FACTORY & HANDLING SOLUTIONS

DECEMBER/JANUARY 2024 FACTORYANDHANDLINGSOLUTIONS.CO.UK

Wrist-Ease

Ease the strain, tape with Ease



THE FUTURE OF TAPE GUNS IS HERE

Enquire today, only at

allpack

A Better Package





RELIABILITY REDEFINED

DOOSAN FORKLIFTS BECOME A PART OF THE BOBCAT FAMILY

We combined the innovation and durability you expect from Bobcat equipment with decades of experience in designing reliable material handling equipment from Doosan. We're incorporating the built-to-last and easy-to-maintain Bobcat DNA into solutions for intralogistics and distribution facilities to boost their profits. Bobcat forklifts are here to empower you and your business to accomplish even more.

DOOSAN

Bobcat is a Doosan Company. Doosan is a global leader in construction equipment, power and water solutions, engines, and engineering, proudly serving customers and communities for more than a century. Bobcat®, the Bobcat logo and the colors of the Bobcat machine are registered trademarks of Bobcat Company in the United States and various other countries. ©2023 Bobcat Company. All rights reserved.





The IIoT Platform
Try for free at **moneo.ifm**

Digitisation can be so quick and simple. With moneo.



NEWS

5 Renishaw celebrates 50 years

FEATURES

10 Robotics automation solves food industry challenges

23 ‘Right-size’ auto-packaging

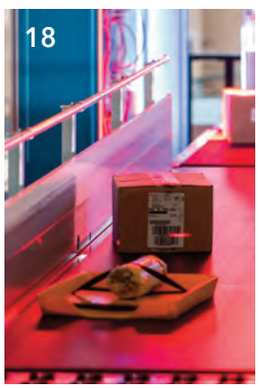
26 Connecting the physical and digital worlds in logistics

32 Connected trucks

38 Game-plan for a new supply chain reality

46 Consolidate to accumulate















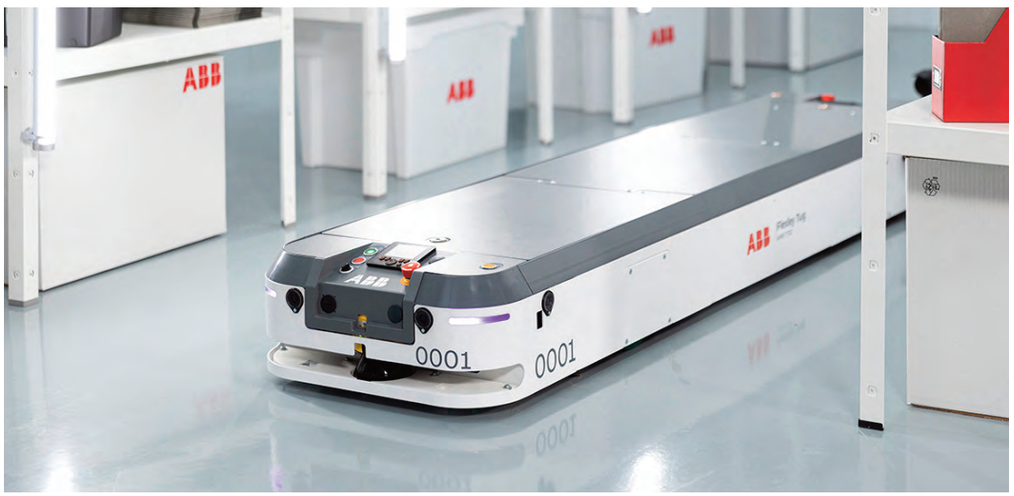
Tackling food industry challenges

Welcome to the first issue of *Factory & Handling Solutions* of 2024. Food and beverage companies face big challenges, such as tight labour markets and supply chain interruptions. In this issue, on page 10, Julian Ware, UK & Ireland sales manager for ABB Robotics explains how automation is delivering solutions to boost productivity and resilience across the industry.

This issue also includes: Boilers, Pumps & Valves; Compressed Air; Food & Beverage; Temporary Buildings; Packaging; Logistics; Storage Solutions; and Forklift Trucks

If you have a comment, opinion or story that you would like to share, please contact me by emailing vwhite@datateam.co.uk. And if you would like to share your product news or case studies, please contact Claire, crixon@datateam.co.uk.

Victoria White
(Editor)



FACTORY & HANDLING SOLUTIONS

factoryandhandlingsolutions.co.uk

To ensure that you continue to receive your free personal copy of this magazine, please fill in the reader registration card, or register online at factoryandhandlingsolutions.co.uk.

Factory and Handling Solutions is sent free of charge to individuals who meet the publisher's strict terms of control.

Annual subscription rates are:
UK - £97.00
Overseas - £155.00

ISSN 1472-1260
Datateam Business Media Ltd..
London Road,
Maidstone, Kent ME16 8LY.

Tel: 01622 687031
Fax: 01622 757646
www.datateam.co.uk

Registered in England No 1771113

© 2024 Datateam Business Media Ltd

datateam Business Media

The statements and opinions expressed in Factory & Handling Solutions magazine are not those of the editor or Datateam Business Media Ltd unless described as such.

Editor
Victoria White
Tel: 01622 699126
vwhite@datateam.co.uk

Advertising Manager
Claire Rixon
Tel: 01622 699150
crixon@datateam.co.uk

Classified Sales Executive
Ethan Smith
Tel: 01622 699168
esmith@datateam.co.uk

Artwork Editor
Claire Noe
Tel: 01622 607963
cnoe@datateam.co.uk

Media Director
Louise Tiller
Tel: 01622 699104
ltiller@datateam.co.uk

DARREN REYNOLDS BECOMES GROUP MANAGING DIRECTOR OF RARUK HOLDINGS

RARUK Holdings is comprised of three leading, Bedfordshire-based distribution companies R. A. Rodriguez (UK), RARUK Automation and Drive Lines Technologies. Managing director of R. A. Rodriguez (UK), Darren Reynolds, has been appointed group managing director of RARUK Holdings.

Having held the role of managing director, and later group managing director, for sixteen years, Peter Williamson has stepped down to focus on his role as CEO of Automate UK.

Supporting Reynolds will be Ross Lacy, who has taken on the role of sales director for RARUK Automation, Jai Sondhi who is now purchasing and operations manager for the group and Matt Jones who has been appointed as sales director for Drive Lines Technologies. Sarah Castle has also been promoted to accounts manager.

www.rarukautomation.com





RENISHAW CELEBRATES 50 YEARS WITH GLOBAL EVENTS

In 1973, Sir David McMurtry and John Deer founded global engineering technologies company, Renishaw. To celebrate its 50th anniversary, Renishaw subsidiaries around the globe hosted a variety of events and activities throughout 2023 involving many stakeholders, including customers and employees.

As part of these celebrations, in the UK, the company welcomed employees and their relatives to special Gloucestershire and South Wales open days held at its New Mills and Miskin sites respectively. The events provided a unique opportunity for guests to experience Renishaw's world-class facilities and view its cutting-edge products in action, with informative demonstrations conducted by experts across various business divisions.

From captivating science, technology, engineering and maths (STEM) activities for younger audiences, to a classic car show and sporting challenges run by partner organisations Cardiff Rugby and Forest Green Rovers FC, the open days showcased the innovation and community spirit that has defined Renishaw for five decades. Renishaw's Edinburgh research office also celebrated the anniversary in style with their very own office band which played hit songs from 1973 including Elton John, Stealers Wheel and Stevie Wonder.

"This year we've celebrated the achievements of our co-founders, plus past and present employees, who have contributed significantly to global advances in precision manufacturing," said Will Lee, Renishaw's CEO. "Whilst this landmark year has now ended, we're looking forward with confidence to another half-century of innovation and sustainable growth."

To showcase Renishaw's global success, teams around the world also hosted anniversary events. In Germany, for example, Renishaw GmbH and guests from Renishaw AG (Switzerland) hosted a '70s themed summer festival, whilst in Asia, Will Lee joined Andy Buttrey, Renishaw's APAC President, to participate in festivities at some of the region's subsidiaries. This included a family party in Shanghai and rock-climbing with employees in Hong Kong.

In Rajkot, India, an evening seminar for customers showcased Renishaw's products for smart manufacturing, including live demonstrations and a round-table discussion, whilst in Italy, a similar event was held at the Turin Automobile Museum.

As part of the 50th anniversary celebrations and to share its success with local communities, Renishaw also donated a total of £150,000 to charities and not-for-profit organisations located in the countries where it has operations. In the UK this included foodbank provider, the Trussell Trust, with all its branches local to the company's sites in Gloucestershire and South Wales receiving a donation.

www.renishaw.com

NEW CHOCOLATE FACTORY HOLDS GOLDEN TICKET FOR CAREERS IN STEM

A new chocolate factory is set to open its doors in Barnsley to inspire and educate the next generation of UK manufacturing engineers.

The 'JJA Snack' facility is an initiative by JJA Pack – a global supplier of industrial chocolate-handling equipment to the likes of Mondelez and Premier Foods, based in South Yorkshire. It has teamed up with long-term partner Siemens to create the advanced, commercially viable chocolate manufacturing line, which will give young people hands-on experience with the pioneering technologies used to manufacture chocolate bars.

Thousands of school children will have the opportunity to learn about where chocolate comes from and how its harvested, with pupils able to design a bar and create it on the JJA Snack production line. A group from Outwood Academy Shafton will be among the first to visit the site in Barnsley.

Meanwhile, engineering students will be able to learn about data capture, streamlining manufacturing processes, and energy efficiency.

The Sheffield Steelers and Leeds Knights ice hockey teams are among JJA Snack's first customers for branded bars, with the facility also set to manufacture chocolate under its own name.

Jamie Ashpole, director at JJA Snack, said: "It's so important that we inspire more young people to pursue careers in manufacturing to enable the sector's future success. Creating an opportunity for students of all ages to get a taste for modern, industrial chocolate-making, is our way of helping to address the UK's current STEM skills gap.



"It's exciting to bring this project forward in collaboration with Siemens, which provides a window for young talent to see how industries are advancing with the help of digital technologies."

JJA Snack will use cloud-based AI solution Insights Hub to provide a comprehensive picture of the production line's performance, which can be accessed both remotely and in situ. Through the power of AI, the data collected is used to avoid machine downtime by predicting and diagnosing issues remotely.

jjapack.co.uk **www.sw.siemens.com/en-US/**

ALLPACK UNVEILS INNOVATIVE ERGONOMIC TAPE DISPENSER: WRIST-EASE

Wrist-Ease
Ease the strain, tape with Ease





Allpack, a pioneer in the packaging sector, proudly announces the launch of its groundbreaking ergonomic tape dispenser, Wrist-Ease. This revolutionary product will redefine the tape dispensing experience, prioritising user comfort and efficiency.

Designed with the user's well-being in mind, Wrist-Ease boasts a range of features that set it apart from traditional tape dispensers:

1. **Ergonomic Design:** Wrist-Ease has been meticulously designed and crafted through 100's hours of user research to develop a user-friendly ergonomic design that promotes a natural and comfortable grip while using the dispenser. The result has been a dispenser which reduces strain on the wrist, making it an ideal solution for prolonged use.

2. **Easy-Load Mechanism:** The tape dispenser features a hassle-free, easy-load mechanism, ensuring a seamless process for loading new tape rolls. This innovation eliminates frustration and enhances the overall user experience.

3. **Adjustable Tension Control:** Wrist-Ease allows users to customise the tape tension according to their specific needs and the tapes being applied. This feature ensures smooth and precise tape application for various packaging requirements.

4. **Built-in Magnet:** The dispenser incorporates a magnetic plate to allow the dispenser to be easily stored on pack benches or forklift equipment. This feature enhances safety and minimises the risk of accidents in busy packaging environments.

5. **Durable Construction:** Allpack's commitment to quality is reflected in Wrist-Ease's durable construction. The tape dispenser is built to withstand the rigours of daily use, ensuring long-lasting performance and reliability.

COME AND FEEL THE EASE ON STAND D66 AT EMPACK

"Allpack is thrilled to introduce Wrist-Ease, our latest innovation in packaging solutions. This ergonomic tape dispenser is a testament to our dedication to creating products that prioritise user comfort and efficiency," said Andrew Almond, Marketing Manager at Allpack. "Wrist-Ease not only enhances the packaging experience for our customers but also underscores our commitment to innovation in the packaging industry."

To request a Wrist-Ease trial or for purchase which can be ordered through Allpack's website at www.allpack.uk.com/wrist-ease or contact our sales department to discuss your enquiry sales@allpack.uk.com

Allpack www.allpack.uk.com/wrist-ease sales@allpack.uk.com

EXPERIENCE THE FUTURE NOW WITH...

Wrist-Ease



ERGONOMIC DESIGN

Avoid repetitive wrist strain (RSI) injuries with the ergonomic designed tape gun.

BUILT-IN MAGNET

Easily store your dispenser to your packing bench or forklift using the built-in magnet.

Enquire today, only at

allpack

A Better Package

www.allpack.uk.com sales@allpack.uk.com 01543 396 700

DO YOU HAVE THE ENERGY TO TRANSFORM FOOD PRODUCTION?

Charles Williams, managing director of process automation specialist Promtek, examines how food manufacturers can reduce their energy usage at the same time as improving productivity - and how maximising the potential of apprenticeships can help play a part.

If you search the internet 'how to reduce energy consumption or improve production throughput' you'll get myriad answers, some of which are actually incredibly helpful. Others are generic, non-industry specific responses that are likely to leave you none the wiser.

What we do know is that as a manufacturer, throughput in production can mean the difference between meeting quotas and losing customers to your competition – and whatever challenges the world is currently experiencing are reflected in the food industry. The biggest challenge is maintaining consumer trust in the food you are providing, but it is not just about the quality of the product. Now consumers are starting to ask questions about how food is produced and what the carbon footprint is through the whole supply chain. So, here is the real challenge: what is the food industry doing to tackle these issues?

ENERGY USE REDUCTION

According to the Industrial Decarbonisation Research and Innovation Centre (IDRIC) energy-intensive industries, in which the food sector sits, account for around one sixth of UK CO_2 emissions. Food is vital to everyday life and the industry utilises advanced technology and skilled workers in its processes. Many products are traded internationally which only makes the challenge of reducing energy costs more incumbent on food businesses as a means of tackling future problems today.

There are, of course, many schemes and technologies that allow for the reduction of energy costs. For example, our enterprise integration platform Condor monitors fundamental process data for machine performance, offering both historical plant performance as well as real time snapshots of current output such as real time energy usage data. This data allows for machinery performance to be profiled and compared when changes are made to make sure that payback is achieved. It's no longer a case of it is either on or off.

Further, smart motor control allows targeted equipment power management providing key diagnostic information that enables you to optimise performance with real-time access to operation and performance trends – hence further energy savings. Automation removes human error and influence on the production system. It also increases efficiency and reduces carbon footprint.

And this is not a case of 'do as I say, not as I do' - at Promtek we have signed up to a trial program run by Interface NRM funded by Innovate UK, to implement an audit standard for carbon reduction to ISO14604. We have positioned the company to support our customer base if they wish to sign up to this standard too.

IMPROVING PRODUCTION THROUGHPUT

Mechanically factories do not change and evolve that quickly but all of the equipment has motors and sensors, and smart technologies allow data to be gathered from these individual components. This data is the heart of improving production throughput. Collecting, processing, analysing and validating that data before sending it on to other systems like the enterprise resource planning (ERP) and maintenance management systems provides the fundamental measurement that will be used to assess production performance. Enterprise integration platforms will give you this benchmarking data before and after you make any changes to your production cycle and will provide the evidence required to show you have been successful.

Another challenge affecting production throughput in the modern food industry is spikes and dips in demand. These are difficult to predict (except for the obvious seasonal demands) yet they can also be useful and used to drive a positive net gain with the application of smart data. By collecting a good amount of data from early on in the process, such as the physical impact of the ingredients on the equipment and relating that back to the dates in question you can look for patterns which will help you to predict the impact of demand on your machinery's reliability more accurately. Do this over time and you will start to see annual trends too.

In a spike phase you do not want your factory to let you down. Knowing your supply chain and all the demands on it, coupled with ongoing and effective maintenance on machinery, will ensure demand is met. A dip in demand is an opportunity to carry out that maintenance and review production throughput, ultimately using the dip strategically. Data collection on the factory provides indisputable facts on what you need, how you need it and when you need it and that data will feed into a producer's planning process.

FLAGSHIP APPRENTICESHIP SCHEME

Carbon neutrality has become the favoured touch stone in the drive for sustainability, but we would argue that it is not enough. If the industry fails to embed the knowledge, experience and skills gained over the last 40 years into the next generation of engineers, technicians, production





managers and business owners, then all the benefits of carbon reduction will be wasted by the effort of re-learning all those lessons in the course of replacing old equipment with new, rather than learning new techniques to adapt and update the equipment to keep it fit for purpose. Young and inexperienced new starters joining our industry are vital to creating a sustainable knowledge base and must be empowered.

Benjamin Franklin said, 'Tell me and I forget, teach me and I may remember, involve me and I learn,' and it's as true today as it was then. When employees lack proper training, they cannot support a business properly; when they are poorly trained, they can be a danger and actually create delays to a production schedule. Properly trained employees and suppliers with the appropriate skills to make confident, well-informed changes to the production process is key to maximising throughput.

With that in mind at Promtek we have invested in our engineering team's future and are delighted to have been awarded the Make UK Engineer Apprenticeship: Employer Gold Kitemark Accreditation which recognises us as one of the best employers in the UK for engineering apprentices. As the accreditation is voted for by existing apprentices, we could not be more thrilled that this investment has paid off. We think the world of our apprentices so it is amazing to know they think the same way.

This investment in staff, and staff training, can be normalised across the industry and will create real time improvement in production throughput as employees will feel rewarded and valued and will in turn add value to any food processing business.

With controlled energy costs (through carbon footprint reduction), data driven production throughput and component staff well versed in company ethos and accountability we can be more than useful to the future, and continued success, of the food industry.

Promtek
www.promtek.com

PROFIBUS & PROFINET International UK

Membership offers you a wide range of benefits including discount on training and consultancy, technical support, participation in the international PROFIBUS, PROFINET and IO-Link Working Groups - and much more.

PI UK
PROFIBUS • PROFINET



https://uk.profibus.com/uk-pages/membership



HSM®

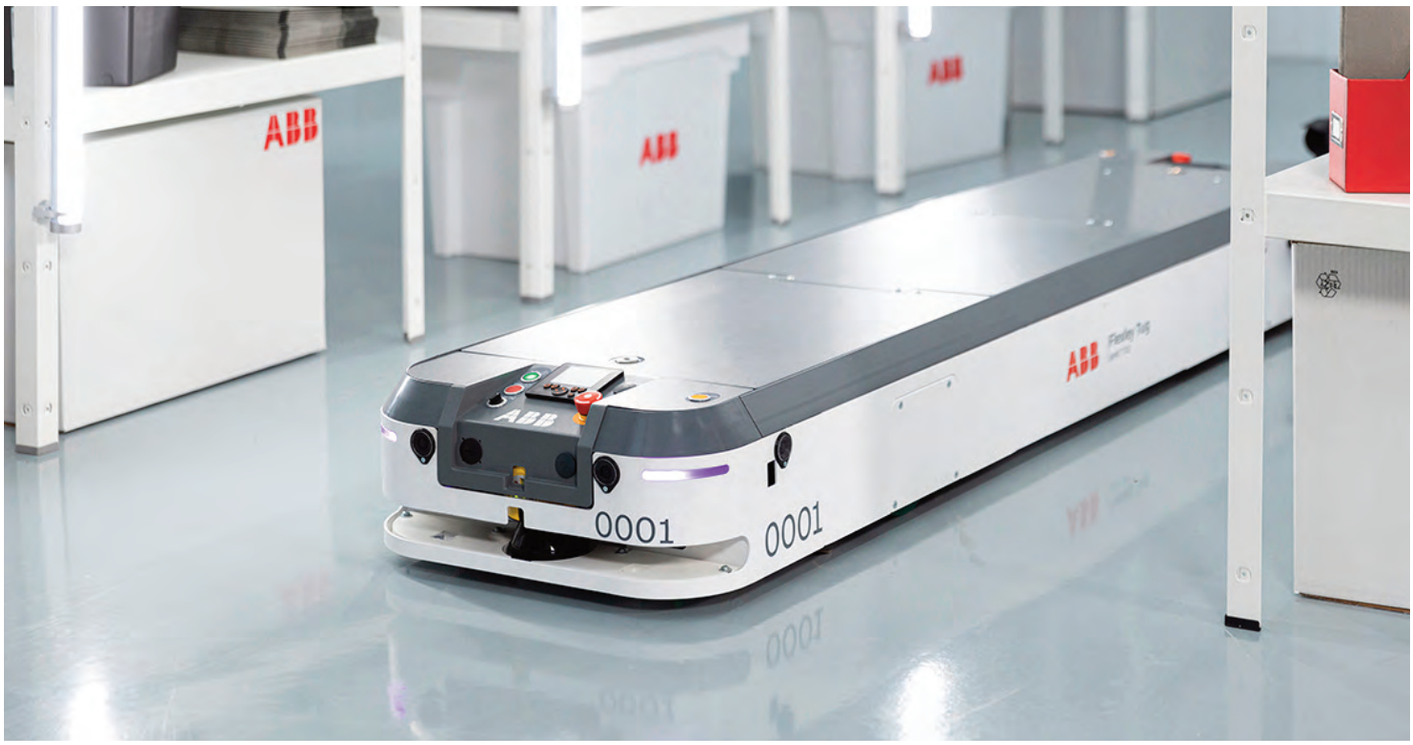
Save on waste costs with HSM Baling Presses!

95% volume reduction

cost effective

simple operation

www.hsm.eu

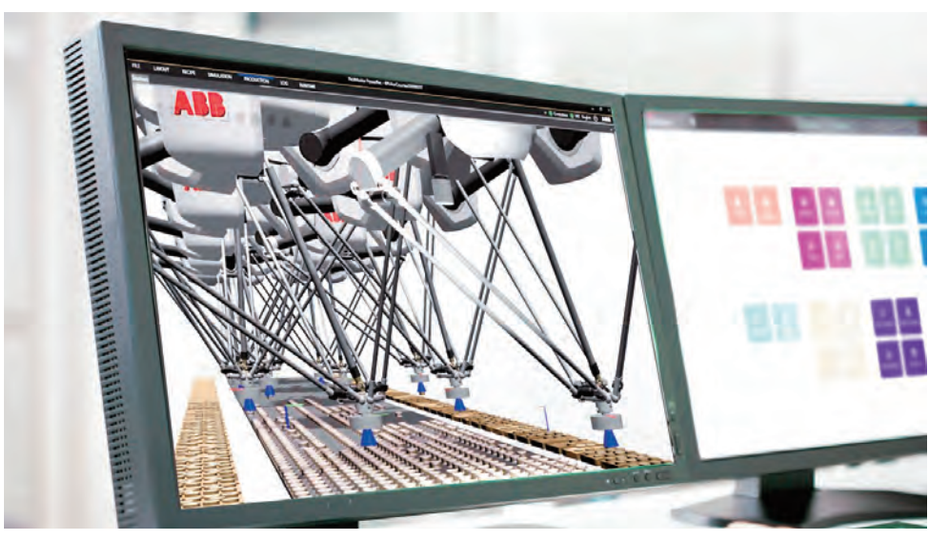


ROBOTIC AUTOMATION TACKLES FOOD INDUSTRY CHALLENGES

Food and beverage companies face big challenges, such as tight labour markets and supply chain interruptions. Julian Ware, UK & Ireland sales manager for ABB Robotics explains how automation is delivering solutions to boost productivity and resilience across the industry.

Revenue in the food market is set to reach US$9.36 trillion globally in 2023, with annual growth (CAGR) of 6.74 per cent forecast over the next five years, according to Statista. Many industries can only dream of such solid growth prospects, but the food industry is not without its challenges. Chief among these are rising input costs and labour shortages, along with a relentless drive to improve productivity and reduce production costs. Food companies also face growing pressure from regulators and consumers to promote sustainability and a Circular Economy.

At the same time, the ever-shifting pattern of consumer tastes makes it vital for food and beverage companies to be able to adapt quickly and keep pace with changing market demands. Recent supply-side disruptions have only added to the pressure to respond rapidly in an unpredictable business environment where unforeseen risks can arise from almost anywhere. Food and beverage companies therefore need to ensure they have flexible systems in place that can readily adapt to evolving circumstances.



It is also worth noting that none of these competing pressures can be allowed to prevent food businesses from maintaining excellent product safety and quality standards.

Faced with all these challenges, food manufacturers have been turning increasingly to solutions based on robotic automation. The latest statistics from the International Federation of Robotics show a strong take-up of robots in the UK food and beverage sector, with a 76 per cent increase in the number of new robot installations between 2021 and 2022.

MORE ACCESSIBLE TECHNOLOGIES

Many of the big names in the food and beverage industry have embraced automation already, with automated equipment helping them to realise new levels of flexibility, productivity, and profitability. Now these technologies are coming within the reach of smaller players, helping them to overcome some of today's biggest obstacles. This is crucial in an industry that features a higher-than-usual proportion of SMEs. In the European Union, for example, some 290,000 SMEs make up 99 per cent of the entire food and beverage

industry, according to Food Drink Europe.

There are many reasons why automated solutions are becoming more attractive, but these can generally be grouped into one of three areas: affordability, ease-of-use, and technical capabilities.

AFFORDABLE SOLUTIONS

The price of today's automated systems is often just 10 to 20 per cent of equivalent systems 20 years ago. For many cost-conscious companies - and for SMEs in particular - this increased affordability is bringing automation within reach for the first time.

In addition, affordability is about more than upfront costs. Food and beverage is typically a low-margin industry. Even so, food companies often enjoy rapid returns when they decide to automate. It unlocks new levels of productivity and competitiveness, helping them to protect tight margins and ensure that they can meet demand from their customers to deliver on time and in the right quantities.

SIMPLIFIED PROGRAMMING AND OPERATION

There has also been a step change in the ease with which general operators can interact with automated technology. Today's robots require comparatively little training to program and operate, unlocking a raft of new application opportunities among users who might previously have been deterred by a lack of in-house expertise.

For example, ABB Robotics' Wizard Easy Programming software is an intuitive and easy robot graphical programming interface that requires no programming skills or specialised training. Instead, it relies on a drag-and-drop graphical user interface where standard commands can be arranged into an operating program that will instruct the robot.

ABB's RobotStudio offline programming tool is another good example of a sophisticated tool that makes life easier for users. This enables users to simulate and test complete robot solutions in a virtual environment before deploying them on the factory floor. Digital twinning software such as ABB's PickMaster Twin for picking and packing lines takes this idea even further by allowing users to create a complete digital model of their application, including robots, conveyors and other equipment, which can be fed with real-time data from the physical application.

MORE CAPABLE

No discussion of technology would be complete without talking about the growing role of artificial intelligence (AI). In industrial robotics, AI is simultaneously making solutions easier to use and more capable.

AI-enabled robots can see, act and reason in the world around them, completing tasks too varied and complicated for traditional programmed robots. These robots engage in reinforcement learning, adapting to new tasks



on their own and paving the way for new opportunities and applications.

Until recently, industrial AI applications were often focused on data analytics, which trawls vast reservoirs of data to spot hidden patterns. This allows it to predict trends such as the performance and future health of machinery and that information can then be used to enable leading-edge business practices such as predictive maintenance. Such analytical applications are now being matched by developments in generative AI, which are enabling robots to learn and adapt in an expanding array of situations.

Take ABB's AI-enabled Robotic Item Picker for instance. It uses machine vision and AI to decide how to pick and place items in order processing and fulfilment applications. Able to pick up to 1,400 items per hour, the Robotic Item Picker can handle many more orders in the same time as previous manual methods. As well as increased speed, the robot can match the dexterity and flexibility of humans, allowing it to pick and place a wide variety of irregular food and beverage items such as fruit, vegetables and cuts of meat, as well as picking more regular prepackaged goods.

In another important example, the end of this year will see the roll-out of ABB's next-generation Autonomous Mobile Robots (AMRs), which combine machine vision and AI to make them more flexible than their predecessors.

AMRs are already widely used in food production, from receiving raw materials at goods inwards and delivering them to the line, to bringing packaging materials and boxes to the packing stations. They can also take palletised products to a wrapper and labelling section and then to the warehouse or shipping area.

The addition of AI-enabled 3D vision removes the need for much of the infrastructure required to guide previous generations of AMR robots around factories and warehouses. Instead, Visual Simultaneous Localisation and Mapping (Visual SLAM) creates a real time 3D map of all the objects in the surrounding area. By detecting and tracking natural features in the



environment, the AMR can determine the safest and most efficient route to its destination, with no need for external navigational references such as magnetic tape or QR codes. This dramatically cuts commissioning time by up to 20 per cent compared to 2D SLAM.

Similarly, a combination of machine vision and AI is enabling the wider application of cobots (collaborative robots) that can work safely alongside people to make mixed production and packing lines a viable option. These robots are increasingly able to handle the kind of unstructured sorting and picking tasks that would previously have been possible only with human operators. They will also tackle the most boring or unpleasant tasks, improving working conditions for human operators and supporting employee recruitment and retention. This is especially useful for food manufacturers that might otherwise need people to work long hours in cold, wet or inhospitable areas of the factory.

PACKAGED PERFECTION

There could be a danger of all these innovations making the world of robotics even more bewildering for non-specialists. However, suppliers are developing a growing range of pre-configured, packaged robotic solutions to help keep things nice and simple.

Modular automation enables easier integration, speeds up installation times and minimises the effort and potential for error associated with sourcing equipment from multiple suppliers. With all the components of the production cell being serviceable by one supplier, users can access the right support more easily in the event of a problem. A fully integrated cell means also that the layout can be optimised to save space and all the components should be able to work together at full capacity to enhance productivity.

DEMOGRAPHIC TIMEBOMB

Finally, it is worth mentioning one more key driver for automation that will impact on food and beverage companies, as well as other key industries: While many of the challenges coming down the track over the next 20 years remain unpredictable, the ageing population in most western economies is a demographic trainwreck that companies can already see coming. With fewer young people joining the workforce as older people retire, automation is an ideal insurance policy against the impact that this will have on the availability of skills and resources.

It is almost certain that the rate of adoption of automation in general, and robots in particular, will grow dramatically in future. The benefits of improved product quality and consistency, coupled with enhanced profitability and product throughput, provides a strong case for implementing these technologies throughout the food and beverage industries. Meanwhile, any lingering concerns around cost or ease-of-use are being rapidly eroded.

ABB
www.abb.com

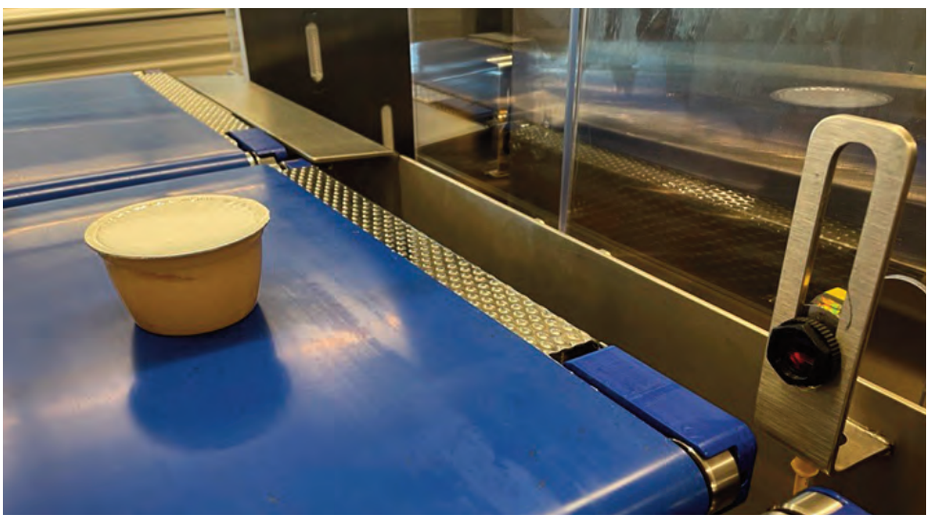
"CHECKING IN" WITH FORTRESS

Sharing the company's extensive knowledge on international net weight verification rules that govern food checkweighing, Fortress explores the 'compliance essentials' that can protect brand integrity while simultaneously lowering operational costs.

Efficient weight control and checkweighing systems are integral to meeting consumer expectations.

In addition to inspecting under and overweight packages and ensuring compliance with net content regulations, deploying smart checkweighers inline and at the end of food processing lines can provide a source of untapped Quality Assurance, waste reduction and brand protection.

Product giveaway is the long-accepted outcome of observing weight legislation rules. However, when food manufacturers overfill packaging to avoid falling foul of international and domestic weight legislations, it can lead to a considerable profit losses. Even nominal overfilling can add up. In a new Whitepaper published by Fortress Technology, European applications engineer Daniel Shail examines the risks versus regulations and delves into the pitfalls of non-conformance.



COST OF CUTTING CHECKWEIGHING CORNERS

Global weight regulations are in place to protect consumers against short measures. The cost if caught selling underweight packaged food products can lead to penalty fines ranging from several hundred, to thousands of pounds. In regions where the rules are even stricter, knowingly distributing underweight products could be deemed fraud.

The picture could be even worse for a multi-national food company with global reach. A widespread recall could rise to several million pounds if withdrawing an entire batch of underweight processed and packaged products.

Longer term brand image also needs to be considered. A social media report can rapidly spiral, leading to potentially serious consequences if a recall is not acted upon swiftly. The resulting impact can be highly detrimental. Consumer research by Harris Interactive reports that 55 per cent of people would switch brands temporarily following a product recall, while 15 per cent said they would not purchase that brand from the manufacturer again. A recall of this scale is often avoidable if food defences are robust and risks are regularly reviewed.

AVERAGE WEIGHT RULES

To avoid issues with weight legislation it is common practice for food plants to overfill. Yet, given the cost of ingredients, food commodities, and packaging, combined with the current cost of living crisis, overfilling is no longer considered a good or sustainable business practice.

In order to cut down on product waste and lost profits, it is advisable for food processors to familiarise themselves with the weight legislation requirements for any region where their products are sold or exported to. The rules in Europe, Canada, and the U.S. are quite aligned, although subtle differences do exist.

Typically, global weight regulations follow three general rules:

> The average weight of a product batch must not be below the nominal label weight on the package.

> The percentage of packages that fall below the nominal weight should typically not exceed 2.5 per cent. These are called tolerable negative error (TNE) in Europe, the limits of error (LOE) in Canada, and maximum allowable variation (MAV) in the US.

> No individual package can have a weight that falls outside the nominal quantity by more than twice the domestic defined tolerance table.

Tolerance tables can be difficult to navigate. Manually determining and programming the correct checkweighing tolerance for specific product applications and pack sizes can be a tedious and confusing process. It can also be prone to human error.

To help processors accommodate numerous weight check product variations, Fortress integrates these defined tolerance tables into its Raptor Checkweigher software. This provides instant adherence to the local legislative weight regulations.

OPTIMISING CHECKWEIGHING EFFICIENCY

It is widely regarded that weight checking every product on processing lines is good manufacturing practice. Fortress engineered digital signal processing into the Raptor Checkweighing series to enable the weight sensors to reset rapidly, allowing for instant and precise weight checks of individual packs in real-time. Trend feedback signals can then be instantly fed upstream to filling, portioning and packing automation equipment, signalling when to increase or decrease fill quantity.

Another benefit of automated checkweighing is the utilisation of automated reporting and data tools. Besides reducing false rejects and product waste, the use of modern network technologies allows for automatic data transmission. With integrated data collection software, everything from trends, pack rates and live OEE data is instantly reported. Production and QA personnel can then utilise this trend feedback to monitor and fine-tune production line performance, even prior to the weight check process.

For example, if a meat manufacturer finds inconsistencies in the size of meatballs, this indicates that the processing machinery is not running accurately. Beyond highlighting this fault, precision checkweighing systems can provide a controlled feedback signal to upstream automation equipment used to portion food products. This signal specifies when to increase or decrease the fill quantity accordingly, eliminating the need for human intervention.

STAYING ON TREND

Linking consumer lifestyle trends back to checkweighing tolerances is equally important. In wellbeing and weight control products, for example, absolute weight conformity is non-negotiable. If a snack pack states 100 grams, the tolerance cannot deviate by more than 0.5 grams.

Leaving the weight check until the end of the process is another highly wasteful activity, as it could result in an entire consignment of baked

or packaged products being recalled. Additionally, it wastes many hours wasted in production and workforce salaries.

Inline checkweighers can be used to maintain batch-to-batch consistency. Widely used on commercial bakery, meat and prepared food production lines, automated inline checkweighing allows for individual pieces that are off target weight to be removed and reworked, Connecting to upstream portioning equipment, the new Raptor Inline Checkweigher also provides corrective feedback to upstream portioning equipment.

With the UK market value of "free-from" products now worth a substantial £3.17bn Fortress anticipates that inline weighing will inevitably become more commonplace.

Free-from products typically use expensive ingredients in the manufacturing process; some costing two to three times more than conventional flour products. Additionally, for people with coeliac disease, the internationally-agreed (FDA) maximum level of gluten considered safe is legally 20 parts per million (ppm) or less of gluten. Only foods that meet this level can be labelled 'gluten free'. Placing even greater regulatory pressure on producers to adhere to weight specifications.



PRIORITISING FOOD SAFETY

Although automated checkweighing is not as tightly regulated currently as HACCP inspection equipment, many processors now recognise the essential role these systems play in the wider quality control program. Particularly in the sectors where food ingredient costs increased by as much as 40 per cent in 2022.

Daniel Shail concludes: "A checkweigher should not just be regarded as a regulatory necessity. Although these machines are integral to meeting consumer expectations, checkweighers play an equally critical role in prioritising food safety and reducing giveaway. It is always good practice to regularly revisit operational processes and practices and examine all food waste risks."

The standard end-of-line Raptor checkweigher is available in four belt widths - 100mm, 200mm, 300mm and 400mm – and can verify the weight of products up to 8kg. For bulk applications, e.g. pet food, ingredients, grains and other large items, the Raptor Caseweigher can weigh up to 25kg, with a heavy duty version available up to 50kg. Fortress can also integrate



its new Raptor Checkweigher with a metal detector or x-ray machine, and has even created numerous small-footprint multi-aperture, multi-lane combination systems.

To download a free copy of the new Checkweighing Compliance Essentials whitepaper, visit https://fortresstechnology.com/white-papers/

Fortress Technology
www.fortresstechnology.co.uk

SEPURA™
condensate filtration
SILEXA™ MADE FROM RECYCLED GLASS BOTTLES

Going green takes bottle

Most customers will tell you just how efficient Sepura oil-water condensate units are. **But** did you know that our patented filtration media SILEXA found inside every genuine Sepura unit is made from recycled glass bottles?

This not only makes the outputs from our units environmentally friendly but also our manufacturing process too.

Going green and achieving your targets doesn't have to be a compromise.

1 Oily water in
2 Passes through de-pressurising void and bulk oil removal shred to remove initial large oil deposits
3 SILEXA™ final filter medium 20% more absorbent compared to other OEM products.
4 Outlet port levels less than 5ppm.



SEPURA™ is part of the Bowman Group
MADE IN BRITAIN
BOWMAN STOR LTD
Z-83.5-57
Deutsches Institut für Bautechnik, Berlin

Visit our website to learn more about our Silexa™ filtration media
www.sepura-technologies.com
t: +44 (0)1543 379212
e: sales@sepura-technologies.com

INGREDIENTS FOR BAKERY SUCCESS



Bakeries face the challenge of quality control right from the moment raw materials arrive on their production lines - especially fine particles. Here, Stephen Harding, managing director at Gough Engineering, explains why industrial sieves and separators are indispensable for ensuring final products meet high standards of quality, consistency and safety.

Bakeries must do all they can to eliminate very fine airborne particles on the production line. Indeed, flour dust is a hazardous substance according to the UK's Health and Safety Executive (HSE), which also reports that rising new cases of occupational asthma among bakers is "now the highest of any occupation in any industry."

These businesses must also be prepared for assessments from official bodies, or their own clientele, through various audits and operations/performance compliance. Adhering to high standards in ingredient handling is therefore imperative.

That means ensuring there are no unwanted elements like foreign objects, otherwise known as tramp materials, in the incoming product. Equally crucial is achieving the correct texture for ingredients. Consistency is key when it comes to creating a uniform feedstock for subsequent processes, whether it's dough production or other baking essentials.

FINE PARTICLES

Beyond quality checks, bakeries also need to focus on the granular structure of the powder. Fine particles present a significant challenge in manufacturing processes. These minuscule particles, often unwanted, can disrupt precise measurements and alter dough consistency, which leads to inconsistencies in the final product.

That is why industrial sieves and separators are so essential. Sieves and separators employ mesh screens or other separation methods to sift out unwanted particles from the mixture. This process ensures that only the desired ingredients make their way into the dough and contributes to uniformity in the dough's composition.

By removing fine particles, industrial sieves and separators prevent uneven distribution, which can lead to variations in product quality. This is especially important for products like bread and pastries, where consistency is a key factor.

By preventing the entry of unwanted particles or contaminates, sieves and separators reduce the likelihood of poor final product quality after baking. In doing so, these systems contribute significantly to the overall operational efficiency and reliability of the production process.

In addition, extraction can help the process of sieving/separating. This can be tackled by coupling the sieve hood and collection bin holding area directly to an existing extraction system; or to have an integrated extraction solution with filters alongside the sieve in one mobile unit. Gough Engineering can assist with both options.

HIGH-QUALITY BAKING

Let us look at the example of a food company in Wales that wanted to improve how it sieved ingredients. To make the process safer, easier to use and more effective, Gough Engineering designed a bespoke sieve with a one mm aperture stainless steel frame that met all the strict food industry rules for the specific bakery environment. This included special US Food and Drug Administration (FDA)-compliant bonding materials that meet regulatory standards for safe use and prevent contamination risks.



Gough Engineering's design team also added a protective cover/hood and a special frame to hold a collection bin underneath. They made sure it fitted in with the bakery's existing system by adding special discharge spouts to take away waste. While some bakeries lean towards automation, others rely on manual processes, so the equipment must be designed accordingly.

For the food company in Wales, Gough designed a unique system using easy-to-use quick-release clamps, to quickly disassemble the machine and clean the integral parts as well as the mesh. The sieve specialist made sure the collection bin underneath was the correct height, and included a correct Gauss rated magnet to remove any metal particles. This made their sieving process super safe, assisting in efficient cleaning regimes and producing high-quality products.

USER-FRIENDLY AND SAFE

Worker safety must also be considered. Measures must be taken to prevent the release of fine powders into the air where product can accumulate on all surfaces over time, pose a safety hazard on slip-risk floor surfaces or create contamination with potential respiratory hazards.

Considering the ergonomics and user-friendliness of equipment for bakery staff is therefore paramount — that is why Gough Engineering crafts its equipment with safety and security as top priorities. Features like bag rest shelves and supporting grid bars are incorporated to assist operations in a safe working environment.

Gough Engineering's design engineers worked closely with the company and came up with a solution that included steps with a good grip for easy bag-opening into the sieve. Handrails on both sides of the steps were also specified for extra safety. Finally, a special tipping hood opens and closes easily, to reduce air-borne particles using special gas-powered struts.

BUSY MARKET

Sorting tiny particles is a big deal for bakeries. That is why compact vibratory systems, like Gough Engineering's Batch Sieve, are crucial for improving both product quality and safety by breaking down lumps and filtering out oversize particles, contaminants and debris.

Industrial sieves and separators are indispensable tools in bakeries for ensuring final products meet high standards of quality, consistency and safety. These systems must be designed based on a deep understanding of what bakeries need, help them work efficiently, meet top-quality standards and stay ahead in a busy market.

Gough Engineering
www.goughengineering.com

INSTRUMENTATION EXCELLENCE AWARDS







ENTRIES NOW OPEN!

WWW.INSTRUMENTATIONAWARDS.CO.UK

Our sponsors:

ifm

MICRO-EPSILON

Napier

VEGA

INTERNATIONAL ENGINEERING INNOVATION IS COMING TO FARNBOROUGH

Widely regarded as the foremost annual engineering trade show in the UK calendar, Southern Manufacturing & Electronics is returning to Farnborough from 6th to 8th February 2024 in an even more international guise, following an unprecedented level of interest from overseas. It has boosted the number of stand bookings and ensured the event will be a sell-out again, even though the organisers created additional space early on to meet the high demand.

Taking place in the prestigious Farnborough International Exhibition & Conference Centre, the show is worlds away from its early beginnings in 1997 when it was a small, regional gathering of local engineering firms. Now firmly established as an exposition of global standing, it is the most comprehensive showcase for cutting-edge technology in manufacturing technology and service provision. Exhibitors are a perfect balance between those operating in the mechanical engineering sphere and others in the electrical / electronic sector.

The forthcoming exhibition mirrors the resilience and adaptability of manufacturing industry, which is grappling with many challenges including the impact of Brexit, supply chain disruptions, high energy costs and increased taxation. Reflecting how industry is responding, key themes at the 2024 show will include a focus on Industry 4.0, robotic handling technology and other forms of automation, reshoring of production, and emerging technologies such as green energy and power-saving machinery.

There will be suppliers of machine tools and tooling, workholding systems, measurement and inspection equipment, finishing machines, laser cutting and marking equipment, 3D printers and consumables, production and planning aids, engineering and business software, controls, displays, HMIs and data acquisition systems. Other exhibitors will present everything from mechanical, electrical, electronic, electromechanical, hydraulic and pneumatic components and assemblies, to PCB manufacture, box build, connectors, sensors, drives and encoders, and on to fasteners, pressings, wireforms, springs, mouldings, gaskets and more.

The exhibition's appeal lies not only in the display of the latest production technology but also in the diverse range of other offerings, encompassing workshop equipment, dust and fume extraction, humidity control, storage systems, plastic packaging, injection moulding, adhesives, industrial flooring, waste removal and recycling, training, freight services and financial consultancy. It all makes the event an efficient one-stop-shop for complex procurement needs.

A distinguishing feature of Southern Manufacturing & Electronics is its commitment to inclusivity. While attracting big-name manufacturers, the show remains an accessible platform for engineering SMEs, as larger firms are discouraged from dominating the space. This approach creates a unique and vibrant atmosphere, leading to a high rate of return bookings. Many participants have been loyal to the event since its inception, testifying to its effectiveness as a business forum.

Interestingly, although the industries and technologies are diverse, there are no barriers between the areas, allowing cross-over between the different disciplines. Visitors say it is a facet of the show that is especially useful, as it encourages a wide ranging itinerary though the exhibition, leading to discovery of firms specialising in related technologies that would otherwise not be encountered. Technology Trails





prompt visitors to take a logical route around the aisles by grouping firms having expertise in particular areas.

Watch out for BITO, Bott, Polstore, Modula Storage Solutions, Randex and System Store Solutions, all of which will propose different takes on workplace storage, handling and ergonomics. Even simple, low-cost solutions like multi-tier shelving, foldable containers and live flow racking for cartons can contribute to reduced supply chain costs in manufacturing operations. At the other end of the scale, automatic guided vehicle deployment can be integrated with a fully-fledged warehouse management system.

MIE Solutions will be on hand to advise on all aspects of ERP production control software and how industry-specific MIETrak Pro can revolutionise growth and development within a business, as hundreds of users all over the UK have found. Sapman, another ERP specialist, has added end-to-end connectivity with the introduction free mobile apps for companies operating Sapman v12. For example, the Mobile Stock Enquiry app lets a user anywhere in a factory or warehouse scan a product, or select an item from a list, and see stock by location, goods received notes, batch details and even a stored image of the product.

Southern Manufacturing & Electronics 2024 will co-locate with AutoAero, a specialist theme within the exhibition dedicated to aerospace and automotive engineering. In addition, attendees will benefit from an extensive technical seminar programme over the three days. With ample parking, excellent transport links and a complimentary bus service, the venue is accessible to all. Admission and parking are also free, emphasising the commitment to providing an inclusive and valuable experience for all.

As anticipation builds for Southern Manufacturing & Electronics 2024, industry professionals, both seasoned and new, are gearing up for an unparalleled showcase of innovation, collaboration and engineering solutions that will shape the future of manufacturing. For more information and tickets, visit www.industrysouth.co.uk

Southern Manufacturing & Engineering
www.industrysouth.co.uk

WAREHOUSING

CANOPIES & LOADING BAYS by SMART-SPACE

PRACTICAL & FLEXIBLE SPACE SOLUTIONS







"It came down to the people. I looked at all the aspects - but when we added in the attention, expertise and knowledge of the Smart-Space team I chose them."

Glenn Kerry, Project Manager, Smurfit Kappa

A range of instant building solutions:
Temporary, permanent or Maxi-Span
PVC or composite roof options
Available in a variety of finishes
Host of flexible options available
British-made with UK supply chain

SMART-SPACE

How can we help?

Shaun Stephens
UK Sales Manager
07535 117181
smart-space.co.uk



OPTICAL CHARACTER RECOGNITION WITH AI REVOLUTIONISES LABEL READING

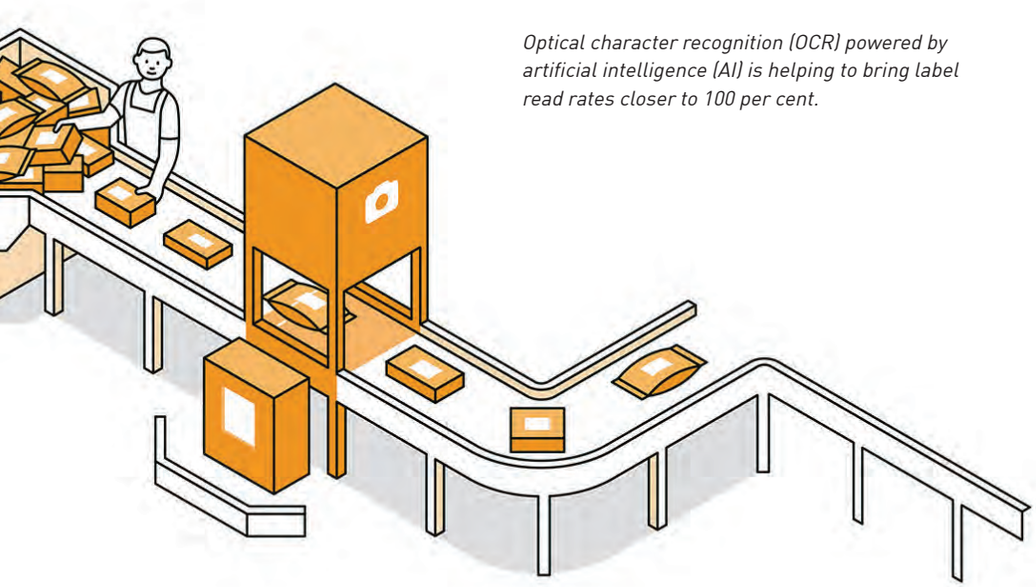




For any inbound or outbound warehouse logistics process, efficiency and profitability rely on moving items to the correct destination in a minimal amount of time. Labels help achieve this, but what if they cannot be read? In the past, manual intervention following a "no-read" was inevitable. However, optical character recognition (OCR) powered by artificial intelligence (AI) provides a modern, automated solution. Prime Vision specialises in this technology, with its tailored Text Vision system ideal for complex, high volume logistics. Mathijs Baron, international sales & business development, and Feifei Huo, R&D engineer at Prime Vision, look at how OCR powered by AI helps to bring label read rates closer to 100 per cent.

There is a lot of data contained on a label, like addresses, barcodes, expiration dates, dates of production, stock keeping unit (SKU) numbers, batch codes and more. Depending on a warehouse operation, all of this information is potentially critical for the sorting process.

Labels are usually read when items pass through camera tunnels as part of a checking procedure, providing actionable information such as where the item needs to go as well as



Optical character recognition (OCR) powered by artificial intelligence (AI) is helping to bring label read rates closer to 100 per cent.

other crucial data for the logistics process. However, expecting a perfect read every time is unrealistic. Labels can be obscured or damaged, which results in a 'no-read'. While these may constitute a minority, in a high-volume warehouse operation, they stack up quickly.

Until recently, a label no-read usually resulted in a slow, costly manual intervention to move the item back onto the right path. OCR provides a solution. By enhancing imagery from cameras and harnessing customer information to reconstruct and identify key data strings on damaged or obscured labels, the technology dramatically improves read rates. Furthermore, it can achieve this fast enough for a fully automated process.

Deep learning improves read rates

Prime Vision has developed its OCR technology since it started reading damaged labels for postal services 20 years ago. Its current Text Vision solution differentiates itself by the innovative use of deep learning AI. Whereas many OCR solutions will bring read rates up to 95 per cent or so, Text Vision can push this up to 98 or 99 per cent in real world applications.

Text Vision operates by taking images of labels, enhancing them in pre-processing, and then finding the appropriate text block or data string that needs to be read. Text is then extracted and assessed by AI, which uses logic to find the best result. Following this reasoning, a successful read is achieved, enabling a relevant action to be taken without interrupting the automation process.

To make this possible, the AI must be trained through deep learning to identify the correct region of interest containing the relevant field or data string on the label. The system is taught using real world examples of customer labels, so it focuses on the right area. AI can also cross reference extracted information with databases to help with reconstruction. Ultimately, OCR can be optimised to each operation, ensuring that it is applicable to any automatic sorting system.

IN THE FAST LANE

While reducing no-reads is important for large logistics operations, as with any warehouse process, the efficiency of the system is vital. The key principles are to read more, read faster and make fewer errors. Prime Vision approaches these challenges with a dedicated research and innovation team that actively experiments and tests the latest technology to unlock new levels of OCR performance.

Identifying barcodes can be achieved quickly with existing scanning hardware, but to reduce OCR computation times, Prime Vision recommends a dedicated GPU processor. The faster processing speeds mean that even if an item suffers a no-read, it can be solved in such a short timeframe that no manual intervention is required. Instead, the system can respond automatically, seamlessly moving the item onto the next stage of the process in a quick and cost-effective manner.

WORTHY OF THE LABEL

With its inherent speed and reduction of no-reads, OCR is incredibly valuable for high volume logistics. During peak periods, it saves time and money by greatly reducing manual intervention. The AI technology powering Text Vision allows OCR to be further optimised, eating into the last five per cent of complex label no-reads to provide a proportionately larger benefit to high volume operations.

To compound this, Text Vision is designed for versatility. Specially attuned to meet different data strings, regions of interest and accuracy requirements – Text Vision has the adaptability to improve the throughput and efficiency of any operation, regardless of complexity.

Prime Vision
primevision.com

AQUAPAK WINS 4EVERGREEN'S AWARD FOR ADDRESSING RECYCLING CHALLENGES

Aquapak Polymers has won 4evergreen's award for addressing recycling challenges, part of its Circular Success Stories, which celebrates breakthrough projects and can serve as inspiring examples of fibre-based packaging circularity and sustainability. Specifically, Hydropol, a water-soluble, biodegradable polymer technology based on polyvinyl alcohol that can be extrusion coated or adhesive laminated as a film onto paper, which has been developed by Aquapak, has been recognised for its ability to address crucial recycling challenges.

4evergreen is a European alliance of over 100 manufacturers, designers, brand owners, researchers and recyclers who represent the entire supply chain and want to contribute to a climate neutral society by perfecting the circularity and sustainability of fibre-based packaging. Its goal is to reach a 90 per cent recycling rate for fibre-based packaging by 2030.

Developed and manufactured in the UK, Hydropol is soluble, non-toxic to marine life. Products made with Hydropol are safe for existing recycling processes and are fully biodegradable, leaving no trace or harmful plastic pollution should they enter the environment.

As an enabling technology, Hydropol can be used on its own or in combination with other materials to enhance recyclability, compostability and end-of-life options. Its material properties allow for scalability into diverse types of products and its solubility makes it easy to separate from other materials when recycling. For example, it can be extrusion coated onto paper or board giving strength and barrier properties against oxygen, oil and grease then made into a multitude of different applications.

4evergreen has undertaken an independent scientific assessment of Hydropol technology using its Recyclability Evaluation Protocol – the European gold standard for assessing paper recyclability. It shows that not only does Hydropol provide barrier properties and functionality to paper, but it aids the recycling of paper with 100 per cent recovery of fibres.

Aquapak Polymers
www.aquapakpolymers.com

THREE STEPS BUSINESSES NEED TO TAKE FOR SUSTAINABLE PACKAGING SAVINGS

Formulating your sustainable future for packaging requires a strategic approach that will balance the environmental and commercial factors involved. Whilst there may be some short-term investment required to make this transition, Roger Wright, waste strategy and packaging manager for sustainable waste management company Biffa, urges businesses to lean into the long-term benefits and cost control that can be achieved as a result.



It is now more important than ever for businesses to consider how their packaging contributes to their commercial and sustainable performance. With Extended Producer Responsibility (EPR), the upcoming waste management policy for packaging, set to hold businesses financially accountable for the packaging materials they bring to the UK market, it is hard not to see cost saving strategies and sustainable goals as contrasting objectives.

According to a new survey by Biffa in partnership with YouGov, more than one in three (36 per cent) businesses state 'cost' as their biggest barrier to sustainability. But this does not have to be the case. By implementing a simple three-step strategy in packaging optimisation, your savings and sustainability goals can work in harmony and not in opposition.

STEP ONE: CLASSIFY

Firstly, businesses must make sure they properly classify and understand their packaging's life cycle. Biffa's survey found that 47 per cent of the materials responders listed in the 'Other waste' category could be collected as Dry Mixed Recycling. Understanding the waste packaging creates is key to unlocking its reusable and cost-saving potential. EPR regulations will offer businesses a much-needed framework for data gathering.

Under EPR, producers or brand owners will be legally obligated to take financial responsibility for the collection, recycling, and proper disposal of any materials they place on the market. The new rules aim to inspire a more transparent approach by creating accountability for those materials, as outlined in our Practical Guide to EPR.

Whilst EPR fees have been delayed to October 2025, the policy mandating packaging data collection has not, and how businesses categorise and collect data on their packaging in the future will therefore be defined within the framework of EPR.

The most significant benefit for any sector adapting to these requirements will flow from what the data reveals. In our experience, great data can show where businesses can have the most impact, both commercially and reputationally. From this comes further opportunities to amplify the good and design out the bad.

STEP TWO: SIMPLIFY

Next is applying the data to improve packaging's sustainability. This is not necessarily as easy as switching to a more recyclable packaging material; these could counteract cost savings by being heavier or harder to source, or not fit for purpose. In a policy environment with many unanswered questions, businesses face the dilemma of improving the sustainability of what they already have vs creating something new from scratch.

Biffa's philosophy, and the solution, are simple: the best waste is the waste you do not create. Simplification is as much about stripping away unnecessary packaging as it is about making it widely recyclable. Trimming down the volume of unnecessary packaging a business creates within its different packaging levels is an effective place to start.

Right-sizing the primary and secondary packaging involves selecting the appropriate dimensions for the packaged product and minimising empty space to match the product's size: the less space that is needed, the greater the cost saving.

Supply chain efficiency can contribute to cost mitigation by implementing transit and tertiary packaging designs that are stackable, nestable and reduce logistical costs like storage and transportation. Efficient packaging designs can also minimise damage during transportation, reducing product replacement costs.

Finally, look to reduce primary packaging with complex multiple layers or combinations of material that can be challenging to recycle for the end user. Optimising packaging in this way to make it easier to separate means it is more likely to be recycled correctly and responsibly.

Sustainable packaging focuses on using materials with a lower environmental impact. Using recycled or recyclable materials can help reduce the volume of raw materials needed for production over time, trimming the associated costs. Meanwhile harmonisation – squeezing even more incremental value from the packaging when it enters waste management – can enhance this process even further.

STEP THREE: BUTTERFLY

A circular economy for packaging requires businesses to recognise and account for how their packaging interacts with the wider world. Where materials come from, and how well they can be recovered or disposed of, plays a huge part in curbing the carbon cost of the packaging sector and the financial burden of inaction.

To make this a reality, we must look to the Ellen MacArthur Foundation's Circular Economy



principles – also known as the Butterfly Diagram, which depicts a non-linear system explaining exactly how a circular economy should work. It prioritises inputs from renewable sources and loops of use and consumption wherever possible, reducing the amount of materials we dispose of and never letting them leak into the environment.

Circular sustainable packaging therefore must consider the potential for reuse or a return to nature. Packaging designs that allow for this or have secondary functions beyond product containment promote a circular approach. Businesses can use materials that are widely accepted by recycling facilities, and are easy to separate. Providing clear recycling instructions via packaging labels will also help end users to ensure the packaging is recycled

A good example of this is milk bottle packaging, which was optimised in the switch from glass to HDPE plastic, making the packaging strong, lightweight and fully recyclable. The more recent switch to clear caps harmonised the change, generating a higher yield of recycled polymers for future packaging products.

If businesses build on the circular success stories of other products, challenge the role of packaging and find formats and materials that make them truly circular, then a cost-saving sustainable future is possible.

Biffa
www.biffa.co.uk



Benefit from the comprehensive DC 24 V circuit protection solution for mechanical and plant engineering. The REX system combines power supply, communication, circuit protection and power distribution in one system.

YOUR BENEFITS:

- **Increased machines availability:** Clear error detection, high transparency and remote diagnosis
- **Flexibility:** Easy assembly, modularity and convenient adjustment
- **Time saving:** Innovative and flexible connection technology
- **Cost efficiency:** No further accessories necessary

E-T-A Circuit Breakers Ltd.
+44 (0) 1296 420336
info@e-t-a.co.uk

www.e-t-a.co.uk

E-T-A®
ENGINEERING TECHNOLOGY

Factory & Handling
« SOLUTIONS »

*Download the app for **FREE**!*



Available on the App Store

Search "Factory & Handling" in the App store or Google Play

ANDROID APP ON Google play

Wrap smarter with the perfect pair.



NO MORE BACK PAIN

GUARANTEE CONSISTENCY

REDUCE LABOUR TIME

REDUCE FILM USAGE

AERO by springpack

X

ARMOUR WRAP by springpack

EYES ON THE FUTURE:

THE PACKAGING INNOVATIONS & EMPACK 2024 SHOW PREVIEW

With dozens of top brands confirming their attendance among an expected 7,000 visitors, and over 400 exhibitors showcasing the brightest and the best the packaging industry has to offer, Packaging Innovations & Empack 2024 is proving to be the hottest ticket in town...

With the final preparations and countdown to the UK's flagship packaging exhibition well and truly underway, organisers Easyfairs believe that all things point to February's Packaging Innovations & Empack being its most successful yet.

The two-day packaging showpiece is set to get underway on 21 and 22 February, and Easyfairs indicates that the largest annual event in the UK will likely grow in size and scale once again. A bumper crowd of over 7,000 visitors is expected, with dozens of representatives from top brands filing past a capacity of 400 of the world's biggest suppliers, who will be waiting to showcase the latest innovations on offer.

Exhibitor places are sold out ahead of another blockbuster show, with exhibitors preparing to network with brands such as Aldi, Asda, Britvic, Boots, Cadburys, Costa Coffee, Diageo, DHL, Heinz, Holland & Barrett, Hovis, Iceland, KFC, M&S, Molson Coors, Nestle, Oh Polly, Sainsbury's, Sky, Superdrug, TATA, Tesco, Unilever, and Waitrose.

The big-name brands turn out to explore the diverse array of suppliers offering a comprehensive range of packaging products and services, spanning from design to cutting-edge primary and secondary packaging, contract packing, e-commerce fulfilment, labelling and printing, and advanced packing and processing technology.

INSIGHTS FROM ACROSS THE WORLD OF PACKAGING

But what else can visitors expect to see at Packaging Innovations or London Packaging Week? Well, they are not just your typical tradeshows. In addition to the impressive showcase of exhibitors, there is an inspiring line-up of speakers across two days and three dedicated event stages – the Innovation & Design Stage, the Supply Chain & Manufacturing Stage, and the Circular Economy stage.

With over 30 free-to-attend sessions, panels, interviews and more, the conference programme promises to aid registered visitors with their packaging objectives through educational content and pioneering solutions from various industries, markets, and professionals.

Speakers include the leading voice on innovation and creative thinking Ben Edmonds, who spent twelve-and-a-half years at the cutting edge of new product innovation as principal engineer at Dyson. He will deliver his unique session titled 'Innovation & the Power of YET: Releasing your full potential' on the Innovation & Design Stage.



Meanwhile, Julien Tremblin, general manager of TerraCycle Europe, a global leader in repurposing non-recyclable post-consumer and post-industrial waste, will deliver his 45-minute keynote called 'Sustainable Packaging: Solutions for right now and the future' on the Circular Economy Stage.

These conference theatres will also play host to engaging, lively debates that seek to unpick the key questions of today's industry. One such panel takes place on the second day of the show, and sees Zoi Roupakia, research associate at the Institute for Manufacturing, University of Cambridge, moderate a Women in Manufacturing panel on the Supply Chain Stage. The panellists are Emma Verkaik, CEO of the BCMPA, Jo Stephenson, managing director of Print & Packaging B2B marketing specialists PHD Marketing, Nicola Peacock, senior relationship manager at The Printing Charity, and Nicola Jones, manager, Steel Packaging Recycling, at TATA Steel, making for what should be an eye-opening discussion.



"Engaging presentations by industry professionals on three distinct stages will provide attendees with unparalleled insights into the sterling work that goes on right across the packaging supply chain," says Naomi Stewart, marketing manager at Easyfairs.

"Not only will it spark creativity in the packaging sector for 2024 and beyond, Packaging Innovations & Empack comprehensively addresses every facet of the packaging journey, uniting a range of experts from diverse industries," she continues. "So, if you're looking for an opportunity to network,



discuss the latest developments, or grow your business, showcase your products and cultivate high-quality leads, look no further than Packaging Innovations & Empack 2024."

INSPIRING THE FUTURE

One thing you can always count on in the packaging industry is that things move quickly. The future is always just over the horizon. That is why the Future Trailblazer showcase has quickly become a highlight of the Packaging Innovations programme.

This special event honours individuals driving creativity in their respective categories, making it a must-see for attendees who like to keep one eye on the future. Meanwhile, the Packaging Showcase celebrates those pioneering innovations, giving visitors a glimpse of the future – and the chance to network with the bright young talent who will make it happen.

"There's no better way to learn about the future than by learning from those who will go on to shape it. This event will be a must-see for anyone wishing to get ahead of the curve in today's fast-paced, ever-changing market," adds Stewart.

The essential annual event promises to catalyse business opportunities, drive innovation across the whole packaging journey, and dig into the topics that matter most across its packed event schedule.

With demand set to soar as we move to within a month of the opening day, potential visitors are urged to register their attendance today.

Packaging Innovations & Empack
www.packagingbirmingham.com



JD DEPLOYS ‘RIGHT-SIZE’ AUTO-PACKAGING FROM SPARCK

Leading sports fashion retailer, JD, has embarked upon a programme of investment into Sparck Technologies’ advanced right-size auto-boxing systems. After the initial installation of one of Sparck’s CVP Impack systems at the retailer’s Rochdale DC in 2021, the company has now taken delivery of a top of the range CVP Everest, as part of JD’s fully-automated ecommerce DC in Derby.

The CVP Impack at JD’s Rochdale facility has been successfully packing online orders at a rate of up to 500 boxes per hour – automatically creating made-to-measure boxes precisely to the optimum dimensions required for each and every order.

Confidence in the efficiency of Sparck’s right-size boxing technology, gained at the Rochdale DC, led the retailer to upgrade to a high-speed CVP Everest machine – capable of creating and boxing 1,100 single or multiple-item orders per hour – at its new Derby fulfilment centre. The latest investment by JD is part of an on-going partnership with Sparck Technologies, with exciting ‘market-leading’ innovations to come.

Commenting on the decision to invest in high-speed fit-to-size packaging technology, Paul Stokes, head of Automation and Engineering at JD, says: “Having experienced the speed, reliability and performance of Sparck Technologies’ CVP Impack machine at our Rochdale DC, we are confident that right-size boxing technology is a key capability for the future – offering major benefits in fulfilling ecommerce orders in a cost-efficient and sustainable way. We believe this is the start of an exciting partnership with Sparck.”



The CVP packaging systems are highly flexible, capable of producing tailor-made packages at speed, whilst being able to cater for single or multi-item orders with differing product profiles.

Jo Bradley, business development manager for Sparck Technologies in the UK, says: “We are delighted to be partnering with one of Europe’s largest retail brands and we look forward to working with them on fulfilling their growth objectives for the future.”

With the capability to tailor-make up to 1,100 boxes per hour, for multiple or single item orders, the CVP Everest and CVP Impack packaging systems offer automated solutions for ecommerce operations challenged by increasing order volumes and growing demands for sustainable packaging solutions. With installations across Europe, the US and Canada, the CVP Automated Packaging Solutions effortlessly create, fill, fold and label each parcel in one seamless process – reducing package volumes by up to 50 per cent, cutting cardboard usage by 30 per cent and eliminating the need for void fill.

Sparck Technologies
sparcktechnologies.com

AN EXC
NEW PART
FROM DATATEAM I

ELECTRONICSLIVE &

MEET OUR I



www.electronicslive.uk

AND MAN

CITING
TNERSHIP
BUSINESS MEDIA

INSTRUMENTATIONLIVE

EXHIBITORS



NY MORE...

www.instrumentationlive.co.uk

CAN THE LOGISTICS TRANSPORTATION INDUSTRY THRIVE BY CONNECTING THE PHYSICAL AND DIGITAL WORLDS?



Earlier this year, Trimble completed its acquisition of Transporeon, combining the two companies' North American and European expertise, and enabling the creation of a unified, global transportation management platform that transforms the way the world works. Christopher Keating, senior vice president of Trimble Transportation Europe explores this connection in the following article, as he looks at how the industry can become a digital leader.

Transporting goods from A to B requires close collaboration between shippers, carriers, logistics service providers and recipients. In many ways, how these stakeholders interact with each other and conduct day-to-day operations has remained largely unchanged for the past decade (or more). After all, the industry often still relies on phone conversations, lengthy email chains, paper documentation and manual reporting to coordinate the smooth movement of freight.

But with a raft of digital technologies now available, this is no longer the best approach. Companies could be much more efficient if they embraced 'phygital' – the seamless integration of physical and digital systems to enhance their operations. So, what is holding the industry back from integrating the physical and digital worlds? And where could companies see meaningful gains from adopting a phygital approach?

OLD HABITS DIE HARD

Technologically speaking, much of the logistics transportation industry is stuck in the past, operating a patchwork of disparate tech solutions combined with legacy paper-based processes.

Why? Well, put simply, old habits die hard. Archaic import and export rules (e.g. countries stipulating the use of physical stamps to authenticate and authorise documents) have, until recently, forced companies to continue using paper. Meanwhile, a lack of 'universal standards' for digital solutions means that companies have taken vastly different digitalisation trajectories over the past decade. This results in siloed tech stacks that cannot 'communicate' with each other, making it hard for companies to accurately understand their order and capacity situation and see whether processes are flowing seamlessly – among other challenges.

The solution? A standardised approach to digitalisation based on a collaborative network, rather than companies working in isolation. Also known as a 'platform approach', standardisation provides the foundation for a phygital future, enabling the creation of a transportation network spanning the entire industry. By connecting shippers, carriers, logistics service providers and other stakeholders, companies can simplify communication and slash manual administrative work.

A collaborative approach also enables data-driven decision-making, with companies benefiting from a vast pool of insights that helps all parties get ahead. In the short term, companies can use this data (combined with a high level of automation) to minimise dwell times, optimise yard operations and more. On a long-term basis, it can be used to train AI models to create tools for autonomous procurement or quotation, real-time ETA and everything in between.

NEW CHALLENGES REQUIRE NOVEL SOLUTIONS

Embracing a phygital approach will not just help shippers and carriers enhance overall efficiency, it is also crucial to helping the industry tackle emerging challenges.

Decarbonisation is arguably the greatest of these, as companies face pressure from governments, end users and fellow industry participants to slash carbon emissions. Sustainability is now impacting the bottom line, with shippers increasingly contracting carriers based on their sustainability credentials, offering extended freight contracts to environmentally responsible companies, and even paying a premium for lower carbon transport.

Decarbonisation is not just about investing in expensive, cutting-edge technologies. Companies can make significant progress by implementing digital tools that enhance visibility into existing inefficiencies. With real-time data, they can reduce empty mileage, tackle lengthy dwell times, train employees on sustainable driving practices and combine transport modes to minimise emissions. Again, this is more effective when done collaboratively. For instance, it is much simpler for carriers to reduce empty mileage by finding a return load if they are operating as part of a wider

network (rather than in a silo). All they have to do is inform the network when they've delivered their shipment, and wait for a match from a shipper looking for available capacity.

Another challenge currently facing the industry is the ongoing driver shortage, caused by an ageing workforce and increased demand for logistics services. With driver recruitment set to remain a persistent challenge, shippers and carriers must put their people first. This means taking tangible steps to lessen the administrative burden on drivers and minimise time spent waiting in yards, at ports and in traffic, as well as using tools and technologies to alleviate process-related stress .

To do so, shippers and carriers must first understand where there is room for improvement. Digital tools can play a crucial role, with companies increasingly turning to real-time insights to uncover hidden inefficiencies and improve visibility by tracing deliveries. In particular, shippers and carriers can make significant efficiencies within the warehouse loading and unloading process, and by automating time slot and yard management processes. This can reduce waiting times from hours to minutes, freeing drivers to spend more time on the road.

THE WAY FORWARD

So, should the logistics transportation industry prepare for a phygital future? In short, yes. Companies already have all the necessary digital tools at their disposal, but success hinges on selecting and implementing them intelligently.

When companies embrace a true phygital approach, they can forget about optimising individual processes, and look holistically at improving their entire system. By embracing platform-based technologies to enhance their physical operations, they can be more efficient, improve visibility and make better decisions. This will help to reduce costs, improve efficiency, and meet customer demands, especially when tackling rapidly evolving challenges like decarbonisation and personnel issues.

Transporeon
www.transporeon.com



OPTIONS FOR SUSTAINABLE WAREHOUSE AUTOMATION

Can warehouse automation advance sustainability? Dan Migliozzi, head of sales at independent systems integrator, Invar Group, looks at the options available.





Logistics and supply chain professionals are increasingly concerned about the sustainability of their operations, and in particular, about the environmental performance of their warehouses and DCs. Furthermore, they have to be. Their customers are demanding ever greater and more demonstrable levels of sustainability.

This applies across the board, from how their facilities are constructed, to impacts on land use, hydrology and infrastructure requirements, transport movements generated, and of course how the facility itself is equipped and operated. As labour becomes scarcer, many businesses are considering automating warehouse processes. So, a big question for a growing number of companies is, can automation be used to advance sustainability within the warehouse?

Applied appropriately, higher levels of automation should lead to greater efficiency, less waste – including but not confined to fuel and energy – and therefore a more sustainable operation. In practice, things are not quite so clear-cut. Automation that is poorly thought out, mis-directed, inappropriately scaled, or implemented with substandard equipment, can impact both operational and environmental performance. However, a well-planned and implemented automation project can yield many sustainability benefits.

A big question is, should the automation be housed in an existing building, or is a new build designed around the requirements of automation a more sustainable solution?

A new build obviously generates a lot of carbon and uses other resources in its materials and construction. Also, a greenfield site will almost certainly impact the 'natural' environment, may influence drainage and groundwater and requires new infrastructure. But a new build can be designed to accommodate sustainability features such as solar panels, heat pumps, wind turbines, energy-conserving doorways, airlocks and insulation.

However, automation in an existing building may make better use of space, removing the need for physical expansion or any need to move. Exactly which option works best is a complex equation and depends on the long-term strategy of the business.

Whether in a new build or refurbished premises, automation can create many other sustainability benefits beyond the walls of the shed. More accurate and timely order fulfilment can reduce the size of truck park required – fewer acres under concrete. And to the extent that headcount is reduced, that is fewer staff bringing in and parking private vehicles.

Automation can lend itself to, at least partial, 'lights out' operation, if appropriate, saving considerable cost and energy. Incorporating a sophisticated Building Management System which optimises the needs of manual and automated operation can yield real cost and sustainability benefits.

So, what are the sustainability issues to consider when selecting the technology? Sourcing/procurement is one area to take up with the vendor or integrator. Are machines and materials traceable to suppliers with acceptable records on their own sustainability? How much power is consumed per unit of output? Does the design of the automated system minimise the number of motors in use? Is the most energy efficient technology being considered? Could gravity be put to good use? Do control systems allow lower power consumption at times of light usage? What recharging facilities and procedures are used for Autonomous Mobile Robots (AMRs) or other electric powered vehicles?

Unpowered elements also matter. Do conveyor components have the lowest coefficient of friction? This can make a huge difference – we know an installation where low friction belts saved 65 per cent of power consumption which, given there were seven miles of conveyor, amounted to 20 per cent of the consumption of the whole building.

Reputable integrators and vendors should supply reliable estimates of energy consumption, related to levels of usage as part of the bidding process. They should also detail their approach to SCADA (Supervisory Control And Data Acquisition) or other approaches to monitoring energy use as part of the control system for the automation. In use, this should be able to highlight areas where power consumption is high, perhaps pointing to a need for better equipment or different modes of operation.

This approach may also uncover areas where performance is deteriorating. Vendor equipment comes with detailed Preventative Maintenance schedules for good reason – it is not just a ploy to ramp up spare parts sales – which, incidentally, should always be authentic parts even if they are more costly. Without proper maintenance, performance will inevitably deteriorate, and sustainability will diminish, quite possibly ending with an expensive line stoppage.

Taken all together, the potential for automation to deliver real sustainability, as well as economic gains, is clearly evident.

Invar Group
www.invargroup.com

RITE HITE ADVISES ON HOW BEST TO 'CLOSE UP FOR WINTER'

Rite-Hite, the Loading Bay safety and environmental control business, is urging customers to think about their current operations and any gaps – literally and metaphorically – in their current thinking to maintain a safe, efficient and productive loading bay throughout the winter months.

It highlights in particular the steps businesses can take to reduce lost energy and increase employee safety and wellbeing.

Thorsten Mauritz, the marketing manager for Rite-Hite in Europe, says Loading Bays are hostile environments at any time of the year, but especially in the winter: "When you think about it, each Loading Bay door opening (typically ranging from 8'x8' to 10'x12' or larger) represents a giant hole in the wall of your facility. Strung together, these dock openings present an enormous opportunity for bad things to enter your facility during the loading or unloading of goods – like wind, rain, snow and rodents – and good things, like expensive heating and cooling energy, to escape.

"Anything a company can do, therefore, to ensure a complete and tight seal at every dock door, can have an immediate positive effect."

Weather-related product damage and contamination, employee comfort and safety, facility hygiene and cleanliness, air quality, maintenance of product quality characteristics and passing inspections are all concerns related to protecting and controlling the environment at the Loading Bay.

Even small, unsealed gaps, like hinge gaps of swing-open trailer doors, for example, can add up to significant costs: "Fortunately, highly effective dock sealing products from Rite-Hite exist that can be designed and installed quickly to make sure docks are sealed up tight and your people, products, processes and profits are protected," Thorsten adds.

Thorsten also highlights the additional challenges that winter weather can bring from both a health and safety perspective. Lighting at the loading bay, for example, can be pivotal in keeping the area safe in the dark mornings and late afternoons during the winter months. Within the trailers themselves, dock lights, such Rite-Hite's Flex Neck HD-LED, are vital in illuminating a trailer or container at the loading bay. Such dock lights should be equipped with additional safety and energy-saving features, such as a variable light output and auto-dimming features that sense when a forklift or person exits a trailer and dims the light to reduce glare.



On the exterior of the loading bay, ancillary lights are available that mimic the red/green light system of control boxes. Helping to communicate the 'restrain status' to drivers, these new lights have been developed to maintain line-of-sight communication regardless of obstructions in front of mounted lightboxes.

Industrial HVLS Fans which keep a facility cool in the summer also have the opposite role in winter to keep a facility warm, and automated wheel locking systems – such as the Global Wheel-Lok – can help prevent serious accidents associated with snow and ice.

"Traditional wheel chocks tend to be unreliable, especially in poor weather conditions, and are often not strong enough to prevent a vehicle from pulling away unexpectedly," Thorsten continues. "They also require someone to physically manhandle them into position and remove them after use, and that can be incredibly dangerous when the ground is icy.

"We want to highlight these and other challenges associated with winter, and the positive benefits that addressing these challenges can bring."

Rite-Hite
www.ritehite.com/en/eu



FOR 3PLS THE ONLY WAY IS ETHICS



Any 3PL that neglects the important role that business ethics and a demonstrable commitment to sustainability now play across the commercial world can expect to struggle, says Charlie Walker.

A logistics service provider's ability to demonstrate that it operates in an ethical way and is genuinely committed to social justice and environmental sustainability is becoming as mission critical as the quality and cost of the range of picking, packing and distribution services it offers.

This is being driven, in part, by the response of companies operating across a range of business sectors to a growing societal trend that demands the highest standards of ethical conduct as well as environmental responsibility. Quite simply, modern businesses – from retailers to house builders - now expect their supply chain partners to prioritise the environment along with such virtues as fairness, diversity and tolerance in their commercial dealings. For 3PLs failure to do so might not only mean risking reputational damage but could also see revenues shrink as potential new clients – as well as existing customers - opt to take their business elsewhere.

So, planning and implementing an effective ESG (Environmental, Social and Governance) strategy is now considered a top priority for every 3PL – from the biggest multi-national player to the many thousands of SMEs that collectively dominate the UK's logistics landscape.

At Walker Logistics we have just started out on our ESG journey. Environmental considerations have driven much of what we do for a long time and it is pleasing to see how ecologically efficient many of our existing processes and operations already are. But there is still much that we can improve upon. For example, we are in the process of deploying tooling that will allow us to accurately monitor how much energy we use to run different parts of our operation. By increasing awareness of the environmental implications of certain activities we will be able to implement changes that will not only make us 'greener' but also (in theory, at least) reduce operating costs.

We are also developing a net zero strategy. While I do not believe that any organisation on the planet can claim that its operation achieves absolute net zero status, this doesn't mean that companies such as Walker cannot contribute to global net zero targets by reducing emissions and eliminating waste where possible from our day-to-day activities. We have set ourselves a short-term target of halving our emissions by 2030 and, looking further ahead, we hope to see a total emissions reduction of 90-95 per cent by 2050.

There is no doubt that sustainability is one of the key new fronts on which logistics companies must compete and it is something that is certainly going to have a significant impact on every business's long-term viability. It is no longer enough to 'green wash' environmental performance or treat issues such as diversity and inclusion in the workplace as another 'box ticking exercise'. Any 3PL that neglects the important role that business ethics and a demonstrable commitment to sustainability now play across the commercial world will struggle in the very near future.

Walker Logistics
www.walkerlogistics.com

STERTIL FAST-ACTION DOORS PROVIDE SWEET ACCESS SOLUTION

One of the UK's leading food and confectionery manufacturers relies upon a pair of Stertil FlexiEdge fast-action doors to provide access to a fork truck drivers' training facility and a stores area within its manufacturing and distribution complex in York.

The new Stertil doors replaced two existing solid sliding doors that were not only heavy and cumbersome but also difficult to open and close. By contrast, the new Stertil FlexiEdge M2P doors, which measure 3,800mm wide x 4,300mm high, are lightweight, durable and easy to operate.

Stertil's FlexiEdge range comprises 16 models of many different types and styles including internal and external doors, all-weather doors, cleanroom and freezer/coldroom doors plus emergency exit doors incorporating breakthrough curtains. Standard models are available in widths up to 11 metres and heights of 5.5 metres whilst bespoke and special sizes may be specified. Also, the range provides standard travel speeds up to 2.7 metres per second (opening) and 1.2 metres per second (closing) to shorten work cycles and increase productivity.

The door curtain is fully flexible with a soft bottom edge which not only self-adjusts to seal on an uneven floor but also avoids any possibility of causing injury to users. In addition, the incorporation of an infra-red photocell, fitted 300mm above floor level, supported by a bottom edge wireless detector ensures instant halting of all door movement in the event of sensing an obstruction of any kind. Also, the flexible soft-edge curtain provides maximum resistance to damage caused by a vehicle collision. If the door edges are knocked out by the collision, they are automatically re-inserted in the side guides as the door opens.

A wide range of activation systems allows maximum versatility of FlexiEdge doors in many different applications. Alternatives to the standard push button pads include wired and wireless pull cords, key switches, induction loops, photocells, radar, radio or infra-red transmitters, presence detectors and touchless hand-wave detectors.

Stertil Dock & Door Products
stertil-dockproducts.co.uk







CONNECTED TRUCKS

Jungheinrich is connecting its fleet by equipping all its new trucks with telemetry units as standard. This enables customers easy access to the Jungheinrich Fleet Management System (FMS), starting with the entry level Starter Kit.

Jungheinrich is continuing to drive forward the digitalisation and networking of intralogistics by equipping all newly ordered trucks produced in its European plants with telemetry units as standard. Jungheinrich trucks are fully networkable and ready for intelligent integration in the warehouse. With the help of the Jungheinrich FMS fleet management system, customers can use this data to optimally deploy their fleet.

"Data is one of the most valuable resources in the warehouse today. We are now making this data easily and efficiently usable by our customers," says Phil Pearson, sales management director at Jungheinrich. "Connectivity is an essential key to further optimising intralogistics. By processing information better and faster with our Jungheinrich FMS, we make our customers' warehouses even more efficient."

Thanks to the telemetry units and Jungheinrich FMS, Jungheinrich customers receive real-time data on the condition and use of their trucks, enabling them to optimally manage their fleet. Data transmission to the Jungheinrich Cloud takes place via a mobile connection or Wi-Fi.

"When our customers agree to share the usage and vehicle data of their trucks with us, we can access important insights into the actual use of the industrial trucks. This enables us to tailor our range of solutions even more personally and individually to our customers' needs," says Pearson. "This includes, for example, remote diagnostics for the targeted reduction or avoidance of downtimes through more efficient service, or intelligent energy solutions as the basis for cost- and consumption-optimised energy management."

Jungheinrich
www.jungheinrich.co.uk

AUTOMATING SARTORIUS STEDIM BIOTECH'S FUTURE LOGISTICS FACILITY

Jungheinrich will provide a complete range of automated equipment for Sartorius Stedim Biotech, a leading partner to the biopharmaceutical industry. With the acquisition of arculus (in 2021), the Storage Solution Group (in early 2023) and the complete acquisition of Magazino (in August 2023), the intralogistics expert from Germany Jungheinrich has placed automation at the heart of its growth strategy, and continues to roll out its automated solutions through this new contract.

Within this collaboration, Jungheinrich will be installing a state-of-the-art automation system in the future logistics facility at Sartorius Stedim Biotech's headquarters in Aubagne, France. Construction is due to start this year. Through this partnership, Jungheinrich is helping Sartorius' logistics to evolve significantly, increasing efficiency, flexibility and productivity.



Scheduled to open in early 2025, the new logistics facility will include a range of Jungheinrich equipment, such as a high bay racking warehouse served by three automated very narrow aisle trucks of the type EKX 516ka, an automated miniload warehouse and a network of pallet/bin conveyors. Also, a buffer storage in which working stations are supplied according to the goods-to-person principle will be built. The connection to the production area is also automated via mobile robots of the type EKS 215a. In addition, the entire facility will be controlled by Jungheinrich's Warehouse Control System.

"We are proud to offer Sartorius Stedim Biotech a complete logistics solution to match its ambitions. Supplying a production line, particularly in the pharmaceutical industry, is a major challenge to ensure quality, hence the importance of having a reliable, scalable and flexible automated installation", states Sylvia Monteagudo, sales and business development manager, Automated Systems, at Jungheinrich France.

"This new facility will enable us to streamline our logistics processes, reduce order processing times and increase our storage capacity. Thanks to the automation of our site, we will be able to accelerate our response to growing market demands, increase our competitiveness and offer an even more reliable service to our customers", explains Valentin Currmi, head of Logistics Projects, at Sartorius Stedim Biotech France.

Jungheinrich
www.jungheinrich.co.uk

PROTECHNIC
AN ENGELS GROUP COMPANY



PROTECHNIC LTD, YOUR WAREHOUSE AND FACTORY SUPPLIER

A COMPLETE RANGE FOR YOUR LOGISTICS, WAREHOUSE AND WASTE MANAGEMENT



- **Increase your warehouse efficiency:** A comprehensive range of storage bins, crates, containers, and plastic pallets.
- **Sustainability meets logistical solutions:** Protechnic offers high-quality warehouse and factory solutions.

ENGELS
www.engels.eu



sales@protechnic.com (+44) 01275 811 310 www.protechnic.com

Flexible online training from Mentor is helping managers to keep sites safer and more profitable...

MANAGING FORKLIFT OPERATIONS SAFELY



With exceptionally high conviction rates and record fines resulting from HSE prosecutions, the pressure on managers to prioritise site safety has never been greater.

Now more than ever, the need for managers to understand and fulfil their requirements is evident, which explains why the Managing Forklift Operations e-learning course delivered by Mentor FLT Training is proving so successful.

"It has exceeded our expectations, with literally thousands of managers signing up," explains Stuart Taylor, managing director of Mentor. "The course has been developed specifically to help managers overseeing forklift operations understand and meet their responsibilities for day-to-day safety. And, because it is an e-learning solution, it has made this vital training more accessible, with busy managers able to train when and where they choose, fitting training around their daily demands."

As a result, the AITT-approved course has been adopted by businesses of all types and sizes across a wide range of industries, with some making it a mandatory requirement for all managers, and others even rolling out the course as part of a worldwide forklift safety programme.



Larger organisations have opted for Mentor's licensed version of the course, which allows for integration with a company's own learner management systems. This has granted them easy access to their own reporting data and helped them to keep all training records in one place for convenience and consistency.

"Managers and supervisors drive a site's culture and determine its norms, but the skills required to do so successfully cannot simply be 'picked up on the job'," adds Taylor. "From our own research, more than half the managers we met had never driven a forklift or received any formal training and a staggering 90 per cent were unclear of their legal responsibilities.

"Those responsible for upholding forklift safety need the knowledge and confidence to rectify any bad practice that they encounter day to day, and this was the driver for creating the Managing Forklift Operations course. What's more, we found they needed a flexible way to access this training, as face-to-face learning was not feasible for every business. The e-learning option provides a simple, cost-effective way to help managers obtain the training they need to keep their forklift operations safe, compliant and profitable."

Mentor FLT Training
www.mentortraining.co.uk

COMBiLiFT 25 Years
LiFTING INNOVATION

Safety Storage Efficiency

Enhance the Safety, Capacity and Efficiency of your Storage Facility

The Combilift ethos is helping customers increase storage without the need to expand the size of their facility.

Our range of multidirectional forklifts, pedestrian trucks, straddle carriers and container loaders will allow you to maximize the capacity, efficiency and safety of your operations.

Contact Us Today

To find out how Combilift can help you unlock every inch of your space





combilift.com

RailQ 3D measurement of crane runway alignment

KONECRANES®
Lifting Businesses™



RailQ 3D uses the latest high-definition surveying technology to measure critical aspects of crane runway systems, including the alignment of runway rails to one another, the alignment and geometry of rails, girders, wheels, end trucks and other crane components.

Accurate survey data is assessed by experienced Konecranes' engineers using our proprietary analysis and 3D visualisation software to produce reports that identify crane alignment issues. The findings may be used to highlight areas where critical safety and production factors may be compromised and recommend remedial strategies.

- High-definition surveying for a comprehensive range of parameters
- Faster and safer than traditional survey methods
- Prompt communication of data for remedial actions
- Helps improve performance, reliability and safety
- Extends crane life cycle
- Fully compatible with yourKONECRANES and TRUECONNECT portals

bit.ly/3DRailQ-UK_09_23



ENHANCE YOUR PORTABLE AIR COMPRESSOR EXPERIENCE

You cannot always control the external conditions your portable air compressor will be faced with – but you can make sure it is tough enough for any challenge. Here are seven common tough conditions your air compressor might have to deal with. But fear not, solutions are available.

1. A PERFECT STORM

Whether it be from rainwater or saltwater, moisture can wreak havoc on a portable air compressor's performance and expected life cycle. Rain and salt degrade mechanical components (both internal and external) of a compressor, leading to unsightly stains, rust, weakened materials, and lowering the machine's asset value... ultimately taking money straight out of your pocket.
Fortunately, all of this should not be a reality. The most effective cure for water damage and rust is prevention. The robust polyethylene (PE) HardHat canopy featured on Atlas Copco's portable air units is designed to offer lasting prevention against corrosion, as is the three-layer anti-corrosion system featured on larger metal units. Furthermore, Atlas Copco puts each of its compressors through a thorough rain endurance test to prove that they remain corrosion, rust and salt resistant even in monsoon weather conditions.

2. HIGH HUMIDITY, HIGH STAKES

Your compressor will experience an additional water load in high humidity conditions – in fact, there is a lot more water in the air at the highest compressor operating conditions in the height of summer (45 °C) compared to the lower temperatures normally seen during other months (15 °C). Filter performance can also be affected by additional humidity. It is therefore important to work with high quality engineered compressors. At Atlas Copco, the portable air compressors are designed with anti-corrosion materials and they are rigorously tested. Replacing filters routinely will help offer long-term protection against humidity, as will adjusting ventilation and airflow to account for seasonal changes.



3. WINTER WARNING

Freezing temperatures have a significant long and short-term impact on your portable air compressor, and the further below zero the greater the impact. Air compressors generate condensation, which freezes, and can clog and rupture critical components within larger air systems. Control lines, drain valves, compressed air filters and heat exchangers are also at risk of freezing and cracking. So when choosing a portable air compressor, opt for a compressor that is designed to take extreme temperatures in its stride. Using a high-tech climactic chamber facility, Atlas Copco's engineers test each compressor against a tundra-like -25°C, meaning you can operate your unit in Antarctica with total peace of mind. For total winterproofing, be sure to routinely check pipes and components far from the motor that can be especially vulnerable to freezing; and change the filters if they become iced over.

4. TAKING THE HEAT

A portable air compressor creates a lot of heat on its own. When combined with the higher ambient temperatures of the summer months, additional strain is placed on the system; it must work harder – and consume more energy – to operate efficiently while the temperature of the cooling water or air increases. If a portable air compressor gets too hot, it may overheat and shut down entirely. At Atlas Copco, they test every unit in a futuristic climactic chamber testing facility. It goes to freezing cold temperatures, but each portable air compressor is also tested against a sweltering 45 °C. Thanks to their use of high-quality material and smart engineered design, the portable air compressors are expertly refined and suitable for the most scorching applications. On top of that, thermal protection features are included for extra safety. Working in Death Valley? No problem.

5. THE DUST DILEMMA

Once dust enters a compressed air stream, it can have detrimental (not to mention costly) consequences for downstream equipment and end products. Unfiltered dust can reduce the lifetime and the efficiency of the compressor element, oil separator element and oil. To avoid these problems, the use of high-quality components in a smart designed compressor is fundamental. Atlas Copco's portable air compressors are designed for a long-lasting life, which is why all new units, and their high-quality filters are tested against dust to help protect customer's investments. Thanks to a high-speed fan, and full footprint data tests to track flow and pressure optimisation, contact surface temperature and starting capability, Atlas Copco compressors can maintain a supply of clean air at all times.

6. ROCKY ROAD

By nature, portable air compressors must be easily transported from jobsite to jobsite. They are frequently moved through uneven, rocky or muddy terrain, where the chassis, wheels and components are put under stress and weakened over time, shortening its expected life cycle. However, a stable and highly durable design ensures smooth transportation through even the toughest of terrain. At Atlas Copco, all portable air units are put through gruelling road testing where they are dragged across uneven grounds to guarantee the robustness of the chassis and canopy, and tensile strength of their lifting beams.

7. REACHING NEW HEIGHTS

As altitude increases, the air density decreases, which results in a roughly proportional decrease in the horsepower a portable air compressors engine is able to produce. High up in the mountains atmospheric pressure, oxygen levels and extreme temperatures combine to negatively impact the air compressors maximum working pressure, capacity, power consumption and cooling requirements. At Atlas Copco, they 'rise' to the challenge of high altitudes by physically hoisting its machines up into the mountains and assessing its performance 4,500 metres above sea level, where the extreme and varied effects of these real-life conditions can really be put to the test. This is where the portable air compressor's robust design and high-quality materials prove the unit to be undoubtedly worthy of its ultra-tough status.

Atlas Copco
www.atlascopco.com



AIR COMPRESSOR WORKSTATION IS 'GAME-CHANGER'

Regardless of whether the business is an automotive workshop, a small-to-medium sized manufacturing company or indeed any type of operation that simply needs dry and clean compressed air, the new G-TEC Air Compressor from FPS provides a complete compressed air workstation with 'game-changing' capabilities. This 6-in-1 offer comprises a high-performance compressor, refrigerated dryer, dual filtration, 270/500 litre air receiver, oil-water separator and controller, making the G-TEC Air Compressor the optimal and most convenient choice, for a whole host of applications.



Avoiding the need for many individual components that typically form part of a complex compressed air system, the G-TEC workstation features an integrated and modular design that saves space, reduces installation and improves efficiency. It delivers outstanding performance, producing a consistent supply of compressed air to power a wide range of pneumatic tools and machinery. With its high-efficiency motor and innovative design, this complete workstation also meets the growing demand for more sustainable and cost-effective compressed air solutions.

G-TEC workstations from FPS are available with a range of 7.5 to 22kW with pressure from 8 to13 bar. The high-efficiency screw compressors ensure optimal productivity and reliability. Importantly, the workstation comes with a 270 or 500 litre receiver and an integrated dryer and filters. The result? Clean, dry air for quality-assured pneumatic operations that lead to reduced downtime and maintenance costs and Indeed, reduced corrosion within pipes that also means fewer product rejects, and fewer costly air leaks, delivering yet more savings.

Another integral component of the G-TEC Air Compressor workstation is the condensate oil-water separator, supplied as standard by FPS to reduce environmental pollution.

FPS Air Compressors
www.fps-compressors.co.uk

GAME-PLAN FOR A NEW SUPPLY CHAIN REALITY

In a world full of 'unknowns', agility, flexibility and responsiveness are key for a successful, competitive supply chain. But how can these essential traits be translated into physical reality? Andy Kaye, CEO of Visku explains.



Supply chain planning has become far more difficult. There are many more uncertainties and plenty of 'unknowns'. But there is a smart way forward.

Supply chains increasingly need agility to be planned in, which has big implications for a firm's logistics network, its warehousing and its storage requirements. Even the largest corporations now look hard at the risks involved in committing to a traditional seven- or ten-year lease on a warehouse. Beyond, a core baseline of 'permanent' storage, demand is increasingly for flexible, short-term space.

Physical logistics networks now need to be lean and agile, and storage space must flex to meet demand. However, there's a critical balance that must be achieved between ensuring efficient fulfilment and supply, and keeping costs, along with risk, to a minimum. To achieve this, a clear focus on sustainable asset maximisation is necessary.

So how should businesses assess their supply chain needs and then build in the necessary agility in the most cost-effective way, with minimum exposure to risk? Can retailers flex at peak to boost performance and still de-risk their supply chains? What part does cost-to-serve analysis play in revealing the pain points and what solutions can businesses deploy to stay agile and responsive?

BEYOND THE UNKNOWN

Supply chain planners increasingly find themselves facing many unknowns. Some events are truly out of the blue – 'sideways in Suez', or a drought affecting the Panama Canal. Others, such as the introduction of LEZs and other traffic regulations, or the need to nearshore/onshore supply or manufacturing, may come with some warning, but are still near-instantaneous over traditional supply chain planning timescales.

But just as important as these macro issues may be, complex issues relating to the costs-to-serve for a whole range of products, perhaps across multiple channels, may accumulatively determine how well a business performs. In many retail businesses, the costs-to-serve are treated as fixed overheads and are allocated evenly across orders, when in reality they vary according to the characteristics of each order. This may be channel, geography, the nature of the goods, or even the behaviour of the customer. They also change over time, and not necessarily uniformly.

Take a given order, do you know what it will cost to fulfil that order? More importantly, do you know what margin you're making? In fact, are you making any profit at all? These are questions that many retailers may find difficult to answer.

Clearly, supply chains cannot be planned for the really big 'unknowns'. But what can, or must, be done, is to plan in the ability to be agile and flexible, whatever the future throws up. For warehousing, that means viewing the use of flexible and temporary space as an essential core component of the strategy, not a short term, tactical 'fix'.

DE-RISKING WAREHOUSING

Of course, there has always been a demand for short-term space. Some of this is planned and predictable – businesses may need to build stockpiles against a seasonal peak, or in advance of a new product launch, for example. Temporary space may also be needed while companies upgrade their permanent facilities or when testing a new market geography.

And while long-term leases come with a lower 'headline rate' in pounds per square foot, that is not the whole story. They are a balance sheet liability, incurring stamp duty, fitting out costs, liability for dilapidations, and could become operationally redundant during the life of the lease. Not good, if there are onerous surrender clauses.



This is a problem for smaller businesses that may not have the necessary balance sheet, or governance, strength to support long term leases. It may also be a consideration for larger companies with leases coming to the end of their term. Short term leases come with a premium, but with a lot less risk.

Transforming a supply chain and its supporting logistics network into an agile, and responsive arm of the business requires planning at three levels. Firstly, there is analysis of the physical logistics or operational infrastructure. Where should warehouses be located and of what size? What transport modes are appropriate, where should vehicle fleets be based, and what types of vehicle are required? How do these optimise in different scenarios?

KNOW YOUR COST TO SERVE

However, infrastructure analysis forms only one element in an end to end 'cost to serve' analysis. Inventory forecasts based on sales profiles (or a variety of different likely profiles) and the required service levels inform the amount of stocking space that will be needed. This may be by geography and by time period, which in turn feeds into modelling of the total cost to serve. That analysis offers a guide to the optimal balance of flexible and permanent space needed in the system.

Thirdly, there is planning to make the best and most flexible use of existing and future space. This includes making optimum use of human assets, and also likely, consideration of the degree and type of automation / robotics that may be beneficial. That involves looking at the whole business, the profiles of skus that will be moving through the system – and how these might change – to ask how and when automation will be relevant.

A further question may be the extent to which any automation is itself flexible – not just in the face of changing requirements on a given site, but whether it could readily be relocated to new or different facilities. It may be fairly simple to reinstall a network of Autonomous Mobile Robots (AMRs) on a new site, but a system of smart conveyors, less so.

PARTNERING FOR TRANSFORMATION

Transforming a supply network into an agile, responsive organ of the business takes knowledge, skill and a special kind of partnership that can deliver physical change.

In the autumn of 2023, Visku was created – through the union of Bis Henderson's Consulting and Space businesses – to respond to these strong market demands for a more imaginative and informed approach to creating flexible, agile supply networks, complete with optimised physical logistics solutions.

Visku holds a market leading position in cost-to-serve analysis, benchmarking, warehouse automation and logistics network design – combined with an extensive network of nationwide partners that deliver short-term warehouse space, as well as expert, tailored solutions.

Designing the flexible use of space into a warehousing equation is one thing – actually securing appropriate, geographically well-placed space at short notice or for the short term is another. Visku supports more than 200 customers and hold 500,000 pallets under management across the UK, with over 16 million sq ft of warehousing space available on a highly flexible basis, with no onerous contracts or long leases.

Finallly. The future is digital. We can easily book a family into a short holiday let in the capital city of our choice with a few keystrokes. How hard should it be to park a hundred pallets for three months? Watch this space.

Visku
www.visku.com

SC60 – The new robotic workhorse for warehouse cleaning



New generation robotic floor cleaners can perform high-volume, repetitive tasks whilst increasing efficiency and productivity – while your team carry out jobs requiring human dexterity

Explore the value of Nilfisk's autonomous scrubber dryers in the form of SC50 and the SC60, the two workhorses that are fast becoming the new go-to in warehouse cleaning – just ask our customers

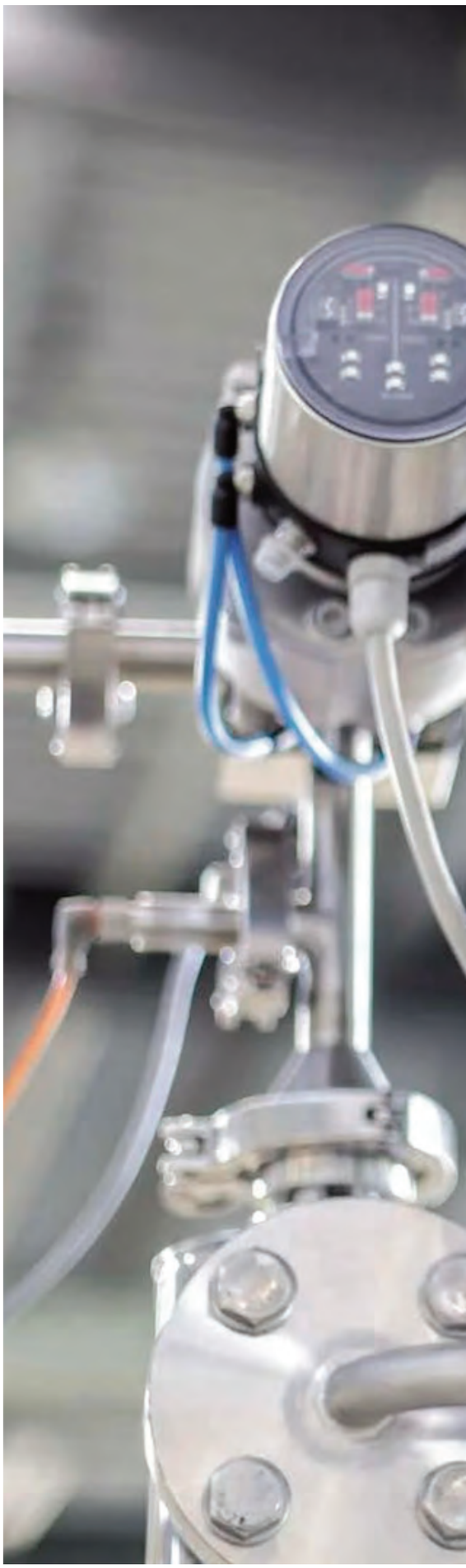
Request free site survey or arrange a demo

www.nilfisk.co.uk

NILFISK

OPTIMISING CONTROL VALVE SPECIFICATION BY CHALLENGING THE INPUT DATA

When specifying control valves, ensuring the right input data is provided offers the best chance the resulting performance of the application will be optimised. To show the effects, a recent example based on deionised water production highlights how accurate specification is essential whenever control valves are used. Full consideration of the application's key criteria, as well as accurate calculation of input application data, are vital to optimise control valve specification. Greg Wainhouse, industry account manager for Water Applications at Bürkert, explains the importance of reviewing input data for control valve specification.



Recently, a system integrator approached Bürkert to supply a valve for a water conductivity blending application, with the objective of achieving water quality with a conductivity level of 10µS (microsiemens). Their process design schematic included a ball valve that would isolate the flow of softened water, while a control valve would modulate the flow of deionized water. By controlling this media combination, once blended, the customer's expected outcome was water production at the desired conductivity level. With this plan, the system integrator requested a control valve that would regulate the deionized water flow.

To calculate the size of control valve required, it is important to understand the required flow rate and pressure. The integrator suggested that upstream pressure was 4 bar, with 3 bar pressure downstream. Moreover, they suggested a total flow rate of 1.5 m^3//h. Even at this stage, Bürkert suggested a review of this input data because the suggested flow rate appeared to be inaccurate. Furthermore, using the pressure and flow data, the calculation generated a requirement for a 1" diameter valve, which would likely be too large for this application. However, the integrator was satisfied with the validity of their initial input data, and they confirmed the resulting valve specification, supported by the fact that they had used this size of valve on a similar project with the same input data.

OVERSIZED VALVE SPECIFICATION

The Bürkert team remained unconvinced and they sought wider input data to help confirm the specification. The integrator reported that when installed, the previous valve project would operate at 10 to 20 per cent of its total capacity. However, the reverse situation should ideally apply, sizing a valve to operate at 70 per cent to 90 per cent of its capacity would enable the use of a smaller, more cost-effective valve, that could also achieve more efficient operation.

Burkert decided to recalculate the valve size, based on optimising 80 per cent capacity. This time, to ensure a comprehensive approach, the input data was reconfirmed. With a reading from the system's pump, the upstream pressure was confirmed. Thanks to an installed flow meter, the flow reading was also verified. Using these input data, it was possible to work backwards and determine the actual downstream pressure.

This highlighted that the downstream pressure was significantly less than the figure initially provided. Instead of the suggested 3 bar, the new calculation was just 0.1 bar. Based on this new data, it was realised that the customer's desired, repeatable, and controllable flow range could not be achieved.

OPTIMISING CONTROL ACCURACY

On further investigation, the customer revealed that an open tank was positioned downstream of this system, which both explained and



confirmed the almost 0 bar downstream pressure reading. As a result, the customer agreed to resize the valve, sufficient to handle a difference from 4 bar upstream pressure down to 0 bar downstream.

By this stage, the system integrator was working more closely with Burkert, and as a result, were also able to challenge a fundamental assumption about the system's design. Although the conductivity value of the deionized water was very low, at 0.5 µS, the value of the softened water was very high, around 600 µS.

Without modulating the softened water flow, the resulting conductivity level after blending the media would be far higher than the objective of 10 µS. Bürkert advised that instead of regulating the flow of deionised water, by controlling the softened water, the desired conductivity level could be reached.

GET IT RIGHT FIRST TIME

Switching the position of the control valve and resizing it accordingly enabled the integrator's system to achieve the low, 10 µS water conductivity rating for their customer. Without assistance in making the correct calculation, the customer would have integrated a much larger – and much more expensive – control valve. Most significantly, the system would have been far less likely to have produced the desired quality of water. Had the system designer engaged with valve sizing and application expertise at the outset, they would also have avoided rework in design, instead achieving a faster time to market.

Although this example demonstrates specific implications of incorrect specification, the same principles apply for any application that requires control valve modulation. The fundamental calculations to ensure correct control valve sizing are essential whatever the purpose and sector, from food and beverage, to pharmaceutical and life sciences.

A crucial aspect for optimum sizing of control valves is achieving valid application input data. If the input application data is incorrect, or incomplete, then the type, position, and size of the control valve will be sub-optimal. While specifiers can make mistakes in calculations, valve specification errors can also have historic origins. If the original system wasn't designed according to the right data, like-for-like replacement will also be sub-optimal. As technology has advanced, valves today are frequently more accurate, impacting open and close rates, and this means that smaller, less expensive valves can potentially be used instead. So, even when upgrading an existing system, the best practice is to recalculate control valve sizing each time.

VALVE SIZING

Bürkert's process valve sizing tool, comprising control valve selection, helps designers and specifiers configure the right specification through a sequential set of application criteria. This tool helps to make control valve selection fast and simple, however, it's imperative to remember that valve specification depends on valid input data.

Moreover, when used in an application like conductivity blending, Bürkert has additional internal tools to determine whether a complete system could achieve the desired outcome.

The surest way to achieve optimised valve specification, first time, is to involve a flow control specialist as early as possible in the process. Sharing access to details on the wider application enables an experienced valve provider to make an accurate specification based on all of the relevant criteria. This process might involve challenging the input data, but in so doing, a more effective outcome can be achieved.

Bürkert Fluid Control Systems
www.burkert.co.uk

FRENCH PASTA MANUFACTURER OFFSETS BOILER-HEATING WITH HEAT PUMPS



Saint Jean, a French pasta manufacturer since 1935, is an organisation today employing more than 450 people across five manufacturing plants located in the Auvergne-Rhône-Alpes region in France. Focusing on quality and growth, the company has been growing steadily and reached a turnover of €83 million in 2020. Following that milestone, Saint Jean has committed to growing its organization further to reach €150 million in turnover in 2030. Preserving its unique know how in pasta manufacturing, the company believes in all technology innovation that can contribute to the growth of their operations.

THE CHALLENGE

In 2022, Sean Jean facility managers were looking for a temporary 150kW cooling capacity to cover the additional summer load in one of their plants. What started as a typical project, evolved into a game-changing approach to industrial heating, changing the mindset that has placed heating and cooling in separate silos.

During the site visit meant to evaluate the plant's cooling needs, Trane Rental Services team analysed Saint Jean's overall cooling and heating demands. The plant needed cold water temperatures of -8°C/-4°C and hot water temperatures of 60°C/55°C.

The Trane team was familiar with Saint Jean's efforts to improve the energy efficiency of their operations. Knowing to look at the cooling and heating systems as a whole, instead of recommending an additional chiller to satisfy the temporary cooling needs, the engineers proposed a new heat pump solution that would not only deliver the additional cooling capacity Saint Jean managers were looking for, but also completely replace the plant's 300kW fossil-fuelled boiler heating system – generating significant energy savings in return.

THE SOLUTION

Following a detailed analysis of the heat requirements, the team installed two Trane City RTSF water-to-water heat pumps, connecting them with the plant's existing chillers, which allowed to harness the waste heat that typically gets lost to atmosphere during cooling process. The new renewable energy heating set up offered the manufacturer new opportunities to lower their energy consumption and associated costs.



THE RESULT

During the four months of rental operations, the calculations showed that thanks to shutting down the gas boiler, and replacing it with heat pumps, the cost of generating heat dropped by approximately 68 per cent from over €8,400 to €2640, contributing also to lowering the carbon footprint of the plant and more sustainable operations.

Anthony Guichard, head of energy performance at Saint Jean comments: "This project enabled us to validate that the water-to-water heat pump solution was capable of meeting the site's heating needs reliably and efficiently. This successful installation allowed us to initiate two further investments at two other manufacturing sites in 2023. These permanent installations will support our organizations' decarbonisation action plans. The project also highlighted the importance of heat storage in this type of installations. We decided to replace the 25m^3 heat storage unit with a 40m^3 unit on a permanent basis. Following the rental period, we decided to leave the heat pump as a permanent installation and coupled it with a new Trane chiller to achieve an even more attractive COP for heat production while permanently upgrading also the available cooling capacity."

Trane
www.trane.eu

Boiler Hire
Short or Long Term
You can't beat Byworth









Long Term

Long term hire can be a cost effective alternative to outright purchase.

- Capital outlay for new plant alleviated
- Maintenance and servicing costs included
- Plant designed and manufactured to suit exact needs

Unity - Byworth's unique remote monitoring system available

Short Term

When you need help in a hurry you can depend on Byworth for a rapid response. Temporary boilers provided for:

- Breakdown cover
- Cover for repairs and maintenance
- Urgent need for extra production capacity
- Short term projects and trials

Trust in the UK's leading industrial boiler hire company using the latest fuel efficient boilers, manufactured in our own factory. Byworth Hire gives total flexibility to cover any eventuality with full back-up support.

CELEBRATING 50 YEARS IN BUSINESS 1968 - 2018

THE QUEEN'S AWARDS FOR ENTERPRISE: 2006 BYWORTH BOILERS LTD

NHS APPROVED SUPPLIER

Byworth BOILER HIRE

Tel: 01535 662599 | hire@byworth.co.uk | www.byworth.co.uk



SAFEGUARDING DIAGNOSTIC TEST KITS WITH COLD STORE CONTAINERS

Neogen EMEA, a subsidiary of Neogen Corporation provides the most comprehensive range of solutions for the food processing, animal protein and agriculture industries. Their Food Safety business offers products covering culture media and diagnostic test kits to detect foodborne bacteria, natural toxins, food allergens, drug residues, hygiene indicators and much more.

Neogen's recent business project necessitated a swift increase in refrigerated storage capacity at their Auchincruive, Ayr Neogen site to accommodate a higher level of stock at short notice, particularly diagnostic test kits for distribution in various global markets. With a pressing need for enhancing their temperature-controlled space, Neogen sought a partner that could offer them a dependable solution.



"We had limited space in our existing facility and a mounting urgency. We needed to hold a higher level of stock at short term to accommodate more areas than what we currently service," shares Andy Keirs, warehouse and logistics manager at Neogen EMEA.

THE SOLUTION

ICS Cool Energy, renowned for its expertise in in critical and process temperature control solutions, emerged as the timely answer to Neogen's challenge. Within a short timeframe, they provided Neogen with three 40ft temperature-controlled Cold Store containers. These refrigerated containers are based on a shipping container that has an integrated refrigeration system. They can be used in many different applications, frozen or perishable food and beverage products, or pharmaceutical goods and ensure products are stored safely at the desired temperature, maintaining consistent temperature, humidity, and atmosphere.

"Having the containers on-site allowed us more control and responsibility for the extra stock hold. The decisive factor for choosing ICS Cool Energy was the cost-effectiveness and very short time their hire team needed to have everything set up and running. It was paramount for us to add extra storage space on site and none of our current suppliers or contractors we work with had any options for what we needed," Keirs elaborates.

THE RESULT

With the added storage capacity, Neogen effectively stored their diagnostic test kits, readying them for distribution primarily within the UK and European Union, with a portion destined for Asia, Africa, and the Middle East. The benefits of the collaboration were multifaceted. Not only did Neogen secure the required storage in a timely manner, but they also gained the advantage of overseeing stock at their own facility without the need to rely on a third-party logistics provider with whom they weren't fully integrated.

"Keeping the stock at a Neogen facility in the short term and not have it stored and shipped from a 3PL has proven to be the right choice. Timely solutions, strategic decisions, and the right partnerships are essential in business growth. The collaboration with ICS Cool Energy ensured we had the right support for this critical project," Keirs concludes.

ICS Cool Energy
www.icscoolenergy.com

WITH US, SPACE EFFICIENT BECOMES
EVEN MORE EFFICIENT

www.bito.com



BITO multi-tier shelving

Maximise your storage capacity by multiplying floor space with a multi-tier storage and picking solution.

BITO
LOGISTICS
SOLUTIONS



CONSOLIDATE TO ACCUMULATE

Pooling inventory to serve both fashion retail stores and ecommerce channels can create an engine for growth, with increased sales and higher margins. Darcy de Thierry, managing director of Ferag UK explains how.



Fashion brands face an ongoing battle to protect margin. Constantly under pressure to provide value to the customer – regardless of rising labour costs, the channel, or consumer expectations on free returns – retail businesses are having to think hard about their cost-to-serve. That is, if they wish to grow and remain profitable.

So, how can multi-channel retailers offer value, along with product and service consistency, across all their channels, while keeping costs to a minimum? Is there an intelligent way of, not only protecting margins, but growing them?

Automation offers obvious advantages in terms of streamlining fulfilment processes, providing capacity to facilitate growth and cope with peak demand. It also helps to reduce reliance on increasingly costly and difficult to find labour resources. But all too often the scale is not there to justify the investment. Perhaps, operations are too fragmented, carried out across a number of sites.

SCALING FOR AUTOMATION

However, for a great many fashion retailers the answer could be relatively simple: create the necessary scale for automation by consolidating inventory into one omni-channel facility that serves both high street stores and ecommerce channels. Pooling stock in this way not only offers the scale and throughput needed for automation, but it also holds the potential to create huge flexibility, where fashion goods flow quickly and smoothly to satisfy demand, whether that be on the high street, click n' collect, or ecommerce. With this agility, there are no longer complications around moving stock between locations or being out of stock in one channel only to find excess stock in another.

Furthermore, a single automated omni-channel facility could, with the right technology, handle returns too. Processing items swiftly and making them immediately available for sale again – via whichever channel is best suited – has the potential to increase sales and may reduce the need for markdowns. Much depends upon acting quickly, before a product loses its fashion moment!

OVERCOMING TECHNOLOGY BARRIERS

A major barrier for many businesses considering an omni-channel approach is the thought of how to bring together disparate technologies and systems to cope with the diverse needs of assembling replenishment for high street stores and on the other hand, picking single or few items for a large number of ecommerce orders. What could be needed – sorters, multi-shuttle and mini-load systems, hanging garment solutions, specialist technologies for returns processing? How do you bring flat-pack / boxed items (such as shoes or accessories) together with soft clothing – will that require a separate sorter? Will all these systems integrate to create a cohesive and flexible solution capable of serving high street





stores and ecommerce channels? And, how much space will all this take up?

These concerns can be put aside. There is a form of warehouse automation technology that offers all the capabilities necessary to orchestrate and fulfil orders for high street stores and ecommerce, all in a single seamless operation – offering automated movement, sorting and buffering of hanging goods and boxed items in one system. Overhead pouch sortation systems, such as Ferag's advanced Skyfall solution, are capable of sorting and processing many thousands of orders an hour, with each pouch able to carry both hanging garments and flat items, such as shoes and flat pack goods, enabling fast order fulfilment from a single pool of inventory.

STORE FRIENDLY SEQUENCING

Critically, the same high-speed pouch sorter system used for fulfilling ecommerce orders can also be deployed to create store friendly sequenced consignments for high-street shops – pulling from the same, pooled inventory. The benefit of sequencing product for a particular store's layout is that the shop assistant assigned to replenishing shelves and rails is able to perform the task quickly and efficiently, freeing them to spend more time with customers – potentially, to secure more sales.

An obvious advantage of a high-speed pouch solution, like Ferag's Skyfall, is that it uses available overhead space – the third dimension of the building – keeping floor areas free for pedestrians and other processes. Furthermore, pouch systems are a highly cost-effective alternative to other forms of goods-to-person automation, like multi-shuttle and mini-load solutions, that can cost up to 30 per cent more. Then there is the core benefit that the Skyfall overhead pouch system undertakes high-speed sorting, conveying and buffering processes too, which with Ferag's modular conveyor technology allows for tremendous flexibility and scalability. And as the pouch has the ability to carry flat items, such as shoes, and flat pack goods along with hanging items, there is no need to have a separate cross-belt sorter for flat items, with all the issues associated with bringing flat and hanging items together.

BUFFERING BETWEEN PROCESSES

The ability to buffer between processes with different throughput rates – for example, ecommerce, retail store, returns handling – is powerful. It means that, for example, the elements for a store-friendly sequenced consignment can be gathered together at the same time as individual ecommerce orders are being processed. It means that ecommerce orders for a particular despatch slot/vehicle can be consolidated in advance, with only final additions to be made as the cut-off time approaches – which in turn means that cut-off can be postponed, offering the consumer a faster service and increases the potential for sales.

Importantly, picking efficiency is enhanced using a single pouch system that serves both the high street and ecommerce channels. High pick 'hit' rates can be achieved when blending ecommerce with retail, as instead of picking just one or two items per pouch when inducting for an ecommerce order, several more items can be picked at the same time, into the same pouch, to satisfy high street demand as well. The result is fewer pouches in circulation, more efficient picking and faster throughput.

FULFILLING POTENTIAL OF AI

But, perhaps, one of the greatest benefits of creating such a highly responsive, agile fulfilment capability is only now, just about to be fully realised. Artificial Intelligence (AI) will soon be capable of understanding and predicting sales patterns, both in a geographical sense, which will allow more precise allocation of stock and ranges to particular stores, and factors that may influence ecommerce customers, such as social media trends. Having a fulfilment system that has the capability to respond appropriately and quickly to AI predictions, across channels, will allow product to be optimally deployed to maximise sales and margins. Seeing this future



and the need for highly responsive, 'intelligent' intralogistics systems, Ferag recently acquired the Australian warehouse automation software developer, dereOida.

A number of leading fashion brands are taking advantage of pouch sorter technology to increase capacity and boost performance of their fulfilment operations. Ferag has recently installed a flexible high-speed Skyfall system at a new distribution centre for children's fashion company, Mayoral Group, in Malaga, Spain. The extensive overhead pouch solution is one of the largest to date, with a mix of hanging pouches and garment hangers totalling more than 58,000 Skyfall hangers, and a throughput of up to 12,000 units per hour. The system sorts and sequences thousands of carriers and hangers with a random mix of pockets and garments, processing orders in batches and actively sorting them in a dynamic buffering solution that offers the flexibility to fulfil both store replenishment and online orders. The same system efficiently handles returns.

Consolidating inventory in a single, highly automated omni-channel facility can drive greater efficiencies, improve productivity, and boost responsiveness – creating an engine for growth that has more opportunities for sales with higher margins.

Ferag
www.ferag.com/uk



New reach truck generation from Crown

THE ESR 1200 Series reach trucks is the successor to the award-winning ESR 1000 Series and features a new mast design that is among the most stable in the industry.



The new mast enables operators to handle heavy loads quickly and safely, even at the highest lift heights, thanks to its robust construction and an impressive residual capacity of 1200kg at a 12-metre lift.

"With our new mast portfolio, we're further boosting the productivity of our reach trucks, which have already proven their value in the warehouse," says Crown marketing product manager Dr Danilo Schmidt. "Smooth and precise operation delivers real performance - even skilled operators can further improve their throughput with our new ESR 1200 Series.

It's all about the mast

In many busy and congested warehouses, the travel speeds of lift trucks are often reduced. Therefore, the lift-lower cycles can make the most significant productivity gains. The ESR 1200 Series' new mast technology is the key to achieving this, enabling up to 36% higher mast stability compared to previous models. The mast's solid construction is exceptionally resistant to deflection. Swaying or vibration is thus reduced to a minimum, which makes it easier for operators to predict how the mast will behave, giving them greater load-handling confidence. With the new masts, the reach trucks can pick up and place heavy loads faster than ever, even at rack heights of up to 14.2 metres. The result is intelligent, safe work, more throughput, and higher productivity.

Additionally, the new mast enables better visibility at height due to an angled cross beam design. With the offset positioning of the mast, the load wheels, forks, and pallets are always in view. The optional panoramic overhead guard further improves visibility while protecting the operator from falling objects or debris.

With three different available mast configurations, heavy duty, super duty, and super duty+, an appropriate mast is available for every application.

Crown's optional Xpress Lower technology can double the mast-lowering speed to an exceptional 1.1 m/s, enabling productivity gains of up to 21%. In addition, the system feeds the energy released during the lowering process back into the battery. Combined with the regenerative e-GEN braking system in the ESR 1200 Series, energy consumption can be reduced by up to 11%.

Smart, reliable, ergonomically adjustable

By enabling all-around connectivity, the Gena operating system optimises truck performance and ensures that key information is easy to see, understand and use. Gena is dynamic, customisable to individual preferences, and easy to access via a 7-inch colour touchscreen. With Gena seamlessly integrated and interacting with the InfoLink fleet management system, the forklift becomes the operator's reliable partner.

ESR Series reach trucks can be customised in many ways. To position the operator for optimal control, visibility and workflow, the lift truck's seat, controls, armrest, and display can be ergonomically adjusted to suit each operator's needs and physical dimensions. For example, the unique D4 Armrest's advanced ergonomics include a large, breathable surface, a moveable palm rest, plus infinitely variable positioning. Depending on preferences, the armrest can be fitted with fingertip, dual-lever, or multi-task controls for super-smooth, high-precision operation. Intuitive assistance systems such as Auto Height Select and Capacity Data Monitor further enhance the truck's productivity.



For customised energy solutions, a wide range of Crown V-Force lead-acid or lithium-ion batteries is available, along with matching battery chargers. The appropriate solution can be selected and adjusted to fit each customer's specific application requirements and on-site infrastructure.



Crown
crown.com

Zebra Technologies introduces ultra-rugged mobile computer to improve workflow efficiency



Zebra Technologies Corporation (NASDAQ: ZBRA), a leading digital solution provider enabling businesses to intelligently connect data, assets, and people, today unveiled its new ultra-rugged mobile computer, the MC9400 Series. Equipped with public and private 5G (data only) and Wi-Fi 6E connectivity, the MC9400 Series is designed to enhance workflow efficiency and device security across the retail, warehouse, manufacturing, and transportation and logistics industries.

The MC9400 Series is an evolution of Zebra's ultra-rugged mobile computers – it's the first of its MC9000 family of devices to offer 5G (data only) and Wi-Fi 6E connectivity, the fastest connection speed available today. The MC9400 provides a cost-effective, wireless solution imperative to efficient operations in challenging industrial environments–inside and outdoors–including cold storage. With maximum speed and performance, the MC9400 improves front-line workers' productivity as they are cross-docking in a warehouse, tracking items in a manufacturing plant or managing assets in a port, yard or other tough edge environments.

"The MC9400 Series represents a significant inflection point in wireless connectivity, scanning and secure authentication to drive enhanced operational benefits for our customers," said Julie Johnson, Senior Vice President and General Manager, Enterprise Mobile Computing, Zebra Technologies. "Zebra's latest ultra-rugged mobile computing solution is a great example of how we help those on the front line work in new ways to improve efficiency and productivity."

Beyond providing the latest in wireless connectivity, the MC9400 Series is enhanced with Zebra's new SE58 extended range scan engine with IntelliFocustm technology. The new expanded range enables workers to scan barcodes up to over 100 ft./30.5 m away. The scanner's new green laser dot provides more visibility – even in daylight – than the typical red dot, making it easier for workers to scan items in hard-to-reach locations, such as a high warehouse rack. It can be added to customers' existing fleet of MC9000 mobile computers without requiring new accessories, minimising operational disruptions.

Additionally, the MC9400 Series offers Identity Guardiantm, a biometric facial recognition and authentication solution which gives workers fast, easy and secure access to their device and minimises the risk of shared or compromised passwords. Unique user-based profiles are stored in an encrypted QR code, enabling the device to be shared with unlimited users for more flexibility. It's also equipped with a new BLE battery that, when combined with Zebra Device Tracker, ensures workers can locate a device –whether that device is on or off – minimising the time and cost of lost devices.

ZEBRA

Zebra Technologies Corporation
https://www.zebra.com/gb/en.html

IUT-F190-B40 UHF Read/Write Device with Integrated Industrial Ethernet Interface and REST API Expands the Pepperl+Fuchs RFID PortfolioDevice



The IUT-F190-B40 UHF read/write device can be quickly and easily integrated into OT and IT systems

Pepperl+Fuchs is expanding its comprehensive portfolio of identification solutions with the introduction of the IUT-F190-B40 UHF RFID read/write device, which offers an integrated industrial Ethernet interface and REST API. Using these interface technologies, the IUT-F190-B40, which is designed for medium detection ranges, can be quickly and easily integrated into OT and IT systems, making it an attractive solution for production control and monitoring, track-and-trace applications, and other Industry 4.0 applications in factory automation.

The Most Powerful UHF Read/Write Device in Its Class

With its compact housing dimensions and wide temperature range, the RFID read/write device is ideally suited for the clear identification of green tires before they are inserted into the vulcanization press

Pepperl+Fuchs
sales@gb.pepperl-fuchs.com
www.pepperl-fuchs.com

Automation helps Mercadona get fresh produce from field to store within 24 hours

Warehouse automation from Cimcorp is enabling the Spanish grocery retailer to increase the shelf life of its fresh food.



Mercadona, a leading grocery retailer in Spain and Portugal, partnered with Cimcorp, a pioneer in robotic handling solutions, to implement an automated intralogistics system at its distribution centre in San Isidro, Spain. Cimcorp's robots have helped Mercadona to achieve record lead times in its supply chain, thereby increasing shelf life for its products and ensuring freshness for its customers.

As well as enabling the delivery of fresh produce from field to store within 24 hours, the warehouse automation secures Mercadona the benefits of less waste and a safer workplace. With robots taking care of the heavy lifting and repetitive tasks, Mercadona's staff enjoy work roles that are less tiring and more productive, factors that typically aid staff retention. Automation also ensures order accuracy, reduced costs and maximum throughput.

The freshness challenge



Fruit and vegetables only stay fresh for a limited time, so any delays in delivering them mean they can spoil or lose their nutritional value. One of the best ways to guarantee freshness is by reducing the lead time in the warehouse. Seeking to optimize its order flows, minimize food waste and enhance the customer experience, Mercadona has worked with Cimcorp to automate its intralogistics at San Isidro, as well as at its distribution centres in Zaragoza and Parc Sagunt. The San Isidro DC supplies 171 of Mercadona's supermarkets, shipping a daily volume of 118,800 totes. "The most significant advantage is reducing errors to guarantee a better service for our stores and customers," says Javier Blasco, Logistics Solutions Purchasing Manager for Mercadona.

Cimcorp
+358 10 2772 000 sales@cimcorp.com
www.cimcorp.com

Be gentle, it's a cookie



Brittle textures often mean breakage – and that's something baked goods producers want to avoid. For delicate products like cookies and crackers, Syntegon boasts comprehensive handling solutions.

The technologies cover discharging, picking and placing. Launched in 2022, Syntegon's Intelligent Direct Handling (IDH) picks up to 1,250 products from the process belt and gently places them into trays or the infeed of primary packaging equipment. Robotic pick-and-place solutions like Syntegon's RPP can further help to group products for loading into secondary packaging.

Syntegon's Distribution Continuous Slide (DCS) lends itself to handling higher output volumes. The conveyor system transports baked goods from the main process belt onto the packaging legs. Launched in 2023, the Distribution Continuous Gentle (DCG) uses yet another method: a pullnose carefully lowers products onto the downstream cross belt.

Syntegon Technology
www.syntegon.com

Exploring the Intersection of IIoT, RTLS, and AIDC in the Digital Era



Welcome to the forefront of the Industrial Revolution 4.0! We dive into the transformative power of the Industrial Internet of Things (IIoT), Real-time Location Systems (RTLS), and Automated Identification Systems (AIDC). These groundbreaking technologies are reshaping industries by enhancing operational efficiency and facilitating data-driven decision-making.

We explore how integrating IIoT and RTLS is not just a trend but a necessity in manufacturing, logistics, and beyond. These technologies allow precise tracking of assets and efficient management, leading to significant cost savings and heightened safety.

However, integrating these technologies is not without challenges. From scalability to data security, we examine the hurdles businesses face in adopting these systems.

For a deeper insight into this digital revolution and how it can transform your business, continue reading our detailed article. Join us in embracing the future of industry – read on to stay ahead!

IDENTEC SOLUTIONS
+47 38 00 35 30
caadal@identecsolutions.com



Watlow launches ASSURANT® high temperature heating jackets

~ A high temperature solution for semiconductor processing ~

Leading provider of advanced industrial electric heater manufacturer Watlow, has announced the launch of its new ASSURANT® HT high-temperature heating jackets, designed to meet the unique needs of semiconductor processing.

Watlow's ASSURANT heaters are heater jackets made with PTFE-coated fiberglass that maximises thermal uniformity and coverage for gas lines, pump lines, forelines and exhaust lines in semiconductor processing applications. These solutions offer even heating for uniform temperature profiles over the entire heated line. The ASSURANT heater jackets optimise process tool uptime and chip yield by providing full coverage to the line, eliminating cold spots that result in particle buildup.

As today's advanced processes, with new chemistries and applications, require even higher temperature ranges, ASSURANT HT delivers a recommended operating temperature of up to 350°C, making it the perfect solution for the most demanding applications. Our glass-based technology ensures that ASSURANT HT is SEMI-rated for cleanrooms and flammability, eliminating issues associated with clogging and fouling.

"We are thrilled to introduce the new ASSURANT HT to the market," said Doug Schaefer, chief system designer at Watlow. "Our first-generation ASSURANT TC is a reliable heating solution for many applications, but as industry evolves there is a need for an even higher temperature range. With ASSURANT HT, we are providing our customers with a step change in thermal performance that will help them stay ahead of the curve on challenging processes like titanium nitride. The launch of ASSURANT HT marks a new era for the ASSURANT line of heaters, designed from the ground up to improve semiconductor processing."

Watlow
www.watlow.com



MultiScan master data solution available to buy or rent from KNAPP

KNAPP, leading technology partner for value chains, is making its MultiScan master data capture system available to customers through short-term rental or outright purchase.

MultiScan is an intelligent and customisable master data capture solution. As well as acquiring article dimensions, MultiScan features integrated weight recording and can also capture other data such as fragility and stackability. The solution records all the data needed to optimise the utilisation of storage space and the efficiency of fulfilment operations.

"The MultiScan system can be particularly beneficial for companies handling seasonal or promotional items of stock," explained Ben Carroll, IT Business Development Manager for KNAPP UK, "as well as for retailers or 3PLs working with multiple vendors, smaller warehouse operators looking to boost efficiency in their e-fulfilment operations or organisations needing to capture article data for robotic systems."

Maximum efficiency

As well as enhancing manual warehouse operations, capturing accurate master data is essential for automating material flows and achieving maximum efficiency through digitalisation of work processes. MultiScan automatically records all relevant data for an application, transmitting the information to the WMS or ERP system to enable optimal warehouse management. By maximising space utilisation – in totes, on shelves and in racking – and optimising the efficiency of packing operations by fitting more items into each carton or bag, MultiScan enables warehouse operators to achieve environmental benefits and lower transport costs. In addition, improving fulfilment efficiency – by requiring fewer visits to each location and fewer tote retrievals – means shorter picking times for both automated and manual systems, thereby improving the customer experience.

KNAPP
http://www.knapp.com/

SEPURA™

Condensate Filtration

As well as our industry leading condensate filtration range, SEPURA™ manufactures high performance replacement filter service kits for all brands of oil-water separators.

To make finding the right filter kit even easier, download our FREE mobile OEM Product Finder App.

www.sepura-technologies.com

SILVERSON®
High Speed High Shear Mixers

RPM vs. Peripheral Tip Speed

Silverson have released a new video explaining the difference between the RPM (Revolutions per Minute) and tip speed. It explains why tip speed is the more important factor to consider when using High Shear mixers, especially when scaling up.

www.silverson.co.uk

ABB

Whether you're taking your first steps into robotic automation or looking for ways to optimize your existing robots with the latest add-ons and software visit our Grow with Robots microsite for useful advice, tips and hints to help you find the best solution.

https://bit.ly/GrowwithRobotsFHS

GRANT HANDLING FORKLIFT SOLUTIONS HELI

Great Trucks, Great Service, Great Value

As the official importer and distributor Heli Forklifts and warehouse equipment, we are committed to reducing your operator costs by offering you a choice of premium value products - with local service engineers that come to you wherever you are!

Grant Handling
info@granthandling.com



www.granthandling.com

RUBB
Building Systems

Rubb's fabric-engineered storage structures offer bright, spacious environments and are fully code-compliant. Since 1977, we've custom-designed and manufactured our buildings in Britain. Durable, relocatable, extendable, and available for rent or purchase.

www.rubbuk.com

Fronius

Fronius are experts in intelligent MHE battery charging solutions that will reduce your energy costs, lower your CO2 emissions, increase the service life of your battery, and minimise the maintenance required. Contact the UK team for your free site survey.

www.fronius.co.uk

AUTOMATION



HANDLING UNITS
TRANSFER SYSTEMS
ROTARY TABLES
01606 860567
www.weiss-world.com
WEISS

BOILERS



CMMS



EQUIPMENT SOLUTIONS

SHREWD INDUSTRIAL LTD
WORKPLACE EQUIPMENT SOLUTIONS - YOUR NEEDS MATTER

- HANDLING & LIFTING
- SITE SAFETY & PREMISES
- ACCESS
- OFFICE & MAILROOM
- SHELVING & STORAGE
- WORKSHOP

FOR ENQUIRIES CALL **01743 612028**
Request your **FREE** catalogue by emailing info@shrewdindustrial.com
Emstrey House (North) • Shrewsbury Business Park • Shrewsbury SY2 6LG

ORDER ONLINE TODAY BY VISITING: www.shrewdindustrial.com
10% automatic discount will be applied to online orders of £500 and above

INDUSTRIAL AUTOMATION & DIGITALISATION

Lenze

engineered to win

Lenze LTD, 6 Abbey Court, Fraser Road,
Priory Business Park, MK44 3WH Bedford
+44 1234 753200 sales.uk@lenze.com www.lenze.com

DRUM & IBC HEATING



FLUID DISPENSING SYSTEMS

Nordson EFD

Nordson EFD is the world's leading manufacturer of precision dispensing systems for applying controlled amounts of the adhesives, sealants, lubricants and other assembly fluids used in almost every industrial manufacturing process.

The product range includes:
Fluid Dispensers
Valve Systems
Dispense Tips and Components
Solder Paste
2-components fluid dispensing systems
Industrial Robots

EFD International Inc.
Unit 14,
Apex Business Centre,
Boscombe Road,
Dunstable LU5 4SB
Tel: +44 1582 666334
Email: uk@nordsonefd.com
Web: www.nordsonefd.com

BOILERS

Byworth BOILER HIRE

BEST FOR YOUR SHORT & LONG TERM BOILER HIRE

Rapid response • Energy efficient
British boilers • Bespoke solutions
Full backup support





CELEBRATING 50 YEARS IN BUSINESS 1968 - 2018

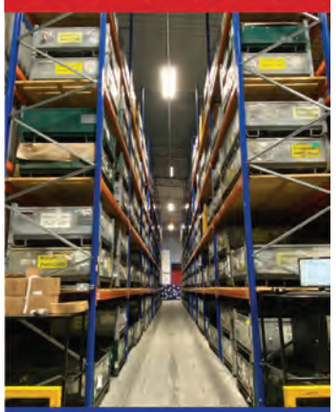
NHS APPROVED SUPPLIER

01535 662599 | www.byworth.co.uk

BUILDINGS

SMART-SPACE

INSTANT BUILDINGS



UK SUPPLY CHAIN
NO MINIMUM TERM
FLEXIBLE
QUICK

0121 756 1561
smart-space.co.uk

COOLING



FORCE, MATERIALS & TORQUE MEASUREMENT

Mecmesin

Mecmesin Ltd
Newton House,
Spring Copse Business Park,
Slinfold, West Sussex. RH13 0SZ
Tel: +44 (0) 1403 799979
Fax: +44 (0) 1403 799975
Email: info@mecmesin.com
Web: www.mecmesin.com

HAND SANITIZING STATIONS



HUMIDITY, TEMPERATURE & CO_2 MEASUREMENT

rotronic
MEASUREMENT SOLUTIONS
A PST BRAND

ROTRONIC is a Swiss based manufacturer of precision Humidity, Temperature, Low Dew Point, indoor CO_2 and Differential Pressure precision instrumentation.
The wide product range includes handhelds, data loggers with a continuous monitoring system - data available everywhere (RMS) and measurement transmitters including ATEX rated models.

For applications across industry:
- Pharmaceutical & Biotechnology
- Food Production & Research
- Aerospace & Automotive
- Drying; Brick & Tile
- Test Houses & Laboratories
- HVAC & Buildings
- Meteorology

Contact us at any time to discuss your application or project.

ROTRONIC INSTRUMENTS LTD
Crompton Fields,
Crompton Way, Crawley,
West Sussex RH10 9EE
Tel: 01293 571000
Fax: 01293 571008
Email: instruments@rotronic.co.uk
Web: www.rotronic.co.uk

INDUSTRIAL DOORS



LEAN PRODUCTION SYSTEMS



PACKAGING MACHINERY



MACHINE SAFETY

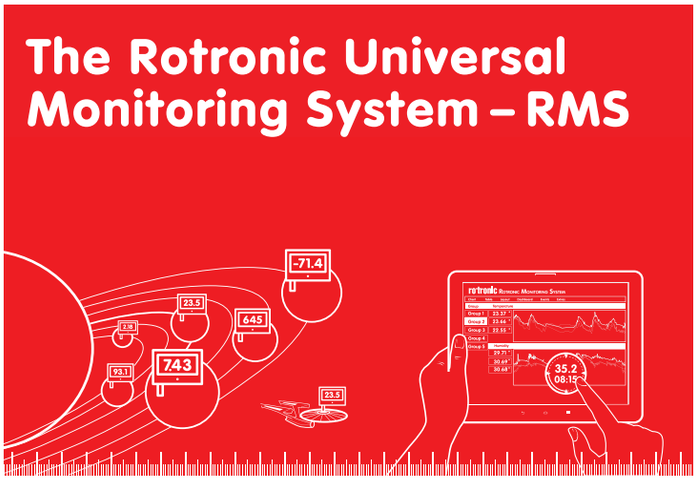
SCHMERSAL
THE DNA OF SAFETY

Schmersal
E: uksupport@schmersal.com **W:** www.schmersal.co.uk

ROTARY VALVES



TEMPERATURE & HUMIDITY MONITORING



Monitoring environmental conditions in any industry requires a fully integrated monitoring system. The modular Rotronic Monitoring System – RMS is the perfect solution. It provides installation flexibility and full data availability, anywhere, and on a variety of devices.
Rotronic can meet your requirements, incorporating multiple sensors for all parameters on a secure network. We can service the entire system.

Visit **www.rotronic.co.uk/rms** for more information

rotronic
MEASUREMENT SOLUTIONS
A PST BRAND

ROTRONIC Instruments (UK) Ltd, Crompton Fields, Crompton Way, Crawley, West Sussex RH10 9EE
T: 01293 571000

MANAGE & SECURE KEYS AND EQUIPMENT



ROBOTS & AUTOMATION



SERVICE & MAINTENANCE

Babcock Wanson | Service & Maintenance

Our UK and Ireland wide Service Team provides:

Mechanical Maintenance
Insurance Inspections
Health & Safety Documentation
Water Treatment

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

SCISSOR LIFTS

TECMACH



SCISSOR LIFTS

Standard or custom design

www.tecmach.co.uk
02392 525613

PUMPS



SAFETY KNIVES



SUPPLY CHAIN INTEGRATORS



BIGBOX™ Group

Intralogistics, Automation & Buildings

A collection of businesses providing intralogistics, automation and temporary and semi-permanent buildings across a wide number of industries and applications.



Big Box Group, Big Box House, 1-3 Wood Lane Mews, Beverley, East Yorkshire HU17 8DA
t. 01430 449986
e. enquiries@big-box.uk
big-box.uk

SPRINGS

Simpson Springs

Simpson Springs is a precision manufacturer of high Quality parts with almost 50 years of experience.

- **Springs**
- **Pressings**
- **Wireforms**

Simpson Springs & Pressings Ltd
T: 01189786573
E: sales@simpsonsprings.co.uk
W: www.simpsonsprings.co.uk

ROTATION MONITORING EQUIPMENT

ROTECH SYSTEMS

FOR ALL YOUR INDUSTRIAL MONITORING SOLUTIONS

Why Accept Anything Less?



- ENCODERS
- CONTROL MODULES
- VIBRATION SENSORS

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

WAREHOUSE & LOGISTICS

CopriSystems designs, installs and manufacturers extensions, shelters and bespoke structures that meet the specific needs of your organisation.

CopriSystems
Innovative Design & Build Solutions



WINTER MAINTENANCE EQUIPMENT

VALE

ICE AND SNOW CONTROL • ROBUST, RELIABLE & UK MADE

SALT GRITTERS FOR FORKLIFTS, TUGS & SHUNTER WAGONS • DE-ICERS & SNOW PLOUGHS • CHEMICAL STORES ALSO AVAILABLE



Low maintenance • 250 to 2000kg capacity • Capable of spreading wet or dry, brown or white salt

Contact VALE Engineering (York) Ltd on **01904 738533**, email **info@valeuk.com** or visit the new website: **www.valeuk.com**

ABSOLUTE & INCREMENTAL ROTARY ENCODERS
British Encoder Products Company
sales@encoder.co.uk
www.encoder.co.uk

BLOWERS, COMPRESSORS
AERZEN
Sales-uk@aerzen.com
www.aerzen.com

DOOR SYSTEMS
HART DOOR SYSTEMS
info@hartdoors.com
www.hartdoors.com

DOORS & LOADING SYSTEMS
IDS INDUSTRIAL DOOR SOLUTIONS
enquiries@idoorsolutions.co.uk
idoorsolutions.co.uk

ENERGY CONSUMPTION MONITORING & INSIGHTS
CDL
www.captiondata.com/energy-consumption-monitoring

FLUID DISPENSING
Nordson
europe@nordsonefd.com
www.nordsonefd.com

FORCE, MATERIALS & TORQUE TESTING EQUIPMENT
Mecmesin
info@mecmesin.com
www.mecmesin.com

GLOVES
JustGloves
Gloves For Less, Next Day Delivery!
Sales@JustGloves.co.uk
www.JustGloves.co.uk

HEATING ELEMENTS
elmatic
sales@elmatic.co.uk
www.elmatic.co.uk

HIGH QUALITY PROTECTIVE COATINGS SOLUTIONS
EM COATING SERVICES
ENGINEERED COATING SOLUTIONS
emukenquiries@cwst.com
www.emcoatingsuk.co.uk

HIGH SHEAR MIXING EQUIPMENT
SILVERSON
High Speed High Shear Mixers
sales@silverson.co.uk
www.silverson.co.uk

INNOVATIVE RETURNABLE PACKAGING SOLUTIONS
Schoeller Allibert
info.uk@schoellerallibert.com
www.schoellerallibert.com/uk

LEADERS IN SURFACE ENGINEERING
CURTISS-WRIGHT
eurosales@cwst.com
www.cwst.co.uk

LEADING THE WAY IN HAZARDOUS AREA STATIC CONTROL
NewsonGale
HOERBIGER Safety Solutions
groundit@newson-gale.co.uk
www.newson-gale.co.uk

LOADING BAY EQUIPMENT
stertil DOCK PRODUCTS DOOR PRODUCTS
DOCK & DOOR SOLUTIONS
info@stertil.co.uk
www.stertil-dockproducts.co.uk

MACHINERY
antalis EM
Just ask Antalis
contact@antalis.co.uk
www.antalis.co.uk/home

MACHINE SAFETY
SCHMERSAL
THE DNA OF SAFETY
uksupport@schmersal.com
www.schmersal.co.uk

MANAGE & SECURE KEYS AND EQUIPMENT
KEY TRACKER .com
The Power of Traceability
Sales@Keytracker.co.uk
www.Keytracker.com

PACKAGING
antalis EM
Just ask Antalis
contact@antalis.co.uk
www.antalis.co.uk/home

PIPEWORK & DUCTING SYSTEMS
JACOB
sales@jacob-uk.com
www.jacob-group.com/uk

PRESSURE TRANSMITTERS
esi
sales@esi-tec.com
www.esi-tec.com

PROCESS HEAT
LEISTER
info@welwyntoolgroup.co.uk
www.welwyntoolgroup.co.uk/industrial/

PROTECTIVE PACKAGING
Pregis
Protective Packaging Solutions
info@pregiseu.com
www.pregiseu.com

R&D TAX CLAIMS /IP /PATENTS
MCS CORPORATE STRATEGIES LTD
01926 512477
www.mcs-corporate.com

ROTATION MONITORING EQUIPMENT
ROTECH SYSTEMS
sales@rotechsystems.com
www.rotechsystems.com

POSITION AND LOCATION
omlox
The open locating standard
omlox.co.uk
uk@profibus.com

SAFE ELECTRICAL CONNECTION
wieland
info@wieland-electric.com
www.wieland.co.uk

TEMPORARY BUILDINGS
CopriSystems
Innovative Design & Build Solutions
01380 830 697
www.coprisystems.com

TEMPORARY BUILDINGS & STORAGE SOLUTIONS
Spaciotempo®
sales@spaciotempo.co.uk
www.spaciotempo.co.uk

TRADE/TECHNICAL PRESS RELATIONS
cantillion king
(0)1453 755 551
www.cka.co.uk

SLIMLINE PULL-WIRE SWITCH
FOR SAFE MACHINE START-UP:
PS216-Q200/Q210

Pull-wire switches are used as signal transmitters to start machines, open electrically driven doors and gates or as light switches in elevator shafts.

The PS216 pull-wire switch comes in two versions, the Q200 has a holding force of 45N and is suitable for wire lengths of up to 50m, while the Q210 has a holding force of 70N and can be used with wires stretching up to 100m. Pulling on the pull wire actuates the switch function in the pull-wire switch.

The high protection class and wide temperature range enable these switches to be used in a variety of applications.

Start your machine the safe way, the Schmersal way.



SCHMERSAL | Enigma Business Park
Malvern, Worcestershire, WR14 1GL

www.schmersal.co.uk
uksupport@schmersal.com

SCHMERSAL
THE DNA OF SAFETY