

INDUSTRIAL PROCESS NEWS

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IPN

Leading the way with PID Sensor technology: ION Science supporting Blackline Safety

Gas detection instruments are critical to protecting the life, health and safety of workers in many industries. Preventing dangerous exposure levels and monitoring over time is key, and using the very best instrumentation available is essential for keeping people safe and healthy, now and in the future. The sensor technology within these instruments is vital, and often the most important aspect to get right for enhanced protection.

ION Science, as a leading global gas detection OEM for over 30 years, were chosen by Blackline Safety for their superior range of gas sensors when developing their comprehensive product range.

PID (photoionisation detection) sensor technology is where ION Science really demonstrates their expertise and knowledge. ION Science's range of sensors are rated very highly within industries such as oil and gas, chemical, pharmaceutical and more. Their sensors are key components of many life-saving gas detection instruments.



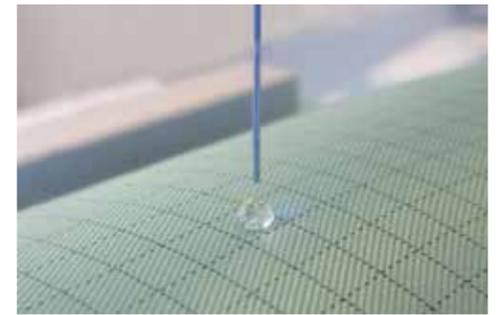
Blackline Safety approached ION Science in 2018 looking to upgrade their instruments with improved VOC (volatile organic compound) detection. It immediately became clear that ION's range of MiniPID 2 sensors were the best choice.

Since diversifying their range of instruments to include the latest PID technology, Blackline Safety has seen improved success in VOC detection and monitoring with their products. Worker health and safety, personal protection monitoring, exposure levels and improved detection all mean that Blackline Safety instruments now perform better and protect more workers than before.

T +44 (0)1763 208503
info@ionscience.com
www.ionscience.com

Reusing protective clothing against infections – conceivable or utopian?

Whether and how protective clothing and utensils can be reused against droplet infections is currently part of the public debate. A new study on the wettability of coated cleanroom garments takes an important step.



The materials studied as part of a research collaboration showed very good liquid-repellent properties, as required to shield infectious droplets. The contact angle method, which was the focus of the study, proved to be valid and can potentially be used as an easily accessible method for testing medical protective clothing. In addition to the Hamburg-based measuring equipment manufacturer KRÜSS, the study involved Dastex Reinraumzubehör GmbH & Co. KG, and OHB System AG, which played a key role in initiating the study.

The textiles under investigation are actually used for cleanroom clothing in satellite manufacturing, where they primarily protect the environment. For potential use in infection protection, the fabrics were given a hydrophobic PTFE coating. This modification ideally prevents wetting by infectious droplets and their absorption so that they fall off or

evaporate on the surface. The detection of such hydrophobic properties is a typical issue in contact angle measurement technology, in which KRÜSS specialises.

First, the fabric was certified to have excellent liquid-repellent behaviour on the basis of larger water droplets. To further investigate the protection in contact with coughing or sneezing patients, tiny droplets were applied to the materials at high speed. Microscopy-based contact angle measurements also demonstrated a good protective effect for this situation, which could even be verified on the basis of individual fibres. Reuse was also shown to be feasible. After 120 washing cycles, no impairment of the water-repellent material properties could be detected.

www.kruss-scientific.com

MagDev acquired by Bunting

The acquisition of UK-based magnet and magnet assembly manufacturer MagDev Ltd by Bunting expands the range of magnetic solutions and technical expertise offered by the global magnetics group. The extended product portfolio and additional magnet engineering knowledge confirms Bunting's premier position in the European magnetics sector.



The Bunting Group is one of the world's leading designers and manufacturers of magnets, magnet assemblies and magnetising equipment. Bunting's European engineering and manufacturing facilities are in Berkhamsted, Redditch and now Swindon, all in the United Kingdom.

MagDev was part of the Delta Magnet group of companies, based in Swindon UK. The facility features testing and in-house machining facilities as well as over 1,100m² (12,000ft²) of warehouse space. MagDev is a leading custom magnets and industrial magnets manufacturer specialising in supplying permanent magnets, magnetic assemblies and soft magnetic solutions in various shapes, sizes and grades, with magnetic

properties tuned to specific applications.

The origins of MagDev date back to 1973, with the company becoming part of the MMG group of companies in 1986. In August 2003, the merger of MMG GB Ltd and Magnet Developments Ltd in Swindon, UK formed MMG MagDev Ltd. After the Delta Magnets Ltd acquisition of MMG MagDev Ltd in June 2010, the company became part of the DMG group of companies.

With an experienced technical development team, MagDev Ltd has the capability of meeting a wide range of magnet material requirements, both with permanent and soft magnet materials, whether from a stock of standard parts or through bespoke development.

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Editor Recommends

New tech to get manufacturing businesses paid faster

Debt Register

A new start-up fintech is set to revitalise the manufacturing industry after COVID-19 as it aims to get businesses paid within seven days, resolving the long-standing issue of late payments.

Debt Register has developed a purpose-built digital platform to resolve debts anything up to 10 times faster than traditional legal action, and for a fraction of the cost. Thanks to the digital nature of the platform, it will enable manufacturers to work globally to quell late payments enabling the industry to get back to full capacity quicker.

Two years in the making, the new business sought a digitised solution to the growing problem of late payment which often leads to unnecessary write-offs or costly legal action (but only when the debt is of sufficient value) with little likelihood of success.

Debt Register is, first and foremost, a global payment accelerator that enables a business to identify late invoices on their ledger and allow the platform to do the rest. Debt Register contacts the debtor automatically and in the appropriate language, requesting that the payment is settled, and ensuring the invoice is correct and not in dispute.

By leveraging its relationships with leading credit reference agencies (CRAs) to report unpaid and overdue debts, debtors are encouraged to settle any overdues promptly to avoid their credit scores being negatively impacted.

For more information or to set up a free demonstration, please visit: <https://debtregister.com>

Digital Edge Subsea

Digital Edge Subsea supplies the oil and gas industry with its digital video recording system.

The company, established more than 10 years ago, has nurtured strong customer relationships that has allowed for honest customer feedback, and this has been incorporated into the development of the Version 5 Edge DVR.

Conversations continue and now Digital Edge are pleased to be able to offer further software that will help their customers to serve their clients better.

Data Archive App

Digital Edge will soon release a data storage and back-up solution that uses an integral app within Edge architecture, to avoid needing a 3rd party app. Edge Archive handles the transfer of data from the internal DVR drives to Client storage, either on a NAS, a Raid, or a phased delivery to multiple external hard drives.

Being a Native app, the data transfer ensures that the quality of Live recordings are not impacted by a 3rd party program trying to access the same file that the DVR app is currently using. Ensuring recorded data integrity and quality is of the highest importance.

Archive can act as a Simple data mirror of the correct internal drive data folders, or can be used to create multiple simultaneous backups of Client Deliverables. This can be done in continuous backup or a phased approach, ie. after each dive.

For more information or a demonstration of the system, contact: info@digitaledge.com or visit: www.digitaledge.com or call 0333 270 7733.



Retail security dilemmas solved with ShopShield

This summer, countless retail, hospitality and entertainment properties across the whole country are standing closed and forlorn as a consequence of lockdown destroying their business one way or another. And, no matter what it says in their lease, tenants who have run out of the wherewithal to pay rent, arrears and monthly outgoings, won't worry about security for their abandoned premises. The responsibility, therefore, inevitably falls back on the sometimes-beleaguered landlord who has his own finance issues to deal with.

Unfortunately, these empty units are like an open invitation to thieves, vandals, arsonists or squatters, even fly-tippers if there is an inviting forecourt to dump on. Landlords can well live without all this in terms of time and further cost.

Commercial security specialists, Clearway, have stepped into the breach with exactly what's needed to stop both criminals and mindless vandals: ShopShield One,

a fixed-price, retail security solution that is simple, affordable and ticks all the necessary boxes to keep the premises safe and secure until new tenants can move in.

Like an easy to understand and buy, one-stop-shop solution, ShopShield One will cover replacement locks, a temporary letterbox seal, Key safe and flammable waste removal. A comprehensive risk assessment is also carried out to highlight any other issues, for which a set of bolt-on services is available to provide additional security measures tailored to the individual needs of your premises.

www.clearway.co.uk/shopshield
T 01322 479652
enquiries@clearway.co.uk

Thorite officially opens new UK Headquarters

When Thorite, the UK's leading independent specialist of pneumatics, air compressors and fluid handling equipment, moved into its brand-new UK Headquarters in January, it intended to have an official launch, but this was delayed with COVID restrictions in place.



L-R: Alex Ross-Shaw and Stephen Wright officially opening the new Thorite HQ

However, on 8th September, Stephen Wright, Thorite's managing director, officially opened the new building in front of an invited audience including Bradford Councillor, Alex Ross-Shaw, who is responsible for Regeneration, Planning and Transport, who said, "I was delighted to be asked to formally open the fantastic new Headquarters for Thorite with Stephen. It's great to see high tech firms like Thorite invest and stay in Bradford and we were pleased to support them in securing a grant from the West Yorkshire Combined Authority to help deliver the move."

"Our area offers significant benefits to business and firms like Thorite provide high-quality, well-paid jobs and opportunities for local people."

We will continue to work with Thorite and other firms interested in building their business in the district to ensure we maximise the benefits to everyone involved."

In response Stephen Wright said, "This move was a journey starting in 2014 where we concluded that our old site of 50 years was no longer fit for purpose. We had known this for some time, having spent most of our working lives in Laisterdyke, but quite naturally, we needed to find the right time in the business cycle to make the decision."

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Survey shows shift in attitudes towards robots



A survey of 250 UK SME & large manufacturing companies carried out by ABB Robotics reveals a change in attitudes towards robotic automation in the UK, with 81.2% of companies saying that they are considering an investment in robots because of recent events including COVID-19.

Conducted as part of the launch of ABB's new GoFa™ and SWIFTI™ collaborative robots, the survey shows how the impact of the pandemic has been widely felt by many businesses across the UK, with many affected by restrictions on workforce availability caused by lockdown and strict social distancing measures that have reduced their production capacity. Asked whether the COVID-19 pandemic has been 'game-changing' for their business and industry, 90.8% of the 250 respondents replied yes, with 45.6% stating that their business has had to make some adjustments and 45.2% stating their business and industry sector has been completely impacted.

A particular problem for many businesses has been a lack of contingency planning. Research by People Management magazine in conjunction with the Chartered Institute of Personnel and Development (CIPD) has revealed that two in five organisations had no contingency plans to manage the COVID-19 outbreak as organisations have previously adopted a mentality of 'if it isn't broken, don't fix it'. This lack of preparation and planning for the future is now hurting organisations as they try to adjust their business operations to the new normal.

The results of the survey suggest that robots are increasingly being seen as a way of addressing this, with 48.8% of respondents stating that they were likely to invest in robotic automation within the next five years.

www.abb.com

OnRobot



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Visit us on booth 618 to see the OnRobot VGP20 and Screwdriver in action

OnRobot helps customers across the world to automate their production as the product range features a wide assortment of tools for collaborative applications, including: electric and vacuum grippers, the award-winning Gecko gripping technology, force/torque sensors, a 2.5D vision system, screwdriver, sander kits and tool changers. This combination of offerings makes it simpler to automate tasks such as packaging, quality control, materials handling, machine tending, assembly, and surface finishing. Regardless of the robot brand, OnRobot provides compatibility and versatility.

You have a chance to see some of the OnRobot applications at the Robotics and Automation exhibition in CBS Arena, Coventry, the 2nd and 3rd of November.

OnRobot will demonstrate Screwdriving application on UR characterised by easy out-of-the-box setup, programming, highly versatile and flexible, with fast changeovers for a wide range of screw sizes and lengths. Precise torque control and intelligent error detection ensure quality and consistency.

The application with electric vacuum gripper VGP20 on Omron TM which suits perfectly for cardboard box palletising and handling irregular shapes and porous surfaces will also be demonstrated. Industry's most powerful electric vacuum gripper saves up to 90% over pneumatic grippers. Built-in intelligence and multichannel functionality ensure failsafe, flexible operation.

See you at Booth 618!
Contact: William McColl, Area Sales Manager (UK and Ireland)
M: +44 (0)7747 166809
William.mccoll@onrobot.com
www.onrobot.com

FlexBuffer™ supports ecommerce order handling

ABB is responding to the growing consumer demand for choice and fast delivery with the launch of its FlexBuffer™ application cell. FlexBuffer brings new levels of flexibility for logistics, food and beverage, healthcare, consumer packaged goods, restaurants and retailers, offering a highly adaptable multi-functional solution for handling a variety of tasks such as sequencing, buffering, storage and order consolidation.

Operators across multiple industries are facing a range of challenges in meeting consumer expectations for faster delivery of an expanding range of goods, including labour shortages and the need to provide direct-to-consumer (D2C) delivery



services in a flexible, fast manner. Automated goods handling is the key to solving these challenges, yet

most systems available today are large, expensive to install, and lack the flexibility to provide the buffering and order sequencing capabilities that companies need.

FlexBuffer answers these challenges. Comprising an ABB robot, a suite of grippers, a software package, storage racking and infeed and outfeed conveyors that feed and dispatch goods, FlexBuffer provides a flexible and cost-effective, multi-functional solution for quickly processing a wide variety of customer orders.

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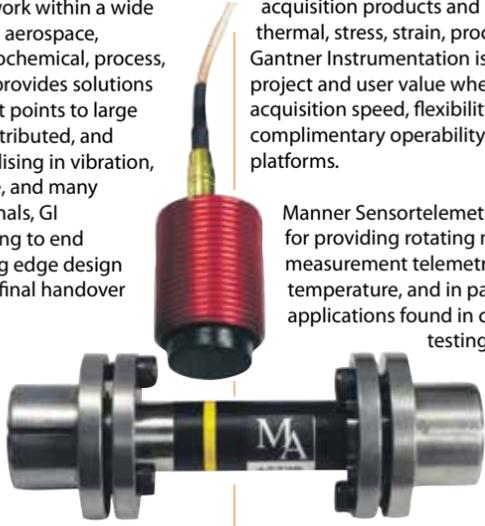
Industrial Process News is proud to announce GI Systems Ltd as our Engineering Systems Company of the Month.

Established in April 2019 by Rob Stockham, GI Systems Ltd is backed by decades of professional technical experience within a wide range of industries to develop business for data acquisition, condition monitoring, test and measurement products, and engineered systems in the UK.

Based in the Midlands, GI Systems Ltd is centrally placed in the UK to support industries and customers across the country. In addition, GI Systems Ltd has partner companies throughout the UK that are well placed to help extend the company's reach to wider markets and applications for instrumentation, measurement, test, data acquisition systems and condition monitoring.

Backed with over 40 years of professional technical experience, GI Systems Ltd work within a wide range of industries including aerospace, automotive, oil and gas petrochemical, process, power, utilities and more. It provides solutions from just a few measurement points to large scale systems, with open, distributed, and flexible architectures. Specialising in vibration, thermal, stress, strain, torque, and many standard forms of sensor signals, GI Systems Ltd delivers beginning to end projects that demand leading edge design and engineering through to final handover of commissioned systems.

GI Systems Ltd is proud to be the UK sales partner for Gantner Instrumentation GmbH and Manner Sensortelemetrie GmbH. Gantner Instruments is a global company



specialising in test, measurement and data acquisition products and systems for vibration, thermal, stress, strain, process, and digital signals. Gantner Instrumentation is renowned for providing project and user value where precision, data acquisition speed, flexibility and benefits from open, complimentary operability with industry standard platforms.

Manner Sensortelemetrie has a high reputation for providing rotating machine and part measurement telemetry for torque, speed, strain, temperature, and in particular for demanding applications found in cutting edge product testing and development.

Similar to Gantner Instrumentation, Manner Sensortelemetrie have some of the worlds most recognised major automotive and

aerospace companies as users of its products and systems. The support in development of electric vehicle drives, drive lines and battery systems, is a typical example of an important application that contributes to both companies' activity.

We spoke with Rob who mentioned, "I am very pleased to have been recognised in 2020 as a 'Fellow' of the Institute of Engineering Technology (FIET), this reflects a long-standing contribution to the industry for furthering the understanding of 'Functional Safety' and standards such as 61508. I was a founder of the IEC 61508 Association and a past Director of The CASS Scheme Ltd."

Furthermore, Rob has a fundamental understanding of the UK nuclear industry requirements for the rigour and depth of substantiation for 'Smart' (microprocessor based, programmable) devices. These are used in safety-critical applications using the EMPHASIS methodology for establishing 'Production Excellence' in a supplier's company processes and products.

Over the years, Rob has been a key speaker at events around the UK and abroad and has made presentations to the IET, Institute of Measurement & Control and other end users. His extensive knowledge of experience has enabled him to



deliver talks to the nuclear industry on topics such as, Process Instrumentation and Measurements, Fieldbus, Data Acquisition, Functional Safety (IEC 61508) and 'Smart' Instrument assessments.

GI Systems is pleased to be engaged and challenged by its customers and their applications, knowing it is supported by its own experience and knowledge, but more importantly, by Gantner Instruments and Manner Sensortelemetrie, who are competent, professional, and capable leaders in their technologies.

If you wish to know more about GI Systems and its partners, visit: www.gismtt.com or email your applications and questions to: info@gismtt.com - they look forward to hearing from you.

For more information, see below.

T 01323 332105
www.gismtt.com

Working together to improve quality, efficiency and profitability

In this issue of Industrial Process News, we are pleased to announce G&P Group Holdings Ltd as our Quality Management Company of the Month.

Since its establishment in 1994, G&P has evolved to become a world leading provider of quality management solutions, providing inspection, rectification, engineering and technical services to the manufacturing industry, primarily in the automotive, aerospace and off-highway sectors.

G&P has grown to become a truly global company with more than 1,000 employees worldwide. In 1998, Dino Kyriacou joined the company, which is now privately owned by him.

The last 27 years has seen the company's vision uncovered on a global scale, to be the strategic partner of choice offering best in class quality management services and solutions, underpinned by outstanding management, technical skills and value-added technology.



Accredited to ISO 9001 and ISO 14001 standards, behind its innovative, award-winning portfolio, lies a team of highly skilled engineers, inspection and containment teams, vehicle technicians and QTrak, all



and suppliers maintain quality standards. G&P also supports rail, marine, defence and household goods sectors, and holds a large presence throughout the manufacturing supply chain product life cycle for these industries.

QTrak is an innovative, fully paperless system that provides real-time analysis and identification of quality issues. This allows problematic supply sources to be investigated without delay, parts contained and corrective action to be deployed to prevent further waste being produced.

QTrak is an exclusive software system that has been developed by G&P and provides a number of benefits. From instant access to real time data and results, image capturing, and the ability to operate across multiple sites, QTrak is a unique, web-based quality management IT system accessible to its clients 24/7.

In recent developments, G&P has entered an

of which make the overriding success of the company possible. The company delivers expertise in a variety of sectors such as automotive, off-highway and aerospace, helping OEMs



ambitious growth phase which will see the company broaden its core sectors and increase its expansion into adjacent services. Following a recent restructure, G&P's class-leading processes have been recognised by manufacturers and tiered suppliers globally. Its management solutions increase efficiency, reduce waste and protect customer reputations simultaneously.

G&P has been the recipients of some of the most highly respected and prestigious awards for its

innovation in the creation of its products. G&P was awarded the UK's highest accolade for business success, winning a Queen's Award for Enterprise. Other awards and accolades include winning bronze at the Green Apple Awards for Environmental Best Practice in the automotive category, being named in the London Stock Exchange report '1,000 Companies to Inspire Britain' for four consecutive years, together with the



Sunday Times HSBC International Track 200, which ranks Britain's mid-market private companies with the fastest growing international growth, and the Sunday Times Fast Track 100, which ranks Britain's private companies with the fastest growing sales.

Recognising the long-term need to diversify into other manufacturing sectors, G&P has built a foundation on which many of its services can be easily transferred into other sectors. Such as supplier management and quality audits, finished product acceptance, measurement and scanning services. This will be executed alongside growing its existing business primarily through integration with current customers to provide them with additional services.

G&P's forward-thinking approach is underpinned by business diversification, which is driven by continued and strong investment in G&P's people and the business itself, together with robust reporting and processes. People are at the heart of the company, and its passion and integrity shine through every actionable step it takes in providing the highest standards of professionalism and discretion to its customers.

T 01922 458003
info@gpqm.com
www.gpqm.com

Manufacturing suppliers need to protect themselves from production fluctuations

A perfect storm of semi-conductor shortages, the 'pingdemic' and the recent ending of furlough means automotive manufacturing suppliers need to urgently address production fluctuations from OEMs.

The timely advice has been issued by Geoff Cousins, chairman of quality management expert G&P and formerly the managing director of Jaguar UK.

However, a flexible approach to working practices, which many suppliers have already adopted due to the pandemic, is one way that suppliers can combat changes in order demand, including through the deployment of the third-party suppliers & their highly-trained personnel to cover all

aspects of production, including quality audits and supplier management, to maintain quality standards, believes Geoff.

"Manufacturing suppliers can protect themselves from a shortfall in personnel by using third-party providers such as G&P who can react quickly, and with flexibility, to their individual needs," said Geoff.

G&P itself has access to a range of highly-skilled personnel, including supplier development engineers, resident engineers, quality inspectors and vehicle technicians who are deployed on-site providing quick and decisive action to any quality issues, and who can be deployed rapidly to cover any shortfall in personnel.



Geoff added, "Suppliers who have come through a tough financial period caused by the pandemic need to protect themselves as much as they can."

For more information about G&P, visit: www.gpqm.com

Something to shout about



Setting itself up to be in prime position for the expected manufacturing upturn, Skelmersdale subcontractor Kirkham Engineering has invested in three new multi-axis turning/milling machines in the past 12 months.

The new machines include two Citizen sliding head turning centres – an L32-X 8-axis machine and an L20-VIII machine upgraded to 25mm. Both are fitted with Citizen's LFV (Low Frequency Vibration) system to improve cutting performance and swarf control on difficult materials.

The third machine is a fixed head Nakamura AS200L MYSF twin-spindle single turret turning centre. This joins a similar AS200 that was purchased new in 2017.

Founded in 1955, Kirkham Engineering established its reputation as a specialist in the production of repetition turned parts on CNC fixed head and sliding head machines. With a focus on the oil and gas industries and petrochemical sectors it produces everything from simple to complex parts in material types from ferrous and non-ferrous metals through to exotic nickel alloys such as Duplex, Monel, Inconel, Hastelloy, Titanium and Stellite.

As well as investing in new machines, Kirkham has built up a fleet of high-quality, high technology used machines including 5 Nakamura WT250 twin-turret, twin-spindle machines, 7 Citizen sliding head machines, 6 Miyano turning centres, including twin-turret, sub-spindle machines, and two Traub TNC 42 DGY machines that came direct from Rolex in Switzerland.

T 01695 727401
www.kirkhamengineering.co.uk

Services for the sheet metal industry

PressCare UK Limited is a West Midlands based engineering company predominantly operating in the fields of power presses, coil handling equipment & automation systems. We offer a comprehensive range of services to the sheet metal industry including servicing, safety inspections, electrical & mechanical repairs, preventative maintenance programs, installations, commissioning, guarding solutions & CE marking.

We offer a comprehensive range of ancillary equipment including tool protection (load monitors, component/misfeed detection, etc), strip lubrication, scrap removal & energy saving systems.

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Industrial Process News is proud to announce that Industrial Technology Systems Ltd has been selected as our Independent Systems Integrator Company of the Month.

Industrial Technology Systems Ltd (ITS) is an award-winning industrial automation systems integrator and solution provider with extensive experience in a vast array of industries and is celebrating its 30th year in business this month. ITS is an approved systems integrator of leading suppliers, including Siemens, Rockwell and Aspentech, and has full support from all its suppliers.

"ITS uses its technical expertise to ensure chemical processes operate safely and that our life science customers' products only go to market if they are produced to the highest quality," stated Joanne Rout,



ITS' Key Account Manager for the Process Industries.

ITS supports its customers' efficiency improvements by delivering data visualisation systems which, not only provide process information for operators but also collect, analyse, and display the information on dashboards for management decision making.

Established by Malcolm Knott, now ITS' CEO, his plan for ITS was to provide the same level of engineering ICI were known for across the world. Malcolm trained as a chemical and process engineer and gained experience of real time automation and computing at ICI; it was from the concept of his own experience that birthed ITS.

Headquartered in Middlesbrough, ITS also has a base in Warrington close to many of its clients in the nuclear, chemical, and life sciences sectors. The company specialises in several highly regulated industries, including chemical, pharmaceutical, biopharma, medical device and energy.

Renowned for reliability and responsiveness, ITS' commitment to its customers makes ITS an industry leader hard to compete with. "ITS provides engineering skills and expertise and takes pride in listening to our customers' specific requirements so that we can offer them the best value solution. We are constantly innovating and investigating new digital technologies and the ways that they can be



implemented which might benefit our customers," said Joanne.

ITS offers one of the most comprehensive portfolios combined with its one-stop-shop approach to all forms of industrial computing and control. From working in sectors such as life sciences, energy, nuclear, digitised buildings, manufacturing and other specialities, Malcolm has created an infrastructure within ITS that will last a lifetime. With the intention of ITS developing its business globally, plans are in place to improve and equip its employees for the future.

ITS has recruited two new Sales Managers in the last couple of years: Joanne Rout, who is responsible for the Process Chemical Sector and John Walker who looks after some of ITS' Life Sciences customers. Joanne explains, "We both started our careers at ICI and have many years' experience in the respective industries."

Well-known for its strong commitment to supporting and guiding talented young people who are looking to start their careers in the engineering industry through both apprenticeships and graduate programmes, ITS is continually looking to grow its team and is currently recruiting people for engineering, validation, and sales roles. The company values the input of all employees and encourages team working and has a culture which makes it a great place to work. To ensure its pipeline of engineers ITS and its employees support school and college STEM programmes.



In October 2021, ITS became a carbon neutral company and this was achieved six months ahead of schedule. The company has been committed to reducing its carbon footprint over the past three years, and through various environmental initiatives, implemented changes and an intentional switch over to a registered carbon offsetting energy supplier. Remarkably, all projects including engineering design and implementation have been delivered without leaving a carbon footprint.

In the future, ITS will continue to innovate and create, ensuring its customers get the best value from new technologies, alongside plans to open further offices throughout the UK and in mainland Europe.

T 01642 222232
enquiries@its-ltd.co.uk
www.its-ltd.co.uk



Let's print together

In this issue of Industrial Process News, we are pleased to announce Mimaki as our Electronic Manufacturing Printing Company of the Month.

Mimaki is a leading manufacturer of a wide variety of inkjet printers and cutting plotters and has developed its own specific product range in hardware, inks, software, and spare parts. As a worldwide pioneer in digital printing and cutting technologies, Mimaki is dedicated in providing innovative, reliable, high-quality products.

Established in 1975 in Tomi-Shi Nagano, Japan, Mimaki has since grown into a globally recognised company with large operational bases in Asia and the Pacific, USA and Europe. In 2004, Mimaki Europe was established in Amsterdam to manage the EMEA region. It carries the responsibility of all sales, marketing, logistics, and administration in Europe and is backed by a large force of highly trained field service technicians alongside a well-established distributor and reseller network.

"We serve various market segments and usually group them into four business units: Sign Graphics, Industrial Products, Textile and Apparel, and 3D. It's quite amazing how many things around us are actually printed and how often these high-quality prints are produced using Mimaki technology," stated Danna Drion, General Manager Marketing EMEA.



From retailers and copy shops to professional sign makers and print service providers, Mimaki has a range of printers that specifically design creatives used for retail displays, outdoor signs, stickers, labels and more. Furthermore, Mimaki is able to provide on-demand production solutions for the industrial and manufacturing sectors, mainly consisting of its UV flatbed printer that can print on plastic, wood, glass, metal, and more. Its vast range of printers specifically designed for the textile and apparel market, allow for a direct and sublimation printing on fabrics and garments such as sportswear, fashion apparel, face masks, and interior fabrics. Known as the first to create a full colour 3D printer that offers 10 million colour possibilities, 3D printing is a recent addition to Mimaki's product portfolio. Useful for producing scale models, figurines, product prototypes, and art, its state-of-the-art technology is highly creative and accurate.



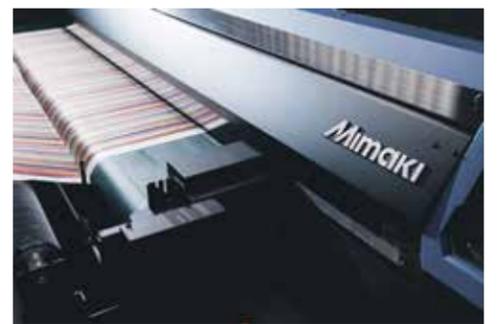
Renowned for its innovation, Mimaki is a pioneer in technological advancements in the printing industry. "As the first company to launch a small-format UV LED flatbed printer in 2010, we have since continued developing new, market-leading

products allowing our customers to differentiate their business and stay ahead of their competition," said Danna.

Mimaki had several new products launching at the recent FESPA Global Print Expo. Its brand-new line up of UV LED flatbed printers are the JFX600-2513 large format UV LED printer, the UJF-7151 plusII high precision UV LED printer, and the UJF-MkII e Series consisting of small format UV LED printers with A3 and A2 size flatbed.

"We're also launching a small format full colour 3D printer, the 3DUJ-2207, which is aimed towards an entirely new segment of professionals in this field offering an affordable, scalable 3D solution," stated Danna. If you're interested in seeing the 3DUJ-2207 live, Mimaki will be present at the Formnext show, taking place in Frankfurt, from 16-19 November 2021.

Recently, Mimaki Europe has welcomed two highly experienced and long-standing Mimaki employees into the management team. Arjen Evertse appointed as General Sales Manager, EMEA, and Mark Sollman Product Manager, EMEA. Both offer a fresh, new approach with forward-thinking ideas that will help grow the business.



"We are always committed to developing more innovative technologies. It's a continuous process for us. One of our latest developments sees us take significant steps in enhancing our portfolio with solutions that support workflow automation," stated Danna.

To be innovative, work with confidence and stand out from the competition are all possibilities Mimaki make reality. Its company ethos is to always encourage customers to join in on the printing experience from start to finish. With COVID-19 restrictions slowly easing, Mimaki is looking forward to attending future trade shows and launch its products into new markets.

For more information, see below.

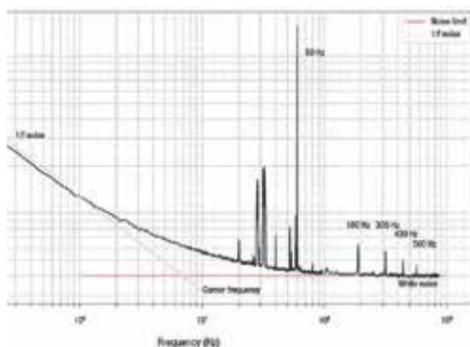
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The lock-in amplifier explained and reimagined

Measurement of electrical signals, voltage, and current is one of the most important methods used by researchers to characterise electronic materials. But electrical signals are often at very low levels and in the presence of noise – which can be as large as or even larger than the signal itself.

Because DC measurement instruments cannot easily extract the signal from the noise, AC measurement techniques are often used. They can modulate the signal with a frequency to measure the signal in the presence of less noise. The lock-in amplifier can perform such a measurement and is one of the best methods for measuring amplitude and phase of AC signals. For these reasons, it is the instrument of choice for low-level measurements of AC signals.



A better way to extract your signal from the noise
The new app note discusses lock-in amplifiers in general and examines how the lock-in technology employed in a new, modular source measure architecture deals with removing the effects of noise from the measurement. It details how the new M81-SSM architecture offers:

- Filters designed to remove noise and decrease measurement time
- Multiple measure options, with the flexibility of measurement configurations
- Multiple source modules, which can be matched to measurement requirements

Quantum Design represents Lake Shore Cryotronics in the UK and Ireland. Find out more about us at: www.qd-uki.co.uk or call 01372 378822.

The technology behind the M81-SSM's precise signal synchronisation



One of the most unique features of the new modular Lake Shore MeasureReady™ M81-SSM synchronous source measure system is its patent-pending MeasureSync™ signal synchronisation technology. This real-time sampling architecture enables simultaneous source module update and measure module sampling timing across all channels, regardless of signal types for frequencies up to 100kHz.

Because MeasureSync samples all channels at precisely the same time, it ensures that multiple devices under tests (DUTs) are tested under identical conditions, so you obtain consistent measurement data. In addition, the architecture allows each source and measure amplifier module to be physically co-located as near as possible to the DUT to further minimise noise pickup from ambient, thermal, ground loop, and other common interference sources.

Amplitude and frequency signals are transmitted to/from the remote amplifier modules using a proprietary, real-time analogue voltage method that minimises noise and ground errors while ensuring tight synchronisation of all modules. This analogue interface keeps noisy digital circuitry away from the modules' sensitive analogue circuits. The signals are digitised by a dedicated converter for each channel, which are synchronised by the shared MeasureSync clock. Each rising edge of the clock triggers every ADC to take a reading and triggers each DAC to update its output. In between clock edges, all of the data is transferred from ADCs to the controller and each DAC is preloaded with a value that is applied on the next edge. Unlike multiplexed systems, this maintains total synchronisation and continuous sampling of each channel. Digital signals are generated or processed by a configurable DSP core.

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G-Series



Interface is pleased to announce the launch of the G-Series – a new, fully metric line of load cells and load buttons for industrial applications.

The demand for Interface products designed and manufactured in the International System of Units (SI), has been evident for several years. Interface's new Global Standard product line, known as the G Series, is designed for an international buyer and user.

Starting small, the series includes three load cell types – the load button, mini S-beam & threaded In-Line. With capacities ranging from 200 Newtons to 50kN. They are all fully stainless steel with an environmental protection rating of IP64 or better.

Each sensor is supplied with individual calibration certificates. So, even with their highly competitive price, you can be sure that like all Interface products, the G-Series are built to the exacting standards that Interface are world-renowned for.

Come and see us at **Advanced Engineering at NEC Birmingham** from 3-4 November on Stand H62.

<https://interfaceforce.co.uk>

Innovative Dual Mode CO Sensors



Innovative Dual Mode CO Sensors from DD-Scientific eradicate false alarms

DD-Scientific is leading the way in providing carbon monoxide sensors with immunity to false alarms resulting from the presence of hydrogen. Hydrogen gas is a common interferent in many applications from steel mill monitoring to combustion efficiency measurement and the gas typically is detected by most CO sensors resulting in false alarms or inaccurate readings. The new A range of CO sensors from DD-Scientific are provided with dual sensing capability to eliminate this problem by simultaneously measuring CO and H₂ together on one channel, and H₂ alone on the other. By subtraction of one signal from the other, both the CO and H₂ concentrations can be accurately determined.

The A series sensors are available in a range of packages optimised for industrial safety, environmental and combustion monitoring applications and are backed up by our market leading technical support and competitive pricing.

To learn more about this new range or any of our other high quality, reliable offerings, please contact: sales@ddscientific.com

New upgrades for high performance fluid heating solution

Industrial heating technology manufacturer Watlow has upgraded its FLUENT® heater, which now features dual voltage capabilities. The lightweight, high-performance solution reduces overall system cost and complexity of heating in semiconductor, medical and analytical industries.



Watlow's FLUENT heater is a high watt density, low mass heater that enables on demand fluid heating with an ultra-fast response, leading to higher system performance. The standard construction includes an internal baffle to promote turbulent flow and high efficiency, a fast-responding high watt density layered heater circuit, low profile axial lead exit and an internal thermocouple for high limit control.

Now, the popular heater has been upgraded with dual voltage capability, which allows heating products to accept more than one type of voltage. In traditional thermal systems, a unique design was required for each voltage to support global demand. But with a dual voltage FLUENT heater, one design can deliver the same wattage level on both 120V and 240V systems.

This means the same heater can now be used in different regions to quickly and accurately heat liquids or gases as a single, integrated solution.

The FLUENT heater is an in-line heating system, meaning engineers can easily integrate the heater by connecting tubing to the FLUENT's inlet and outlet. "In-line helps to save installation time compared to a traditional immersion heating solution and eliminates additional components – reducing overall system cost and complexity," said Andy Selvy, chief system designer at Watlow.

Watlow offers standard size FLUENT heaters ranging from 250 to 8,000 watts, with several designs available for quick delivery. To find out more, visit: www.watlow.com/heaters/

XIMEA announces new camera models with Sony CMOS Pregius™ S sensors

Camera models based on IMX53x and IMX 54x will be introduced first and further sensors from the Sony Pregius S family will follow soon.

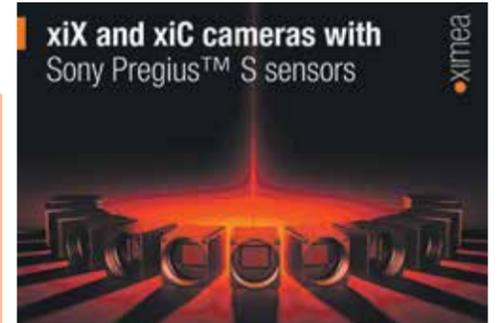
To the outstanding features of the next evolution of Sony CMOS sensors belong the small pixel size in combination with BSI – backside illumination technology. All the sensors offer global shutter readout making them ideal not only for scientific applications, but also for systems where objects move at a higher speed.

The 4th generation continues with high quantum efficiency, lower noise, and noteworthy dynamic range of 71 dB.

Earlier mentioned small pixels are 2.74µm helping with the choice of C-mount lenses thus improving the attractive cost and allowing a smaller footprint for mobility.

To leverage the miniature size of Sony sensors, XIMEA has integrated them into the smallest form factor measuring only 26 x 26 x 33mm and weighing 38g. This is to date the most compact size for cameras with Sony Pregius S 4th generation supplied with 10Gbit/s bandwidth.

High resolution, unbeatable form factor, attractive price, compatibility, and customisability make these cameras stand out and they are worth checking out.



Contact www.ximea.com

Bradshaw EV: PT2500

Bradshaw has announce the launch of its all new state of the art The PT2500, a fully electric, remote-controlled, pedestrian-operated tow tractor designed for moving articulated lorry trailers up to 25 tonnes in manufacturing and distribution applications.

Overview

The PT2500 is a powerful, robust, high performance articulated trailer mover. It is easy to operate

and moves trailers safely with exceptional manoeuvrability, negating the need for terminal tractors. The high-performance electric motors can tow up to 25 tonnes, and the hydraulically powered column lift can hoist up to 6,000kg. The remote-control functionality provides enhanced flexibility, manoeuvrability, and safety and optimally uses limited space. Simple to operate and low maintenance, the PT2500 is an ideal partner for anyone working in logistics and distribution.

Enhanced visibility & manoeuvrability

The remote-controlled PT2500 allows trailers to be shunted safely and efficiently with no strain to the operator. Providing excellent visibility from any angle, the PT2500 & its remote control functionality let the operator walk around the trailer during manoeuvres, making them completely visible and the ability to be their own banksman, all from a safe distance. Connecting the PT2500 to the fifth wheel is quick and easy, thanks to its precise manoeuvring abilities.



Space-saving

With superior manoeuvrability, the PT2500 is ideal where space is a premium, presenting outstanding turning capabilities compared with terminal tractors. The PT2500 accesses tight spaces, turning almost on itself and allowing trailers to be parked tightly, thereby optimising limited space.

Remote control

Controlled via the MLTX2 bellybox transmitter, the system incorporates the latest electronic technology in a lightweight, comfortably contoured, and durable case. Easy to use, the angled lever controls enhance operator comfort. The remote-control housing is constructed from super-tough nylon to withstand shock, and the IP66-rated sealed unit can withstand harsh industrial conditions. Synthesised frequency generation enhances reliability for a robust and reliable signal. The access code system provides peace of mind, as the signal only operates the intended equipment. Designed to minimise power consumption, the NiMH battery packs provide longer life between charges. The PT2500 remote comes with two battery packs, one for the remote control and a backup; both can be charged on the vehicle.

Braking systems

The PT2500 features a built-in air compressor system to operate trailer brakes utilising a dual-air brake system via the service and emergency airlines. When the tractor brakes are activated, the trailer service brakes are also activated and vice versa. The trailer mover features an e-stop; if the e-stop on either vehicle or remote is activated, this will dump the air, activating the emergency trailer brakes. A speed limiter controlled via a pressure sensor on the mast hydraulics activates when operating the fifth wheel, reducing the vehicle's speed during coupling. The vehicle also features electronic regenerative braking under deceleration and dynamic speed-sensing to prevent over speeding. An automatically applied transmission parking brake ensures the vehicle remains stationary when not in use.

Fully electric

The robust and powerful high-performance trailer mover features an 80 volt AC controller, and the high-capacity 80V 210Ah lead-acid batteries provide high initial torque and smooth acceleration. Fully electric, the PT2500 is a sustainable, environment-friendly, and cost-effective alternative to diesel shunters. Producing zero emissions and no exhaust fumes, the articulated trailer mover can be used indoors for a healthier working environment. In addition, the PT2500 lorry tug is silent to operate, making night and early morning operations possible, especially close to residential areas. In the absence of a combustion engine & fewer moving mechanical parts, the PT2500 is straightforward & cost-effective to maintain.

Cost efficiencies

Developed for logistics and distribution, the PT2500 trailer mover has been designed to aid 24 hour operations.

Negating the need for an HGV driver to be on-site, the remote-controlled technology means articulated trailer movement can be a one-person function. Anyone with operator training can operate the vehicle without an HGV licence.

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The PT2500, a fully electric, remote-controlled, pedestrian-operated tow tractor designed for moving articulated lorry trailers up to 25 tonnes.

Remote-control functionality provides enhanced flexibility, manoeuvrability, and safety and optimally uses limited space. Simple to operate and low maintenance, the PT2500 is an ideal partner for anyone working in logistics and distribution.

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Five Speedors for Ineos

Ineos, the global chemicals company, has had five new Hart Industrials doors installed at its Newton Aycliffe, Co Durham, site in a project being carried out by Hawkins Construction.

Four Speedor Storms and one Speedor Mini were part of the rebuild and refurbishment of the Ineos facility.

"We have installed 25 doors on the site in recent years," says Gordon Kipling, Hart's regional sales manager. "It is good to see quality and reliability of product remains a priority."

Mr Kipling adds, "Speedor Storm is an external high speed door designed for frequent use in high traffic situations where wind resistance is required on large openings up to 8m.



"The energy saving potential of this door is also particularly high. This fast

action roller door has a unique guide system offering wind resistance up to class 5. Speedors improve energy efficiency, maintain a better working environment and temperatures within the building."

They are manufactured under ISO 9001:2015 and their recommended operations mean they are suitable for high usage up to 1 million operations.

Mr Kipling continues, "Hawkins Construction has been a great partner to work with on this important project and we look forward to working with them again in the future."

Contact
T +44 (0)191 214 0404
www.hartdoors.com

Protega Global reveals dispenser for paper-based alternative to bubble wrap

Protega Global has launched the paper-based packing system Hexcel Dispenser Bench. The compact unit has been developed and manufactured in the UK to complement its paper alternative to plastic bubble wrap.

This means that as well as being dispensed using standalone equipment Hexcel can now be integrated into a customer's packing station. This puts Hexcel at the operator's fingertips which in turn means faster wrapping and lower footfall. The integrated Hexcel bench was launched in response to e-commerce businesses crying out for a sustainable alternative that's as good as plastic bubble wrap, and an efficient method of packing fragile goods to meet the significant increase in online demand for their products.

Requiring no power supply, this space-saving dispenser can be designed to fit a customer's specific requirements and deployed anywhere in the packing room or warehouse. It separates, wraps and tears off Hexcel paper wrap through the simple roller system, while roll change is easy: just lift the bench top and slide on a refill.



Premium retailers are among those leading a significant uptake of the system, which is suited for items such as tableware, glassware and mores.

In addition to the new dispenser bench, Protega offers a paper cushion, which provides protection against shock damage to goods in transit.

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Continued investment plans for Kingston Engineering

Kingston Engineering is one of the UK's leading precision engineering companies, with expertise in the manufacture and production of bespoke power screws. Using materials and specifications to suit customer's exact specifications and needs, Kingston Engineering produces cutting-edge power screw components with complementary nuts and fittings.

Based in Hull in East Yorkshire, Kingston Engineering specialise in manufacturing Right Hand/Left Hand, Single/Multi-start, Cut Thread Power Transmission Screws and Nuts, adaptable for mechanical power transmission. Kingston Engineering's products are provided to a diverse range of industry sectors in the UK and across the globe, conforming to British, European and American standards.

Kingston Engineering works closely with both suppliers and end-users, with a focus on providing technical expertise and an efficient turnaround service. Their



products are used extensively in a range of applications across multiple industries including the aerospace, oil and gas, nuclear energy, the chemical and medical sectors and many more.

All customised and purpose-built screws are manufactured and produced to the exacting quality standards of ISO 9001-2015 accreditation. Kingston Engineering also provide component reclamation, component enhancement, component repair and a corrosion prevention service.

An enviable reputation

The specialist precision engineering services provided by Kingston Engineering have evolved from a wealth of engineering experience and a heritage spanning over 100 years.

Founded in 1919, the aftermath of the First World War marks the time frame for the origins of the business. Starting out as Hull Motor Transport and Engineering Co, the company manufactured pistons and provided cylinder grinding and general engineering services. With further expansion in the early years, the company evolved to offer sawmilling and printing machine repair. In 1924, the Kingston Engineering Co. Ltd name was adopted, with the manufacturing of screws beginning as early as 1930. Kingston Engineering started to manufacture components for aircraft undercarriages

during World War Two.

In the decades to follow, a focus on skill and provision of engineering expertise has enabled Kingston Engineering to obtain an enviable reputation, as a leading precision engineering company. The ability of the company to adapt and evolve has always been a defining characteristic of the Kingston Engineering business.

Building a resilient future

With a heritage built on engineering skill, innovation and expertise, Kingston Engineering has shown remarkable resilience and responsiveness to change across the decades. These are the core strengths that still form the cornerstone of the Kingston Engineering business today.

Kingston Engineering continues to build on a strong foundation of engineering excellence and is committed to further investment to build a resilient future. As the company embraces the years ahead, the focus is to continually invest in state-of-the-art equipment, in-house facilities and advanced technologies. This will enable Kingston Engineering to continue to deliver leading



precision engineering solutions to customers in both the UK and across the globe.

As a leading precision engineering company, Kingston Engineering is dedicated to producing cutting-edge power screws and components, cut to quality materials and manufactured to exacting quality standards.

Kingston Engineering provide great flexibility and a rapid response service and are committed to providing unique and quality solutions to customer's specific engineering requirements.

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Capacitive silicone force sensor SXTSC by Sateco makes gripping safe and dexterous

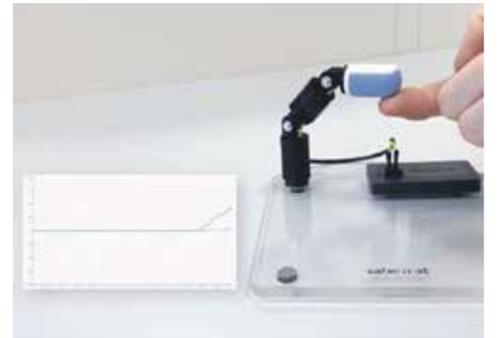
The human hand exhibits a dexterity yet unmatched by technology. Force sensors can close this gap by offering feedback on the grip force, thus avoiding damage to delicate and fragile objects such as food and human body. The elastomer sensor works according to the capacitive operating principle and can continuously measure both touch and compressive force. It is soft and flexible, can be shaped three-dimensionally, and is suitable for various applications in agriculture, food, electronics, surgery and generally in cobots and prosthetics.

Both the sensor's footprint and dimensions can be freely designed. As a result, it can be customised to curved surfaces and integrated seamlessly between the body structure and a soft surface. This enables an ergonomic design of robotic grippers, prostheses and exoskeletons and both on small and large surfaces. Used on the surface of a body structure the material feels similar to a human skin and offers a life-like soft and comfortable human-machine interaction.

The sensor combines two measurement functions in one

component. It can detect the approximation of a body part at a short distance and precisely measure its exerted force as well. This keeps the combination compact and enables predictive operating and measurement systems.

Thanks to its elastomer material, the SXTSC sensor is robust, shock and impact-resistant, and it also enables high durability, even in rough environments at high (+85°C) and low temperatures (-40°C). Silicone is gentle on the skin. Optional texturing of the surface can make it even more comfortable to wear. Silicone is chemical and



temperature-resistant with regard to food.

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Intelligent steam boiler sequencing

SCOPE is an all-new, PLC-based boiler sequencing control system from FULTON, suitable for up to four steam boilers that optimises installations, ensures energy efficient operation and improves boiler longevity.



It can be retrofitted to existing vertical and horizontal fuel-fired boiler installations, including Fulton's own range of existing and planned products and those manufactured by other boiler OEMs.

By using SCOPE's intelligent sequencing to provide redundancy and reliability, significant savings can be made by automating start-up and shut-down procedures, controlling and optimising main steam header pressure or temperature, ensuring steam supply is controlled precisely and load-balanced across the boilers, thus eliminating extensive losses from repeated start/stop cycling of burners.

At launch, SCOPE features a high-definition touch screen for system programming and displaying boiler status, with values presented including firing rate, fault history, TDS value logging. Remote access allows service engineers to review boiler status and/or alarm conditions and control system functionality according to process demands.

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Challenging carbon capture pilot plant



Working alongside the University of Nottingham, Strata Technology's specialist team of engineers and technicians have delivered a challenging carbon capture pilot plant, supported by the government's UK Research and Innovation (UKRI) initiative.

The brief covered the design, manufacture & assembly of circulating and bubbling fluidised-bed systems (CFB and BFB) for testing new adsorbents for CO₂ capture on a 5-20kg scale using simulated and actual flue gases.

Strata customised off-the-shelf products such as compressors, rotary valves and expansion joints to deliver against bespoke applications as quickly and cost-effectively as possible. Welders with the required coding were contracted on day rates with a manual lifting plan in place to negate the cost of hire & training using heavy lifting equipment. In this way, Strata were able to meet the ambitious delivery schedule of just nine months.

Speaking about the project, Professor Colin E. Snape, Director of EPSRC Centre of Doctoral Training in CCS and Cleaner Fossil Energy from the Faculty of Engineering, University of Nottingham, said, "We have worked with Strata for a number of years and had confidence and trust in their ability to build and deliver this rig. The solids looping adsorption rig is essential for taking forward our findings on developing new adsorbents for CO₂ capture on their pathway to commercialisation."

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www.stratatec.co.uk/case-studies/
carbon-capture-pilot-plant-nottingham-university

Flow meter performance



Titan Enterprises has published a new technical article focusing on flow meter performance. The article discusses the factors involved in determining the overall performance of pulse output turbine flow meters and how each factor influences the accuracy of flow measurement.

Turbine flow meters are invaluable measurement tools, and their repeatability and linearity are the key elements that determine the flowmeter's performance and overall accuracy. Both the mechanical properties of the flow meter and the physical properties of the fluid combine to influence the general performance of the flow measurement device.

Terms synonymous with calibrating flow meters – the K-Factor, calibration uncertainty, repeatability, accuracy and linearity – are explained. The technical article discusses the relationship between all these flow factors and how they each influence the overall performance of a flow meter.

Whereas turbine flow meters, such as Titan's Beverage flow meter and 800 series, offer the high level of repeatability and reliability required for accurate batch delivery systems, Titan's Atrato® and Metraflow® ultrasonic flow sensors and the larger oval gear flow meters, are highly accurate over wider flow ranges, especially with viscous liquids such as oils.

To read the technical article in full, please visit: www.flowmeters.co.uk/titan-explains-the-factors-that-determine-flow-meter-performance/

For further information on flow measurement devices to suit specific applications, please contact Titan Enterprises on +44 (0)1935 812790 or email: sales@flowmeters.co.uk

Insulated bus bars formed without coating damage thanks to new approach to bending

William Hughes Group announces that it has perfected a method of composing and forming complex automotive electric vehicle (EV) bus bar geometries out of pre-coated copper stock; and can do so in such a way that the insulation/protective cover remains completely viable along the length of the bar.



EVs. For this reason, bending machines are a far better proposition.

The development has been driven by the relative ease with which straight copper bar stock can be more easily coated than bar that has already been shaped. But it is possible to over stress the coating and cause stretches and cracks if the material is bent too far or too tightly. For this reason, significant research and development efforts were expended on formulating the capabilities and limits of the materials and the processes.

Using bending machines, the minimum bend radius for the high edge is approximately the same as the material's height, while the minimum radius for the small edge is approximately the same as the material's thickness. 90° twisting is also possible for confined areas where a bend could be problematic. In all instances, William Hughes can work with customers to help define the material cross section, the bend radii, the curve forms and the geometry possibilities based on the installation space.

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Onder Karaca, Internal Sales Engineer
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EXPECT PERFORMANCE

HMI support arms for all applications from Foremost

Foremost Electronics, the engineering-led Essex based importer and specialist distributor of electromechanical components, can now offer machine builders and process control system designers one of the most comprehensive and versatile ranges of HMI support arms available from a single source.

Market leading enclosure manufacturer Schroff-nVent monitoring and management support arms are a modern looking design for mounting a flat screen monitor of up to 24" with a keyboard and mouse for use industrial or laboratory environments. The fully integrated design means installation

on any cabinet can be done by one person in a few minutes. The Schroff-nVent support arm allows screen tilting with optional swivel and rotation functions for individual needs and the keyboard can be folded up to save space. Two models are available with or without a keyboard tray. The keyboard tray unit provides space-saving cable management within the wall duct.

The Idec HT3P Safety Commander™ Series of support arms save the costs of having a bespoke programming pendant or permanent touch panel in each workplace and allows machine programming or maintenance to be done from a standard

tablet. The HT3P improves safety and operability for both right- and left-handed users and adapts to both vertical and horizontal use. The HT3P will accommodate industry standard tablets of various sizes and includes a USB charging port. Built-in safety features include an emergency stop switch with LED indicator and a three-position enabling switch and key locking function. The HT3P support arm has a rugged construction with drop resistance of 1.2 meters and IP54 protection.

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Q Electrical Industrial Services Ltd emerges from acquisition

Despite uncertainty with Brexit and COVID-19, the continued growth of new VSD Contract Partnerships & Electrical Projects has led to Quantum



Controls acquiring Lothian and Borders Electrical in East Lothian, Scotland. Lothian and Borders electrical is one of Scotland's leading electrical contractors and through this acquisition Quantum now have a nationwide network of 6 Service Centres and a growing team of engineers providing a range of Electrical Services and solutions across the UK.

2020 was a difficult and challenging year for all, however as a service business with Key Worker status and over 250 VSD contracts, both companies have been extremely lucky to still be able to support our customers and experience significant growth in these troubled times. This has led to Quantum Controls being awarded the prestigious 'Drive & Motor Company of the Year' award from Industry Update.

The new Service Centre and experienced electricians will provide Electrical services such as:

- Electrical Contracting Services
- Electrical Installation in many industrial processes
- Turnkey projects from design to control panels, PLC programming, SCADA and Installation
- 10 Variable Speed Drive Service Engineers based in Scotland
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- Inspection & Testing
- Power Factor Correction

If you would like to know more about our new services in Scotland, please contact Lyall Colvin, Managing Director.

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TXLN Series

- Compact metal case with screw terminal block
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- High efficiency up to 91%
- Active PFC >0.95 (above 100 Watt)
- Compliance to EN 61000-3-2
- Short circuit, overvoltage & overload protection
- IEC/EN/UL 62368-1 safety approvals
- 3 year product warranty

The new TXLN line comprises a series of metal enclosed AC/DC power supplies ranging from 18 to 960 Watt (split into 12 different



power levels) and is designed for a wide range of industrial applications. The TXLN is an active replacement of the older TXL line and is built on the same design principals to make the transition to the new TXLN series as easy as possible. The model selection includes single, dual as well as triple output solutions to cover different applications requirements.

With a low-profile metal case and screw terminal block connection, they are easy to install in any equipment. Up to the 200 Watt models the TXLN power supplies are completely convection cooled and from 320 Watt and above they come with an internal fan. Above 100 Watt an active PFC (>0.95) function is added to the standard feature pool. All models in the TXLN line have universal input and comply with the latest industrial standard IEC/EN/UL 62368-1, European EMC standards and the Low Voltage Directive (LVD).

Contact: Florian Haas
T +41 43 311 45 11
F +41 43 311 45 45
f.haas@tracopower.com
www.tracopower.com

A look into the post-pandemic connector market



The COVID-19 pandemic has caused substantial disruptions across the engineering sector over the last 18 months, with businesses facing challenges such as changing market requirements, stock shortages and longer lead times. The electrical connector market was no exception to this. Here Shaun Findley, European Director of Product and Purchasing at electrical connector specialist PEI-Genesis, discusses why, despite the disruption caused by the pandemic, the interconnects industry is now seeing rising demand.

Electrical connector orders were up 71.5% in April 2021 compared to a 19.4% decrease in 2020, according to recent data from Bishop & Associates. The same study showed that sales were up 43.4% in 2021, compared to a 17.2% decrease in 2020. This growing demand for electrical connectors is directly related to growth in key markets such as renewable energy, construction and automotive.

Connectors for renewable energy applications

There is no doubt that interest in renewable energy continues to grow. This has led to expanding applications and an increase in the renewable energy electricity trade. Advancements in renewable power and power distribution technology have led to increased demand for high-capacity interconnection lines, driving growth in the electrical connector market.

Renewable energy connector applications go beyond massive power grids – applications like hybrid and electric vehicles (HEV/EV) and net metering for solar homes also impact the industrial connector market.

Connectors in construction

The compound annual growth rate (CAGR) of the building and construction industry is expected to expand by 5% between 2021 and 2028, driving increased demand for electrical connectors, according to data published by Grandview Research. Keep in mind that this is not limited to new construction, but also includes the refurbishment of existing infrastructure.

Another key aspect of this growth lies in the expansion of infrastructure taking place in many developing countries. The growing infrastructure includes transportation and expansions in power generation, smart grids and electrical distribution. In particular, updates and expansions to transportation infrastructure will include rail signalling and rail tunnelling, requiring reliable railway connectors.

Automotive connectors

The automotive sector, which is expected to experience a strong demand related to various factors, is heavily influencing the post-pandemic demand for connectors.

These factors include more stringent quality and reliability standards, the development of highly advanced electric systems and increased demand for HEVs and EVs.

Reliability and quality standards are a few challenging aspects of the automotive market. This requirement has driven a demand for designs involving smart connectors with EMI/RFI suppression, versatile miniature connectors and UL-recognised and RoHS-compliant connector solutions.

The adoption of advanced electronic systems such as system diagnostics, driver assistance and infotainment have also greatly influenced the automotive connector market. Infotainment, in particular, will have a positive impact on the need for communication connectors.

The demand and interest in HEVs, EVs and autonomous vehicles are rapidly increasing. In fact, there will be over 37 million EVs on Great Britain's roads by 2050 according to National Grid ESO's Future Energy Scenarios 2021

report. This demand puts extra pressure on engineers to develop harsh environment connector solutions that are efficient, reliable and lightweight, offering a weight reduction between 20 and 30% compared to traditional solutions.

The global market for cables and connectors was valued at USD 78,510 million in 2019 and is expected to reach USD 120,940 million by the end of 2026, growing at a CAGR of 6.3% over the next five years, according to data from Absolute Reports. The key to keeping up with the increased demand for cables and connectors is an emphasis on high performance, reliability and efficiency.

PEI-Genesis is committed to helping you find the reliable and efficient interconnect solution required to meet the needs of your application. Its extensive inventory of off-the-shelf components and capacity to build bespoke, customised solutions allows it to keep up with an increased market demand for electrical cables and connectors.

To find out more, and to keep up with the latest news in the world of electrical connectors, subscribe to PEI-Genesis' blog at: <https://blog.peigenesis.com>

Contact: Michelle van Wyk
michelle.vanwyk@peigenesis.com
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Rebel™ EMP 215ic welder provides portability and power

ESAB's Rebel™ EMP series of integrated, compact inverter-based welding systems includes Rebel EMP 215ic for maximum portability. Rebel 215ic weighs 18kg, measures 584 x 229 x 406mm and – like all Rebel welders – features a five-handle roll cage and unibody construction that integrates the front, back and top panels to provide superior durability for protecting internal components.

When connected to 230V mains power, the machine provides a maximum output of 240A. When connected to 120V mains, it provides a maximum output of 140A. It accepts 100 and 200mm wire spools.

All Rebel machines feature ESAB's unique sMIG ('smart MIG') function. With sMIG, users begin MIG/MAG welding by setting metal thickness and selecting wire diameter. Rebel will automatically adapt to any popular steel, stainless, chrome-moly or aluminium filler metal/gas combination. sMIG monitors the operator's technique and continuously adapts the output to provide a stable arc and superior, repeatable welds, therefore removing doubt of welding with incorrect settings.

Rebel features a multi-lingual operator interface with colour LCD/TFT display that provides a graphical and intuitive way of selecting



processes, setting parameters and fine-tuning performance. The control display incorporates a built-in user manual with graphics and text to help with weld process set up.

To learn more, visit: www.esab.com

Robust Feed U82 wire feeder offers unmatched combination of advanced process controls and extreme durability

Robust Feed also offers Red Dot Award-winning ergonomics and usability.

ESAB has launched the Robust Feed U82 wire feeder, which includes a full suite of advanced process control functions that help users increase competitiveness through consistent weld quality and appearance, address workforce skill issues, improve productivity and reduce operating costs through more uptime. The feeder accepts 200 and 300mm wire spools and is designed to work with ESAB's Aristo™ 500ix and Aristo Mig 4004i Pulse power sources for MIG/MAG, pulsed MIG, flux cored and TIG welding, as well as carbon arc gouging.

The Robust Feed U82 combines the extreme durability of a portable, enclosed feeder and the precision wire feeding and control of a shop-style feeder. Its PreciDrive wire drive system delivers better arc starts and stops without backlash or play in the gears and features a 4-wheel drive system. Large diameter (38mm) drive rolls offer more gripping area and provide more pushing force without deforming soft cored and aluminium wires, a common source of

feeding problems. It handles solid wires up to 2.0mm and cored wires up to 2.4mm and feeds wire at speeds of 0.8 to 25.0m/min.

"With the introduction of the Robust Feed U82, which offers our most advanced control panel, users in every industry can take advantage of the unique productivity, reliability and durability benefits of Robust Feed," says Arne Lagerkvist, Global Product Manager – Heavy Industrial Welding Equipment, ESAB. "This feeder also offers ESAB's exclusive SuperPulse modified pulsed spray transfer process. SuperPulse combines a conventional pulsed waveform and with a second waveform or process to achieve specific goals when welding aluminium or stainless steel."

To learn more, visit: www.esab.com



New from welding inverter manufacturer JASIC are the TIG 200 Amp AC/DC machines

The JASIC TIG 202 Analogue Pulse AC/DC and JASIC TIG 202 Digital Pulse AC/DC are technologically advanced single-phase inverter power source suitable for medium production work.

The 202 Analogue has an innovative and user-friendly analogue control panel allowing full control of the welding parameters. The 202 Digital has an innovative and user-friendly digital control panel allowing full control of the welding parameters.

The excellent technical characteristics of

these models make it an ideal choice for the professionally qualified TIG welders that require precise and reliable performance. Optional water cooler and large cylinder trolleys are available. Both inverters come complete with TIG torch & adaptor, gas regulator, work return lead and clamp. All JASIC welding inverters carry in the UK and Eire a free 5 year warranty supported by factory trained technicians offering you total peace of mind.

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Quality alternatives for 95% of ALL passive components

With its latest franchised distribution agreements in place, BEC Distribution now offers quality alternatives to major brands for what it believes covers 95% of all passive components including TOKO/Murata, Sumida, TDK, Coilcraft, Cooper, Bourns, Tyco, Vishay, Würth, Panasonic among others.

Many well-known manufacturers currently have lead times of 18-26 weeks, often with product allocation policies. BEC's alternatives are available on 5-7 weeks delivery (excluding public holidays). Many products are ex-stock, with a low MOQ of just 10 pieces for samples. The policy of sourcing from different

countries around the world ensures continuity of supply without compromising quality.

BEC is a franchised distributor of High Current Power Inductors, Power Inductors, Chip Inductors, Common Mode Choke, Line Filter, Transformers, Resistors, Terminal Blocks, RJ45 connectors and LAN Magnetics.

Samples and spec sheets are available on request. Sourced from established manufacturers around the globe, the ranges offer high-quality alternatives, often at a price lower than the

well-known manufacturers. Quality is key – for example, many products feature gold-plated contacts and robust, rugged designs, ensuring long life. Error-reduction designs have also been utilised in the components. A very recent BEC distribution agreement is the Itacoil range of Measuring Transformers. They offer very high precision with a typical measurement error of < 0.5%, suitable for frequencies from 50Hz to 400Hz with output voltages from 2.5V to 10V.

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Membrane Switches are a self contained printed keyboard which offers low cost and high reliability. They are custom designed, thin and flexible. They are available with tactile/non tactile feedback, surface embossing, backlit legends, silver or carbon tracking and RFI or EMC shielding if required.

Elastomeric connectors made from silicon rubber offer an economic and reliable solderless connection. They are widely used on digital screens, home electrical goods and communication equipment.

Ask about our Value Added Keypad Assemblies

Kontron's VX3060-S2

Kontron, a leading global provider of IoT/Embedded Computing Technology (ECT), commences first deliveries of its high performance VX3060-S2 Blade PC. Based on 11th Gen Intel® Core™



processors, this underscores Kontron's strong partnership with Intel, enabling the company to be first to market with a powerful and versatile space-saving 3U VPX single board PC.

Kontron's VX3060-S2 combines robustness, reliability and 15 year availability with high performance processing, neural network acceleration and powerful graphics capabilities.

CPU SKUs included with the Kontron VX3060-S2 are quad core units supporting specialised Vector Neural Network Instructions (VNNI) and Doubled Signal Processing performance (AVX512). The Gen12 Gfx graphics engine ensures maximum performance for computer vision and media processing – twice that of the previous generation. Furthermore, the direct on-chip access to main memory allows exceptional performance from the 96 execution units (EUs), especially when compared to traditional discrete graphics silicon solutions featuring many more EUs.

Alain Spors, Director of Products at Kontron, says, "Developers can take advantage of our VX3060-S2 immediately. On a single blade consuming only 12-28W of power, the VX3060-S2 is ideal for long-term blade computing deployments in Aerospace, Defense and Transportation – in fact, any innovative embedded application requiring vector neural network acceleration or computer vision."

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An unmissable showcase of the best in intralogistics

Quite simply, this exciting event, held at Coventry's RICOH Arena from 1-2 July 2021, cut through the growing noise in the industry and provided visitors with the go-to platform for discovering logistics innovations.

IntraLogisteX is for logistics professionals who are looking for solutions to their current and future challenges, from the latest materials handling technologies to full-scale warehouse automation options. This event is designed for end-user practitioner logistics professionals such as warehouse managers, heads of distribution, IT directors and lead project managers.

Visitors were able to meet industry leading exhibitors and discover how the latest technology can be applied to their operations to provide massive improvements in productivity and accuracy. There was a completely free Conference theatre. This free learning opportunity meant visitors could hear directly from the minds behind the latest technology, and listen to industry leaders as they shared their insights and gave real world examples of how they have automated their own and their customers' operations.

Visitors could condense weeks of online research into just a few hours – all the companies they needed to talk to were

gathered together in one venue. There was no better way of doing business than meeting face-to-face to get more value from interactions with potential suppliers and ensure they really understood visiting organisations' complex needs.

IntraLogisteX will return next year to the renamed CBS Arena, Coventry from 29-30 March 2022. This is our second pick of the best exhibitors from this year's show, listed here in alphabetical order: Wanzl. Further details can be found on this page.

www.intralogistex.co.uk

Print & Packaging News



AdCo's HD 250 NV is a true standout among industrial-grade hot melt glue guns, and a go-to tool for contractors and tradesmen in many fields of work.

The "NV" stands for "needle valve," an exclusive AdCo design feature which allows the user to lay down precise, uniform glue lines, with perfect cut-offs and no more dripping and stringing!

This exceptional quality tool sports cushion-padded grips, an easy-squeeze trigger, and a removable wire base stand which makes it easy to use in any work environment.

The 225 watt PTC heating system allows for quick heat-up times to its preset temperature of 210°C, and the ability to dispense upto 1.5 kilos of glue per hour.



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FEATURES & HIGHLIGHTS

- Needle valve nozzle
- Uses 11/12mm glue sticks
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Insight. Expertise. Solutions.

In this issue of Industrial Process News, we are pleased to announce FEG Global as our Engineering Consultancy of the Month.

275 Combined Years of Cross-Sector Engineering Project Management

With more than 275 combined years of engineering experience, FEG Global is a specialist engineering consultancy delivering cross-sector CAPEX project management and environmental technology services. Known as a global powerhouse, the company focuses on areas of food and beverage, pharmaceutical, paper and tissue, nuclear, chemical, and automotive industries.

For many years, FEG Global has supported and innovated the industry working on multi-million-pound projects for some of the biggest brands in manufacturing such as McVities, Weetabix, General Mills and Kimberly-Clark. In all of its activities and actions, FEG Global aims to provide impartial and appropriate solutions that best represent its clients' interests.



FEG Liquid Gas Contact Scrubber



Diverse Services across CAPEX Project Management, Ventilation, Odour Abatement and Dust Extraction FEG Global believe that diversity within the industry is conclusive to success, therefore, its environmental technology services cover a wide range of industries, which allow them to offer design consultation and turnkey projects in dust extraction, filtration, heat recovery, environmental surveys, and odour abatement.

Its project management capabilities serve the purpose of delivering projects to solve the initial problem on time and on budget. Providing services from initial feasibility and design, EPCM, CDM, principal contracting to turnkey projects, the FEG Global team operates as a whole across these two separate divisions.

Established in 2004, FEG Global was founded by now Managing Director, Chris Williams. With a core team of engineering experts, the company reached its first milestone when it partnered with Kimberly-Clark on its first turnkey project. This partnership helped set the company on an upwards path of offering clients complete accountability and responsibility. Headquartered in Washington, UK,

FEG Global also has offices in Birmingham and Glasgow, and more recently opened its first legal entity in Belgium.

Patent-pending Liquid Gas Contact Scrubber Development

In recent product development, FEG Global has designed and developed its own unique odour abatement scrubber solution, the Liquid Gas Contact Scrubber (LGC). Recently patented, the LGC was designed to solve tricky food odour control issues. The LGC uses a scrubbing solution to remove unwanted particulates

from a gas stream and features a flexible and modular multi-stage design that allows FEG Global to tailor it to suit customer requirements.

Specifically useful for the food industry, odour and oil mist emissions from applications such as frying, cooking, coating and seasoning can cause major problems and lead to complaints to Environmental Health. The unique design of the scrubber ensures a practical, low maintenance solution which delivers compliance with the requirements of Best Available Techniques. Suitable for internal or external installations, the scrubber provides a fire



Design and installation of flour silos



Factory production line extension for 2 Sisters

barrier that is accepted by insurance companies. Other benefits include a recirculation of liquor that reduces costs and lowers environmental footprint, as well as tackling legionella, the LGC incorporates a CIP system and involves no cleaning of ducts after the scrubber.

Digital & Automation Focus

Deemed as key workers, FEG Global was able to continue operating during COVID-19, and business continued as normal. The company noticed a digital evolution which propelled interest from pharmaceutical and life science industries. The company has also witnessed an interest from manufacturers within the food industry looking for more sustainable and automated technology to help reduce their overall energy consumption. FEG Global has been able to help these manufacturers reach their sustainability goals and reduce their carbon footprint.

In the future FEG Global plans to continue growing within Europe and provide further solutions for the food and beverage sectors.

For more information, see below.

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Experts in labels, labelling and label printing,



Datamark supply and manufacture a varied range of labelling solutions to a wide range of customers spread across various industries. Enlisting in the services of Datamark, customers can enjoy numerous benefits, for example gaining from the years of knowledge and experience amassed by Datamark.

Constantly innovating and seeking to add new products to their already extensive range, Datamark truly are the one stop shop for all of your labelling needs. Moving from strength to strength since its inception in 1995, Datamark offers customers competitive pricing, unparalleled customer service, reliable deliveries, rapid quote turnaround, and an extensive product range. Datamark's product range includes: Plain and Colourwashed Labels, Flexographic Printed Labels, A4 Sheeted Labels, Fanfolded Labels & Tags, Own Brand Thermal Transfer Ribbons, Thermal Transfer Ribbons, Thermal Transfer Bureau Print Solutions, GoDex and other brand Thermal Transfer Printers, Thermal Transfer and Direct Thermal Print Solutions, and TT Printers Service and Maintenance.

Driving the company forward, aside from its extensive product range, is its continued emphasis on providing the best customer service possible. It is no wonder that Datamark supplies such a wide variety of industries, including; food, distribution & logistics, storage & contract packers, electronics, homecare, automotive and industrial.

sales@datamarkuk.com
www.datamarkuk.com

24 hour remote wastewater sampling across 15 locations

Wastewater monitoring has become increasingly important in not only ensuring a producer's consent compliance through automated quality checks, data logging and discharge, but in an environment where there are increasing pressures socially, ethically and financially via increased economic penalties to adhere to set limits. It is a situation where a robust process has become essential.

Producers not only need the confidence of compliance in an era of increasing fines, but also reduce and limit any impact made upon the surrounding environment. Reducing the amount produced and tracing its exact origin can be a challenging prospect.

A customer contacted North Ridge Pumps with a requirement to remotely sample wastewater 24 hours a day, 7 days a week at set intervals across 15 locations. They needed to sample dirty water where water levels were very low at times meaning pumps were susceptible to dry running, there were fluctuating inlet pressures and a possible ingress of solids including grass, twigs and mud ruling out many pump technologies.

They needed a low maintenance solution to pump at very low pressures, with a flow requirement up to 500L per hour. Due to the remoteness of testing locations, and sampling required at various hours throughout

the day they wanted to remotely control pump speed via a single-phase supply, have the ability to reverse units should they become clogged and have a way of detecting if the hose required replacement.

Our customer initially trialed a unit to check that the system performed as required, before ordering an additional 14 AMP16 3/4" Peristaltic Pumps complete with single phase inverter for speed control, hose leakage detector to enable the operator to know should the only wearing part fail via their installed PLC Controller, and with a remote input for reversing of the pump should any blockages occur. The units were supplied with forced air cooling allowing a wide operating flow with pump speed varying between 4 and 105 revolutions per minute.

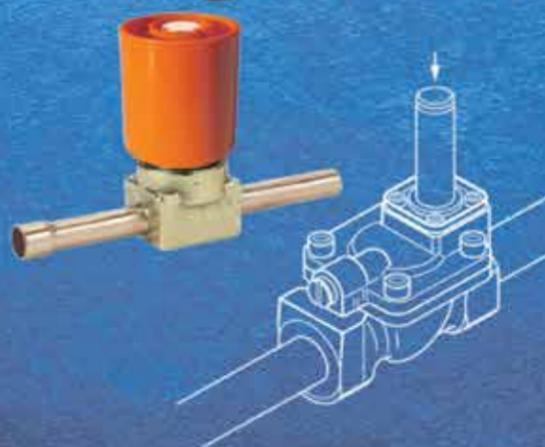


As the pump supplied is of roller design they are expected to experience as much as 30% reduction in unit power consumption compared to traditional designs of peristaltic pumps, extended hose life and see many years of trouble-free service with inspection and lubrication intervals as much as 12 months apart.

If you have a wastewater treatment application and are unsure of the most appropriate solution, consult with us. As North Ridge Pumps are not tied to a specific pump technology we can select the most appropriate pump for your application.

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Fridgenius Solenoid Valve Operating Magnet: A positive solution for the valve industry!

Solenoid valves are electromechanically operated valves used to control the rate of flow in fluid or air powered systems. With automatic operation, solenoid valves are incredibly useful to engineers as they remove the need to manually operate valves. They are incredibly versatile, however, if the system in which the valve is operating loses power, it becomes useless and cannot continue to function. Fridgenius has worked hard in creating an ingenious product to solve this problem.

Established in 1995, Fridgenius supplies National and International distributors with Solenoid Valve Operating Magnets suitable for use in refrigeration, air-conditioning, water, oil and gas installations.

As a family-owned company, David's son Chris Slydel runs the company in the beautiful market town of Wimborne, Dorset which lies on the River Stour. Its dedication to provide excellent products and services has proven vital in its success over the years.

Building on its already sterling reputation, the past 25 years has proven that Fridgenius consistently delivers a quality and reliable service to its ever-growing client base.

Fridgenius designed the Solenoid Valve Operating Magnet to solve the problem of how to operate solenoid valves when a system is not under power. Essentially the device is designed to convert electrically operated solenoid valves into hand-operated valves in seconds.

This function allows the magnet to operate valves in a plant or system which has yet to be installed or has been decommissioned. In cases of emergency, such as a failure of a solenoid valve coil, it can be used to keep a system operating while a replacement coil is found.

Each Solenoid Valve Operating Magnet is fully customisable. Companies can choose to add their own branded logo onto the magnet, this is useful for companies who are looking to use the magnet within their own workforce and is great for retail sales. The magnet is the same shape and size of a large cotton reel and when placed onto a solenoid valve, it causes the armature to open or close. Available in an array of colours to match corporate branding, there is also three sizes of magnets to choose from. Whether the need for a 10mm, 15mm or 18mm magnet is required, Fridgenius customise your magnet to fit all makes of solenoid valves.

As well as saving service engineers time when on the job, another of its many benefits is the magnet allows service engineers to operate the valves manually negating the need to wire up a system. As well as eliminating the



worry around selecting the correct voltage, the Solenoid Valve Operating Magnet offers vital assistance through the installation, recovery of refrigerants, and the commissioning and decommissioning of plant and machinery stages. In a matter of seconds, the magnet converts an electrically operated solenoid valve to a manual.

The Solenoid Valve Operating Magnet has received an abundance of rave reviews over the years. We caught up with Chris who explained one example where Fridgenius' device has helped a customer deal with an emergency. Chris expanded that, "At a show a few years ago, a refrigeration engineer recounted that while watching a rugby match on TV, he received a call from a milk processing plant customer. His plant was warming up and he needed help. He found that the solenoid coil had burned out and by using the Fridgenius Solenoid Valve Operating Magnet, he was able to run it permanently, setting it to cut out under pressure. The use of this ultimately saved

14,000 litres of milk, which resulted in one very happy customer, and the engineer returned home in time for the end of the rugby match!"

Imagine, you are in the middle of a job, you're on a tight schedule to finish and the power goes down. The solenoid valve installed has now stopped working due to the fact that it relies on an electrical input to function. Don't get caught out. React now before it's too late. Fridgenius has created this ingenious device to enable your working day to run smoothly, with no room for error. Available today to keep you, your workforce and your customers happy. Don't let your service suffer. If you need to

operate a solenoid valve manually, you need a Fridgenius Solenoid Valve Operating Magnet!

If you would like to find out more information and ask any questions on how the Fridgenius Solenoid Valve Operating Magnet works, please visit the company website or see the information on how to get in touch with Fridgenius directly using the contact details below.

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KOSO Kent Introl engineers and supplies high-quality valves to perform in some of the most severe service conditions throughout the world. As experienced valve manufacturers, KOSO Kent Introl has built a reputation for providing high-performance products on time and at a competitive price. Their products can be found right across the globe and are backed by first-class technical expertise and professional after-sales service.

Over the years, KOSO Kent Introl has diversified across many different industry sectors including

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Oil & Gas, Petrochemical, Power and Industrial. They initially focused on the Oil & Gas industry, and to date, this remains a key area of interest. Another key area is Subsea, with KOSO Kent Introl entering into this market in the late '80s with their subsea Choke range of products, and over the years, have delivered some industry firsts in this segment. With extensive experience in supplying

Control and Choke valve products to the world's energy markets, KOSO Kent Introl is also ideally positioned to support the energy sectors on their journey into cleaner energy. KOSO Kent Introl supplies high-quality valves for the green energy sector, including hydrogen applications, carbon capture, utilisation & storage, offshore & subsea electrification, and offshore floating wind.

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Seaglass Cloud supports Omni Energy



Seaglass Cloud supports Omni Energy in addressing the under-served pre-payment gas and electricity market

Seaglass Cloud Technology, an end-to-end, software-as-a-service (SaaS) provider to the energy sector, has developed a scalable and future-proof, full-service customer management system for Omni Energy, helping it to provide a responsive and highly-efficient service to domestic pay-as-you-go (PAYG) energy customers.

Omni Energy specialises in the PAYG market, where consumers top up energy via Omni's app, online portal or physical card or key – a market it believes is under-served within the energy supply industry.

"These customers are perceived as too complex, and do not get offered forward-thinking products or account management," says Gary Bartlett, CEO at Omni Energy. "Our sole purpose is to make pre-payment better."

Seaglass' end-to-end, Cloud-based solution includes automated SaaS systems that streamline customer risk calculations, data migration, onboarding, supplier switching, customer communications and billing.

As a Cloud-native business, the Seaglass system is innately configurable and includes system updates resulting from regulatory changes as part of its standard offering. It is helping Omni Energy, for example, in offering its customers faster and more reliable switching in line with Ofgem's Switching Programme.

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Versatile and now also explosion-safe

The Schmersal Group have expanded their existing range of switches for heavy industry to include explosion-proof variants that are suitable for use in areas at risk of explosion. The pull-wire emergency switches in the EX-I-ZQ900 and EX-I-RS655 series as well as the belt misalignment switches in the EX-I-BS655 and EX-T. 454 series can be used in dusty environments in Zone 21 in ignition protection class Ex tb 'Protection by enclosure' or in gas atmospheres in Zone 1 in ignition protection class Ex ib 'Intrinsic safety'.

The new versions expand the possible range of applications for these switches:

- The variants certified for Zone 1 have been designed for applications in which hazardous gases could occur, such as in the chemicals and petrochemical industry as well as in refineries, landfill sites and recycling plants.
- Switches that are certified for Zone 21 are suitable for areas outside of dust-enclosing containers, such as near to filling and removal points, conveyor belts or HGV dumping points, such as those found in recycling plants, gravel and cement works, thermal power plants and in the metalworking industry.

The EX-I-ZQ900 pull-wire emergency switch with single-sided action is used on machines and systems in areas at risk of explosion, where there might be the need to trigger



the emergency stop command at any point along the route of the wire.

For greater distances, there is the EX-I-RS655 pull-wire emergency switch with two-sided action. The main characteristic is a significantly reduced installation cost, made possible by the wire length of up to 2x100m as well as by the central connection terminal.

Contact: Steve Watkins, Marketing & Business Development
T 01684 571980
swatkins@schmersal.com
www.schmersal.co.uk

CHEMTREC® partners with chemical response agency

CHEMTREC, the world's leading emergency hazmat response service provider, has partnered with China's National Registration Centre for Chemicals (NRCC) to create a unified global response for chemical emergencies in China.

After several years of collaboration, CHEMTREC will now be able to offer global clients a more unified response to local chemical emergencies as well as providing more support on chemical compliance and risk management in the region.

The new partnership will enable CHEMTREC clients to manage all NRCC registrations and Chinese hazardous chemical compliance directly through their existing CHEMTREC contract, without the need for third party contracts, lawyers or mediators within China. The new process will reduce the risk of having goods impounded, financial penalties, or other sanctions by streamlining compliance and simplifying approval processes through one party, rather than many.



Along with NRCC registration, CHEMTREC will also manage chemical compliance including individual chemical registration, SDS (safety data sheet) and label production as well as GHS (global harmonised system) classification. Additionally, clients have access to 24/7 in-country NRCC emergency support, as mandated by Chinese law, along with additional back up helplines provided by CHEMTREC.

For more information on CHEMTREC's partnership with NRCC, please visit: www.chemtrec.com/emergency-hazmat-incident-response-services/nrcc-emergency-response-service-china or contact us at: sales@chemtrec.com for further details.

Alcohol and drug testing in the workplace post-lockdown

Despite the relaxation of COVID-19 restrictions in the UK, vigilance remains essential when it comes to safety and hygiene in the workplace.

The vaccination programme is a clear success, yet even those who are double-vaccinated can still catch and transmit the virus.

These hygiene concerns have led some businesses and organisations to scale down their alcohol and drug screening activities for fear of breaching the 'hands, face, space' recommendations. Latest government guidance states that 'Everyone should be cautious while managing the risks as cases of COVID-19 remain high.'

So how can employers safely reinstate or introduce drug and alcohol screening without compromising COVID safety?

Suzannah Robin, a drug and alcohol safety expert at AlcoDigital, says it's important not to substitute one risk for another by ignoring the dangers that misuse of drugs and alcohol can present in the workplace.

"Research has shown that levels of drug and alcohol misuse have increased during the pandemic. More people are drinking at home, and now that pubs and clubs have



reopened, some are making up for lost time by over-indulging during nights out.

"No employer wants to be a killjoy, but at the same time they have a legal duty to protect the safety of staff by ensuring that these issues do not create risk in the workplace."

For further information about AlcoDigital, please visit: www.alcodigital.co.uk or contact the team on 020 8454 7372. Keep up to date with AlcoDigital news and events on Facebook at: www.facebook.com/alcodigital

High vis 'Super Stretch' comfort from ENGEL workwear

A range of high visibility, flexible workwear which stretches to follow the movements of the body giving maximum comfort in any work situation forms part of the comprehensive workwear collection from Danish workwear specialists ENGEL.

Called 'Safety – Super-Stretch', the wide variety of garments feature elastic fibres woven into a polyester and cotton mix; the strong yet extreme flexibility of the material allows each item of clothing to return to its original shape making it especially suitable for working in confined spaces while still retaining all the inherent advantages of design and style.

With added safety being as important to wearers as both comfort and practical durability, not only does the flexibility help reduce tiredness, the workwear also allows them to be readily seen throughout the day or night, further minimising the risk of accidents.

The 'Super-Stretch' collection, which includes high-vis 'Safety' work jackets, trousers, shorts and bib-overalls is also being offered during 2021 in an environmentally friendly, 'Sustainable-Safety' version which incorporates 50% regenerated polyester fibres made from recycled plastic bottles.



This method of yarn production with the brand name of 'REPREVE' has been developed by Unifi, one of the world's most advanced recycling centres; waterproofs, T shirts, sweatshirts and a zipped hoodie using the same material are also being added.

For more details, contact Gareth Bladen at: gbl@f-engel.com or call +44 (0)7759 520034 or visit: www.engel.eu/en & ENGEL Workwear Catalogue at: www.f-engel.com – for more information, go to: <https://youtu.be/nc2se7xKKIE>

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Forecyte Online Condition Monitoring Powered by Nidec

Forecyte is the remote vibration/temperature monitoring system manufactured by NIDEC and promoted by GES as part of our machine condition monitoring programme, used by many customers throughout UK & Ireland. The Forecyte system allows continuous vibration monitoring of any equipment over an unlimited period of time and at recording intervals determined by the user.



GES Group's 5 Pillars of Expertise

GES Group, established in 1972 as Grants Electrical Services (NI) Ltd, the company has grown and developed into GES Group, a leading Electrical and Mechanical Engineering business, now serving customers throughout Ireland, the UK and Europe. Currently employing over 80 staff, including many professionally trained and accredited Engineers, we respond quickly to industry's ever-changing demands and needs, while offering geographic coverage to many of our customers. Traditionally AC/DC motor rewind and re-manufacture specialists, we have developed our portfolio as a market leader to now provide an extensive range of technically advanced products and services.

Nidec (Leroy Somer) Electric Motors stocked in Mallusk and Newbridge (IRL)

As of the 4th January 2021, GES Group became the authorised Distributor for Nidec (Leroy-Somer) Motors Ireland. This is a very exciting time for both GES Group and Nidec as we have worked together in partnership in Northern Ireland for several years, and by expanding the distributorship to Southern Ireland, our partnership will create a more comprehensive infrastructure with enhanced experience and expertise and will provide our customers with a first class customer service experience.



Wind Turbine generator re-design

The Northern Ireland wind fleet contains 1,236 sites of 5,000kW in capacity or less, with a total capacity of 218MW. A significant number of these are around 250kW (798 with a total installed capacity of 214MW). Deploying larger capacity turbines with a reduced output capability has become extremely viable as the machines can produce the maximum 250kw at lower wind speeds making for a potentially more efficient machine. GES has been working closely with the industry in developing the generator winding design to accommodate this. Recently GES has completed machine winding conversions which have been installed at several sites across Northern Ireland and in Europe. The feedback from customers and service providers has been excellent and the machines' performance has met all expectations. With several more conversions in the pipeline, GES looks forward to further orders and developing our working relationship with others in this industry.

Telephone: 02825 656406
Email: info@ges-group.com

www.ges-group.com