



Smart Vibration Switch

Monitoring, display and recording of vibration values in one compact field unit.

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AirBench release VertEx Booth – High Efficiency Containment Booth

AirBench Ltd are pleased to announce the release of our new modular booth designed for attachment to the VertEx cross-draught system.

Using the new modular booth construction, a full environmental containment booth can be built rapidly from standard parts.

The use of very high efficiency fans allows the complete booth installation to operate from low power supplies while achieving very high airflows. The booth shown in the above image is approximately 2.5m wide, 2.4m high, and 2.2m deep, and draws more than 20,000m³/h. This impressive air movement, and the associated booth lighting, all runs from a single 13a socket.

The fully modular construction allows for any width of booth to be delivered using standard components and VertEx base units.

The VertEx Booth is available with the full range of AirBench filters up to and including H12 HEPA filtration as required.



More information, including videos and datasheets, is available at www.airbench.com/vertex. Contact us for an assessment of your dust issue or a demonstration of VertEx.

Denso Void Filler Used For Surface Levelling Posts

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The levelling posts consist of floating bore holes lined with a fixed sleeve and an inner floating sleeve. Winn & Coales (Denso) Ltd's Denso Void Filler was recommended to fill the void between the two sleeves but allowing movement of the inner sleeve.

Denso Void Filler is based on a microcrystalline petrolatum containing corrosion inhibitors and moisture repellents. It forms a permanently flexible medium for the encapsulation and protection of bearings, tendons, stay cables, among many other applications. It has been used on a variety of major civil engineering projects, including both Severn Bridges.



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New Ferrule Opti-Gard™ SoLo rupture disc from Elfab provides high performance pressure relief for ultra-low pressure hygienic applications

Leading rupture disc manufacturer Elfab has launched Ferrule Opti-Gard™ SoLo, an advanced reverse-acting disc designed for use in hygienic and aseptic applications.

Ferrule Opti-Gard™ SoLo enhances the existing Opti-Gard™ range, the most technically advanced rupture disc available on the market since its initial launch in 2003.

Ferrule Opti-Gard™ SoLo features a 95 per cent operating ratio and three per cent tolerance, providing the highest performance characteristics available on the market for hygienic and aseptic installations.

Available in a variety of sizes, and suitable with the

lowest burst pressure capability on the market, the design is non-fragmenting and capable of supporting vacuum and back pressures. The disc is for installation between tri-clamps and ferrules, and benefits from an uninterrupted surface finish to meet FDA approvals, making it ideal for use in CIP and SIP applications.

The unique design also includes an integral Flo-Tel™+ actuator as standard, offering the added benefit of non-invasive, ATEX- approved rupture detection through the Flo-Tel™+ system.



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New, improved safety sign printers: because safety means the world to you

The new BBP™35 Multicolour Sign & Label Printer and BBP™37 Multicolour and Cut Sign & Label Printer support safety and operations professionals to quickly create a safer, more productive facility with multi-colour and multi-shape signs and labels.

The printers offer great colour and cutting capabilities as well as a simple, automatic label setup and intuitive touchscreen to make any sign on demand and on-site.

Increase productivity & reduce accidents

Attention-grabbing safety & lean facility signs can reduce machine downtime, increase productivity and help to meet compliancy, safety and efficiency goals. They instruct employees and contractors on optimal work procedures, warn against dangers and promote safety precautions. The BBP35 and BBP37 printers enable professionals to create highly customisable signage to increase a facility's safety and productivity on demand and on-site.

Print any colour, in any shape

For signage to be effective, it needs to grab the attention of employees and contractors on the workfloor. Customised multicolour signage in various shapes is better able to do that. The BBP37 printer is equipped with outstanding colour and cutting capabilities. Both printers also feature 'drop in' consumables, automatic label setup, LAN and optional wifi connectivity or standalone use, all at a print speed of 12.7 cm per second.

Both BBP35 and BBP37 are compatible with Brady's wide range of durable label materials, able to resist the toughest industrial contexts. Multi-colour printing and cutting features enable users to create a wide variety of signs with just one label supply.



Extra efficiency with Brady Workstation

BBP37 works perfectly with Brady Workstation, a downloadable app-platform. Brady Workstation opens up a host of dedicated signage creation apps. Combined with Brady Workstation, the BBP37 printer enables the on-site and on demand creation of any customised lean or safety sign a facility could require.

Email us at emea_request@bradycorp.com to receive a BBP35/37 printer brochure, or visit www.bradyeurope.com/bbp37 to watch video and download the brochure.
Source: BRADY Corporation

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BRADY UK
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Banbury, Oxon OX16 3JU



Nederman Introduces Most Flexible Dust Collector Ever

To ensure a perfect fit into virtually any manufacturing application that generates dust, smoke or fumes, Nederman has now introduced its new the L-series, a modular and fully configurable dust collector.

In manufacturing facilities where dust, smoke or fume is generated during the production process, the primary objectives are to create a safe working environment for the workforce whilst achieving low emissions to atmosphere, to meet increasingly stringent environmental and health and safety regulations. Since no two facilities are the same, Nederman has designed its new L-series dust collectors, to be fully flexible and configurable to match a wide range of needs in the collection and recycling of dust, smoke and fumes.

How we create the Perfect Fit

The core of any dust collector is the filter media. The Nederman L-series dust collector offers a wide portfolio of filter media in bag or cartridge format, which ensures that performance and filter life is optimised, whatever the contaminant. After selection of the correct filter media, the dust collector is configured to match the required airflow and application characteristics. The L series is modular and assembled from a limited set of stocked panels. This panel stocking enables Nederman to offer very low lead times for all the range, with some standard pre-configured filters available in just two working weeks!

Flexible, efficient and future-proof

Nederman's wide expertise in extraction as well as collection of dust, smoke and fumes helps ensure not only a perfect fit, but also efficiency and a future-proof solution. The new L-series can be expanded to

adapt to future process changes or new regulations. New filter modules can easily be added whenever increased filter capacity is required.

Low total cost of ownership

The L-series offers low total cost of ownership due to low power consumption, minimum maintenance needs and extended filter lifetime. It can be supplied either pre-assembled or be fully built on-site, for those occasions where access requirements prohibit the installation of an assembled filter. This may also generate considerable savings on shipment costs. The Nederman L-series is available in ATEX compliant configurations for safe handling of combustible dusts, as well as with a variety of ancillary components and equipment for configuring the dust collector and system to match all of your facilities operation and maintenance needs. These options include pyramid or trough type hoppers, a no-hopper venting version, dust discharge valves, dust storage bins with 50 or 100L capacity, integral or floor mounted fans and fan silencers.

Wide range of applications

The portfolio of filter media options and configurations available makes the L-series suitable for a wide variety of applications, including crusher extraction, spray dryers, foundries, mixers, grinders, kilns, welding, plasma cutting, shot blasting, thermal spraying, biomass, mining, metallurgical, food and pharmaceutical processes.



Unlimited capacity

Nederman has built the L Series to be suitable for rigorous environments and applications. It is robust, resilient and weatherproof, and whilst the modular method of construction makes the air flow capacity virtually unlimited, there are standard sizes which cater for flows of approximately 5,000 to 300,000m³/hr, dependent on the application and the media selected.

For more details on how Nederman can clean up your work environment, please contact your local Nederman representative on Tel: 08452 743434.

BESTOBELL MARINE IS FULLY APPROVED!

Bestobell Marine, a world leading supplier of cryogenic globe and check valves for ships, has obtained full type approval from the main four international Class Societies for its range of Globe and Check cryogenic valves.

DNV-GL, Lloyds Register, Bureau Veritas and American Bureau of Shipping have all approved Bestobell's valves for use in cryogenic marine applications, which includes valves used in cargo systems on LNG carriers and bunker vessels, LNG fuel gas systems, LNG regasification systems and LNG reliquefaction systems.

Duncan Gaskin, Sales Director at Bestobell Marine, part of Parker PEGL, said: "It is very exciting to be one of the first cryogenic valve manufacturers to receive full type approval from all four Class Societies. This will enable us to develop our business even further supplying cryogenic valves for both marine cargo containment and for fuel gas systems, on an international basis."

Bestobell Marine was required to obtain full type approvals for its range of cryogenic globe and check valves, due to the changing requirements from the IACS Class Societies. Having full type approval means that Bestobell Marine can continue to carry out random tests of 10 per cent of its valves in an order, witnessed by a class surveyor, rather than be subject to excessive testing requirements that would have incurred extra cost that would have had to be passed onto customers.

Bestobell Marine does, however, carry out 100 per cent ambient testing for all its cryogenic Globe and Check valves to identify any leakage problems with its valves.

At its headquarters in Sheffield, Bestobell Marine has its own fully operational cryogenic test facility that allows the company to test thousands of valves each year for its marine and OEM clients.

Extensive experience in this area means that Bestobell has built up a wealth of knowledge in carrying out cryogenic tests. As a company, Bestobell Marine is also hugely experienced in managing large valve contracts and organising factory acceptance tests (FAT) where shipyard, shipowner or OEM representatives attend with the Class surveyors to witness the testing of valves. It is this experience and understanding of managing projects that allows Bestobell Marine to meet customers' exacting project schedules.

Bestobell Marine is a division of Bestobell Valves, a world leader in the manufacture of LNG cryogenic valves, with over 50 years' experience. Bestobell's Valves are widely used on LNG Carriers, Floating



Production & Storage Units and FSRUs (Floating, Storage & Re-gasification Units). The company designs and produces valves to meet specific requirements in the marine sector and has supplied cryogenic valves to a majority of the major shipyards building LNG Carriers.

For more information visit the website www.bestobellvalves.com or call +44 (0) 1142 240000.

BRUSH FRAMES FOR SIMPLIFIED CABLE ROUTEING APPLICATIONS

The icotek range of cable entry products available from M Buttkerit Ltd has been extended with the KEL-BES range.

These products feature Polyamide frames incorporating entrapped Polyamide brushes providing a quick and simple push-through entry for routing cables into network cabinets and control boxes etc. These KEL-BES products are also ideally suited for exit/entry apertures in the raised floors utilised within computer centres.

Three frame sizes are currently available, all providing exact matches for the cut-out dimensions applicable to 10, 16 and 24 pole standard industrial connectors. All frames feature a 10mm thick projection above the mounting service, with a wide mix of round, flat and even pre-terminated

cabling being accommodated. The twin brush strips incorporated into each frame provide a self-sealing closure to whatever standard or mixed cabling is utilised, so limiting or preventing the ingress of all but very fine dust particles.

All frame fixing and cable routeing applications can now be simplified, resulting in higher versatility and time saving. The frames are manufactured from black Polyamide (PA) with a flame class of UL94-Vo, with the same material utilised for the brushes. The products are Halogen and Silicone free and are suitable for operations within a temperature range of -20°C to +90°C.



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New Optical Sensor From ABB Cuts The Costs Of Dissolved Oxygen Measurement

Advanced digital sensor with EZLink technology offers enhanced accuracy and reliability for dissolved oxygen monitoring

Problems associated with traditional dissolved oxygen sensing systems can now be eliminated using ABB's new optical dissolved oxygen sensing system. Consistent, reliable and accurate, it can help operators to realise significant savings through reduced energy consumption and maintenance.

Comprised of the ADS430 sensor and multi-channel transmitter, the system provides the highest levels of stability and accuracy for dissolved oxygen measurement. The ADS430 optical dissolved oxygen sensor uses Rugged Dissolved Oxygen (RDO®)* optical technology for measuring dissolved oxygen in the most demanding process environments. The RDO technology, which has been approved by the U.S. Environmental Protection Agency (EPA), uses the dynamic luminescence quenching technique.

Comprised of a sensor and multi-channel transmitter, it works on the frequency domain method and provides the highest levels of stability and accuracy for dissolved oxygen measurement.

The patented signal processing within the sensor enables it to respond to changes in process conditions up to five times faster than other optical systems, allowing maximum process savings through improved control.

The robust design of the sensor enables it to withstand the problems that can affect conventional membrane-based sensors, such as abrasion, fouling or poisoning. Constructed from inert, non-corrosive materials, it is suitable for use in high salinity environments. The sensor lumiphore is not affected by photobleaching or stray light. The sensor itself is also immune to the effects of sulfides, sulfates, hydrogen sulfide, carbon dioxide, ammonia, pH, chloride and other interferences that can affect membrane-based sensors.

The use of the dynamic luminescence quenching principle means that the sensor is not susceptible to drift, removing the need for frequent maintenance.

A key benefit of the system is its simplicity. ABB's EZLink plug and play technology automatically connects the transmitter and sensor, with no need for wiring or complicated configuration.

Set-up is straightforward, with a user friendly HMI and clear menus making it easy to set parameters and view diagnostic information.

Available in two or four channel versions, the Aztec AWT440 universal transmitter can be connected to up to four ABB digital sensors, enabling monitoring at multiple points without purchasing and installing separate transmitters.

This simplicity also extends to the sensor itself, which features a smart sensing cap with automatic setup. The SmartCap comes pre-loaded with factory calibration coefficients, serial number, lifetime indication, and manufacture date which are automatically uploaded to the sensor, eliminating the time normally required for set-up. By automatically prompting the user when replacement is due, the SmartCap also removes the risk of unexpected sensor failure.

The SmartCap is capable of up to 24 months of continuous operation, greatly reducing the requirement for maintenance. When the cap does need replacing, it will be as easy as the original installation – the calibration details will be pre-loaded and the transmitter will automatically recognise the new sensor.

When cleaning is necessary, it can be cleaned and redeployed without calibration, saving time and cost and eliminating disruption to measurement.

For high-fouling applications, the sensor can be automatically cleaned using ABB's auto-cleaning system. This system periodically injects a high pressure burst of air across the sensor surface to remove any fouling.

All measured data is stored in the AWT440 transmitter's internal memory, together with event log and configuration data. In total, up to 300 days' worth of process data can be stored, in addition to the last 10 data log and event log files and eight configuration files within its internal memory.

The transmitter's event log files contain audit log, alarm log, diagnostic log and calibration log data that is time and date stamped, providing the operator with full audit trail capability.

Various options are available for remotely accessing data held within the transmitter. An Ethernet option enables measurement readings and active diagnostics data to be accessed via a PC. Profibus DP V1.0 or



Modbus RS485 communications provide the added choice of accessing data via a distributed control network. The inclusion of SD and USB portals also enables users to securely store data on portable devices for transfer to a PC for analysis using ABB's DataManager Pro data review software.

With a range of installation options, the ABB optical dissolved oxygen system can be used in a wide variety of applications, from large-scale municipal and industrial waste water treatment plants through to food and beverage production processes. Options include dip mount systems, floating ball systems and chain mount immersion systems for open tank and channel installations, as well as a flow-through system for panel mount systems.

ABB has extensive experience in the design, manufacture and lifelong support of dissolved oxygen sensors for water, wastewater and process applications.

ABB's Measurement & Analytics business unit (www.abb.com/measurement) is among the world's leading manufacturers and suppliers of instrumentation and analyzers. With thousands of experts around the world and high-performance technology, ABB's team is dedicated to making measurement easy for its customers.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility, industry, and transport and infrastructure customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in roughly 100 countries and employs about 140,000 people.

ABB Measurement & Analytics
Tel: 0870 600 6122
tim.door@gb.abb.com

Innovative Apollo 600 Granted Patent Protection

Seaward's most advanced portable appliance tester has been awarded a UK patent that recognises its unique ability to combine formal visual inspections and all required electrical testing as part of a formal safety risk assessment process.

The Apollo 600 has been specifically designed to incorporate a range of special features in line with HSE guidance to ensure that the inspection and testing of workplace electrical appliances is proportionate to the safety risks presented.



To meet this need, as well as an onboard risk assessment tool to help determine re-test intervals, the multi-purpose PAT tester incorporates a built-in digital camera to enable high quality images to be tagged against appliance test records.

Along with the storage of test results against a unique appliance identification number, the integral camera enables comprehensive and completely traceable electrical safety records to be maintained and future test programmes to be managed effectively.

More details at www.seaward.co.uk

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Dialight's Stand-Alone Wireless Occupancy Sensors Deliver Maximum Flexibility, Control & Efficiency for Smart LED Lighting Systems

Cordless, Plug-and-Play Sensors Install in Any Location to Control Single Fixture or Lighting Group for Maximum Energy Savings

Dialight, the innovative global leader in LED lighting technology for industrial applications, today unveiled its new wireless occupancy sensor, a unique battery-powered plug-and-play sensor that speeds and simplifies installation to provide maximum lighting control flexibility and energy savings in industrial applications.

Designed to integrate seamlessly with any Dialight smart lighting system, the new wireless sensor can be placed virtually anywhere within a facility, without the need to install or move cabling, for nearly unlimited lighting control options. A single sensor can be programmed to control multiple lights and groups of lights, eliminating the need to install a sensor on every light.

Using Pyroelectric InfraRed (PIR) technology, each sensor can instantly switch a single light or a group

of lights from off to on or from a dimmed state to on when motion is detected for full visibility and brightness only when needed, greatly reducing on-time and power consumption. Multiple sensors can be linked to a single Dialight gateway to manage several (or up to 100) nodes (sensors and lights) from a single wall controller.

Programmable dimming and customizable timeout options allow facilities to configure fixture on-time for each sensor at one-minute intervals. Lights can be programmed to remain on for up to 30 minutes once motion is no longer detected and then dim or turn off instantly.

Auto-detect technology instantly recognizes new sensors on the network upon activation for fast and easy configuration. And, each light and sensor in the network can be securely monitored and configured



remotely from anywhere through the Dialight cloud-based gateway portal using a tablet, laptop or smartphone.

With its 10-year lithium batteries and self-healing 2.4 GHz IEEE 802.15.4 mesh networking system, the new occupancy sensors offer the same long-life performance and dependability of the complete Dialight wireless lighting system, backed by a 5-year warranty.

For information about Dialight please visit www.dialight.com
Or Call: +44 (0)1638 665161

DOCK HOUSES – ARE YOU IGNORING A GOOD THING?

Dock houses - complete pods consisting of a dock leveller and dock shelter in one are used to maximise warehouse space, providing an additional area between the warehouse and the vehicles being loaded and unloaded.

Situated on the outside of the warehouse walls, they allow the use of internal space to be maximised. It's also possible to build dock houses that can be moved around, creating 'portable' loading docks which can greatly improve flexibility in the operation. In short, they can be invaluable additions to warehouses or distribution centres.

Stertil Dock Products, one of the UK's leading suppliers of loading bay equipment, believes that dock houses are an underrated option that more logistics operations should consider. If properly designed, dock houses can be relatively light in structure whilst still being strong enough to cope with heavy loads.

Dock houses are generally manufactured from insulation panel with a minimum 40mm thickness (80mm is optional). They can, however, be covered in single-skin cladding for ambient buildings. Insulation panels are self-supporting and are extremely strong when fixed in position with deep 'U' channels. Roofs are usually made from a deep corrugated section, which is flashed and

fitted with downpipes to take rain water down to the service yard level.

The dock shelter or dock pad fixing is organised within the structure and this is generally taken care of by galvanised folded sections fabricated into a frame. The door can be housed at the building line creating maximum insulation of the main warehouse when the door is closed. Alternatively, it can be housed within the dock house - either at the front or rear. However, it's important to remember that, if a sectional door is to be used, the dock house must be sufficiently high and long to take the door tracks.

Installation needs to be carefully considered. At many sites, the dock houses are entirely separate and independent of each other because it suits the programme for pouring the floor slab inside the warehouse. By contrast, they can be installed in multiple units if space between them is limited.

Stertil Dock Products' experience and expertise means



that the company can build dock houses in virtually any shape or size incorporating a variety of cladding finishes. Visit www.stertil.co.uk for more information on the benefits of dock houses.

Stertil UK Limited
Tel: 0870 770 0471
Email: ageorgiou@stertil.co.uk
www.stertil.co.uk

Hydrotechnik Launches New Expanded Range Of Pressure Sensors For A Multitude Of Industry Applications

Hydrotechnik UK Ltd is pleased to announce the launch of its new expanded pressure sensor portfolio to meet the needs of a wide range of industries and applications, from low cost OEM production to high performance R&D and test.

Made in Germany in partnership between Hydrotechnik & ADZ, the new product line offers an extensive choice of cost effective proven solutions for markets ranging from industrial machinery, process and environmental systems to automotive, rail and aerospace.

Featuring thin-film and diffused silicon elements, the ADZ piezo-resistive sensing technology is inherently accurate, small and robust with stainless steel construction.

This enables it to be readily adapted into many different sensor configurations for customer specific requirements; from a standard 22mm cylindrical transmitter to customised miniature transducers for critical measurements in confined spaces such as automotive engines.

Richard Price, Managing Director at Nottingham based Hydrotechnik said "In the 25 years that we've been supplying test and measurement equipment, we've consistently delivered high quality products that provide a perfect solution for customer challenges, backed by our highly technical support team.

"I'm confident that our newly expanded pressure sensor range will be well received as it offers more choice of performance, configuration and applications to address existing and new customer opportunities."

Featuring ranges from 10 mbar to 4000 bar with excellent shock, vibration and overload ratings, Hydrotechnik's rugged stainless steel pressure transducers and transmitters are suitable for all kinds of gas/fluid media, even in harsh operating environments with temperatures from -40 up to 200 degC. Gauge,

absolute, vacuum and differential configurations are available and flush mount/ open face diaphragms.



Dependant on user requirements, measurement accuracy at room temperature conditions (according to IEC 61298-2) can be supplied up to 0.1% of calibrated pressure range - equivalent to 0.05% BFS (Best Fit Straight Line). This includes the combined effects of non-linearity, hysteresis, non-repeatability and zero/span offset.

All popular electrical outputs are available including 2/3 wire 4-20mA, voltage, switch and CANbus (CANopen 2.0A/2.0B) and example connectors include DIN, Deutsch, M12, Packard and Superseal amongst others. Intrinsically safe ATEX / Ex approved versions are available for use in Zone 0 and Zone 1 hazardous areas.

For further information Contact:
Richard Price - Managing Director
richard.price@hydrotechnik.co.uk

Hansford Sensors To Showcase Solutions For Effective Vibration Monitoring At Maintec 2016 Stand M314

Hansford Sensors, the leading manufacturer and global supplier of industrial accelerometers, will be presenting a selection of its market leading vibration monitoring solutions at Maintec 2016.

At the show, visitors can see the many vibration monitoring options offered by Hansford Sensors for themselves. This includes: the HS-100 series, which is an AC industrial accelerometer that enables quick and easy measuring of vibrations in rotating machine components; and the Premium HS-170, which delivers improved frequency response and enhanced efficiency compared with many other market options.

Hansford Sensors will also be showcasing its popular low cost HS-420 on-line sensor for monitoring such equipment as fans, pumps and motors, as well as the HS-620 Vibration Monitoring Kit, which enables maintenance technicians to

measure bearing condition and levels of velocity, acceleration and displacement.

In addition, visitors will have the opportunity to discuss their own application and condition monitoring needs and the many benefits of vibration monitoring with Hansford Sensors' experienced on-stand specialists.

"Maintec is one of the most important events in most maintenance technicians' calendars, which is why we'll be presenting our leading range of vibration monitoring equipment once again," explains Chris Hansford, Managing Director at Hansford Sensors. "By implementing an effective maintenance strategy



that features vibration monitoring, maintenance teams can minimise the downtime of their assets and achieve greater productivity."

Maintec 2016 will be taking place at the NEC in Birmingham on 22-24 March 2016. Visitors to the show will find Hansford Sensors at Stand M314.

For more information on Hansford Sensors' range of intrinsically safe accelerometers, please visit the Hansford Sensors website www.hansfordsensors.com

Loading Bay Equipment and Industrial Doors



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stertil DOCK PRODUCTS

Engineered for Excellence

The World's Most Durable Infrared Window

Infrared windows that are designed to withstand the rigours of the industrial environment and maintain accuracy are the products for which IRISS is already world-renowned.



With its latest introduction, however, the company has set the bar even higher in terms of product durability. The new IRISS CAP-ENV is unequivocally the toughest and most reliable infrared window available and suitable for thermal inspection of energised equipment in the visual, UV and all three infrared wavelengths.

What sets this product apart from others in the IRISS range is a stainless steel housing complete with a reinforced, lockable door which is environmentally

sealed to IP67/NEMA 6. This means that accurate quantitative and qualitative measurements can now be taken from live electrical systems in the most hostile of conditions. IRISS CAP-ENV is therefore ideal for use in offshore, onshore or marine applications, exposed industrial environments and in climates characterised by temperature extremes.

An exclusive pharmaceutical grade reinforced Poly-View System™ polymeric material creates the large and clear, rectangular IR window of the CAP-



ENV. It provides an unparalleled field of view when compared to traditional round windows and a choice of standard sizes is available to suit the application. These range up to CAP-ENV 24 that measures 61cm x 21.8cm; custom sizes, materials, locking devices, labelling and colour are also available.

The benefits of the IRISS IR transmissive polymers for industrial applications are clear. The materials are unaffected by mechanical stress and are shatterproof. They maintain a fixed and stable transmission rate even when exposed to humidity, moisture, seawater and a broad spectrum of acids and alkalis. The addition of an environmentally sealed door on the CAP-ENV system, allows IRISS to complement these qualities with another layer of application security, creating a supremely reliable data collection port for tough applications.

These credentials are assured by a series of certifications. Indeed, IRISS windows comply with more standards, by far, than any other IR window. These include UL, cUL, CSA, IEEE, Lloyds of London and most recently, DNV accreditation. The IRISS CAP-ENV is no exception to the rule but it also carries the higher IP rating confirming its suitability for harsh environments. And, in common with all IRISS products, the CAP-ENV is also protected by the IRISS unconditional lifetime warranty.



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Smart Vibration Switch

Monitoring, display and recording of vibration values in one compact field unit.



New developments in vibration monitoring from sensor specialists ifm electronic are spearheaded by the VNB001, the first in a new line of compact yet powerful vibration sensors.

For continuous online monitoring of machine condition, the VNB001 measures and displays the average vibration velocity (mm/s or in/s). Not only can a system such as the VNB001 help maintain reliable operation, but also monitoring by vibration severity to ISO 10816 can avoid unplanned downtime and costly consequential damage.

Overall vibration velocity can be measured as peak-to-peak value (highest speed achieved or rms value (root mean square) amount of vibration energy, usually between 50...80% of peak amplitudes : the VNB001 offers both, with the default setting as rms. The measuring range in(mm/s) of the VNB001 can be set up to a maximum 500 and measurement

values v_{peak} or v_{rms} are in the ranges 2...1000 Hz (0...500 mm/s) or 10...1000 Hz (0...50 mm/s), making the VNB ideal for machines with speeds between 120 and 600 rpm.

The VNB001 is equipped with pushbuttons, making it simple to set up, requiring no PC software for parameter setting. A setting guide for switch point settings according to ISO 10816A is freely available on the ifm electronic website, www.ifm.com.

For data collection and trending over a period of up to three years, an on-board time-stamped history function logs vibration values, as well as the values from an external sensor (if used).

Once installed the user can clearly see the machine status by the colour of the LED display. The four-digit alphanumeric display shows the real-time vibration value, colour coded for "traffic light" function, (green

for normal operation, amber for early warning, and red for the main alarm) allowing instant identification of a critical situation regardless of output status. A closer inspection will also reveal individual output status as well as other indications from the eight signal LED's above the alphanumeric display.

Critical machine conditions are signalled using either two switching outputs or alternatively one switch and one analogue (4 to 20mA) output. In addition to the outputs, an input allows for the simultaneous monitoring of a further process value, for example temperature, and these values are recorded together with the vibration data.

In a fixed installation the VNB001 is powered from a standard 24V DC supply via an M12 connector. However, portable operation is also possible, in combination with, say, a tablet or laptop, where the unit can be powered using the integrated USB. The integrated display can even be used to show the ISO and temperature measurements which means not even a PC is required, just a USB battery pack.

While the VNB is designed to be simple to use, the parameter setting menu also offers many variable settings for the more sophisticated applications, from on and off delays on the main outputs and scaling the analogue to setting hysteresis values, and much more besides. The setting also features an electronic lock to prevent tampering once the required parameters have been chosen.

As a product designed for industrial applications, the VNB001 is built with a rugged die-cast housing and will operate over a temperature range of -30 °C to +60°C, with a protection rating of IP67, withstand shock and vibration to EN 60028-2 and conforms to the generic EMC requirements of EN 61000-4.

ifm is committed to working closely with its customers to develop products which precisely match their needs, and the company provides expert, readily accessible technical support to help users maximise the benefits they gain from ifm products.

For More Information:
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www.ifm.com/uk

Precision Meets Connectivity

The first cloud-based shaft alignment system ROTALIGN touch integrates shaft alignment into the overall plant assessment



If a new machine has been correctly aligned at commissioning, and regularly checked thereafter, a significant amount of operating and maintenance costs can be saved.

Laser shaft alignment with online functionality

Different shaft alignment methods are available. Shaft alignment using a straightedge, a feeler gauge, or a dial gauge can still be found. One of the disadvantages of these methods is that they cannot be integrated into a Smart Factory with self-controlling production processes as they do not offer connectivity. However, integration of maintenance tools into technologies of the Smart Factory are already possible: The laser-optical method is used worldwide and across many industry sectors as standard process for shaft alignment. Mobile devices, such as tablet PCs or smartphones, can communicate with the sensor system. Thus, measurement reports can be sent immediately via e.g. e-mail.

Laser shaft alignment offers many outstanding advantages, including:

- Graphical display of the alignment results
- No coupling disassembly required during measurement
- Accurate and repeatable results paired with high usability
- Results can be electronically stored and printed
- Display of vertical and horizontal corrections in real time during machine adjustment (Live Move mode)

ROTALIGN touch – the first Cloud-based alignment system for Smart Factories

Connectivity and usability paired with high precision: ROTALIGN touch, the latest member of the PRUFTECHNIK product family meets all the requirements for a modern and innovative alignment system.

Mobile connectivity at its best

As the only cloud-based laser shaft alignment system with touchscreen, the ROTALIGN touch can be fully utilized in the area of connectivity. Using the new ALIGNMENT RELIABILITY CENTER 4.0 software, alignment work orders e.g. to service teams can be sent in real time via the Cloud to mobile ROTALIGN touch devices worldwide. In return, the Wi-Fi- and Bluetooth-enabled devices can send measurement results back from any location directly via the Cloud and without PC connection. In combination with the

Big Data, Cloud, Internet of Things, and Smart Factory: This is just a selection of the buzzwords currently dominating the discussions in many industry sectors. Beneath all of this is the need for almost complete automation of production and control processes.

However, the move towards self-controlling production plants increases the functional complexity and also drastically increases the requirements on the operating personnel. User-friendly and well-conceived solutions will therefore become even more important in the future.

Objective: Smart Factory

An important prerequisite for automation and plant management is the communication among the machines. For this reason, connecting all the components within a plant is a central prerequisite for setting up the so-called "Smart Factory." The vision of the Smart Factory also requires that that all upstream and downstream production processes be interconnected. Such a plant monitoring system also requires interfaces for the seamless data exchange between plant control, process visualization, and operator.

Misalignments

More than 50 % of all pump damage is caused by misalignment. The failure rate can be significantly

reduced with the use of laser measuring systems.

Device connectivity is the measure of all things in maintenance as well

Comprehensive device connectivity, be it via a network, Bluetooth, Wi-Fi, or a Cloud solution is also a key requirement when implementing maintenance solutions. Connectivity is decisive for mobile service and maintenance teams. They often perform maintenance work at different sites and/or for different clients and need to be able to call up orders or send measurement reports at any time.

Alignment as part of the maintenance strategy

Intelligent condition monitoring of machines and plants is an important part of a comprehensive maintenance strategy. This also includes the precise alignment of machine shafts, as incorrect alignment causes more than 50 % of all damage to rotating machines.

Misalignment means:

- Premature wear of bearings, seals, shafts, and couplings
- High temperatures at bearing and coupling
- Excessive vibrations
- Loose foundation screws Breaking (or tearing) of shafts on the inside
- Increased power consumption

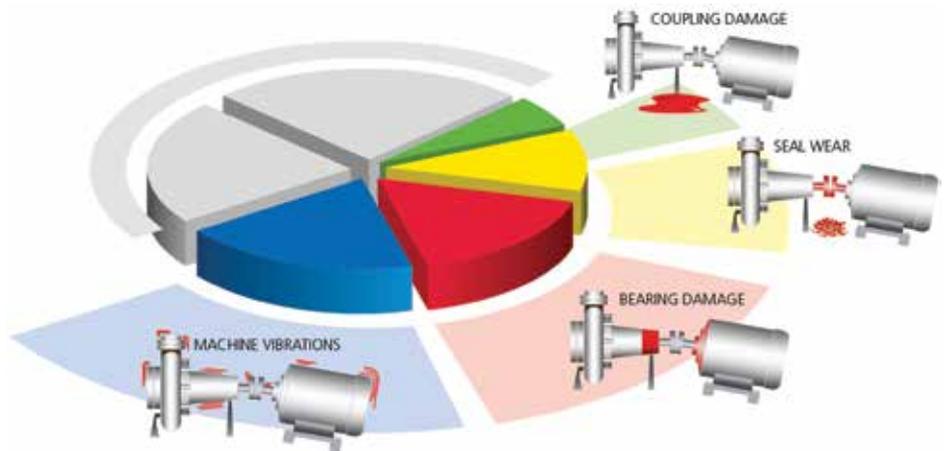
integrated RFID scanner, the plant-specific tasks enable a fully automated and error-free machine identification. After the corrections, the alignment condition as left can be conveniently stored in the RFID tag of the machine. Using the inbuilt camera, the user can add photos to the measurement report for a more visual documentation.

ROTALIGN touch – Alignment as a dynamic condition monitoring parameter

With the ROTALIGN touch, alignment is not a static snapshot anymore. It becomes a dynamic machine condition monitoring parameter. ROTALIGN touch is the only alignment system that can track the alignment condition over time in order to detect machine problems early on.

Easy user interface enables alignment in one-key flow

Alignment has never been easier: The newly developed user interface with 3D animations enables a fully intuitive and visual work sequence. Using the wizard-like user guidance, users may perform standard and more sophisticated alignment jobs by only pressing one button. Navigating back and forth between the screens is possible at any time.



ROTALIGN touch – More highlights

- Voice recognition – ROTALIGN touch can recognize and process voice commands making both your hands free for the alignment task
- sensALIGN – The unique, intelligent sensor technology offers the unmatched precision and accuracy you've come to expect from PRUFTECHNIK
- Display screen made of strengthened glass and robust housing – ROTALIGN touch withstands even the most intensive industrial use
- Results table for quick check of measurement

repeatability without navigating away from the current measurement.

- First capacitive touchscreen-embedded system on the shaft alignment market that can also be operated with gloves.

For further information, please visit www.what-is-coming-next.com/en

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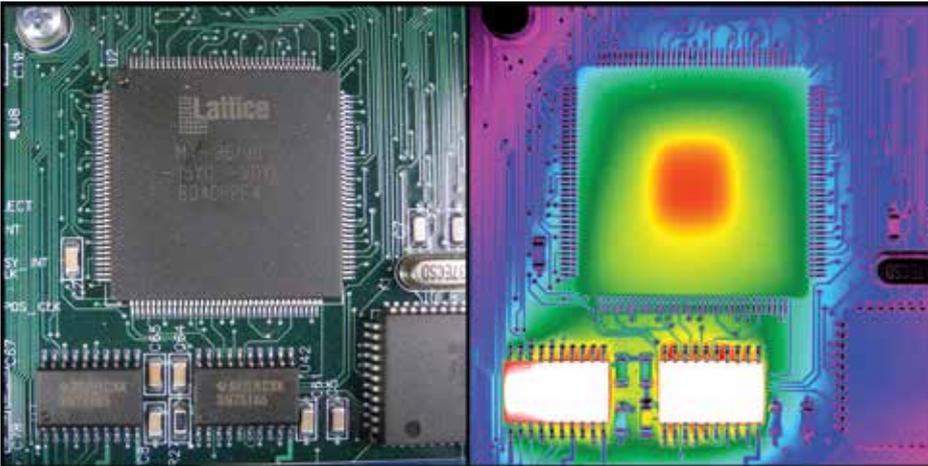
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SEEKING HOTSPOTS WHAT ARE THE OPTIONS?

For measuring temperature is it best to use a spot pyrometer, a thermal imaging camera or a combination of the two?



Well essentially it depends on the application, whether the measurement needs to be put into context and also the scope of temperature measurement across other tasks.

All the devices work according to the same principle; they are non-contact devices that detect infrared radiation and translate it into a temperature reading. Indeed a spot pyrometer can be seen as a thermal camera with just one pixel and it can be very useful for a wide variety of tasks but, it is simply a tool that measures temperature in one spot, nothing else. This may be sufficient for some applications it does not allow the full potential of thermal measurement to be incorporated into the predictive maintenance routine.

Whilst a spot pyrometer gives you a single number, a thermal imaging camera generates an image from multiple pixels each of which provides a temperature reading. In effect the camera combines thousands of spot pyrometers in one device. So a camera with an image resolution of 160 x 120 pixels, such as the FLIR E40, is therefore able to provide 19,200 temperature readings at once.

These many thousands of measurement points are then translated into a radiometric thermal image providing a complete overview of the target area. This allows the operator to see the thermal profile of the problem and its heat distribution. It puts the hot spot into context, greatly assisting diagnosis. Some cameras also provide simultaneous visual imaging and cleverly combine both thermal and visual images to give greater detail.

A thermal camera also saves inspection time. Scanning large areas with many components using a spot pyrometer is a very time consuming task whereas, with a camera, a single image is often all that is needed. Also, thanks to their advanced optics, thermal cameras can resolve temperatures from further away and with a greater degree of accuracy.

By comparison, for a pyrometer to maintain its accuracy, very close attention must be paid to its spot size in relation to the size of the target; the smaller the target, the closer the camera needs to be to that target to ensure the spot size covers it entirely. If the target is smaller than the spot size, the detector will take in radiation from the object's surroundings, potentially compromising accuracy.



Recent developments have taken the scope of temperature measurement even further. Maintenance engineers no longer have to choose between a spot pyrometer and a thermal imaging camera, they now also have the option of an imaging thermometer. The development of a micro thermal imaging core has allowed the benefits of spot measurement and radiometric imaging to be combined so engineers can have both technologies instantly available for fast and effective troubleshooting.

Indeed, the introduction of the micro-core is paving the way for a range of combined technologies – watch this space!

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*An additional accelerometer A9012 needed for two plane balancer



www.tpieurope.com

New entry-level model introduced to 14.5cm LCD touchscreen Fluke TiX Expert Series Infrared Cameras

With a full 180° articulating lens and 14.5cm touchscreen, the new entry-level Fluke® TiX500 Infrared Camera allows thermographers to easily navigate over, under, and around objects to preview and capture images.

The recently-introduced Fluke TiX Expert Series cameras are ideal for predictive maintenance, in R&D, oil and gas, and utility applications, where flexibility and higher resolution are essential, and they enable users to share their data in real time via Fluke Connect™.

The responsive 14.5cm LCD touchscreens of the Fluke TiX Expert Series offer a large viewing area, which enables thermographers to quickly identify issues while still in the field, as well as easily edit images directly on the camera, eliminating time in the office. SuperResolution mode boosts resolution four times, so the normal 320 x 240 pixels resolution of the images captured increases to 640 x 480 pixels, revealing even greater detail. Optional telephoto and wide-angle lenses add versatility to meet a wide variety of applications. The TiX500 is suitable for temperatures between -20°C and +650°C, while the other models cover up to +850°C (TiX520) and +1200°C (TiX560).

Out of focus images may produce inaccurate temperature measurements that can be off by as much as 20°, making it easy to miss potential problems. To ensure consistently in-focus images, the cameras feature LaserSharp® Auto Focus, exclusive to Fluke, which uses a built-in laser distance meter to pinpoint the target, and accurately calculate and display the distance.

The cameras also feature Fluke IR-Fusion® technology with Picture-in-Picture, full visible light, and AutoBlend™ modes for easier identification and reporting of problems. On-board advanced analytics allow users to adjust or enhance images right on the



camera without additional software. Also included is Fluke SmartView® software, which provides a suite of advanced tools to view, optimise, annotate, and analyse infrared images, and generate fully customisable professional reports.

Fluke Connect

The Fluke TiX560, TiX520 and TiX500 Expert Series Infrared Cameras are part of the Fluke Connect™ system, the world's largest portfolio of connected tools, which allows technicians to wirelessly transmit measurement data from their test tools to their smart phones and tablets for secure storage on the cloud and universal team access from the field. Fluke Connect with ShareLive™ video call enables teams to easily share and access infrared inspections on the go and look at trends over time. The Fluke Connect app can be downloaded free from the Apple App Store and the Google Play Store.

For more information on all Fluke products, please visit: www.fluke.co.uk

Stethoscope ELS14 An Important Part Of The Toolbox At Paper Mill

Listening to machine sounds in order to identify potential problems is common practice in many industries and Swedish paper mill Stora Enso Fors in southern Dalecarlia has long been frequent users of SPM's earlier stethoscope.

Frequent use in the harsh plant environment - with high levels of heat and humidity - puts high demands on the sustainability of the stethoscope. In conjunction with the development of ELS14, the new generation of the electronic stethoscope, the maintenance department at Stora Enso Fors took part in field testing prototypes and have thus been able to provide valuable input and suggestions, resulting in the functionality and performance offered by the recently launched ELS14.

Mats Dickfors, preventive maintenance inspector at Stora Enso Fors, says: "What we like about the stethoscope is that it is convenient, easy to handle and feels good in your hand. The ability to record and filter machine sounds in a quick and easy way is a big advantage as well. The fact that the instrument

can also be used with Bluetooth*, rendering the cable between instrument and headphones unnecessary, provides greater certainty when listening to rotating machinery. The instrument is neat, reliable and of high quality.

ELS14 was launched in April and at the time of writing, the maintenance department at Stora Enso Fors has seven new stethoscopes at its disposal.

The Stora Enso Fors mill is one of the world's largest and most modern facilities for producing carton board for consumer packaging and printing purposes. It is an integrated mill with its own pulp mill and two board machines, KM2 and KM3. The latter is equipped with the Intellinova system for online condition monitoring, while the remaining



measuring points are monitored through periodic measurements with the portable instrument Leonova Infinity.

*Stora Enso Fors has opted to use an external device for wireless transmission (not supplied by SPM) to the headphones via Bluetooth.

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The World's Sixth Sense™

Agility Version 7: Easier, Simpler and even more Mobile

The very latest release of the market leading EAM/CMMS system Agility, from SoftSols Group now delivers an easier, simpler user experience particularly on devices with smaller screens.



Agility Version 7 now includes new mobile friendly features such as expanding and contracting menus to maximise the useable screen space and graphic icons have been added to menus and navigation bars to aid system recognition and familiarity.

A more personalised Agility experience is now available through Version 7 with a new panel allowing users to add a picture and contact information. Agility also now recognises the system features that are visited most by users and presents these in the new 'frequently used' menu option.

The same mobile device compatibility principles have also been applied to the frequently used forms in Agility, with navigations being retractable to make best use of the available screen space. The newly designed equipment form also contains some new features enabling asset performance to be analysed in detail.

Building on the very popular asset map feature and recognising that users have varying levels of IT literacy, raising a work order against a specific asset can now be done in a simple one click action. This means any operative can quickly log a breakdown, helping to improve response times and reduce production downtime.

Agility for Android now has even easier to navigate menus with the new release of Version 7 and a range of brand new features. Signature capture, associating multiple checklists, a search facility and making stock issues and returns are all now possible from the Android mobile device, dramatically increasing work and information flow from the mobile device.

"We know from our own mobile license sales which have increased 76% from 2014 and Android's

continued domination of the smartphone and tablet markets just how important the continued development of Agility for Android is" commented David Hipkin Group Managing Director for SoftSols Group.

David continued, "This has been reinforced by the discussions and interest levels we've seen at our recent customer events, the marketplace is really embracing Android primarily due to the cost of the actual devices, which are much more affordable than with other operating systems"

"Our development roadmap for 2016 will see further features added to Agility for Android and some really exciting auto-deployment possibilities which will help organisations see significant savings in both administration resources and time".

Ease of use has been front of mind when introducing other additional features in Agility 7; the new simple helpdesk form enables details of issues to be quickly and intuitively captured and comments can be added to the request enabling history and feedback to be quickly and easily referenced. A new task view allows users to see their scheduled work in their preferred day, week or monthly views. Plus a new multi scheduling tool enables managers and planners to schedule multiple tasks to employees or contractors in one single action.

Tim Tunnard, Commercial Director commented, "The reaction to Agility 7, and feedback on the new features and Agility for Android has been fantastic, we're going to have a very busy end to 2015!"

To find out more about Agility Version 7 and book a personalised demo, please contact us on 01924 200344 or visit www.softsolsgroup.com

Evaluating a Move from Excel to CMMS Software

NEW

Is it cost effective and time efficient to manage your maintenance activities using a spreadsheet?



Weigh up the benefits of utilising software to manage maintenance routines and streamline processes, in **our new complimentary white paper** which explores:

- The pros and cons of spreadsheets versus CMMS software
- What to consider before moving from Excel to more streamlined technology
- How to make a business case for CMMS software
- Step by step guidance on importing your information to the new system

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Excel to CMMS software – Making the Transition

Great facilities have always contributed to an organisation's positive reputation and enhanced the customer experience.



The maintenance manager's role is now changing to become one that helps businesses achieve important competitive advantage. As maintenance increasingly becomes a strategic activity, there is a greater demand for immediate, accurate, real-time data. However, some maintenance managers still work within the limitations of spreadsheets, inputting data into Excel, to manage valuable plant and equipment.

In start-up businesses and small organisations, where there are low numbers of service issues, no risk of financial penalties for underperformance, and no demand for complex reporting, Excel spreadsheets can offer a low cost and easily accessible solution. As a business develops, relying on spreadsheets as a primary source of information for reactive and planned maintenance and for asset and performance management has severe limitations.

When the organisation expands; the volume of service requests grows significantly; PPM regimes become more complex; there is an increase in staff; or there is the need to bring in external contractors

and spreadsheets become unwieldy and unreliable. There is also a risk of the maintenance department, or even the company, falling into disrepute should an inadequate information management system cause a serious breach of service terms, a compliance failure or a health and safety error.

If the organisation's offices and sites are scattered geographically, it is even harder, with data spread across different folders, workstations and locations, to use spreadsheets to keep track of information. Fragmentation makes the risk of duplication and lack of data integrity considerably higher.

Using spreadsheets to manage maintenance work leaves organisations vulnerable to:

- fraud – the inherent lack of controls, and difficulty in detection, allows the easy alteration of formulas, values, or dependencies
- susceptibility of human error – this can damage confidence, result in losses, and increase compliance and health and safety risk through the entry of inaccurate data, duplication of data, or data redundancy.

Spreadsheets lack scalability and are a stand-alone solution with restricted functionality; without the capability to assign, prioritise and escalate tasks; to automate asset inspections and audits; to provide a watch-list with real time visibility of service calls from logging to completion; or to enable self-service.

The support of a quality CMMS system is increasingly recognised as a key enabler in the smooth day-to-day running of service delivery, boosting efficiency, cost effectiveness and productivity, and as an indispensable management tool. Using technology, maintenance managers can drive out unnecessary costs, streamline PPM scheduling and maximise quality data, creating effective workplace regimes and practices that support better business performance. CMMS software, with flexible, intuitive, and enabling technology, has become the maintenance manager's greatest ally in the implementation, delivery and management of a new era of business-critical services.

As the use of spreadsheets for capturing maintenance information continues to lose relevance in today's business world, a new white paper from Service Works Group (SWG) provides guidance for maintenance managers. The document 'Excel to CMMS Software – Making the Transition' examines:

- the pros and cons of using spreadsheets alongside the business benefits of investing in CMMS software
- what to consider before making the change to CMMS software
- making the business case for CMMS software
- how to make the change.

To receive your complimentary copy of the new white paper '**Excel to CMMS Software – Making the Transition**' or for further information, please email: info@swg.com or call +44 (0)20 8877 4080.

Lightbody selects Mainsaver CMMS from Spidex Software

Spidex Software has announced that Lightbody, one of the UK's largest suppliers of celebration cakes to the retail multiple sector, has selected Mainsaver CMMS to support best-practice maintenance at its production site in Hamilton, Lanarkshire.

Lightbody has been in existence for over 100 years as a bakery business. Following recent large-scale investment in new plant and equipment at the Hamilton factory, including state-of-the-art "pick and place" robots, the factory is looking to its maintenance procedures to attain further improvements in production throughput.

Mark Mansell, Lightbody's Interim Engineering Manager, is leading the project. "The key to improvement is information" he says "and we will be looking to accumulate good quality maintenance data with this new system."

The CMMS implementation will supercede manual maintenance recording methods which, while well

managed, can no longer provide the requisite real-time visibility of departmental performance. In addition to Mainsaver, the installation will include the SpidexWM web maintenance suite including risk assessment, auto-alerting and report dashboard functions.

"We are very excited to be working with Lightbody" says Spidex Managing Director Jonathan Starling. "This CMMS project should provide a framework which will enable a number of desired objectives to be achieved, including reduced administration time, improved maintenance planning, fewer machine failures and better audit performance."



"Spidex's products have an excellent track record in the food manufacturing sector and we are delighted to welcome such a major producer as Lightbody to our user community."

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Severe changes in weather conditions has a devastating effect on the British business economy – extreme hot temperatures in summer places an increased burden on air-conditioning plants and production processing water temperatures rise due to increased ambient water conditions leading to losses in productivity.



Both these situations often rely on the efficiency and effectiveness of on-site air cooled fluid chillers – cooling and recirculating colder water for control of the temperature.

Faced with increased work load these chillers may falter, becoming ineffective; long-term off line or under-performing can have serious consequences for any company – staff loosing concentration, production slowing and ultimately stopped – potential outcomes include incorrect data entry due to tiredness, late delivery possible accompanied with penalties, orders cancelled and lost reputation.

When one aviation component manufacturer experienced a sudden drop in the weather's temperature down to minus 20C it could have had a devastating consequence without the intervention of Andrews Chiller Hire, part of the Andrews Sykes Group.

The aviation production company requires a constant supply of regulated water temperature within the factory for process cooling, water conditions governed by an externally mounted chiller plant. Any fault or underperformance of the chiller would cause serious production problems and issues with product quality.

On one particular winter's morning when icy cold weather hit Britain the coils in the external chiller froze since the unit did not have any form of protection, and no Glycol in the system. Blocked pipework was catastrophic, production drew to a stop, a fast temporary solution was required until a new, properly equipped chiller for all weather conditions could be sourced and installed.

The search for a chiller hire company began. With more than 25 national depots strategically located, a promised response in under 4hrs and experienced engineering staff able to appreciate industrial applications, Andrews Chiller Hire seemed to be the ideal organisations. Telephone call made, Andrews Chiller Hire despatched a 30kW air cooled fluid chiller and an installation team to connect the chiller to the onsite Heat Exchanger.

Within hours the factory production processed returned to normality, the Andrews chiller suitably equipped with Glycol in the system enabling it to operate reliable even at low temperature as experienced by the aviation component manufacturer.

For many years Andrews Chiller Hire has been providing emergency, temporary solutions to organisations suffering from on-site chiller plant problems. The chiller division holds an impressive range of modern air-cooled fluid chillers with capacities from 6kW to more than 750kW and single air-handlers capable of delivering up to 600kW and provides 365 days, 24/7 dedicated support. The equipped in complemented by experts in chiller design and support, establishing a level of unrivalled customer support, helping to keep British production on track.

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Unit 54 Gravelly Industrial Park, Tyburn
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THERMAL IMAGING - Gadgets Vs. tools for the job

As the technology behind thermal imaging cameras advances it was only a matter of time that an attachment to your smart phone would be introduced.

But can they fulfil the role of a professional thermal imaging camera designed specifically for the job?

Stacey Ward, Sales Manager at BSRIA Instrument Solutions, explains more: "Thermal imaging has limitless potential in trouble-shooting, predictive maintenance and fault finding. Formerly, the main decisions to be made when stepping into the world of thermography was what is the best camera for my application, what resolution do I require, what additional functionality could be beneficial to me? And, often more importantly, what does my budget actually buy?"

Now with the immergence of the smart phone camera attachment, even more difficult decisions abound: "Do I need a custom designed camera if I already have a smart phone? What is the difference between the stand alone cameras and the phone add-ons? What are the pros and cons of the different devices, if any?"

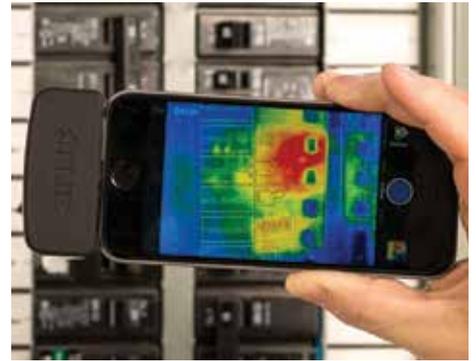
The first question often asked is however cost, an entry level thermal imager usually starts at around £700 and for this you will get an instrument with a "fairly decent resolution suitable for spot checking with more

advanced cameras running into many thousands of pounds".

A smart phone camera attachment is priced typically around £250 and – considering the cost of a smartphone itself – you are already near the same price as an entry level thermal imaging camera. The advantage however is that most people already have a smartphone. As with anything you buy – the more money you spend – the better quality you get and image resolution is usually the main factor affecting the cost of a camera.

The resolution may be of a decent standard but nothing can compare to the image definition of a camera with high pixilation. With a true thermal imager you have the added advantage of every pixel being effectively a thermometer, giving you accurate and precise measurements.

The perception of having the right tool for the job is "priceless". If you have a critical site visit or survey to conduct and your client sees you using a smartphone as your thermal imager "eyebrows will certainly be raised



regarding your competency", if however the purpose for the camera is to find a fault for "quick fix" then the smartphone could be the perfect solution for you!

Nothing can substitute the quality, accuracy and reliability of a professional model camera but ultimately it may be "over kill" for the user's requirements. With some research and hands on experience you can find the best camera or add-on which is best suited for you.

BSRIA Instrument Solutions offers a vast range of thermal imaging cameras available for purchase or hire. For more information contact the expert team on 01344 459314 or info@bis.fm



Instrument Solutions



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Efficient School Fume Cupboard Ventilation Made Simple

Efficient fume cupboards are fundamental systems for most schools and universities, protecting staff and students from the hazardous fumes or vapours produced by science or design & technology processes.

Axair Fans have designed the perfect package to simplify the installation of a laboratory fume cupboard ventilation system, making it easier for schools and universities to protect their users.



The Axair Educational Fan Pack includes all of the relevant components required for an efficient, clean and safe system. Not only does it include a corrosion resistant fan with motor starter, it also features anti-vibration mounts, flexible connectors, a scroll drain, an indoor pedestal and an electrical isolator.

The solution is ideal for new build projects, it's also the perfect choice for refurbishment and any educational facility that is looking to replacing existing systems. After all, fume cupboard systems must comply with the Governments' Control of Substances Hazardous to Health (COSHH) regulations. Under these regulations, systems should be subject to regular maintenance, inspection and testing (at least every 14 months), if this hasn't been undertaken, the system may need replacing. The Axair Educational Fan Pack makes this quick, simple and easy, and the additional accessories will help to ensure your system is safely and securely installed, with added future protection. What's more, the Axair team of Product Engineers will undertake all of the specification work and calculations as part of their service, sizing the fan system to fit your fume cupboard and duct.

As well as saving you both sourcing and installation time, choosing an Educational Fan Pack can also save you money as this tailored package is better value than buying the fan and accessories separately.

Contact Axair Fans for more information on 01782 349 430 or visit our website on www.axair-fans.co.uk

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Designed to keep out or keep in electromagnetic interference, TBA Protective Solutions range of BeCu gaskets are an excellent choice for shielding electronic equipment.

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DiamondBack shielding, with a textured contact surface, increases attenuation at 2.5 GHz and above. The non-abrasive texturing can be applied to most standard profiles to achieve up to 20dB attenuation improvement at high frequencies without raising the compression force.

To avoid galvanic action between contacting metals a variety of plating options are available. Many profiles are offered in standard thickness or low compression.

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Nederman

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Nederman Brightens Up Dark Evenings With LED Filterbox Offer

With the clocks going back and the dark winter evenings drawing in, Nederman is brightening up the industry with its new Autumn promotion campaign.



The market leading manufacturer of air filtration systems is now offering free LED lighting units with any purchase of the Nederman Filterbox 10M.

The Nederman Filterbox 10M is a W3 approved portable unit for the filtration of localised fumes and dust that is generated by processes such as welding and soldering. This bestseller from Nederman is even more tantalising with the promotional offer of LED lamps that will reduce power consumption costs and brighten the immediate vicinity around the welding area.

For companies considering the Filterbox, the incentive is now even greater with the LED lamps that offer four times more light and 70% lower

energy consumption compared to existing halogen bulbs. With LED lighting well documented to extend bulb life by up to 20 times and provide greater shock resistance, the overall cost saving of LED lights equates to over 80% during the life of the Filterbox 10M.

The illuminating offer is only available with the Filterbox 10M system and the promotion must end before Christmas. The established Filterbox 10M gives the customer a 3m extraction arm that delivers an air flow up to 1000m/hr with a filter separation efficiency of 99%. Supplied with a silencer on the 900W motor, the 230V single phase Filterbox is the most mobile extraction system on the market.

Facts about Nederman

Nederman is one of the world's leading companies supplying products and solutions in the environmental technology sector focusing on industrial air filtration. The company's products and systems contribute to reducing the environmental effects from industrial production, to creating safe and clean working environments and to boosting production efficiency. Nederman's offering encompasses everything from the design stage through to installation, commissioning and servicing. Sales are carried out via subsidiaries in 30 countries and distributors in over 30 countries. Nederman develops and produces products at its own manufacturing and assembly units in Europe, North America and Asia. The Group is listed on Nasdaq OMX, Stockholm and has around 1,950 employees.

If you already have a Nederman Filterbox system and you are interested in upgrading your existing system, please get in touch with your local representative for your LED upgrade kit. The upgrade kit is supplied with LED lights and protection glass and it can be easily installed to instantly enhance your welding conditions.

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What Makes A Good Hygienic Pump Repairer?

Tom Cooper of AxFlow looks at what it takes to be a good hygienic pump repairer

There are many pump repairers, fewer hygienic pump repairers and fewer still good hygienic pump repairers. This is because it takes more than a clean bench and a box of antiseptic wipes to make a good hygienic pump repairer. To become a member of this select band of pump repairer requires a combination of three key attributes, namely: experience, knowledge and commitment.

Few things come easy in life and making a success of hygienic pump repair is no different. To do it well and avoid costly mistakes and multiple attempts at a repair you need experience of a wide variety of pump types, a good working knowledge of food and beverage manufacturing and the commitment to invest in both facilities and procedures. Taking a closer look at these areas we should first start with facilities.

Facilities

As a bare minimum, you need a proper clean room curtained off from the rest of the workshop, dedicated hygienic tools stored correctly and a range of hygienic fittings for testing. Your test rig needs to be devoted to hygienic repairs, located in a hygienic area and have the ability to gas test pumps used, rather than water, whenever possible. You also need areas and equipment outside of the hygienic area, such as hygienic cleaning equipment, secure and sealed storage for the hygienic pump components and clean working areas for the non-hygienic parts such as motors, bearing housings etc. However, all the equipment in the world will do you little good without a well managed process (Fig.1) and well set out written procedures to ensure consistency of the process and that no rogue pumps slip through the net and back to the customer.

The process adopted at AxFlow is based on a few basic principles of separating the hygienic and unhygienic

parts as soon as possible, then keeping them separate until the very last moment by using different equipment and areas (even within the main workshop), and using the hygienic area as little as possible limiting its use to the hygienic wet end final build and testing.

The importance of knowledge

Of course it's not all about equipment and facilities; you also need a good working knowledge of a much wider range of pump types than many typical repairers will have. This is because food production involves a very broad number of pump types due to the diversity of physical properties displayed by the products being transferred. Food production can involve very high temperatures, light liquids such as oils, highly viscous products including starches and glucose, non-lubricating liquids, non-Newtonian liquids such as mayonnaise, shear sensitive products that can separate and finished products containing delicate solids.

Positive displacement pumps are very often the answer to these challenging liquids and consequently, a long list of these pumps are encountered within food processing plants. These include rotary lobe, circumferential piston, AOD (Fig.2), hose, progressive cavity, vane and eccentric rotating disc. And on top of these are the hygienically designed centrifugal pumps that are generally more sophisticated.

Positive displacement pumps are by their very nature much more challenging due to their tighter tolerances, less robust components and susceptibility to break. They can have very exacting performances particularly in



Fig.2 Repair work being conducted on a Wilden AOD pump.

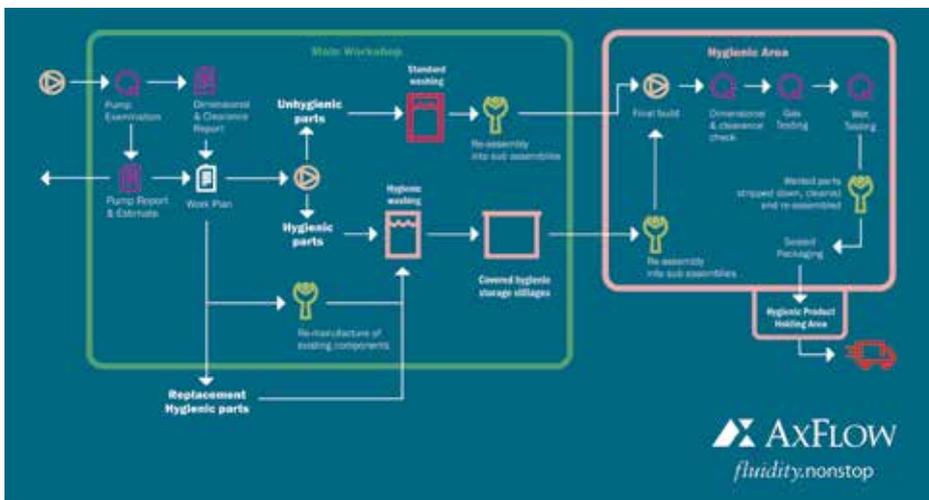
the food industry, so the pump must be returned not just in working order, but demonstrating exactly the same performance as when it originally left the customer. To achieve this you require exactly the right components, work to high levels of precision and truly understand the pump. It also helps to know why the pump broke down in the first place, which is only possible by having a good practical knowledge of the pump and an understanding of the process in which it operated. This brings us on to the next important factor, experience of the food industry.

Experience

The food and beverage industry is extremely diverse when it comes to applications and it has become apparent to AxFlow as to just how important it is to have an appreciation of the food production processes. For example, it is very often the case that it is not just about getting a product from A to B, but ensuring that its consistency is not altered or that solids are not damaged. For this reason we make a point of recording the internal dimensions of all the pumps and then replicating these dimensions in the repaired pump using various methods that we have developed over many years.

This knowledge has led us, in many instances, to suggest making modifications to pumps and recommending ways of either running or setting up the pump in order to reduce problems. It is the in-depth knowledge of all pump types designed for hygienic applications, coupled with an understanding of food processing technologies that reassures our customers that they are safe in placing the repair of pumps for hygienic applications with AxFlow.

Below: Fig. 1 AxFlow's hygienic pump repair process.



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

Robust, Close-Coupled Thermoplastic Pumps

Where chemical handling or any similar fluid handling applications involve aggressive or corrosive fluids, thermoplastic pumps, as opposed to metallic options, are the ideal choice.

A good example of this is the range of ARBO thermoplastic mechanically sealed centrifugal pumps made from either polypropylene, polyethylene, PVDF and PTFE available in the UK from MICHAEL SMITH ENGINEERS.

ARBO pumps are machined from solid block and a manufacturing process that involves no injection moulding or welding which eliminates the potential for stress-cracking and so ensures robust, reliable, corrosion resistant pumping. They are available in three configurations including the SealPro closed-coupled design which handles flows up to 50 m³/hr, heads to 45 metres and maximum suction pressures up to 1.5 Bar with standard seal.

They are ideal for safe and efficient transfer and circulation duty of corrosives, including liquids containing solids and also viscous liquids up to 200 cP.

The pumps incorporate a single internally flushed rotating seal made from PTFE-graphite or Silicon

Carbide which is mounted on the impeller so there are no wetted metallic seal components. Also, as none of the seal components touch either the sleeved pump shaft or the pump housing, this means the only wearing parts are the seal faces. An innovative internal circulation system ensures that the seal rings are always within the liquid zone and continuously flushed with the medium being pumped. This provides sufficient cooling and cleaning of the liquid surface at all times and optimises pumping efficiency.

Typical applications for ARBO thermoplastic mechanically sealed centrifugal pumps include pumping acids in anodising plants, circulating aggressive chemicals in pickling lines, tanker unloading of ferric salts in the water industry, pumping chemicals and untreated effluent in electronics manufacturing

Other situations where these pumps will be appreciated include; circulating demineralised water in food industry applications, handling coolant circulation in power plants, sea water circulation in aquaria and any



application where metallic pumps will either suffer from corrosion or can cause contamination.

Further details on the ARBO range of pumps can be found at:

<http://www.michael-smith-engineers.co.uk/products/arbo-pumps>

Unit E, Scotswood Park, Forsyth Road, Sheerwater, Woking, Surrey GU21 5SU

Tel: FREEPHONE: 0800 316 7891

Fax: 01483 723110

Email: info@michael-smith-engineers.co.uk

PUMP SYSTEM IS PERFECT FOR PASTES AND HIGH VISCOSITY PRODUCTS

Transferring high viscosity creams, pastes and gels which do not flow readily, such as peanut butter, shaving cream, petroleum jelly, yeast extracts and mascara, present unique challenges across many process applications in the food, cosmetic and pharmaceutical industries.

In many cases operators revert to manual handling solutions due to the limitations of some pumping systems and this can result not only in wastage issues but also those of a health and safety nature.

An effective and practical solution is available from liquids handling specialists PUMP ENGINEERING who offer a CSF piston pump mounted in the centre of a follower plate which fits into a drum and seals against the inside of the drum. Two pneumatic cylinders force the plate onto the top of the product and as the pump empties the drum, the plate is drawn downwards keeping the inlet of the pump full of the product. A rubber seal on the follower plate effectively wipes the side of the drum as it travels

downwards, sealing it and ensuring that very little product is wasted.

The pumps are available as quick-strip versions for easy cleaning without the need for tools. For lower viscosity liquids, a long version of the pump is available for emptying tanks, drums and IBC's which features a

special bag-in-drum inlet which prevents the plastic drum lining used in some industries being drawn into the pump.

CSF piston pumps are air operated and depending on the model, will deliver flowrates up to 100 litres / minute with pressure ratios up to 20 to 1.



Pump Engineering Ltd, Riverside Estate, Littlehampton, West Sussex, BN17 5DF, UK.

Tel: 01903 730900

Email: sales@pumpeng.co.uk

Visit: www.pumpeng.co.uk

Wildacre Make Up Higher Quality Cosmetics With Thorite Compressor Rental

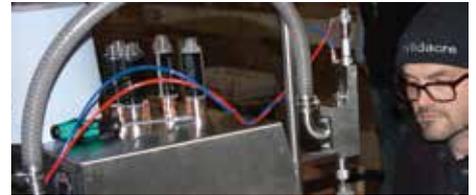
Based in Bingley in the heart of Yorkshire and committed to innovation, quality and flexibility, Wildacre Cosmetics designs, develops and manufactures a specialist range of cosmetic and toiletry products.

The company's cosmetics manufacturing machinery are mainly pneumatically powered, but production problems used to be common due to the unreliability of two compressors which had been supplied from a tool hire company. The compressors were also expensive to rent. Steve Richardson, Wildacre's Managing Director, was convinced there must be a better solution and contacted nearby Thorite, the UK's biggest distributor of pneumatic products and process systems, for advice.

Thorite's Technical Application Team suggested the installation of a complete Air Rental Package. This comprised an energy-efficient HPC SM12T compressor complete with an air receiver, oil/water separator unit and all necessary filters. This package not only provides completely reliable machinery power, but has also proved to be less expensive to rent than the tool hire company equipment.

Thorite's new Air Rental Packages provide both budgetary and performance benefits for customers who are supplied with brand new compressor packages for an agreed time period: The Air Rental scheme is highly tax efficient, rental charges are fixed for up to 60 months, there are no upfront costs, the latest compressor technology is supplied and the equipment is fully maintained during the rental period. This ensures reliability, means minimal down-time and maximises energy efficiency which reduces power costs. All the customer needs to provide is an appropriate power supply and suitable site location.

Speaking of the Thorite solution Steve Richardson said: "We now power 4 filling lines and a labeller from the Thorite-supplied compressor. The best complement I can use to describe the quality of the compressor and its associated equipment is that we simply forget it's there - it is all so totally reliable - and because



everything is covered by the Thorite Service Contract we get on-going peace of mind."

Full details of Air Rental Packages are available from the Thorite website, by contacting the Technical Application Team on Freephone 0800 142 2446 or by visiting any of Thorite's 10 regional Sales & Service Centres located throughout Yorkshire, Lancashire, the West Midlands and the North East.

Wildacre Cosmetics Ltd are located at Unit 14, Castlefield Trading Estate, Bingley, West Yorkshire BD16 2AF and can be contacted on 01274 510882.

For more information:
<http://www.thorite.co.uk>



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Understanding Compressed Air Production Costs

Businesses must look beyond the initial purchase price of a compressed air system and consider the factors that affect the total cost of ownership (TCO), explains Mark Whitmore, General Manager at BOGE.



While purchasing a compressor may be the largest single one-off cost for businesses investing in compressed air production, operating the system will bring greater combined costs over its lifetime. It is in the best interests of businesses to ensure total cost of ownership is as low as possible to help the bottom line – with reduced energy bills and greater machine reliability two significant benefits.

Energy efficiency

The main expense throughout a compressor's lifespan is the energy costs associated with operating the system, which accounts for approximately 75% of total costs across the machine's life cycle – equalling more than the original price of the system. Of this, typical system inefficiencies such as leaks or supercharging result in around 55% of the input energy used to compress air being wasted.

However, this doesn't have to be the case. Easy alterations can be made throughout the compressed air system to help cut the energy usage of compressors by up to 50%.

One option is to implement an intelligent energy management system. This provides a transparent and current picture of how efficiently the compressor is performing, helping to control costs and make savings of 30-50%.

Also, because a high proportion of energy used for air compression is converted into heat, there is an opportunity to reuse this energy elsewhere in the plant – to heat water, for example – to further improve efficiency and cut energy bills. A heat recovery system such as the BOGE DUOTHERM can recover up to 75% of the energy emitted for reuse, thus reducing utility bills as well as environmental impact.

Compressor maintenance

Failing to take care of a compressor appropriately can be an expensive mistake, with unexpected costs quickly adding up. Regular maintenance is therefore essential to preventing malfunctions that may reduce efficiency and increase the likelihood of machine failure.



There is more than one option when selecting the most appropriate maintenance programme. Fixed maintenance is pre-set, meaning components would be fixed, serviced or replaced after a certain amount of time, regardless of whether this was required or not. Status-based maintenance, on the other hand, is where systems are continuously monitored through the use of diagnostic tools, with action taken to repair or replace assets only when required.

As part of a thorough maintenance programme, businesses must also consider leak detection. The Carbon Trust estimates that a 3mm hole in a compressed air line could cost a business as much as £700 per year in wasted energy. Conducting leak detection surveys is a simple way of further lowering the total cost of ownership.

Summary

There is much more to owning and operating a compressor than the initial purchase price. By taking into account the various other factors that add to the cost of producing compressed air, businesses can make significant efficiency savings and improve machine reliability to avoid unscheduled downtime – much to the benefit of the bottom line.

For further information contact:

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Compressed Air Filter Replacement: More Safety and Efficiency

The right timing is what matters



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

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

Especially in existing compressed air systems, it is recommended to call in filtration experts to measure the contamination that may be caused by the compressors (Fig 2). The contamination by the lubricating oil alone amount up to 40 mg/m³ depending on the type of oil-lubricated

Above: Figure 1

compressors; this may increase to more than 100 mg/m³ in older compressors. Even in oil-free compressors, abrasion, moisture and contamination by water injection and contamination through the lubricants of the gears and bearings can add to this depending on the model.

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

of expectations. The pressure losses through leakages are high and the compressed air pressure in the piping system is contaminated. When the compressed air filters at the points of use are heavily contaminated, the differential pressure rises faster. This problem significantly clarifies the complex interactions of the components in compressed air supply systems. Experienced engineers know that the condition of a compressed air system can be seen on the filters. They are the best indicators of compressed air quality without considering complex equipment. However, these monitoring functions can only be met by coalescence filters with a differential pressure indicator (Fig 3).

The potential savings are at several thousands of Euros

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

Below: Figure 2





Above: Figure 3

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

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

The Best Filter for each Use

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

Below: Figure 4



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

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

Is the differential pressure alone important?

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

Below: Figure 5



Basically, this replacement interval based on operating hours applies also to activated carbon filters that are used to separate oil vapours and odours. These filters are a standard for operations in sensitive areas such as in the food and pharmaceutical industries and in the generation of process air, in order to achieve a residual oil content of air pressure of 0.01 mg/m³, as referred to in ISO Standard 8573-1 for compressed air quality class 1. Even the use of particularly high quality activated carbon adsorbents that are used as a bed or as an integrated component of filter media, lose effect, despite their high adsorption capacity, which is not reflected in the differential pressure. The recommendation for the filter element replacement is at a maximum of 2,000 operating hours or three months. Depending on the prevailing oil vapour content and at inlet temperatures above 20 °C, a replacement is recommended at an earlier time.



Above: Figure 6

This is how damages can be prevented

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

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

Filter element replacement made easy

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

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Compressor Control With Tomorrows Technology, Today

The latest generation in compressed air management systems is the Sigma Air Manager 2 (SAM-2) recently introduced by HPC KAESER.

Having evolved from its predecessor, the SAM-2 is much more than a control and management system for installations with multiple compressors, it is capable of complete air system management with the ability to monitor and record information relating to all the components of a compressed air system. Incorporating many important features, including the capability to embrace the future technological benefits of Industry 4.0, the SAM-2 provides a valuable tool to assist complete system maintenance and reliability.

SAM-2 optimises the compressed air system pressure (a 1 bar reduction in pressure can equate to a 6% energy saving) automatically adjusting compressed air delivery to accommodate fluctuating air demand and optimising system efficiency through constant analysis of the relationship between control losses, switching losses and pressure flexibility. The SAM-2 will also enable customers to benefit from planned future upgrades and services such as predictive maintenance, so it has the potential not only to boost operational reliability and efficiency, but also significantly reduce energy costs further.

Industry 4.0, or the 'Internet of Things,' has the potential to be a far-reaching revolution in production and the new Sigma Air Manager 2 makes this level of integrated control possible. For example, the ability to make predictions far in advance, network components and exploit much larger data volumes than ever before, whilst also ensuring significant energy cost savings and delivering a reliable, consistent and efficient compressed air supply.

The ability to ensure the best possible compressed air pressure quality, tailored to specific needs is vital in many compressed air applications and this is largely made possible by the SAM-2's advanced 3-D Control.

This takes into account other factors, apart from switching losses (start/stop) that influence compressed air system energy efficiency. These include control losses (idling and frequency conversion) and pressure flexibility (average increase above required pressure). This innovative control strategy predictively calculates the optimum achievable configuration and adjusts the connected components accordingly, all based on the specific pressure required by the user.

SAM-2 supports operation in 30 languages, while the high quality, easy-to-use 12-inch colour touchscreen shows at a glance whether the station is operating in the 'green zone' from an energy management perspective. Operating status, pressure history, free air delivery, power consumption, as well as maintenance and any error messages can be easily displayed and analysed, both in real-time and retrospectively. Using a PC and network connection, this data can be accessed conveniently from anywhere, not just at the machine itself. This not only provides users with peace of mind, but also lays the foundation for predictive maintenance and enables energy management in accordance with ISO 50001.

The far-reaching benefits of the SAM-2 are expanded even further when users also take advantage of HPC KAESER's Sigma Network. Based on Ethernet technology, the powerful Sigma Network is a closed and secure network that has been specially developed to support optimal monitoring and coordinated control of compressed air stations.



SAM-2 offers additional powerful features which enable remote diagnostics and predictive maintenance. For example, maintenance and error messages can be immediately sent via e-mail to a pre-set personal address and the remote diagnostics option allows for preventative maintenance and service based on actual use. Both of these elements increase compressed air availability and reliability and also help keep life-cycle costs to an absolute minimum.

Further information is available from:
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METPOINT OCV Now As A Validated Test Method To Determine Residual Oil Content Within Medical Compressed Air.

BEKO TECHNOLOGIES are delighted to inform you that our METPOINT® OCV monitoring system has been successfully validated from BfArM (German Federal Institute for Drugs and Medical Devices) as a method to determine residual oil content within medical compressed air.

The validation has been executed and achieved within a strong co-operation project of a global gas company and BEKO TECHNOLOGIES.

In a joint project, the companies have validated a procedure for monitoring oil vapours in compressed air systems for medical air. The suitability of the monitoring method was validated on the basis of the requirements of the latest version of CPMP/ICH/381/95 as well as reference measurements obtained with recognised test procedures. All measurements in this validation process were obtained using METPOINT® OCV photoionization detectors (PID) from BEKO TECHNOLOGIES.

The available data was submitted to the German Federal Institute for Drugs and Medical Devices (BfArM) as a variation subject to approval in relation to the marketing authorisation dossier. It encompasses threshold monitoring not only of the oil vapours arising during manufacture of the active pharmaceutical ingredient (production of compressed air), but also of the filled batches of medicinal products (compressed gas cylinder). The variation was reviewed positively by the BfArM.

METPOINT OCV is therefore validated as a method to determine residual oil content within medical compressed air.



For more information on our METPOINT OCV range, please contact us on:
Telephone: 01527 575778
or email info@beko-technologies.co.uk
Website: www.beko-technologies.co.uk

BEKO TECHNOLOGIES UK are on the move

BEKO TECHNOLOGIES will be starting the new year in new premises. After nearly a year of searching BEKO TECHNOLOGIES UK will move to Redditch.



Not only will these new premises give a much improved work environment for the UK team, but we will create a first class training and education facility where we can educate current and potential customers, demonstrating our equipment in a live environment giving much needed practical hands on learning.

The UK team have had their first glimpse of the new facility, there was a lot of excitement and already there are plans for seminars for End Users in the pipeline.

The plan is that we will move in just before Christmas, over the next 6 weeks the contractors will be starting the refurbishment

Martin, general manager at BEKO TECHNOLOGIES says 'I would like to thank Monique and the family for supporting the move to this new building, I am personally looking forward to a very exciting future for BEKO TECHNOLOGIES UK. What a great way to start 2016".



For those of you keen on Google maps, you can find us at Units 11 & 12 Moons Park, Burnt Meadow Road, North Industrial Estate, Redditch, B98 9PA.

For more information, please contact us on 01527 575778
or email us: info@beko-technologies.co.uk
Website: www.beko-technologies.co.uk

Point-Of-Use Membrane Dryers Prove Popular For Wide Variety Of Applications

Since Hi-line Industries completely re-engineered its market-leading range of Hi-DRI compressed air membrane dryers, the company reports that strong uptake has seen these technologically advanced units sold into a wide variety of applications.



Clearly impressed with the ability of Hi-DRI membrane dryers to deliver superior levels of reliability, performance and energy efficiency, the systems are proving extremely popular with end users seeking ways to make it easier and less expensive to supply pneumatic equipment and instrumentation with clean, dry compressed air. Among the multitude of end user sectors already exploiting the virtues of Hi-DRI membrane dryers are the medical, dental, paint/bodyshop, analytical equipment, robotics and laser printing industries, to list but a few.

The many notable features differentiating Hi-DRI compressed air membrane dryers from competitor units include a patented arrangement

of structurally packed, permeable hollow fibres that are spirally wound on a support core. This has the advantageous effect of combining efficient air flow with high contact areas to maximise drying performance.

Another factor in the ongoing success of Hi-DRI systems is their compact, 'in-line' design. This makes life easy for compressed air system specifiers and designers, and ensures the products are ideal for in-line installations that guarantee the delivery of dehydrated compressed air to the point of use. Moreover, no electricity or energy supply is required, making these lightweight units ideal for remote, isolated or other challenging requirements.

Offering cost effective and efficient filtration and drying in a single unit, Hi-DRI units offer numerous benefits to end users seeking competitive gain from their compressed air systems. For instance, the membrane construction of the units does not deplete oxygen from compressor, which means it can be used as 'breathing air' dryer. Furthermore, there is no condensed H₂O to deal with as this is removed as a gas. Indeed, membrane dryers contain no refrigerants whatsoever, making them environmentally friendly.

This simple, proven technology helps eliminate condensation, oxidation and microbial growth (detrimental in food, pharmaceutical, dental, medical or laboratory applications) – all of which are known to result in the poor reliability and performance of downstream air operated equipment. In addition, Hi-DRI membrane dryers do not contain any moving parts, and there are no desiccants or refrigerant to replace. As a consequence, users enjoy a long, maintenance-free service life with low TCO (total cost of ownership).

Almost any dewpoint can be achieved (flexible pressure dewpoint down to -40°C), even when accommodating high humidity ambient conditions as experienced outdoors, in open workshops or on seagoing vessels. As a point of note, Hi-line can also provide pre-filtration, which further enhances the membrane dryer's efficiency and compressed air quality downstream and at point of use.

Offering low purge air in comparison with desiccant dryers, the range of Hi-DRI membrane air dryers covers air flow rates from 17 to 1050 litres/min. Multiple dryer units can be used in parallel to achieve higher flows where required. Outlet dewpoints from +15° to -40°C can be achieved at 7 barg pressure (12.5 barg max) and with 35°C inlet air temperatures. The dryers are available ex-stock from Hi-line's Burton-upon-Trent facility ready for next day delivery.

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

Gardner Denver Enhances Manufacturing Capabilities

Vacuum pump and compressor manufacturer, Gardner Denver, is investing over £7 million in a new centre of excellence at its Simmern production site in Germany, home to the CompAir range of compressors.



The project is due for completion at the end of 2016 and will result in optimised processes and modern assembly techniques to deliver an enhanced range of oil-lubricated, oil-free and portable screw compressors to customers in the UK and globally. Colin Mander, Regional Director for Gardner Denver explains:

“Alongside the continuous improvement of our Redditch production site for Hydrovane and high-pressure compressors in the UK, we also see huge potential in creating a centre of excellence in Simmern to enhance our service to CompAir customers around the world.

“The majority of the investment is funding new machinery for compressor production, which allows us to increase our capacity and flexibility. In addition, the existing assembly concepts of stationary systems will be converted into a continuous flow production system, which will increase productivity and reduce time and costs.

“The increasing digitalisation and smart communication options of our compressors coupled with the energy-savings measures set by the European Eco-Design Directive creates new challenges for all our engineering teams. The investment in Simmern will keep us on the forefront by providing a platform for continuous improvement for the future.”

The next milestone is to expand production capacity further. As part of this, the 7.5 to 11 kW range of CompAir oil-lubricated screw compressors, which were previously manufactured at the plant in Italy, will now be produced in Simmern in addition to the existing product ranges.

For sales please contact Prince Ayeh
prince.ayeh@gardnerdenver.com

Golfers raise over £4,500 for Cancer Research UK

Vacuum pump and compressor manufacturer, Gardner Denver, has raised over £4,500 for Cancer Research UK after hosting a charity golf day for UK distributors, suppliers and sales teams.



The annual event took place at the Warwickshire Golf and Country Club with the company originally ‘on target’ to raise £3,000. However, the 16 teams that took part have exceeded this goal by over £1,000, with the current total standing at £4,500.

Colin Mander, Regional Director for Gardner Denver said:

“The event saw many of our key distributors joined by suppliers and Gardner Denver internal teams for a great day’s golfing that even included a hole in one!

“It was of course an opportunity to talk to our customers about some of the new products that we plan to introduce in 2016. But more importantly, the event was about raising as much money as possible for a very worthwhile charity.

“I’d like to thank each of the 64 golfers who gave up their time to support this event and who helped us raise money for this great cause. In one day, we have raised enough money to part-fund clinical trials across the West Midlands area, just one small thing that will hopefully make a difference in the fight against cancer.”

Gardner Denver

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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.

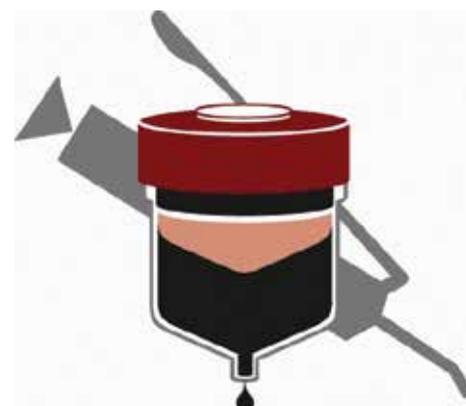


Jack-Luber Model 125 & Replacement Cartridge

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.

Hydro International Launches Watertight Toggleblok™ Pollution Containment Package

The industry's only completely watertight pollution containment valve, the Toggleblok™, is now available from Hydro International, supported by a full design, commissioning and maintenance service from Hydro International's specialist Water Pollution Management team.

In an agreement officially announced at Flood Expo, Hydro International is working with manufacturer Sandfield Engineering to market the technology-leading Toggleblok™ Drop Seal Valve, as well as providing design, installation and servicing of Toggleblok™ valves for both companies.

Nationwide, there are already more than 150 installations of the Toggleblok™. Toggleblok™ is installed on a series of UK sites, and is helping facility owners prevent damaging surface water pollution incidents. The Toggleblok™ valve was invented by David Cole, Hydro International's consultancy division Water Pollution Manager, and developed for manufacture by Sandfield. David Cole states:

"The Toggleblok™ is a water-tight and failsafe valve for pollution, flood water or spill containment and the only valve we would recommend for organisations obliged to comply with UK environmental protection regulations, according to the CIRIA 736 industry standard guidance.

Pollution containment is critical for sites operating under the Control of Major Accidents and Hazards (COMAH) 2015 or Environmental Permitting (England and Wales) Regulations (EPR) 2010. It should also be integral to any compliant Environmental Management System (EMS) – or for those companies working to ISO 14001.

"Often penstock valves are wrongly considered as an acceptable containment solution, but it's important for any organisation at risk of a pollution, flood or fire water incident to understand that a penstock is first and foremost a flow control device

and therefore is not designed to be 100% leak proof and water tight when containing low pressure gravity flows," explains David Cole.

"To be sure to avoid a pollution incident, and potential prosecution, it's advisable to fit a watertight valve, as well to ensure the correct sizing and location of the valve in the drainage system, fitted and maintained by a specialist. Hydro International offers the complete package."

The Toggleblok™ is a retrofittable drop seal valve that protects receiving water courses by blocking the release of flood water, polluted or fire fighting water from a site's storm drains. The Toggleblok™ valve's mechanically locking failsafe design ensures the valve remains fully closed and sealed once activated until it is safely unlocked by an operator. Manufactured from stainless steel, it is factory pressure tested to ensure zero leakage to up to 0.5 bar pressure.

The valve can be closed remotely by means of bi-directional radio control or cloud-based communications systems. It can also be activated automatically via a site's fire alarm or Building Management System. Operated by a pneumatic power source, the valve is safe to use in a confined space or explosive atmosphere.

The Toggleblok™ is available either gully or chamber-mounted to fit a range of standard pipe sizes and a site's existing stormwater drainage systems. It is normally positioned close to the drainage outlet to a watercourse, but can also be fitted at the inlet to the site to help protect against flooding of the on-site drainage network.



Hydro International's Water Pollution Management team offers a complete service including advice on correct location and sizing of the Toggleblok™, installation on site, commission and testing.

Regular servicing ensures systems stay operational at all times. Hydro International's hydraulic modelling and flood risk consultants can also advise on the full performance of a site's overall water pollution management provision.

"By working with Hydro International to specify and install a Toggleblok™, companies have the reassurance of a value for money solution that is engineered, delivered and maintained by water pollution experts," adds David Cole.

For more information, please contact:
David Cole on 01275 878371
or email dcole@hydro-consultancy.com
www.hydro-consultancy.com

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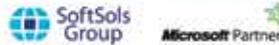
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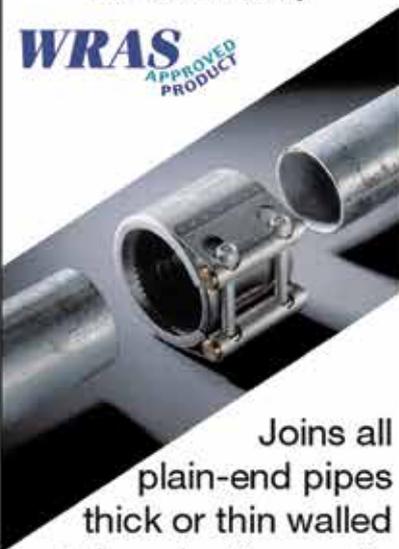
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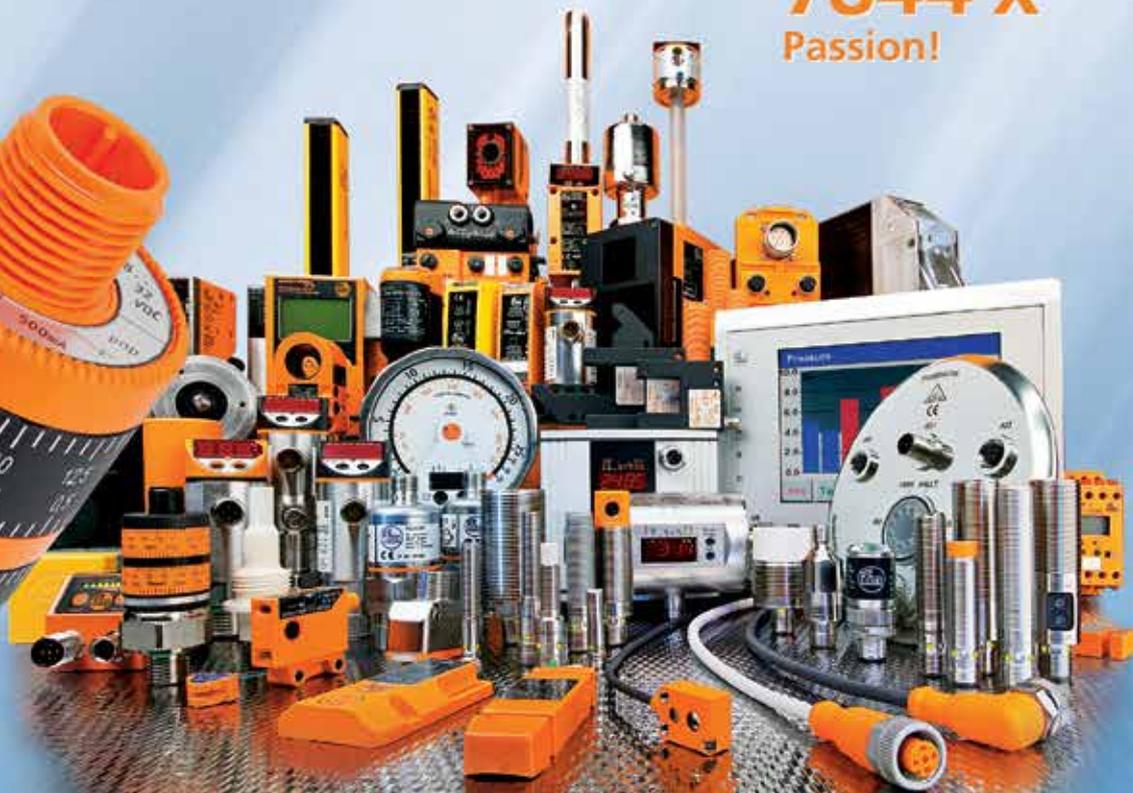
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