly want to know some key flows and pressure losses, leakage and dew point just as a

good base to start from."

With the BDL installed the factory engineer can measure 12 outputs of his own choice and can record, indicate and evaluate the data. This enables him to be constantly aware of his running costs and assist in spotting situations that could be troublesome without corrective action. For example a rising dew point could be too much flow, but with the measurement that can be quickly eliminated, it could have a dirty heat exchanger which can be cleaned or it could be losing gas in which case a qualified refrigeration engineer would be required. The principle is clearly that this knowledge helps in the management of the system.

The data measured by the BDL is easily transferrable to a PC via a USB stick or GSM module or Ethernet connection to suit the frequency of information required by the client. Some compressor data needs to be inputted relating to the type, performance, variable or fixed speed motor. Then once this is done a range of graphical outputs are available at a glance and at the touch of a button the client can see (for example)

- Energy cost
- Compressed air cost
- Leakage cost
- Compressor load/unload times
- Specific energy of the compressor
- Cost of 1m<sup>3</sup> of compressed air

A final word from Matt Harrison "This is a fantastic system for me and my clients. I see clients with the knowledge that if I find solutions or savings for them they will reciprocate by trusting me with their business. The BDL gives me another means of doing my job in this manner. Another really important fact is that BEKO TECHNOLOGIES do not sell compressors so we are never trying to sell that key part of the system...all orders for dryers and drains etc will of course be gratefully accepted!"



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Customers are already experiencing amazing results in offshore, automotive, petrochemical and painting industries... and the applications are limitless!

Andy Bird Dropout Europe says: “We are so pleased with the feedback on our latest product offer having sold units into industries where a refrigerant dryer appeared to be the only solution! Changing the way end users think about water removal is our passion. We feel that we can finally offer a credible alternative to traditional water removal equipment without the high investment and maintenance cost. So if you are looking to install one unit to remove the liquid water from your system at source or a polisher at “point of use” we have the solution”.



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# Compressed Air Filter Replacement: More Safety and Efficiency

The right timing is what matters



It could all be so simple in compressed air filtration: The comparison of filter performance data is today possible with standard ISO 12500 and registering operating hours is as easy as reading the differential pressure indicator. However, the energy conditions of air filtration still receive very little attention in practice (Fig 1).

The reasons are as varied as the complexity of compressed air conditioning: The compressed air filters are a part of the system and use "only" indirect energy based on the differential pressure, which is applied by the compressor. The dimensioning of a compressed air system, and therefore the capacity and number of filters used, is based on the required compressed air quantity and quality, the location of the compressed air purification system and the type and age of the compressors used. The contamination of the ambient intake air and the humidity, which varies depending on weather conditions, must also be considered, just as the impurities that are introduced by the compression process.

Especially in existing compressed air systems, it is recommended to call in filtration experts to measure the contamination that may be caused by the compressors (Fig 2). The contamination by the lubricating oil alone amount up to 40 mg/m<sup>3</sup> depending on the type of oil-lubricated

Above: Figure 1

compressors; this may increase to more than 100 mg/m<sup>3</sup> in older compressors. Even in oil-free compressors, abrasion, moisture and contamination by water injection and contamination through the lubricants of the gears and bearings can add to this depending on the model.

In older compressed air systems with compressed air pipework that can be several kilometres long and disregarding leaks, can also be susceptible to corrosion, the use of modern energy-efficient compressed air systems frequently falls far short

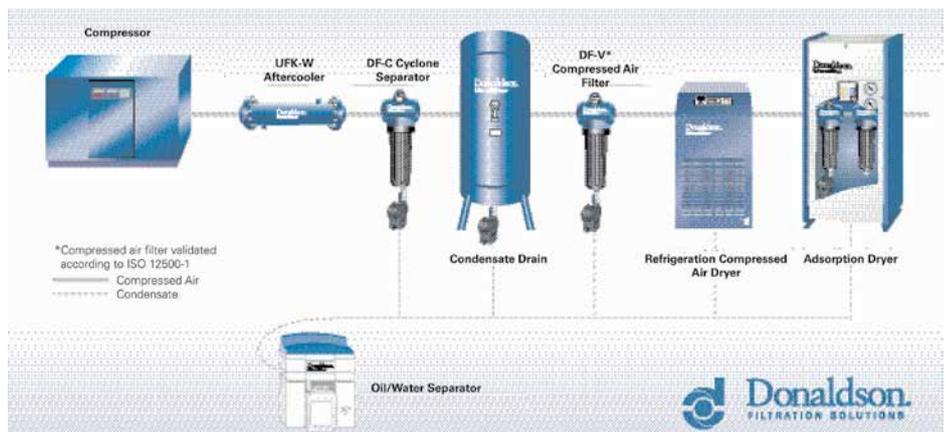
of expectations. The pressure losses through leakages are high and the compressed air pressure in the piping system is contaminated. When the compressed air filters at the points of use are heavily contaminated, the differential pressure rises faster. This problem significantly clarifies the complex interactions of the components in compressed air supply systems.

Experienced engineers know that the condition of a compressed air system can be seen on the filters. They are the best indicators of compressed air quality without considering complex equipment. However, these monitoring functions can only be met by coalescence filters with a differential pressure indicator (Fig 3).

The potential savings are at several thousands of Euros

The Fraunhofer Institute for Systems Technology and Innovation Research (ISI) discovered the following in a study in the course of the German Compressed Air Campaign "Druckluft effizient" in 2003: "In the field of compressed air treatment, it is primarily important to achieve the compressed air quality required for the application. It is best for energy and operating costs to meet the requirements of the applications. Exceeding or falling below the air-quality requirements results in increased operating and energy costs. The current potential savings per component part are thereby up to several thousand Euros (Fig 4). Regularly changing the filter elements within the recommended intervals achieve significant savings and thereby minimize the operating costs. „This statement has not lost any of its topicality against the backdrop of rising electricity prices. This means for the practice of compressed air filtration: Compressed air filter elements must be replaced to improve the energy balance:

Below: Figure 2





Above: Figure 3

- if they are not validated according to ISO 12500 and an objective performance comparison is impossible or
- when the differential pressure of coalescence filters for the separation of aerosols and liquid oil/water contents exceeds the limit or
- if they have been used for more than twelve months or 8,000 operating hours.

The specification of value “350 mbar” within the scope of the above-mentioned campaign “Druckluft effizient” is a reference value, and reflects the differential pressure curve of compressed air filters. The differential pressure of a new filter element initially increases very slowly. With increasing operating time, the differential pressure rises more rapidly and then reaches the point at which the filter element replacement is necessary. The recommendations for differential pressure limits vary depending on the filter manufacturer and may well be at 500 mbar.

## The Best Filter for each Use

Why is it necessary to monitor each compressed air filter in a compressed air supply system?

Below: Figure 4



75% of the compressed air costs are energy costs. More than 30% of the energy costs can be saved. Expenses for investment, interest and service amount to 25%.

Contamination of the compressed air can occur at any point of the compressed air purification system. That is why it is so important that the filters have reliable differential pressure gauges. The Economizers, which indicate when the differential pressure reaches the limit value and an element replacement is advisable for reasons of operational safety and energy efficiency, so that the operating costs caused by the filter do not exceed its cost, are easy (Fig 5).

## Is the differential pressure alone important?

Although long-term experience shows that an element replacement in the coalescence filters is useful when the differential pressure limit is reached, it is not the sole decision criterion. A sudden steep increase in differential pressure, for example, is a warning sign for increased contamination by particles. Therefore, one cannot solely rely on the differential pressure. Even quality filter elements with their great contamination retention capacity and the high resistance of their filter media against the constant exposure to corrosive substances should be replaced at the latest after 8,000 operating hours or twelve months.

Below: Figure 5



Basically, this replacement interval based on operating hours applies also to activated carbon filters that are used to separate oil vapours and odours. These filters are a standard for operations in sensitive areas such as in the food and pharmaceutical industries and in the generation of process air, in order to achieve a residual oil content of air pressure of 0.01 mg/m<sup>3</sup>, as referred to in ISO Standard 8573-1 for compressed air quality class 1. Even the use of particularly high quality activated carbon adsorbents that are used as a bed or as an integrated component of filter media, lose effect, despite their high adsorption capacity, which is not reflected in the differential pressure. The recommendation for the filter element replacement is at a maximum of 2,000 operating hours or three months. Depending on the prevailing oil vapour content and at inlet temperatures above 20 °C, a replacement is recommended at an earlier time.



Above: Figure 6

## This is how damages can be prevented

In compliance with the replacement intervals and differential pressure limits, the user can be sure that the productivity and efficiency of his systems, which rely on compressed air, are maintained or increased and the optimum protection of the workers is ensured.

A “worst case scenario” with a production loss or unusable products can result in unpredictable consequences for the company. Good advice and a reliable service, the monitoring of functions in the central control systems and ultimately a clear responsibility for the compressed air supply and the timely replacement of filter elements prevent economic damages.

## Filter element replacement made easy

Replacing a filter element is easier today than ever. In a cross reference table (<http://b2b.emea.donaldson.com/public/Ultrafilter/prd/xrefifs.htm>), the user will find energy-saving filter elements validated under ISO 12500 for most filter housings, the quick availability of which is guaranteed by Donaldson by the “European Distribution Center” (Fig 6). Orders received by 1 pm will usually be shipped the same day. This eliminates the necessity of own warehousing for compressed air users and compressed air resellers. The filter replacement is also offered by a nationwide service network by the Donaldson Service technicians.

Author: Donaldson Filtration Deutschland GmbH in 42781 Haan

Donaldson Filtration (GB) Ltd  
Humberstone Lane, Thurmaston,  
Leicester, LE4 8HP  
Tel: +44 116 269 6161  
Email: CAP-uk@donaldson.com  
Web: www.donaldson.com

# Improving Manufacturing Efficiency

Every manufacturing organisation strives to improve its operational efficiency, especially in terms of energy consumption and environmental impact.

Compressed air is a significant user of energy and often the source of manufacturing problems so how can manufacturing efficiency be improved?

At the heart of any compressed air treatment solution is the dryer, its purpose is to remove water vapour, stop condensation, corrosion and in the case of adsorption dryers, inhibit the growth of micro-organisms.

Heatless adsorption dryers are the simplest type of adsorption dryer available and have long been the dryer of choice for many industries and applications as they are reliable and cost effective. Modular heatless dryers such as the Parker domnick hunter PNEUDRI provide an even more reliable, smaller, more compact & lightweight dryer which can be installed in both the compressor room or at the point of use.

### Benefits of Heatless Adsorption Dryers

- Industry proven design
- Suitable for all industries and applications
- Low capital investment
- Reduced complexity
- Robust & reliable
- Uses clean, dry compressed air for regeneration
- Low maintenance costs
- No heat / heaters / heat related issues

Heatless adsorption dryers use clean, dry process air for regeneration, but in real terms, this means that their running costs are not always the lowest and not all of the compressed air generated is available for manufacturing processes.

### INTRODUCING PNEUDRI MXLE ADVANTAGE Low Energy Heatless Adsorption Dryers

The PNEUDRI MXLE ADVANTAGE has been specifically designed to provide all the benefits of a standard PNEUDRI MX heatless dryer with the additional benefits of:

- increased compressed air for plant use,
- lower energy costs
- lower environmental impact.

### The Complete Solution

Each dryer comes supplied with the industry leading OIL-X EVOLUTION pre & post filtration allowing the complete package to supply compressed air in accordance with the purity levels found in all revisions of ISO8573-1, the international standard for compressed air quality.

### The dryer you can trust

PNEUDRI MXLE is the first dryer available to be fully 3rd party performance validated in accordance with ISO7183, the international standard for dryer testing. Coupled with the already validated OIL-X EVOLUTION filters, Parker domnick hunter provides a complete clean dry air solution which includes an air quality guarantee.

### Energy Efficient & Environmentally Friendly

PNEUDRI MXLE dryers use low energy heatless technology which provides 17% more air for manufacturing processes than a comparative heatless dryer.

This technology provides on average, 60% lower energy consumption than a comparative heatless dryer and 39% lower energy consumption than a comparative heat regenerative dryer and includes an Energy Management System fitted as standard for additional savings.

### Suitable for all industrial applications

PNEUDRI MXLE is suitable for all industrial applications but is particularly suited for use in the food, beverage and pharmaceutical industries as each dryer only uses clean dry process air for regeneration (no contamination of adsorption bed) and has materials of construction which are FDA Title 21 compliant and EC1935-2004 exempt



Together, we can –

*Improve your manufacturing efficiency, by reducing your compressed air energy consumption, improving your compressed air quality and providing more compressed air to your manufacturing processes.*

The PNEUDRI MXLE ADVANTAGE dryer has specifically been designed to provide all of the benefits of a standard PNEUDRI MX heatless dryer with the additional benefits of increased compressed air available for plant use, lower energy cost and lower environmental impact.

As standard the PNEUDRI MXLE ADVANTAGE has 3rd Party validation, materials of construction which are Title 21 compliant and EC1935 exempt, which makes it an ideal dryer for Food, Beverage, and Pharmaceutical industries.

Contact: Glenn Crame

Parker Hannifin

Parker Sales UK

Tachbrook Park Drive

Warwick

CV34 6TU

Tel - 00800 27 27 5374

parker.uk@parker.com

## MK: - 427 NoiseSensor – The Complete Solution For Monitoring Noise

Cirrus Environmental, a leading specialist in the design and manufacture of environmental noise monitoring solutions introduces the MK: - 427 NoiseSensor: - an accurate, reliable and weather proof self-contained outdoor environmental noise monitor, that connects directly to process measurement and control systems.

The MK: - 427 is successfully used in large industrial sites – where live feed is required into an existing system, examples include – power stations, manufacturing sites, petrochemical sites, construction sites, and other urban noise monitoring environments. The MK: - 427 provide users with a simple way to monitor and display live noise level, along with other data vital for the operation of the site.

The MK: - 427 can be operated without any user intervention, as there is no need for any specialist equipment. All that needs to be done is to simply power-up the Noisesensor and the noise level will be continuously fed to the output. One of the many benefits of the MK: - 427 is that it is very durable in the harshest outdoor environments.

The Noisesensor converts the noise level in decibels into an industry standard 4-20mA output, which can then be fed directly into a SCADA-type control system. The noise levels received through the MK: - 427 can be displayed and stored using a company's own system software, eliminating the need to install third party software, especially where the complexity of extra software systems or security could be an issue.

With the ever increasing need to accurately monitor and control the environmental noise impact generated by industrial processes and sites, the Class 1 MK: - 427 NoiseSensor enables companies to manage and control noise levels effectively. It also meets the requirements of IEC 61672, the current standard that specifies sound level meter



functionality and performance, for a Class 1 instrument.

Cirrus Research Plc, Acoustic House,  
Bridlington Road, Hunmanby,  
North Yorkshire, YO14 0PH  
Telephone: 01723 891655  
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# DRY TIMES

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<p><b>Desiccant dryer</b></p>  <p><b>DRYPOINT® AC</b></p>	<p><b>Refrigeration dryer</b></p>  <p><b>DRYPOINT® RA</b></p>	<p><b>Customised dryer</b></p>  <p><b>EVERDRY®</b></p>
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**DRYPOINT® AC**  
from **BEKO** TECHNOLOGIES comes in 2 formats. The first is a "Compact" modular type with flows up to 112 M<sup>3</sup>/hr and is designed to be a low cost solution for the client who requires a small amount of very dry compressed air. Easy to install and maintain are the principle advantages of this design. The second format is a more recognisable twin column dryer which is available for flows from 135-1550 M<sup>3</sup>/hr. Again there is a high pressure range (AC HP) with pressure options at 100, 250 and 350 bar. These dryers as standard give a dew point of -40°C with an optional -70°C possibility available.

**DRYPOINT® RA RANGE**  
of direct expansion refrigeration dryers is available in a range from 21 to 8800 M<sup>3</sup>/hr with variants for corrosive atmospheres (RA TAC), water cooled options for larger flows, high inlet temperature versions designed to allow an inlet temperature of 80°C (RA HT) and high pressure variants which can accept up to 50 bar inlet pressure.

**EVERDRY®**  
is the flagship product of **BEKO** TECHNOLOGIES large dryer range. There are again a number of variants from Zero Purge (FRA) to small amount of Purge loss 2% (FRP), a system suitable for tropical conditions includes a loop cooling system (FRL). The most common FRA uses vacuum technology to minimise power consumption (FRAV). This range is a tailored range in that if the customer solution is slightly away from a standard catalogue item then a customer specific solution will be engineered.

**BEKO** TECHNOLOGIES, 2 & 3 West Court, Buntsford Park Road, Bromsgrove, Worcs, B60 3DX, Tel 01527 575778, Fax: 01527 575779 email: info.uk@beko.de website: www.beko-technologies.co.uk

# Tracking the Changing Nature of Asset Management

The role of the asset manager is changing. With continued pressure on capital budgets, growing numbers of organisations are exploring not only new financing models but new ways of procuring and maintaining assets – including the use of third parties.

So where does this leave an asset management department that has delivered real benefits over the past few years in extending asset life without compromising performance or operational compliance?

As Karen Conneely, Group Commercial Manager at Real Asset Management insists, it is those asset managers that can leverage comprehensive asset intelligence and proactively demonstrate quantifiable business advantage – from maximising asset value to facilitating cost effective innovation - that will be best placed to manage the rapid change in asset procurement practices over the next decade.

## Enduring Austerity

With the announcement that the era of austerity may be extended to 2018\*, organisations across both the public and private sector are having to rethink investment strategies. For the past five years, those tasked with asset management have played a vital role in extending the useful life of key assets – from IT to manufacturing equipment. But with organisations facing another six years of reduced capital investment, senior management are set to rethink the way assets are not only maintained to maximise value but also procured in the first place.

Growing numbers of organisations are exploring operating and capital leases as an alternative to full purchase; many – especially within the public sector - are also being offered third party outsourced services, where a provider will retain ownership of an asset and simply deliver and maintain it on site as and when required. The challenge for asset managers will be to retain control within this new, complex business environment.

How, for example, can the asset management team ensure complete visibility over performance, history, maintenance and usage if assets are fragmented across an internally and externally owned model? How can an organisation ensure compliance with a raft of health and safety requirements or demonstrate compliance in the event of an incident that may result in legal action? Furthermore, how can it ensure critical business continuity and minimise the risk of financial damage due to equipment being out of use or in the wrong location?

## Asset Insight

It is time for asset managers to take a far more proactive role and to demonstrate the value being delivered to the business by effective, intelligent asset management. Asset teams have worked phenomenally hard over the past few years to ensure items are not swapped out until they have delivered maximum value for money and to balance asset performance with risk, age and innovation.

Asset managers must increasingly be involved at every stage of the asset lifecycle – from the initial purchasing decision through maintenance and disposal. This business critical role has created a fundamental requirement for in-depth, accurate asset information.

With a three to five year investment programme, asset business intelligence is essential to provide answers to the executive teams and boards to support investment decisions.

## Business Value

There are two key steps that can make this process far more business relevant. Firstly, standardise equipment as far as possible. Consistency in purchasing has a number of benefits – from negotiating better procurement contracts and ensuring maintenance personnel have the right parts and expertise to service and repair, to minimising staff training and improving the organisation's ability to move people and equipment between departments.

The second step is to reclassify assets. As Richard Scott, Consultant Clinical Scientist and Head of the Medical Equipment Management Department at Sherwood Forest Hospitals NHS Foundation Trust, explains, upwards of 20% of the 20,000 assets under management at the Sherwood Forest NHS Foundation Trust are standard across the organisation – from beds to infusion pumps. "The decision making regarding the timing of replacement and acquisition of these standard medical devices can be led by medical engineering. By reclassifying assets the Trust has enabled clinicians to focus on the key areas of development and innovation that really influence performance and affect patient outcomes."

In addition, there is a requirement to become far more



Above: Karen Conneely, Group Commercial Manager at Real Asset Management

flexible. With a clear shift towards a mixed procurement approach and, indeed, the increasing use of third parties to provide and service specific equipment, asset management departments need a new way of project managing the asset base to impose control and ensure compliance.

A key requirement will be the need to evolve from the static, annual asset audit towards a model that delivers far more frequent insight into asset location, status and usage. By replacing barcodes with the latest generation of affordable Radio Frequency (RFID) technology, there is no longer a need for costly and time consuming annual audits. Instead, a quick and more frequent rolling programme can be adopted that delivers the insight required to make faster decisions and respond to board level proposals.

## Proactive Attitude

The continued pressure on capital budgets is already having a direct impact on the role of asset managers with the potentially expensive possibility that outsourcing could become an increasingly attractive option. It is time to stand up and be counted, to take advantage of the improvements in asset intelligence of recent years and to deliver robust, demonstrable arguments for asset replacement based on performance, maintenance history and, of course, expert insight into new ideas.

Asset managers need to be able to exploit asset intelligence to extend asset life without compromising safety, performance or innovation and to deliver effective asset management based on an overview of the entire estate, so enabling the organisation to adopt radical new approaches to asset financing. It is by taking this proactive approach that asset managers will be able to demonstrate quantifiable, long-term business value to the organisation.

Source: Institute of Fiscal Studies <http://www.bbc.co.uk/news/business-20470864>

Real Asset Management Plc  
+44 (0)1689 892 100  
Email: [solution@realassetmgt.co.uk](mailto:solution@realassetmgt.co.uk)  
Web: [www.realassetmgt.co.uk](http://www.realassetmgt.co.uk)

# Best Practice for Successful CMMS Implementation



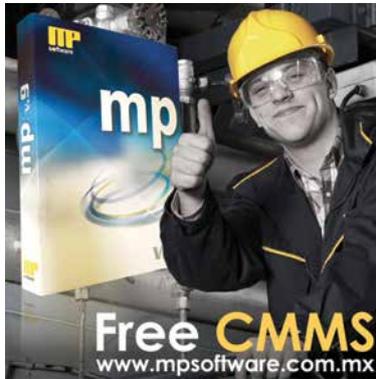
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## New Bigfoot CMMS ERP Integration Expands Maintenance Software Options for Organizations

Smartware Group, Inc., provider of the cloud-based Bigfoot CMMS (Computerized Maintenance Management Software), introduces Bigfoot Enterprise Resource Planning (ERP) integration, a customized solution that integrates asset maintenance data with ERP systems to help customers eliminate double data entry, achieve greater process automation, and reduce operating costs.

This latest Bigfoot solution widens the maintenance software options available to organizations tied to a particular ERP system.

"As we continue to expand Bigfoot CMMS's reach into larger enterprises – while preserving our signature ease-of-use and superior customer service – we're now adding a customizable interface to synchronize CMMS work order and preventive maintenance data with ERP business processes," said Paul Lachance, president and CTO of Smartware Group, Inc. "Now organizations no longer need to compromise simplicity for data integration; customers can have it all with Bigfoot CMMS."

Typical points of integration include (but are not limited to): spare parts inventory management, purchase orders/requisitions, and related cost information. An example of Bigfoot ERP Integration can occur when a work order requires spare parts to be used. Those parts are noted in the Bigfoot CMMS work order, but also seamlessly adjusted within inventory and order management on the ERP side.

"ERP systems are diverse and can be complex," Lachance added. "Our flexible interfacing technology allows us to match up these systems so our customers can enjoy a best-of-breed CMMS solution with their current ERP system."

Material	B10F00201	Filter	
Material Type	ERSA	Spare Parts	
Unit of Measure	ST	Base Unit of Measure	ST
<b>Stock Overview</b>			
Detailed Display			
Client/Company Code/Plant/Storage Location/Batch/Special Stock	Unrestricted use		
• B10			5,085.000
• B10 B10CC Bigfoot Company Code			5,085.000
• B10 B10PL Bigfoot Plant			5,085.000
• B10 0001 Bigfoot Sloc			85.000
• B10 0777 Meredith			4,990.000
• B10 9999 Headquarters			10.000

Site	Location	Part #	Qty. (HU)	Part name
Florida	Materials Depot	12345	85.00	Bigfoot01 - SAP demo part
Meredith	Parts Room	12345	4990.00	Bigfoot01 - SAP demo part
Pinedale	Supply Warehouse	12345	10.00	Bigfoot01 - SAP demo part

Above: An example of Bigfoot ERP Integration can occur when a work order requires spare parts to be used. Those parts are noted in the Bigfoot CMMS work order, but also seamlessly adjusted within inventory and order management on the ERP side.

Visit [www.bigfootcmms.com](http://www.bigfootcmms.com) for a comprehensive needs analysis and additional information about Bigfoot ERP Integration for your organization.  
Email: [sales@bigfootcmms.com](mailto:sales@bigfootcmms.com)

# New Maintenance Software From Shire - A Hit With Maintenance Managers

The UK No 1 producer of maintenance software, Shire Systems, has released the latest version of Pirana CMMS.



It's now even easier to use with a clever interface that's transforming the user's experience. Users are able to get started straightaway and the on-going time saving is impressive. The new release is packed with Aladdin's cave of extra functionality and new productivity aids. Compatible with major browsers including the latest Chrome, Pirana can be presented in different languages and terminology and offers a broad choice of security setup including a read-only profile. There's now a Quick Work Order Signoff and the popular Dashboard and KPI Scoreboard are proving to be essential control tools. Powerful search & filter utilities have been added and reports can easily

be exported to Excel.

Pirana is unbeatably affordable and is being adopted by many major players in the food, manufacturing and services arena. Sold in modules, including the popular Mobile Solutions, Pirana can revolutionise work order, stock, & purchasing operations. Whether installed on your own server (on-premise), or the stress-free fully hosted option, Pirana has a setup option for everyone. Shire support is second to none. Over 10,000 organisations use Shire maintenance management software, making Shire Systems the UK's leading provider of maintenance solutions.

Shire has a full schedule of FREE CMMS roadshows and also offers a FREE, no-obligation, fully functional demonstration system, so there are plenty of opportunities to try before you buy.  
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## Web-based CMMS

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- ✓ Affordable SAAS/hosting options



Contact RAM today and discover how its proven solution can transform your maintenance processes through the delivery of accurate and timely information about your assets, work orders and planned schedules for powerful and informed decision making.

Request a free CMMS review pack:

Karen Conneely  
Tel: +44 (0)1689 892 127  
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# SoftSols Double Milestone – 25th Agility Roadshow in 30th Year

**“This year we are celebrating 30 years of experience in our field, which is outstanding for any technology company” says David Hipkin, SoftSols Group Managing Director, “we are proud to say that we are the same age as Microsoft and 3 years older than Apple, so we have a great deal of experience and expertise we are able to share.**



Despite being at the forefront of technology, we find there is no better way understand our market and customers than meeting face-to-face. A key part of our annual calendar is our Agility Roadshow events, which we hold to bring together existing, new and potential customers in an open forum to discuss their experiences, their use of Agility and how they work with SoftSols. It's an indication of the strength and confidence we have in our products, the customer service we provide and the calibre of our people that we don't shy away from bringing existing and potential customers together and encouraging them to talk”.

SoftSols have been running roadshows since 2010 and know a great deal about how to hold a productive event. “We know from the feedback we receive from attendees that they really appreciate the events as they are a very time efficient way of finding out more about SoftSols, Agility and current trends and themes affecting manufacturing and facilities managers”, says Tim Tunnard, Commercial Director.

“Some attendees are long standing Agility users, some are using competitor software, and others are not using any software but Excel spreadsheets and white boards to manage the maintenance function. People can be from a maintenance, facilities, manufacturing, IT or general management role as we find that managing assets and being more efficient is now a priority across every department and every level within organisations, so it is not unusual for us to have a few delegates at an event from the same organisation. We explain everything in straightforward language and keep sessions short so we don't overload people.

SoftSols' key people are available at these Roadshow events, on hand to discuss any current or future projects and are able to give detailed one-on-one sessions after lunch to give a real insight into Agility. Peter Smith, SoftSols Product Management Director comments, “We have just launched Agility version 5, with versions 6 and 7 progressing well. We use the roadshows to give people an overview of

the new features as we are keen to show how Agility is advancing, but we don't go into a huge amount of detail as everyone's circumstances and requirements are slightly different. We are currently showing Agility's new Asset Maps and Training Record features, as maps can now be incorporated and connect to existing Agility functions. As a new extension of the labour records function, employees' training records and certificates can now be managed and maintained; plus a new notification has been added to help prevent unqualified and uncertified employees being allocated to tasks which is a real help towards Health and Safety compliance”.

David states, “Agility's standard functionality straight 'out of the box' is incredibly powerful, however we typically find that customers have internal systems, reporting requirements or information challenges that we can help with and that is where our Implementation Team come in. Having members of the team at these events really helps to give confidence that we are able to use Agility to deliver exactly what each customer needs; our people are highly technical but very easy to work with.”

“Our Roadshow events are about us giving food for thought and not the hard sell. At each event we have a guest speaker to share information on new ways of thinking about and approaching asset management and maintenance. Recent speakers have been Andrew Fraser from Reliable Manufacturing and Garry Tyne from ARMS Reliability, who both bring some real hands on experience and learnings. We receive great feedback from these events, as people find they learn a great deal in a short space of time, and whilst everyone finds it hard to get away from the office, time in a different environment really helps people to focus. I would like to encourage anyone interested in maintenance or facilities management to come along to our next event and join us”.

Feedback from recent delegates can be found on the SoftSols website [www.softsolsgroup.com](http://www.softsolsgroup.com) along with details of the next roadshow events. To reserve your place please call 01924 200344 or email [info@softsolsgroup.com](mailto:info@softsolsgroup.com)

# Successfully Implementing CMMS Software to Achieve Effective Plant & Building Maintenance

The current economic climate has forced organisations to scrutinise their maintenance strategy in order to improve plant performance, lower maintenance costs and increase operational efficiencies.

And with an ongoing requirement to maintain service and safety standards, whilst ensuring effective reactive and planned maintenance planning, CMMS (Computerised Maintenance Management Software) continues to be an essential facet of any effective maintenance programme. But what is the best business approach to successfully implementing a CMMS system?

## Initial Assessment

The first stage is to identify areas and set criteria against which decisions can be made before selecting a suitable system. This enables organisations to minimise purchasing risks, justify expenditure and align the system with central business objectives. Areas to consider include:

- Will the system be self-contained or does it need to link to other applications (e.g. finance)?
- Will users need access via mobile devices such as tablets or smartphones?
- Will Cloud hosting be a viable option?
- Will a detailed review of current maintenance management methods or workflow patterns be required?

## Developing an Implementation Plan

The project plan is the basis for any structured and well managed CMMS implementation, and if executed correctly, should provide organisations with a plan that results in the success of the project. A strong implementation plan will also ensure that

constraints, including timescale, resource availability and the scope of requirements are minimised.

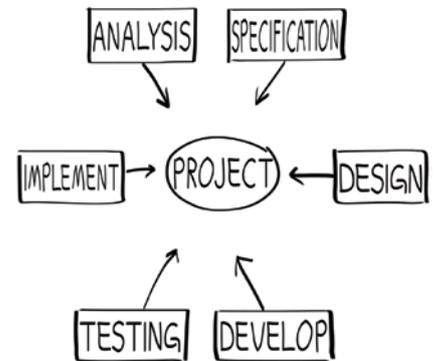
There a number of other pertinent factors associated with the development of a successful implementation plan, which include:

- Defining the key objectives and priorities for the new CMMS system? (e.g. Improving customer service, tighter financial control, increased efficiency).
- Planning how the objectives can be identified, broken down and converted into identifiable project tasks?
- Deciding which current business processes need to be retained and which can be replaced?
- Considering what the roles and responsibilities each project member will be within the group?

## Data Review, System, Design and Set-up

There are a number of areas to review when planning the installation of the CMMS system. From a data perspective, are current data sources going to be used? Does existing data need to be migrated across to the new system? Should it be updated or validated?

Prior to 'go live'; it is imperative to complete installation checks on hardware, operating systems and third party software. Will existing hardware support the new CMMS system? Are there



adequate IT back-up procedures? Is there a need for compatibility testing?

## Going Live

The 'switch' to live operation should be carefully planned. Will the whole system go live at once, or is it going to be phased? Is a parallel running period planned? Will there be a trial run?

It is also useful to identify the post-sales support and training offered from the software provider. What level of technical support is required? Is there provision for future running costs of the system? Is there adequate system training available?

## Conclusion

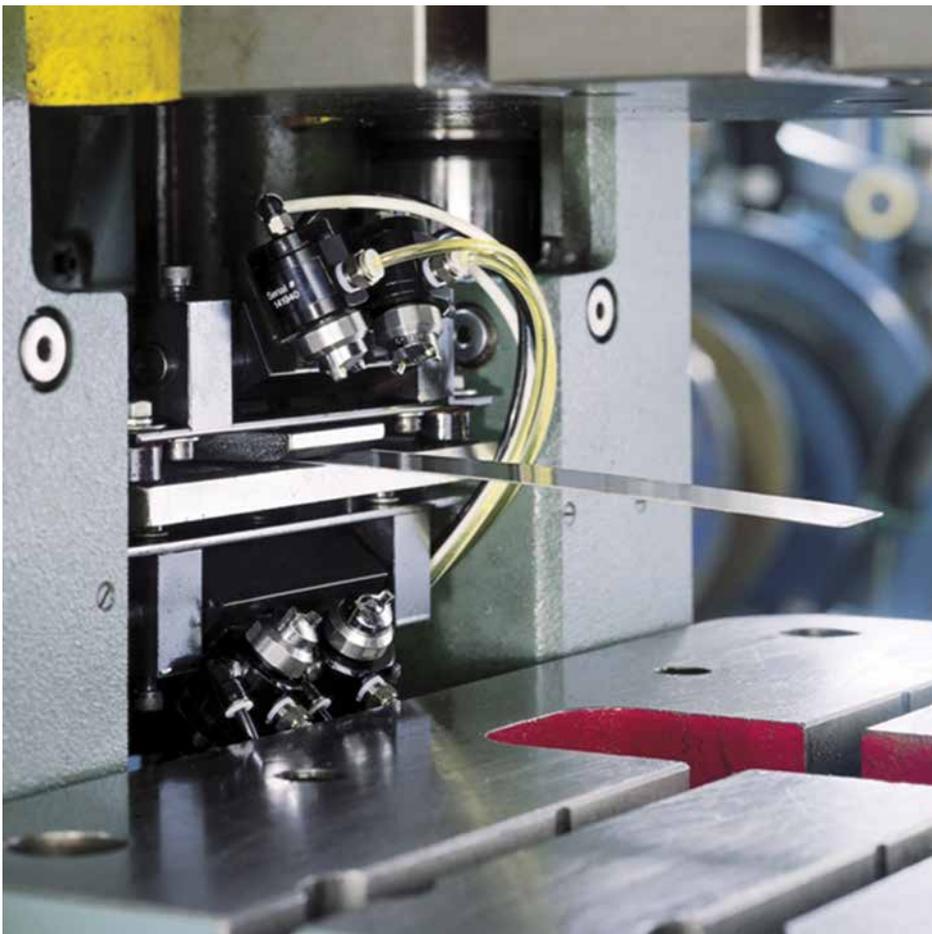
The major benefit of having a clearly defined implementation plan is that from the outset all parties understand the responsibilities, scope and deliverables of the project.

With all the efforts and objectives co-ordinated, there are time saving benefits for everyone involved, resulting in reduced costs and implementation timescales.

This article is based on the white paper 'Best Practice for Successful CMMS Implementation' from Service Works Group. To obtain a complimentary copy, please email [info@swg.com](mailto:info@swg.com) or contact Service Works on 020 8877 4080.

# Precise And Environment-Friendly Lubrication By Nordson EFD Microcoat

The Nordson EFD MicroCoat system applies lubricant in a fine, even film. Just the amount you specify. No more, no less.



With instant flow adjustment – no wait time for pads or rollers to become wet or dry out. This unique, fully integrated system uses Low Volume Low Pressure (LVLP) technology to provide steady, consistent lubrication without the overspray or mist of airless spray systems. The benefits are significant. Exact lubrication control increases profit opportunities throughout the manufacturing process. Tools last longer and presses run faster. Your process becomes environmentally friendly, while problems from drip

pads, rollers and airless spray systems disappear. Uniform lubrication provides:

- Even, uniform coverage, top and bottom
- 60% to 90% oil savings
- No overspray or mist
- Clean working environment
- On-the-fly adjustment of oil coating
- Expandable, modular system for wide stock
- Flexible oil feed from tanks, pumps or central system
- Single or multiple oil use
- Simple, reliable, and low-maintenance operation
- Easy “plug & play” setup

The MC800 series system operates up to eight valves. Precision flow controls permit the amount of lubricant applied by each valve to be adjusted independently. Valves can be mounted above or below the stock.

## About Nordson EFD

Nordson EFD is the world's leading designer and manufacturer of precision dispensing systems that apply accurate, consistent amounts of the adhesives, sealants, lubricants and other assembly fluids used in virtually every manufacturing process.

When companies are able to put the same amount of fluid in the same place every time, they gain a competitive advantage through higher productivity, improved quality, and lower production costs.

Since 1963, Nordson EFD has helped thousands of companies achieve these benefits with benchtop dispensers for manual assembly processes, dispense valves for automated production lines, XYZ dispensing robots, and the highest quality dispensing tips, syringe barrels and other disposable components in the industry. EFD products also include high-quality solder pastes for improving productivity in surface mount and electromechanical manufacturing processes, and the unique MicroCoat® system, which is changing the way lubricants are applied in the metal stamping industry.

### Contact

EFD International, Dunstable, U.K.  
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Email: europe@nordsonefd.com

## Sololube – Precise Electromechanical Single-Point Lubrication

Sololube is a reliable, easy-to-operate Lubricator with an electromechanical drive.

Its precise delivery system makes Sololube equally suitable for the automatic lubrication of roller and friction bearings, gear racks, open transmissions or chains.

Sololube has a robust, very precise drive motor, supplied with voltage by a high-capacity 6V Li battery. The lubricant cartridge - optionally with 150 cm<sup>3</sup> or 250cm<sup>3</sup> content - is simply screwed to the drive unit. With a delivery pressure of 7.5 bars, the Sololube works automatically, independently of temperature, for up to a year. The performance of the Sololube is monitored with a clearly visible LED.

The filling level of the lubricant cartridge is moreover clearly visible at all times through the transparent housing.



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## Lubricus – Modern Lubrication Technology

The “Lubricus” is a compact lubrication unit for oils and greases.

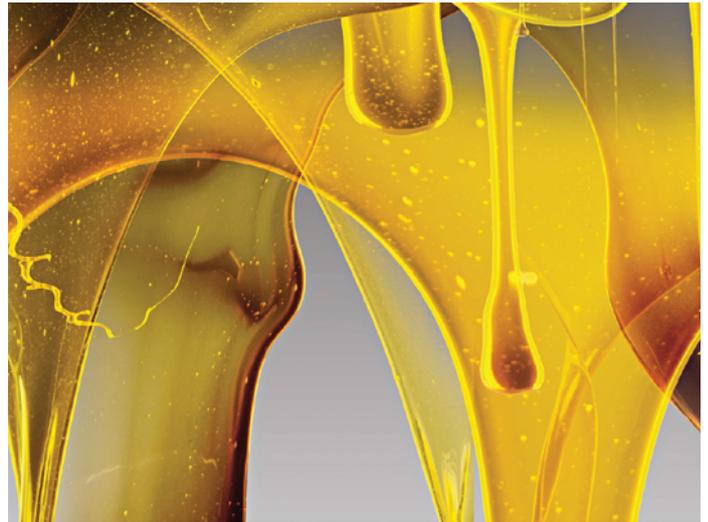
The lubrication system operates either autonomously with a battery pack or via an external power supply (24VDC). Lubricus is available with 1-4 outlets, to ensure the right medium is available to choose from for every application.

The lubrication unit is therefore very flexible and is not only suitable for applications with one lubricating point, but also for multiple lubricating points. Thanks to its compact dimensions the lubricating system can also be very easily retrofitted. Lubricus operates reliably within a temperature range from -20 °C to +70 °C and pumps the lubricant with a pressure of up to 70 bars.

With a capacity of 400cm<sup>3</sup>, sufficient lubricant is available to reliably supply several lubricating points, even for lengthy periods.



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LUBRICATION

# ATS Electro-Lube (UK) Ltd Have Added Another Product To Their Well Proven Range Of Self Contained Automatic Lubricators.

The new Jack-Luber is a fully self-contained battery powered lubricator available with either a 125cc or 250cc replaceable grease cartridge.

Grease cartridges can be supplied filled with the specific brand & type of grease type required for the application & can be changed in seconds by the user.

As the Jack-Luber is a motor-driven lubricator, it can generate up to 250psi operating pressure, meaning that it can be used with long feed lines or in cases where there is high back pressure at the bearing.

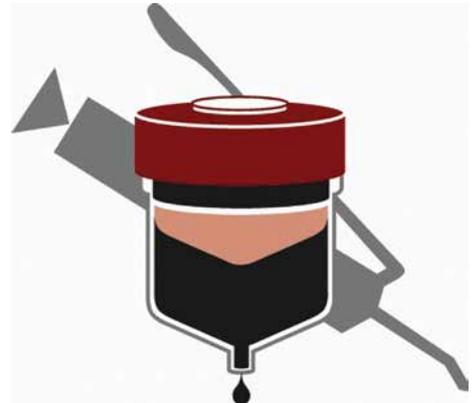


Jack-Luber Model 125 & Replacement Cartridge

The innovative new Jack-Luber incorporates a Jackscrew mechanism which reduces wear & therefore prolongs the operational life of the unit. Once activated, the Jack-Luber runs intermittently to supply grease on the optimum "Little and Often" principle. Integral switches allow users to set the required feed rate, allowing up to 2 years operation between cartridge/battery change.

The Jack-Luber is suitable for indoor or outdoor use and is not affected by changes in temperature. In addition, the Jack-Luber is certified intrinsically safe for use in hazardous areas.

This new addition fills the gap in the ATS Electro-Lube product range, fitting between the low pressure (50 psi) Electro-Luber Gas Series and the



higher pressure (900 psi) Ultimate-Luber Motor Drive Series.

Detailed information, including demonstration videos for the entire ATS Electro-Lube product range can be found at their new website: [www.atselectrolube.co.uk](http://www.atselectrolube.co.uk).

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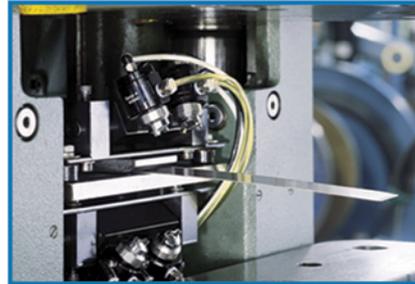
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## Nordson EFD Microcoat

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With instant flow adjustment – no wait time for pads or rollers to become wet or dry out. This unique, fully integrated system uses Low Volume Low Pressure (LVLP) technology to provide steady, consistent lubrication without the overspray or mist of airless spray systems.

### The benefits are significant.

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# Liquid Applied Elastomers, An Alternative To Replacement Of Rubber Components

Maintenance costs are becoming an increasingly greater concern, and as a result, the ability to repair equipment rather than replace is becoming the preferred option for many engineering and maintenance professionals.

Rubber components such as seals, gaskets and drive couplings are susceptible to damage through abrasive wear and can be very difficult to repair. In addition, wear and erosion of bespoke rubber components often suffer from similar problems. Due to costly spare parts and limited availability, replacement of the entire equipment is often the only option, resulting in high costs. Even if parts are available, delivery times can be a problem.

Belzona manufacture a range of fluid grade Elastomeric solutions that can be used to cast and repair components without involving hot work. Fluid Elastomers can be easily applied reducing the need for specialist tools and will adhere to almost any surface, and are cold applied and cold curing. Utilising a pourable durable Elastomer will allow complex shapes to be simply replicated providing future protection against abrasion, erosion and wear.

Belzona Elastomeric products have been used in numerous repair situations including: the creation of flexible moulds and rubber components, rebuild of gaskets and seals and horizontal expansion joints. Adhesion can be created by using surface conditioners, alternatively components can be 'cast and released' by use of a Releasing Agent.



Above:  
Belzona Elastomer being poured into a mould



Above:  
Recast bearing with Belzona 2131 (D&A Fluid Elastomer)

By way of example, these rubber lobe pumps are used in harsh environments such as for processing sewage effluent within the water industry. Wear on the rubber rotor leads to less efficiency necessitating replacement. Belzona 2100 Series Elastomers can be effectively used to re-cast and remold these worn rotors.



Above:  
Accurate mould created to form the bearings



Above:  
Custom seals on non-return flap valves with Belzona 2131 (D&A Fluid Elastomer)

Cutlass bearings are another typical application for Belzona Elastomers; these bearings can deteriorate and become worn. In this example a Belzona Fluid Elastomer was used to recast water lubricated cutlass bearings from sea water lift pumps. High sand content in the water had resulted in the bearings wearing out rapidly. A suitable mould and former was manufactured and released using Belzona 9411 (Release Agent).

Belzona 2131 (D&A Fluid Elastomer) was then poured in until the material filled the mould. Once cured, the former was removed.

To date, the success of the Belzona solution has resulted in over 300 bearings being cast for the client. Reclaiming the original sleeve allows new bearings to be produced at a fraction the cost of new ones.

Other applications of Belzona liquid applied Elastomers include the creation of custom seals and repair of both horizontal and vertical expansion joints.

Belzona's cold curing; liquid applied Elastomers can offer huge cost savings in challenging industrial situations and demonstrate long term, excellent resistance to abrasion, wear and erosion. For further information on how Belzona can help reduce your maintenance costs, please visit <http://www.belzona.es/prod2k.aspx>

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# Bifold, Official Partner Of The Marussia F1™ Team Have Developed Sophisticated Configurators To Make Valve Selection Effortless

## Unique Valve and Manifold Configurators:

With Bifold, you can use our unique online drag and drop Modular Manifold Configurator to design highly bespoke manifold systems effortlessly.



The manifold can be designed from the circuit sequence down to the orientation of individual modules to your exact specification. Once designed an interactive 3D rendered model is immediately viewable online and an installation drawing, bill of materials and 3D CAD model are automatically emailed upon design verification from Bifold.

You can use our Valve Model Configurator to create the valve you require and download a bespoke configured datasheet with a single click. The 3D CAD model is then automatically emailed. The datasheet contains a tracking image which enables you to view the rendered image in real time, in augmented reality and to scale using the Bifold Model Viewer, available on the App Store for iPad and iPhone; and Google Play for android devices

## Effortless Selection Process:

1. Configure your product
2. View interactive 3D model online
3. Print bespoke data sheet or save to your system
4. Receive 3D CAD model by email
5. Contact sales department with your order

Download the free Bifold Model Viewer from the App Store or Google Play and view our products at the show. Go to [apps.bifold.co.uk](http://apps.bifold.co.uk) for more details.

Visit us at **Offshore Europe 3rd - 6th September 2013, stand number 3B60**, where there will be an augmented reality wall featuring a window to the Bifold product range viewed live and interactively. You will be able to configure bespoke manifold

systems and products, create and print bespoke data sheets and view configured systems and products to scale in augmented reality. Available to take away from the show, will be an exclusive pack of augmented reality tracking images to work alongside your app.

The Bifold Group of Companies provides technical and engineering support together with a global network of agents and distributors. Bifold Group is a world class supplier of the widest range of switching instrument and piping valves and pumps for use in the oil and gas upstream and downstream sectors. Our innovative and reliable range of high-tech products and accessories, specifically designed with the customer in mind, have gained worldwide approvals and credibility for the onerous conditions as found in hazardous (classified) locations, hostile, corrosive and subsea environments.

## More Information

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# Vacuum Pumps Help To Save Water And Energy At The University Of Reading

The University of Reading is starting to achieve water and energy savings at its Bio Food Hall in the Food & Nutritional Sciences Department following the installation of two Busch RA oil lubricated rotary vane pumps for the vacuum circuit.



According to the University's Energy Manager Dan Fernbank, since the two pumps were installed by AxFlow earlier this year, water savings of between 20 and 30m<sup>3</sup> per day are being attained, this being the equivalent of between 7,000m<sup>3</sup> and 11,000m<sup>3</sup> annually.

The University's Food & Nutritional Sciences Department is the only UK university facility with a fully equipped food processing hall and has access to many specialist analytical research tools. The vacuum circuit is a fundamental requirement for all the laboratories and the piped system runs around the building enabling the various labs to pull off

moisture at specific points.

"The two Busch pumps which we supplied replaced two vacuum pumps which had been operating since the building was opened in 1985," reports Andy Woods, Sales Engineer, AxFlow. "The original pumps had water running through them at a rate of 12 litres per minute for the purpose of cooling, but because it could not be re-circulated, the water was allowed to drain away. By calculating the volume of water being wasted and its cost to the University, a decision was taken to remedy the situation. It was shortly after this that AxFlow Windsor was called in to make a recommendation on replacement pumps."

The replacement Busch oil lubricated pumps do not require water cooling, thereby eliminating any need for water. A further attraction of this pump type is that it is more energy efficient. "We offered the University two options, a liquid ring vacuum pump with partial seal water recirculation and the oil lubricated rotary vane pump," continues Andy Woods. "Although the second option will require regular servicing, the efficiency savings meant that this option was selected and we went ahead and removed the old pumps and installed the new ones in March."

In terms of water saved, Dan Fernbank reports that this will account for the equivalent of 3% to 4% of the university's total annual water consumption. "In financial terms, this equates to between £12,000 and £18,000 annually and being a more efficient pump, it is also saving around £1,000 in electricity," comments Dan. "It is therefore a major step in our drive to cut our water consumption by 10% and carbon emissions by 35%."

AxFlow offers a comprehensive range of engineering resources to facilities management, environmental and process industries. The Windsor Service Centre operates teams of mobile service engineers for on-site maintenance across the southern half of England, supported by workshop personnel and design engineering resources. "Our Windsor operation is very much geared up to providing support in the building services sector and we offer a wide range of capabilities," says Bob Jervis, Sales Manager. For instance the repair and servicing of air-handling equipment can involve the replacement of bearings, motors, pulleys and belts, as well as the re-balancing of the fan impeller assembly. We can also carry out the repair or replacement of cooling and heating coils within the AHU's.

In addition there are extensive sales, repair, service and systems engineering operations for all types of fluids handling equipment in Ealing, Huddersfield, Durham and Aberdeen.

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engineering and general workshop applications.

These products ensure workshop health and safety compliance for load capacities up to 2 tonnes, with hoists that have been manufactured to the same high standards as their heavier duty equipment.

Two ranges of these general lower duty hoists are available, including the JDN Mini series which are aluminium bodied units with models available for payload ratings of 125, 250, 500 and 980kg. Where more rugged, steel-bodied hoists are required, the JDN Profi TI series incorporates four models in a lower-load range rated at 250, 500 and 1000kg plus a 2 tonne lift capacity unit.



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## Bifold, Official Partner of the Marussia F1™ Team have Developed Sophisticated Configurators to Make Valve Selection Effortless

### Unique Valve and Manifold Configurators

With Bifold, you can use our unique online drag and drop Modular Manifold Configurator to design highly bespoke manifold systems effortlessly. The manifold can be designed from the circuit sequence down to the orientation of individual modules to your exact specification. Once designed an interactive 3D rendered model is immediately viewable online and an installation drawing, bill of materials and 3D CAD model are automatically emailed upon design verification from Bifold.

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Visit us at **Offshore Europe 3rd - 6th September 2013, stand number 3B60**, where there will be an augmented reality wall featuring a window to the Bifold product range viewed live and interactively.



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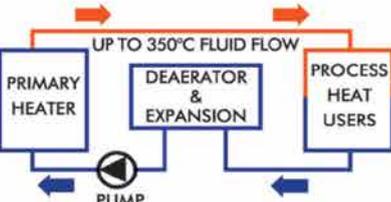


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