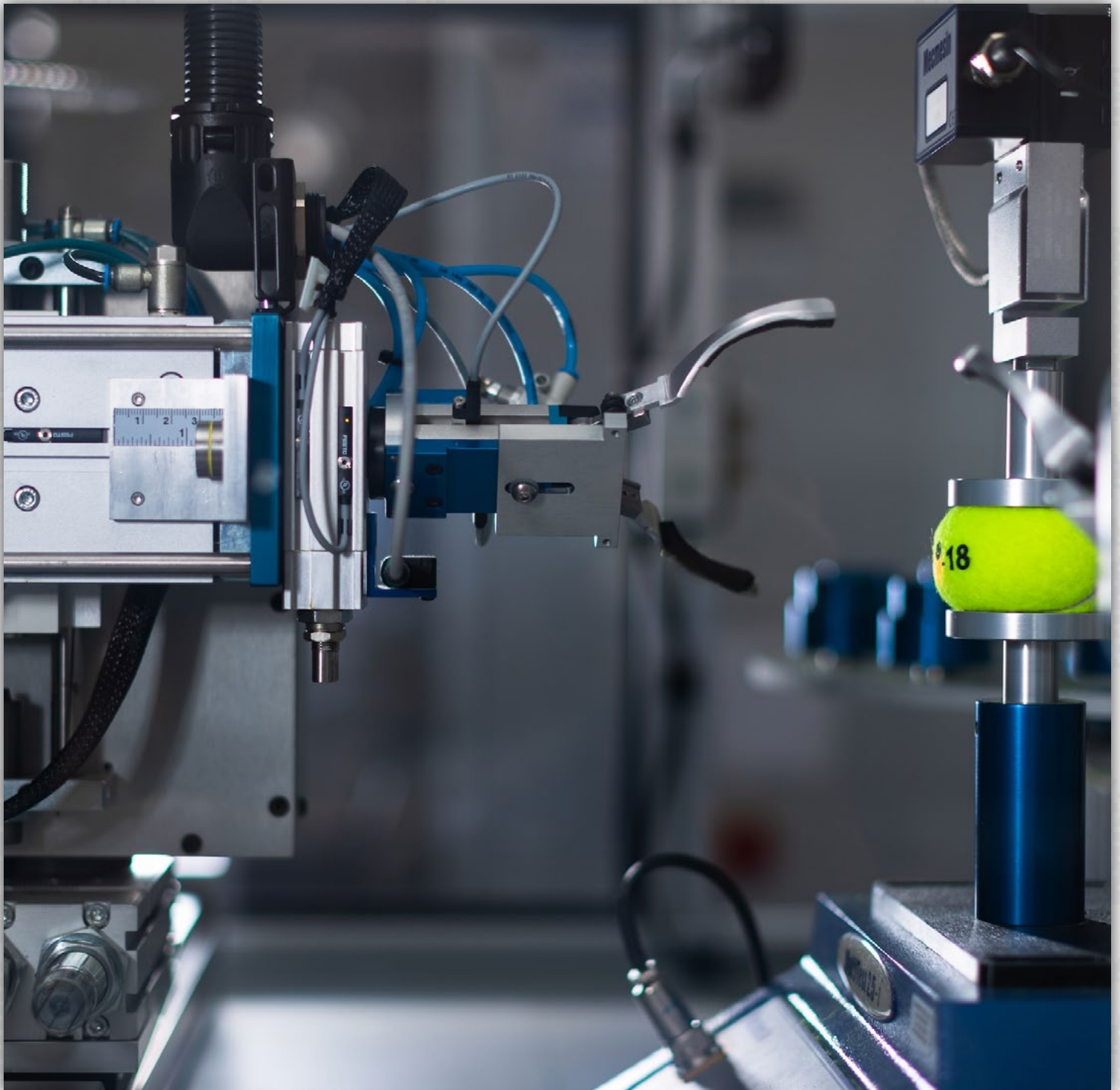


# ACE

**AUTOMATION    CHEMICAL    ENGINEERING**

**Issue 35 2023**

Sulzer  
ek Robotics  
Plus Many More!  
**INSIDE...**



# Work smarter, not harder



ERGONOMICS | ESD | LEAN

[treston.com](http://treston.com)

A workspace that adapts to your needs, not the other way around.

The widest range of accessories on the market.  
**Future-proof**

Suitable to any environment, application and industry.  
**Concept workbench**

Multiple sizes and combinations available.  
**Productivity and well-being**



DESIGN YOUR PERFECT WORKSTATION

**TRESTON**



The Treston 3D Configurator can be used to design an industrial or technical workstation that best meets your needs. To get started, all you need is a mobile phone or a computer with an internet connection; no downloading is required and using the software is free.

[3D.Treston.com](http://3D.Treston.com)

# Contents



## Features

- 4 Burkhardt Compression**  
Burckhardt Compression Boosts Reliability for a Major Petrochemical Company
- 6 ABB**  
ABB provides a complete range of robots for Nobia's new, high-tech kitchen factory
- 10 ek Robotics**  
ek robotics transport robot wins renowned iF Design Award 2023
- 16 Obso Global**  
Obso Global launches handy five-point plan to combat supply chain stress
- 22 Fanuc**  
FANUC places education centre stage at inaugural Automation UK show
- 26 Micro-Epsilon**  
Inrotech A/S chooses 2D/3D laser profile scanners from Micro-Epsilon to optimise the quality of weld seams
- 28 Sulzer**  
Sulzer signs agreement with Jindan New Biomaterials in China for production of biobased plastic
- 32 IPP Pooling**  
Why we should all strive to be 'zero heroes'
- 34 Mettler-Toledo**  
Mettler-Toledo Launches X2 Series of X-ray Solutions to Bring Enhanced Product Safety to a Wider Audience

### Editor in Chief

Antony Holter  
antony@aceindustrymag.co.uk  
01304 806039

### Editor

Julie Fox  
editor@aceindustrymag.com  
01304 806039

### Publishing Director

Martin Holmes  
martin@mhmagazine.co.uk  
01304 806039

### Sales Manager

David Allerton  
david@aceindustrymag.com  
01304 806039

### Business Manager

Josh Holmes  
josh@mhmagazine.co.uk  
01304 806039

### Accounts Dept

Alison Holmes  
accounts@mhmagazine.co.uk  
01227 936979

### Published by:

MH Media Global Ltd  
18/20 Newington Road, Ramsgate, Kent, CT12 6EE

Tel: 01304 806 039  
© MH Media Global

Every effort is made to ensure the accuracy and reliability of material published in ACE however, the publishers accept no responsibility for the claims or opinions made by advertisers, manufacturers or contributors. No part of this publication may be reproduced or transmitted in any form or by any means, mechanical, electronic (including photocopying) or stored in any information retrieval system without the prior consent of the publisher.

# Burckhardt Compression Boosts Reliability for a Major Petrochemical Company

**B**urckhardt Compression's expertise and know-how, along with its transparent assessment of the condition of compressors and auxiliaries, played a crucial role in the major turnaround of two LDPE compressors for petrochemical company. The successful completion of the project on time and within budget, along with the extended lifetime of the equipment, underscores the importance of Burckhardt Compression's dynamic project management and expertise in the petrochemical manufacturing industry.

A major petrochemical company has been meeting the demand for its products for nearly 60 years, specializing in polymers such as ethylene, polyethylene, polyvinyl chloride, and polypropylene. These polymers are essential components for many industries worldwide, as they are used in the production of a wide range of products, including packaging, construction materials, automotive components, and textiles.

To meet high market demand, the factory relies on robust plant and equipment for flawless production. Although the two low-density polyethylene (LDPE) compressors - a booster/primary and a hyper, critical to the production process required scheduled maintenance, they only needed minor repairs. Additionally, the auxiliary equipment was also part of the factory's major turnaround, which required special care to ensure optimum performance.



**Burckhardt Compression provided comprehensive support and management for the customer's project.**

Burckhardt Compression's specialist team attended the site and worked with the customer's on-site engineering team to collect site data and provide insight into the condition of the compressor system for necessary repairs and major turnaround.

The customer faced several project challenges, including the need for OEM expertise to ensure the project was completed professionally and on time due to the compressed timeline for the overhaul. Additionally, there was a requirement for a single-source supplier to coordinate and execute all compressor-related work on the auxiliary equipment like motor and gas piping.

Burckhardt Compression provided comprehensive support and management for the customer's project. This included overhauling a lubrication unit, cleaning and flushing of the auxiliary and gas piping, as well as inspecting and overhauling the compressors to ensure they were fully operational.



Burckhardt Compression also coordinated with the motor OEM to assess its condition and source the necessary spare parts.

To adhere to a strict timeline, Field Service representatives from Burckhardt Compression worked in shifts to carry out the required work including crank gear overhaul and con-rod bearing replacement. This was in addition to the other work managed by the on-site Field Service Coordinator, who acted as a single point of contact for project management and oversaw the entire project.

The major turnaround has resulted in an extended lifetime of the customer's plant equipment and ensured safe compressor operation until the next scheduled maintenance.

A contracts specialist for the customer concluded: "Our organization is extremely satisfied with the exceptional professional services provided by Burckhardt

Compression. The entire team provided an unwavering dedication to completing the project on time and within budget. The technical expertise of Burckhardt Compression is second to none, and we are grateful for the quality of work and successful completion of the project."

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

**interface**  
FORCE MEASUREMENT SOLUTIONS.



## Load Cell, Torque and Pressure Sensor Specialist

Interface's new Global Standard product line - The G Series

- Three load cell types – the load button, mini S-beam & threaded In-Line.
- Capacities ranging from 4.5 newtons to 50kN
- Stainless steel with an environmental protection rating of IP64 or better.

Purchase our G-Series at [store.interfaceforce.co.uk](http://store.interfaceforce.co.uk) or visit [www.interfaceforce.co.uk](http://www.interfaceforce.co.uk)

**FPS** ★  
AIR COMPRESSORS

# One Source For All Your Compressed Air Needs

HIGH ENERGY SAVING SOLUTIONS



**IE4**  
IE4 MOTOR

**PM**  
PERMANENT MAGNET

**HIGH OUTPUT**

**LOW NOISE**

5.5kW to 315kW

Visit: [www.fps-compressors.co.uk/nobel](http://www.fps-compressors.co.uk/nobel)

✉ [sales@fps-compressors.co.uk](mailto:sales@fps-compressors.co.uk) ☎ 01865 892 620  
Unit 5, Tower Estate, Warpsgrove Lane, Chalgrove, Oxfordshire OX44 7XZ

## Rotaflow swivel joints for all sectors of engineering

Through design and in-house manufacture our swivel joints allow one or more different flows through a single unit, enabling the pipework to rotate 360 degrees whilst carrying fluids (including hydraulic and pneumatic) of different pressures without cross-contamination or leakage. There are many different forms of Swivel Joint... from very straight forward designs of our F and FS series, Compact swivels, or Heavy Duty to Articulated Pipework configurations, Floating Suction Arms, Jacketed, High pressure. A Swivel Joint reduces costs by reducing the risk of leakage with its associated downtime.



By fitting a quality designed swivel, you are improving your production capacity.

With almost 40 years of experience, Rotaflow, are specialists in taking your bespoke requirements and being able to design a solution that can fit your budget, dimensions, materials, FAT/ witness testing; hygienic and pressurised environments. We regularly test to Hyperbaric, Seal Life and conduct Temperature/ Pressure/ Load Cycle Testing. We are ISO 9001:2015 certified.

To find out more please visit our website and/or give us a call.  
Tel: +44(0)1663 735003 | [sales@rotaflow.com](mailto:sales@rotaflow.com)

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

# Fluid Carrying Flexibility Swivel Joints

- Torsion In Hoses
- Articulated Pipework
- Subsea Oil & Gas
- Rotating Cylinders

- Swivel joints allow pipework to rotate whilst carrying fluid under pressure 1/4" to 40" and beyond.
- Vacuum to over 20,000psi.
- Stock and bespoke production.
- Unique bearing/ seal design for longer life.
- ISO 9001 CE marked where applicable.
- Hyperbaric testing.

**Rotaflow**  
the swivel joint specialists

Tel: +44(0)1663 735003  
E-mail: [sales@rotaflow.com](mailto:sales@rotaflow.com)  
[www.rotaflow.com](http://www.rotaflow.com)

Rotaflow FV Limited | Rotec House  
Bingswood Trading Estate  
Whaley Bridge | High Peak | SK23 7LY | UK



# ABB provides a complete range of robots for Nobia's new, high-tech kitchen factory

**A**BB Robotics has been selected by Nobia - the leading kitchen specialist in Europe - to supply robotic automation solutions for their new factory in Jönköping, Sweden. By securing the contract, ABB Robotics furthers its expansion into new industry segments, helping to make production more efficient and sustainable.

"ABB's contribution to Nobia's new state-of-the-art factory clearly illustrates how we are helping companies unlock flexible automation to transform their business, supporting with unique global industry expertise and innovative, tailor-made products," said Andrea Cassoni, Managing Director, General Industry, ABB Robotics. "Working with Nobia, our robotics solutions will enable fast mass-production of customized kitchens, meeting consumers' increased

“

We are very excited about this partnership with ABB. We are building a future-proof, high-capacity factory that will support our leading position.

demand for tailored and personalized product choices”.

The supply of ABB robots will enable Nobia to achieve its vision for more flexible and more automated manufacturing that's capable of producing customized products at

scale. By taking on the dull, dirty and sometimes dangerous tasks, the range of robots will enable Nobia's workers to take on safer, more rewarding work. The robots included are IRB 7600, ideal for heavy applications, IRB 4600, a general-purpose robot that increases production capacity and improves productivity, and IRB 6700, the highest-performance robot in the 150–300-kilogram class which, on average, takes about 2.5 tons per day off the shoulders of an employee. The robots will enable the factory to produce customized cabinets with 75-80% higher efficiency (time) in comparison to non-automated processes.

Combining ABB's technological leadership in automation with Nobia's segment insights and knowledge of their customers' needs, the relationship will

lead to more flexible and digitalized manufacturing processes. Together, the companies strengthen the competence development within automation for the region around Jönköping. In the local area, ABB Robotics will support and educate Nobia's existing and future employees as well as students at Jönköping University and neighboring Linköping University. The training will be held in ABB Robotics' recently opened training center in Jönköping.

"We are very excited about this partnership with ABB. We are building a future-proof, high-capacity factory that will support our leading position. It is a real game changer for the whole industry. The factory will manufacture customized, made-to-order kitchens at the highest speed and at the same time highest possible quality. The unique combination of technique solutions combined with our expertise will enable us to offer kitchens with leading

## About ABB

ABB (ABN: SIX Swiss Ex) ABB is a technology leader in electrification and automation, enabling a more sustainable and resource-efficient future. The company's solutions connect engineering know-how and software to optimize how things are manufactured, moved, powered and operated. Building on more than 130 years of excellence, ABB's ~105,000 employees are committed to driving innovations that accelerate industrial transformation.

design, and sustainability performance to customers in the Nordic region. To achieve this we will utilize ABB's market leading technology for highly automated and flexible processes, and extensive logistics consolidation," said Jon Sintorn, CEO, Nobia.

The region around Jönköping is characterized by extensive know-how

and expertise in manufacturing, with ABB Robotics further enhancing this through its work with Nobia. The factory will be fully operational in the course of 2024, to become one of Europe's most modern kitchen factories.

<https://go.abb/robotics>



# New chain cutting service

**A** new in-house chain cutting service is now available from UK based Donghua Limited following the installation of our new automatic chain cutting machine

As part of the launch of our new chain cutting service, Donghua is offering distributors free carriage (UK mainland only) on all orders of cut to length chain.

Donghua Limited is part of the Hangzhou Donghua Chain Group of Companies which is one of the world's largest manufacturers of industrial chain, producing in excess of 40 million metres of finished chain per year.

Based in the West Midlands since 2009, we have created a comprehensive workshop on site in our warehouse and distribution centre, for the production of bespoke in-house built attachment chain.

The new automatic chain cutting machine is the most recent addition to our workshop which includes a range of tools and machines which measure the length of chain; pre-load chain; match chain, cut large pitch chain and special attachment chain, plus features our highly popular hot dip chain lubrication facilities.

The new machine, which has been designed by Donghua and is the only machine of its kind in the UK, automates the chain cutting process enabling us to supply our distributors with cut to length Leaf Chain and Roller Chain.

Designed for speed and accuracy, the new machine cuts chain very quickly providing our customers with a cost-effective solution to buying cut to length chain. It cuts Leaf Chains from 1/2" pitch to 1 1/4" pitch in AL, BL, LL, FLC series; and cuts Roller Chains from 1/4" pitch to 1 1/4" pitch in simplex, duplex and triplex in British and American standards.

To see Donghua's new automated chain cutting machine in action watch our latest video, available on our website.

For more information about our chain cutting service call 01902 866200 or email [sales@donghua.co.uk](mailto:sales@donghua.co.uk).



“

Designed for speed and accuracy, the new machine cuts chain very quickly providing our customers with a cost-effective solution to buying cut to length chain.



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





**NEW**

## in-house automatic chain cutting service

We now offer cut lengths of Leaf Chain and Roller Chain with our new automatic chain cutting machine – the only machine of its kind in the UK – providing our customers with a quick, automated chain cutting service.

We can automatically cut Leaf Chains from 1/2" pitch to 1 1/4" pitch in AL, BL, LL, FLC series; and cut Roller Chains from 1/4" pitch to 1 1/4" pitch in simplex, duplex and triplex!

**FREE carriage (UK mainland only)  
on all orders of in-house cut chain!**

**Tel: 01902 866200**

**[donghua.co.uk/workshop](http://donghua.co.uk/workshop)**





# ek robotics transport robot wins renowned iF Design Award 2023

The VARIO MOVE transport robot has been awarded this year's iF Design Award. This is the third time that the flexibly configurable automated guided vehicle (AGV) from ek robotics, with its sophisticated industrial design, has received a coveted design award.

The industrial design of the VARIO MOVE series has convinced an international design jury for the third time: After receiving the Red Dot Award 2022 and German Design Award 2023, the VARIO MOVE transport robot from ek robotics has also been honored with the globally renowned iF Design Award in the category "Industry / Tools". The number of submissions was large: The 133-member jury had to choose between 11,000 applicants from 56 countries, for the winners who may carry the popular design label in the future. "We are very pleased and proud of the third award for the VARIO MOVE. All three design awards confirm the positive feedback from our global customers who use the VARIO MOVE to optimize their material flows," says Andreas Böttner, CEO of ek robotics. "Our goal for this transport robot series was to develop an appealing and smart design that conveys our new distinctive

corporate design. With the versatile VARIO MOVE, we have succeeded in this." The VARIO MOVE AGV has been designed for the sustainable optimization of transport and material flows and meets a wide range of transport requirements. The modular concept, maximum availability, maintenance-friendly design and an exceptionally long life cycle are just as striking features as its design. "As a high-tech transport robot, the VARIO MOVE combines power and performance with a compact but friendly appearance and helps minimize fear of contact between humans and robots," adds Ronald Kretschmer, CSO at ek robotics.

Together with industrial designer Meike Hahr from Creative Specialists, the engineers from ek robotics deliberately focused on a friendly appearance when developing the VARIO MOVE. Right from the start, people should experience the transport robot as a working partner and not as a disruptive factor. The iF DESIGN AWARD is awarded once a year by the world's oldest independent design institution, iF International Forum Design GmbH. Since 1954, the iF DESIGN AWARD has been a globally recognized trademark when it comes to excellent design.

## VARIO MOVE: HIGH PERFORMANCE, EXCELLENT DESIGN

Depending on the application profile, the three-time award winner can be equipped with different trolleys, various load handling devices and all major navigation technologies available on the market. The VARIO MOVE modular system consists of five defined lift masts, with which a transfer height of up to 5 meters can be achieved. At the same time, it has a high load capacity of up to 1,600 kg. Inside, an intelligent sensor system ensures maximum safety during operation, while the intelligent Li-Ion energy system is designed for 24-hour use, 365 days a year. This results in a multitude of possible combinations - one of the strengths of the Infinite Colors of Transport from ek robotics.

On April 25 - 27, visitors to LogiMAT will be able to experience the transport robot VARIO MOVE, which has won the Red Dot 2022, German Design Award 2023 and iF Design Award, in action under real conditions. You will find ek robotics in hall 6 at booth B05.

<https://ek-robotics.com/en/>

# Denso Bore-Wrap™ Protects Power Station Gas Pipeline During HDD Installation

**W**inn & Coales (Denso) Ltd, leading manufacturer and supplier of corrosion prevention and sealing systems, recently supplied their abrasion resistant outerwrap (ARO), Denso Bore-Wrap™ for use on sections of a new 2.7km natural gas pipeline constructed to service Kilroot Power Station, situated on the north shore of Belfast Lough. The contract, secured by GMC Utilities Group with their joint venture partner Rayden Engineering, is part of a £600m decarbonisation scheme to transform the coal fired power station and create a new low carbon energy park.

The welded steel pipeline from Marshallstown Above Ground Installation (AGI) to Kilroot AGI was mainly installed by open cut methods, but at road crossings, including one on the A2, the pipe was installed by horizontal directional drilling (HDD). To ensure that the integrity of the anti-corrosion coatings on the pipe was maintained, Denso Bore-Wrap was applied to these sections prior to pulling the pipe under the roadways. Once pulled through, the ARO showed no signs of damage, indicating no damage to the coatings underneath and clearly demonstrating the exceptional mechanical protection offered by the system.



*Denso™ Clear Outerwrap is applied whilst the ARO is curing, then removed once fully cured. The undamaged Denso Bore-Wrap™ is visible after the pipe is pulled (inset).*

[www.denso.net](http://www.denso.net)

## LABFACILITY

TEMPERATURE & PROCESS TECHNOLOGY  
Leaders in temperature measurement

### Hermetically Sealed Wire Sensors

An IP67 wire sensor that is hermetically sealed for use in corrosive or wet environments

- Available in IEC, ANSI & PRT versions
- Hermetically sealed airtight tip
- Suitable for insertion into liquids
- Oil & Chemical resistant PFA insulation
- Available with standard tails or mini thermocouple plug terminations



XE-6353-001  
IEC Type K, 1m with Mini Plug



XE-6378-001



XE-6365-001



XE-6380-001



XE-6375-001



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

[www.labfacility.com](http://www.labfacility.com)  
Bognor Regis tel: +44 (0)1243 871280



[sales@labfacility.com](mailto:sales@labfacility.com)  
Sheffield tel: +44 (0)1909 569446



*The FLOWave offers a very compact footprint, a key priority in this project*

# Surface acoustic wave technology provides hygienic flow measurement for pharmaceutical manufacturer

**W**hen active pharmaceutical ingredient (API) developer and manufacturer, Veranova, wanted to build a new manufacturing suite, it needed accurate control over volumetric flow to optimise process efficiency. As the suite would be installed within an existing area of the facility, the flowmeter had to contribute to a compact overall footprint. Handling various media, including solvents and acids as well as low conductivity liquids, the device also had to enable a clean in place (CIP) process. Veranova turned to Bürkert and its surface acoustic wave (SAW) technology to fulfil its requirements.

At Veranova's Edinburgh facility, the company planned a new manufacturing

suite for high potency APIs, increasing production capacity from the lab to full-scale manufacturing. While Veranova has developed its own portfolio of APIs, the company is moving further into contract manufacturing, which will be supported by the additional capacity of the new production suite. To optimise manufacturing at a higher scale and ensure process efficiency, Veranova needed accurate control over the total flow of raw materials for API production, as well as the flow rate of chemicals in the CIP line.

Physical space is typically at a premium in API production, and Veranova's manufacturing suite had to fit within the footprint of its existing facility, so



*The FLOWave was simple and straightforward to install and commission*



*Compact dimensions were very important for the new API production equipment*

compact dimensions were even more important. This ruled out Coriolis meters, even though Veranova often uses them within its processes, because of their comparatively large size, as well as the extended pipework they need. Since the requirement was flow measurement rather than mass flow, an alternative solution would also be more cost effective.

The flow meter also had to be capable of measuring various fluids, including water-based solvents, and acids, that would flow down the same line following a flush. As some of the solvents involved have low conductivity, this would also rule out certain flow measurement technologies. Following detailed research and testing, Veranova determined that Bürkert's FLOWave flowmeter closely achieved its key requirements.

"FLOWave is really compact, and a key benefit is that it's hygienic and easy to clean, giving confidence that no residue is left behind. This enables us to use

multiple fluids down the same line, and FLOWave can be calibrated specifically for each type of liquid, providing the accuracy we need," explains Richard Bell, Veranova. "It's a multi-purpose plant, and we can manufacture multiple products within the suite. Even within a single API product, multiple materials are used, and FLOWave will help us to achieve that."

FLOWave has a smooth bore that is completely free of mechanical obstructions, preventing retention of any residue from media or the CIP process, ensuring optimum hygiene. The device is also constructed from 316L stainless steel, which

compared to standard 316 has a lower carbon content, increasing its resistance to corrosion and improving hygiene. This was an important factor for Veranova that uses dilute acids within its process.

The device achieves hygienic flow measurement thanks to SAW technology, generating surface acoustic waves that

## About Bürkert

Bürkert Fluid Control Systems is one of the leading manufacturers of control and measuring systems for fluids and gases. The products have a wide variety of applications and are used by breweries and laboratories as well as in medical engineering and space technology. The company employs over 2,200 people and has a comprehensive network of branches in 35 countries world-wide.

travel through the fluid. Calculating time differences of the waves proportional to the flow, FLOWave can determine real time flow rates, total flow and flow velocity. The technique also enables FLOWave to measure irrespective of fluid conductivity.

While surface acoustic wave technology isn't new, some pharmaceutical manufacturers can be hesitant in deviating from the mainstream type of flowmeter, so why did Veranova make the selection?

"It was easily the best fit," says Richard. "We looked at various alternative brands and technologies, but none of them could achieve a compact design to hygienically measure the flow of multiple liquid types, including low conductivity media, as effectively as FLOWave."

With the suite now installed and commissioning almost complete, Richard says that set-up of FLOWave was simple and straightforward, and Veranova is looking to make the first batch from its new system very soon. The flowmeter also gives a flexibility to change production if needed.

"FLOWave has a wide flow range that can be easily adjusted depending on your application and media requirements. If we introduced a new API product, for example, we could easily re-range the device for a higher flow," says Richard.

[www.burkert.com/en](http://www.burkert.com/en)



# H.B. Fuller Acquires Beardow Adams

**H**.B. Fuller Company (NYSE: FUL), the biggest pure play adhesives company in the world, has acquired Beardow Adams, a UK-based family-owned business that has grown since its establishment in 1976 into a proven multinational industrial adhesive manufacturer, with customers in more than 70 countries. With manufacturing capabilities across Europe and the U.S., and a powerful distribution network across the globe, Beardow Adams is recognized for its commitment to quality and service across a variety of industry applications. The acquisition is expected to accelerate profitable growth in many of H.B. Fuller’s core end markets and generate business synergies through production optimization, an expanded distribution platform, and difference-making innovation.

“Combining the two companies is an exciting move toward H.B. Fuller’s goal of strengthening our leadership position in the markets and regions we serve by expanding our customer base and technology portfolio to address today’s megatrends, such

## About Beardow Adams

Beardow adhesives are present across the world in millions of everyday items that help to make the end user’s application easier, more efficient and of a better quality. The global adhesive manufacturer and supplier aims to be best in class, knowledge leaders with technologically advanced products.

as e-commerce, food safety, and sustainability,” said Jim East, executive vice president, Hygiene, Health, and Consumable Adhesives. “As we combine our businesses, we will be a stronger force in the adhesives industry.”

Beardow Adams generated approximately €130 million in revenue for the 2022 fiscal year. With a team of 200 employees globally, the company

## About H.B. Fuller

Since 1887, H.B. Fuller has been a leading global adhesives provider focusing on perfecting adhesives, sealants, and other specialty chemical products to improve products and lives. With fiscal 2022 net revenue of \$3.75 billion, H.B. Fuller’s commitment to innovation and sustainable adhesive solutions brings together people, products, and processes that answer and solve some of the world’s biggest challenges.

will operate within H.B. Fuller’s existing Hygiene, Health, and Consumable Adhesives global business unit.

[www.beardowadams.com](http://www.beardowadams.com)  
[www.hbfuller.com](http://www.hbfuller.com)

# Reliable sealing for critical industrial applications

**PERLAST®**  
Perfluoroelastomer Parts

In process and manufacturing industries, equipment reliability can't be left to chance. Perlast® Perfluoroelastomers (FFKM) have been developed to provide exceptional sealing performance in environments where other materials might fail. From O-rings to hygienic gaskets, Perlast® is the name to trust for process industry leaders around the world. Here's why...

## 1. UNIVERSAL CHEMICAL RESISTANCE

Perlast® FFKM is chemically inert. In tests and in situ, Perlast® FFKM materials are proven in the most aggressive chemical environments – across process media as well as chemical (CIP) and steam (SIP) sterilisation routines.

## 2. HIGH TEMPERATURE RESISTANCE

The molecular structure of Perlast® FFKM results in extraordinary stability in high temperatures. Perlast® FFKM can withstand operating temperatures of up to 327°C (620°F). Perlast® FFKM is not only resistant to high temperatures – some grades seal down to -46°C (-51°F)

## 3. MECHANICAL STRENGTH

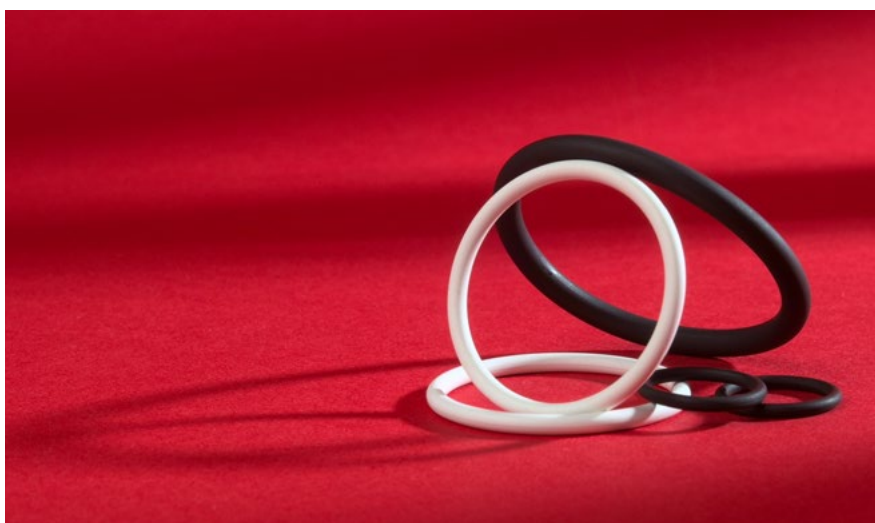
The low compression set of Perlast® FFKM means that across both static and dynamic applications, Perlast® FFKM seals can be specified within fast-paced process lines that cannot be undermined by material weakness and unreliability.

## 4. FULL REGULATORY COMPLIANCE

Perlast® FFKM is certified compliant to important standards across several industries, including food, dairy and pharmaceuticals (FDA, 3-A Sanitary Standards and USP), and energy (NORSOK M710, NACE, ISO23936, and ISO10423).

## 5. AVAILABILITY

In recent months, the excellent availability of Perlast® FFKM has been a critical factor for equipment operators. An industry-wide shortage of FFKM ingredients has led to significant increases in lead times for major manufacturers and prominent FFKM



“

The molecular structure of Perlast® FFKM results in extraordinary stability in high temperatures.

grades. Perlast® FFKM has remained relatively unaffected by this supply chain complexity. Perlast® FFKM sealing components can be manufactured to order in as little as a month – up to six times quicker than some competitor grades.

### SWITCHING TO PERLAST® FFKM

PPE sealing specialists understand the

difficulties involved in specifying and implementing a new sealing material. Arrange an initial consultation with a Perlast® specialist at [www.perlast.com](http://www.perlast.com), or take a look at our videos and resources to explore the benefits of using Perlast® FFKM.

Precision Polymer Engineering are exhibiting at CHEMUK 2023 at the Birmingham NEC (10-11 May) – so if you're attending, we'd love to welcome you to Stand M34 where our specialist sealing engineers have answers to all your industrial sealing questions.

01254 295400  
[prepol.sales@prepol.com](mailto:prepol.sales@prepol.com)  
[www.perlast.com](http://www.perlast.com)



## Obso Global launches handy five-point plan to combat supply chain stress

**R**ecent findings by the Chartered Institute of Procurement & Supply (CIPS), found that the downturn in UK manufacturing accelerated at the end of 2022. Moreover, the rate of decline was among the steepest during the past 14 years.

Companies reported that recent output had been scaled back due to declining intakes of new work and disruption caused by stretched supply chains and material shortages.

Long lead times prove to be a huge challenge for businesses attempting to source genuine parts for equipment and machinery.







“

Long lead times prove to be a huge challenge for businesses attempting to source genuine parts for equipment and machinery.

That's why Obso Global has launched a new guide, which outlines five simple steps operators can take to help source and stock new and refurbished parts for production; helping to mitigate the risk of unplanned downtime and maintain productivity.

Available to download for free here, the five-point plan guides operators through the key steps to take to reduce the impact long lead times are having on businesses. It includes guidance on the importance of an operational strategy for parts' procurement, developing contingency plans or using a third-party provider for bonded stock holding. The plan has been compiled using insight from Obso's experienced technical team, which has helped many customers across the world combat the stresses of ongoing supply shortage and parts' availability.

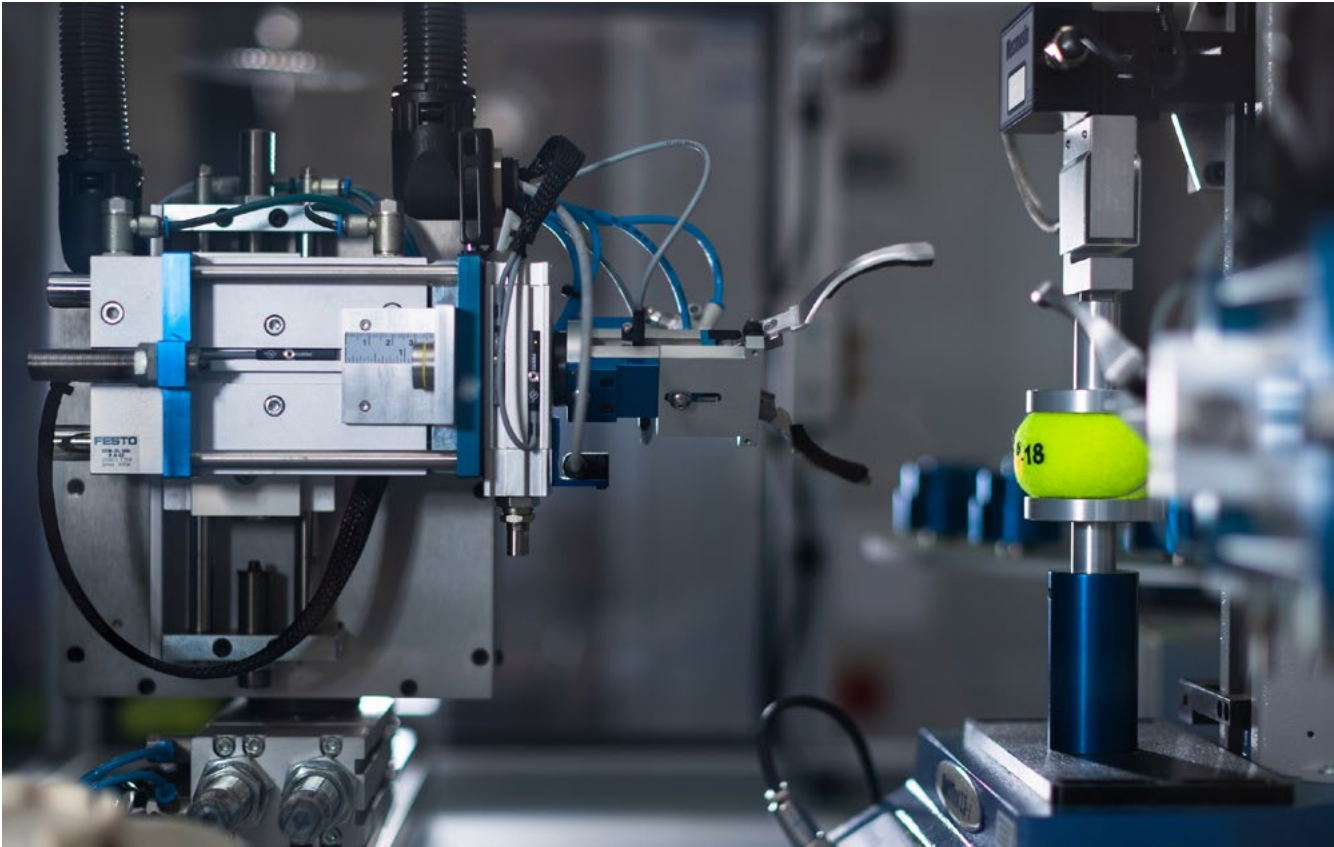
## About Obso Global

Obso Global is a supplier of hard-to-find and obsolete automation spare parts worldwide. With more than 40,000 part-lines available to deliver, from more than 300 manufacturers, the company supports businesses across the entire manufacturing industry: from electronics to automotive, food and beverage to production engineering.

Obso also plans to launch a series of blog articles discussing – from personal experience – how longer lead times and rising costs have affected the business over the past few years, and what steps the team has taken to overcome this.

**For further information please visit [www.obsoglobal.com](http://www.obsoglobal.com) or call 0800 36 888 17 to speak with an experienced Obso advisor. To download a copy of the free five-point plan, please visit <https://obsoglobal.com/uk/sourcing-automation-parts-made-easy>.**





# Nine ways consumable, democratised data improves factory operations

**M**anufacturers are increasingly turning to smart manufacturing principles, hoping to turn the shop floor into highly efficient, data-driven operations humming with synchronised precision. Unfortunately, line-of-business managers, team leaders, and shift supervisors—the shop floor heroes—often lack easy access to the ERP system and the relevant data needed to keep production on track.

Deskless workers play a vital role in operational efficiency. Democratising data—making data consumable for a wider population—will give these frontline users valuable decision-making insights. With role-based dashboards and reporting tools, they can drive better performance up and down the production line, from smart use of resources to reduction in rework and scrap.

Countless critical decisions are made on the shop floor every shift. The setting—notoriously noisy and fast moving—isn't conducive to careful, prolonged

“

Deskless workers play a vital role in operational efficiency. Democratising data—making data consumable for a wider population—will give these frontline users valuable decision-making insights.

pondering of influences. Fast-moving production lines require fast decisions and expedient action. At the same time, errors can be costly, eating away at profitability, wasting resources, and jeopardising as-promised delivery times. Decisions based on guesses, one random exception, or anecdotal stories can send a team into spirals of wasted time, frustrating workers and managers alike.

## EMPOWERING FRONT-LINE USERS

The answer is to put data in the hands of every decision-maker in the organisation, even those who aren't advanced data analysts with skills in report writing and applying artificial intelligence (AI) algorithms. Modern digital platforms provide interface tools to help users apply advanced functionality to everyday situations. Featuring low-code and no-code capabilities, the digital platform provides front-line users with role-based dashboards to track relevant key performance indicators (KPIs) and custom reporting to investigate emerging trends. Quickly, dynamic insights are within reach of machine operators, maintenance technicians, and material handling engineers, scheduling clerks, and shift leaders.

## DATA DRIVES SPEED AND ACCURACY

Operational-level access to data is especially helpful in preventing gaps in workflows and avoidable delays. Frontline workers can get immediate answers to design questions or

specifications on a custom work order. Access to information keeps production lines moving as planned, with minimal interruptions because of questions, disconnects between departments, or stockouts.

Advanced analytics can go even further to keep the shop floor operating smoothly and profitably. Managers can delve into exceptions and track influencing variables. They can find opportunities for improvement, such as eliminating quality roadblocks or controlling down time.

## PRACTICAL APPLICATIONS

As artificial intelligence (AI) and machine learning (ML) have moved into the mainstream, manufacturers are increasingly seeking practical applications for data insights. Proof of concept projects are being replaced by ones which promise a timely, measurable return on investment. The shop floor offers many practical applications for AI-driven insights. Routine processes can be automated, streamlining the need for human interaction. Only anomalies or exceptions need to be routed to supervisors for individual attention. Streamlining the data flow will also help keep various teams apprised of real-time updates and needs. No one is out of the information loop, falling behind on evolving expectations. One data-driven digital thread will connect every stage in shop floor operations.

Here are nine examples of how democratized data helps boost productivity:

### 1. Custom quotes and bill of materials.

Efficiently managing make-to-order, engineer-to-order, and configured products requires an automated system for generating rules-based quotes and matching bills of materials. Once the customer has approved the order, the specifications must flow from sales to operations to ensure the right dimensions, features, and finishes are applied. Access to the customer order helps managers verify details, eliminating reworks or customer returns.

### 2. Projecting raw resources needed.

Synchronising production planning and availability of raw resources requires access to data and AI-driven predictive capabilities to prevent stock-outs. Data helps procurement managers make sure the warehouse is stocked with necessary components. Too much inventory can be just and dangerous, tying up capital and risking obsolescence.

**3. Accurate scheduling.** Synchronising production runs to fulfill customer orders depends on accurate account data as well as sales, delivery promises, inventory of raw materials, and machine capacity. Working with co-manufacturers or subcontractors also requires access to information. Collaboration portals can help share information while protecting security.

### 4. Strategic scheduling of the workforce.

With data insights, managers can track and understand performance of shifts and crews, identifying essential staffing requirements and tracking expenses. With the acute labor shortage manufacturers face today, careful scheduling of right-skilled workers is especially important.

**5. Workflows.** Keeping operations running smoothly with no gaps, delays, or roadblocks requires coordination among teams and sharing data on job status, equipment performance, and scheduling. Reporting can help identify trends and analyse variables, allowing managers to delve deeper into influencing factors that can be improved. Decisions can be made, changes executed, results monitored, and further refinements made. Continuous improvement can be part of the system and standardised workflows.

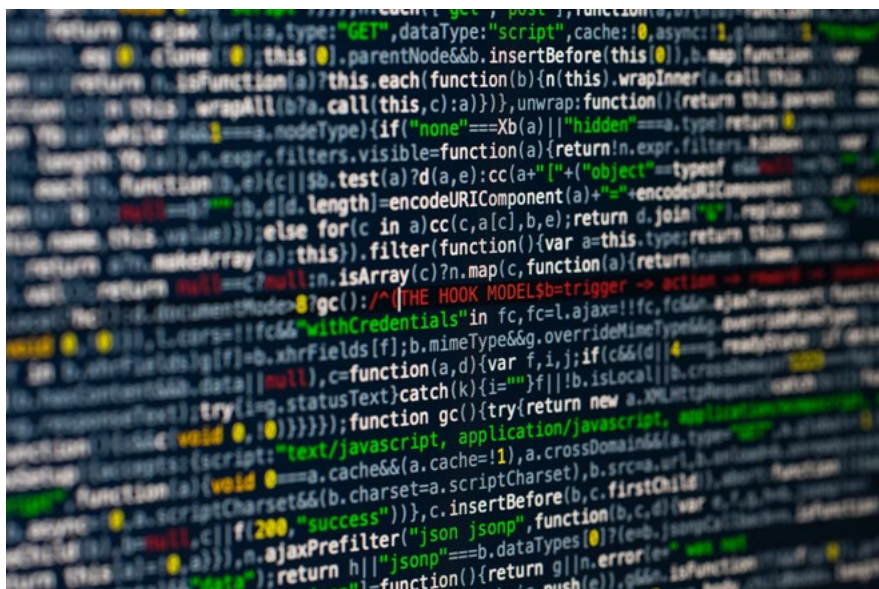
### 6. Compliance and quality control.

Managers need to track, monitor, and evaluate quality standards, with a continuous feedback loop in place. As new products are introduced, specifications need to be easily updated and accessible to relevant teams. Regulation compliance, too, is critical in many industries and demands accurate reporting. Democratized access to data helps keep the details in view when and where they are needed most.

**7. Waste reduction.** As manufacturers strive to be more sustainable, they place a high priority on reducing waste, including energy, water, and raw resources. Reducing scrap is essential. By improving consistency and quality control, fewer units will need to be scrapped or reworked. Access to data will help crews verify proper machine settings, consult knowledge banks for typical resolutions of issues, and verify proper specifications and variables.

**8. The call center.** The aftermarket service operation needs real-time access to account and product details to answer customer questions about deliveries, service agreements, warranty status, and scheduled preventive maintenance. Service dispatch needs to access the location and availability of technicians to dispatch the right person to the right job based on geography, service level agreements and urgency.

**9. First-call resolution.** Field technicians at the job site need remote access to details on the unit, as-serviced history, inventory status of parts, and availability of replacement or upgrade units. A technician with the right data is seen as a trusted advisor and can often make sales in the field.



# Macsa ID UK targets engineering industry with new SPA2 series of laser coders

**M**acsa ID UK is targeting the engineering and industrial markets with its newly launched SPA2 series of modular laser coders. Featuring several technologies and multiple power options, the simplified platform delivers maximum marking resolution and definition at higher speeds, more consistently over time. The advanced systems are versatile and reliable, as well as cost effective to own, maintain and operate. Kind to the environment, laser coder technology is fume, waste and consumable free, and uses less power and energy.

Boasting a modular design, Macsa's flexible SPA2 lasers can be easily integrated with any production line or application, and adapted to meet changing needs of the user. Providing high quality marking on a range of materials, such as wood, thermal labels, board, metallised board, glass, ceramics, metals, rubber and plastics, the SPA2 platform is available with CO<sub>2</sub>, DPSS and Fiber technologies (several wavelength options). Plus, laser power from 3w-250w, enclosures for standard, dusty and wash down environments, extra powerful performance and high speed heads.

Macsa's SPA2 F pulsed fiber laser model in particular is widely used for marking onto plastic or metal-coated materials, such as aluminium beverage cans, making it ideal for engineering and industrial applications. The new XQS high precision printhead ensures clear and legible codes even on curved surfaces with information applied continuously at high speed while maintaining integrity of the substrate.

The SPA2 series is also available with a HPD printhead for high resolution images, difficult substrates, product modification and marking areas above 250mm<sup>2</sup>. Digital galvos make calibration, trouble shooting and replacement much easier. A UHS printhead is available for very high speed lines and longer, more complex messages.



Kind to the environment, laser coder technology is fume, waste and consumable free, and uses less power and energy.

Due to the innovative EEP® (easy exchange printhead) feature, operators can switch printer heads on site using just two connectors, allowing the laser system to be adapted to the requirements of the production line at all times.

Exceptionally easy to install, program and operate, online help videos, technical guides and tips can be accessed via a new 10-inch handheld touchscreen controller designed to make programming quicker and to eliminate operator errors. The lasers can also be controlled direct from a PC via an ethernet link or PLC with Profinet or OPC-UA.

The enclosure has been redesigned with a flat front surface allowing simple integration of vision systems and other devices. With models that meet IP54 and IP65 standards, the SPA2 lasers are designed to operate in dusty or damp environments and in extremes of temperature.

The novel RAF® (reverse airflow cooling) system means that filters are changed less frequently and not at all in some circumstances. A sealed air

system transfers heat from the laser to the cooling air itself. This eliminates the risk of dust being deposited directly into the system component. Part of the exhaust air is blown over the focusing lens keeping it dust free so that print quality is maintained without the need for operator intervention.

The surface recognition feature, which is included within its 3D printing kit, allows printing on multi-level surfaces, ensuring an optimal focal point at all times. An external Z-axis controller enables operators to adapt the SPA2's vertical coding axis in order to vary the height between print cycles and adapt it to different products.

The SPA2 connector box offers a wide range of communication ports, enabling the system to be integrated with all elements of the production line. The lasers support Macsa's Optima software for real time control and compatibility with desktop printers, label printer applicators and label applicators.

Macsa's SPA2 laser coders are available with a comprehensive range of software, accessories and services, and backed by advice and consultation services, installation assistance, training, technical support and extended warranty.

For product information please contact: [sales.uk@macsa.com](mailto:sales.uk@macsa.com) or telephone 01462 816091.

For further information, please visit [www.macsa.com/en-uk](http://www.macsa.com/en-uk)

# 100% SUSTAINABLE

## SPA2 FIBER PULSED LASER

*the BEST solution for  
metal and plastic  
substrates*



### **Our SPA2 F Laser**

The Macsa ID SPA2 Fiber range codes and marks product information without damaging the substrate, at very high speeds while maintaining excellent definition.

With a life span of more than 100,000 hours, the environmentally-friendly SPA2 F is ideal for coding onto plastic or metal coated materials such as aluminium beverage cans.

**Macsa id**  
a code you can trust

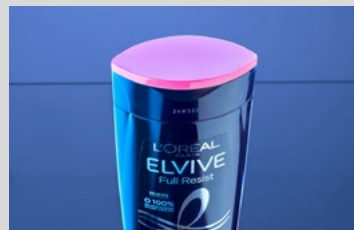
## SMART. PRECISE. RELIABLE



High powered lasers for coding on the fastest production lines



The XQS high precision printhead ensures clear and legible codes even on curved surfaces



DUO dual processor technology enables high speed and high quality printing with variable data



Extra protection enclosures and touchscreen for dusty and washdown environments

Contact Us :

tel: 01462 816091 email: [sales.uk@macsa.com](mailto:sales.uk@macsa.com)

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



FANUC is deeply committed to supporting automation education through both our Training Academy and the delivery of robotic equipment to training locations such as schools and technical colleges.

# FANUC places education centre stage at inaugural Automation UK show

**A**s part of its campaign to inspire the next generation of robotics engineers, automation experts FANUC UK will showcase a suite of education-themed initiatives at the first ever Automation UK event (stand B14, 20-21 June 2023, Coventry). With a fifth of manufacturing workers set to retire over the next decade, engaging with young people is crucial to plugging the skills gap and ensuring the UK remains internationally competitive. Recognising its responsibility to help inspire a future talent pipeline, FANUC is placing education at the front and centre of its activities throughout 2023. The Automation UK event will serve as the perfect springboard to highlight the benefits of a career in robotics, as well as demonstrate to visitors the myriad applications of FANUC's robot and cobot solutions across sectors as diverse

“

Automation presents a solution to several challenges facing manufacturers today, from unskilled labour shortages and increasing product quality to waste reduction.

as food & beverage, pharmaceutical, automotive, aerospace, FMCG and general manufacturing.

Live education cell demonstrations Giving visitors the chance to get up

close and personal with working robotic systems, FANUC UK's stand will host its standard education cell, an easy-to-use, plug-and-play solution. Featuring a FANUC ER-4iA industrial robot at its core, this is a popular choice at schools, colleges, universities, training centres and OEM training facilities around the world, providing hands-on learning for the development of skills in robotics. Also on display will be a collaborative solution, the CRX educational package, featuring a FANUC CRX-10iA cobot and all the functions required to teach core programming skills.

## **A DRIVING FORCE FOR CHANGE**

Organised by BARA, Automation UK will bring together over 50 leading robotics and auxiliary components suppliers and system integrators, enabling visitors to see first-hand the latest industry

innovations and receive expert advice on how to implement the right solutions for their projects.

As a founder exhibitor and longstanding BARA member, FANUC UK is committed to increasing UK uptake of automation through educational outreach, as BARA Council member and FANUC UK's Head of Sales, Oliver Selby, comments: "Automation presents a solution to several challenges facing manufacturers today, from unskilled labour shortages and increasing product quality to waste reduction. If UK manufacturing is to remain internationally competitive, we need to heavily embrace automation and at FANUC UK, we are determined to be a key driving force for change. From our partnership with WorldSkills UK and our accredited Training Academy at our Coventry HQ to the delivery of robotic equipment to training locations such as schools and technical colleges, we are committed to inspiring the next generation towards a career in robotics and automation. We look forward to sharing our vision with visitors to stand B14 at the inaugural Automation UK Show in June."

Oliver Selby and Satty Cole, FANUC UK's Education Business Development



*Satty Cole, FANUC UK's Education Business Development Manager, who will present with Oliver Selby at the Automation UK seminar theatre.*

Manager, will present on the importance of reducing the skills gap to support growth in automation adoption at 2pm on 20th June at the Automation UK seminar theatre.

## About Fanuc

The FANUC Corporation is one of the worldwide leaders in factory automation for CNC control systems, robots and production machinery (ROBODRILL, ROBOCUT and ROBOSHOT). Since 1956, FANUC is the pioneer in the development of numerically controlled machines in the automation industry. With 271 FANUC locations worldwide and more than 8,000 employees, FANUC offers a dense network in sales, technical support, research & development, logistics and customer service.

For more information, go to <https://www.automation-uk.co.uk/seminar-program/>



*Oliver Selby, Head of Sales at FANUC UK.*

# Assembly Specialist Solutions

**W**e take pride in overseeing the entire manufacturing process, from design, prototyping and manufacture to delivery, installation, full product certification and after-sales service

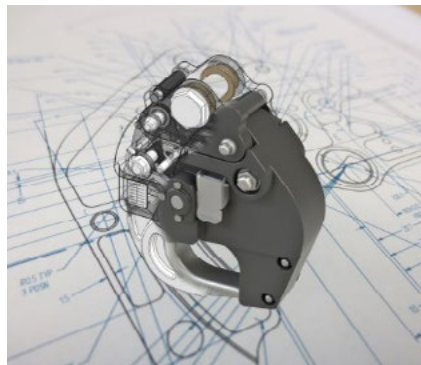
Drallim is an innovative technology driven British engineering company with global presence. With experience in providing comprehensive turnkey assembly & test solutions covering electronic, electromechanical, engineering, and mechanical products. We offer our customers a total contract manufacturing service, offering design, and manufacturing solutions, providing engineering skills, manufactured equipment & custom-built systems for the Aerospace, Industrial and Utility Markets.

## PRODUCT REALISATION

Prototyping and New Product Introductions; From the initial enquiry, our Business Development Team analyses the specifications and requirements of a product or project and issues a comprehensive and detailed quotation. When an order is received, a project plan is then developed; our team uses detailed documentation, engineering change and reporting control to ensure continued information integrity. An experienced project manager acts as the interface between Drallim and our customers although, at the same time, we actively encourage engineer-to-engineer communication. We have had customers engineers based at our headquarters signing off drawings as they are produced to meet urgent deadlines for manufacture. The designated project manager ensures that resources are allocated appropriately and that all tasks are tracked and recorded. The result is a controlled transition into the manufacturing process.

## DESIGN SUPPORT

When it comes to product manufacturing, a substantial proportion of the end product's total cost is determined at



the design stage. As a result, this part of the manufacturing process presents the perfect opportunity to identify improvements that will lead to cost reductions. A thorough understanding of each element will enable the product to be designed and optimised for procurement, manufacturing and test. We provide an extensive Design for Manufacture service to help our customers achieve substantial improvements, including:

- Improved manufacturing productivity
- Enhanced product quality and reliability
- Minimal/simplified maintenance
- Lower Cost
- Reduced time to market
- Increased customer satisfaction
- Manufacturing
- Precision assembly

We regularly produce complex assemblies that demand high levels of skill,

precision, accuracy and consistency. The engineering and manufacturing teams at Drallim are highly skilled in this type of work, with awareness of critical engineering tolerances when producing assemblies of this complexity. Our skills-base extends to include testing of electrical, electronic, mechanical, hydraulic and pneumatic assemblies. Following rigorous approval processes Drallim's supply chain partners for custom parts, such as plastics, machined and fabricated metalwork etc, are monitored closely for quality and delivery performance. Tight control of the material supply chain ensures the availability of high quality mechanical parts is maintained for timely production.

## ELECTRICAL ASSEMBLY

Many of the assemblies produced require wire and cable interconnection between boards and sub-assemblies. This can be via cable forms or point to point wiring. As part of our electro-mechanical assembly service we are often called on to produce products that require critical cable routing. We also undertake electrical wiring of switch and instrument panels plus sophisticated control cabinets. We have highly trained engineering and assembly teams to assist with design and the assembly and support for all your cable and loom requirements.

- Electro-mechanical Assembly
- Pneumatic & Hydraulic Assembly
- Racks & Cabinets
- Box-Build Assembly
- PCB Assembly
- Prototype Wiring
- Cable Assembly
- Testing

If you are interested in British Manufacturing and looking for a Contract Manufacturer, then maybe Drallim Industries could assist you.

For further information, please visit [www.drallim.com](http://www.drallim.com)



## BESPOKE ENGINEERING SERVICES

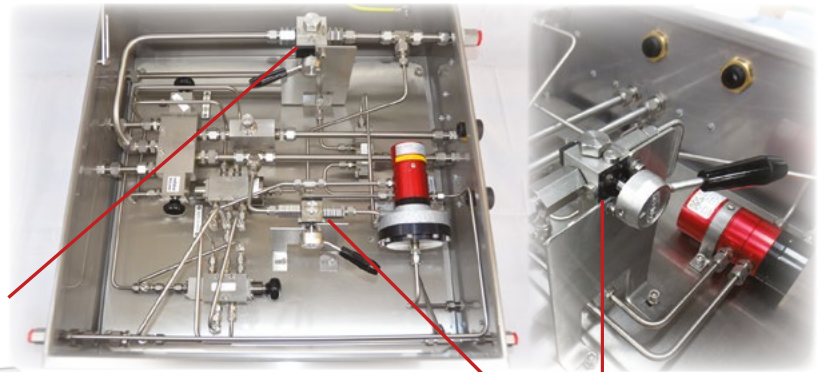
- **Small Batch Manufacture**
- **Electrical | Electronic**
- **Pneumatic | Hydraulic**
- **Mechatronics**
- **Concept Design**
- **Reverse Engineering**
- **Obsolescence Review**
- **Prototyping**
- **Qualification**
- **Build to Print**
- **Installation**



PCRID (Permanent Current Rail Indicating Device) for London Underground



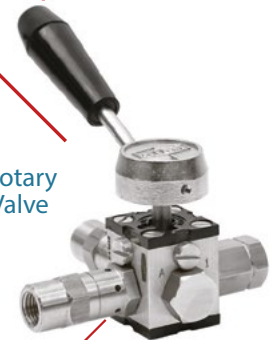
5 Bank, 6 Port (Series 60) Rotary Selector Valve



National Grid Slamshut Cabinet



Series 70 Rotary Selector Valve



Series 40 Rotary Selector Valve



Water Treatment Controls for a UK Nuclear Power Station



Dewpoint Monitor



Pneumatically controlled solenoid actuation panel

# Inrotech A/S chooses 2D/3D laser profile scanners from Micro-Epsilon to optimise the quality of weld seams

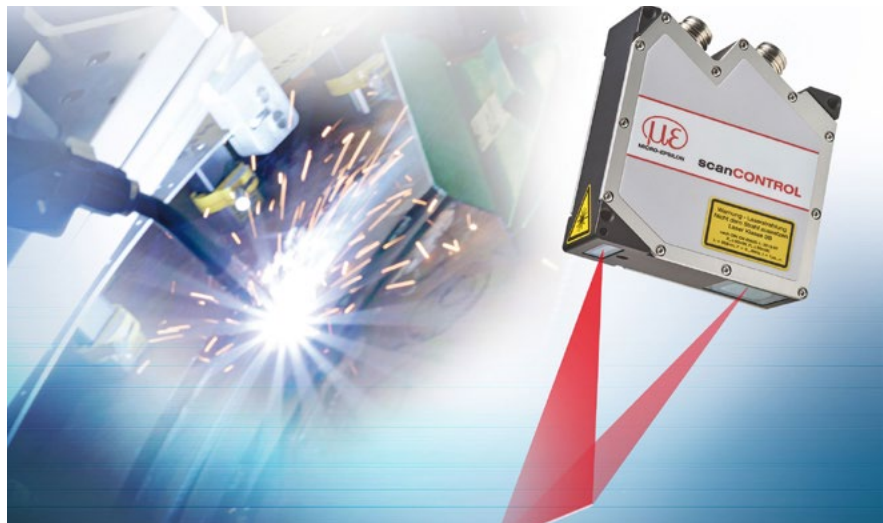
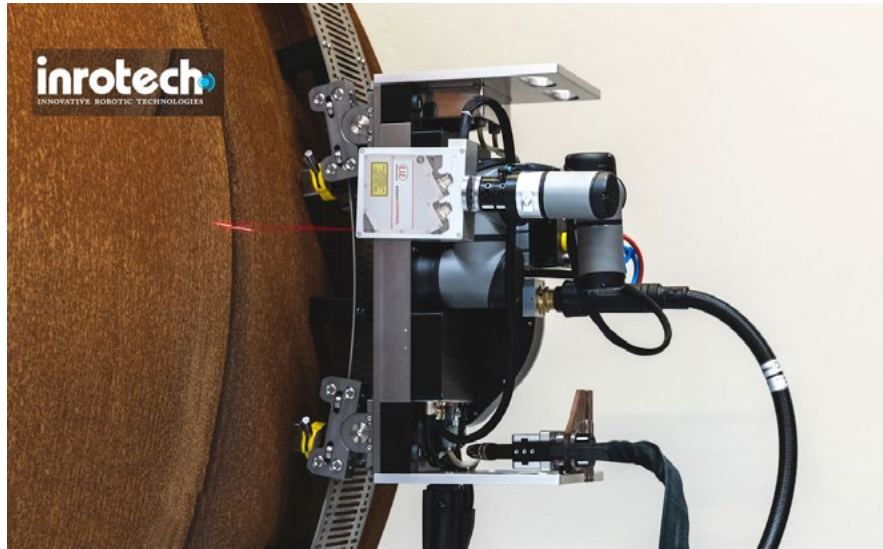
Inrotech, a designer and manufacturer of automated welding solutions for shipbuilding, renewables, offshore and heavy industries, has chosen 2D/3D laser profile scanners from Micro-Epsilon for use on its 'Inrotech-Crawler' welding robot, which calculates welding processes in advance before carrying them out.

A scanCONTROL 2900 laser profile scanner from Micro-Epsilon is mounted on the Inrotech-Crawler and measures the geometry of the seam to be welded before the actual welding process starts. Only these high precision profile measurements enable the welding process to be automated. Due to its compact, lightweight design with integrated controller, the scanCONTROL 2900 is ideally suited to this measurement task. In this particular application, the laser scanner has a measuring width of 100mm, a measuring rate of 300Hz and a resolution in the Z-axis of 12µm.

Various connectivity options offered by the SDK (Software Development Kit) enable Inrotech to directly transmit the profile data, from the sensor, calibrated to their own software via the scanCONTROL DLL. The Weldlogic technology from Inrotech then calculates, among other things, the number of weld passes, the position of the weld seams, the weld speed and the oscillation width required to produce a quality weld. Directly after the calculation, the Inrotech-Crawler automatically performs the welding process.

The welding robot enables the scanning of weld geometries such as plates or curves with various characteristics. Based on the optimal exposure time control and high resolution, the laser profile scanner reliably measures almost any measurement object.

Designed for mobile applications, the Inrotech-Crawler is ideal for different environments, for example, for pipeline



welding tasks in the oil & gas industry, offshore, shipbuilding, wind turbines and building construction. A resistant sensor is the base requirement in this and many other environments. The scanCONTROL 2900 laser profile scanner is ideally suited to these requirements and is integrated into a protective housing by Inrotech.

The scanCONTROL 29x0 series of 3D laser profile sensors are designed for industrial measurement tasks where compact design and high accuracy are required. Due to their high resolution, self-contained housing, versatility and excellent price-performance ratio,

the scanners are particularly suitable for static and dynamic applications, for example, on robots. The scanners measure and evaluate a variety of geometrical features such as angles, steps, gaps, distances and extreme values.

For more information on the scanCONTROL 29x0 series of 3D laser profile sensors from Micro-Epsilon, please visit [www.micro-epsilon.co.uk](http://www.micro-epsilon.co.uk) or call the Micro-Epsilon sales department on +44 (0)151 355 6070 or email [info@micro-epsilon.co.uk](mailto:info@micro-epsilon.co.uk)

## Protecting Your Plant

Instant Shutdown **Before** Things Go Wrong



### Motion Sensor's For All Industries

Rotech Motion Sensor's can be used whenever information or monitoring of shaft rotation, position, direction, speed, slip etc is required!

Rotech Motion Sensor's can be used for indication, control, interlocking, protection, sequencing, alarm initiations and many more functions!

Rotech Motion Sensor's can be used wherever materials are transported or processed By conveyors, elevators, screws, mixers, etc!



**ROTECH FOR RELIABILITY** *Why Accept Anything Less?*

**ROTECH SYSTEMS**

Web: [rotechsystems.co.uk](http://rotechsystems.co.uk)  
Email: [sales@rotechsystems.co.uk](mailto:sales@rotechsystems.co.uk)  
Tel: +44 (0)151 356 2322



Monitoring the world

## Applied Rubber Linings Ltd

Process Plant Liners

Serving the Mining, Quarrying, Water, Metal Finishing, Process and Marine Industries



Abrasion and chemical resistant rubber linings for sand washing plant, process vessels and pipework, valves, mixers, filters, storage tanks and shot blasting equipment.

Tel: 01452 381849 [www.applied-rubber.co.uk](http://www.applied-rubber.co.uk)

# Custom Inline Disc Filters

## You design, we create

Helapet knows that no single filter can be suitable for the varied filtration applications that are used across industries.

Our new online design tool provides customers with a simple-to-use design wizard, combined with enhanced information to guide customers through the **100's** of available filter combinations.

# Helapet

A CiniMed® Group Company



**Try out our filter design tool for yourself today!**  
**Visit [filterdevices.com](http://filterdevices.com)**

# Sulzer signs agreement with Jindan New Biomaterials in China for production of biobased plastic

Jindan will utilize Sulzer's licensed PLA technology at its new manufacturing plant to produce up to 75'000 tonnes of PLA per year, mainly to be used for food packaging, molded goods and fibers production.

Sulzer has recently signed an agreement with major lactic acid (LA) producer, Jindan New Biomaterials (Jindan), to enable the production of polylactic acid (PLA), a biobased plastic. Jindan will utilize Sulzer's licensed PLA technology at its new manufacturing plant in Henan Province to produce up to 75'000 tonnes of PLA per year, mainly to be used for food packaging, molded goods and fibers production. Sulzer will also provide extensive service support to ensure a seamless start.

## ENABLING THE TRANSITION TO SUSTAINABLE, CIRCULAR PRACTICES

Jindan's new bioplastic facility will produce PLA in a variety of grades to support the expanded use of bioplastics in several sectors in China, including the textile and package manufacturing industries. To enable the company's transition towards more sustainable, circular practices, Sulzer Chemtech will design and supply its key proprietary PLA technology, while further providing extensive engineering and technical support and field services as the manufacturer commences operations.

Sulzer's Executive Chairwoman Suzanne Thoma said: "Our leading technologies are currently used at the vast majority of existing PLA facilities worldwide and support the increased adoption of circular manufacturing practices and sustainable materials. We are pleased to collaborate with Jindan New Biomaterials to meet ever-increasing market demand for bioplastics."



“

By investing in Sulzer's PLA solutions, we are taking key, strategic steps to advance our competitiveness in the booming biopolymer industry and drive the use of greener plastics.

Mr. Shi Congliang, President of Jindan New Biomaterial, added: "By investing in Sulzer's PLA solutions, we are taking key, strategic steps to advance our competitiveness in the booming biopolymer industry and drive the use of greener plastics. Thanks to its comprehensive expertise in the PLA value chain and all the stages involved, Sulzer Chemtech is an extremely valuable partner. We look forward to installing the equipment and starting-up our enhanced operations."

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

**ROWASHER**  
ECO-FRIENDLY PARTS WASHERS

# MEET THE NEW GENERATION ECO-FRIENDLY PARTS WASHER

## POWERFUL CLEANING

Solvent-free, aerospace approved

## LOW ENVIRONMENTAL IMPACT

Assists compliance with ISO14001

## REDUCES WASTE

Bioremediation technology, oil-eating microbes keep fluid clean

## NO EXPENSIVE SERVICE CONTRACT

Self-recycling, easy to maintain

## LOW ENERGY CONSUMPTION

Eco-mode and double skinned tank reduces energy usage by up to 54%\*

## HEALTH & SAFETY

Non-hazardous, non-flammable, no vapours



**+44 (0)121 514 0607**  
**www.rozone.co.uk**

We are looking for ROWasher distribution partners across the globe. Call us or email [export@rozone.co.uk](mailto:export@rozone.co.uk) for more information.



\* Based on internally conducted controlled laboratory tests in 2022.

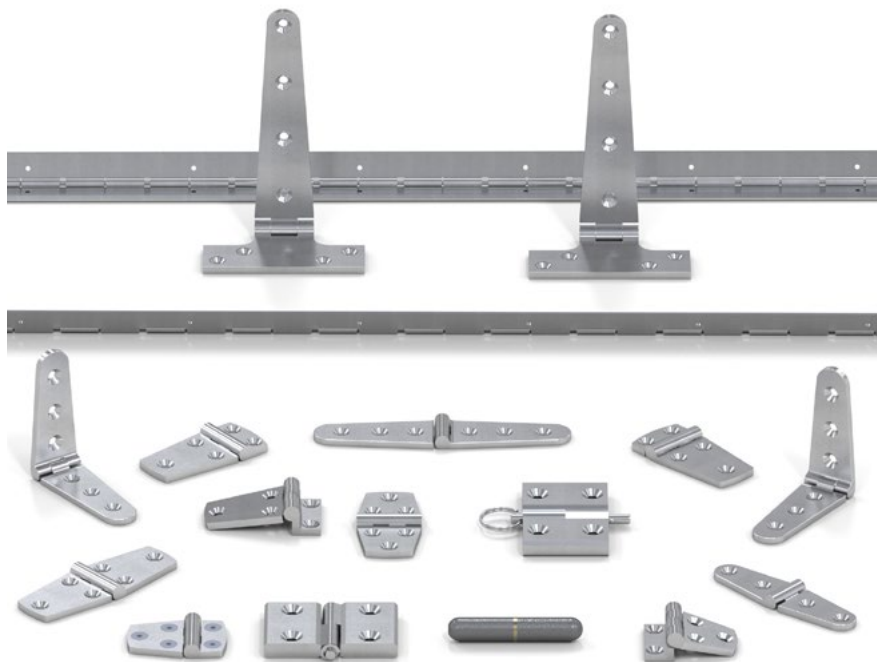
# WDS expands hinge range with new styles in stainless steel

Standard parts and components supplier WDS Components has expanded its range of hinges including new designs. Quick release hinges enable easy removal, while WDS also increases its range of cabinet and strap hinges. The range also includes weldable bullet hinges, plus an increased variety of sizes in continuous piano hinge designs. All of the new hinges are available in stainless steel, making them highly suited to applications including marine use as well as the food and beverage sector.

The new quick release hinges add a layer of security to existing lift-off hinge designs, while still enabling easy door removal. Developed to enhance ease of maintenance, or for when a door needs to be quickly removed, the quick release hinges come in two designs. The E clip design secures the hinge pin to prevent removal, while deinstalling the clip enables the door to be taken off the hinge, making this style useful for less regular maintenance.

For more frequent removal, a detent pin design secures the hinge, while its release enables the hinge and adjoining door to be lifted. This style is also useful to secure lift-off hinges during transit, where laying the door horizontally in a moving vehicle can cause their accidental removal. With 22 sizes of each new hinge type, they're suitable for a wide range of door weights and dimensions. Manufactured in stainless steel, the hinges are heavy duty and corrosion-free.

WDS has also launched an expanded range of cabinet and strap hinges. Traditionally used to secure cabinet doors, these designs allow the door to lay over the frame, useful in applications where the door is larger than the frame. Meanwhile, strap hinges have a similar use and are distinct for their long, thin arm design. WDS' new designs are produced in highly polished stainless steel and are intended for heavy duty outdoor use, including the marine and agriculture markets. They're also designed for use in hygienic environments, such as food and beverage preparation, and



The new quick release hinges add a layer of security to existing lift-off hinge designs, while still enabling easy door removal.

can undergo regular chemical washdown without corroding. Various designs of cabinet and strap hinge are available in a range of sizes to suit a wide variety of requirements.

Bullet hinges are also new, so called thanks to their design style, and are installed by welding into place. The narrow, cylindrical hinge is designed to be positioned on the outside of the door, with welding adding security and enabling attachment when space restriction prevents the use of fasteners. Commonly used in industry, bullet or weldable hinges are often installed on machinery. Offered in a wide range of sizes, the hinges are available in steel as well as stainless steel, and there's also a version with a grease port, enabling regular lubrication.

WDS has further expanded its range of continuous hinges, also known as piano hinges. Originally designed for piano lids, these long, continuous hinge designs add stability as well as safety, preventing finger traps in a closing door. Originally stocked in 1.8m lengths for the customer to cut down to size, WDS now provides continuous hinges

in various sizes starting from 1m, meaning they're ready to be installed without modification. These hinges are available in stainless steel as well as zinc-coated steel.

All of the hinge styles in WDS' expanded range are available on [wdscomponents.com](http://wdscomponents.com), with complete specification details including sizing and free to download CAD images, available in a range of formats. Thanks to its on-site manufacturing and extensive warehouse, same-day shipping is available on many products. WDS' Stock Guarantee programme also applies to many part numbers, where 10% discount is removed from a subsequent order of any quantity not held in stock.

[www.wdscomponents.com/en-gb](http://www.wdscomponents.com/en-gb)

Linear motors for the  
**Food and Beverage Industry**

**LinMot®**

- Clean hygienic design
- Stainless Steel
- Easy to clean
- Minimum maintenance
- High performance
- Low energy



[www.quin.co.uk/linmot](http://www.quin.co.uk/linmot) - Linmot distributor for the UK & Ireland

**Turn your new product concept into reality with Lascar.**

With over 40 years' experience in delivering cutting edge technology, we're leading designers and manufacturers of data capture, touch screen and wireless products.

- IoT, electronics and plastics design and manufacture
- Firmware, software and App development, Cloud integration
- Low and high volume manufacture (UK and Far East)
- Unbeatable cost-effectiveness and lead time reductions
- Supply chain and stock management

Talk to us to start your next success.

**Lascar delivers**



Design



Prototype



Sourcing



Manufacture



Supply



+44 (0)1794 884567

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



# Why we should all strive to be 'zero heroes'

Shelley Harris, commercial director at IPP asks if we will have the 'bottle for change'

**W**e'd all love to be 'zero heroes' when it comes to recycling items which will otherwise become single-use and end up in landfill or water courses, at huge cost to the environment.

We nostalgically hark back to the 1970s to when we had a ready-made recycling scheme from home, where milk was delivered in reusable glass bottles on electric floats as part of an early form of an eco-friendly circular economy.

Likewise fizzy pop, delivered and collected from people's homes, utilised a deposit scheme allowing households to deduct the cost of the next drinks if the bottle was re-used. This in turn encouraged enterprising youngsters to collect abandoned pop bottles and





Shelley Harris, commercial director, IPP

## About IPP

IPP is one of Europe's leading poolers of pallets and boxes.

Part of the Faber Group, which has a history dating back to 1891, this Dutch family-owned group provides pallet and box pooling services across Europe.

The IPP pool is a leading rental provider of pallets and boxes in fast moving consumer goods and industrial supply chains.



We nostalgically hark back to the 1970s to when we had a ready-made recycling scheme from home, where milk was delivered in reusable glass bottles on electric floats as part of an early form of an eco-friendly circular economy.

take them to corner shops to redeem a few pence to supplement their pocket money.

This was all before it was decided that milk sold in plastic bottles in supermarkets and corner shops was cheaper, along with carbonated drinks in cans and plastic bottles. With the benefit of hindsight, both commercial decisions turned out to be vastly more expensive in terms of the cost to the planet.

Now we learn that DEFRA's Deposit Return Scheme (DRS) for recyclable materials, which is already set to be introduced seven years after it was originally proposed in 2025, will not include glass in England.

Instead, consumers will pay a deposit fee for plastic bottled and canned

drinks at the point of sale, which will be redeemed when they return the container to a reverse vending machine (RVM) at the store on the next visit.

Businesses wanting to act as deposit management organisations (DMOs) will tender to the government to get the operation up and running.

Although designed to incentivise returns, at £100,000 per RVM and a row bubbling up over the exclusion of glass from the scheme in England, it's hard to see a joined-up strategy across the UK.

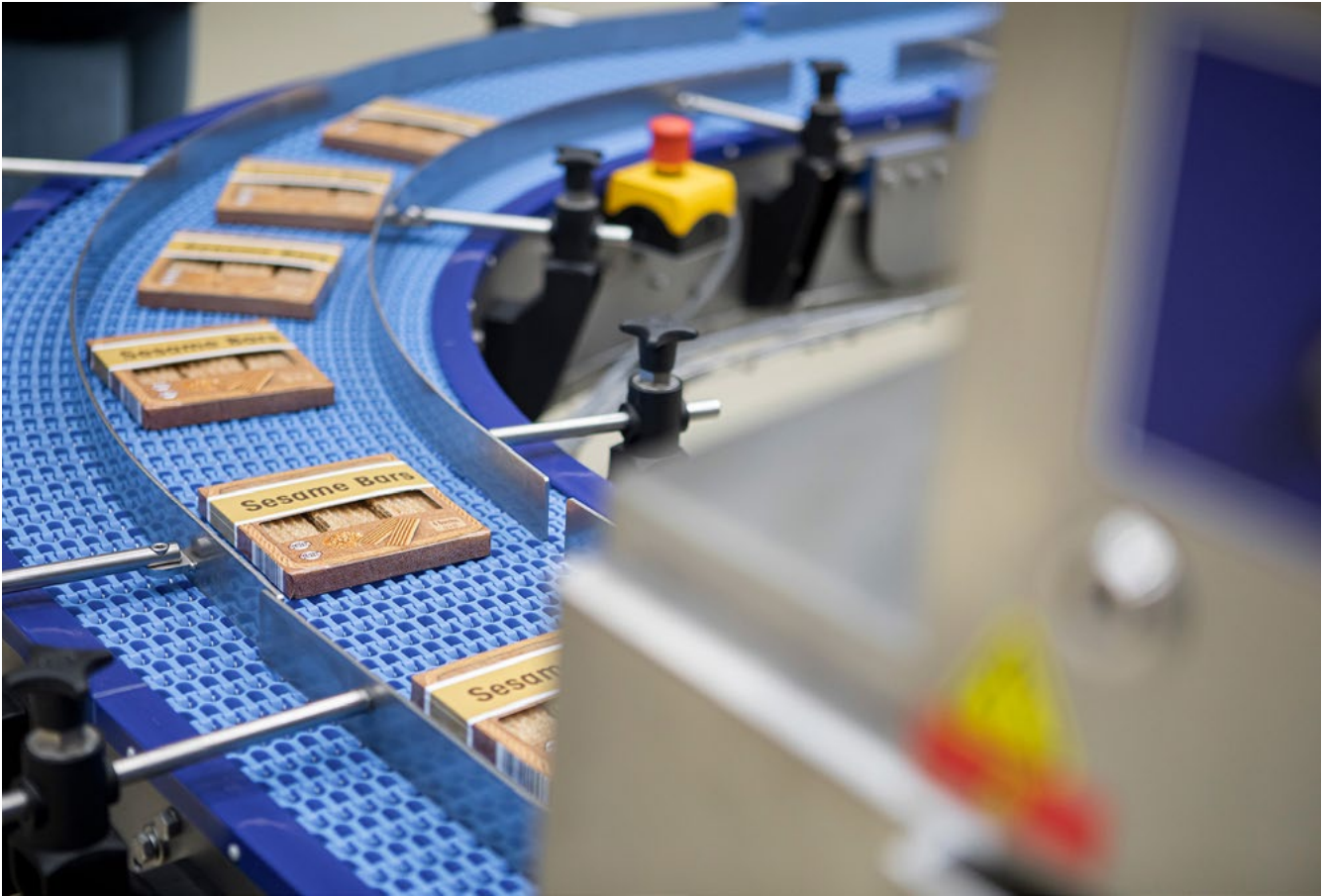
It seems rather the opposite, creating conflict within the packaging industry and across the devolved powers of the UK without any clear evidence that people will embrace the scheme by remembering to bring their bottles back

There is, however, a growing appetite for a home solution, with the added bonus of smartphone technology allowing consumers to redeem their initial deposits.

For solutions to work, there has to be consistency of approach and consensus from policy makers to the packaging manufacturers and ultimately, the consumer. Collaborative solutions, like those in the circular economy, mean everyone is on board rather than at odds with each other.

To achieve this, central government needs to have the bottle to bring everyone together under one unified scheme that works both home and away so that we can all be zero heroes.

<https://www.ipp-pooling.com/>



# Mettler-Toledo Launches X2 Series of X-ray Solutions to Bring Enhanced Product Safety to a Wider Audience

**M**ettler-Toledo Product Inspection has launched the X2 Series of high-performing x-ray systems to help enhance product safety at an incredible price point for all food manufacturers. With two x-ray systems currently in the X2 Series, x-ray inspection is now accessible for all budgets, offering manufacturers software that is designed to last longer and perform better.

The creative design of the X2 Series helps enhance brand protection and product safety while also increasing product quality. Helping manufacturers to meet food safety compliance requirements, while also offering enhanced productivity, the X2 Series, delivers outstanding reliability with a smart industrial design.

The X2 Series helps prevent product recalls with outstanding contamination

detection capabilities that go beyond detecting just metal. The x-ray inspection technology inspects a wide range of contaminants, including glass, metal, mineral stone, calcified bone, dense plastic and rubber compounds whilst simultaneously completing a number of quality control and integrity checks. The X2 Series offers significant benefits both in-line and at end-of-line inspection by using innovative technology all designed for optimum performance and output.

## INTELLIGENT SOFTWARE

State-of-the-art ContamPlus™ software is an innovative inspection process which scans products for every kind of contaminant and not just the ones optimised during the initial automatic product set-up. The automatic set-up detects the most hard-to-find foreign

bodies and rejects only the contaminated products, reducing production waste and protecting productivity. This is especially crucial for food manufacturers, where product integrity and completeness is key as missing information or products can lead to costly recalls and, sometimes dangerous, results.

ContamPlus™ facilitates new product set-up with just a few passes and without the need for complicated programming or extensive training. Product details are stored and easily recalled for smooth and fast product changeovers to help minimise downtime and boost productivity.

## SMART INDUSTRIAL DESIGN

Every detail of the X2 Series technology is optimised to offer superior performance.

At the heart of the design is a new product inspection chamber and a revolutionary modular mechanical design which allows full frontal access to all the most common operations. It offers a range of new features to improve operations such as product handling, cleaning and service routines. The X2 Series' range of standard length and height configurations is complemented by bespoke designs to allow total customisation to meet exact customer needs.

Food manufacturers can significantly reduce cleaning output and maintenance routines as well as the need for complex operator training with the X2 Series' front-opening hygienic design. Designed for efficient cleaning, the solution makes it easy for operators to perform regular maintenance routines. The conveyor belt can be removed swiftly and without tools by releasing the tension with the handle situated on the infeed roller. The lead-free, low friction curtains also allow smooth product transition through the machine, with the presence of curtains constantly monitored to help keep the operator safe. The new multi-fit reject device option is suitable for most common applications, with other options available on request. With reliable rejection and due diligence of products, the design enhances brand protection and helps ensure all end products are the optimum quality when they reach the customer.

## COMPLIANCE

With the X2 Series, manufacturers are easily able to comply with industry standards and regulations through ProdX™, a data management software, which provides full traceability through an audit trail and recorded image database. A review of contaminated products is also easily managed with the new stainless steel reject bin, which safely collects substandard products to avoid production line contamination, allowing manufacturers to review the product and its contamination.

## IMPROVED TOTAL COST OF OWNERSHIP

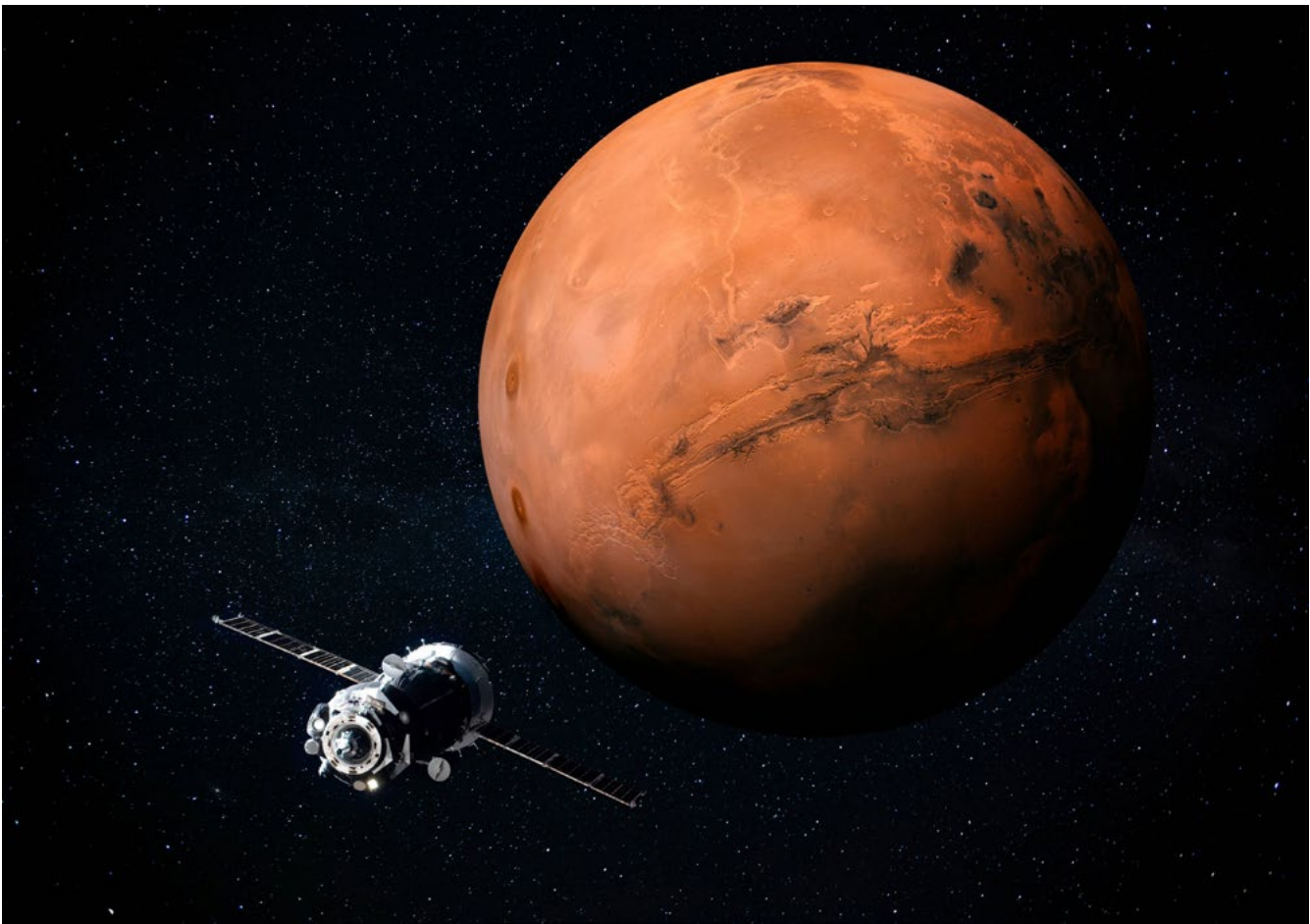
The X2 Series combines superior industrial design with simplified cleaning routines. Its intuitive user interface and a highly reliable set of state-of-the-art subsystems such as the generator and detectors, help to improve Overall Equipment Effectiveness and lower Total Cost of Ownership. With extensive service solutions and a five-year generator warranty, manufacturers can feel confident in keeping their systems running at optimal capacity for longer periods of time.

Manufactured in Europe, the X2 Series consists of two models – the X12 and X32, both are available in multiple line configurations 800, 1300, 1800 and 2000 mm line lengths:

- X12 High Performance X-ray System: This high performing single-lane x-ray inspection system comes as standard and is available at an incredible price point, featuring the HiGain detector, which generates sharper images to deliver outstanding contaminant detection.
  - X32 Advanced X-ray Solution: Offering enhanced sensitivity and product integrity performance, this x-ray inspection solution features the HiGain+ detector and is available in standard and custom configurations, with single or multi-lane capabilities.
- “We are hoping to change the mindsets of all food manufacturers with our new X2 Series that they can now install a high-end x-ray inspection solution at an affordable price point for all,” said Mike Pipe, Head of Global Sales & Product Management, Mettler-Toledo Safeline X-ray. “By utilising global service hubs and reducing spare parts, we are confident we have created an innovative solution that is easy to install, environmentally more sustainable and suitable for any budget. With a current 14-day lead time, we can work with manufacturers to install one of our new X2 Series x-ray systems quickly and efficiently, helping them to increase product quality and protect their brand reputation”.

For more information on X12, [click here](#) or for more information on X32 [click here](#).





# Ensuring success among the stars

**T**he space race didn't get off to the best start this year, with the UK's first ever satellite mission ending in disappointment. The launch highlights how the failure of just one component can lead to the demise of an entire mission. But space waits for no one, and as the race continues, how can we best ensure that future missions are successful? Here, Dave Walsha, sales manager at DC motor supplier EMS, explains.

Virgin Orbit's Start Me Up mission hoped to be historical: being the first orbital launch from the UK, the first international launch for Virgin Orbit, and holding the first satellite built in Wales.

Investigations into the reason for the project's failure are still ongoing, but preliminary evidence suggests that the problem lies with a filter in the rocket's second-stage propulsion system. The filter was dislodged, causing issues downstream and ultimately leading to premature shutdown of the engine.

“

The project highlights the complexity of space missions, and the importance of every single component – including micromotors – in ensuring a safe and successful mission.

The project highlights the complexity of space missions, and the importance of every single component – including micromotors – in ensuring a safe and successful mission. But what can reliable micromotors do for space applications?

## TAKING FLIGHT

Most orbital launch vehicles, including Virgin Orbit's rockets, rely on RP-1 fuel for power. RP-1 is a highly refined form of

kerosene, which has had additional unwanted compounds removed to produce a cleaner burn and prevent engine damage.

RP-1 is mixed with liquid oxygen (LOX) to create a combustion reaction. The nature of this reaction means precise ratios aren't required, provided both reactants are present in some capacity. But if the ratio does begin to stray significantly from the ideal, then one reactant is likely to run out before the other, leaving the remainder as dead weight.

To avoid this from happening, butterfly valves are installed onto the fuel tank pipes. Controlled by servo motors, these valves allow precise control of reactant flow, which means that the fuel mixture can be kept as close to its ideal ratio as possible.

## A RETURN TRIP

Micromotors aren't only helpful in ensuring an efficient launch – they can be just as important when it comes to making the return journey.

Since the first unmanned space mission Sputnik in 1957, unmanned space probes have been used for a more cost-effective and safer method of space study. Small samples of rock and dust are collected from other planets in the hopes that they contain some clues about planet formation and potential signs of life.

Return capsules are responsible for bringing these samples safely back to Earth for analysis. Their smooth, dome-like shape offers them greater aerodynamics. But one might ask: with no exterior flaps, how can the capsule retain its stability and avoid spinning off course?

The answer is to use linear DC servo motors within the capsule. By moving up and down the X and Y axes, the motors can help to shift the capsule's centre of mass and help to stabilise it in flight. In some cases, the weight of the motor can be sufficient to act as a counterweight, but additional weights can be added if a higher mass is needed.

#### **MOTOR POWER**

Expectations of these motors are high. They must be able to operate in the harshest of conditions, whether it's the extreme heat of re-entry or the absolute

zero temperatures of space. They must also be able to withstand extreme force and vibrations, with no loss of integrity.

In the case of providing stability in real-time, the motors need to be able to quickly change direction. The linear servo motors in sample return capsules may need to travel along their axes up to four times a second.

The motors must also be as compact as possible, with free space often a commodity. High reliability is another necessity, as the role these motors play can be significant in ensuring safe and efficient spacecraft operation.

FAULHABER motors, supplied in the UK and Ireland exclusively by EMS, are able to deliver to such a specification. In fact, there are already numerous FAULHABER motors hard at work in space, in applications ranging from seismometers and rovers to satellites and artificial assistants.

We never know what we'll find in the cosmos, or even if we'll find anything at all. The complexity and unpredictability of space means it's almost impossible

### **About EMS**

Founded in 1985, EMS has established itself as the leading supplier of high-quality precision small DC motors and linear actuators in the UK. It is a bespoke product manufacturer and is the sole UK distributor for the FAULHABER Group, as well as MPS and Piezomotor. EMS supplies a wide range of industries, including the medical device, aerospace, defence and military sectors.

to guarantee the success of one mission to the next. But by choosing components carefully to match the harsh conditions and requirements of such missions, each spacecraft can be given the best possible chance of success.

[www.ems-limited.co.uk](http://www.ems-limited.co.uk)



# Keeping up with the pressure!

Sulzer delivers cost saving rerate to resolve condensate pump debate

**B**ig chemical production sites measure their lifespans in decades. From the outside, a plant may look very similar from one year to the next. Behind the scenes, however, operators are continually adjusting and adapting their facilities to boost yields, drive down costs and integrate new technologies. For one chemical plant in Singapore, uprating, not replacing, a critical pump enabled a shift to higher pressure operation six months faster, and at much lower cost.

Chemical processing is both energy intensive and competitive, so any advantage that can be achieved that will improve a process or reduce costs will be assessed carefully. Consequently, a project that could achieve both of these objectives would be very attractive to the plant operators.

In this case, the plant was planning to increase the operating pressure in a key process, but the project team knew that the change would exceed the 38 bar



maximum allowable working pressure (MAWP) of a large condensate pump. To tackle this challenge, the procurement team began looking for a brand-new pump.

The pump in question was a VS6 type barrel design, with seven impellers

mounted on an extended shaft. That shaft passes through the suction and discharge section of the pump, via a seal and balancing section to the drive motor, and the whole unit is encased in a caisson to create a net positive suction head.



Above, For one chemical plant in Singapore, uprating, not replacing, a critical pump enabled a shift to higher pressure operation six months faster, and at much lower cost. (Image Source: shutterstock\_1211709133). Top, the entire upgrade process took only six months to complete.



*Sulzer pump experts suggested an approach that could save its customer time and money.*

### **MORE COST-EFFECTIVE SOLUTION**

Since the existing pump was a Sulzer unit, the team initially asked the global pump specialist to quote for two new pumps capable of meeting the revised operating requirements. They explained that they needed one working pump and another in reserve, allowing periodic exchange for maintenance and repair. That conversation led Sulzer pump experts in Singapore to propose an alternative approach that could save its customer time and money.

After visiting the site to examine the customer's existing spare pump, Sulzer confirmed that it could make selective upgrades to the original pumps, then test and re-certify them to comply with the new 45 bar MAWP and all relevant reserve and safety factors.

Once the plan was agreed, the spare pump was transferred to a Sulzer engineering facility in Singapore, where it was stripped down for analysis. Since the pump had spent time in service, it was exhibiting all the usual signs of a hard working life, including extensive corrosion to wear parts such as the impellers. Sulzer's team of pump experts identified several components

for replacement and subjected the remaining parts to detailed inspection including dye penetrant testing (DPT).

### **SELECTIVE UPGRADES**

In parallel, Sulzer engineering specialists designed a new caisson with thicker walls, to cope with the higher working pressure, and upgraded material, to provide improved corrosion resistance. They also rerated the seal system to cope with the new operating parameters.

The new seals, caisson and other replacement parts were manufactured at a specialist Sulzer facility in Germany, then shipped to Singapore where the pump was reassembled, hydro tested and certified for the higher MAWP. The completed pump was installed and commissioned by Sulzer field engineers at the customer's site.

### **FAST, SAFE AND SURE**

The entire upgrade process took only six months to complete. That allowed the company to stick to a tight schedule for its overall plant revamp project. As an additional benefit, the cost of the re-rate project was significantly lower than the cost of two new replacements by USD 200'000. With the original pump now

in operation, the Sulzer team has since completed the same set of upgrade tasks on the customer's second unit.

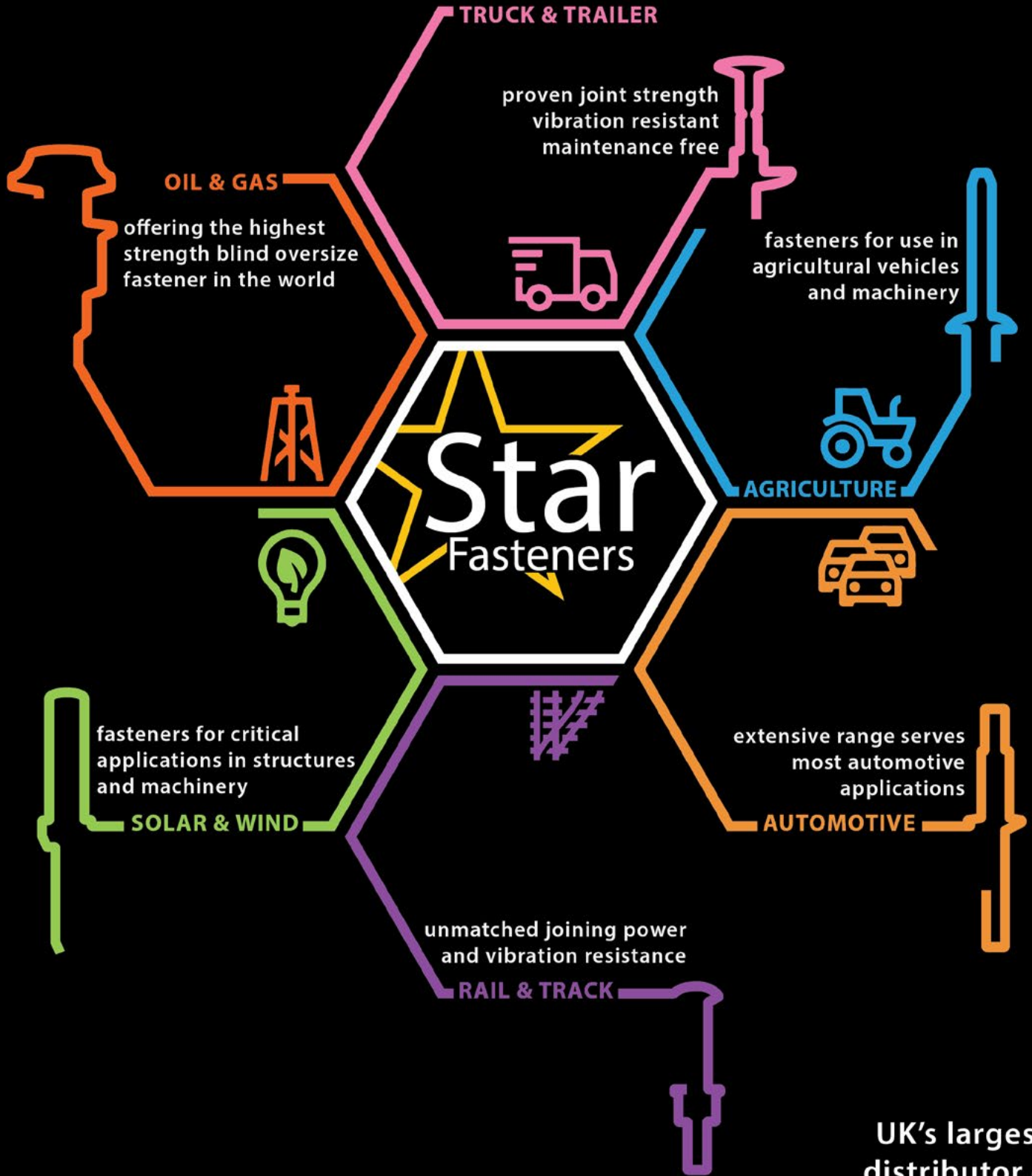
As process plants grow and evolve, it is common for the operating requirements of critical equipment to change. To maintain safety and ensure long-term reliability, it is vital that such changes, especially pressure increases, do not push components beyond their certified limits.

Sulzer's pump diagnostic, upgrade, retrofitting and maintenance services, backed by its knowledge as a leading OEM, allow customers to extend the capabilities of their equipment, with the confidence that every unit has all the necessary testing and documentation to detail the changes made and provide proof of safe operation. Furthermore, by choosing the retrofit solution instead of installing new machinery, the carbon footprint of the project was minimized, supporting the sustainability aims of the customer.

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

# TOOLING SALES, HIRE & REPAIR, RIVETS, & THREADED INSERTS

MAGNA-LOK® MAGNA-BULB® BOM® HUCKLOK® HUCK360® AUTO-BULB® FLOOR-TITE®  
MAGNA-TITE® PENTALOK BOBTAIL® MAGNA-GRIP® C6L® C50L® C120L® HUCKTAINER®



UK's largest  
distributor of

**HUCK**