

# EMS

ENGINEERING MAINTENANCE SOLUTIONS

The International Magazine For Maintenance & Engineering Professionals

April/May 2021

\$6.80

£4.16

€5.00

## Reliable condition monitoring around the clock

Read More On Page 4

12-15

Boilers & Burners

28-31

Industrial Cooling

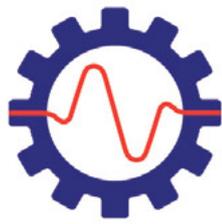
40-47

EMS Teams Chosen Products

Visit Us Online

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





# FARADAY PREDICTIVE

**ENABLING SOLUTIONS IN CONDITION-BASED MAINTENANCE  
TODAY FOR A BETTER WORLD TOMORROW**

**Specialists in the application of Model-Based  
Voltage and Current (MBVI) systems**



**[info@faradaypredictive.com](mailto:info@faradaypredictive.com)**

**(+44) 0333 772 0748**

Providers of portable and permanently installed condition monitoring and energy monitoring and optimisation systems. Faraday Predictive systems require no sensors to be mounted on your plant equipment, instead we use the electric motor driving your equipment as the sensor. Simply by measuring the voltage and current drawn by the motor we can identify an astonishing amount of information about developing problems in your equipment, giving you an indication of current condition and predicting future condition for up to three months in the future. We provide easily understood advice on the nature of the fault, how we have diagnosed it, the effects it is likely to have, and what you should do about it. We also quantify the energy being wasted by faults, allowing you to cost-justify corrective work on energy saving grounds.

**For more information see our website or contact us direct.**



**Reliable condition monitoring around the clock**

Read More On Page 4

12-15

Boilers & Burners

28-31

Industrial Cooling

40-47

EMS Teams Chosen Products

Visit Us Online  
engineeringmaintenance.info



# Contents

## In This Months Issue



**Front Cover Story**  
PAGE 4

## Contacts



**Publisher**

Michael Dominguez



**Advertising**

Steve Pheasant

stevep@engineeringmaintenance.info

**Email**

Info@engineeringmaintenance.info

**Website**

www.engineeringmaintenance.info

**Phone**

Tel: +44(0)203 575 1170

**P:4-5 Front Cover Story**

**P:6-7 Condition Monitoring**

**P:8-11 News & Products**

**P:12-15 Boilers & Burners**

**P:16-17 Calibration**

**P:18-20 News & Products**

**P:21-23 Hazardous Areas**

**P:24-27 News & Products**

**P:28-31 Industrial Cooling**

**P:32-35 Materials Handling**

**P:36-37 IIOT**

**P:38 News & Products**

**P:40-47 EMS Teams Chosen Products**

**P:48-49 News & Products**

**P:50-51 Buyers Guide**

## In the next Issue: June/July 2021



BCAS Official Media Partners

- Maintenance Training
- Condition Monitoring
- CMMS
- Compressed Air
- Seals , Bearings, Lubrication
- Pumps and Valves
- ATEX
- Automation
- EMS Teams Chosen products

# Reliable condition monitoring around the clock

Schaeffler OPTIME condition monitoring solution has prevented unplanned downtime in the supply systems at the Schaeffler production plant in Schweinfurt, Germany, resulting in cost savings in the five-figure range.



Status report at the Schweinfurt plant

| Status | Trend | Machine                             | Diagnose   | Actions   | First finding | Based on |
|--------|-------|-------------------------------------|--|---|---------------|----------|
| !      | →     | Build. 26/2<br>Supply air<br>motor  | Advanced outer<br>race defect of the<br>bearing NU 313 ECP | Check the bearing<br>and exchange it if<br>necessary      | 24.02.2020    | Raw data |
| !      | →     | Build. 26/0<br>Exhaust air<br>motor | High vibration<br>amplitudes                               | Check the sensor<br>mounting and the<br>machine condition | 24.02.2020    | Raw data |

Machine status always identifiable at a glance via smartphone, tablet, or PC.

Above: Figure 1

Consequently, hundreds of machines at the Schweinfurt plant are now monitored directly via the mobile app, and with great success. After just six months, an outer ring defect on the exhaust air motor and the threat of damage to the supply air motor were detected in a supply system (see actual status message fig 1).

Detlev Jacobi, Maintenance Manager at the Schaeffler plant in Schweinfurt comments: "Since introducing OPTIME, we have had no unplanned downtime in the supply plant. This is a good thing."

### Other Benefits:

- Easy and rapid installation of OPTIME components.
- Easy data reading with no expert knowledge required.
- Greater security for employees, as access to hard-to-reach machinery is no longer required with the digital service.
- Cost effective solution for comprehensive and wireless monitoring of units.
- Permits long term planning of maintenance measures, personnel requirements, and in the management of replacement parts.
- Unplanned downtime is no longer an issue for monitored machines.

Schaeffler OPTIME is now being installed throughout the Schweinfurt plant. Furthermore, it is not just Schweinfurt that is benefitting from installing OPTIME. Other Schaeffler plants across the world are also using OPTIME to great effect, with downtime being saved in many key areas already.

For more information visit:  
[www.schaeffler.co.uk](http://www.schaeffler.co.uk)

### The Challenge

At the Schaeffler plant in Schweinfurt, rotating machines are used in a hardening shop around the clock, as well as various supply systems. The hardening shop comprises of six separate hardening lines that process around 130 tonnes per day. Three of these lines are now monitored using OPTIME. 31 OPTIME sensors are installed on circulating air fans (2.2 to 10kW) that run at fixed and regulated speeds of 950- 1500rpm. The temperature can reach as high as 200°C.

The hardening lines are supplied by 50 ventilation and media supply systems. Eight of these systems are monitored by OPTIME. Approximately 100 OPTIME sensors are installed on motors, pumps, ventilators, plunger block housing units and belt drives.

The plant's maintenance manager, Detlev Jacobi, was looking for a reliable and cost effective addition to the existing condition monitoring system, as downtime of production systems caused by the failure of auxiliary units such as motors, pumps and fans are always associated with high costs. Consequently, the primary aim

of a new monitoring solution was to vastly reduce maintenance costs.

In addition, the solution was intended to provide better protection for personnel, as auxiliary units are generally difficult to access and therefore pose a safety risk. For this reason, the maintenance manager sought assistance from the Industry 4.0 experts within his own company.

### The Solution

Experts in the Schaeffler Industry 4.0 division recommended a comprehensive condition monitoring solution in the form of Schaeffler OPTIME. The Schaeffler OPTIME solution comprises wireless sensors, a gateway, and digital service. The sensors monitor the machines and devices. The gateway receives the data from the sensors and transfers this to the Schaeffler Cloud. The data is analysed using the digital service and an error diagnosis is created on the basis of algorithms. The user receives clear statements about the condition of their machines via a mobile app.

The installation work, which involved fitting around 130 sensors, was completed in just a few hours.



We pioneer motion

## How I teach my machines to speak to me



### **OPTIME**

enables me to keep an eye on hundreds of machines in just a few hours – which makes OPTIME a quick, easy and economical condition monitoring solution.

[www.schaeffler.com/OPTIME](http://www.schaeffler.com/OPTIME)

**SCHAEFFLER**

## Condition Monitoring – why the best Voltage and Current systems are so much more than mere “Motor Testers”

Motor Current Monitoring is increasingly being understood as just another form of Vibration Analysis – but one that can also cover electrical faults and energy consumption.

The purpose of Condition Monitoring is to detect developing faults before the machine fails catastrophically, avoiding unexpected breakdowns and allowing maintenance work to be planned efficiently at a time of minimal disruption to operations.

Many techniques are available – and should be selected to detect the type of faults relevant to the particular machine, so there is no single universal panacea. Techniques that can detect a wider range of faults can obviously be applied more widely – and one of those with the widest range is the Model-Based Voltage and Current (MBVI) technique, as used by Faraday Predictive.

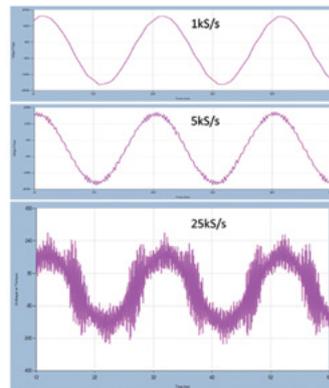
This uses the motor as a sensor and by clever automated analysis of the relationship between voltage and current, and how this changes over time, it can automatically detect, discriminate and diagnose an astonishingly wide range of phenomena, including mechanical, electrical and operating faults. It also measures energy consumption, and identifies how much energy is being wasted by each developing fault, allowing users to cost-justify precision maintenance to eliminate the fault on the basis of electricity cost saving.

The net result is an automated output of the current and predicted state of the machine as a whole, the energy cost and wastage, and an assessment of the current and predicted state of each developing fault – which can directly feed maintenance and operations planning. See below – the display of phenomena in this particular machine includes both electrical and mechanical faults.



So how does motor current and voltage predict specific mechanical failures in this way? Motor current is very sensitive to the load on the motor – increased load results in increased current – so the current is effectively an indication of the torque required to drive the machine. Because developing faults cause subtle variations in this torque, they create subtle variations in motor current, at the characteristic frequency of the fault in question. The motor is therefore a sensor of torsional vibrations, and MBVI systems are effectively just another form of vibration monitoring, using torsional vibration, rather than the radial or axial vibration that is normally measured by accelerometers used by conventional Vibration Monitoring. But of course, in addition to measuring the normal mechanical parameters, MBVI systems also provide information on electrical faults and energy consumption at the same time.

These diagnostic conclusions are all based on analysis of voltage and current waveforms, which is at the heart of Faraday Predictive’s Model-Based Voltage and Current Analysis. This is a sophisticated process, for example the apparent shape of these waveforms can look quite different depending on the sample rate, as shown here for the Voltage output from an inverter, sampled at 1kS/s, 5kS/s and 25kS/s.



### Effect of Sample Rate in Time Domain view

Increasing sample rate reveals additional detail of the time waveform, in this case the voltage output from an inverter.

What looks like a smooth and sinusoidal waveform when sampled at 1,000 samples/second, starts to reveal a pattern of distortions when sampled at 5,000 samples/second.

At 25,000 samples/second, not only is a mass of distortions revealed, the peak voltage also appears to increase – note the scale of the bottom plot is +/- 400v, whereas the upper two are only +/- 200v.

And if we were to measure this output with an oscilloscope, giving us much greater sample rate with minimal filtering, the picture would appear as a complete mass of noise with little distinguishable waveform shape.

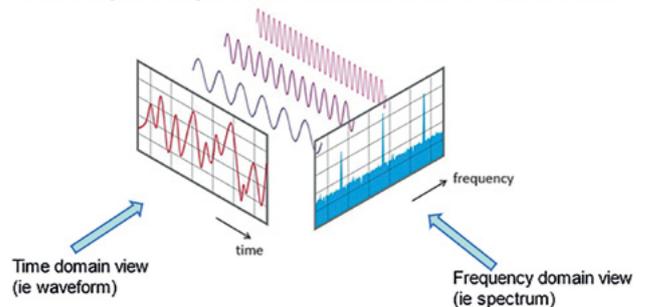
Distorted voltages inevitably create distorted currents – so when analysing inverter driven current waveforms, you need a system that takes these voltage distortions into account – which the Faraday Predictive system does automatically.

The pictures above show how the resolution of the time waveform picture increases with higher sample rates. But most of the analysis of the waveform is done in the Frequency Domain, by converting the time waveform from the time domain into a spectrum by a process of Fast Fourier Transform (FFT):

### Time domain and frequency domain are different views of the same thing



A fast Fourier transform (FFT) is an algorithm that samples a signal over a period of time (or space) and divides it into its frequency components. These components are single sinusoidal oscillations at distinct frequencies each with their own amplitude and phase. This transformation is illustrated here: (Wikipedia)



The Faraday Predictive systems do this interpretation automatically, providing you with the maximum benefit without you needing to “get your hands dirty”. The system not only does all the time waveform and spectral computation for you automatically, it also identifies each individual fault and trends it through time, and predicts the time at which each fault will require maintenance, to give you actionable advice without you needing to get bogged down in all this analysis. But it also makes it all visible to you at the touch of a button, so you can see and understand why the system has reached these conclusions and recommendations if you wish. The best of both worlds!

For more information visit:

<https://www.faradaypredictive.com/technical-education/diagnostic-outputs/sample-rate-sample-length-resolution-and-fmax/>

Email: [info@faradaypredictive.com](mailto:info@faradaypredictive.com) Call: 0333 772 0748



## Protect your critical assets from spinning out of control!

### Vibration monitoring 24/7

Monitoring and Condition Based Maintenance of rotating machinery. This complete solution makes your machines fit for Industry 4.0

- Continuous diagnostic: Full coverage of your critical assets at all times.
- Early diagnostics: Monitoring of imbalance, wear and overall vibration.
- Maximum efficiency: Permanent diagnostics helps keep your assets running efficiently.
- Easy integration: ifm provides individual solutions suited to different types of machines.

Reducing costs, avoiding unplanned downtime and optimising processes: The ifm application solutions.

ifm – close to you!



Go ifm online  
[ifm.com/uk](http://ifm.com/uk)



# ENGIE Fabricom Announces Appointment of New Chief Officers

One of the UK's leading engineering and construction companies – ENGIE Fabricom - has announced the appointment of two new Chief Officers; Chief Executive Officer, Simon Rafferty and Chief Operating Officer, Peter Clouston.

Both join the business having successfully held a number of board positions across the globe and with vast experience across a number of business functions.



**Simon Rafferty, Chief Executive Officer**

Simon joins ENGIE Fabricom having successfully led the Canadian division of the business in the same capacity and with over 15 years' experience in the engineering and construction marketplace. He brings to ENGIE Fabricom a wealth of experience having ran a diverse range of business functions from sales and business development to project management and contract negotiations. In his role as Canadian CEO Simon has successfully led numerous major projects focusing on staff engagement and operational efficiencies.



**Peter Clouston, Chief Operating Officer**

Peter comes to ENGIE Fabricom with over 30 years' experience in the oil, gas, power, chemical and renewables industries. He joins the business as a highly experienced, successful and well-regarded business leader having worked for companies including Rolls Royce Marine – where he began his career on the shop floor – through to the last 20 years in senior management positions for corporate companies and SMEs.

Within these roles, Peter has led an extensive number of business functions from sales and project management through to establishing global supply chains, driving customer relations and delivering operational efficiencies.

Both Simon and Peter will work closely with the UK

Board, taking responsibility for overall strategy and execution and overseeing ENGIE Fabricom's end to end service delivery including implementation, customer service and driving operational excellence across the business.

Both appointments come on the back of a refocused ENGIE Fabricom which will concentrate on the core strengths of the business; detailed design and engineering, modular construction and ongoing maintenance support.

Speaking about his new role and Peter's appointment Simon said: "I am very excited to have this opportunity of leading ENGIE Fabricom into its next stage of development and working alongside Peter to do this. The future, we're pleased to say, is positive for the business. We have refocused our efforts to concentrate on our core strengths and have made internal changes to make sure our processes and systems are as efficient as they can be.

"We have a deep pool of talent, a well-established customer base and a visible pipeline for this year and - with the continued support from ENGIE Group - we are confident 2021 can be a solid year for ENGIE Fabricom."

Headquartered in Grimsby - with offices in Stokesley, Immingham, Middlesbrough, Hull and Lowestoft - ENGIE Fabricom provides comprehensive engineering design and project management services to the oil, gas, power, chemical, energy from waste and renewables industries.

For more information visit:  
[engie-fabricom.co.uk](http://engie-fabricom.co.uk)

# Research Reveals Private Equity And Venture Capital Professionals Predict Huge Growth In The eVTOL Market

New research with senior private equity and venture capital professionals reveals 71% expect there to be more than 160,000 commercial air taxis operating around the world by 2050. Some 17% anticipate there will be over 200,000.

The research was commissioned by Horizon Aircraft, the advanced aerospace engineering company that has developed the Cavorite X5, the world's first eVTOL (Electric Vertical Take-off and Landing) that can fly the majority of its mission exactly like a normal aircraft.

The findings also reveal that in 30 years' time, 36% of private equity and venture capital professionals interviewed said they expect the urban air mobility

market to generate revenues of around \$90 billion a year, but 46% believe it will be more than this.

Brandon Robinson, CEO and Co-Founder of Horizon Aircraft said: "At the end of 2020, the renowned global consultancy firm Roland Berger published a report claiming the urban air mobility market will have around 160,000 commercial air taxis by 2050, and the sector will be generating around \$90 billion a year in revenue. These are

lofty estimates, but our research suggests many professional investors believe the market could be even bigger than this. This is probably being fuelled by a stream of exciting news coming out of the sector, including Astro Aerospace's recent announcement to acquire us.

"However, investors should be warned that there are over 400 eVTOL concepts around the world being developed, and the vast majority of these will never become commercially viable. They either won't meet the requirements needed to secure insurance, or because of their design and operational costs and challenges, they may be too expensive to run."

On 18th February 2021, Astro Aerospace (OTCQB: ASDND), a global leader in eVTOL aerial vehicles and drones, entered a binding agreement to acquire Horizon Aircraft Inc. The transaction is expected to close on or before the beginning of 2nd Quarter pending customary closing conditions.

Astro, a pioneer in the eVTOL market, has developed one of the market's safest and most efficient eVTOLs in the world. In 2018, the Company's drone, 'Elroy', was one of the first to seamlessly fly with humans on board. Astro continually defies traditional aviation design, and the acquisition of Horizon will only push the Company further, with the ability to reach greater heights working in tandem with Horizon's exceptional team.

| How many commercial air taxis will there be operating around the world by 2050 | Percentage of private equity and venture capital professionals |
|--|--|
| Less than 160,000  | 13%  |
| 160,000  | 13%  |
| Between 160,000 and 180,000  | 31%  |
| Between 180,000 and 200,000  | 23%  |
| More than 200,000  | 17%  |
| Don't know   | 3%   |

| By 2050, how much annual revenue will the global urban air mobility generate | Percentage of private equity and venture capital professionals |
|--|--|
| Less than \$90 billion   | 15%  |
| Around \$90 billion  | 36%  |
| A little more than \$90 billion  | 37%  |
| A lot more than \$90 billion   | 9%   |
| Don't know   | 3%   |

Visit [www.horizonaircraft.com](http://www.horizonaircraft.com) and [www.flyastro.com](http://www.flyastro.com) for more information.

# Ultimo identifies access to data as key in chemical processing

Access to actionable data has been identified by Ultimo Software Solutions as being the most important factor, in relation to asset management, in the chemical processing sector.

The findings have been published in a new whitepaper entitled Optimising uptime and cost control in the chemical processing industry. The paper covers the most crucial subjects in relation to Enterprise Asset Management (EAM) and is available to download at: [www.ultimo.com/whitepaperchemical](http://www.ultimo.com/whitepaperchemical).

The paper, written Chris van den Belt, Team Leader Product Management at Ultimo, covers the major factors that influence asset availability and concentrates on the topics of uptime and cost control. A major finding of the paper is that the ability to turn data into clear information, that can be acted upon, is often missing within chemical

processing operations. The point is made that while data is theoretically available for every asset, particularly those that may already be connected with sensors as part of an industrial internet of things (IIoT) deployment, this data is not being captured and utilised to its potential.

Also discussed within the paper is the fact that there is a constant balancing act for asset managers regarding an optimal asset management and maintenance approach. The emphasis on cost control is never-ending and requires close interaction and cooperation with colleagues in production. The more data available, the paper puts forward, the more likely that informed decisions can be made for chemical processing plants.

Incorporating insight from quantitative and qualitative research amongst asset managers and maintenance professionals, the paper covers the 'Big Data' challenge and how it relates to EAM software.

Speaking about the release of the paper Ewout Noordermeer, said, "Our trends report showed that 23% of asset managers expect big data and business intelligence platforms to be applicable to their organisations going forward. While an EAM system will host all the data for each asset and will function as the primary operational platform, other 'Big Data' business intelligence platforms are being deployed throughout organisations, so the ability for an EAM system to integrate with these is paramount."



WHITEPAPER

Optimising uptime and cost control in the chemical processing industry

Live-link your assets and facilities.

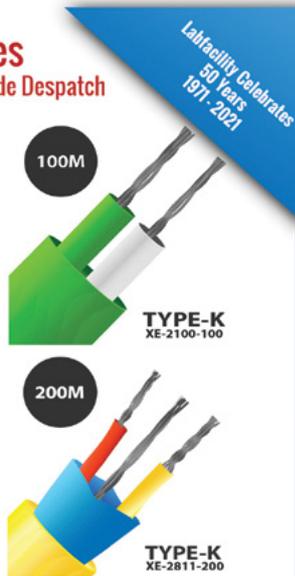
ULTIMO

For more information visit [www.ultimo.com](http://www.ultimo.com)

**LABFACILITY**  
TEMPERATURE & PROCESS TECHNOLOGY  
Leaders in temperature measurement

**Thermocouple Cables**  
In Stock For Immediate Worldwide Despatch

- PVC, PFA, PTFE Glass fibre & PRT cable
- Flat pair or Twin twisted pair in various calibration types
- Available in 10m, 25m, 50m, 100m & 200m lengths
- Available in IEC or ANSI colours



Buy On-Line at [www.labfacility.com](http://www.labfacility.com)

sales@labfacility.com  
Bognor Regis tel: +44 (0)1243 871280  
Sheffield tel: +44 (0)1909 569446



**Fabricated Type J or K Grounded Thermocouple in Stainless Steel Tube**



The Fabricated Type J or K Grounded Thermocouple has a stainless steel tube and available in various lengths and has the junction grounded at the tip for a fast response. Each thermocouple has 2 metres of IEC glass fibre stainless steel over braided cable terminating in bare tails. The probe has a temperature range of -60 to +350°C.

<https://www.labfacility.com/temperature-sensors/thermocouples-iec/fabricated-and-specialist-thermocouples/fabricated-type-j-or-k-grounded-thermocouple-in-stainless-steel-tube.html>

**Winn & Coales (Denso) Ltd Announce the Launch of Denso Bore-Wrap™**

Winn & Coales (Denso) Ltd are delighted to introduce a new addition to the Denso product line – Denso Bore-Wrap™.

Denso Bore-Wrap is an Abrasion Resistant Outerwrap (ARO) which has outstanding performance against impact, gouge, abrasion, and fracture. Denso Bore-Wrap creates a superior sacrificial outer laminate layer, which protects both pre-approved field joint coatings and mainline coatings (such as, liquid epoxy coatings, heat shrink sleeves, 3LPE, 3LPP and FBE coatings) from damage during pipeline installations, in difficult terrain or by means of trenchless installation methods, such as directional drilling, HDD or boring.

Denso Bore-Wrap is easily applied in the field; there is no mixing required, it is simply wrapped over the existing pipeline coating and cured with water. Due to its flexibility and exceptional level of mechanical protection, Denso Bore-Wrap minimises the need for costly spot repairs or re-pulling pipe from damage.

Chairman of Winn & Coales (Denso), Chris Winn, is excited about the introduction of Denso Bore-Wrap and the potential that this new development will bring. He said,



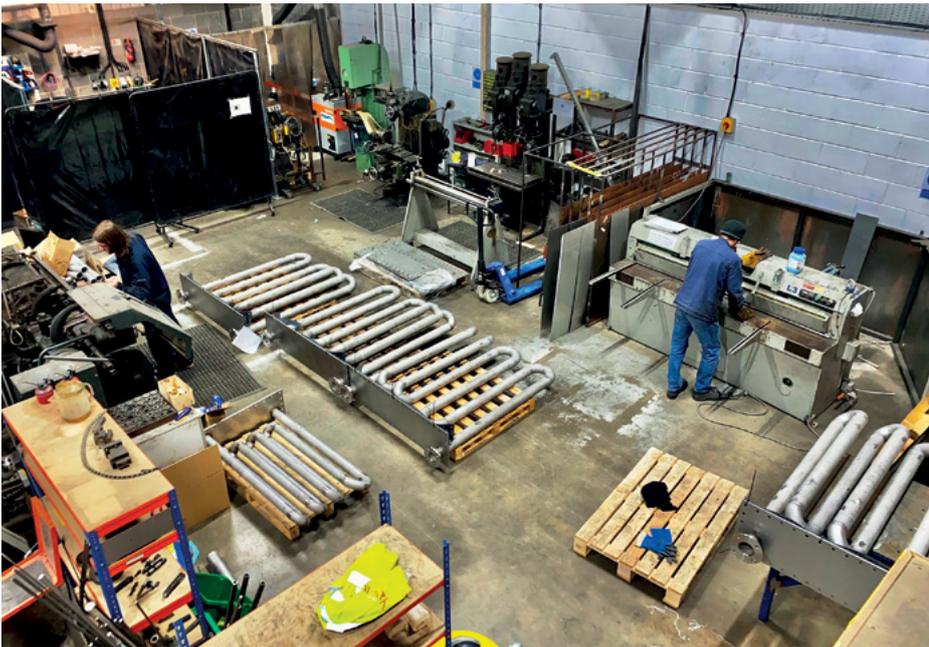
“At Winn & Coales (Denso), we are always striving to innovate and provide our customers with the most up-to-date solutions for their corrosion prevention problems. The introduction of Denso

Bore-Wrap to the Denso product range is an exciting development, and really cements our position as market leaders.”

For more information visit:  
[denso.net](http://denso.net)

# Commitment To Apprenticeships And Training Underpins Lanemark Success

The success enjoyed by Lanemark Combustion Engineering Ltd. since its formation in the early-1980's can be attributed not only to its production and technical capabilities but also to its ongoing commitment to training and personnel development.



Jeff Foster, Sales Director at the Nuneaton-based organisation, which manufactures process gas burner systems that are used in a range of industries – from metal pretreatment and brewing to the petrochemical sector – draws attention to the benefits of this approach.

*“Some 30% of our current work force either has been or still are apprentices,” he says, “and this reflects on our philosophy that remains strong to this day.”*

Lanemark operates a defined structure that enables apprentices and trainees to progress in the company in a way that meets both their own and the organisation's needs. “In all cases, apprentices start their careers with us in the workshop environment and are then given the opportunity to progress into different disciplines,” adds Jeff Foster. He highlights Technical Manager Aidan Lewis, Service Manager Chris

Wilson, Machine/Fabrication Shop Supervisor James Keene and Service Engineer Matthew Jee – all of whom have committed to the Lanemark approach and have benefited as a direct result.

By its very nature, Lanemark operates in an extremely specialist sector of the manufacturing and processing industries. The company's burner systems have always been designed to meet key customer objectives, typically in the heating of process liquids and air, and by enabling specialist skills to be developed and retained in-house, it can be best assured that its position in this highly challenging field can be sustained.

“Our customers – whether they are operating in a micro-brewery or a large-scale petrochemical processing plant – all look for the same capabilities,” explains Paul Collier, Lanemark's Managing Director. “They require installations to operate at the highest levels of efficiency and

reliability while also meeting ever-more stringent environmental objectives, and our choice of system designs all look to deliver in both areas.”

Importantly, the challenge of the last 12 months has not seen the company lose sight of the need to provide its workforce with the required operating environment – not least as defined today, for example, by social distancing.

“Apart from ensuring our office-based staff can work from home, we have also paid close attention to our production environment in Nuneaton – which, of course, cannot be relocated in the same way,” continues Jeff Foster. “This has included the opening of a new manufacturing facility close to our main factory which has provided sufficient additional space for us to separate production operations more effectively.” He adds that when times return to normal, this will also serve as added production space to reflect Lanemark's recent and increasing sales success worldwide.

“We are firmly of the view that people are our most valuable resource and are the most direct influence on our equipment, performance and success,” concludes Paul Collier. “Our history shows that this approach has been fundamental to our track record to date and I am sure will continue in the same way long into the future.”

For more information visit:  
[www.lanemark.com](http://www.lanemark.com)



**International Boiler Brokers  
For all Industrial Boilers**

Free, totally independent service linking enquirers worldwide with appropriate suppliers for:

Steam – Hot Water – Thermal Fluid  
New – Reconditioned – Hire

Over 300 reconditioned and secondhand boilers available ex-stock from various suppliers

**Twin Industries International**

Tel. 01252 845521  
[sales@twin-industries.co.uk](mailto:sales@twin-industries.co.uk)  
[www.twin-industries.co.uk](http://www.twin-industries.co.uk)

**KING BOILER HIRE SPECIALISTS**

The UK's largest provider of industrial Steam and Hot Water boiler plant. Fast, efficient Nationwide service for planned or emergency cover, R & D projects or extra capacity.



- Steam boilers 150-15,880kg/hr
- Hot water boilers 30-8,000kW/hr
- Pressures from 7-17 bar
- Oil, gas or dual fuel
- Long or short term hire
- Full commissioning service
- 24/7 support



**SALES • HIRE • EXPORT**

+44 (0)1992 451629  
[www.kingsboilerhire.com](http://www.kingsboilerhire.com)



**LANEMARK COMBUSTION ENGINEERING Gas Process Burners**



**FD-C** high turndown oven/dryer air heating burners.



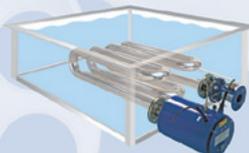
**FD-C (GA)** modulating gas + air process air heating burners.



**FD-E** low cost high turndown oven/dryer air heating burners.



**Midco HMA** high efficiency, high turndown, air replacement or "make-up" air heating burners.



**TX** high efficiency small diameter immersion tube tank heating systems.

Lanemark gas burner systems offer users reliable, high efficiency, process heating solutions.

**FD Series Packaged Oven/Dryer Burners**

- Specifically designed for process air heating applications in convection ovens and dryers
- High turndown/short flame lengths providing accurate process temperature control
- High efficiency gas + air modulation, gas only modulation and simple high/low control options
- Heat Input Range: 9 kW – 880 kW

**TX/TRX Series Gas Fired Process Tank Heating Systems**

- High efficiency (80%+) heating of all types of spray and dip process tanks
- Compact high efficiency small diameter immersion tube heat exchangers occupying minimum tank space
- Accurate performance modelling using Lanemark TxCalc design software
- Heat Input Range: 15 kW (1½") – 730 kW (6")

**Midco DB Series Air Replacement or "Make-Up" Air Heating Burners**

- Direct fired, high efficiency burner systems, for high volume air heating applications such as paint spray booths, ovens and dryers.
- Supplied either as Midco burner heads for OEM system integration or as complete packaged systems including modulating gas valve trains and controls
- Wide range of firing rates to suit alternative temperature rise and air velocity system requirements
- DbCalc system design software

**Lanemark Combustion Engineering Limited**  
Lanemark House, Whitacre Road, Nuneaton, Warwickshire CV11 6BW United Kingdom  
Tel: +44 (0) 24 7635 2000 Fax: +44 (0) 24 7634 1166 E-mail: [info@lanemark.com](mailto:info@lanemark.com)  
[www.lanemark.com](http://www.lanemark.com)



# ICS Cool Energy Supplies Temporary Heating and Cooling for an Electric Car Manufacturing Site in Germany

A bespoke, energy efficient heating and refuelling system has delivered 36MW of flexible heating for several different construction phases of the plant



**The following units were specified, planned, delivered and commissioned within the 4-week completion target:**

- 9 ICS Cool Energy Boiler 2000 (2MW) units
- 2 ICS Cool Energy Boiler 1300 (1,3MW) units
- 28 ICS Cool Energy IDF 150 indirect diesel fired units
- 58 ICS Cool Energy Air Handler 150 air handling units

ICS Cool Energy, an international market leader specializing in complete temperature control solutions for manufacturing process and facilities applications delivered a bespoke, energy efficient heating and refuelling system at an electric car manufacturing site being constructed in Germany.

The customer required a quick and state-of-the-art approach that would provide them with energy efficient heat for different construction phases. ICS Cool Energy, with one of the largest hire temperature control fleets in Europe, was able to meet all the requirements and design the most efficient heating and refuelling concept. The installed system comprises hire boilers, a fully managed fuel package, indirect diesel fired heaters and air handling units working in tandem.

To ensure lower fuel and electricity consumption,

ICS Cool Energy used liquefied petroleum gas (LPG) as the heating medium, which per metre cubed offers a calorific value of 13 kWh – 30% more in comparison to oil and natural gas. For seamless refuelling operations, all fuel tanks have been fitted with GPS modules, which send the actual fill levels directly to the supplier to avoid empty tanks.

“Our team managed to deliver a highly bespoke and specific solution that combines the best hire boilers on the rental market with excellent engineering and application knowledge,” said Stefan Drexelmeier, key account manager at ICS Cool Energy. “This combination of product and application expertise allowed us to provide the customer with a unique concept that has helped them keep their operations running and move forward with the construction process.”

With large part of the process heat used to ensure the continuation of the construction works, part of the heating system and additional 4MW of process cooling is also used for production and programming of various production processes like the painting robots. When completed, the facility will be the most advanced high-volume electric vehicle production plant in the world.

For more information, please visit [www.icscoolenergy.com](http://www.icscoolenergy.com)

# Universal Alloy Turns To Fulton For Steam As Operations Expand

With a requirement for new steam boilers with increased capacity, higher efficiency and more eco-friendly emissions when expanding their operations at a second facility in Romania, Universal Alloy Corporation had no hesitation in turning to heat transfer specialist Fulton, the supplier of steam boiler solutions already installed at its facilities in Romania and Vietnam.



Heat transfer specialist Fulton has supplied, assisted with installation and commissioned two gas-fired, horizontal RBC3000 steam boilers for Romania-based Universal Alloy Corporation (UAC), a manufacturer and fabricator of high-strength, hard alloy extrusions for aircraft structures or where precision-engineered products are critical. This is UAC's second Fulton installation in Romania – at an all-new facility built to cope with increased demand from the airline industry – and third installation across its sites in Europe and Vietnam.

In accordance with strict Romanian regulations on the installation of new plant equipment, including steam boilers, as the OEM Fulton had to be in attendance at the system testing stage, ensuring reliable, maintainable steam could be provided ahead of a planned visit by several prestigious UAC customers. This meant that Fulton's engineering services supplied support from the UK and, in line with current COVID-19 guidelines,

had to self-isolate for two weeks following the test-fire visit.

Under normal operating conditions, the two RBC steam boilers at the new Romanian facility are setup for N+1, with steam being used to heat water in several large vessels via coils, with the water being used for quenching purposes during component processing. Steam is also being passed through coils for a heater-dryer system at the end of the same processing line.

For the steam boilers supplied to UAC, Fulton partnered with renowned burner manufacturer Weishaupt and supplied the RBCs with two low-NOx, fully-modulating burners and reconfigured the boiler steam outlet nozzles to run at just 2 bar. The use of a Siemens high integrity digital burner management system means the boilers are capable of achieving at least 7:1 turndown, something not always achievable from large horizontal firetube boilers.

Additionally, unlike typical gas pressures in the UK of approximately 20 mbar or 60 mbar on the continent, the supply at UAC's site in Romania was 1.6 bar, so Fulton and Weishaupt provided an over-protection rig for the gas components in the gas train. While the gas supply to the gas train is now regulated to 95 millibar, the over-protection rig ensures that a slam-shut system is enabled should the gas pressure exceeds 180 millibar, completely negating any possible component damage.

In addition to November's test-firing visit, two of Fulton's engineers visited Romania in September to service the RBC boiler at UAC's original facility and commission the two boilers at the new plant. Again, both engineers followed COVID-19 guidelines on self-isolating when returning to the UK.

Both visits also provided an opportunity for the training of key boiler operators at UAC's new manufacturing facility which, as well as the usual instruction and guidance, also ensured that operators were educated on the start-up procedures in both low fire hold and auto modulation modes for these particular boilers.

Offering higher capacities than the 2500 kg/h maximum for its VSRT range of vertical boilers, with outputs to 4787 kg/h and a maximum working pressure of 10.34 bar, Fulton's RBC range can be specified with matched multi-stage oil, modulating gas or dual-fuel burners as standard, with other burners available on request. The boilers are constructed to BS12953 standard, meet current and anticipated legislation and have been engineered to provide a substantial performance margin.

For further information on Fulton's horizontal RBC and vertical VSRT steam boilers, call: +44 (0)117 972 3322, email [sales@fulton.co.uk](mailto:sales@fulton.co.uk) or visit [www.fulton.co.uk](http://www.fulton.co.uk)

# Hydrotechnik announce extended Calibration Department

Major investment in a multi-function flow test rig and extended pressure and temperature testing adds to capabilities

Hydrotechnik have unveiled a continued investment in their re-calibration department. The addition of an oil-based flow test rig enables Hydrotechnik to offer full in-house flow meter recalibrations traceable to National Standards for oils from 10 to 100cst and flow rates from 0.05L/min up to 700L/min. The Flow Rig has 2 master flow meters giving a maximum uncertainty of +/-0.5%. Oil flow calibrations traceable to DKD (German) national standards and full DAkkS ISO 17025 on request. In Addition, Hydrotechnik UK offer Water flow calibrations from 0.05 L/min to 2000 L/min traceable to national standard or Full UKAS ISO 17025 on request.

Hydrotechnik have created a dedicated in-house laboratory room which caters for Flow, Pressure, Temperature and electrical sensors; all outputs from mA to Ohms, plus instrumentation re-calibrations and repairs. Pressure capability is from -1 to 2,800 Bar and Temperature from -55 to +250 Deg °C, all traceable to UKAS standards.

### Why is Recalibration it so important?

Re-calibration is an important yearly procedure as it ensures that any given sensor is giving reliable, safe and trustworthy results traceable to a known National Standards.

### How often should I calibrate?

There is no one universal rule that dictates how often an instrument or sensor should be calibrated, however, most companies ISO standards dictate that sensors and instrumentation should be tested and recalibrated every 12 months.

### What Hydrotechnik UK can offer

Hydrotechnik UK have invested in a range of UKAS traceable calibration equipment. From our temperature-controlled flow meter testing rig, two dead weight pressure testers and state of the art Temperature bath, this equipment enables Hydrotechnik UK to accurately calibrate flow meters, pressure, temperature, analogue & digital gauges, displays and data loggers to national, UKAS and DKD standards. In addition, Hydrotechnik can offer instrumentation repairs and functionality checks.



All recalibrations are traceable to UKAS management ISO system, full UKAS IOS17025 is available on request.

For competitively priced and accurate calibration with a rapid turnaround freephone Hydrotechnik UK on 0800 068 4134. Or email [service@hydrotechnik.co.uk](mailto:service@hydrotechnik.co.uk)



**Your one-stop shop for Calibration & Repair**

- ✓ Flow Meters
- ✓ Pressure Sensors
- ✓ Temperature Sensors
- ✓ Analogue Gauges
- ✓ Digital Gauges
- ✓ Signals & Displays
- ✓ Dataloggers

**Accurate, reliable in-house calibrations and repairs. Carried out on high quality equipment certified and traceable to UKAS, DKD and national accreditation bodies.**

Call **0800 068 4134** or visit [hydrotechnik.co.uk/calibrations](http://hydrotechnik.co.uk/calibrations)

# TÜV SÜD National Engineering Laboratory Launches The UK's First Domestic Hydrogen Meter Calibration Facility

TÜV SÜD National Engineering Laboratory launches the UK's first traceable hydrogen flow calibration facility for domestic gas meters.

The new facility will help meter manufacturers determine if existing meter stock, and new technologies under development, are correctly

the grid. From our involvement in EU hydrogen metrology projects, and our extensive experience as the UK institute responsible for National

will initially support ongoing hydrogen feasibility and metrology research, including HyDeploy (a pioneering hydrogen energy project), the European Metrology Programme for Innovation and Research (EMPIR), and the UK Flow Programme. The research will be shared publicly so that industry can make more informed choices about meter selection.



Virtual Opening of TÜV SÜD National Engineering Laboratory's Hydrogen Domestic Gas Metering Test Facility by Dr Lisa Cameron, MP (East Kilbride), 19 March 2021

Dr Lisa Cameron, MP for East Kilbride, Strathaven and Lesmahagow, opened the facility and said: "It is wonderful to be opening our UK-based world-leading facility that represents a vital step in ensuring hydrogen is a key pillar within a sustainable future. TÜV SÜD is signalling to the world that East Kilbride will be at the forefront of global efforts to explore hydrogen's potential and the role it will undoubtedly play in combatting climate change at the forefront of our global goals for COP26 and beyond."

measuring hydrogen flow rates. This is a crucial step to ensure that hydrogen gas meters deployed onto the market in the future will deliver accurate measurements for customer billing and taxation purposes.

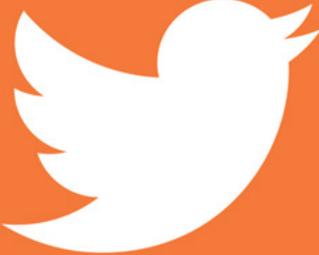
Marc MacDonald, Head of Clean Fuels at TÜV SÜD National Engineering Laboratory, said: "Accurate measurement is an essential element to enable the decarbonisation of heat via the replacement of natural gas with hydrogen in

Flow Measurement Standards, it is clear that the change from natural gas to hydrogen can result in increased meter measurement errors. Our new hydrogen calibration facility will give manufacturers the independent assurance they need to prove that metering systems are suitable for their intended service."

Funded by the Department for Business, Energy & Industrial Strategy (BEIS), through the National Measurement System mechanism, the new facility

Although the new facility was originally developed for testing domestic gas meters, other meter types including Coriolis, turbine and differential pressure can also be calibrated. Hydrogen flow meter manufacturers will also be able to use the facility for their own R&D purposes.

Watch the Official Opening  
<https://youtu.be/hCmqPOEHKMQ>



## Stay Up To Date!!!

Follow Us On Twitter

@EngMaintSol



# Ultimo and UReason launch joint solution to increase asset efficiency and availability for asset owners and managers

## Partnership unlocks real-time asset condition monitoring possibilities

Enterprise Asset Management (EAM) platform provider Ultimo and Asset Performance Management (APM) specialist UReason integrate functionalities to provide real-time asset condition monitoring. UReason is a software company that supports both asset owners and equipment vendors (OEMs) with real-time condition monitoring and predictive and prescriptive maintenance. Ultimo's EAM cloud platform helps customers increase asset availability and optimise productivity and safety. By combining the data of both platforms, unplanned downtime of assets is eliminated.

UReason's APM Studio offers the possibility to use condition-based maintenance to ensure asset reliability, worker safety, costs reduction and high asset performance. Ultimo users can now connect to UReason's APM Studio to add real-time condition monitoring and predictive maintenance capabilities to their assets. Data from the field and derived data can be integrated seamlessly from APM Studio to Ultimo using the Ultimo IoT connector. APM Studio can also create

a work order in the Ultimo software, even before a non-conformity or failure occurs.

Patrick Beekman, Partner Solution Manager at Ultimo, said: "By connecting our CMMS software with new technologies, we make asset management more efficient and predictable.

Our partnership with UReason is a great example of this. Their APM software uses AI, machine learning and IIoT to make the most out of all asset data. We extract the data and link it to our Ultimo platform, which allows customers to take the right action at the right time. For example, if you constantly have problems with critical control valves, actuators, motors and pumps that result in unplanned downtime, monitoring your assets in the APM Studio will give you direct insight into the likelihood of any failure-mechanisms occurring.

This will result in better control over your process and minimise downtime. If a failure occurs or a condition is about to reach a critical level, a notification is created in Ultimo, alerting you on time to enable the right corrective action to be taken. With this relatively easy integration of both

technologies, we create significant value for our customers."

Ronald Wissink, CEO at UReason, added: "When using our joint solution, maintenance departments can improve the use and performance of assets, stay on top of the maintenance costs and extend the lifespan of installations. Our integration with Ultimo will provide customers with improved ease of use and better efficiency. In addition, we provide more intelligence in the system so customers can control their critical processes."

Beekman concluded: "This partnership is set to benefit industrial customers in Western Europe. Both Ultimo and UReason have a solid foothold in these areas and many companies in the sector typically have multiple assets to be monitored. Interested customers of both Ultimo and UReason can contact us for a virtual demo."

For more information visit <https://www.ultimo.com/en-uk/software-solutions/maintenance-management-system/computerized-maintenance-cmms-tool-program>



# Stay Up To Date!!!

## Follow Us On Twitter

### @EngMaintSol



# Urgent Calls For Changes In How We Define Fresh Air

As the UK emerges from lockdown, a leading ventilation specialist is accelerating calls for a clearer definition of 'fresh air', in order to improve indoor air quality (IAQ) in our public buildings.



With the closing down of many public spaces as a result of the COVID-19 pandemic, focus on the air we breathe and the need to improve it has increased. As many ventilation strategies are built around the delivery of 'fresh air' into a building, Elta Group is highlighting the lack of clarity surrounding its definition.

David Millward, Group Product Manager at Elta Group, comments: "Simply defining 'fresh air' as allowing outside air to circulate inside does

not go far enough, as the quality is not always sufficient, nor is it immediately controllable. This can be particularly problematic in urban areas, where high levels of pollution mean that natural ventilation, such as opening a window, can bring harmful pollutants into the building."

Contractors and those tasked with delivering ventilation solutions are being urged to play their role in changing public perception, and familiarise themselves with the latest regulations. New

consultation documents for Parts L and F of the Building Regulations detail a change in emphasis towards air quality, with specific guidance on monitoring IAQ in offices.

There should be the means within ventilation systems to measure CO<sub>2</sub> and other air quality indicators, which helps to ensure that the 'fresh' air being brought in from outside is suitably healthy. There will also be specific guidance on how to ventilate certain types of buildings, or rooms in which particular activities are taking place. For example, where there is singing, exercise, or large numbers gathering, an increase in ventilation rates is likely to be required.

Demand-controlled ventilation (DCV) will play an important role as emphasis shifts to managing ventilation rates, as it facilitates the adjustment, whether that's automatic or manual, of rates according to what is needed. This ensures that air circulation can be adapted to meet a change in occupancy levels or alterations to the internal layout of a room. It enables systems to either increase or decrease their output depending on the situation, whether that's working up to meet compliance, or down to minimise energy costs.

David concludes: "As we move forward, it is important that the legal definition of fresh air becomes more prescriptive, and moves away from a reliance on high-quality outdoor air. By incorporating closer monitoring of internal air and taking advantage of the latest technology, particularly in relation to DCV, we can ensure that we are meeting the demands of today while catering for the needs of the future."

For more information on Elta Group, please visit: <https://eltagroup.com>

# AMP16 Control Intelligent Peristaltic Metering Pump

North Ridge pumps are proud to announce the release of the AMP16 Control - an intelligently controlled Peristaltic Metering pump with built in variable frequency drive (vfd).

Its unique design enables the precise metering of gaseous, viscous, and shear-sensitive media, containing particles with ease without the use of valves, or seals prone to blockage and wear.

Its simple design - containing a single hose and two rollers spaced at 180° intervals minimises the amount of spares required on stock, as well as the time required for maintenance which can be performed by a single operator. As the pump head rotates, the rollers compress the hose moving fluid from the inlet towards the outlet. Such design ensures full containment of the process fluid, as well as being reversible incase fluid recovery is required.

As the unit utilises peristaltic pump technology it guarantees precise, linear and repeatable metering in all process conditions. The unit is controlled via a 3" LED display with Keys and click wheel, with functions accessed via the built in menu. The unit can also be controlled remotely via BUS (profibus, profinet, canbus) as well as being IOT Capable.

The custom interface features built in machine learning enabling the unit to anticipate hose failure, preventing downtime, optimizing longevity and ensuring your process runs uninterrupted.

Upon first use the unit learns the operating characteristics, typical hours of operation, working duty and flows, detecting when the hose has leaked through its inbuilt leakage detection sensor. Once the hose has been replaced it notes the number of hours of operation which led to the failure, warning users as the unit approaches a similar time frame to replace the hose prior to failure.

The user interface not only displays current pump function but also assists users by guiding operators through hose replacement via the use of on screen instructions. The pump head automatically rotates into the correct position for hose replacement meaning users do not have to manually intervene.

## Features:

- Precise, linear and repeatable metering Gaseous of gaseous, viscous, and shear-sensitive media containing particles up to 40,000cst
- Built in Machine learning anticipates hose failure, and proactively advises operators to replace hose prior to leakage optimizing longevity and preventing downtime.
- Enables input of required final concentration, with volume-proportional metering to meet re-quired concentration (concentration mode)
- Automatic metering mode – volume settings only (l/h, ml/contact etc.)
- Metering Repeatability:  $\pm 2\%$  with retracted hose after 500 revolutions
- Metering in L/h, or gph
- Built in hose leakage detector
- Dry Run Capable and Reversible
- Visually Guided Hose Change
- Single Component in contact with fluid –the hose means there are no seals, or valves to clog or wear.
- Operation by contact, batch, manual, analogue or BUS control
- Task Mode for volume proportioning, and timed metering.
- Connection to process control systems via a BUS interface, e.g PROFIBUS®/Profinet / CANbus and IOT Capable



Typical liquids: Sulfuric acid, hydrogen peroxide, chlorine, sodium hypochlorite, flocculants, coagulants polymers and other chemicals.

## Applications:

- Chemical – Metering & Injection of Chemicals
- Food and Beverage- Flavourings, Colourants, and Shear Sensitive Liquids
- Mining –Polymers, Additives, Flocculants and Coagulants
- Paint – Metering of Solvent, Oils, Tint, Resin or Pigment
- Paper –Additives & Polymers
- Plastic – Additives & Polymers
- Potable Water –Disinfectants, Flocculants & Coagulant
- Waste water industry - High viscosity products, Polymers, Flocculants & Coagulants

For more information visit:

[https://www.northridgepumps.com/p\\_1602\\_boyser-amp16-control-intelligent-peristaltic-metering-pump](https://www.northridgepumps.com/p_1602_boyser-amp16-control-intelligent-peristaltic-metering-pump)

# Environmental Hazard Monitoring Expert Casella Announces 2021 Webinar Series for Dust, Noise, Vibration and Asbestos Monitoring

Global occupational health and workplace hazard monitoring expert Casella has announced its schedule of industry leading webinars for 2021. The schedule of free to attend, virtually accessible webinars covers Casella's areas of core competency, including workplace monitoring for dust, gas and vapour hazards, as well as instrumentation usage and best practice.

The sessions will also cover monitoring for Hand Arm Vibration (HAV) and sampling for asbestos. In order to reach worldwide attendees, two sessions will be run on each date, with one taking place at 10am and a later session at 3pm to ensure learners across multiple time zones can benefit. Each webinar will conclude with a Q&A session to recap.

The webinar schedule is set to run as follows:

## 23rd June - Setting up Air Sampling Pumps

Setting up air sampling pumps and their associated items is paramount to ensuring accurate exposure data. This webinar covers selecting the correct pump, setting up a 'sample train' and ensuring accurate flow, as well as best practice to ensure good quality data.

## 21st July - Introduction to HAV Monitoring

Hand-Arm Vibration Syndrome (HAVS) is a serious condition that can be prevented with the correct control of exposure. This webinar reviews the terminology around HAV measurement, legislation and exposure limits, as well as how to measure exposure on tools correctly and subsequently calculate exposure levels.

## 11th August - Introduction to Asbestos Sampling

This session will provide a quick insight into the international use of asbestos, both now and historically, its associated health risks and how to perform air sampling for asbestos. Attendees will be guided through the equipment and accessories needed with best practice advice on how to set up equipment.

## 15th September - Introduction to Dust Sampling

This webinar will guide attendees through different facets of dust monitoring using air sampling pumps, including types of dust to measure and the selection of equipment, such as sampling heads or filters. Additionally, the webinar will cover how to calculate airborne concentration and exposure.

## 20th October - Use of SLM's and Noise Dosimeters

This session will guide attendees through the applications and uses of noise dosimeters and sound level meters, and the pros and cons of each. This session will also provide a best practice guide to getting the most from noise monitoring

equipment, and critical 'do's and don'ts' of instrumentation.

## 24th November - Introduction to Sampling Gases and Vapours

Personal sampling of vapours and gases requires knowledge to select the correct sampling media and the right accessories and flow rates. This webinar covers sources of information, how to set up a 'sample train', and how to select the correct air-sampling pump and equipment calibration.

To sign up for any of these webinars, free of charge, please visit;

### UK & International

<https://www.casellasolutions.com/uk/en/support/training/Casella-Webinar-Schedule.html>

### USA

<https://www.casellasolutions.com/us/en/support/WebinarScheduleUS.html>

To find out more about Casella's industry-leading range of monitoring solutions, please visit [www.casellasolutions.com](http://www.casellasolutions.com)

# Taurob and Equinor to introduce autonomous robots on Norway's offshore platforms

Equinor is introducing autonomous ATEX-certified robots on their oil and gas installations. Partner in the project is inspection robotics specialist Taurob of Austria. Its robot will be used to conduct routine inspection and maintenance tasks on offshore installations.



### Thorough certification

Taurob started developing robotics applied for human safety, particularly in emergency response situations, 11 years ago. Safety is also the main driver for the energy domain to step into robotics. The state-of-the-art 'Taurob Inspector' is the result of an intensive 2-year collaboration between Taurob, French energy giant Total and UK's OGTC. Total was the first energy major to implement robotic inspection on their plant in the North Sea's Shetland Islands. Matthias Biegl, Managing Director and co-founder of Taurob, emphasizes his company's focus on safety: "Our goal is to

build trust with operators and raise acceptance on site. Going through thorough certification procedures with the customers and their HSEQ and Electrical departments is as important as the development process itself."

"Taurob Managing Director and co-founder Matthias Biegl: "Our goal is to build trust with operators and raise acceptance on site."

Equinor decided in 2019 to join Total, OGTC and Taurob in the ARGOS Joint Industry Project to develop a completely new robot, capable of performing autonomous manipulation operations.

"We expect the result to be a robust and reliable robot, with maintenance intervals of up to only once per year; ideal for Normally Unmanned Facilities (NUF) where human intervention is rare. As a so called 'Work Class' robot, it will physically interact with the installation," says Biegl. First tests will be performed this year.

For more information visit:  
<https://taurob.com>

# Pyroban's ATEX forklift conversions get both UKCA and CE mark

In March 2021, safety company Pyroban applied its first UKCA mark to an explosion proof forklift, alongside the CE mark.

Following BREXIT, Pyroban, based in West Sussex, England, is now applying the UKCA mark to all shipments destined for Zone 2 or 22 hazardous area operation, confirming it has met the required standards.

Neil Elliot, Compliance and Certification Engineer for Pyroban explains: "The dual marking demonstrates that our ATEX 3G and 3D conversions have full approval for use in the UK and Europe in accordance with the ATEX 2014/34/EU Directive, Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 and EN1755:2015 standard."

Pyroban has a strong presence in Europe which is why the CE mark remains in place to ensure products are built for operation in EU countries.

So, whether supplying a waste management company in the North of England or a chemical company in France, the Pyroban solution will be identical.

"Our system design, build quality and levels of safety are exactly the same as they were before BREXIT," says Neil. "We are also working hard in the background to bring UKCA marking to all our Zone 1 and 21 solutions, which we expect later in the summer, long before the 1st January 2022 deadline."

The UKCA (UK Conformity Assessed) marking is a new UK product marking that is used for goods being placed on the market in Great Britain (England, Wales and Scotland). It covers most goods which previously required the CE marking.



Pyroban converts forklift trucks (and other mobile equipment) so that they cannot be the source of an ignition in potentially explosive atmospheres. Unprotected vehicles could otherwise be the cause of an explosion in the chemical, pharmaceutical, cosmetics, food and drink, oil and gas or logistics industries.

For more information, visit  
[www.pyroban.com](http://www.pyroban.com),  
email [sales@pyroban.com](mailto:sales@pyroban.com)  
or call +44 (0) 1273 456800.

# TOUGH & RELIABLE IN HAZARDOUS AREAS

- ATEX/IECEX ZONE 1/21
- UP TO 3,100 LUMENS (EMITTED) - IDEAL FOR SMALLER CONFINED SPACES
- UP TO 8 LIGHTS CAN BE CONNECTED FROM ONE WOLF TRANSFORMER
- FULLY LINKABLE (UP TO 20 LIGHTS CAN BE STRUNG TOGETHER WITH THE HV VERSION)
- SOVI™ TECHNOLOGY ALERTS THE USER IF LIGHTS ARE RUNNING OUTSIDE CERTIFIED AND OPTIMAL VOLTAGE RANGES
- CERTIFIED SAFE TO 0 VOLTS
- IDEAL FOR 24 VOLT APPLICATIONS WITH A LIMITED POWER SUPPLY
- TOUGH, RELIABLE, PROVEN MATERIALS FOR LONG LIFE



WOLF SAFETY LAMP COMPANY T: +44 (0) 114 255 1051  
SAXON ROAD WORKS W: WOLFSAFETY.COM  
SHEFFIELD S8 0YA E: INFO@WOLFSAFETY.COM

CHOOSE THE ULTRA RELIABLE  
**WF-250XL**  
LED FLOODLIGHT

## Wolf Safety's bespoke lighting solutions add value and cut costs

As world leaders in manufacturing hazardous area portable and temporary lighting, Wolf Safety know that many customers require a bespoke solution which addresses safety, technical and logistical issues raised by a specific project.

So when the Wolf team was asked to propose a lighting solution for the inspection and maintenance of a condensate LNG tank in Norway it was an ideal opportunity to demonstrate the company's technical expertise and bespoke service.

This enhanced capability proved a key factor in Wolf Safety being awarded the contract, following a highly competitive international procurement process.

Says Miles Jackson, Sales Director: "We not only came up with a better lighting scheme but also a safer, total solution, delivered at considerably lower cost than our competitors. This addressed all safety aspects, including correct fusing of very long extra-low voltage power cables.

Project summary: The LNG (liquefied natural gas) storage tank to be inspected and maintained is 60m in diameter and 45m high. The task required the use of a SELV (Safe Extra Low Voltage) power supply and this, combined with limited access to the tank, raised several issues.

As different contractors' teams needed to work on the project at the same time the base of the tank had to be fully illuminated. This objective was achieved using 60 perimeter mounted lights, fewer than the number proposed by other companies.

Using highly efficient Wolf lights, requiring fewer transformers, led to substantial cost reductions. The lighting solution required 48 mid-power WF-250XL floodlights mounted using magnet fixing kits at a 2m height on the tank wall, projecting



light from the perimeter towards the centre. An additional 12 high power WF-300@XL LED floodlights illuminated out from the central tower of the tank.

For further information about bespoke ATEX temporary lighting solutions for use in hazardous areas, go to:  
[www.wolfsafety.com](http://www.wolfsafety.com)

# High-performance seals for butterfly valves

In order to ensure that process plants meet hygiene requirements, industry-specific approvals and resistance to CIP/SIP media, Freudenberg Sealing Technologies has developed a new series of high-performance seals for butterfly valves. The seals have been developed in conjunction with French customer Definox, one of the leading manufacturers of first class process valves and stainless steel equipment for high-end applications in sectors such as food, beverage, cosmetics, pharmaceutical and animal feed.

Following rigorous tests, 70 EPDM 291 O-rings have already been delivered to Definox, where they have been successfully deployed and demonstrated. Based on this first success, both companies decided to launch a project for the development of new butterfly seals.

## Setting out the objectives

Developing the new seals saw the two companies draw up a list of technical targets, which included simple installation, uncompromising tightness, wear-resistant materials and sealing geometry free of dead space. With the concept finalised, the development team at Freudenberg Sealing Technologies set to work.

As part of an initial phase, Freudenberg performed extensive validation testing of the new valve seal on its in-house test bench. Seals in three reference dimensions were tested in Definox butterfly valves under operating conditions similar to reality. Results from the long-term tests could then be transferred to other seal dimensions.

## Expertise in testing and validation

The advanced test bench at Freudenberg Sealing Technologies is designed as a CIP system featuring multiple containers, thus offering the capability to simulate various cleaning processes with acids, lye and disinfectants. Up to three

butterfly valves can be tested simultaneously or successively on test tracks, with temperature, pressure and flow rate recorded digitally. Findings are provided on the material's resistance and functional reliability, thus delivering vital data for selecting the optimum seal geometry.

The co-operative partnership between Freudenberg Sealing Technologies and Definox resulted in an advanced butterfly valve seal offering both design innovation and high levels of wear resistance. This makes it ideal for process sector requirements.

Among the attributes of the new butterfly valve seal is its ability to close with little force. Moreover, when closed, the seal provides high compression to create the sealing function. The seal's geometry is free of dead space to ensure its suitability for use in hygienic applications.

Further benefits include very good pressure resistance, which is maintained during multiple switching operations, and extremely low torque. As a result of these properties, long service life and high reliability are assured, even when operating in challenging conditions.

## Material options

Convinced by the performance attributes of the new seal developed by Freudenberg Sealing



Technologies, Definox asked the company to start replacing the seals of existing valve types.

As a result of this project, Definox now offers a series of butterfly valves available in three FDA- and EU (Reg.) 1935/2004-compliant materials: 75 EPDM 253356; 75 Fluoroprene® XP 41; and 75 HNBR 254067. 75 Fluoroprene® XP 41 is additionally tested in vitro according to USP chapter 87. The material is also certified to USP Class V chapter 88 at 121°C, meets 3-A® Sanitary Standards and complies with regulations set out by the BNIC (Bureau National Interprofessionnel du Cognac) in France.

Ultimately, the partnership with Definox has led to the creation of a new high-performance butterfly valve seal that is capable of meeting requirements across a multitude of demanding process industry applications.

For more information visit:  
[www.fst.com](http://www.fst.com)

# New medical guidelines added to water jetting code

Far-reaching new medical guidelines for managing injuries are among the important additions to a revised Code of Practice published by the Water Jetting Association (WJA).

The member organisation for the UK water jetting industry has revised its Blue Code of Practice for the Use of High Pressure and Ultra High Pressure Water Jetting for the first time since 2015.

It is the ninth time the Blue Code, as the document is called, has been revised or significantly amended and then republished since it was first created in 1982.

The WJA also has a 'Red Code' for the Safe Working and Use of Water Jetting in Drains and Sewers. It urges members and commissioning clients to consult the codes of practice every time they need to confirm best practice in water jetting.

The new medical guidelines for the management of industrial high pressure fluid injection injuries

(IHPFIIs) are based on research commissioned by the WJA and carried out by a team of eminent trauma doctors.

David Kennedy, Director of the WJA, said: "The medical guidelines were first published in 2019. They represent a step change in our understanding of fluid injection injuries and our ability to treat them.

"For that reason, we wanted to include them in our Blue Code as soon as possible. If applied, the guidelines will save lives and reduce the risk of long-term and life-changing serious injury.

"We've also gone through the Code of Practice line by line, updating guidance based on latest understanding on best practice, changes to



health and safety regulation and legislation, and feedback from our members."

Other significant changes include the inclusion of a hierarchy of control in an appendix to the section on risk assessment and a new appendix providing extra information and advice about water jetting personal protective equipment (PPE).

[www.waterjetting.org.uk](http://www.waterjetting.org.uk)

## WATER JETTING TRAINING FOR THE ENGINEERING INDUSTRY

### Key Benefits

- City & Guilds Accredited
- WJA-Approved Instructors
- New Recruits & Refresher
- Written Compliance Test
- Certificate & Photo ID Card

City & Guilds Accredited Programme

### Courses Offered

- Safety Awareness
- Pressure Washing
- Tube & Pipe Cleaning
- Surface Preparation
- Hydrodemolition
- Drain & Sewer Cleaning

New for 2021

### Level 2 Water Jetting Technician Certificate

- Level 2 Water Jetting Technician Certificate
- UK's first competency qualification for water jetting
- Accredited by ABBE / Ofqual
- Qualifies holder for CSCS card

- 40/60 skills learning and assessment
- Enhances productivity and safety
- Supports succession planning and retention

Contact us for details of WJA-Approved Instructors in your area

✉ [info@waterjetting.org.uk](mailto:info@waterjetting.org.uk) ☎ +44 (0) 208 320 1090 🌐 [www.waterjetting.org.uk](http://www.waterjetting.org.uk)

Water Jetting Association - The Engine House, Veridion Way, Erith, Kent, DA18 4AL, UK

JOIN THE  
WATER JETTING  
ASSOCIATION

Find out about the many benefits of being a WJA member

# Four excuses not to take your enclosure cooling maintenance seriously.

There is an adage that time is money, this is particularly true when it comes to production downtime. Hold ups in production could result in lost money- a lot of lost money!

Losses of upto £480,000 have been suggested that one of the UK's largest automotive manufacturers could lose EACH HOUR; when they experience downtime on their paint plant. Your overheads may not be as substantial as the above example, but that doesn't take away from the fact that the old adage you hear in every corner of business and production is true:

Regardless of your industry and the product you manufacture, production downtime is a crucial performance indicator to monitor because of the direct impact it can have on your bottom line. More downtime equals increased spares/maintenance costs, taken directly from your profit. This could have been invested to meet more pertinent business objectives, purchasing new machinery etc..

Do you ever hear (or even make) any of the following excuses as reason not to tackle climate

control provision and maintenance in your production and automation facilities?

## 1) "I will just fix a problem when it occurs"

In the past, the approach of reactive maintenance was seen as acceptable for most businesses. However, times have changed. The key goals of any sized business are now becoming "increased throughput", "Cost Efficiency", "Continuous Improvement". Potential roadblocks to output targets need to be nipped in the bud and nobody wants to be the one in the morning meeting explaining why yesterday's targets weren't met!

The implementation of a semi-regular maintenance schedule doesn't have to be massively time-consuming. Even something as simple as a weekly visual check of cooling equipment filter mats or any system alarms can alert you in good time to call in the experts, who can then perform a more detailed review for you.

## 2) "We just open the enclosure door for a while"

This is treating the symptoms rather than the illness. If you are having to resort to a tactic such as using large fans to blow ambient air into an open enclosure you could be doing more harm than good. Not to mention that this is a massively dangerous solution from a health and safety standpoint.

An enclosure's purpose is to create an environment in which electrical equipment is protected from ambient contaminants. Having the door open allows a constant stream of dirty air to be pulled into the enclosure. This will then gather in switchgear/connection points and can cause short circuits or block on-board fans which will result in damage to componentry, reduced life and possible critical component failure.

If this course of action is required it can point to the fact that the cooling equipment currently employed is not adequate for the installation, or it requires some level of maintenance to bring it back into working order.

A RiAssure FREE Cooling Review from Rittal is perfect in this instance as your local Climate Control expert will perform a short appraisal of your existing equipment, give you honest feedback as to whether

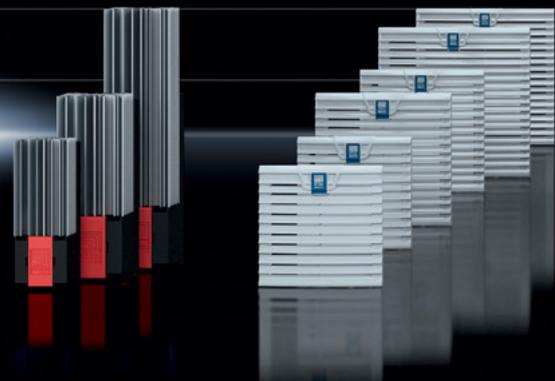
## Rittal – The System.

Faster – better – everywhere.

# Enclosure Climate Control

## Whatever the scale.....

## .....we have the solution



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

the equipment is adequate, and also provide details/quotations for a service contract to suit your ongoing needs.

**3) “My equipment is currently operating, and I haven’t serviced it in months/years”**

The problem may be “out of sight, out of mind” for now but the longer your cooling equipment is left unchecked, the higher the risk.

For example, if a fan unit is in a dusty environment and the filter mat becomes clogged, this will reduce its effectiveness to cool the electrical equipment within due to a reduced level of air throughput.

This in turn can increase the enclosure internal temperature. As a rule of thumb, for every 10°C you increase your internal temperature, you halve the life of the equipment within and increase the likelihood of an unexpected failure.

**4) “I don’t have the manpower/we have a company who does that work for us”**

Many companies I visit tell me that they outsource their servicing to a third party, however I tend to question what checks they are performing, given that I have been called onto site because an enclosure is overheating!

On one occasion, I asked the customer to speak with his current service provider to understand what checks were being undertaken, because his cooling units were in quite a state of disrepair. It became clear after a short discussion that they serviced “Air Conditioning” in the offices and didn’t even look in the factory...



Obviously, this is not the case for all service providers out there, however climate control equipment becoming increasingly efficient, while new, sophisticated, cutting-edge technology is launched every year. The only guarantee of the highest level of checks and service will come from engineers who have been trained by the manufacturers about the technology and its detailed workings.

Rittal has been manufacturing industry-leading climate control equipment for 30 years and all of our service staff are highly trained on the whole

portfolio to ensure they can remedy your issues.

Take the introductory example again and turn the spotlight onto your business. Everyone has budgets and savings targets to hit, so ask yourself, can you afford NOT to have correct maintenance in place?

For more information go to:

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

or: [www.friedhelm-loh-group.com](http://www.friedhelm-loh-group.com),

or on twitter @Rittal Ltd UK on linked in



IT INFRASTRUCTURE

SOFTWARE & SERVICES

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



# ICS Cool Energy Keeps Leading UK Brewery Operations Cool

With a customized long-term hire, ICS Cool Energy equipped a leading multinational brewery in Burton-on-Trent with portable Cold Store solutions and replaced ammonia-based refrigeration system with high efficiency, low GWP chillers.

ICS Cool Energy, an international market leader specializing in complete temperature control solutions for manufacturing process and facilities applications, announced today it has helped a leading multinational brewery in Burton-on-Trent to fulfil their cold storage and process cooling needs.

The brewery was looking for a partner that could answer their unique needs for cold storage within their Burton-on-Trent plant and replace the aging, ammonia-based process cooling system. ICS Cool Energy team was able to deliver a bespoke, long-term hire solution that met all their requirements.

"At ICS Cool Energy, we take pride in working hand in hand with our customers, listening closely to their needs and keeping their industries running," said Dave Palmer, general manager ICS Cool Energy. "In the brewing industry, achieving a high-quality product consistency relies on having control of your process temperatures. With this project, our dedicated hire team fulfilled the customer's unique demand for cold storage and helped them address their safety concerns by replacing the ammonia system with a safer and environmentally friendly process cooling solution."

## Cold storage in the middle of the plant

The brewery was looking for a way to install a flexible cold storage solution that would keep the kegs of beer and raw products cold and fresh within their craft beer pilot plant. They needed to maintain specific temperatures to guarantee product consistency, while coping with a high

ambient temperature caused by the central location of the pilot plant within the manufacturing facility. ICS Cool Energy was able to tick all their boxes customizing a 20-foot refrigerated container unit as part of their Cold Store hire solutions.

Originally designed for global - often in high ambient temperatures - marine transport of temperature sensitive perishables, the Cold Store solution provides accurate and stable storage temperatures. At the brewery, the unit's temperature was set at down to minus 21 degrees Celsius to ensure the raw material and ingredients used in the brewery processes of the special craft beers were kept at the optimum conditions before they are used. Additionally, the portable Cold Store container, designed to be put on and off ships, gave the brewery the flexibility to move it around with the lift and shift as needed.

**Replacing ammonia to combine safety, high efficiency and performance with low environmental impact.**

Following the successful Cold Store hire project, the brewery was looking for a way to remove the ammonia (NH<sub>3</sub>) refrigerated chillers from their site. Further investments required to maintain the old system safe and operational exceeded the financial and safety benefits of installing a new and more efficient one. ICS Cool Energy was again able to provide them with a hire solution, that met their process cooling needs and combined safety, high efficiency and performance with low environmental impact.



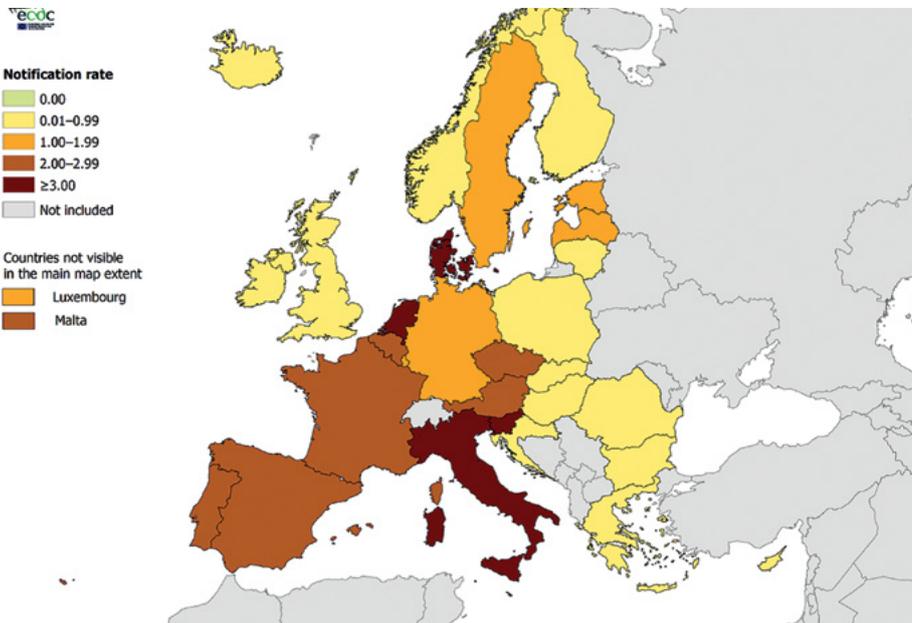
Initially, the brewery was looking for localized chillers for every part of the brewing process. After analysing the options, the ICS Cool Energy team offered a more efficient solution that mimicked the old ammonia system. ICS Cool Energy installed three large 1,4MW chillers in the same area where the ammonia was originally installed, which allowed to tap the new chillers into the existing pipework and power infrastructure. The new chillers can provide reliable temperature control in the most demanding applications. They feature a variable volume index compressor and permanent magnet motor that allow the equipment to operate at the most appropriate pressure ratio and achieve outstanding part load efficiencies.

For low environmental impact, the units feature ultra-low global warming potential (GWP) R-1234ze refrigerant, which in chillers can outperform ammonia even by 25% according to the energy efficiency ratio (EER) analysis. R-1234ze is mildly flammable and non-corrosive in comparison to ammonia, which is toxic and can pose serious risks to human health and food and beverage operations.

For more information on ICS Cool Energy complete process temperature control solutions, please visit <https://www.icscoolenergy.com/>

# UK leading the fight against Legionella Bacteria

Mark Donoghue, Products and Services Director, DHD Cooling



It is now more common to read about cases of Legionnaires' Disease in the media than ever before, with outbreaks regularly being reported in cities around the world all the time. Many of these cases are attributed to contamination of domestic systems, showers and spas, but some are the result of operating cooling towers.

Whilst this problem is not new, with the first reported case in Philadelphia in 1976, the UK has been at the forefront in leading the battle with Legionnaires' Disease, which has a mortality rate of approximately 10%.

The Health and Safety Executive (HSE) worked with manufacturers and industry experts to issue the Approved Code of Practice L8 in 1991 which advised manufacturers, owners, operators and service providers on the use of cooling systems (and domestic water systems) and their safe operation with regards to legionella bacteria.

From data available via the European Centre for Disease Prevention and Control in their Annual Epidemiological Report 2018, there were 10,672 cases of Legionnaires' Disease across Europe.

Germany, France, Italy and Spain accounted for 71% of the cases, with UK cases only accounting for 5%. Outbreaks in the UK in fact are becoming more and more infrequent, which has led to the question, why is this not the case elsewhere?

## Tackling legionella bacteria

In the UK, the HSE has led the drive to reduce the incidence of legionella bacteria in water systems with their two documents, ACoP-L8 and more recently HSG274 Pt1. This has seen the numbers of cases within the UK become the lowest of the main manufacturing nations of Europe.

Legionella bacteria exists in fresh water so can be introduced into cooling systems through the make-up water line if the water is not treated. Added to that, when given the right conditions - water temperatures between 20 and 45, stagnation in pipes, accumulation of dirt or scale, sunlight, and a food source - it can multiply to dangerous levels within a water system. When contaminated water is introduced into a stream of air, the bacteria can become airborne which is known as drift, and if this is inhaled, it can become a serious risk to health.

There are several ways of tackling the issue of legionella in cooling systems, and these should be used in conjunction with each other to comply with the HSE's guidance.

- The cooling system (the cooling tower and everything associated with it) should be designed so that risks of bacterial growth are minimised. This covers actions such as the removal of dead-legs in the pipework,

designing the system so that it is easy to clean and maintain, using materials of construction that are not favourable to bacterial growth and minimising the release of drift.

- Legionella can be introduced from the water inlet, so treatment of the system is needed. This will typically involve dosing the system with biocides that kill the bacteria, corrosion inhibitors to limit corrosion (which can act as a food source) and scale inhibitors which prevent build-up that provides a protective layer and prevents the biocides from working effectively.
- Physical maintenance is crucial, and comes in the form of cleaning debris and ensuring contamination is removed from the system and the heat exchange media. It also involves reviewing the system to ensure that the correct materials are installed to minimise the risk of legionella and that they are working correctly. Preventative measures such as painting the internals of systems can also help stop process water coming into contact with the corrosion and can extend the life of the system.

## Legionnaires' Disease is still a very real threat

Keeping cooling equipment operating safely is not the same as making sure your equipment operates effectively. Owners of cooling systems should not be complacent with keeping their equipment clean and maintained, as bacteria is still a very real possibility in cooling systems.

Legionella bacteria is naturally present in water and in the right conditions can proliferate, so it is important to minimise the risk of this occurring by implementing controls in the form of good system design, effective water treatment and monitoring, cleaning and maintenance of the system using qualified suppliers. If these measures are followed the control of legionella is achievable and organisations are on their way to becoming responsible users of cooling systems and helping to keep the UK as the pioneers in the fight against Legionnaires' Disease.

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

# Simple, Safe, Efficient

## Fresh Air Cooling Solutions

- ✓ 100% fresh air
- ✓ Save up to 90% compared to AC
- ✓ Ventilation based evaporative cooling
- ✓ Targeted spot and blanket cooling
- ✓ No refrigerants



WAREHOUSE



RETAIL



TELECOM



DATA CENTRES



FACTORY



GYM



Scan to  
watch our  
video!

 **EcoCooling**  
FRESH AIR COOLING

# Keep your factory cool while reducing the risk of COVID transmission this summer.

The Government have just announced their new guidelines of “hands, face, space, fresh air” to reduce the risk of COVID transmission. The emphasis for business is the provision of good ventilation for workers.



EcoCooling manufacture a fresh air solution that provides ventilation and supplementary cooling in both an effective and environmentally friendly way. EcoCooling evaporative cooling technology complies with the new ventilation guidelines and can maintain temperatures below 25C all year round, keeping staff safe as well as cool.

## What is Evaporative cooling?

Evaporative cooling occurs naturally near water. For centuries the application of this process has been keeping people cool. EcoCooling evaporative coolers use this process on an industrial scale to keep people, products and processes at a comfortable temperature in factories and large buildings without the use of refrigerants.

## How do EcoCoolers work?

EcoCoolers are installed as part of a balanced mechanical ventilation system. They incorporate evaporative cooling which is a very simple process. In hot weather the hot air passes over wetted filter pads which cool the air. These are linked with extraction fans to remove hot air

and ensure air is never recirculated. A control system monitors both external and internal temperatures to maintain a consistent operating temperature within a building. Systems can be installed to provide blanket cooling or spot cooling directed at work stations or machinery. Unlike air conditioning, this system operates just as efficiently with doors and windows open or closed.

The only installation requirements are mains water and 240V electricity supply, making them very simple to install and maintain.

EcoCoolers can be fitted with simple air filtration systems which meet Good Manufacturing Process standards for most applications including the food industry.

## Is my factory too big or small for an EcoCooling system?

EcoCoolers are modular; one cooler can typically provide up to 35kW of cooling covering an area of 250m<sup>2</sup> or a 15m diameter circle in a factory. Installers design systems around the size and use of the building, ensuring that there are a sufficient number of air changes per hour to achieve the

desired temperature and ventilation requirements. A normal factory will have between 12 and 15 air changes per hour. This means, however substantial or compact your premises is, we can specify a system for your needs.

EcoCoolers can be operated in either automatic or manual modes allowing the client to boost cooling or ventilation. The control solutions offered range from the most simple to full PLC systems with touch screen controls. CO<sub>2</sub> monitoring can also be used to manage the internal environment.

## Looking to reduce your carbon footprint?

The natural cooling process and low electricity usage supports businesses looking to reduce the carbon footprint of their factories and has helped drive companies towards their net zero targets.

On colder days, when cooling is not required the system can run in free cooling or ventilation only mode. When evaporative cooling is required, one cooler costs less than 15p per hour to run.

Conscious about supporting local businesses? We are a UK based company with stock held in Suffolk and an established installation network across the country.

## A simple, safe, low cost solution for cooling your factory

Cool conditions will lead to improved productivity and product stability. Ventilation, rather than closed loop refrigeration systems, expels COVID and other contaminants leading to a safer work place.

At 90% less than the running cost and less than 50% of the installation cost of air conditioning. EcoCooling provides a simple, safe and low-cost method of making your factory cool, productive and COVID safe.

For further information please contact us on 01284 810586  
[sales@ecocooling.co.uk](mailto:sales@ecocooling.co.uk)  
 or visit our web site:  
[www.ecocooling.co.uk](http://www.ecocooling.co.uk)

# New LEEA research reveals optimistic post-pandemic outlook

Despite the Covid-19 health crisis impacting significantly on the Lifting Industry, Lifting Equipment Engineers Association (LEEA) Sector Benchmark Research reveals optimism for the post-pandemic future, and a move towards new and possibly more productive ways of working.



Indeed, 72% of firms reported being optimistic for the next 6 months, with this increasing to 80% for the next 12 months. However, the breadth of specialisms and the number of supply chains in the sector have produced a varied picture in the research.

LEEA does not expect the sector to return to pre-pandemic patterns of work as there are now clearly different expectations around training, travel and work patterns, according to the research. The majority of firms (over two thirds) reported their attitude towards e-training had changed in the past 12 months, with it being seen much more as an option. Training by Zoom specifically has its supporters, with nearly three quarters of firms reporting that they now see it as a more likely option. However, there is clearly a view

that face-to-face training remains the preference, regardless of company size or specialism.

Most firms are looking at more focussed travel, however, with 65% reporting that they expect to make changes to their business travel budget post lockdown.

Few can be surprised to see such a large percentage of respondents recording revenue falls due to the economic impact of the pandemic and associated lockdowns. Surprisingly, however, the survey reveals a larger percentage recorded an increase in revenue. The picture improves when looking over the duration of the crisis: during the initial pandemic period (April to June 2020), there was an equal split between those reporting revenues up or down compared to the same

period in 2019 (45% each). But, across the longer period of April 2020 to February 2021, the balance shifts to 54% reporting revenues up compared to 39% seeing a drop, which gives reason for optimism looking forward. Nevertheless, there has been a dramatic impact on the workforce with an incredible 50% of respondents making job losses attributable to the pandemic across a range of roles. Half the respondents expect the workforce to be smaller in March 2022 than it was in March 2020. While we can speculate about the reasons behind the ups and downs, further research will be required to fully understand which parts of our sector did better than others.

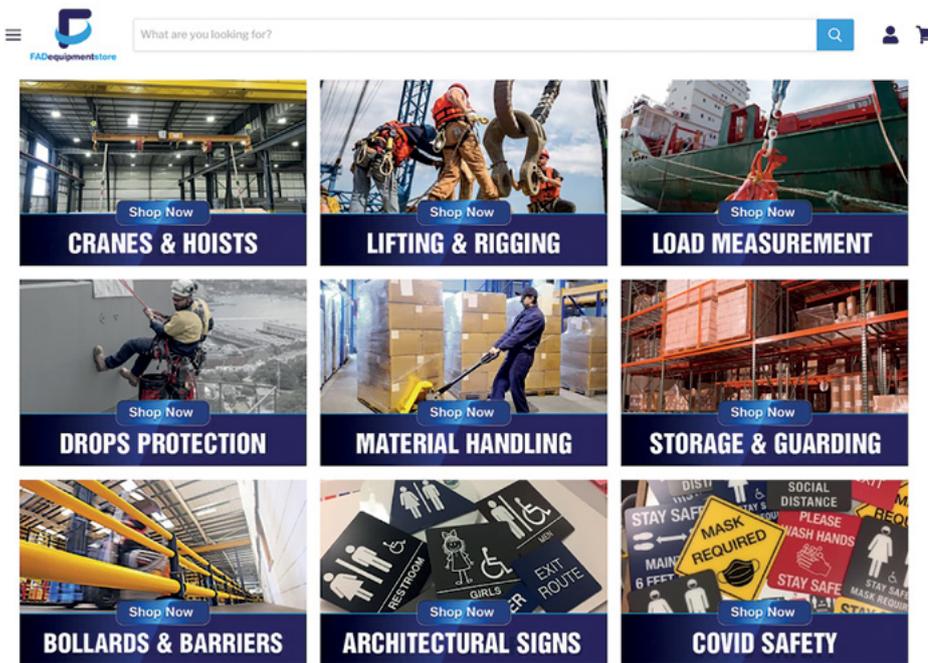
Ross Moloney, CEO of LEEA said: "2020 has been a year that none of us expected. Our personal and work lives have all been impacted and as we look forward, we are now trying our best to predict what the future will look like. A year on from the initial lockdown in the UK, LEEA has issued this research aimed at helping us to understand the implications of the pandemic on our industry. It allows us to see the huge financial effects on our industry and the retrenching we are expecting concerning the size of the workforce, how training is conducted and changes to everyday work."

The LEEA Sector Benchmark Research was disseminated to LEEA members and broadly to the industry using social media between February and March 2021. Of the 118 firms responding, a third reported that their Head Office was located in the UK, a quarter in the Middle East and 13% within Africa. The size of firms ranged from micro, employing less than 10, through to firms employing more than 50. For further information visit [leeaint.com](http://leeaint.com).

For more information visit:  
[leeaint.com](http://leeaint.com)

# Material Handling Equipment Store Launches

A new USA material handling equipment store has gone live at [fadequipmentstore.com](http://fadequipmentstore.com), offering free shipping on all products.



Headquartered in South Carolina, [fadequipmentstore.com](http://fadequipmentstore.com) puts lifting, material handling, safety and load monitoring products a click away from end users in warehouses, manufacturing, construction, oil and gas, renewables, commercial and other markets. Solutions that can be used by anybody but feature cutting-edge design and state-of-the-art technology are drop-shipped to customers.

The new business, powered by online equipment directory [findadistributor.com](http://findadistributor.com), is led by Jeff Miller, general manager, while serial industry entrepreneur David Ayling is president. A consortium of ecommerce, finance and marketing professionals complete the team.

Miller said: "This is the most innovative material

handling ecommerce concept to hit the market.

It's one thing to deliver an online platform where users can visit, click and order, but another to present a broad portfolio of products each of which is the standout technology or solution in its sector. [fadequipmentstore.com](http://fadequipmentstore.com) is a combination of easy-to-order and best-in-class."

The store offers breadth of product but every item is provided by premium suppliers with stock held in the USA for quick delivery direct from the manufacturer. Miller's specialist team will continually monitor the relevant markets and trends, and maintain constant dialog with industry contacts, to ensure that the site serves as a one-stop-shop for material handling and safety equipment users. [fadequipmentstore.com](http://fadequipmentstore.com)

will also be present at trade shows and industry events to guarantee customers constant catalog refinement.

The evolution of ecommerce continued at a steady speed until the outbreak of Covid-19, when online purchases increased at an exponential rate, even apace with the virus itself. Reality is, there are less sales representatives traveling the USA visiting customers and it is more incumbent on a buyer to source online and buy direct. [fadequipmentstore.com](http://fadequipmentstore.com) is perfectly positioned to move in that direction of travel, indeed, to lead it.

Miller, who has held general management positions with start-ups and established companies of all sizes, said: "We are poised for rapid growth and prepared for all eventualities. Our customer base can reach out to us if there are any issues with availability or condition of product."

Leading manufacturers that have listed product on the store include The Crosby Group (lifting and rigging hardware), Crosby | Straightpoint (load monitoring technology), Crosby | Accolift (chain and lever hoists), Oz Lifting (davit cranes and hoists), Caldwell (overhead lifting and rigging gear), SpaceGuard, A-Safe (both protective guarding products), P&I Supply (tool drop prevention solutions), and Kroy Sign Systems (signs and way-finding).

Begin a lifting, material handling, safety or load monitoring product purchase today at:  
[fadequipmentstore.com](http://fadequipmentstore.com)

# Rail Fleet Modernisation – Developing Components For The Future

Rail locomotives provide a vital transportation service for both passengers and freight across the world.

Working round-the-clock, they are expected to deliver unrivalled reliability, which is made possible through regular maintenance and provision of modernisation programmes delivered by the train manufacturers. These are delivered in partnership with trusted equipment manufacturers that have the expertise and knowledge to meet the exacting standards of the industry.

Ralph Breuer, Director of Engineering & Product Management and Mustafa Metin, Product Specialist for Elastic Couplings at Stromag, examine the challenges of developing new

components for existing rolling stock.

The worldwide rail network endeavours to maintain an excellent safety record through both regular planned maintenance, and adherence to rigorous standards and repair specifications. Any supplier to the industry must pass the scrutiny of independent inspections that examine the entire supply chain of materials, repair techniques, facilities and training. Those that qualify can deliver services to operators as well as manufacturers - as part of their programmes for continuous improvement.

## Incorporating modern designs

For manufacturers, developing modernization packages is a very important part of the support they offer to operators. These programmes can take advantage of materials and manufacturing techniques that have been developed since the locomotives were launched. For the operators, these updates ensure continued reliability and extended service life for their assets.

However, these programmes require considerable planning and time for product design, development and testing. As a result, the relationships between the OEM, the rail operator and the parts manufacturer are very important; they must be long-standing if a successful outcome is to be achieved.

In one example, a rail OEM reached out to Stromag, Nuttall Gear and Guardian Couplings, all of which are leading brands of Altra Industrial Motion Corp., for support in supplying specialist flexible and gear couplings.

Over the last three years, the OEM's design and engineering team has been working on new coupling solutions for both the main drive side and the power-take-off (PTO) of the diesel engine. One coupling is to be positioned between the diesel engine and the gearbox, another between the gearbox and the exciter and blower assembly and a third connecting the engine PTO to the air compressor.

## Design challenges

Each application has several design challenges – some unique and some shared. The most significant, common challenges are torsional vibration and the physical space available for



*The Stromag Vector® coupling has high torque transmission capabilities and very compact dimensions.*



*Rail locomotives provide a vital transportation service for both passengers and freight across the world.*

the components. During the three-year design process, multiple coupling options were reviewed to determine which solutions would best address these challenges. The chosen designs would be recommended for a potential population of over 10,000 locomotives.

Within this fleet, the diesel engines produce up to 3,300 hp (2,500 kW) at 900 rpm and are mounted on isolation mounts, while the gearbox and alternator are hard-mounted to the chassis. This can mean lateral movement of  $\pm 3$  mm laterally and  $\pm 4$  mm vertically.

As part of the design process, the OEM provided the input parameters for the design team to work with. Stromag did the torsional vibrational analysis (TVA) recreating the complete drivetrain and establishing that the values surrounding the engine to gearbox coupling would present a considerable challenge.

Using the analytical approach, it proved to be impossible to eliminate the root cause, which left another option - to mitigate the effects by adding weight to the flywheel. The suggestion was to increase the mass moment of inertia of the flywheel (which was originally 25 kgm<sup>2</sup>) to 120 kgm<sup>2</sup>.

### Proving reliability

Having reduced the torsional vibration, Stromag started to develop a design based on its Vector® coupling which has high torque transmission capabilities and very compact dimensions. At the same time, Nuttall Gear and Guardian Couplings added their expertise to develop a complete package of parts to integrate with the existing components with easy installation, even in the confined space.

programme are expected to have a 20-year service life with an annual operating time of 8,760 hours. Above all, they must prove their robust design and ability to deliver continuous reliable service in an arduous application.

As a result, the process of creating new parts is just the beginning. It is followed by an extended testing phase to prove the product's design and its reliability. Throughout this phase of the programme, parts manufacturers, such as the brands that belong to Altra Industrial Motion Corp., continue to monitor progress and provide further support where necessary.

For more information visit:  
[www.stromag.com](http://www.stromag.com)

# The Digital Evolution of Engineering

The COVID-19 pandemic has been the single biggest driver behind the digitalisation of almost every industry. The engineering and maintenance sector has been no different, with digitalisation enabling growth in remote management capabilities. So just how much change did 2020 bring to the engineering profession?

## Moving to Remote Work

Early in the pandemic, it was clear that work patterns and operations would have to adapt to a new, socially distant reality. Remote work restrictions meant that businesses swiftly applied a strict 'essential works only' rule, meaning the engineering sector had to adapt to severity management protocols and prioritise essential requirements. However, with the various national lockdowns, it soon became evident that in order to address requirements deemed non-essential, the sector had to pursue remote alternatives to asset fault diagnostics and maintenance works.

The sector quickly turned to pre-existing capabilities enabled by Internet of Things (IoT) technologies. Through advanced machine connectivity, these technologies enabled enhanced visibility and control over assets, such as refrigerators, HVAC units or lighting systems, and provided engineers with real-time insight into health, performance and efficiency data. With this approach, not only could ongoing problems be identified, diagnosed and remotely fixed, but potential future issues could be exposed. Historic data could also be used to understand root cause and ultimately minimise catastrophic mechanical failures – vital during such an uncertain time.

## A New Way of Working

The ability to remotely triage and prioritise issues in real-time provided a new tool in the engineer's armoury, while also enabling huge reductions in travel and human contact. Not only has this kept engineers safe during the pandemic, but it has also led to the sector establishing a more efficient, way of working.

Inefficient work order management and high volumes of unnecessary site visits inevitably lead to escalating costs and wasted time. However, by leveraging IoT connectivity, the ability to make fixes and take corrective action remotely has freed-up engineers to become more productive.

Using remote analysis across a client's portfolio of assets, IoT software is able to identify inefficient systems that may be causing excessive energy use, putting product at risk or proving detrimental to mechanical longevity. With advanced IoT monitoring and control at each site, new control strategies can be implemented remotely, and multiple site or asset changes can be done simultaneously, maximising engineer productivity, reducing travel time, and bringing the system back in line with the rest of the estate – ultimately saving energy, safeguarding product and protecting equipment.

For one food retailer, remote capabilities provided the opportunity to implement a new, estate-wide air conditioning control strategy in order to realign the settings to provide a safer and more comfortable environment for both customers and staff. With engineers now having the ability to remotely enact thousands of site changes at the touch of a button – a new way of working is truly upon the sector.

## Post Pandemic

The role of the maintenance engineer is evolving, just like many others in the post-pandemic world, and the benefits of using software to enable remote engineering is being realised more and more.

In this highly competitive, fast-evolving field, the ability for engineering teams to leverage remote 'desktop' engineers will drive new levels of productivity, enhanced control and unrivalled visibility, and will only enrich the workforce further.

Although there will always be a requirement for 'boot-on-the-ground' engineers, by providing an experienced engineering with the advanced remote tools and insights enabled by digitalisation, engineers will be able to increase efficiency and productivity while delivering better value for their customers and ensuring enhanced maintenance regimes.

For more information visit:  
<https://www.ims-evolve.com/>

# Nokia expands Mobily partnership with enterprise IoT network in Saudi Arabia.

Nokia have announced the completion of a narrowband 'Internet of Things' (NB-IoT) network deployment in L 800 band as part of its strategic partnership with Mobily.

As a result of this deployment, Mobily and Nokia have connected more than 4,000 sites and facilitated NB-IoT cell radius coverage averaging 20 km per cell, which is much wider than normal LTE cells. The completion of the project increases Mobily's digitalization by offering new NB-IoT services to better serve its enterprise customers.

As part of the project, Mobily's existing LTE base stations have been upgraded to enable NB-IoT in all Nokia footprints - Central, North and East of Saudi Arabia without additional hardware but with a simple software update. Nokia's LTE solution will help Mobily enterprise customers to enhance their operational efficiency and deliver improved customer experience through IoT connectivity for enterprises in verticals such as energy, transport, and health.

Nokia's NB-IoT technology solution meets the dynamic demands of connected devices. By utilizing Nokia's cutting-edge NB-IoT business platform, Mobily's enterprise customers can deploy IoT devices on Nokia's network without the need to manually configure the devices or switch networks. The platform also enables wider coverage indoors and outdoors, ideal for rural and deep indoor locations because it allows the signal to reach further inside buildings to connect sensors and devices and transmit information. It also provides enhanced machine-to-machine communication as it supports more connections and lowers power consumption.

Alaa Malki, CTO at Mobily, said: "The partnership reinforces a robust IoT infrastructure and network,

allowing enterprises to accelerate the expansion of their IoT footprint. As our long-standing partner, we are excited to strengthen the cooperation with Nokia and empower enterprises to harness the power of IoT through excellent connectivity."

Tareq Khalaf, customer Team Head of Mobily, at Nokia, said: "We are proud to be working with Mobily to meet the needs of modern enterprises by enabling a wide range of commercial uses such as smart metering for utilities, powering connected health and industrial appliances, and smart city infrastructure. Our latest NB-IoT technology will allow Mobily's customers to utilize IoT services regardless of their location, area, or region."

For more details visit:  
<https://www.nokia.com/>

**VIEW FULL MAGAZINE ONLINE**

- + Extra Articles and features
- + Full Business Directory
- + Much More...

# EMSOnline

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

All of our articles are available to read online today!  
 Scan the QR code to go directly to the site



Visit Us Online

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





# Meeting the needs of the next industry generation - Ultimo and Axians announce technology partnership

Enterprise Asset Management software company Ultimo and Internet of Things (IoT) system integrator Axians have announced a technology partnership that will meet the increased data needs of their customers and the needs of the next generation coming into asset management.



According to Head of Solution Partners at Ultimo, Patrick Beekman, "Organisations are looking for new technologies and techniques to meet the needs of the 'digital thinking' approach that the new generation of asset managers are bringing into the sector. We are in the middle of a digital transformation which means that more and more data is being produced by machines, data that can be used to optimise the asset management process. We see that data is becoming the most important asset, the only challenge is how to get that the data into Ultimo, so we needed a partner to help our customers convert data from their machines to trigger actions in Ultimo. Axians, conversely, needed a partner who could use their data to trigger actions and align responsibility. Together we complete the circle from data to action."

Axians supports its customers with data access and analysis, collecting real-time data from machines and making this data available for asset management. It does this through MAESTRO, its IoT platform based on Microsoft Azure, that is able to integrate data streams from sensors and machines and, based on machine learning, offers notification possibilities for customers. Ultimo's Enterprise Asset Management cloud platform, also based on Microsoft Azure, helps customers to increase asset availability and the optimization of productivity and safety. Both companies operate primarily in the Manufacturing, Infrastructure, Utilities, Healthcare and Logistics verticals. By combining the data of both platforms, new opportunities for maintenance can be simply unlocked.

While Ultimo and Axians operate across many markets, 90% of the applications for the combined solution, initially, will be in manufacturing. The two companies already share customers in this sector and in the early stages the plan is to link both applications for these clients. This integration, it is believed, will also have the benefit of moving some 'on-premise' Ultimo customers to adopt its cloud solution and to benefit from the insight that the integration of these technologies can bring.

Commenting on the partnership Raymond Janssen, Sales and Operation Manager at Axians says, "Thanks to the integration with Ultimo EAM software, our customers can now design end-to-end asset management solutions. Our systems complement each other in the workplace of our customers: MAESTRO generates the data out of the machines and Ultimo transfers this data into actions and work orders in its EAM platform."

Potential customers are able to arrange a 'sandbox demonstration' of the integrated solution which enables them to gain a hands-on experience of the system in a virtual playground. "Perhaps the most exciting thing about the partnership", summarises Patrick Beekman, "is that it is so easy, it's almost plug and play. It's about connecting two platforms and then benefiting from the best of both worlds. It's not rocket science. Normally, people believe, that such a project will require a lot of time and resources, but, with our integrated solution, it's simply not the case."

For more information visit:  
[www.ultimo.com](http://www.ultimo.com)

# Hart launches Speedor Lite

Hart Doors, the Newcastle-based designer and manufacturer of industrial door systems including high speed roller doors and commercial roller shutters, has completed the installation of its first Speedor Lite, a new variant of its famous Speedor range of high-speed doors.



The installation is in a temporary Rubb building at Hart's headquarters. "Rubb is the leading provider of high-quality fabric buildings worldwide and we have good links with them. Speedor Lite is ideal for use within a facility especially if compartmentalisation is required," says Melanie Rosby, Hart's marketing manager.

"Rubb's temporary building gave us an opportunity to launch the new variant. Speedor Lite retains automatic operation, high-speed and robust engineering for high-traffic situations as associated with the Speedor brand and is therefore a valuable asset in any situation where

energy-saving, dust control and so on are important."

Hart's Speedor high speed door system now features a range of seven automatic, high speed door variants from its Speedor Storm door to Speedor Lite. Together Speedors offer a wide choice of models for use internally or externally across an almost limitless manufacturing sectors – for busy, high-traffic, situations, energy saving, clean room, warehouse/loading bays, vermin and dust control, heat sensitive production processes and hazardous areas.

"Across the range the focus is on high performance, innovative and robust design which has tried and tested durability and requires minimal maintenance," adds Ms Rosby. "By delivering high speed automatic and easy opening in busy high traffic situations, Speedor Lite saves time and money."

For more information:

[www.hartdoors.com/speedor-lite](http://www.hartdoors.com/speedor-lite)

t: +44 ( 0 ) 191 214 0404

# Hultafors Group completes the acquisition of Fristads, Kansas and Leijona Workwear

They join Snickers Workwear in Europe's market-leading portfolio of Protective Wear and PPE brands.

The Hultafors Group has completed the acquisition of the Fristads, Kansas and Leijona protective wear brands following approval by the relevant competition authorities.

Peter Dumigan, managing director of the Hultafors Group UK, says, 'All three are well-known brands in professional workwear with well-established market positions in Sweden, Denmark, Finland and will complement the Snickers Workwear

brand throughout the European market very well indeed'.

With a portfolio of premium PPE brands that includes Snickers Workwear, Hellberg Safety as well as EMMA, Solid Gear Safety Footwear and Hultafors Tools, it serves markets throughout Europe and North America. The Hultafors Group's aim is to continue to driving the development of all its brands with a focus on customer value, product innovation and sustainability.



Getting more information on the Hultafors Group product range available in the UK is easy. You can call the Helpline on 01484 854788 or email [sales@hultaforsgroup.co.uk](mailto:sales@hultaforsgroup.co.uk)

**EMS Online**  
www.engineeringmaintenance.info

All of our articles are available to read online today!

**VIEW FULL MAGAZINE ONLINE**

- + Extra Articles and features
- + Full Business Directory
- + Much More...

Visit Us Today:  
www.engineeringmaintenance.info

ENGINEERING MAINTENANCE SOLUTIONS

**OVER 100 YEARS EST. 1919** **KINGSTON ENGINEERING**

*Over One Hundred Years Of Engineering Excellence*

**Leading Specialist Manufacturer and Producers of Bespoke Power Screws**

- Ex stock power screws & nuts
- Precision-machine components
- Self-reversing screws and followers
- Specialist leadscrew & power screw products
- Accredited by Aerospace, Nuclear & Chemical customers

Kingston Engineering Co. (Hull) Ltd  
Pennington Street, Hull, East Yorkshire. HU8 7LD. UK  
**Tel: +44 (0)1482 325676**  
email: sales@kingston-engineering.co.uk  
www.kingston-engineering.co.uk

SGS UKAS

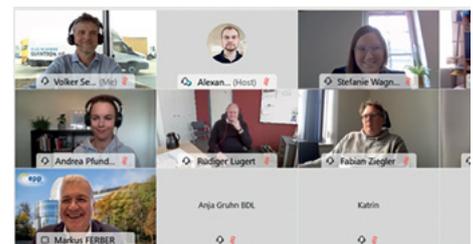
## Quantron AG exchanges ideas on innovations with EU Member of Parliament Markus Ferber

On April 14 2021, Markus Ferber, Member of the European Parliament, invited to the Lunch Talk. Participants were representatives of innovative companies from the administrative district of Bavarian Swabia, including Volker Seitz from the e-mobility specialist Quantron AG. Due to the current pandemic, the meeting took place as a video conference.

The exchange was themed: "Digital, innovative and still lost in the EU jungle". MEP Ferber opened the expert exchange with an insight into the work and decision-making processes in the European Parliament as well as the cooperation with the European Commission. The main part of the expert talk was a lively exchange of information between the participating company representatives and Ferber as well as Peter Martin from the European Commission, who also attended the conference.

### About Quantron AG

Quantron AG is a system provider of clean battery and hydrogen-powered e-mobility for commercial vehicles such as trucks, buses and vans. In addition to new electric vehicles, the wide range of services offered by the innovation forge includes the electrification of used and existing vehicles, the creation of individual overall concepts including the appropriate charging infrastructure as well as rental, financing and leasing offers and driver training. Quantron also sells batteries and integrated customised electrification concepts to manufacturers of commercial vehicles,



machinery and intralogistics vehicles. The German company from Augsburg in Bavaria is a pioneer and innovation driver for e-mobility in passenger, transport and freight traffic. It has a network of 700 service partners and the comprehensive knowledge of qualified experts in the fields of power electronics and battery technology, through its cooperation with CATL, the world's largest battery producer. Quantron AG, as a high-tech spin-off of the renowned Haller GmbH, combines 138 years of commercial vehicle experience with state-of-the-art e-mobility know-how.

You can find more information at  
[www.quantron.net](http://www.quantron.net)



## LOOKING FOR INTEGRATED FULL-FACE AND HEAD PROTECTION?

Try the **V-Gard® 950 Safety Helmet** with Integrated Full-Face Visor.



**TRY BEFORE YOU BUY**  
Request your **FREE** sample today\*  
visit [gb.MSAsafety.com/v-gard950](http://gb.MSAsafety.com/v-gard950)

\*Conditions apply, contact us to learn more.

## NEW from Solid Gear – The Revolutionary Safety Trainer.

Solid Gear's latest safety shoe – combines the best in safety and sports footwear technology.



The New Revolution 2 is more than just a market-leading safety trainer. It combines the BOA fastening system for maximum comfort and fit with a full E-TPU midsole with 'bounce back' technology to help reduce foot fatigue.

The shoe's stretchable mesh upper with lightweight CORDURA® and recycled material technology is water-resistant with amazing performance when it comes to breathability and flexibility. What's more, it has a sole that's oil and slip-resistant and a composite midsole for soft nail protection.

These shoes also come with Solid Gear's newly developed NANO toe-cap. It's 40% stronger than fiberglass, lighter than other materials and thinner than other non-metallic versions.

So get to know more about the quality and innovation plus the top class safety functionality in every Solid Gear product – your feet will notice the difference.

To get more information on Solid Gear Safety Footwear, visit the website at [www.solidgearfootwear.com](http://www.solidgearfootwear.com) You can call the Helpline on 01484 854788 or email [sales@hultaforsgroup.co.uk](mailto:sales@hultaforsgroup.co.uk)

## ifm's new longer-tip conductivity sensors simplify CIP

Particularly suited for use in CIP (cleaning-in-place) applications in the food and beverage industries, the new LDL201 conductivity sensors from ifm electronic have a 77 mm long sensing tip which makes them versatile and easy to install in a variety of hygienic process connections. In addition, the tip features solid PEEK construction which virtually eliminates the risk of breakage even if the sensor is subjected to high levels of stress.

Typical applications for the new LDL201 sensors include monitoring/control of cleaning agents, checking rinse water for residues and product validation. Since the sensors allow improved process control to be achieved, they typically enable users to cut costs by reducing energy usage during CIP cycles, along with the consumption of water and cleaning agents.

LDL201 sensors have a conductivity measuring range of 100  $\mu$ S/cm to 1000 mS/cm and feature an integrated temperature sensor. They have a continuous operating temperature of -25 to +100

$^{\circ}$ C and a maximum of 150  $^{\circ}$ C < 1 hr. They are provided with an IO-Link interface which provides loss- and error-free transmission of measured conductivity and temperature values. IO-Link also allows easy parameterisation, which not only aids initial set up but also makes it quick and easy to adjust settings to accommodate recipe changes.

With food-grade material used for all parts exposed to the media in which they are being used, ifm's new conductivity sensors meet EHEDG, FDA and 3-A standards. They are available for fast delivery and are complemented



by a wide range of accessories. These include welding adapters, clamps, hygienic pipe fittings and pre-terminated connecting cables.

<https://www.ifm.com/gb/en/shared/product-news/2020/sps/conductivity-sensor-for-clamp-and-hygienic-pipe-fittings>

## C.K. Launches its New Rescue Nut & Bolt Extractor Set

Always looking to introduce innovative products to make life easier for professional tradespeople, leading brand C.K. Tools is set to launch its new Rescue Nut & Bolt Extractor Set (T4360), a handy solution that quickly and efficiently removes broken/damaged nuts, bolts and fasteners.

The new Rescue Nut & Bolt Extractor Set joins the already popular Damaged Screw Remover Set, to enhance the expanding C.K. Rescue range of products. Designed to alleviate what can be an arduous, time consuming process, the new Rescue Nut & Bolt Extractor Set is set to be a winner for those whose work relies upon quality tools to get the job done.

### Great Features & Benefits

The C.K. Rescue Nut & Bolt Extractor Set provides a hassle-free solution, featuring high quality patented extractor inserts for Ring Spanners and Sockets, that securely grip all round, and

effortlessly remove fasteners with up to 85% damaged or worn corners. Ideal for a wide range of applications, other key features and benefits include:

- Adapters for fixings sized 8,9,10,11,12,13,14,15,16 and 17mm.
- Works on a range of fasteners e.g. 6 point, 12 point, Hex and Spline.
- Adapts just two socket/ring spanner sizes to fit 10 different fasteners (sizes 8-17mm).
- 8-12mm inserts suit 14mm wrench/ 12-17mm inserts suit 19mm wrench.
- Unique Flange designed to prevent fall through.



A real time and effort saver for busy tradespeople, the new C.K. Rescue Nut & Bolt Extractor Set (T4360) is packed in a convenient compact carry case, with clearly marked slots to easily identify the most suitable size to work with.

For more product information please contact CKI Sales on 01758 704704, or visit [www.carlkammerling.com](http://www.carlkammerling.com)

# MAK CHEM International Distribution Opportunities for ambitious UK Companies

A&S International is excited to be developing their global distributor network for their MAK CHEM range of maintenance chemicals.



The MAK CHEM range includes a number of NSF A1 or K1 registered degreaser cleaners for use in the food & beverage sector including MAK CLEANEX & MAK REX. Other products such as MAK FOX & MAK WELDING offer outstanding eco credentials – the latter being a totally non-toxic & biodegradable anti-spatter liquid for manual & robotic welding applications used by some of Central Europe’s largest automotive manufacturers. More specialist solutions include the MAK MOISTURE EXPEL aerosol product for the protection of electrical components or MAK EXPERT for the safe removal of graffiti & paint from a variety of surfaces.

During the past 12 months they have been offering these innovative, environmentally friendly maintenance solutions to their worldwide distributor network as well as starting to develop a UK direct client base. Sales of these new industrial degreasing & cleaning solutions steadily grew during the second half of 2020 despite the limiting business conditions created by the COVID-19 pandemic.

Particular success has already been enjoyed by the MAK CHEM brand in Greece, Philippines, Portugal & the UK with new distributors also now starting in Indonesia, Nigeria & Taiwan. The majority of the maintenance chemicals can be easily & effectively demonstrated to clients in the workshop; however, due to the current inability to visit industrial sites in many countries, a range of demonstration videos are available on the corporate websites & social media.

“It has been an excellent start to 2021 with the addition of a number of new distributors to our growing global team. We have ambitious plans to develop the sales of these high-performance maintenance chemicals via our team of loyal distributors, direct clients here in the UK as well as a new network of resellers. We are particularly keen to speak with any UK companies that are passionate about our profitable & environmentally friendly business opportunity.”

Commented Angus Macdonald, Co-Founder & Director of A&S International Ltd.



MAK CHEM Products

UK businesses that are interested in marketing & selling the MAK CHEM product line in their regions should contact the A&S International team via the website. New distributor partners are warmly welcomed & assisted with product training and prompt technical support including monthly remote regional sales meetings:

<https://www.aands.international/contact/>

# Speedor Storms for major manufacturer

Hart Doors has recently installed a pair of its high-speed Speedor Storm doors at a major manufacturing/recycling plant in the Midlands. The plant, which annually supplies over 275,000 tonnes of polythene products, also recycles over 95,000 tonnes of UK waste from industrial, commercial, agricultural and domestic sources.

"Together with the latest Speedor Storms we have nearly 30 Speedors on site," says Melanie Rosby, marketing manager, Hart Doors. "The doors are a crucial part of an objective to improve energy efficiency, maintain a better working environment and temperatures within the building as well as reducing vermin access."



The new doors will form an automatic interlock so that the outer door will close allowing the inner door to open automatically and hold open while deliveries are made. Each Speedor has a clear vision panel.

The doors are suitable for high usage of up to 1 million operations.

Hart's area salesman Peter Cairns says the customer has been a Hart client since 1990. "We have Speedor Supers still working from that time," says Mr Cairns. "The 30 or so doors on site are a mix of Supers, Storms and Roller shutters and we also have the maintenance contract for site."

He adds: "The recent installation is two Storms in automatic airlock which is the first time we have done this with two Storms. The new airlock is designed to omit minimal heat loss from the factory whilst loading goods out of the factory into an annex, where goods are collected.

"The heat loss affects the machinery as well as the work force. There is also a safety element which means one door cannot open until the other door is closed. Once the door is fully closed the other door opens automatically."

[www.hartdoors.com](http://www.hartdoors.com)

**HART**  
DOOR SYSTEMS

**Engineered  
For  
Endurance**

**Internal and external rolling doors and shutters to improve and protect your productivity both safely and securely.**



- **High-speed doors - improve workflow efficiency**
- **Fire doors - ensure staff safety**
- **Shutters - security and asset protection**
- **Custom doors - designed your way**

**Design | Install | Maintain**

Get a free consultation, contact us on  
+44 (0) 191 214 0404 | [info@hartdoors.com](mailto:info@hartdoors.com)

[www.hartdoors.com](http://www.hartdoors.com)

# ALUP innovates lower energy industrial compressors

With manufacturing and service industries under pressure to reduce carbon emissions, as part of the government's 'Net Zero' roadmap, leading industrial compressor brand, ALUP, has launched an upgraded range of oil-injected air compressors, which have a significantly lower environmental footprint.

Offering a fully-integrated configuration with combined air receiver, tank, filtration and refrigerant dryer, provides customers with a compact, silent unit, that not only costs less to install but also means it can be located closer to the point of use, requiring less pipework. Internal componentry has been designed to allow for easier maintenance and removable service panels enable quick access.

Commenting on the launch of its upgraded compressors, Mark Keen, Business Line Manager at MultiAir UK & Ireland, which supplies the ALUP brand to a network of distributors, said:

"Within the production and service industries, compressed air is often referred to as the fourth utility, so ALUP remains committed to improving efficiency and performance, as well as pursuing ways of reducing energy consumption. These latest innovations to ALUP's Sonetto range of screw compressors have been developed in conjunction with customer requirements, whilst recognising the urgent need to lower carbon emissions in every sector. Improving the work environment for operators by minimising noise has also been a key factor, so these upgraded machines provide a compelling overall business solution in a challenging economic climate."



ALUP's innovative Sonetto models feature a revamped air end element, which facilitates a market-leading increase of 15% in Free Air Delivery (FAD) output and a reduction in energy consumption on selected models of up to 12%.

At the same time, its development of a full range of options allows the compressor to operate on a low duty cycle typically seen on piston machines, where the demand for air is intermittent. The combination of an anti-condensation oil heater, tropical thermostat and a larger 500-litre air receiver thereby allows the unit to operate on very low duty cycles and also avoids the issue of condensation forming within the oil.

Where there is a need for large volumes of air

on continuous demand, such as an industrial production process, ALUP's Sonetto belt-driven screw compressors can be configured accordingly. Units are available either floor mounted, tank mounted or tank mounted with refrigerant air dryer, the latter version delivering a 55% reduction in Global Warming Potential (GWP) over previous generation screw and dryer packages. This is a result of the change from R134a HFC refrigerant gas to R513a HFO refrigerant gas used within the refrigerant dryer. Compressor power ranges from 2.2 to 7.5kW in either 8 or 10 bar versions and distributors also have the option of a pressure conversion kit for flexibility in stock holding and to ultimately ensure the end user gets exactly the right pressure unit for their application.

For more information visit:  
<https://www.alup.com/en-uk>

# Enhanced Visibility and Safety With Snickers Workwear Hi-Vis.

A Superior Range of Hi Vis Protective Wear – for all kinds of light conditions.



Snickers Workwear takes personal wellbeing at work very seriously. That's why this range of Hi-Vis protective wear is streets ahead of anything else.

With updated styles and designs added to the extensive range of Jackets, Trousers, Shorts, Toolvests, Shirts and Fleecees for men and women, there's a host of garments in the range to satisfy the specific requirements of Classes 1, 2 and 3 protection levels.

These 'outstanding' products combine Snickers' unrivalled hallmarks of functionality and comfort with the requirements of the EN20471 standard for high visibility warning clothes.

With advanced designs and high-tech fabrics that are windproof and water-repellent, all the garments have durable, colour-fast protection that will last for wash after wash, retaining shape and comfort throughout the life of the garments. Added to which, Snickers Workwear Hi Vis garments can be custom-profiled to ensure 'stand out' coverage for your corporate brand.

Getting more information on the Snickers Workwear range of ProtecWork and Snickers Workwear Hi-Vis protective wear is easy. You call the Helpline on 01484 854788; check out [www.snickersworkwear.co.uk](http://www.snickersworkwear.co.uk) and download a digital catalogue; or you can email: [info@snickersworkwear.co.uk](mailto:info@snickersworkwear.co.uk)

# Hellberg Launch New Safety Eyewear

Find Focus with Hellberg's range of all-new specialist safety glasses and goggles.

Renowned for its hi-spec PPE that includes advanced hearing protection products, face protection and communication solutions, Hellberg Safety is launching a new range safety eyewear.

With a wide range of street-smart styles, from basic to premium - the new range ensures a consistently clear line of sight and safe vision for professional tradesmen and women wherever they're working on site.

Built with lightweight, durable materials and specially developed lens technology, the eyewear

provides complete protection, and comfort throughout the working day and can be easily combined with other PPE including ear defenders, safety helmets, and visors.

With a focus on enhanced safety in all conditions, Hellberg glasses and goggles have impact-resistant lenses with anti-scratch and anti-fog coating on both sides and there are styles that can be worn over prescription glasses.

Around the lens, the ergonomic design, incorporates practical features, like a soft nose



bridge and 'adjustable temples', making sure the glasses stay in place and fit safely allowing you to

Getting more information on the Hellberg Eyewear range is easy. You can call the Helpline on 01484 854788; check out [www.hellbergsafety.com](http://www.hellbergsafety.com) or email [sales@hultaforsgroup.co.uk](mailto:sales@hultaforsgroup.co.uk)

# Testo 883 thermal imaging camera. Sees everything. Thinks for you.

Introducing the new testo 883 thermal imaging camera, with outstanding image quality and automatic image management.



## Key features / benefits (USPs)

### High image quality to detect every weak spot

- infrared resolution of 320 x 240 pixels, further increased to 640 x 480 pixels with built-in testo SuperResolution technology.

### Automatic image management - testo

SiteRecognition technology automatically recognises the measuring location via user generated QR code, eliminating the need for manual image assignment.

### Networked - App for quick analysis and reports on site

**Extensive analysis and documentation** - With the intuitive professional software testo IRSOft

### Full control - Manual focus and interchangeable lenses

**Wireless transmission** - Integrate readings from clamp meter or humidity probe directly into the thermal image

**Helpful features** - testo SiteRecognition intelligent image management and testo ScaleAssist automatic contrast adjustment

The testo 883 was developed especially for maintenance staff and facility managers who wish to rely on the best thermal image quality and helpful features for their thermal measuring tasks. This saves time and ensures flawless work results. The testo 883 offers an impressive infrared resolution of 320 x 240 pixels, which can be even further increased to 640 x 480 pixels with the built-in testo SuperResolution technology. And thanks to the manual focus feature, the user is guaranteed full control of the thermal image at all times. With the testo Thermography App, thermal images can be quickly analysed on a smartphone/tablet or shared with colleagues and managers. For facility management and maintenance experts

it is pivotal to ensure productivity and avoid unplanned downtime. This can be made more difficult to manage by constant time pressures, administrative tasks and if the correct tools aren't available. The use of a thermal imaging camera helps to optimise such tasks and processes. This testo 883 has a site recognition feature which automatically assigns thermal images (e.g. of switching cabinets) to the correct measurement object, thus eliminating the need for tedious manual image management. Another useful feature is the user can connect the thermal imager to the (optional) testo 770-3 clamp meter, so electrical measurements of current or voltage are integrated directly into the thermal image when checking switching cabinets.

To find out more about the testo 883 thermal imaging camera for facility management and maintenance visit: <https://www.testo.com/en-UK/products/testo-883-for-maintenance>

# Tips for choosing the right industrial PC

The first machine that could be considered an industrial PC (IPC) was released by IBM in the early 1980s, designed for the rigorous operations of industry. Almost 40 years on, IPCs are commonly used as automation controllers in many industrial environments. However, selecting the right IPC for these industrial environments is anything but straightforward. Here, Stephen Hayes, managing director of Beckhoff Automation UK, explores the main considerations for success when choosing an IPC.

committee still believes that UK industry is lagging behind other world economies in the adoption of automation.

However, getting started with automation systems can be quite complicated. Part of the adoption process requires investing in the right hardware, which invariably requires choosing the right automation controller for your operations — be it a programmable logic controller (PLC), IPC or programmable automation controller (PAC).



## IPC requirements

Firstly, we need to address the technological elephant in the room that is the infamous argument of PLC vs PAC vs IPC. This mass industrial debate boils down to preference of vendor and supplier more than significant technological advantages or disadvantages. That said, at Beckhoff we prefer PC-based control systems that more readily support open architecture, but which can be secured effectively.

IPCs come in several forms. First, there are control cabinet PCs, which are the computing units most people are familiar with, that slot into control panels and cabinets. Then there are embedded PCs, which are specialised PCs embedded into larger systems, and panel PCs, which couple a typical IPC with a user interface such as a touchscreen.

Plant engineers choosing an IPC will likely have some idea of the technical specifications they need. Often, this is determined based on the requirements of the automation software and

It's something of an understatement to say automation is at the centre of modern industry. Automated systems and software have made significant gains in efficiency, productivity and safety over the past few decades. Generally, it's necessary to use some form of automation system to remain competitive in today's industrial market.

These views are generally shared across most industrial sectors in the UK, albeit with mixed results as far as implementation is concerned. In PwC's 2019 Annual Manufacturing Report, there

was positive sentiment towards automation and digital industrial technologies among industrial companies — almost three-quarters (74 per cent) accepted that they'll need to adopt digital technologies to prosper in the years ahead.

Many have started this journey. BDO's 2019 New Economy: Investing in Automation report indicated that 93 per cent of manufacturers had invested in automation — six per cent more than the average adoption rate nationally. Yet the UK Government's business, energy and industrial strategy (BEIS)

operating system (OS) being used, as well as compatibility with other networked devices.

In recent years, one OS that has started gaining traction is FreeBSD, an open source OS that is similar to Unix. One of the core benefits of this OS is that it boasts very low latency compared to other Unix-based systems like Linux, which is particularly advantageous in an industrial network.

This is one of the reasons why Beckhoff is currently looking at coupling this OS with its TwinCAT software as an alternative option for its IPC systems in the months ahead. This package, the TwinCAT/BSD, will support all TwinCAT runtime functions and the installation of FreeBSD applications and Linux programs in one system.

### Environmental matters

For plant managers, considering the operating environment is arguably the most important step when choosing an IPC. Unlike traditional office PCs where specification is led by technical requirements and processing capabilities, IPCs require careful attention to factors such as ingress protection (IP), cooling and ruggedness.

Industrial environments are far from the friendliest operating environments for computers. Mining processes, for example, can produce significant amounts of airborne debris. Similarly, welding applications naturally require high temperatures and most heavy industrial processes will generate high levels of vibration that can affect equipment. Engineers and managers should therefore plan accordingly.

There are several ways to counteract this. If you're working in an industry prone to dust, choosing an IP6X-rated IPC ensures protection against total dust ingress. Similarly, offshore engineering or chemical processing environments where liquids are present will require an appropriately protected



IPC, rated to anything from IP64 — for protection from dust and water spray from any direction — and above.

Protection from water-based ingress is a key consideration for any industry where washdown is essential, such as food and beverage manufacturing. In these applications, protection against ingress from high pressure jets of water — IP66 — will be required. IP-rated PCs are also advantageous in high temperature operating environments to mitigate for the impact of condensation.

In IPCs, the only way to reliably achieve such IP ratings is by going fanless. Fanless designs boast an additional benefit of being more compact due to the lack of bulky ventilation systems, which makes them ideally suited to space-restricted applications. However, these designs necessitate an effective heat dissipation system to avoid overheating, which can otherwise reduce performance and damage components.

Fanless IPCs benefit from having additional space around them for heat dissipation, as most will use passive cooling — where components operate at a slower speed, thus producing less heat — alongside heatsinks. For example, Beckhoff's C6025 ultra-compact IPC uses passive cooling and a cooling plate to dissipate heat.

### Enduring operation

For most control cabinet and panel IPCs, durability and robust design is crucial. Most IPCs will have a durable housing as standard to minimise the impact of factors such as vibration and shock.

If you're considering Panel IPCs, you'll also need to think about the interface attached to them. For example, industrial touchscreens need to be robust, suitable for use with gloves and designed without a bezel around the screen to improve hygiene and cleanability.

Engineers that consider these points will find they narrow their choice to a series of IPCs that suit their needs and, crucially, fit their operations. However, weighing up the options is equally complex and comprehensive — which is why many engineers consult with industrial computing experts such as Beckhoff Automation.

Four decades on, IPCs have grown in number, capability and complexity to become a cornerstone of modern industrial automation. While it does mean that making the right choice is more difficult, doing so will reward engineers with a well-performing network of devices that can support productivity for decades to come.

For more information visit :  
<https://www.beckhoff.co.uk/>

Asset Management/CMMS



**ShireSystem**

*"The complete CMMS"*  
Chris Drury, Ferrero

Helping businesses to increase productivity and reduce downtime



Contact us today for your free trial  
023 8022 4111  
shiresales@elecosoft.com

**Elecosoft®**



**VALUEKEEP**

**A SMARTER CHOICE TO MANAGE MAINTENANCE**

Start reducing maintenance costs and saving time with an easy-to-use, affordable, and intelligent CMMS solution.

[Book a demo!](#)

-  Web-based & Mobile (Android, iOS and Win10)
-  Easy-to-use
-  Quick installation & customisation
-  Integrates with Corporate Systems
-  Real-time reporting & dashboards

[www.valuekeep.com](http://www.valuekeep.com)  
+44 (0) 20 8068 9242  
info@valuekeep.com

Boilers & Burners

Interested in Advertising here?

Contact: Steve Pheasant  
Media Manager  
Tel: 07962 666987  
Email: [stevep@mslmedialtd.com](mailto:stevep@mslmedialtd.com)



**Babcock Wanson**

Modern Coil Type  
Steam Generators  
& Fire Tube Boilers

- 100Kg/h – 25,000Kg/h
- High efficiency - up to 96%
- Low overall emissions
- Improved safety
- Simplicity of control
- Quiet, clean & cool in operation

Tel: 020 8953 7111  
[info@babcock-wanson.co.uk](mailto:info@babcock-wanson.co.uk)  
[www.babcock-wanson.co.uk](http://www.babcock-wanson.co.uk)

Interested in Advertising here?

Contact: Steve Pheasant  
Media Manager  
Tel: 07962 666987  
Email: [stevep@mslmedialtd.com](mailto:stevep@mslmedialtd.com)



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

Visit Us Online

All of our articles are available to read online today!  
Scan the QR code to go directly to the site



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

Boilers & Burners



**Twin Industries International**

Leading  
**BOILER BROKERS**  
for all  
**INDUSTRIAL BOILERS**

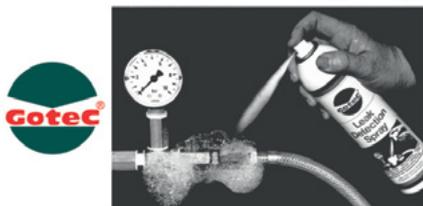
Steam ♦ Hot Water ♦ Thermal Fluid  
New ♦ Reconditioned ♦ Hire

Contact us or visit our website for  
The largest selection of  
Reconditioned Steam Boilers  
available –  
all with different suppliers,  
who will quote you direct

SELLING A BOILER – contact us  
01252 845521  
sales@twin-industries.co.uk  
www.boilerbrokers.com

Compressed Air

**Leak Detection Spray**



At the press of a button - **GOTEC LDS** is instantly ready to locate even the smallest low pressure leaks from compressed air, natural gas, LPG, refrigerant and every other gas - quickly, reliably, safely and conveniently.

- 400ml contents per can
- Non-flammable • Non-corrosive • Biodegradable
- Free from oils • solvents • halides • salts
- Spray can at any angle - 360° - upright to inverted
- NATO Stock No: 4910-99-930-4489
- VOSA & DIN EN 14291 compliant
- ISO 9001 Approved Manufacturer
- For sub-zero temperatures down to -45°C use GOTEC LT45



Gotec Trading Limited  
Boulton Road, Pin Green  
Stevenage, Herts SG1 4QL  
Tel 01438 740400  
Fax 01438 740005  
enquiries@gotectrading.com  
www.gotectrading.com



**STEAM • HOT WATER**

• **MOBILE • CONTAINER • STATIC**



**HIRE • SALES • 24/7**

+44 (0)1992 451629  
www.kingsboilerhire.com

Condition Monitoring



FOR ALL YOUR INDUSTRIAL MONITORING SOLUTIONS  
*Why Accept Anything Less?*

- ENCODERS
- CONTROL MODULES
- VIBRATION SENSORS

www.rotechsystems.co.uk  
Sales@rotechsystems.co.uk Tel: +44 (0)151 356 2322

Tank Storage



**HORIZONTAL CYLINDRICAL TANKS**

From 27,250 litres to 54,500 litres  
(6,000 - 12,000 gallon)

Single and twin compartments, with cradles

**BUNDED TANKS**

From 10,000 litre to 27,000 litre  
(2,000 - 6,000 gallon)

with cabinet, gauge and alarm

All suitable for fuel, water & effluent  
Call today for details

01638 712328 | tanks@thekinggroup.co.uk

Gas Detection



**We've got you covered**

WITH OVER 500 DIFFERENT GASES DETECTED

**We've got you covered**

**GfG TotalCare®**  
TAILORED SERVICING

FOR TRUE COST OF OWNERSHIP WITH NO HIDDEN EXTRAS

**We've got you covered**

Do you need Professional Gas Detection advice?  
Do you need more Gas Detection cover?  
Do you need a review of your existing Gas Detection System?  
**FREE NO OBLIGATION ON-SITE GAP ANALYSIS**



UNIT 8 ORINGS BUSINESS CENTRE WEST STREET COPPESSHALL ESSEX COE LINT  
sales@gfggas.co.uk www.gfggas.co.uk Tel: 01376 561463

Temperature Sensors



Labfacility are the UK's leading manufacturer of Temperature Sensors and Thermocouple Connectors.

- \* Thermocouple Connectors (IEC, ANSI, JIS)
- \* Thermocouple Cable (IEC, ANSI, PRT)
- \* Temperature Sensors (Thermocouple & PRT)
- \* Sensor Installation Fittings
- \* L60 Thermocouple & Fine Wire Welder



In addition to stocked items, Labfacility also offers bespoke Temperature Sensors.

Thermal Fluid



**Thermal Fluid Heating**

Technology now for the future

- Up to 50% energy savings
- Compact size
- Easy & safe to use
- Works up to 350°C
- Low exhaust emissions
- High efficiency
- Requires no specialist knowledge
- Corrosion free operation
- No chemical treatment

Tel: 020 8953 7111  
info@babcock-wanson.co.uk  
www.babcock-wanson.co.uk



### MODULAR SYSTEM

Each OnTrak is capable of 16 sensors. Easily scale OnTrak systems to thousands of sensors to one central dashboard

### COMMUNICATION

(Ethernet, wifi or cellular)



### SINGLE POINT LUBRICATOR

Dispense lubricant with precision only when needed from up to 16 single point lubrication devices



### MOBILE VIEW

Viewable on any network connected device; pc, laptop, tablet, phone using a standard browser

### ALARM NOTIFICATION

Built-in events system, which is configurable, and has the ability to display, email and text any alerts the system has

# BEARING LUBRICATION REIMAGINED

## Remote and Real Time Bearing Monitoring and Lubrication



The OnTrak SmartLube is a unique remote bearing monitoring and lubrication system. Designed to **monitor and lubricate bearings remotely**. With remote condition-based lubrication you can greatly reduce bearing failures.

System uses ultrasonic sensors: identify bearing issues beyond lubrication at the earliest possible point

Lubricate bearings remotely with a push of a button, using always the right grease and the right amount

All data accessible anytime, anywhere, via user-friendly dashboards

System includes single point lubricators: no more lubrication issues!

Easy to install, affordable and scalable

Integrates with existing databases and CMMS

**CONTACT US FOR A DEMONSTRATION WITH REAL LIFE DATA!**

**UE SYSTEMS UK & IRELAND** - CHRIS HALLUM  
+44 (0) 7930 352 188 | chrish@uesystems.com

**ue**  
SYSTEMS INC  
The *ultrasound* approach