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Condensate Recovery Turns Water Into 'Gold'

All steam systems produce condensate, which is hot, chemically-treated water that can be re-used in the boiler.



A new condensate recovery system can pay for itself very quickly and even an existing system can be upgraded with the latest techniques to reap substantial financial gains, explains Paul Mayoh, UK Technical Manager, Spirax Sarco.

Condensate contains around 20% of the energy of the steam from which it came, which is why most steam system operators recognise condensate as being a particularly valuable resource. In reality, many UK sites already have condensate recovery systems in place, although nearly all could be enhanced by the latest techniques.

Aim for 75-80% recovery

Returning condensate to the boiler can save thousands of pounds per year in energy alone. Most systems could be achieving a condensate recovery rate of 75-80%, as using hot condensate to heat the boiler feedwater means the boiler has less to do in converting the water to steam. In other words, less fuel is needed to produce steam from hot water rather than from cold water.

Additionally, condensate returned to the boiler feed

tank reduces the need for blowdown, which is used to reduce contamination in the boiler water. This helps to reduce the energy lost during the blowdown process.

Save water costs

Any condensate not re-used must be replaced with fresh water. This top up will incur additional water charges. Re-using as much condensate as possible also minimises the use of costly chemicals to treat raw water from the utility.

Furthermore, in the UK, trade effluent above 43°C cannot be returned to the public sewer because it is detrimental to the environment and may damage pipes. Condensate above this temperature must be cooled if discharged, which could incur extra costs. Similar restrictions apply in most countries and effluent charges and fines may be imposed by water suppliers for non-compliance.

How to boost condensate recovery rate

There are several essential steps in any effective condensate recovery system and it is well worth

reviewing them all to improve the system's condensate recovery rate to hit the magic 80%.

The steam trap is the most important link in the condensate loop because it releases condensate and incondensable gases from the steam system while retaining steam within the process for maximum efficiency. Therefore, a good start point for improving condensate recovery is to commission a professional steam trap survey to identify where gains could be made. Such a survey will also give an estimate of the potential financial benefits through upgrades – helping to justify maintenance expenditure.

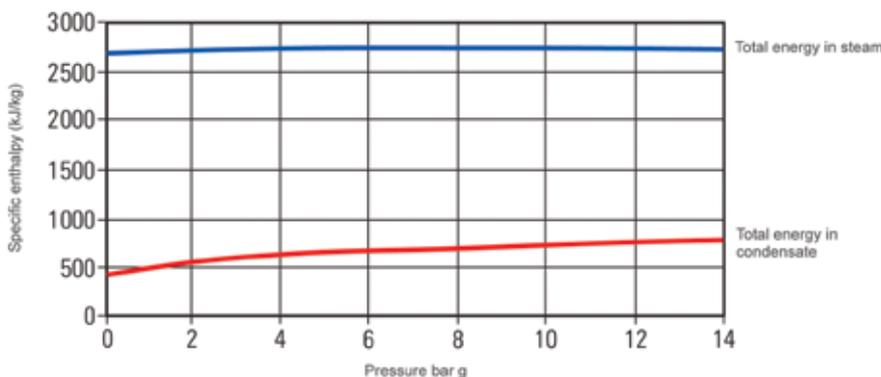
After leaving the steam trap, the condensate may need to be pumped back to the boiler house. Condensate pumps may be electrically powered or mechanical, which are usually more efficient because they use using the steam itself for motive power.

Automatic pump traps combine the functions of a steam trap and condensate pump. Under normal operating conditions, these act as conventional steam traps. But in conditions where back pressure would cause a normal trap to stall and flood the system, pump traps automatically switch to pumping mode to remove the condensate. Automatic pump traps are particularly effective for use with heat exchangers and other plant that run with varying demand.

Once again, professional advice can be sought on the most suitable pumping technology for a specific system.

Savings in a flash

The benefits of an effective condensate recovery system are many-fold. Each steam system is different and only a technical assessment and cost saving calculation can determine the payback of a particular project. However, typically the payback is between one and two years, with some measures paying for themselves in mere weeks, making condensate recovery an attractive proposition for any steam-using organisation.



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25% Reduction In Energy Consumption At Housing Trust.

The Liverpool Housing Trust have used Atlantic Boilers' VF range of boilers to significantly reduce energy consumption at it's Friendship House Building.

The Trust manages more than 40 retirement properties and retirement homes for older people. Friendship House, houses 31 flats with resident staff support, and contains lift, lounge, guest facilities, salon and garden. It is thoughtfully positioned within walking distance of bus stop, shops and doctors.



The consulting engineers were REC of Liverpool and the installers were Kimpton Building Services of Birkenhead. The original boilerplant was replaced with two of the Atlantic VF 100kW all stainless steel pre-mix gas, low NOx condensing boilers and this was carried out with minimum interruption in heating services. In the following 12 months, the energy consumption was reduced by more than 25%. Building Management Control was also added, increasing the energy saving to over 40%.

The VF range includes from 4 models 40kw to 100kw. Each is a pre-mix boiler modulating from 25 to 100%. NOx emissions are below 35mg/kWhr and is available with a built-in boiler management system.

For more information see www.atlanticboilers.com

Corrosion Monitoring And Inhibition By Rose Corrosion Services Ltd (RCSL)

RCSL is a world class company specialising in chemical injection and corrosion monitoring and inhibition, working in the oil, gas and refining industries.

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Optimus Red – In A Class 2 All Of Its Own

Cirrus Research is offering a “One Product/One Price” package that covers all Noise at Work requirements through its Optimus Red noise measurement meters.

With no hidden extras at hidden costs, the Optimus Red can claim to be the industry leading product that covers ALL areas of UK and European Noise at Work legislation, taking away any uncertainty for professionals looking for a Class 2 sound level meter. A sound level meter used for Noise at Work measurements should ideally meet Class 2 of the latest standards and all of the Optimus Red instruments meet or exceed this requirement.

“We know that it can be confusing for customers in terms of which product will meet their exact needs and that’s why we have the Optimus Red so they know it has absolutely everything covered for Noise at Work measurements,” explained Marketing Manager James Tingay.

“Some products on the market offer a basic noise measurement model but then you have to choose add-ons such as a data logging system. We decided to offer a one product/one price deal that we know covers all the Noise at Work requirements which is our specialism. That lets our clients go away and concentrate on their specialism - their core business.”



Included in the Optimus Red 162C as standard but on other rival products as “extras” are:

- Data Logging of measurements and calibration records
- 1:1 octave filters
- Voice Tag Audio recording
- Single Timer
- TWA Dose

Other advantages offered by the Optimus Red Range include:

- 15-year “no quibble” warranty that also covers accidental damage.
- Membership of the Cirrus Research dBAdvantage Card Scheme with over £1,000 of extra benefits and training over three years.
- Three independent integrators for every function to meet UK, EU, OSHA, MSHA or ACGIH - all at the same time.
- Real-time 1:1 octave band filters (C version).
- Simultaneous measurement of dB(A), dB(C) and dB(Z) Frequency Weightings.
- 120dB measurement span all the way up to 140dB(A) and 143dB(C) peak.
- 4GB Memory in the B&C versions hundreds of measurements
- Licence free installation of the NoiseTools software with free, lifetime updates

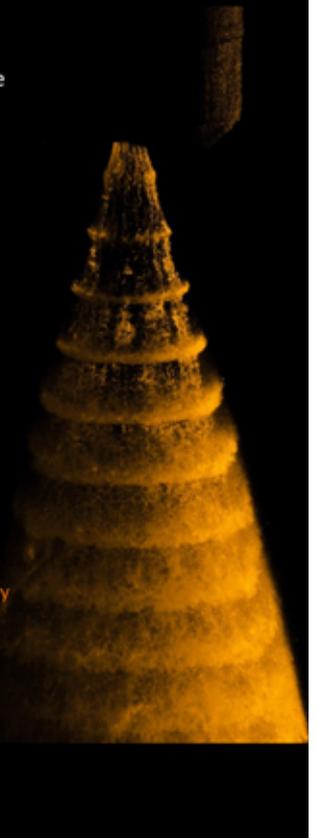
“When it comes to Noise at Work measurements, we know that the Optimus Red ticks all the boxes on every legislative level, so we don’t need to offer a “pick n mix” of add-ons that not only confuses the customers but ultimately make the product more expensive,” concludes James.

With 40 years experience of innovation and customer support, Cirrus is also backed by ISO 9001:2008 and ISO 14001:2004 Quality Management Systems.

for more information please visit:
www.cirrusresearch.co.uk

Our Heat Transfer and Fluid Flow Laboratory with over nineteen-year experience is focusing on research and design of descaling systems. To optimize its header design, we can provide a wide range of laboratory testing, including the mechanical and thermal tests to investigate the profiles of impact pressures, spray footprints, and heat losses in descaling sections. Also, erosion and quality tests can be performed to study erosion homogeneity, oxide, and material integrity of the strips before and after descaling.

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William Hughes Adds Strength And Versatility To Its Wire Components With New Overmoulding Capability

William Hughes, the specialist manufacturer of springs and wire components, continues to find new ways to meet its customer’s requirements for precision wire assemblies with the introduction of an overmoulding capability for wire parts.

The new process dispenses with the need for metal retaining clips in assemblies such as car seats – providing an assembly that is both strong and fast to manufacture.



The new process can be applied to a wide range of wire assemblies and requires the wire parts to be manufactured to a high accuracy. The components are brought together using special tooling designed by William Hughes and two vertical injection moulding machines perform the moulding process to complete the assembly.

The overmoulding process allows for variations in the finished assembly – for example, in car seat assemblies retaining bars for the seat cloth can be included or where heated seats are required, connectors and cabling can be incorporated so that heating elements can be simply plugged into the encapsulated boots.

“Our expertise is in the design and manufacture of a wide range of bent wire components to high accuracy and this is critical for the manufacture of overmoulded assemblies,” said Emma Burgon, Engineering Director, William Hughes. “This means that the overmoulding process can be applied to a wide range of assemblies across many industries, providing benefits to our customers in terms of strength, versatility and speed of manufacture.”

Any 2D or 3D wire form that involves twists, turns, spirals, protrusions, indentations – or just plain bends – can be accommodated and the William Hughes team of application engineers can help customers solve their engineering problems by offering a rapid design and prototyping service. This is particularly suited to the high volume sectors such as automotive.

William Hughes has over 200 years’ experience in producing bent wire components and wire form assemblies. Today it is one of the most advanced producers in Europe, with high-tech manufacturing facilities in Dorset, UK and Plovdiv, Bulgaria.

For further details, contact: William Hughes Ltd, Station Road, Stalbridge, Dorset DT10 2RZ.
Tel: (01963) 363377 Fax: (01963) 363640
Email: sales@wmhughes.co.uk Website: www.wmhughes.co.uk

Mechanical Speed Adjustment for Hydra-Cell Metering Pumps

Wanner International has introduced a range of mechanical speed variators for manually adjusting the rotational speeds and output flows of its Hydra-Cell metering pumps.

These pumps are used in oil and gas production for injecting chemicals such as acids and bases, amine gas sweeteners, oxygen scavengers, polymers and proprietary chemicals into process streams.

Because Hydra-Cell pumps are true positive displacement pumps, flow rate is directly proportionate to input shaft rpm and virtually independent of system discharge pressures. Very precise and repeatable, infinite adjustment of shaft speed is achieved from almost zero rpm, through a simple manual adjust hand wheel. It transmits its highest torque from speed zero, is adjustable in operation and at rest and exhibits linear setting characteristics.



The Wanner mechanical speed variator is ideal for use in explosive environments and is ATEX certified for zones 1 and 21, completely removing the need for complex and costly external ATEX control.

Unlike friction type variators, the Wanner mechanical speed variator operates on the elasto-hydrodynamic principle, producing output torque by means of a traction fluid. This removes the possibility of mechanical slippage between input and output.

Long life, high reliability Wanner mechanical speed variators are available for all Hydra-Cell Metering pump from P200 to P600 and compatible motors are also offered.

Further information from:
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Execute The Basics Of Reliability And Maintenance Well And You Will Get Guaranteed Results. Part I

by Christer Idhammar

First I like to tell you about myself and from what perspective I write this article. My world is process industries such as Iron, Steel, Pulp, Power and Wood based industries such as Oriented Strand Board (OSB), medium Density Fiber (MDF), Chemical, Oil and Gas, Food and Beverage etc. In short all industries where a break down of critical equipment assets results in risk for environmental damage, personal injury, lost quality and volume in throughput or high costs for maintenance.

I lose some of my important arguments if reliability is not important because then the maintenance organization has no "revenue". If reliability is not important the sense of urgency and importance in the work we do, as a maintenance organization is not there.

International phenomena

I work on a worldwide arena and observe the same problems, or improvement opportunities, in all countries and all type of industries. If you have worked as a reliability and maintenance professional in many industries and/or countries you also know that this is true. If you only worked in one plant you believe that you are unique and different than all other plants but that is very seldom the case. The reason why maintenance management is so similar between different types of industries and facilities lies in a couple of facts.

- Equipment does not break down, components such as; gears, couplings, control valves, transducers, seals and bearings break down. The whole equipment e.g. a compressor does not break down. These components are the same with some variations in all industrial plants. The environment they operate in is different but if an electric motor is covered by chocolate, saw dust or pulp the consequence is the same: it will overheat and shorten electric life dramatically. Some plants have a more aggressive corrosive atmosphere but again the consequences of corrosion are the same.
- Reliability and maintenance management is driven by the system and processes people work in, not by the physical assets the organization maintain.

There are some differences that make implementation and execution of best reliability and maintenance practices more or less difficult. These are more cultural differences and it is important to know and understand these. They include but are not limited to:

- Political Systems make a difference in e.g. how profits are calculated.
- Taxation rules make a difference in how life cycle costs are calculated.
- Living standards are different between countries. In many countries with high living standard I often find a culture of entitlements and complacency and less of a desire to improve than in other countries where people are eager to learn and improve their performance.
- Labor laws, working hours and employee benefits and unionization are very different between countries.
- Some industrial plants have many short and long shut downs others have no scheduled shut downs. This fact only changes the way you plan and schedule work that requires equipment to be down to do work. If your plant has scheduled shutdowns you must plan work before you schedule work to be efficient. If your plant has no scheduled shut downs, or if it is easy to shut down and start up again, then you should focus more on planning and execute planned work when the opportunity to access physical asset can be done safely at best opportunity from manufacturing point of view.

But the system, processes and practices used to manage reliability and maintenance are not different. Nor have they changed in the last fifty or more years. What has changed and improved dramatically is technology including much better

and more affordable computer systems and tools for condition monitoring. We have much better and more affordable equipment for measurements and analysis of component condition such as:

- Infrared cameras.
- Wear Particle Analysis.
- Vibration Analysis.
- Acoustic Emission
- Alignment of components.
- Stroboscopes.
- Ultrasonic methodologies.
- Etc.

Do the Basics better and better

My advice is to never forget to improve execution of the basics of maintenance. This was true 50 years ago and it is still true. Too often we complicate things beyond what is necessary. In the field of reliability and maintenance many tend to give new names on what in the end anyway comes down to the basics. TPM, RBM, VDM, QCC, RCM and many other acronyms only lead to confusion in the message you need to send to your employees in the maintenance organization. They will start talking about the "Program of the month" and lose faith in you as a leader.

Anyone who have attended any conference including conferences covering the subject of Reliability and Maintenance have heard several speakers referring to Albert Einstein's definition of insanity:

"To do the same thing over and over and expecting different results"

This hold true if you do the wrong thing. However if you do the right things better and better over a long period of time you will generate substantial results.

I know from a very long experience in industry that guaranteed results will be achieved by executing the basics of reliability and maintenance (the right things) better and better forever.

The basics are perhaps not as glorious to talk about as many would like them to be but I find them very interesting and challenging because I am still interested in people and equipment and the fantastic results that can be achieved when an organization execute these well. Results can even be life changing for some people. Organizations today are spending way too much time on other more complex initiatives and therefore forget where the true improvement potential lies.

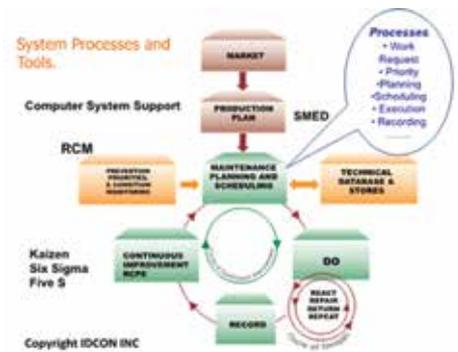
The basic elements of reliability and maintenance are:

- Maintenance Prevention
- Inspect
- Prioritize
- Plan work
- Schedule work
- Execute work

If you do not Execute these things very well you will never have time to do what you know you need to do to become as reliable and low cost as you can be. I stress the word Execute because most organizations know what they need to do. So many strategies and improvement plans are developed and so little Execution of the very basic elements of reliability and maintenance occur. These next steps are:

- Root Cause Problem Elimination
- Apply Life Cycle Cost when specifying equipment
- Design for Reliability and Maintainability in early equipment design
- Use tools such as 5S, Single Minute Exchange of Dice (SMED), Reliability Centered Maintenance methodology (RCM), to enhance performance of work within the processes that build the whole reliability and maintenance system

The structures of system, processes and elements described above are what we call Current Best Practices (CBP) for reliability and maintenance. If you do an audit it is on the level of elements



Above: The System. The market drives the production plan and all maintenance work requiring shut down of equipment must be coordinated with production plan for best time to be executed. When maintenance work is planned and then scheduled you have set the process people work in right so they can execute work much safer and more cost effective. To plan work efficiently you must have access to an up to date technical database including Bills Of Materials (BOM) and other information. After work is completed it should be recorded as to what was completed, parts and material used, update information to BOM and other valid information. The recorded information shall be used to continuously improve using Root Cause Problem Elimination (RCPE). However, most organizations do not work in this "Circle of Continuous Improvement" they work more in the "Circle of Despair". This means that they React, Repair with low quality because of the reactive mode and therefore will have to Return to rework and the circle Repeat itself. To get out of this "Circle of Despair" you must set up the processes for Prevention, Condition Monitoring, Prioritization, Planning of work, and Scheduling of work, Execution of Work, Recording of executed work and how to do RCPE.

The Processes. An example of a process is Planning and Scheduling, or Work Management Process. It contains several steps and starts with Work Request then Priority of Request etc.

The Tools. The tools are used to enable and enhance how well you can execute the processes. It is very important that Processes and Tools are not mixed up. To be successful you must have a very well established system including its processes. Tools are good and very useful when used in the right environment. Implementation of only a tool will only result in temporary improvements. The system and processes must be in place to support sustainability and continuous improvement.

that you evaluate and discover improvement potential and the gap between how good your organization can become.

A good advice is to only focus on the right things to do and not discuss how you can do these things. That comes as the next step. The reason for this is that the first step must be to agree on the right things to do. Because they are all common sense your organization will agree. They might not agree to how you are going to implement these things. As a leader you must show what your beliefs are and give your organization a direction that is what you do here. Then you bring your organization with you to help execute your strategy. You can say that the well described 245 elements comprises a very well documented reliability and maintenance strategy and if this strategy is not executed you have wasted money and time to develop it.

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There follows a list of some examples of usage.

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Save Energy & Reduce Compressed Air Costs with Heat Recovery

HPC Compressed Air Systems explain that there is up to 96% recoverable energy achievable from screw compressor installations.



In view of the ever-increasing cost of energy, efficient use of it is not just a sound economic measure but an ecological necessity as well.

Compressor manufacturers, like HPC, offer many possibilities and expert advice to interested parties, but one potential and cost effective opportunity that is still largely ignored is the recovery of the heat produced by the compression process.

It is a fact that today's screw compressors primarily generate heat. Although this statement may come as a surprise, the truth is that 100% of the electrical energy input to a compressor is turned into heat. The action of compression charges the air in the compressor with potential energy. This energy is given up at the point of use by the compressed air expanding and drawing heat from the surroundings.

However, up to 96% of this energy is recoverable. The major proportion of the energy recoverable as heat, about 76%, is found in the compressor cooling fluid/oil; approximately 15% is in the compressed air itself and up to 5% is given up by the drive motor to the cooling air. In a fully encapsulated oil-cooled rotary screw compressor package even the losses from the electric motor can be recovered as hot air. This brings the total proportion of input energy available as recoverable heat up to an impressive 96%. Of the remaining energy, 2% radiates away from the compressor package and 2% remains in the compressed air (see heat flow diagram)

The Possibilities of Heat Recovery

Energy conscious compressed air users wanting to improve the efficiency and economy of their compressed air plant can choose from a number of heat recovery methods:

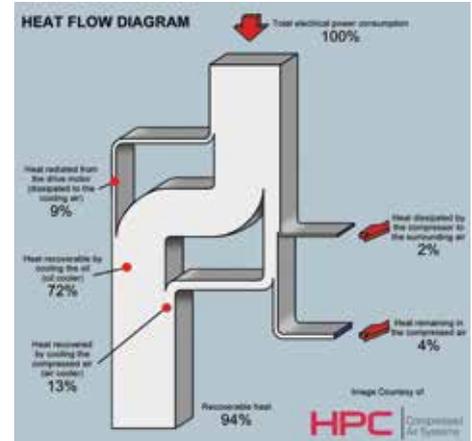
Air/Space Heating

The simplest and most direct method of recovering the heat generated in an oil cooled rotary screw compressor is by direct utilisation of the cooling air that carries away the heat from the airend, oil cooler, motor, etc. This heated air can be ducted away for use as space heating in warehouses and workshops or it can be used for other applications such as drying, heat curtains or pre-heating combustion air.

When the heated air is not required a manual or automatic flap/louvre can be used to discharge it to atmosphere. In some instances, this flap can be thermostatically regulated to maintain a constant, set temperature. This space heating method allows 96% of the electrical energy consumption of a screw compressor to be recovered with considerable cost savings. For example, even with a relatively small 18.5 kW compressor you could easily recover enough energy to heat a small unit or office area.

Water Heating

An alternative option of heat recovery from compressors is hot water. This can be recovered for various purposes either from an air-cooled or water-cooled compressor package with a heat exchanger installed in the airend cooling oil circuit. Plate or fail-safe heat exchangers are employed, depending on whether the water is used for heating, laundry, showering, production or commercial cleaning purposes. Water temperatures of up to a maximum of 70°C can be achieved with these heat exchangers. HPC's experience shows that for compressor packages upward of 18.5 kW capacity the additional costs for these heat recovery systems can be realised within just two years (conditional on correct design).



Considerations of Reliability

Normally, the compressor's primary cooling system should not be used both for cooling and as a heat recovery system. HPC's reasoning behind this is that, should the heat recovery system fail, then the cooling of the compressor and the production of compressed air would be endangered. The safest method is to fit an additional heat exchanger in the compressor purely for heat recovery. In the event of it failing, or if no hot water is required, the compressor can revert to its primary air or water cooling system and so continue operation. The supply of compressed air is then ensured.

It is important to realise that each application and compressed air installation is different and should be treated accordingly. The path to maximum energy savings is the efficient and proper application of compressor control systems and energy saving techniques.

Recovering the heat of compression for a useful purpose is an intelligent way of reducing the cost of compressed air production and improving energy efficiency at the same time. The effort and additional investment involved is reasonably small and, depending on individual applications, can be recovered over a relatively short period of time depending on the purpose to which the heat is put and the method of recovery chosen.

HPC Compressed Air Systems

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The new HPC BSD Series with IE4 Motors - more air, greater efficiency, increased savings

HPC's new BSD Series rotary screw compressors are compact, powerful, dependable and efficient.



Available as stand-alone units, with an integrated refrigeration dryer, with variable speed drive or as a complete package; the new HPC BSD Series feature some excellent design improvements and new IE4 super premium efficiency motors.

Featuring 30kW, 37kW and 45kW model options, the impressive new BSD Series demonstrates that the technology used for larger compressors can also be applied to medium-sized rotary screw compressors. For systems with a pressure range up to 15 bar and free air deliveries from 5 to 8 m³/min, any one of the BSD series model options demonstrates the enormous energy savings that can be achieved when using the very latest compressor technology.

Six Percent Improvement to Specific Power

The rotary screw compressor air ends feature enhanced flow-optimised SIGMA Profile rotors. Thanks to these further refined rotors and other improvements, such as minimisation of internal pressure losses, HPC KAESER was able to improve the specific power compared to previous models by up to six percent.

IE 4 Motors Boast World's Highest Efficiency Class

The new Super Premium Efficiency IE 4 motors contribute significantly to this improvement. HPC KAESER worked in close partnership with a renowned motor manufacturer and already uses these motors in this next generation of high performance compressor packages. The IE4 motors' ground-breaking efficiency further reduces the peripheral equipment losses associated with compressed air production. These new compressor packages feature an impressively effective cooling system that makes it possible to maintain extremely low compressed air discharge temperatures. This system includes an efficient condensate separator with a monitored energy saving drain: As a result, over 95% of the condensate is separated from the air flow. The large external cooler surfaces located on the back of the compressor package also help save energy. Thanks to their cooling efficiency, the compressors can easily be installed in environments where ambient temperatures reach 45 °C. Their external placement also allows easy access and cleaning.

Energy-saving, Environmentally Friendly Fluid Filter

HPC KAESER's developers also gave considerable thought to resource conservation when designing the inside of the compressor package. Whereas in the past, filters had to be completely replaced, on the new BSD Series compressors, the fluid filter housing is reusable – only the filter element itself needs to be replaced. Not only is this cheaper, it is easier on the environment.

SIGMA Control 2 for Optimum Coordination

All BSD systems are equipped as standard with the SIGMA Control 2 controller, which features an RFID reader and Ethernet connection. Furthermore, variable interfaces and - for the first time - plug-in communications modules, enhance flexibility when interfacing with master compressed air management systems, computer networks and/or remote diagnostics and remote monitoring systems such as those available through HPC. A large display with thirty language options makes onsite operation simple, whilst an SD card slot allows for easy data readout and software updates. The integrated RFID reader helps standardise field servicing, enhances service quality and provides excellent security. The SIGMA Control 2 also monitors the compressor, the refrigeration dryer and the optional variable speed drive.

Wide Range of Models

As with the majority of HPC KAESER compressors, versions equipped with an integrated refrigeration dryer module are available in addition to the standard models and provide all-in-one compressed air production and drying within a single, efficient, compact package. The dryer module is sized to handle high ambient temperatures and operates with minimal pressure loss. It is significantly more energy efficient than predecessor models and uses almost fifty percent less cooling fluid. The dryer is mounted in a separate housing and is therefore thermally shielded from the compressor. The 37-kW BSD package (BSD 75 SFC) is also available with variable speed control. The maximum free air delivery and control range is up to 27 % higher than previous versions. These systems provide optimum efficiency throughout their entire control range and ensure the same impressive reliability as standard packages.

HPC Compressed Air Systems

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FOOD GRADE COMPRESSED AIR UPDATES

The Food and Beverage Grade Compressed Air Best Practice Guideline 102 is available from the British Compressed Air Society and contributing members such as BEKO TECHNOLOGIES.



This best practice guideline has been produced because compressed air is a utility and as such its provision is normally included in the pre-requisite programme rather than the HACCP process. There was also an opportunity to review and update the guideline.

The talking points have not changed much because safety has to be fundamental but there are some issues that those responsible within the Food and Beverage Industry should take note of. The first one is that the "Competencies" section, under provision of equipment, the staff providing the compressed air products or complete system should have a minimum of 5 years training and on the job experience. This makes sense and BEKO TECHNOLOGIES welcome such stipulations. In fact any person from BEKO TECHNOLOGIES attending sites to discuss products and systems will have at least 10 years experience. There is of course an extra burden on the customer and client in establishing the bona fides of any person attending site for the purpose of providing compressed air equipment.

Much of the document focuses on the fact that the process always defines the purity required but if there is no specification from the machinery supplier

or the Food and Beverage Industry client, then this guideline should be followed. There is importance attached to the correct installation in order to maintain air purity, together with the provision of standby equipment to allow maintenance and documentation as to what protection was taken during any periods of bypassing.

The quality of compressed air is as before defined by ISO 8573-1 (2010) where levels of particles, water content and total remaining oil content i.e. liquid, aerosol and vapour are specified. For the user there are again 2 categories of compressed air usage; direct contact and indirect contact. Direct contact is where there is direct impingement onto the product, ingredients or packaging. Indirect is the situation where pneumatic equipment is present and the exhausted compressed air from cylinders, actuators etc are present in the production or packaging areas.

The air treatment requirement for the main contaminants has been adjusted to reflect changes in ISO 8573:2010 and the light of experience with the previous version of the guide. The particle class chosen for both direct and in-direct contact has been relaxed to mirror easily available filtration. The humidity levels identified have been chosen to help

with the control of microbiological contaminants and will require the use of different drying techniques.

There has also been a relaxation of oil levels for in-direct contact applications.

There is a requirement for logging data and setting frequency of measurement and again here the process or equipment used should define actions or the guideline of 2 measurements per year followed. Today it is very easy to constantly monitor all the key parameters in a compressed air system and BEKO TECHNOLOGIES have a device METPOINT BDA which will monitor 12 analogue or digital inputs which could cover the guidelines. Data is available in many formats from connection to BMS to SMS to selected phones plus many other options.

Dewpoint is simple but particle counting and total oil are not frequently observed. For oil, BEKO TECHNOLOGIES have a solution which will constantly measure the remaining oil vapour content in compressed air and as above store data and relay in which manner is preferred. The METPOINT OCV is installed in an increasing number of Food and Beverage companies because impact tubes are only able to measure to Class 2 for oil and therefore provide part of the compressed air solution. METPOINT OCV will go down to 0.003mg/m³ and provides reassuring data and sometimes frightens those who automatically expect the air from an oil free compressor to have a Class 0 reading. This is frequently not the case and is no fault of the compressor but the intake air will contain hydrocarbon in high concentrations in industrial locations. The other option to measure occasionally by sampling and sending to specialist labs is permissible but one can only imagine what the consequences of a negative result would really be...effect on brand reputation, product recall and certainly very significant cost compared to the BEKO TECHNOLOGIES solution of permanent monitoring.

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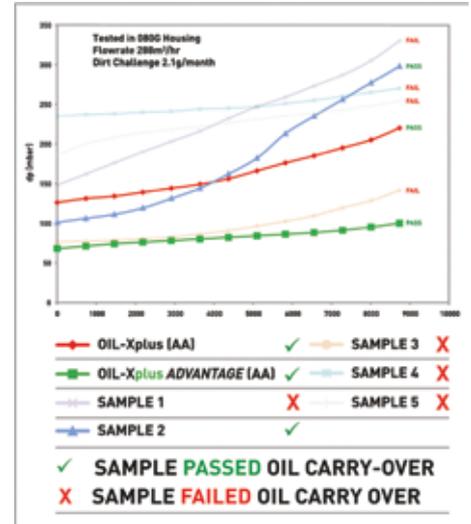


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The True Cost Of Differential Pressure Over The Working Life Of A Filter Element

It is all too-easy to fall into the trap of purchasing filter elements based solely on their purchase price. The truth, however, is that true costs must be based on total cost of ownership.



A clean and dry compressed air supply is crucial in maintaining effective production at manufacturing facilities. Coalescing and dry particulate filters are instrumental in the treatment process, removing eight of the 10 most commonly found contaminants. To guarantee air quality, many filter manufacturers recommend a service lifetime of 12 months on filter elements.

During generation, air compressors consume large amounts of electrical energy and manufacturers need to be aware that wasted energy is connected directly to the running costs of the business.

Over the recommended one-year lifecycle of an element, an increase of differential pressure (dp) across the element can be expected. This pressure loss is caused by the element becoming congested by the particulate it is designed to remove. When evaluating replacement elements, total cost of ownership should always be taken into account. Elements with a high dp over their working life will in turn cost more to operate.

Filter element construction and media vary between manufacturers; these aspects of the design have a significant impact on both dirt handling capabilities and loss of pressure during operation.

Parker domnick hunter pioneered the use of glass micro-fibre in the construction of filter elements, a technical innovation that remains at the forefront of this critical technology, and since 1972 the OIL-X filter has been supporting production facilities around the world with clean compressed air.

Engineers at Parker domnick hunter understand the true measurement of differential pressure and how this affects total cost of ownership. In addition to the testing standards outlined in ISO12500-1, Parker domnick hunter developed a 12-month dirt loading test.

Engineers established a representative total amount of dirt that a 1-inch ported compressed air filter working under normal conditions would collect in a year. The amount was divided by twelve to determine a challenge equivalent to one-month dirt loading. The filter was then installed with a completely saturated element and a measure of the dp across the element was recorded. The filter was injected with the one-month challenge. Every time another challenge was injected into the airflow and captured by the element, the dp was recorded. After 12 challenges, the engineers had a true differential pressure curve of the element in its one-year service life.

This analysis, along with the oil carry-over test, was performed on an original Parker domnick hunter OIL-Xplus element, along with five other elements produced by major compressed air treatment equipment manufacturers. The findings showed, apart from the Parker domnick hunter OIL-Xplus filter element, only one of the five other samples met the performance claimed and all had a higher differential pressure, some significant.

Using this research, Parker domnick hunter has re-engineered the OIL-Xplus filter element to include pleated media technology that provides increased dirt holding capability. The new OIL-Xplus ADVANTAGE significantly lowers the dp over the 12-month service life.

In conclusion, any reduction in pressure loss can be calculated into a cost. Selecting a filter element based on initial dp figures or simply on purchase price will prove to be a false economy. Remember, not all elements are the same!

Mark White

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AGA Rangemaster Puts Reliability On The Menu With Genuine Compressor Spares

Ask any responsible operator what steps can be taken to improve compressor performance and you'd expect a number of answers; maybe to invest in the latest, high-efficiency compressor technology; perhaps to install a new controller or purchase more effective downstream equipment; or to undertake a comprehensive air audit.



While all of these are excellent ways to improve production efficiencies, forward-thinking manufacturers, such as AGA Rangemaster, the market leader in range cookers, are considering a further option; investing in genuine manufacturers' spare parts over non-genuine or third party spares.

Here's how AGA Rangemaster has ensured the longevity and high-performance of its CompAir compressors at its production facility in Leamington Spa for more than thirty years, through regular servicing and the use of genuine components.

APPLICATION DETAILS

To ensure maximum productivity, AGA Rangemaster needs to ensure a dependable, quality source of compressed air is always available. With production running five days a week, its compressed air network must operate at peak performance at all times.

Its original CompAir piston machines had been serviced regularly with genuine spare parts providing reliable performance for over 20 years. Around 10 years ago, AGA Rangemaster decided to invest in variable-speed compressor technology to help improve energy efficiency.

The company chose a new package from CompAir comprising two L132 machines, an L75 variable-speed unit together with dryers, filters and an air/water separator. This station has now been operating for over ten years, thanks to a programme of planned preventative maintenance backed by the provision of genuine spare parts.

Vic Merulla, maintenance manager from AGA Rangemaster explains the company's reason for choosing CompAir spare parts:

"Typically, non-genuine compressor spares

and lubricants are cheaper to source than the manufacturer's original parts. Clearly, all service and maintenance costs need to be factored in to our cost of ownership equations very carefully and, when finances are under pressure, it would be easy to choose cheaper alternatives.

"However, by talking to the service and engineering team at CompAir, we soon learnt that fitting the wrong spare part can, in some cases, cause real damage to the compressor, ultimately meaning the machine can fail completely. This won't just result in an expensive repair bill, but will affect our productivity too; so profitability would really suffer.

"As a result, we have always used CompAir genuine parts, fitted by a CompAir-trained service engineer to ensure that our compressors deliver the predictable performance we need."

Colin Mander, regional sales director at CompAir said:

"Modern compressors are carefully engineered to ensure that all components can contribute to high-energy performance and reliability. So it is clearly counter productive to replace such components with non-genuine spares, as it will reduce the cost savings achievable.

"In contrast, genuine parts have been manufactured to meet the same standards as the compressor they are intended for. This means that they have passed the same stringent manufacturers' testing regimes, in a quality-controlled environment, to offer the repeatable, dependable operation that plant manager's need to keep production costs down."

CompAir offers an extensive range of genuine spare parts and lubricants, designed to deliver maximum energy performance and reliability, backed by round-the-clock maintenance and support from a network of service engineers.

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Denso Steelcoat Protects Scottish Water Aqueducts

Scottish Water plc has recently completed a £7m project to upgrade aqueducts conveying water from Loch Katrine to Glasgow.

Scottish Water says it was the biggest improvement to the aqueducts since they were constructed more than 150 years ago. The main contractors were George Leslie Ltd, with Jacobs being the Consulting Engineers.

Winn & Coales (Denso) Ltd's Steelcoat 400 system was chosen to give long-life protection on the 48in diameter pipes used at three structures which were virtually reconstructed along the aqueduct system. These carry two twin pipeline sections conveying 450 million litres of water per day to 1.3 million people.



The Winn & Coales Steelcoat system, applied by sub-contractor Interserve Industrial Services Ltd, in each case comprised of: Denso Hi-Tack Primer, Denso Profiling Mastic, Denso Hi-Tack Tape, Denso Ultraseal Tape and a Denso Acrylic Topcoat.

Jim Clark, Senior Project Manager at Interserve, said: "Due to the remote locations and the change in weather patterns throughout the refurbishment of the pipes we had a number of challenges to overcome but we are highly delighted with the quality of the finished product. It was a pleasure being a part of the team whilst carrying out this project for George Leslie and Scottish Water."

Over the combined length of the old and "new" aqueducts, there were more than 30 historic listed structures and planning permission for the repair work was conditional on full consultation with Historic Scotland.

Scottish Water's project manager, Simon Renton, said: "Strict adherence to constraints and restrictions was necessary to ensure that the character of the historic structure was preserved. Reconstructed areas of masonry on every part of the structure had to match the existing stonework in terms of appearance and painting and protective coatings systems were carefully chosen to blend with the surrounding structure."

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* All BEKO TECHNOLOGIES* sales and service staff comply also with the minimum requirements within **Guideline 102**



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Tom Parker Ltd Introduce E.MC Pneumatics To The UK Fluid Power Market

E.MC is an exciting addition to Tom Parker Ltd.'s impressive range of pneumatic and hydraulic brands. With distribution rights to supply this innovative range exclusively to the U.K. fluid power market, Tom Parker Ltd is excited to actively promote E.MC and to share the excellence of the products.

QUALITY = E.MC

E.MC specialises in manufacturing pneumatic and hydraulic component systems, automation solutions and high-precision machined parts. With over 25 years' experience and a global network of distributors, E.MC is already well known outside of the U.K and has gained the impressive reputation of being the number one Pneumatic and Hydraulic Manufacturer in China. A company whose key focus is on quality, EMC operate stringent control procedures to ensure consistently high standards are maintained. From prototype design, right through every stage of the manufacturing process, every detail is carefully inspected. On visits to EMC's

extensive production facilities Tom Parker Ltd were especially impressed with the close attention to detail and thorough testing systems, which cemented their decision to add the range to their core product offering.

INNOVATION = E.MC

E.MC shares many of Tom Parker Ltd.'s values including a joint commercial vision to distribute only products that are competitively priced, durable and of a high standard. Working together both companies strive to push boundaries; responding to industry challenges by manufacturing and distributing innovative and technologically advanced solutions. Tom Parker Ltd

values the relationship they have developed with their customer base and endeavour to remain at the forefront of the marketplace by carefully selecting new brands that will enhance their present offering. The addition of E.MC will add further depth to the company's ability to satisfy their customers' needs and meet their unique requirements.

Other selective new brands will be introduced in January 2014 with the launch of the 2014-2015 product catalogue.

EXPERTISE = E.MC

Sales Manager Sebastian Cole has shared his enthusiasm at the new brand addition: "We met the directors and staff at E.MC at their manufacturing facility in Ningbo, China, last year and saw first-hand the level of innovation and expertise that goes into the development of their products. We have maintained excellent connections with E.MC's technical department and are convinced that these products meet our need for a competitively priced but comprehensive range of quality cylinders and valves. We look forward to demonstrating the quality of the products to our valued customers."

E.MC products are now in stock and available to purchase. For samples, prices or literature please contact the technical sales team at: sales@tom-parker.co.uk or call: 01772 255109

To ensure the maintenance of quality levels across all its operations, Tom Parker Ltd implements quality management systems in accordance with BS EN ISO 9001:2000 and are certified by the BSI. The Technical Sales team are on hand 8am – 6pm Monday to Thursday, 8am – 5pm on Fridays and 9am – 12noon on Saturday's to advise and assist on all orders. Tom Parker Ltd offer facilities for timed delivery and their carrier can provide a confirmation of arrival times on most orders.

For more information about Tom Parker Ltd or E.MC products call the Tom Parker Ltd Marketing team on: 01772 220 544 or email: marketing@tom-parker.co.uk. Alternatively visit www.tom-parker.co.uk, for the full e-commerce product catalogue, technical specifications, latest news, supplier literature and dedicated press area.



Water Injected Screw Compressors The Most Economic Option For Genuine 100% Oil-Free Air

There is no doubt that food and drink industry processes require compressed air that is guaranteed to be totally pure, with no possibility of oil carry-over to contaminate the product.

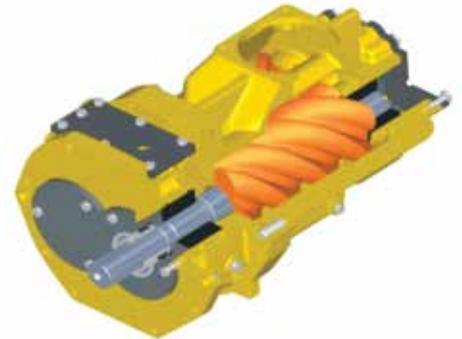
Filters and catalytic convertors will always have an element of risk and the only safe option is a genuine oil-free machine.

There are two alternative technologies available – the dry-screw (adiabatic) and the water-injected screw (isothermal). But the former has disadvantages in both capital outlay and, more importantly, in running costs. Heat generated in compression means loss of efficiency to generate the correct volumes of air needed – meaning less air delivery per kW used. Thanks to the superior cooling capability of water, the Worthington Creyssensac WIS range removes the heat efficiently at source meaning that more air per kW is generated and electricity costs are cut substantially.

The WIS compressors have polymer ceramic rotors and water lubricated bearings, ensuring that no oil contaminates the element. The resultant air is classified Class “0” – ISO8573-1. The zero indicates absolutely no oil carry-over.

20% efficiency increase

The largest cost in owning and operating a compressor is in the electricity used to power it – well over 70% of the lifetime costs. Any reduction which can be achieved in usage here can be significant and the Water-injected Screw shows that around 20% less power is needed to generate similar volumes of air, because of the constant temperature in the compression chamber.



Above:

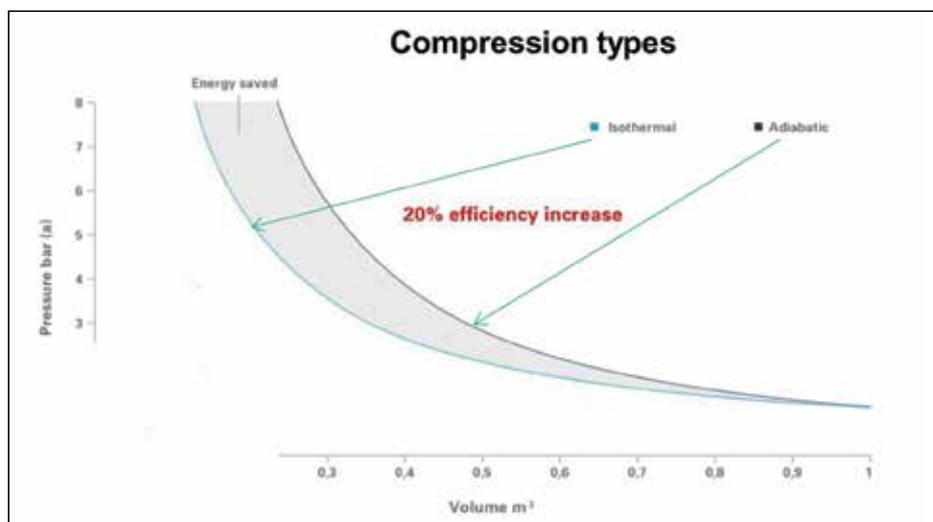
The heart of Worthington's WIS range benefits from polymer ceramic rotors and aluminium bronze housing

There are also savings in wear and maintenance. The aluminium bronze element housing gives added strength and durability and the hydrodynamic bearings ensure long life and smooth rotation with no physical contact in the bearing itself. A direct drive motor also reduces bearing stress and energy loss. Reverse osmosis ensures a constant supply of high quality water, avoiding corrosion and bacteria growth. Service is only required every 4000 running hours.

With pressure options from 7.5 to 13 bar and further energy savings of up to 35% to be made with optional fully integrated inverter drive technology, the WIS range is backed by Worthington Creyssensac's 145 years of experience and a nationwide specialist distributor network for all installation and maintenance.



For more details contact:
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Above: Chart showing 20% saving - Isothermal vs Adiabatic

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* N-EUPEX is a registered trademark of Siemens AG



Type A



Type B



Contact

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Also available from our companies in
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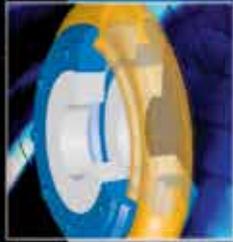


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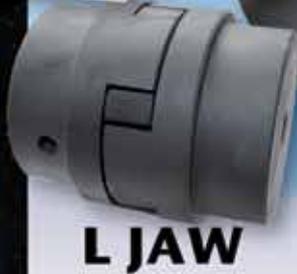


HRC



NPX

CHAIN



L JAW



RPX



FFX

European recovery in sight - major couplings manufacturer CHALLENGE PT increase stock to satisfy demand



CHALLENGE Power Transmission, Wolverhampton have recently announced their plan to increase stocks of couplings in line with strong demand both domestically and from the EU.

The announcement on twitter lends further support to economic data suggesting the UK and the Eurozone are on the road to recovery.

Louis Hopkins, MD of Challenge UK had this to say; "We have seen a surge in demand in recent months, particularly for our **NPX** coupling which has proven extremely popular in Europe where it has been recognized as a significant competitor to Flender's N-Eupex® coupling. The **Challenge NPX** is completely interchangeable with the N-Eupex®

making it perfectly suited for both new-build and replacement applications.

"The **NPX** range is available in either pilot or taper bore and includes a free wear indicator with every set; a much more convenient and cost effective package than our competition currently offer."

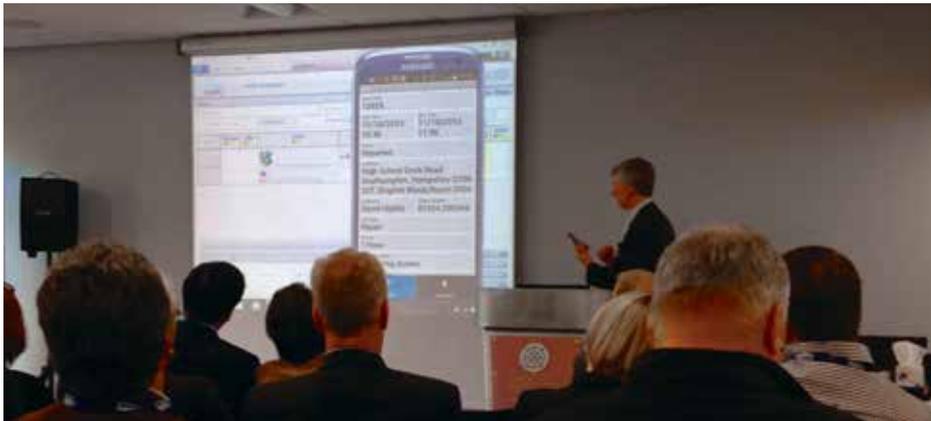
As well as the popular **NPX** coupling Challenge UK have also seen a large uptake in their well known **RPX** coupling - a high quality, industry standard coupling interchangeable with the KTR Rotex® featuring a fully machined curved jaw design and elements available in 92 shore (yellow) and 98 shore (red), this coupling transmits a high level of torque for its size while allowing for higher levels of shock loading and vibration.

Other couplings available ex-stock from Challenge include the standard **L Jaw** coupling; the **HRC** coupling (available in pilot or taper bore); chain couplings and the **FFX** tyre coupling produced in steel with NR and FRAS tyres (also available in pilot or taper bore).

As well as couplings Challenge stocks the widest range of power transmission under one brand. With over 35 years in the industry, a quality reputation and large stocks, Challenge is well placed to benefit from the economic recovery.

Agility Version 6: It has already been a great year for SoftSols, celebrating their 30th Anniversary and a successful launch of a major release of their market leading CMMS software, Agility Version 5 in April.

The end of the year will be no less busy, as Agility 6 is scheduled for launch in December which will see some significant enhancements for mobile users of Agility.



Above: David Hipkin demonstrates ALite at a recent Roadshow Event

Peter Smith, SoftSols Product Management Director, comments, "Agility 5 has received great feedback from our customer base. The additional new features we launched; Global Search, Training & Certification and Asset Maps have all proved popular and bring significant steps forward in user efficiencies which is what Agility is all about. At our Roadshow Events this year we have demonstrated Agility 5, and even those who have never seen or used Agility before, have said how these new features can bring immediate benefits.

"As an organisation we are continuously developing and enhancing Agility" added Peter, "the framework is proprietary to SoftSols so we are not reliant on any other organisation. We totally own and manage the development of our products."

Agility 6 will be launched in December, and will see some minor enhancements to the Training & Certification feature launched in version 5. Users will now be able to make selected certification mandatory; whilst qualifications can also be set to be equivalent or superior to related qualifications further allowing internal and external training to be fully managed.

A further additional feature is the ability to raise purchase orders directly against assets and cost centres.

A significant area of development within Agility 6, is with the ALite application, the mobile option for Agility specifically for Android based handhelds. David Hipkin, SoftSols Group Managing Director comments, "We are, as a business increasingly finding that our customers want to work with us in two areas, those of integration and mobile solutions. We have extensive experience across our 30 years of getting our software products to work with those from other suppliers. Typically our CMMS solution is not the first system introduced within an organisation, so it is important for the acceptance and maximisation of Agility that it is able to communicate with the existing systems in the business, be that SAP, SAGE or BMS/SCADA. Our Implementation Team are highly skilled and have a huge knowledge base of other systems, more importantly they have great listening skills as the start point on any project is understanding. David continues, "Agility 6 sees ALite being given more functionality, moving the product towards the capability of Mobile Expert, which is our version of Agility for installation directly onto Windows mobile devices. ALite gives the same flexibility for those mobile workers using Android devices. "

Agility is browser based and so providing a user has constant internet access then they can use the full range of features found in Agility. However there are a significant amount of working environments where that access does not exist. Full site-wide network coverage can be hard to maintain plus in certain installations, such as in the health or process industries, sites contain



Above: New ALite screen showing new job being raised on site.

very sensitive equipment so the solution needs to allow for workers being online/offline. Agility 6 now allows users of Android handhelds and tablets to not only receive and manage work orders but now they can create a job from the actual device as they are in the field, so if something is observed and needs doing, it can be logged and actioned immediately. Agility 6 also allows checklists to be added to work orders allowing for dynamic questions to prompt for user feedback on the work order. This next release also allows photographs to be captured as part of the Android Work Completion process.

"Android's dominance in the European market means that compatibility with this operating system for Agility is essential and version 6 brings us right up to date," adds David. "As an organisation we are really excited about the opportunity of providing solutions for our customers with Agility, be that for mobile workers in the field or by allowing business systems to integrate with Agility efficiently and effectively.

"One thing is for certain, with the development plans we have for Agility for the end of 2013 and 2014, we have very exciting times ahead."

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Mobile Technology: A Global Maintenance Management Trend

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Transforming Maintenance Management with Mobile Technology

The rapid revolution of mobile technology has played a dramatic role in the way we operate on a daily basis; both at work and in our personal lives.



The benefits are significant, including:

- Logging, receiving and closing jobs in real-time
- Taking photos of asset condition and instantaneously uploading to an CMMS database in real-time
- Capturing signatures to confirm job sign-off
- Providing notification to the help desk for replacement parts
- Effectively managing workforce allocation, tracking and accountability using GPS
- Using QR codes to scan and manage asset data, its service and performance history
- Up-skilling staff through online collaboration, giving operatives the ability to confer live, onsite with industry experts via video calling facilities such as Skype, thereby increasing the opportunity to secure a first-time fix
- Viewing online reports on the move for improved decision making and performance management

Aligning a mobile CMMS solution with 'the cloud' also offers maintenance managers with a far greater level of flexibility in the way they interact with the software, further enhancing efficacy. The Cloud is agile and works remotely as well as on premises, it speeds up application deployment and enables the CMMS providers to fine tune, maintain and upgrade the software centrally, meaning all adjustments and improvements are felt immediately, improving the end-user experience.

All in all, the maintenance management sector can reap considerable rewards from the use of mobile technology; enabling a more effective and efficient way of managing work on the move, delivering far-reaching operational improvements, as well as supporting strategic decision making both departmentally and business wide.

Smart devices, such as Tablets, Smartphones or PDAs, offer numerous practical benefits, whether it's monitoring daily budgets, staying connected via social networks or being able to access and complete work whilst on the move.

According to a recent YouGov survey, employees are recognising the benefits of mobile working, with 47% of employees reporting that they currently use their personal devices for work and 55% of senior directors now relying on Smartphones to manage their work on a day-to-day basis.

Although the maintenance management sector has been relatively slow to adapt to the changing technological trend, organisations are now starting to recognise the opportunity that mobile technology can deliver. For maintenance engineers and managers, there is a great deal of functionality that can significantly improve work productivity and time management; from logging and closing down jobs,

through to the ability to scan and read QR codes to track and manage asset data for greater insight into an asset's performance.

Many organisations are opting to integrate their mobile device with CMMS (Computerised Maintenance Management Software) to generate further operational gains. Integrating with a CMMS solution offers rapid rollout as well as cost effective implementation, shorter training times, and greater resilience and flexibility. It also delivers greater productivity in the workplace and significant operational cost reductions.

A move to a truly mobile solution for a maintenance management professional means much more than efficient work scheduling or streamlined task logging. The introduction of mobile devices ensures that maintenance professionals can work more cost effectively and efficiently.

This article is based on a new Guide from Service Works Group, 'Mobile Technology: A Global Maintenance Management Trend'. To receive your complimentary copy, or for further information on how a mobile CMMS software solution can benefit your business, please email: info@swg.com or call +44 (0)20 8877 4080.



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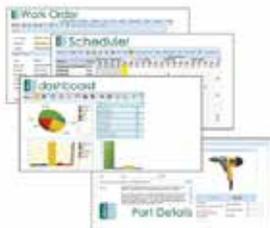
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eMaint Announces Opening of EMEA Office in Dublin, Ireland

International CMMS Software Provider Expands into Ireland's Digital Hub



October 1, 2013 (Marlton, N.J.) – eMaint Enterprises, a leader in cloud-based maintenance management software, has opened an office in the Digital Hub in Dublin, Ireland as the headquarters for its EMEA operations. Claire Cox has come on board as Senior Manager of EMEA Operations.

eMaint has chosen to expand its office space internationally in order to provide existing European customers with on-the-ground support for its flagship product, eMaint X3; further grow its business in Europe; and extend its hours of operation to fully cover normal business hours in Europe.

"Our expansion into Ireland is key to meeting our company's mission, which is to ensure the success of our clients. It is important that our clients outside of North America are receiving the support and service to help them achieve their maintenance management goals," says eMaint CEO and President Brian Samelson.

The establishment of eMaint's EMEA headquarters in Dublin will allow for a greater level of support for existing global clients, and will enable the eMaint team to continue to provide a highly-personalized level of service as its international business expands.

Senior Manager of EMEA Operations, Claire Cox, is responsible for the leadership of eMaint's EMEA business based out of their Dublin office. Cox is very customer-focused, passionate about technology, and dedicated to driving business growth for eMaint within the EMEA region. Claire holds an undergraduate degree in business from University College Dublin and a masters degree in marketing from Dublin City University, and brings a strong record in account management, operations and client implementation with 10 years experience in sales and client relationship management.

Cox provides on-site leadership for the new Dublin office, and extends eMaint's company culture and values to their Irish operation. Other team members include a CMMS Implementation Specialist and an Implementation Account Manager to provide on-the-ground technical support and customer service to eMaint's growing European customer base. The company is actively seeking additional multi-lingual resources for their client services team to provide native language support for their growing European client base.

Named one of Inc. Magazine's fastest growing companies in the U.S., eMaint's geographical expansion to Ireland is just one aspect of its overall growth. With 18,000 users in 20 countries worldwide, the company enjoyed a 167 percent revenue growth in 2012 over a three-year span. Additionally, eMaint's staff has more than tripled since the beginning of 2010.

About eMaint Enterprises, LLC
eMaint, the leader in on-demand CMMS solutions, has been providing maintenance management software solutions since 1986 and was one of the first CMMS providers to develop a completely web-based "Software as a Service" (SaaS) model for more rapid implementation at a lower total cost of ownership.

eMaint's client base consists of over 18,000 users worldwide across 2,000 sites ranging from small & medium sized organizations to Fortune 500 corporations including manufacturers, service providers, fleet operators, energy and utility companies, health care facilities, universities, municipalities, and facility and property managers.



For more information on eMaint products and services, please visit the eMaint main site at:

www.emaint.com,

the EMEA site at:

www.emaint.eu,

the UK site at:

www.emaint.co.uk,

the Spanish language site at:

www.emaint.com.mx

or the Portuguese language site at:

www.emanut.com.br

Coswin 8i the new generation CMMS/EAM by Siveco Group!

Coswin 8i is a CMMS/EAM solution that allows improving maintenance management as well as equipments performance whatever the size of the organisation and activities (Industry, Health, Transport, Defense sector...).



Nowadays, maintenance process can no longer be kept on factory or maintenance department level. Maintenance is collaborative; it interacts with the other specialized applications (ERP, LDAP, SSO, DMS, GIS, CRM, SCADA, MES, ...) of the company and is fully part of the global information system. Therefore maintenance is now linked with companies' leadership interests. Data transfer module, interface tables, web services allow organisations to integrate Coswin 8i easily into their environment.

Web Architecture

Coswin 8i Web architecture optimizes all advantages offered by the latest web technologies (JSF, HTML5, Ajax). Users can get access anytime from anywhere via standard Internet browsers. This minimizes the network traffic and avoids the purchase of expensive computer devices. Coswin 8i can therefore be implemented in very different configurations, from the simplest to the most complex, in local or extended network.

Design & Ergonomy

Coswin 8i is very intuitive and handy. Therefore its application is more efficient. In fact, the software benefits from an innovative approach, combining performance, design, conviviality and simplicity of use in a way that brings the user maximum comfort. The manipulation of data tasks is easy: entry and online modification « spreadsheet », mass modification of data, statistics on request and direct export of your data on a spreadsheet. Moreover,

Coswin 8i is fully customizable by user profile (vocabulary, layout of the screens, addition of new fields, definition of links with external applications, contextual browsing mode).

Adaptability

Multi-companies : Coswin 8i is the ideal solution to manage several sites and/or companies as each user visualizes only his own data.

Multi-languages : Coswin 8i can be used simultaneously from different countries in different languages. Data and screens can adapt according to the zone or the profile of the connected user.

Reporting & performance indicators

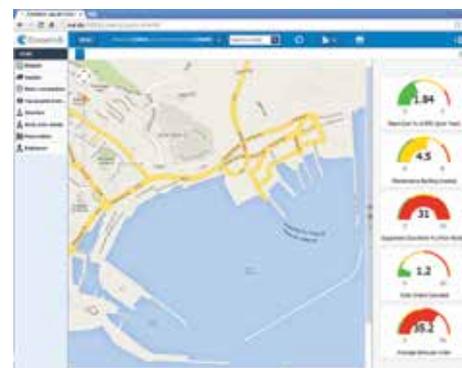
Thanks to Coswin 8i, you can edit user-friendly reports evaluating performances and the statements of your assets, it will help you build clear strategic and financial goals. Siveco Group makes available pre-established reports and you can easily customize your own thanks to the standard integrated tool Siveco Reports.

Security and traceability

Coswin 8i enables companies to stick to the security and environment legislation in force. Coswin 8i integrates audit trail extended functionalities to ensure the security of access and transactions. You can therefore answer to the specific requirements of quality assurance, traceability of work and improve your internal services. You can as well benefit from electronic signature functionalities in accordance with 21CFR11 (pharmaceutical industry standard for example).

Coswin 8i is an off-the-shelf CMMS, The standard package includes the following functionalities :

- Management of maintenance strategic assets
- Standard and corrective process:



- Planned maintenance:
- Stocks management
- Purchasing management
- Multi-Organisation management
- Project
- Quotation
- Workflow
- Metrology

A flexible offer

Siveco Group offers large choices of deployment for Coswin 8i:

- License mode: traditional license purchase. Coswin 8i in license mode will be directly installed on your internal network server. You will therefore handle and manage your server.
- SaaS subscription mode : CMMS becomes a simple service. You rent Coswin 8i software that is hosted in a secure cloud .
- Hosting : This hybrid solution between local hosting and SaaS subscription allows to own the license while delegating the server technical management to Siveco Group.
- Your company can thus choose the mode of deployment corresponding to its needs while keeping the conformity of its informatics policy.

Mobile CMMS thanks to Coswin Nom@d

From simple mobile terminals (smartphones, touch pads...) equipped with Coswin Nom@d solution, the managers and maintenance itinerant technicians can get remote access and can exchange information real time with Coswin CMMS databases. Coswin Nom@d answers to the needs of nomad populations of Industrial and Utility companies.

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W.T.S. Tactical Change Pays Dividend

Wellman Thermal Services of Oldbury In the West Midlands, are now reaping the benefits of their tactical changes when they decided to form their new Energy Performance Division.



They are now also able to provide Stock Boilers from their most popular range of large volume, hot water and steam boilers.

This move is supported by the opening of regional offices throughout the United Kingdom where Sales Engineers and Commissioning Engineers are now based.

In the E.P. Division, the most significant award has come from Manchester University Hospital.

The new hospital opened in 2009 and has recently upgraded its Wellman Thermal Services boiler plant by fitting 'Economisers' to two of its five units. The two 'Economisers' installed will yield a payback in less than 12 months.

An added bonus comes in the reduction of 676 tonnes p.a. of carbon into the atmosphere, which equals that of a sizeable forest during the life of the installation. Further to this, Wellman Thermal Services have carried out a survey for the hospital

that shows how a new 'Control Management System,' can effectively reduce costs considerably. This contract is expected to be awarded shortly. The Hospital, which has over 370 beds with accommodation facilities, has been created from three smaller units. One of these units decommissioned its W.T.S. boilers that had been installed in 1939 after seventy-four years of continuous service. They were still in good working order.

The introduction of further Stock Boilers from the most popular range of units has considerably reduced delivery times. W.T.S. who have supplied boilers to 28 hospitals over recent months, have recently received an order for Alder Hey Children's Hospital in Liverpool to install three hot-water Wellman Thermal Services Boilers in their new £237 million complex. The designated UT-L 24 E boilers, fired by dual fuel (gas/oil) are of the three pass wet back design with integrated economisers to give the maximum efficiency.

Originally opened in 1914 the hospital is being rebuilt at the neighbouring Springfield Park and is due for completion in 2015.

In the Brewery and Distillery industry, W.T.S. are to supply a world renowned distillery in the Speyside District of Scotland with a new steam boiler before Christmas 2013. The boiler which is dual fuel fired (oil/gas) is from the Robey ULS I.E. range and includes an Integrated Economiser. It is rated at 11,000 Kg/hr (25,000 lbs/hr) 10 barg.

The Distillery, which specialises in single malt whisky, entered the Guinness Book of Records in 2009 by producing the largest bottle of whisky in the world, containing 105.3 litres.

To add to their recently opened offices in the South East and North West W.T.S. now operate in Scotland from their new office at Trident House, 125 Renfrew Road, Paisley, Scotland. PA3 4EF. Phone 0141 218 4421.

It takes an average five hour driving time from the borders to reach the extreme North of Scotland. Wellman's new office will benefit the whole region offering consistent and reliable coverage within the Scottish borders all year round.

Paisley's team includes several Sales and Commissioning Engineers amongst their ever expanding staff.

The Scottish Office is just one of several fully supported satellites that W.T.S. is opening throughout the UK. They have been strategically placed to enable a faster service response to the whole of the boiler-using industry. The new satellite offices not only offer all the services provided by Wellman In the past but also include the new Energy Performance Division. The E.P. division offers a bespoke service to cover the ever growing demand in the industry for energy savings.

Wellman Thermal Services Limited
Newfield Road, Oldbury, West Midlands,
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Tel: +44 (0) 121 543 0000
Email: info@wellman-group.com
www.wellman-group.com

Specially Designed Denso SeaShield System for Grangemouth Jetty

Winn & Coales (Denso) Ltd solved a new challenge when Forth Ports issued a contract for refurbishments to one of their Grangemouth jetties on the Firth of Forth.

The contract required Denso's SeaShield 2000FD System to be applied within the splash zone from the underside of the jetty to 500mm below the low water level on 77 piles. Application was carried out by contractors Gareloch Support Services GSS Diving, with Consulting Civil Engineers, Wallace Stone, supervising the installation for Forth Ports.



Sixty-seven of these piles were regular Frodingham No.4 type octagonal piles, which the normal SeaShield 2000FD System is designed to accommodate.

However, the ten piles on the link to the shore were of the Larssen BP 2N Type which have an unusual 'clutch type' arrangement. Engineers at Winn & Coales therefore had to design a variation to the system to ensure that the SeaShield 2000FD System was suitable for the protection of these piles. After inspection and measurement on site Winn & Coales carried out trials leading to the design of HDPE fillet pieces which were manufactured so as to form a profile on the piles ensuring a good fit of the subsequent SeaShield 2000FD System.

This project once again demonstrates Winn & Coales (Denso) Ltd's ability and flexibility to supply systems which provide long-term anti-corrosion protection to marine structures.

The Denso SeaShield 2000FD system, now used globally in many marine structure protection applications, begins with the application of Denso Paste 105. This is followed by Denso Marine Piling Tape and then HDPE jackets which are put into place with stainless steel fixings. Denso Marine Piling Tape, a cold-applied petrolatum-based tape for application under water, is the primary anti-corrosion protection in the SeaShield system with over a 35-year proven record. The jackets will also give abrasion protection for the tape system.

Winn & Coales (Denso) Ltd, Chapel Road, London, SE27 OTR
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The Bifold Group Broadens its Valve Line with a Range of Medium Pressure Ball and Needle Valves, Delivering Safe, Reliable Operation up to 20,000 psi / 1379 bar.

The range comprises of needle valves, ball valves, manifold valves, check valves, fittings and adaptors. The valves are designed with unique features and offered in a wide range of configurations, alongside many standard features which makes the product far superior to conventional products on the market.

Our medium pressure ball valve range is available as a floating or trunnion style, with an operating temperature range of -46°C to +225°C (-20°C to +180°C) as standard.

Our medium pressure needle valve range is designed with a unique maintenance free stem sealing system, with an operating temperature of -73°C to +315°C (-20°C to +170°C) as standard.

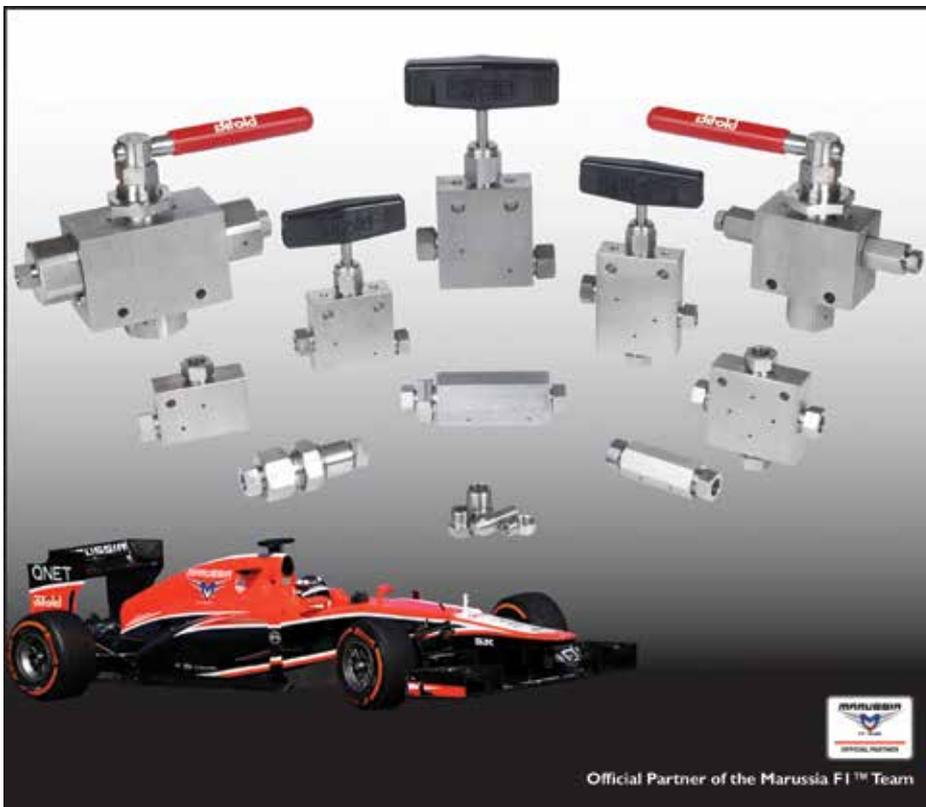
- High tensile 316L CW stainless steel.
- Maintenance free stem sealing system eliminating loss of integrity.
- Innovative locking device available on the ball valve design, which does not compromise through panel mount function.
- A secondary metal to metal seal design provides a failsafe open and close system.
- Tested in accordance with API 598 & BS EN 12266-1

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Bifold, Official Partner of the Marussia F1™ Team have linked Safety with Performance to provide Medium Pressure Instrumentation Valves and Fittings

The Bifold Group broadens its valve line with a range of medium pressure ball and needle valves, delivering safe, reliable operation to 20,000 psi / 1379 bar.



Both valve types are available in 1/4", 3/8", 9/16", 3/4" and 1" tubing sizes, comprising of a coned and threaded connection. The connection method allows for increased flow rates due to the larger bore sizes, common within this range. The valves are constructed from high tensile 316L CW stainless steel (Exotic materials available).

The range comprises of needle valves, ball valves, manifold valves, check valves, fittings and adaptors. The valves are designed with unique features alongside many standard features which

makes the product far superior to conventional products on the market.

Our medium pressure ball valve range is available as a floating or trunnion style and incorporates an innovative locking device. This design allows the valve to maintain its through panel mount function and is pressure tested in accordance with API 598 & BS EN 12266-1, also proof tested to 1.5 times maximum working pressure. These valves are offered in a wide range of configurations, with an operating temperature

range of -46°C to +225°C (-20°C to +180°C) as standard.

Our medium pressure needle valve range is designed with a unique maintenance free stem sealing system. This eliminates the loss of integrity often experienced over time with traditional packing glands. There is also a secondary metal to metal seal system which reduces potential leak paths. Further product advantages include the unique stem treatment to prevent galling, non wetted threads, fail safe open and closed system and many more features and benefits. These valves are offered in a wide range of configurations, with an operating temperature of -73°C to +315°C (-20°C to +170°C) as standard.

Here at Bifold, we are constantly carrying out vigorous research and development on all our products, ensuring that our valves represent the best of what we do.

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Bifold Fluidpower Ltd, Greenside Way, Middleton, Manchester, M24 1SW, UK.

AxFlow Solves A Sticky Problem For Toffee Manufacturer

Walkers Nonsuch of Stoke-on-Trent has been making traditional toffees for over 100 years and exports its high quality confectionery to over 35 countries.



The recipes may be as old as the family business, but the same cannot be said about the processing equipment. One of the company's recent investments has been the installation of six Waukesha Universal 1 Series rotary piston pumps from AxFlow to replace rotary lobe pumps which were plagued by mechanical seal failures.

The toffee production cycle starts with uncooked toffee mixture at a temperature of between 40 and 50°C and this has to be pumped around the factory to various points where it is drawn off for the addition of ingredients that go into formulating the toffee mix. At this temperature the sugar is abrasive and viscous. Once a toffee mix has been produced, the sticky liquid is transferred to the dissolver where it is raised to 85°C in order to dissolve the sugar. Both operations use the Universal 1 Series 60 pumps.

Once the sugar has been dissolved, it is transferred by four Universal 1 Series 15 pumps to the individual cooking ovens. These pumps are governed by flow meters as it is critical that the speed of the pumps is accurately controlled to ensure a smooth production flow. Cooking is a continuous process, but the individual products are manufactured on a batch process, so there has to be a constant availability of the toffee mix into which the various additives, such as flavourings and colours, are fed. The number of hours that any of these Waukesha Universal pumps

run does vary according to production requirement, but as a minimum, the pumps are run eight hours a day.

Walkers Nonsuch switched to the Waukesha pumps after consulting AxFlow, the UK distributor for this pump brand, about the sealing problems that they were experiencing with the existing rotary lobe pumps. "There were two reasons why the Waukesha pumps were selected, the first being down to efficiency of the design and the second was the elimination of replacing mechanical seals," says Production Director, Edward Walker. "It was costing us around £2,000.00 every time seals needed replacing. The attraction of the Waukesha pump is that it contains a self-lubricating double 'O' ring seal, so the problem of costly mechanical seal failures is eliminated. In reality, the initial outlay on a new pump can be recovered in around a couple of years."

The Waukesha Universal 1 Series is a rotary piston pump that employs an operating principle known as the external circumferential piston (ECP). In this design the arc-shaped rotary pistons, or rotor wings, travel in annular-shaped cylinders machined in the pump body. The resulting long sealing path reduces slippage and produces a smooth product flow without destructive pulses or pressure peaks, and without the need for valves or complex parts.

However, unlike progressing cavity and rotary lobe pumps, the Universal pump is not adversely affected by varying or viscous products that may settle in the pump. Because the rotors produce a scooping action, they do not squeeze and compact the medium being pumped.

The Waukesha Universal 1 pump is ideally suited to confectionery manufacturing because it can handle both thick and thin fluids without causing any damage to the pumped product. It combines a very gentle, pulse-free pumping action with the high suction capacity necessary for allowing the thick mix to be drawn into the pump without any separation of the ingredients. The pump uses double 'O' ring self-lubricating sealing system for all applications, which allows high vacuum to be developed on the inlet side.

Manufactured from stainless steel and suitable for CIP cleaning, the pump's close clearances allow the pumping of water against back pressures, whilst its simple design enables operators to completely strip it down for inspection in situ without the need to remove connecting pipework. Where high viscosity fluids and solids are involved, the large fluid cavities of the rotors, together with the large easy-entry anti-cavitation ports enable efficient pumping. Maximum service life can be achieved even under severe operating conditions where fluids are non-lubricating or abrasive because there is no contact between the bearings and the pumped fluid, nor is there sliding or rolling contact and rotor-to-rotor contact.

According to Edward Walker, it is now about two years since the first of the Waukesha pumps was installed and following on from the success of the pump the other five units have been installed as required. Should there be a need to shut one of the Waukesha pumps down, it can be quickly removed and flushed out in a very short period of time in situ. "When you are making up to as much as 40 tons of toffees a week and having to satisfy orders from customers from all over the world, minimising downtime is a key issue," comments Edward Walker. "The removal of the old pumps and their replacement with Waukesha Universal 1 Series pumps has removed the uncertainty and costs of mechanical seal failure, and at the same time is contributing to efficiency."

For further product details, contact:
Tony Peters, AxFlow Ltd, Orion Park,
Northfield Avenue, London, W13 9SJ
Tel: 020 8579 2111
Email: info@axflow.co.uk
www.axflow.co.uk

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.

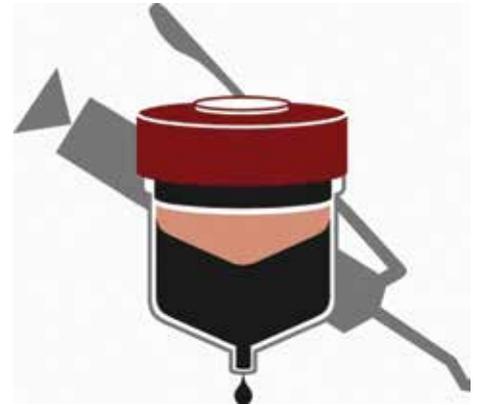


Jack-Luber Model 125 & Replacement Cartridge

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.



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- ▶ Fault/empty reporting
- ▶ Temperature-independent feed rate

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A schematic showing a typical Central Vacuum Cleaning System

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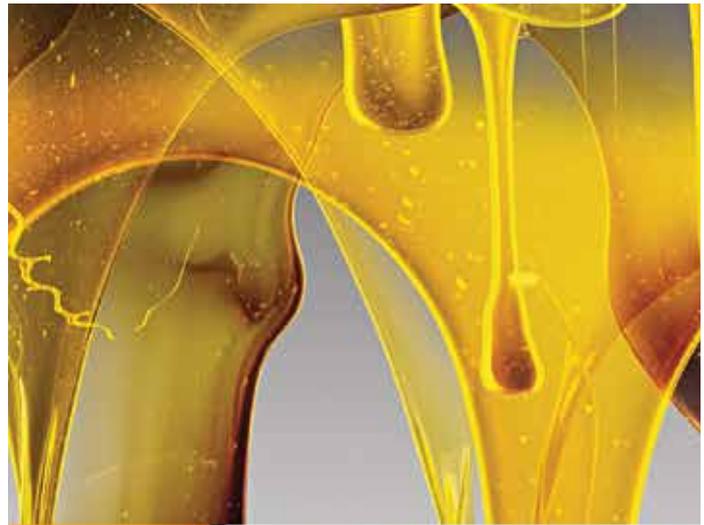


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The filling level of the lubricant cartridge is moreover clearly visible at all times through the transparent housing.



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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.

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KEMPER Reveals Completely New Product Portfolio

- New products, new colours , new exhibition stand
- Innovative products with unique dust extraction
- Portfolio for all applications and budgets



Vreden / Essen, 17/09/2013 – When the curtain fell, everything had changed. Since the opening of the exhibition, KEMPER GmbH has been showing welding and cutting in a new guise. What appears at first glance to be a new colour scheme, logo or website, on closer inspection, turns out to be a product offensive with unprecedented technology inside. Some highlights are mobile devices such as SmartMaster or MaxiFil Clean and the air-cleaner CleanAirTower.



The technological leader in welding fume extraction has set a real milestone in the company's history on extraction systems for welding and cutting, says CEO Björn Kemper: "Looking at our new portfolio of mobile devices, I see no more gaps. The goal was to offer the best solution for all applications. We have achieved that."

Already patent pending is the contamination-free dust removal in cartridges. This technique is unique. It is faster, safer and cleaner than the previous disposal of the dust. Other equipment on the market still uses drawers or bags as containers for the harmful dust. Contact can therefore hardly be avoided when changing the container. KEMPER is already using the new technology in the newly introduced MaxiFil Clean and CleanAirTower.

■ A World-first from the show

MaxiFil Clean is a mobile suction unit for permanent use. The new dust disposal technique, in combination with the self-cleaning filter, ensures



maximum health and longevity. Together with the high mobility and a 360 degree operating radius, MaxiFil Clean can master applications with large amounts of smoke and dust.

The contamination-free dust removal in cartridges is also used in the air-cleaning CleanAirTower.

Wherever a source extraction is not possible or not sufficient, the CleanAirTower is used. It provides effective protection from fine dust. The purified air remains in the room. The device causes minimal air turbulence and prevents the polluted air from entering uncontaminated areas. The CleanAirTower works according to the displacement ventilation principle recommended by health and safety bodies.

A mobile suction device for less than 1000 euros is the SmartMaster, also newly introduced. The basic unit is also suited for welding of high alloy steel due to its W3-approval.

See our website for more information:

www.kemper.eu

FARR GOLD SERIES® PROTECTS AGAINST DUST FROM ALUMINIUM LINISHING PROCESSES



The GS16 is installed outside the factory providing more space, less noise and a cleaner working environment.

PRODUCT INFORMATION

Product: Farr Gold Series® dust collector

Size: GS16 with drop out section

Air Volume: 18.000 m³/hr

Application: Aluminium Linishing

Customer: Russell Consulting Scotland Ltd.

End User: A global company involved in the avionics/ automotive sector, Scotland

Installation date: May 2013

They did this on behalf of this Scottish company for the purpose of providing the best solution to meet the challenges above.

Camfil APC, specialised in dust control systems, proposed a high-tech, custom-designed dust extraction system that would meet all the customer's demands.

The solution is based on a GS16 Farr Gold Series® dust collector. As aluminium dust is highly explosive, the dust extractor had to be fully ATEX compliant. The dust collector incorporates an integral drop out section to remove large volumes of dust from the airstream prior to the air passing through the filter cartridges. This reduces the dust loading on the cartridges and so improves the filter life. Over 1000 kg per week of collected material discharges from the collector via three rotary valves into 1m³ flexible bags.

The GS16 Farr Gold Series was fitted with carbon impregnated HemiPleat Gold Cone filter cartridges, and was supplied complete with an access platform as well as an energy saving variable speed drive controlled by a differential pressure monitor. The system installed provides highly efficient extraction ensuring that operators are protected from exposure to dust generated during the linishing process.

SEPA, the Scottish Environment Protection Agency has tested the system and they concluded that it is an, "excellent installation".

The customer concerned is delighted with their new dust extraction system, as it has both improved the working environment and reduced maintenance costs. Moreover, production no longer needs to be shut down each week in order to clean the dust collector.



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CHALLENGE

This company, located on the West Coast of Scotland, is a leading global development partner in the avionics and automotive industry. They offer unique systems competence regarding internal combustion engines and engine peripherals ranking among the top three systems suppliers worldwide for engine components such as piston systems, cylinder components and valve trains. Their facility in Scotland manufactures precision bearings for the automotive industry.

This customer was using wet type dust extractors

in their manufacturing area to control the dust from their aluminium linishing operations. There were several issues with these wet type dust collectors. They were noisy, inefficient and had to be cleaned out at least once a week. However, most importantly of all they did not comply with the local emissions regulations.

SOLUTION

Russell Consulting Scotland Ltd., a specialist in providing independent advice for local exhaust ventilation systems, contacted their long-term business partner Camfil Air Pollution Control (APC).

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Aquamove™ launches the first mobile membrane degasser

Marlow, 09 October 2013 - Veolia Water Solutions & Technologies has unveiled the latest addition to its Aquamove™ fleet of mobile water treatment solutions.

REMOX is a membrane degasser which removes carbon dioxide and oxygen from water. The first membrane degasser available on the rental market, REMOX is housed in a fully air-conditioned standard 40ft container complete with all necessary compressed air, nitrogen and vacuum equipment. With two streams of membrane modules, REMOX can treat up to 100m³/h of water to less than 0.3mg/l dissolved carbon dioxide and up to 75m³/h to less than 0.01mg/l dissolved oxygen.



Among the many applications for REMOX are deaeration of boiler feedwater to reduce corrosion, degassing of semiconductor rinse water to reduce wafer surface defects and to improve the shelf life and taste of food and beverage products. Additionally, ion exchange deionisation and continuous electrodeionisation processes operate much more efficiently if dissolved carbon dioxide is removed upstream. Aquamove REMOX removes dissolved gases without any chemical addition or waste water, providing safe operation. Complete with automatic monitoring, the Aquamove™ team can monitor the system data and performance, and control the plant. So the supply is maintained and optimised remotely, with total operational security.

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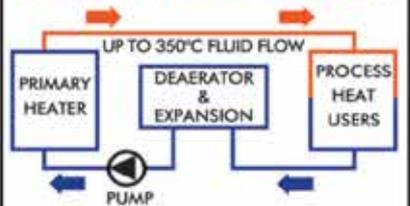
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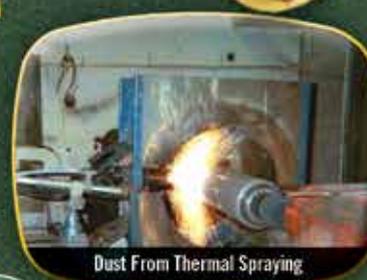
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HPC Compressed Air Systems is recognised as the gold standard in the industry, supplying innovative products and system solutions to the UK's highest quality manufacturing businesses.

A leader in the UK market for fifty years, HPC's "yellow-box" compressed air systems can be found throughout British industry, from workshops and garages to factories and power stations.

From initial air demand survey, through system design, installation and total care servicing, to end-of-life replacement, HPC believes in continuity of care, courtesy and professionalism.

HPC engineers have a wealth of experience of installing and servicing compressed air systems. This enables HPC to provide a service of the highest quality to customers 24 hours a day, 365 days a year.

HPC is able to respond quickly and at short notice to your needs and holds an unrivalled stock of spare parts along with new and reconditioned equipment.



Products

" We supply a premium product and service - not always with the lowest initial capital investment, but always designed to deliver the most economic true lifetime cost of compressed air"

HPC Compressed Air Systems provide quality, reliable, long-term cost-effective solutions to customers' present and future compressed air requirements.



" We are often the only supplier prepared to guarantee our figures for energy efficiency"

HPC's customers are increasingly focused on energy efficiency, to both control costs and reduce their impact on the world's natural resources. HPC always provides the most efficient system solutions while minimising the environmental impact of its products.

The range of HPC compressed air equipment includes:

- Rotary screw compressors - 2.2 to 450kw (5.5 to 15bar)
- SFC variable frequency compressors
- Packaged air systems
- Refrigerant and Desiccant dryers
- Filtration and air purifying equipment
- Condensate management
- Compressor controllers and air management systems
- Air receivers and storage
- Piston compressors
- High pressure boosters
- Portable compressors
- Rotary blowers, exhausters and vacuum

" We know our compressors inside out because we are part of the manufacturing process"

HPC Precision Engineering partners Kaeser Kompressoren GmbH of Coburg, Germany in the production of Sigma Profile air-ends. To maintain the close-tolerances required to ensure high energy efficiency and long operational reliability, HPC machines to within microns in temperature and humidity controlled environments.



All HPC compressors* feature Premium Efficiency IE3 motors that meet or exceed the energy efficiency criteria required to be eligible for Enhanced Capital Allowances (ECA's)

*excluding SX and SXC Series



Serviceing

Serviceing your Compressed Air Requirements

Effective maintenance is essential for the reliability and efficiency of a compressed air system. Regular maintenance can help eliminate the risks associated with costly downtime and maximise productivity. HPC engineers are multi-skilled, factory trained and have the resources and ability to respond to any situation 24 hours a day, 365 days a year.



HPC engineers have access to the latest equipment and technology which allows quick, efficient diagnosis and repair keeping "downtime" to a minimum.

HPC is able to provide competitive service quotes for all makes and types of compressors. An extensive stock of spares and a range of compressed air equipment, that is immediately available, enables HPC to install new systems at short notice. In addition, re-conditioned stock and hire equipment is also readily available.

"HPC service all makes and types of compressors and compressed air equipment"



"HPC supply a premium product and service designed to provide long-term cost effective solutions to customers' present and future compressed air requirements"

HPC's range of compressed air services include:

- Energy saving audits
- Complete turnkey installations
- Installed system modifications
- Compressor and dryer hire
- Heat recovery and ductwork
- Air quality testing to food industry and breathing air standards
- Point of use flow metering
- Remote monitoring and diagnostics
- Air leak surveys and repairs
- Insurance inspections
- Carbon Trust loan and ECA advisors
- Preventative maintenance service agreements
- Extended warranty
- Emergency breakdown and 24 hour call out
- Pipework and ring main installations (new or modifications)
- Site commissioning and customer handover training



Energy and cost savings made simple with HPC

By focusing on energy efficiency, HPC is able to assist customers to control costs and minimise their environmental impact with a number of simple and effective measures:

- **SIGMA Air Manager** - this compressed air management system optimises the compressed air supply and can significantly reduce energy consumption by up to 30%
- **SIGMA Profile** - providing more air and more savings, specially developed SIGMA Profile rotors are at the heart of every HPC screw compressor providing 5% to 15% improved performance compared with conventional profile rotors
- **SIGMA Control** - based on advanced industrial PC technology, the SIGMA Control compressor controller uses a high precision pressure sensor and offers four control modes to enable energy savings of 20%
- **Heat Recovery** - the use of warmed compressor cooling air to provide highly effective space and water heating can provide recoverable heating energy savings of 94% and up to 72% can be recovered through the use of hot water heating systems
- **SECOTEC Control Refrigerant Dryers** - compared with conventional dryers, SECOTEC refrigerant dryers can achieve 88% energy savings and can be eligible for ECA's
- **Optimising System Pressure** - with HPC assistance a reduction in system pressure of 1 bar can equate to a 6% energy saving
- **Improved Air Distribution** - Effective compressed air leak detection and correction combined with modern smooth bore energy efficient pipework systems will reduce unnecessary power consumption at source

- **Air Demand Analysis** - The path to maximum energy savings is the proper application of compressor control systems. A thorough air demand analysis will obtain the information required to optimise a compressor systems performance and reduce energy costs further
- **Regular and Effective Maintenance** - regular planned care and maintenance will keep modern, sophisticated compressed air equipment operating reliably and at peak efficiency. The use of manufacturers genuine parts will also enhance and protect a systems long term performance



Performance, Precision, Partnership



Performance, Precision, Partnership

Contact HPC Compressed Air Systems today for prices and information on air compressors, air treatment products, compressor controllers and air management systems, compressor maintenance, air compressor servicing and pipework system installations.

Benefits of investing in HPC

- HPC is one of the UK's largest and most successful compressed air solution providers
- HPC is a family business with commitment to customer support and value for money
- With over 50 years experience, HPC provides tailored solutions supported by factory trained, time served technicians
- HPC supplies high quality compressed air products and provides a lifetime of value-added services and support
- HPC can provide competitive service quotes for all makes and types of compressors and compressed air equipment



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