

Best Practice



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QUALITY HINGES FOR
OVER 200 YEARS
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APPLIED
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Applied Maintenance
Technology
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surplex

Surplex
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Enimac
Tape Application Made Easy

Enimac
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BITO
STORAGE
SYSTEMS

BITO Storage Systems
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Editor's Notes



As we come to the end of 2023, we take a look back on all the greatest and most innovative products and services that have entered the key sectors of UK industry over the past 12 months.

From current trends and developments, to the latest new products and services launched into the marketplace, this year we have covered a vast range of topics for you that have contributed towards elevating the industry and creating a forward-thinking culture.

Coin a drink was a worthy winner of our Product Innovation Award for its Smart Fridge Technology. The company is a leading supplier of workplace coffee, vending, fresh food, micro-market and water cooler solutions, and provides a customer-centric approach to refreshment solutions.

I also want to highlight and thank our 2023 Company of the Year Award winners: BONA and Matara, and also LP Systems Ltd and Christeyns Food Hygiene who have showed a Commitment to Excellence in their practices throughout 2023.

Some more thank-yous go to: Interface Force Measurements; Schmersal; Bito; Oliver Valves; Borger; and Watlow who we have also had the pleasure of working with.

My handpicked highlights from this issue include a new tape application automation solution from Enimac, an exploration into the proven process of how UNISIG leverages experience and expertise to solve customer challenges in deep hole drilling, and a new remote monitoring solution – SEMOTA – from Interface Force Measurements Ltd.

We look forward to 2024 and what the new year brings to the industry.

Have a great Christmas and Happy New Year..

Don't forget to send us your latest Industrial news and updates and email us at: sales@bestpracticeuk.co.uk

On the Cover

**Gold & Wassall
– Quality
hinges for over
200 years**

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Trace heated 'v' tepid water

When handling hazardous materials in factories, laboratories, or other workplaces, there's a lot of factors to consider in assuring personnel safety, with much of industry still assuming that a trace heated shower will deliver tepid water this is simply not the case. Trace heating only protects the shower from freezing.

ANSI 2014 states that the water temperature delivered by safety equipment should be 'tepid'. Tepid is defined to be between 60°F (16°C) and 100°F (38°C). Many COSHH sheets state the requirement for a casualty to remain under a shower for at least 15 minutes to be washed off satisfactorily. The necessity to therefore provide 15 minutes or more of tepid water is absolutely vital as getting doused in cold water can not only cause thermal shock it will actually close the pores thus trapping the contaminants in the skin.



"The argument over the pros and cons of whether or not to install heated water safety showers has really run its course," says Janet Waine, managing director of Aqua Safety Showers International.

"It is no longer an option to give your workforce cold water safety showers direct from the mains as this will undoubtedly exacerbate injuries causing further unnecessary harm and pain. Supplying tepid water is vital and if your safety showers don't meet industry standards, you may be setting a dangerous trap for your workers and a costly liability bill for your company."

A tank shower is possibly the most effective solution to ensure tepid water is guaranteed as by the very nature of being able to store water means operationally it is not affected

by interrupted or low water pressure. Regardless of ambient or incoming water temperatures the shower will deliver a guaranteed 15 minutes of tepid water at 76 litres per minute as recommended by ANSI because the stored water can be effectively managed.

More sophisticated methods are now available to enable the tank to be heated but to include a visual water temperature display, water temperature alarm and power failure alarm.

Aqua Safety Showers International Ltd is offering no obligation help and advice for companies both large and small on how to operate within the latest ANSI Z358.1-2014 recommendations.

Please visit: www.aqua-safety.com for contact details and more information.



AQUA Safety Showers, experts in our field

When it comes to the safety of workers out in the field, we are the people to contact when it comes to emergency safety showers and eye wash stations. It isn't just about the end product. We will recommend and advise you on the best safety shower solution to suit your requirement. As there is no one-fits-all approach we have the flexibility to adapt or modify our units in our manufacturing facility in Great Britain.

Our range of emergency products and equipment offer protection against serious injury and are all built to exceed



ANSI/EN safety standards.

While we hope there is never the need for your safety showers to be used, having one is imperative on site should be working around harmful substances.

Our goal is to create essential pieces of equipment that become the standard in every laboratory and facility that uses harmful substances.

Are you properly prepared in case of an emergency?

Aqua Safety Showers can keep your workers safe with our wide range of products and units available. For a bespoke quotation or free site survey, please get in touch with our dedicated sales team today.

Our highflyer is our TS1500 unit (<https://aqua-safety.com/product/1500-tank-shower/>). This unit guarantees over 15 minutes of tepid water without the need for a mains water supply. It can be situated indoors or outdoors and in either



hot or cold climates. Temperatures are maintained around 18-20°C when heaters (and chillers) are fitted.

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Our proven process: how UNISIG leverages experience & expertise to solve customer challenges



For over 40 years, we've helped our customers achieve success in deep hole drilling, providing them with the machines, automation and support they need to be competitive and profitable.

We have found that the initial energy we and our customers spend at the beginning of a quoting process pays off throughout the entire project, from inception to installation. We take a systemised approach not only during this critical phase but also throughout the entire sales process. This ensures there are no surprises and that our customers know exactly what they can expect when starting discussions with UNISIG about their gundrilling and deep hole drilling needs.

This is our approach at UNISIG:

1. We listen to our customers, ask questions and understand what they need.

This may seem obvious, but often the temptation is there to just skip to a quote because we think we know what is needed after a brief discussion. Sometimes that is true, when the application is straightforward and familiar, or it is something we have a packaged solution for. We always try to make the quoting process quick and efficient, but there are times when the application deserves a more in-depth conversation. Our salespeople and engineers listen very carefully and often pick up on small details – a specific tolerance, material condition, process requirement or a future need for flexibility – that may change our recommendations.

When it makes sense, our experienced sales team or engineers will visit a customer to see what is needed firsthand. Whether a site visit or just a virtual meeting, this initial investment of time to clarify the need saves the customer money and provides them a truly valuable solution.



2. We first identify a standard solution from our product line that can be applied at the lowest cost and shortest delivery possible.

At UNISIG, our product development mindset is to systemise solutions from our experience in many different industries, make them automation ready and embed application flexibility whenever possible. We invest millions of dollars annually in our product line and related spare parts, giving us a strong starting point for new applications. Our standard product line encompasses much more than machines, including standard automation, workholding, accessories and tooling that we can offer as part of the solution.

Once we have identified a standard machine as a starting point, our engineers seek out smart, practical ways to meet the customer's application needs. The goal is to innovate within the machining operation planning, work holding or automation, as opposed to engineering a completely special solution without first exhausting opportunities to solve problems with standard products.

For our customers, this approach provides them a reliable, standard machine that can be used for many years and that has the built-in flexibility for easy re-tooling to adapt to future needs. For us, initially working within the boundaries of our catalogue cultivates new ideas that can then be applied to improve our standard products as well as help us direct future research and development budgets.

3. If a standard solution isn't available, we consider a customised solution and we stand behind it.

UNISIG is very good at building customised machines, and we do so often. Once we and our customers agree that a special solution is needed, we move forward with a great deal of confidence and experience. We start by evaluating how we might approach the design using standard modules or proven concepts, thus eliminating long debug cycles and/or high costs. Then we use our mechanical and electrical engineering disciplines to virtually test the new machine before we build it.

One of the key reasons our customers are confident moving forward with a UNISIG custom machine is that they know we will stand behind it and that we have substantial capabilities to ensure it always exceeds their production expectations. We approach these special projects with the mindset that a custom machine will be used for decades in production, which is why we provide the same documentation and long-term technical support for all our machines whether standard or custom.

4. If a commodity solution is readily available, we recommend that rather than upsell a machine the customer doesn't need.

We build machines that can gundrill or BTA drill deep holes that are impossible to drill on machining centres. Even if it may be possible to drill some deep holes on a CNC machining centre, our machines have the power, speed, dimensional accuracy, spindle density, coolant systems and process control that will improve productivity, tool life and reliability.

Typically, though, when a customer comes to UNISIG with a specific part need, at that point they've most likely already struggled with a conventional machine and realised that a deep hole drilling machine is obviously the way to go.

However, our team knows how to identify whether or not an application would truly benefit from a UNISIG solution. When it wouldn't, we will suggest viable alternatives. It's not that we don't want to sell a machine. But the fact is that our experience has shown that at some point the alternative-solution direction becomes obvious, and we want to make that apparent early on in the process so as to avoid wasting a lot of our customer's time.

Our customers expect the best from us, and we believe that our proven process ensures we never disappoint. Our goal is to leverage our core values to serve our customers as best we can and build strong, productive relationships for years to come.

For more information:
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10 challenges for auction houses in the digital age



The management team of Surplex keeps a close eye on the future. From left to right: Uli Stalter, Ghislaine Duijmelings, and Michael Werker (© Surplex)

Auction houses have a tradition spanning several centuries. In recent decades, they have undergone a digital transformation, expanding their reach globally. However, this has also brought numerous challenges, particularly in meeting the ever-growing demands and needs of customers.

What do customers expect from an auction house? Surplex asked itself the same question and conducted a survey among its customers. Surplex is one of the leading industrial auction houses in Europe and has been active in the digital trade of used machinery and industrial equipment worldwide through its platform, Surplex.com, since 1999. In order to gain a deeper understanding of its global customers and derive the challenges facing auction houses in the digital age, Surplex conducted a survey and received feedback from nearly 400 participants. The results represent the diverse clientele on the used machinery market in Europe: Especially small and medium-sized enterprises from countries such as Germany, Italy, and Spain as well as from the metal and wood processing, construction and agriculture sectors gave their assessments.

Challenge 1: Local markets

In the times before digitalisation, trade was mostly local. While businesses can now operate globally, there are still significant differences between countries in terms of market practices and preferences. One possible solution is the establishment of local branches and the employment of market experts. The experienced Country Managers at Surplex work in offices across 16 European countries. They are familiar with the national peculiarities and build trust through personal customer interactions.

Challenge 2: Simplicity in the bidding process

In the traditional auction house, the gavel marked the winning bid, and a simple hand gesture could place a bid. This straightforward and direct experience is

expected in the digital age. A convoluted or non-transparent bidding process discourages potential buyers.

Challenge 3: Supply and bandwidth

Buyers appreciate an extensive selection and a wide range of items offered at auctions. However, auction houses often face limitations in the variety of items they can offer due to their reliance on sellers. Where there are no sellers, there can be no auctions. Because of this dependency, many auction houses place significant emphasis on targeting potential sellers and focusing on building brand awareness.

Challenge 4: Linguistic diversity

Digitalisation has globalised the second-hand market, making linguistic diversity a central challenge for auction houses. Not every customer speaks English. In response, Surplex.com offers its platform in 18 languages. And the company employs staff from 20 different nations to ensure effective customer support worldwide.

Challenge 5: Accessibility and customer service

In a globalised world where buyers and sellers come from different time zones, round-the-clock accessibility is crucial. Through 24/7 customer support and the use of chatbots and other modern technologies, customer queries can be answered in real-time despite time zone differences. Moreover, multilingualism and helpfulness in customer service are highly valued as they form an essential basis for trust and customer loyalty.

Challenge 6: Valuation of items and technical information

In the auction industry, the accurate valuation of objects and items is of great importance. This ensures that both sellers and buyers engage in fair transactions. Especially for technical items, providing detailed and precise information in text, images, and videos is indispensable to avoid misunderstandings. However, this can be challenging as determining the correct value and providing comprehensive

technical data require expert knowledge.

Challenge 7: Virtual viewing

Inspecting items before a purchase often presents a logistical challenge as it typically involves a lengthy journey to the physical location. Virtual 3D viewings offer an innovative solution to this issue. A 3D model is created by capturing the auction item or its surroundings from various angles through photography or filming. Specialised software is then used to combine these images into a three-dimensional representation. This allows potential buyers to gain a detailed view without needing to be physically present.

Challenge 8: Disassembly, transport and customs

International customers expand the reach of auction houses, potentially leading to higher revenues. However, with this global presence comes challenges such as the disassembly of items, international shipping, and compliance with customs regulations. Buyers expect support in these areas. This expanded service transforms the auction house from a mere sales platform into a service provider or even an intermediary.

Challenge 9: Mobile use

B2B auctions have traditionally been conservative, primarily conducted through desktop platforms. In 2023, approximately three-quarters of bids on Surplex were made by desktop users. Nevertheless, mobile usage is gaining importance. To adapt to changing user habits, auction houses must expand their portfolios, such as through mobile apps. These apps can revolutionise the auction experience by sending notifications about upcoming auctions or providing mobile bidding features, enabling buyers to participate flexibly and independently of their location. Surplex has also made relevant adjustments, including a September app relaunch and the introduction of a WhatsApp newsletter, in response to changing user habits.

Challenge 10: Technological future prospects

The digital revolution has already fundamentally transformed auction houses, but the transformation is far from complete. Ongoing technological advancements, such as Virtual Reality (VR) and Augmented Reality (AR), could make virtual viewings even more realistic in the future. Artificial Intelligence (AI) could further automate the appraisal process and offer personalised recommendations to bidders based on their preferences and past bids. With a focus on customer satisfaction, auction houses of the future are likely to be not only places of commerce but also technological pioneers.



The world of online auctions: Opportunities and challenges in the digital age (© Mr. M. Nobody/Shutterstock.com)

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Enimac releases NEW tape application automation solution



Enimac
Tape Application Made Easy

Enimac was founded in 2013 by a tape converter in northern Italy, Biemme Adesivi.

The synergy created gave clients in Italy access not only to tape, but to machines, better known as tape application solutions. Over the years, Enimac has slowly expanded this philosophy worldwide by partnering with tape companies and tape converters to add



its automation to their tapes, offering their clients the same complete tape and automation solution.

Today, Enimac's headquarters are situated in Cornaredo on the outskirts

of Milan in Italy, where the company continues its work to design, develop, and manufacture solutions for applying adhesive tape.

Enimac's extensive history has made them a household name in the industry and is why the company is trusted by many long-term clients. "We started out by making table-top and standalone tape application machines for the printing and packing industries. As these machines can be used to apply tape to any flat substrate up to 15mm thick and 1.6m wide, we had requests from other industries who used the machine to apply tapes to aluminium and PVC sheets. Additional industries took interest

requiring other types of customised solutions, and we have since made 2-axis application solutions used in EV battery production in the automotive and ship

building industries as well as 3-axis and multi-axis solutions for the white goods and furniture industries. As robots and cobots are found in industries everywhere, we've developed an 'end-of-arm' applicator to integrate onto these, with solutions used in the automotive, white goods, and other industries. Of course, we customise applicators to integrate into production lines or other machines as well," stated Martin Buerger, company vice president.

Enimac has recently completed some modules with more axes, including the XT Multicartesian that consists of 3 rows and 2-axis linear actuators with applicators capable of applying tape and rewinding the liner. Martin explains XT Multicartesian in more detail, "This module adds a taping solution to a much larger production line. The applicators adjust for the thickness of the panel and move left and right to apply the tape where needed. A panel comes down the production line, passes through the taping module where tape is applied removing the liner with the panel coming out ready for the next assembly process. This applicator can apply tape from pancake rolls or, by integrating a spool unwinder, also from traverse wound spools."

This type of solution has been sold to previous furniture manufacturing companies who apply foam tapes to wood panels, but Enimac ensures the solution can also work with similar flat panels using different tapes in other industries.

Enimac has been keen to showcase its new solutions to the tape industry, as well as explore, learn and gather insight on all the latest innovations and technologies available to the tape and



adhesive industry. "We've just come back from the Tape & Functional Film Expo Europe tradeshow in Amsterdam this March 2023, where we found new solutions, new partners, and possible new projects. We were also at the Adhesives and Bonding Expo Europe in Stuttgart back in

November 2022 where we found a new distributor and generated interest in a new industry for us, foams. At both shows we had our X-treme Light with a 25mm, 50mm and 100mm applicator and our UR10e cobot fitted with an Enimac XT Compact 60mm RW applicator, which applied tape to different substrates also removing the tape's liner. In Amsterdam, we also brought a 2-axis solution, applying tape with or without liner on panels and profiles of different materials," said Martin.

If you're interested in finding out more on Enimac's products and solutions then, visit their website: www.enimac.it or follow them on LinkedIn for news of future shows: www.linkedin.com/company/enimac





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Lascar Electronics' air quality product range: enhancing environmental monitoring & safety

In today's rapidly changing world, the importance of monitoring and improving air quality cannot be overstated. Lascar Electronics, a leading provider of data logging and monitoring solutions, offers a comprehensive air quality product range that empowers organisations to proactively address environmental concerns. With cutting-edge technology and a commitment to excellence, Lascar Electronics continues to deliver innovative solutions for efficient and accurate air quality monitoring.



We understand that air quality monitoring needs vary across industries and sectors. That's why our product range caters to diverse applications, from indoor environments such as offices, schools, and healthcare facilities to outdoor settings like industrial sites and construction zones. By offering a wide array of devices, Lascar Electronics enables organisations to effectively monitor air quality parameters and take appropriate actions to ensure the well-being of their employees and the surrounding community.

Our devices are equipped with state-of-the-art sensors capable of accurately measuring key parameters such as particulate matter (PM2.5 and PM10), carbon dioxide (CO₂) levels, volatile organic compounds (VOCs), temperature, humidity, & air pressure. Our products undergo rigorous calibration processes to guarantee reliable and consistent performance, providing users with peace of mind knowing that their air quality data is accurate and trustworthy.

Our air quality monitors enable real-time monitoring and provide instant alerts. This feature allows users to promptly respond to any deviations from acceptable air quality levels. Whether it's a sudden increase in particulate matter concentration or a rise in CO₂ levels beyond the recommended threshold, the monitors alert users via visual indicators, audible alarms, or through connected systems such as mobile apps or Cloud-based platforms. This immediate notification empowers organisations to take swift corrective measures, ensuring a healthy and safe environment for all.

Lascar Electronics understands that effective air quality management requires comprehensive data analysis. Our air quality product range seamlessly integrates with data logging platforms and software, enabling organisations to collect, store, and analyse air quality data over time. This integration allows

for the identification of patterns, trends, and potential sources of air pollution. Armed with this knowledge, your organisations can make informed decisions, implement targeted interventions, and continuously improve air quality standards.

Lascar Electronics' air quality product range offers a comprehensive and reliable solution for environmental monitoring and safety. By providing precision instruments, real-time alerts, and seamless data integration, Lascar Electronics empowers organisations to proactively address air quality concerns across various settings. As the importance of air quality management continues to grow, Lascar Electronics remains at the forefront, delivering innovative products that prioritise the health and well-being of individuals and communities worldwide.

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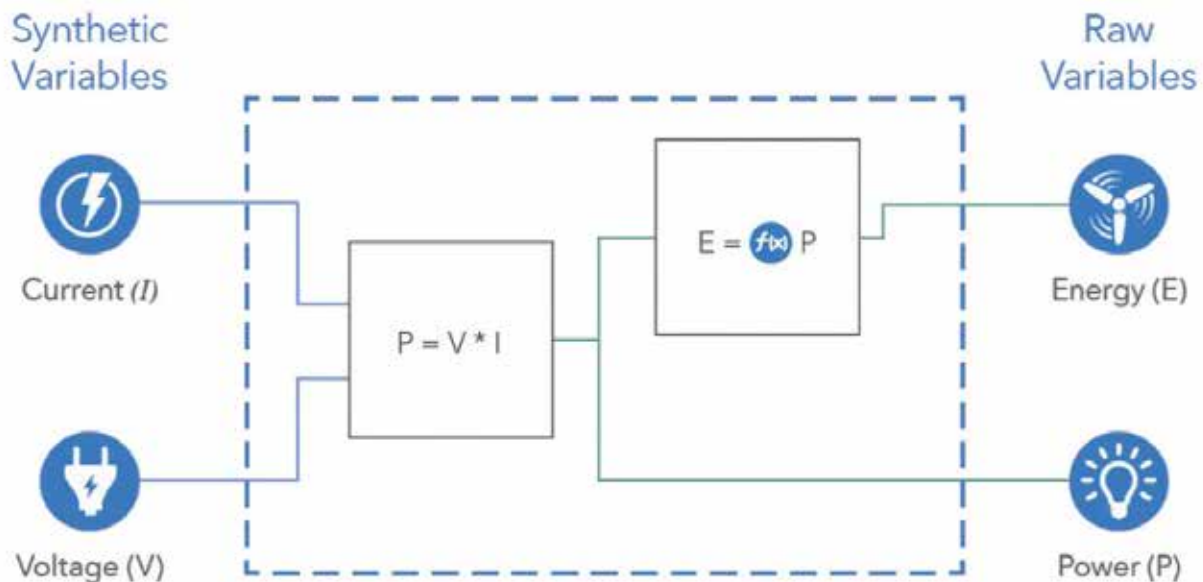
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SEMOTA:

sense, monitor, trigger, act



The new remote monitoring solution from interface force

SEMOTA is a hardware and software solution with a web-based application that enables the remote monitoring of any load cell, force, torque or pressure sensor, using our Wi-Fi enabled hardware.

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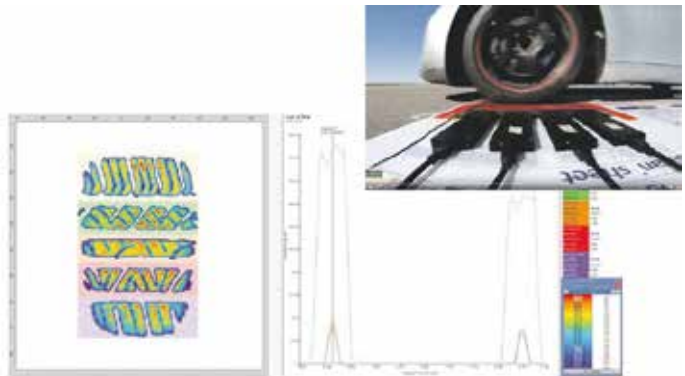




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Interface Force is an internationally recognised brand and decades of experience have gone into making Interface manufactured load cells the benchmark for thousands of users around the world, and Interface Force Measurements was established in 1996 by Neil Johnstone.

Based in Crowthorn, Berkshire, Interface Force distributes to the whole of the UK & Ireland, but also overseas, especially into Turkey, Greece and the Middle East. The company is a primary distributor for Load Cells manufactured by Arizona-based Interface Inc, and it also supplies their Torque Transducers, associated electronics, multi-access Load Cells and the XSensor Pressure Mapping systems.

The global Interface Inc. is represented by a large network of distributors outside of the US, and they have requested products that are designed and manufactured in metric, with the precision and accuracy of all Interface products. These products are designed for an international buyer and user, and all specifications are in metric specs, a global standard for force measurement products.

Interface Force work mainly with aerospace, automotive, and motorsport companies, and Business Development Manager, Tony Rokins, told us, "We work closely with companies which are undertaking research into product development, and so this includes universities and also medical companies who need load cells for weighing saline bags – we have a very wide and varied client portfolio."

In this crowded industry, Interface load cells and torque sensors have a hard-won reputation for reliable, accurate and repeatable test results. The range of pressure sensors and pressure mapping systems from industry leaders GP50 & XSensor back this reputation.

Tony continued, "With regards to force measurement, our load cells are preferred by aerospace companies because they are highly accurate, and the results are very repeatable. Also, the devices themselves are extremely reliable and so they are looked on very favourably by both automotive and aerospace manufacturers in particular."

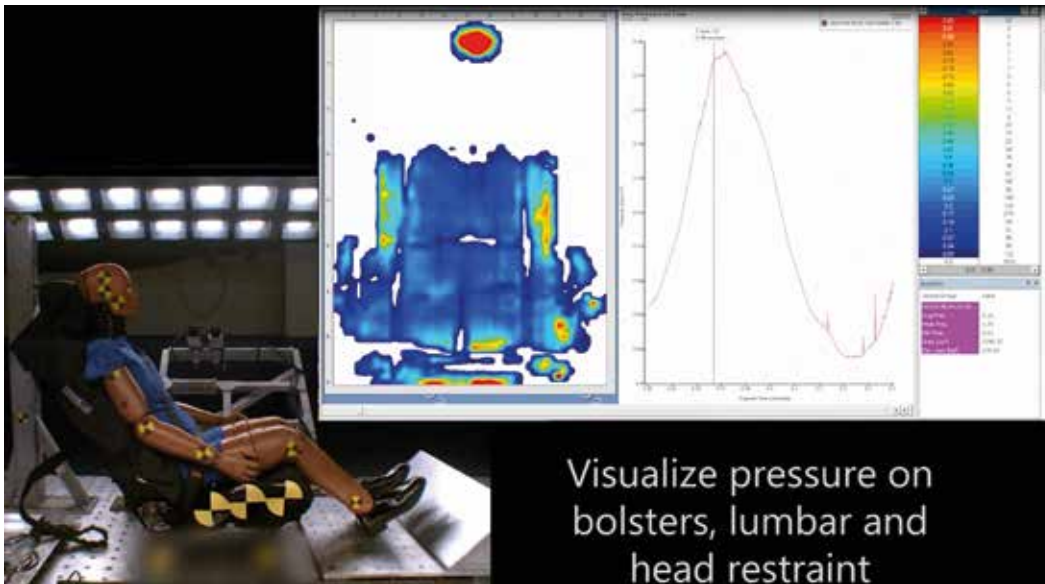
Interface Force is currently re-launching its XSensor High Speed Pressure Mapping System – the

company offers a range of pressure mapping systems that can be applied to anything from impact testing to pressure testing tires, runways, beds, seats and much more. The XSensor system is the first system design to allow product designers and safety testing engineers to see, record and evaluate the distribution of force from high-speed impacts on safety equipment such as helmets and body armour.





force or torque



The system is particularly popular with automotive and aerospace seating manufacturers as evaluating the performance of helmets and other protective equipment designed to prevent injury requires detailed understanding of the pressure distribution on the body surface during dynamic impacts. Xsensor's high speed HS Impact system combined with the thin conformable sensors allows customers to accurately measure those pressures and evaluate how different design configurations affect pressure distribution on impact.

In addition to this, the system is also used by manufacturers of office seating, companies that develop seating for the home, and bed manufacturers.

In spite of its success in the industry, Interface Force is very much looking to future development. Tony informed us, "We are building new Applications which are based around renewable energy, and we are also developing Cloud-based, Wifi and Bluetooth data acquisitions by making our devices

wireless. This would mean customers being able to collect data from anywhere in the world via an App."

This ever-growing comprehensive range of indicators, signal amplifiers, data loggers and wireless transmitters has been designed to complement the extensive range of load cells, torque transducers and pressure sensors, and the range has developed to ensure that customers have access to the most accurate, up-to-date, and cost-effective devices available.

Another new development is in the Airport environment, where Interface Force have begun to provide wireless monitoring of equipment on, for example, luggage carousels, and this product among many others have helped Interface Force to have a very successful past 12 months especially.

Interface Force's product reliability is second to none and all of its product lines have to match this standard before ever being recommended to customers. Interface is

the world's trusted leader in technology, design and manufacturing of force measurement solutions. Its clients include a 'who's who' of so many industries, and the company's engineers around the world are empowered to create high-level tools and solutions that deliver consistent, high-quality performance.

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BITO Storage Systems

Edward Hutchison, Managing Director, BITO Storage Systems, answers questions about the company

How have the past 12 months been for the company?

BITO has maintained a consistent growth trend over the years and this continued during 2023. All of BITO's routes to market are performing well, the bito.com web shop enables customers to order standard items, many from stock. A regionally based team of designers travel the country to understand clients' needs and pain points in order to design a solution that helps improve their business. Finally, a national key accounts team work on the larger scale projects, often with systems integrators. We are seeing growth in a number of sectors including food & beverage, e-commerce, fashion retail, and pharmaceutical.

What were the biggest challenges the company faced in 2023, and how is the company addressing these challenges going forward?

Many companies today are challenged by increasing order volumes, labour availability and cost pressures. Companies know their business best and often have their own great ideas for solutions to their particular issues. Turning a client's ideas into reality requires a considerable amount of expertise. BITO works with clients on projects to turn their ideas into reality through innovative, high quality and reliable solutions that address these challenges and can also contribute to the increasingly important task of helping companies to demonstrate their sustainability credentials. Many projects involve designing bespoke solutions to successfully overcome a specific operational challenge.



How has the industry evolved over the past 12 months and how did you adapt?

Consumer expectations for greater choice and shorter lead times are driving the need to store a broader range of SKUs as well as ensure rapid and flexible order fulfilment. We are seeing a particular trend towards lower cost storage and order picking solutions to help meet such requirements.

These might include multi-tier shelving, adapting pallet racking for picking small items, installing live storage flow shelves to give greater pick face density, investing in bins and containers for efficient storage and delivery, and adopting technology that allows staff to spend their time more productively picking orders.



Pallet and carton live storage systems are an efficient means for providing dense storage for rapid, efficient and accurate order picking. Compared with fully automated systems and traditional racking, these 'mechanical' solutions strike the right balance between investment, storage density and speed for fast moving goods picked on a First In, First Out (FIFO) basis. Adding simple automation technologies such as pick-to-light and voice picking can further improve accuracy and throughput speed.

What are the current goals that the company is focused on, and how is your team working to support hitting said goals in 2024?

To support the growth in clients and revenue, we are increasing the size of our sales and fulfilment teams. Importantly, capacity has also increased with the completion of additional pallet racking manufacturing capability which will enable even better service & lead times.

To ensure growing order volumes are fulfilled, BITO is bringing more full load deliveries into its Nuneaton hub, both for restocking the warehouse and to cross dock customer orders. Crossdocking allows BITO to, for example, send several incoming pallets of plastic containers direct to a customer's site on local transport. In addition to reducing paperwork and speeding delivery, the customer is provided with a more precise delivery slot, making it easier for them to book in their delivery.

Through 2024 and beyond we are likely to see more companies wishing to deal with suppliers that can demonstrate sustainable practices. It is increasingly vital that companies cut their emissions

and demonstrate their environmental credentials. This is particularly important when it comes to complying with the requirements of the procurement departments of customers seeking to minimise their own carbon footprint.

BITO, an industrial company that manufactures durables from raw materials in our plant in Meisenheim, Germany, has demonstrated how manufacturers can take measures to reduce their CO₂ emissions and thus actively minimise their environmental impact. We are proud of our quality products, which are designed to last and have positive contribution to sustainability.

What gets you most excited about the company's future?

It has become more and more clear that an efficient and cost effective logistics strategy is an important part of a company's success. BITO products are an integral part of a logistics strategy, so by helping to enable a client's success also supports our continued success – quite an exciting concept.

How do you see this company evolving over the next five years?

BITO has been in the UK since 1999 and since then, the company has grown and evolved in terms of capacity and complexity of solution supplied to the market. As client requirements change over the next five years, BITO will continue to evolve to meet those requirements.

We see companies investing in intralogistics systems that help fulfil orders seamlessly. They are seeking systems that are efficient, reliable and have the flexibility to adapt easily to changing business circumstances and to meet peaks in demand.

Anything else you would like to add?

Clients requiring innovative solutions will need a supplier with experience and expertise. They also need equipment of a quality they can depend on and we pride ourselves that BITO equipment provides that quality. As a company that can design and manufacture racking and shelving as well as compatible bins and containers means that equipment provides storage and picking solutions that ensure the optimal use of space and efficiency of process.

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Machine Film Savings Calculator

Springpack, a packaging specialist, has introduced an online Machine Film Savings Calculator for their nano machine film, Armour Wrap. This calculator allows businesses to assess the potential cost savings and efficiency improvements they can achieve by using Armour Wrap compared to their current machine film.

By inputting their current film specifications into the user-friendly online tool, users can compare and analyse the benefits of Armour Wrap based on industry standards. It's important to note that while the calculations provided by the calculator are reliable, actual savings may vary depending on individual usage patterns.

Armour Wrap stands out due to its unique features and advantages. The film is constructed with multiple layers, providing exceptional strength and load stability, surpassing other high-performance and conventional films. This strength reduces pallet damages, breakages, and movement during transit, ensuring secure packaging.

Switching to Armour Wrap also offers significant cost savings. The film's strength allows for less weight of film to secure a pallet, resulting in less plastic waste and monetary savings. Additionally, each roll of Armour Wrap can wrap around 100 pallets, compared to 70 pallets with conventional films, maximising the packaging output. The film also uses 1kg cardboard cores instead of 1.8kg cores, reducing overall cardboard waste.

Armour Wrap's multi-layer nanotechnology provides high puncture and tear resistance, making it ideal for wrapping pallets with sharp edges. Its increased stretch capability of up to 335% outperforms conventional films, minimising wastage and delivering optimal performance.

Consistency is key with Armour Wrap, as it is manufactured using top-grade materials and advanced machinery, ensuring reliable and durable performance. The film's raw materials are sourced consistently, eliminating variations in quality between rolls.

Using Armour Wrap also enhances warehouse productivity and efficiency. With more meterage of film per roll, there are fewer roll changes required, reducing film breakages and line stoppages, resulting in a more streamlined workforce.

Springpack sets itself apart by offering customisable solutions tailored to each business' unique requirements. Their team of packaging experts provides guidance throughout the process, ensuring businesses find the perfect packaging solution aligned with their goals.

To begin optimising packaging processes and reducing costs, businesses can access the Machine Film Savings Calculator by scanning the QR code or visiting: <https://springpack.co.uk/machine-film-pallet-wrap-savings-calculator>. By exploring the potential of Armour Wrap, businesses can take the first step towards efficient and cost-effective packaging solutions.

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THE WORLD'S SMALLEST ELECTRONIC SOLENOID INTERLOCK

With dimensions of just 119.5 x 40 x 20 mm, the AZM40 by Schmersal is the smallest electronic solenoid interlock in the world. This makes it especially suitable for small safety doors and flaps. Despite its compact size it has an amazing 2000 Newton interlocking force and 25 Newton latching force.

Thanks to the 180° angle flexibility of the actuator, it can approach the AZM40 on a stepless basis, making the interlock also suitable for flaps which do not close at 90° or those that open upwards to a 45° angle. This means the angle flexibility helps the interlock easily fit into compact spaces and difficult to access areas.

In the event of a power cut, the AZM40 retains the current position. This ensures safe operation, whatever the status of the machine. Even if there are hazardous run-on movements, the safety door remains locked in the event of a power failure. Another advantage of the bistable principle is the consistently low energy consumption, as the interlock only requires power when the door is to be locked or unlocked.



Relaunch of the tec.nicum website

New website for services relating to machine safety

tec.nicum, the service division of the Schmersal Group, is pleased to announce that its new website has been launched today. The new website features the new, overhauled corporate design of tec.nicum. The website is now characterised by a clearer and more user-friendly structure and can be reached as before at www.technikum.com

The website provides an overview of all services that tec.nicum provides in terms of machinery safety. tec.nicum's range of services encompasses four pillars, which can be ordered as either individual modules or all-round packages:

- ▲ tec.nicum academy – knowledge sharing
- ▲ tec.nicum consulting – consulting services
- ▲ tec.nicum engineering – conception of safety solutions
- ▲ tec.nicum integration – practical implementation

The tec.nicum website includes current information on the comprehensive training and seminar programme of the tec.nicum academy, which also includes the new TÜV-certified qualification 'Machinery CE Certified Expert'. The seminar calendar provides an at-a-glance overview of all topics and dates, and events can be booked online through the website.

The MRL News magazine, which offers a wealth of well-founded background information on the subject of machinery safety, can also be accessed free of charge via the tec.nicum website,



either as an e-paper or as a downloadable PDF.

"Since its foundation seven years ago, tec.nicum has successfully evolved as a service provider. In the meantime, our organisation now operates domestically and at different locations internationally. Our website ensure the best possible accessibility for our services," explains Siegfried Wolf, Director of tec.nicum.

Contact: Steve Watkins, Marketing & Business Development
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Shows what's possible: Schmersal's IIoT demonstrator at SPS 2023

At SPS – Smart Production Solutions – 2023, the Schmersal Group demonstrated how the Industrial Internet of Things (IIoT) can be implemented at field level by showcasing a range of new developments in automation technology and machine safety. The innovative components and systems from Schmersal enable a comprehensive machine communication and a holistic integration ranging from the field level all the way to the Cloud.



To make this evident, Schmersal exhibited an IIoT demonstrator: The demonstrator features a conveyor belt with two compact 3D ToF cameras installed above it. The IIoT demonstrator from Schmersal is used to illustrate how the data and information collected by the cameras, the PROTECT-PSC1 safety controller and a PLC, can be forwarded to an edge gateway via OPC UA and, if needed, to a Cloud infrastructure – for instance, as a starting point in determining production-related key performance indicators.

Novelty at SPS: AM-T100 ToF camera
 An integral part of the IIoT demonstrator is the AM-T100 3D camera, which Schmersal presented for the first time

at the beginning of this year. Here, the integrated Sony DepthSense™ sensor uses time-of-flight (ToF) technology, i.e. runtime measurement of emitted light pulses in the infrared range (850nm), that are reflected by the objects being captured. This allows for creating a 3D image of the scene at high speed that is accurate to the millimetre and that is available as a point cloud. In this way, the camera can determine the position and the dimensions of an object or detect the fill level of a container, for example.

High-performance fault diagnosis
 Schmersal also presented a new gateway for the acquisition of diagnostic data at the SPS, which is equipped with a web server and a microSD memory card.

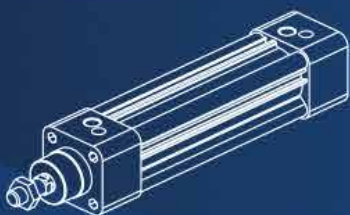
This allows users to analyse event logs live via the web interface and read out the entire diagnostic data from all connected safety switches in plain text in the browser. The diagnostic data can be transmitted to the machine controller via various fieldbus protocols. The new SDG fieldbus gateway will be of particular benefit to users in terms of high performance fault diagnosis.

Safety Fieldbox – now also compatible with EtherNet/IP CIP Safety and EtherCAT/FSoE

On the safety-related level, the successfully introduced Safety Fieldbox ensures uncomplicated data transfer to a safety controller through its simple and fail-safe connection of up to eight safety switching devices of different types. At SPS, Schmersal showcased two new variants of the product: As of now, the box can not only be integrated into systems with PROFINET/PROFIsafe as before, but will also be available for the EtherNet/IP with CIP Safety and EtherCAT with FSoE bus systems.

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Based in Nuneaton, at Attleborough Fields Industrial Estate, the company provides an unrivalled product range. These include: laser cutting machines, Easybender automated bending & processing systems & a full range of plastic fabrication equipment. The dedicated Sales & Engineering team offer a fully comprehensive solution package from: initial site survey, full installation, user training, aftersales care, servicing, maintenance & breakdown cover.

Firstly, automation solutions in plastic fabrication include the cutting-edge, renowned Cutlite Penta systems. These are designed for: cut plastics, metal and die boards across the paper industry. Over the last decade, Cutlite Penta has partnered with Ot-Las: a leading Italian brand for the streamlined development of the CO₂ laser galvanometers for artisan engraving and decoration.



The LTS Cutlite Penta (CP) RF systems are perfect for a diverse range of applications from: plastics cutting, wood and textile machining. The compact dimensions can even cut through metal, utilising a capacitive head, making this an exceptionally versatile laser machine. Capable of precision-cutting dimensions, due to CO₂ laser-radio frequency compatibility, this robust laser machinery offers accurate finishings every time.

The PLUS Cutlite Penta (CP) RF systems however, are the perfect choice for PMMA+ Acrylic laser cutting. The in-built CO₂ laser radio frequency sources optimise premium laser cutting. The engineered versatility allows this popular machine to be used for

plastics and metal, providing a one-stop shop across differing applications. The capacitive head can be manoeuvred to the cutting head, in cases of metal laser cutting applications. The magnetic linear motors function on board the axes, propel dual cutting head acceleration up to 2.5g and speeds of up to 140 metres per minute.

The PLUS CP RF is the industry's choice for larger volumes of quality manufacturing in plastics cutting, providing a cost-effective streamlined process. Secondly, LP Systems offer leading die-making machines for streamlined automated solutions, from the renowned Cutlite Penta to the SDS Korea.

The LTF (CP) system is the perfect solution for diemakers and in-house die shops, with potential E.En. radio frequency sources offering powers from 750W to 850W, in addition to the LTF system cutting head. This model works quickly, completing finished die boards in record times, due to the cutting head and optional marking head installations. The LP Systems engineers can install the model quickly, allowing

production the following day and the integrated control panel, electrical unit and laser source are all designed for streamlined operations.

Lastly, LP Systems can provide cutting-edge sign-making machines, providing fully automated sign-making operations from hole punching to fast bending. The revolutionary Channel Bender SXP letter system for channel letter forming has all the properties to make traditional face-lit through to hybrid channel letter forming. Producing a timeless, beautiful finish, the letters can be almost any height and from 25.4mm to 203.2mm deep. The fully height-adjustable hydraulic hole punching unit removes manual drilling of 6.35mm drain holes and 3.175mm pilot holes for rivets and screws.

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Swivel joints will allow the movement on a slowly rotating drum or remove the damaging effect of twisting on hoses. The photo attached is of a 3" hardened carbon steel unit with specific end connections for use in the oil and gas drilling. Please visit our Previous Projects page on our website for more examples of our swivels in use.

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Measurably better Chemiluminescence analysers

Nitrogen Oxides (NO_x) are chief villains in the battle for climate control; belonging to a family of gases that are formed during the combustion of fossil fuels. When Nitric Oxide (NO) reacts with other gases, for example with Ozone, it forms Nitrogen Dioxide (NO₂), which is considered highly toxic to human health.

The reaction with Ozone is also an indicator for why Nitric Oxide (NO) is considered a climate active gas, that interacts with Earth's protective Ozone layer. Human exposure to high levels of Nitrogen Dioxide (NO₂), but also Nitric Oxide (NO) can cause airway inflammation, susceptibility to allergens and exacerbate pre-existing lung or heart conditions.

Nitric Oxide (NO) is a biological marker of inflammation and is also produced by cells involved in the inflammation process. It is typically used to diagnose allergic/eosinophilic asthma. Legal ambient air limit value (annual average value for the European Union) for Nitrogen Dioxide (NO₂) concentrations is 40µg/m³. Maximum occupational exposure limit is 950µg/m³. Indoor air limit value for maximum exposure is 250µg/m³ but the precautionary value 80µg/m³. The WHO defines 40µg/m³ as precaution limit. (www.baua.de/EN/Service/)

[Legislative-texts-and-technical-rules/Rules/TRGS/TRGS.html](#)

The Department for Environment, Food & Rural affairs (DEFRA) has also reported soil chemistry and biodiversity changes across many UK habitats, through gas (dry deposition) and precipitation (wet deposition.) Anthropogenic Nitrogen Oxides (NO_x) influence tropospheric chemistry, which directly cause photochemical smog and concentrated levels of urban ozone.

ECO PHYSICS AG offer world-leading measurements of Nitrogen Oxide (NO_x), through trailblazing chemiluminescence analysers. These innovative analytical solutions are unprecedented in speed and sensitivity, with a cutting-edge range of sensitivities from 1% down to 1 ppt (part per trillion). Chemiluminescence Analysers use a unique thermally-stabilised semiconductor photodiode, to measure light intensity produced by reactions between Nitric Oxide (NO) with Ozone (O₃). The light intensity correlates to the proportion of Nitric Oxide (NO_x) converted to Nitrogen Dioxide (NO₂) by the reaction.

We caught up with Dr Grischa Peter Feuersänger, Head of Sales & Marketing, to find out



perfected analytical technique in speed and sensitivity. Today we are proud to claim world leadership in the fastest and most sensitive chemiluminescence analysers and the broadest commercially available range."

This Swiss-based innovative company has EN ISO 9001: 2015 quality management and EN ISO 13485: 2016 medical devices-compliance, offering quality assurance to customers across many industries. There is a new range of gas analysers and boxed set gas analysers available: nCLD AL, nCLD AL2, nCLD AL3/8555, nCLD EL and nCLD EL2.

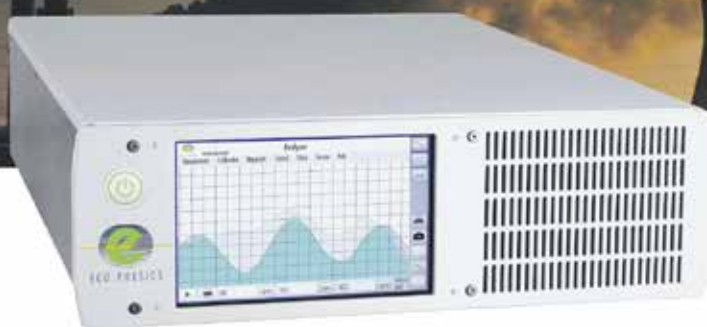
more about ECO PHYSICS, "ECO PHYSICS was founded in 1990 through a management buy-out, by co-founders Dr Matthias Kutter and Dr Werner Moser and we now operate from our base in Duernten, Switzerland. We offer innovative analytical solutions for measurement tasks in the fields of environment, health and process control. With our interdisciplinary research and development team, we are delivering customer-oriented and tailor-made products and services. The initial know-how focus was centred on the principle of the chemiluminescence, thus developing and manufacturing analysers for the ambient pollution and emissions. We have

The nCLD AL3/8555 is a next-generational modular gas analyser, offering state-of-the-art simultaneous measurements of NO, NO₂, NO_x, NH₃ and NOx-Amines. Even lower detection limits can be detected through the newly designed reaction chamber, enhanced gas flow paths, improved pressure and temperature stability. This analyser is adaptable to non-standardised applications, with the unit calibration running smoothly on an automated basis.

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The one- and two-channel chemiluminescence based NO_x analyzers of the nCLD "Facelift" box-solution analyzers detect NO, NO₂ and NO_x at concentrations ranging from 5 ppm to 5000 ppm with minimal detection limits averaging from 0.4 ppb to 0.5 ppb. They hereby focus on two main application areas, Ambient Air (AL, <50ppm) and Emission/Process (EL, <500ppm; EL S <5'000ppm) monitoring. The one-channel nCLD AL, EL and EL S feature an external pump, while the two-channel nCLD AL2 and EL2 include an internal pump. The nCLD "Facelift" boxed solutions consist of five, fixed and preconfigured analyzers. The nCLD AL (Ambient Level) and EL S/EL include a standard NO/NO_x measurement, with an optional NO₂ add-on, while AL2 and EL2 include, due to the two-channel set-up, a standard NO₂ detection. Additionally, all nCLD-models are capable of a remote power down/up including a failsafe feature. nCLD AL2 and EL2 are TÜV approved, qualified according to ISO EN 14211 and 15267 1-3.



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