

**SOLIDS
2024 SHOW
ISSUE**

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Complete production plant for bone cement production. (see p11).



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Automation in the packaging industry

In times of skilled labour shortages, automation technologies offer companies the opportunity to compensate for bottlenecks in personnel. In particular, physically demanding or highly standardised tasks can be taken over by using machines, robots and intelligent software solutions.

Technical requirements must be observed: With new directives on machine safety and explosion protection, the European Union (EU) has issued important guidelines that are of key importance for numerous industries. Companies must ensure that their machines and systems comply with the new requirements, which often requires investment in new technologies or the retrofitting of existing systems.

Quality requirements for packaged products play an important role in all industries.

Packaging and processing machines must be designed, manufactured and handled in such a way that they guarantee the safety and quality of the products they contain.

In addition, government regulations on the traceability of production data play a key role in ensuring quality, safety and transparency in the manufacture of products, particularly in the food and animal feed sectors. These regulations make it possible to trace products in the supply chain and to react quickly and effectively in the event of quality defects or sources of danger.

For over 33 years, SSB Wägetechnik GmbH, of Buchholz, Germany has developed packaging systems, as well as customised solutions in bagging, weighing and control technology. SSB develops and designs filling systems meeting the above criteria, from silo discharge to the finished pallet. The modern



Flour bagging with robot support.

bagging systems consist of an overall concept of bagging, bag transport, palletising and final packaging.

Different products require different bagging concepts. Flours or powdery products are usually bagged in valve bags using pneumatic packers. Granular products are usually bagged using FFS bagging machines. The bagging logs are recorded electronically and are available in a central database for transfer/quality assurance. Criteria relevant to calibration are of course fulfilled.

For palletising the bags, it is necessary to prepare the bags optimally, i.e. to shape the bag in order to achieve a clean and stable palletising result. Furthermore, important quality checks such as bag labelling, foreign objects, metal detection or checkweighers can be integrated into the transport route.

SSB offers a compact robot palletising system for various performance requirements. The filled bag is fed to the robot on a special conveyor belt. The robot palletises the bagged goods reliably and efficiently. Depending on the output, several bagging machines can work with just one robot.

The robot is available in different versions up to a capacity of 1200 bags per hour. For higher bagging capacities, several robots can carry out palletising at the same time. This means that outputs of up to 2,300 bags with 2 robots are realistic.

The 4-axis robot model enables precise and fast operation and can be used in a wide range of applications and therefore for a variety of products. The robot can be programmed using integrated software, making it capable of learning and can be used quickly and flexibly. There is also a large selection of accessories for the bag gripper hand. Pallet modules and soft sheet applicators can be integrated into the hand.

The finished palletised pallet can be transported away automatically via roller conveyors. It is advisable to integrate a corresponding packaging machine into the conveyor line. Stretch wrapping machines or stretch bonnet systems are available. These protect the pallets and at the same time serve as certified load securing. Finally, before the pallet is stored, it is labelled with the current production data. The finished product can then be transported directly to the warehouse.

The focus is on the total integration of all machine components and individual machines in a central control system. This allows processes to be controlled and monitored centrally. Production monitoring, product tracking and data recording are programmed on a customer-specific basis. Remote access is also possible at any time.

www.ssb-waagen.de



Example of a packaging line.

Dinnissen opens UK regional hub



Dinnissen's new UK regional hub.

Dinnissen, a system integrator specialising in process technology of powders, granules, and granulated products, has opened a new regional hub: Dinnissen UK Ltd.

In addition to its two locations in the Netherlands, one in Germany, and one in Jakarta, will this be the company's fifth branch. The daily management of Dinnissen UK Ltd. will be handled by Dan Baxter, who has over 30 years of experience in process technology. Operations will be based at the Alderley Park business park, near Manchester.

He will be responsible for customer relations in the UK and Ireland. With his proximity to customers and knowledge of the region, he can act fast on customer needs. Baxter states: 'The focus is on serving our customers as effectively as possible. Having a local process expert who understands both the

culture and the market allows us to serve customers better and more efficiently.'

Dinnissen has been working with UK-based companies for many years. The key change is that customer contact will now be handled by a local expert, rather than from The Netherlands. This ensures familiarity with local culture, conditions and regulations. Engineering and production of all components, machinery and complete production lines will continue to be carried out in Sevenum, The Netherlands. The complete systems will then be shipped to the UK, where Dinnissen UK will oversee further implementation. Wouter Kuipers, operations director, explains, 'At our company, we always make decisions with long-term considerations in mind. By operating locally, we can continue to meet our customers' needs.'

www.dinnissen.com

Adjustable continuous mixer

Solids handling equipment maker, Ajax Equipment, has supplied a leading snack producer with two stainless steel twin-screw mixers to expand production. One of the mixers is mounted on a mobile stand enabling the height and angle of the mixer to be adjusted to meet the plant configuration required for each product, as well as helping to drain the mixer after cleaning operations.

When handling and processing food it is essential to maintain the integrity of the ingredients; over 50 years Ajax has developed a range of features to help food producers achieve high quality products. In this case, both mixers utilise Ajax's lynFlow paddles to provide gentle yet thorough mixing, ensuring a homogenous mix without compromising on quality.

The mixers also gently heat the ingredients inside. To do this, warm water is circulated through a jacket around the machines' casing as well as along the screws' centre tube, helping to maintain an even temperature throughout the machine. The mixing screws also feature quick release couplings making it easy to remove the augers for regular cleaning or to allow product changeover.

'Each material has its requirements, but food in particular requires gentle handling and processing. Ajax's food mixers combine a hygienic construction, including crack and crevice free finish, with bespoke screw flights and casing profiles to ensure thorough mixing whilst being gentle enough to maintain the integrity of the ingredients,' says Eddie McGee, managing director, Ajax Equipment.

www.ajax.co.uk.



Adjustable continuous mixer from Ajax.

Wolfson Bulk Solids Centre celebrates 50th Anniversary



2024 marks the 50th Anniversary of the Wolfson Centre for Bulk Solids Handling Technology.

The Centre was originally a department within the School of Engineering at what used to be Thames Polytechnic, later to become the University of Greenwich. At this time, in 1974, the office and laboratories were based in Woolwich, where they remained until their relocation to Medway in Kent in 2005.

The department was set up initially at the request of the then Head of School who had completed his PhD in 2 phase solid gas flow and discovered that the Polytechnic did not cater for this discipline. He therefore appointed people to continue this stream of Research which in turn led to research into general bulk materials handling, and the Bulk Solids Handling Unit was born. It was not until 1989 that the Wolfson Centre name was added, thanks to funding from the Wolfson Foundation.

Although the people, the location and the department name may have changed throughout its 50 year history, the aim of the Centre has remained the same – to help industry with its bulk solids handling issues.

Since 1974 the Centre has evolved into what it is today – only one of three

comprehensive Bulk Materials Handling Centres around the world – the only one of its kind in Europe.

Their experts deal with all materials that are in the form of particles, a phase of matter that has its own unique patterns of behaviour unlike other materials. Such materials are widely used in industry and the Wolfson Centre is recognised world-wide in both industry and academe for the work in this field through consultancy services, research and education through short courses, seminars and workshops.

Through its consultancy services, it has helped:

- Design new plant or advised on updating of existing plant;
- Advised on material blends for new products in the food and drink industries, homeware goods and renewable energy sectors;
- Tested countless materials for their handleability and flowability properties;
- Advised in expert witness cases;
- Advised on the aftermath of accidents – fires, destruction of silos, blow-outs;
- Been at the forefront of the design and implementation of unique tools and equipment such as the widely used Brookfield Powder Flow Tester,

Segregation Testers, Virtual Formulation Laboratory (VFL), Cellular Automata (CA) based modelling to predict segregation in industrial hoppers and silos, a Mechanical Surface Energy Tester to predict bulk flow properties, to name but a few

The Centre's series of short courses are regularly delivered to over 200 delegates around the world each year, whether on the premises in Medway, onsite or online.

Research into new areas of technology has provided studentships for around 50 PhD students since the early 1980s in subjects such as Pneumatic Conveying, Wear and Particulate Handling, including the current Director 'Professor of Bulk and Particulate Technology' Mike Bradley who graduated in 1990 and has remained in the Department ever since. Without Mike

the Wolfson Centre would not exist as it is today.

The Wolfson Centre remains a small independent department within the faculty of Engineering and Science. Helping Mike with the technical services, research and teaching are Drs Tong Deng, Baldeep Kaur, Vivek Garg, Atul Sharma and Hamed Johnny Sarrafi, all experts in different areas of bulk solids handling technology.

Working hard in the background is Senior Technician Paul Wakeman, who joined in 2023 bringing a wealth of experience and expertise to the laboratories, and the Centres Support Manager, Caroline Chapman who has been with the department for nearly 20 years, keeping everyone in check!

In August the Wolfson Centre celebrated this special occasion by inviting leading industry clients and collaborators, along with past and present Wolfson staff and students, to join them for a day of bulk materials handling activities.

The event was sponsored by SHAPA, the MHEA and the University of Greenwich

Faculty of Engineering and Science.

After an informal buffet lunch, a series of seminars took place, showcasing Industries close links with the Centres work. After an introduction from Mike Bradley, a potted history of how the Centre came into being and an informative history of bulk solid materials, the floor was taken by invited guests including Peter Brookes from Hargreaves Industrial Services, Phil Freeman from Tate and Lyle Sugars, Davey Wharrier from Lynemouth Power, Ian Birkinshaw in his last role as SHAPA Secretary and Dr Rizwan Chaudhry from Clyde Pneumatic Conveying who was also a PhD graduate from the Centre.

A brief tour round the on-site pilot plant followed, guided by the Wolfson Centre consultants who were on hand to answer questions about the equipment and facilities.

Then everyone headed off to a Drinks reception and Dinner where the evening progressed with guests renewing old acquaintances and reminiscing with their own bulk materials handling stories.

www.bulksolids.com



Redefining industrial cleaning

Automated Material Processing (AMP), comprising Kason Corporation and Marion Process Solutions, has recently introduced its TotalClean Clean-in-Place (CIP) systems. These CIP solutions are designed to increase efficiency, safety and profitability across a range of industries including food, pharmaceutical, nutraceutical, chemical, cosmetic, food processing, dairy and brewing, all while meeting validation of FDA, 3A and BPE standards.

The CIP systems employ advanced technology and high-pressure nozzles to thoroughly clean even in challenging and hard-to-reach areas. The automation reduces manual intervention, providing a consistent and repeatable CIP cleaning process compared to traditional methods. Furthermore, the faster cleaning cycles of Marion's and

Kason's TotalClean CIP systems, which average 30-60 minutes, result in higher profit margins by enabling quicker

batch changes and increased product throughput.

<https://amprocessing.com/>



The CIP machine from AMP.



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Vortex Global acquires SolidEx

Vortex Global, provider of components for the transport and flow control of dry bulk solids, has acquired SolidEx, the rail car loading solutions integrator, based in Baton Rouge, LA.

SolidEx will now be part of the Vortex family of companies, further expanding Vortex's expertise and capabilities in the dry bulk material handling industry.

SolidEx is a specialist in innovative spin loader technology, developed by Tom DePierri with clean loading and fill efficiency in mind. This solution addresses the challenges of traditional

railcar loading methods, which typically fill railcars to only 80-85 percent capacity. The spin loader distributes plastic pellets, increasing railcar fill rates to 99 percent and generating significant savings. Additionally, this technology offers a cleaner, environmentally friendly alternative to previous loading methods and supports the Operation Clean Sweep initiative to prevent plastic pellets, flakes, and powder from entering the environment during the rail car loading process.

SolidEx and Vortex have already enjoyed a partnership of over 10 years.

During that time, Vortex manufactured the SolidEx loading equipment that connects to the spin loader, including positioners and loading spouts.

"Our mission has always been to put the customer first," said Travis Young, CEO of Vortex Global. "By acquiring SolidEx, we continue to expand our ability to offer innovative and reliable solutions to meet the most demanding applications in the dry bulk solids industry."

<https://www.vortexglobal.com/products/solidex>



Bulk terminals industry prepares to meet in Antwerp

On 23 & 24 October, the international bulk terminals community will gather in Antwerp for the 8th Annual ABTO Bulk Terminals conference, where industry experts will provide analysis and advice on a range of thought-provoking topics covering everything from geopolitical events to environmental improvements.

Bulk Terminals Antwerp's full programme offers sound practical solutions to terminal operators for streamlining and increasing the profitability of operations, improving safety and ensuring environmental protection.

The sector-by-sector analysis of bulk markets will be presided over by session chairman Rahul Sharan, Deputy Director – Bulk Research, Drewry, with a keynote on 'Bulk markets vulnerability to wars and political disruptions' from Dr Wouter Jacobs, Executive and Academic Director Erasmus Commodity & Trade Centre, Erasmus University Rotterdam.

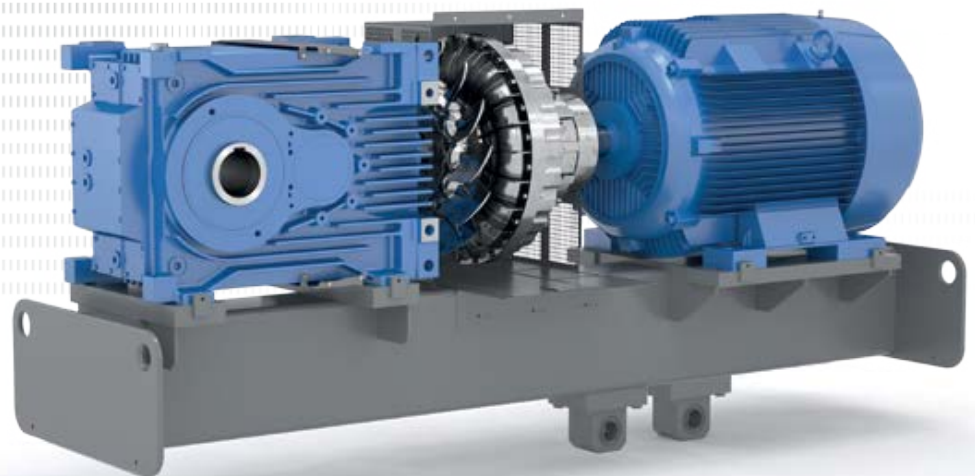
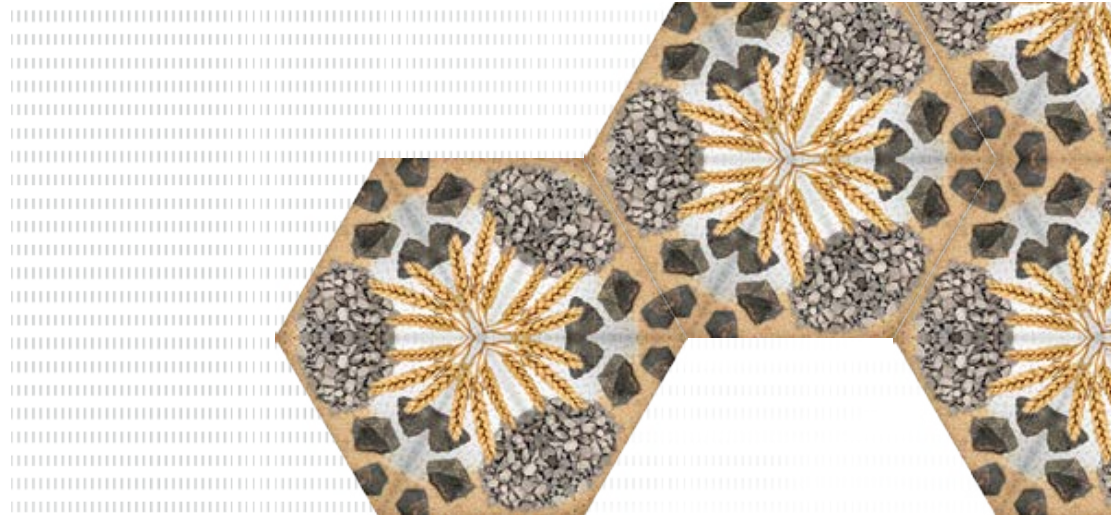
ABTO CEO Simon Gutteridge says: "We have addressed the effects of the war in Ukraine, China's weaponisation of trade and Houthi attacks on shipping in the Red Sea, both in Bulk Terminals International magazine and at our previous conferences. Dr Jacobs will be drawing these strands together in his not-to-be-missed session."

Further highlights include an in-depth exploration of circular economies by the case studies panel, which will see specialists including Jessica Gerritsen, Port of Antwerp-Bruges Expert Circular Economy discuss the financial as well as environmental benefits of a circular approach. Garry O'Malley, Chairman of the ABTO Technical Committee and Operations Director at Teesworks, will moderate the panel.

A packed Environment session will see discussions from speakers including Karin Smit-Jacobs, Director EU Transport and Energy, Conference of Peripheral Maritime Regions (CPMR) on green port strategies, as well as an in-depth look at the impact of technology on sustainability. Delegates can share their environmental journey in what promises to be a lively interactive session.

The cyber security, safety and risk session will put the very latest protective measures in the spotlight, with advice from experts including Richard Steele, Head of ICHCA International.

<https://www.bulkterminals.org>



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Webinar: "Transform Your Powder Processing"

Granutools is organising a free webinar on September 26, 2024, entitled: "How to Improve Powder Processing: The Role of Permeability."

The Session will show why understanding powder permeability is crucial for optimising processes across a wide range of industries, including pharmaceuticals, food production, and additive manufacturing.

The Webinar will guide participants through the latest advancements in technology, providing insights that can help enhance product quality and stay ahead in a competitive market.

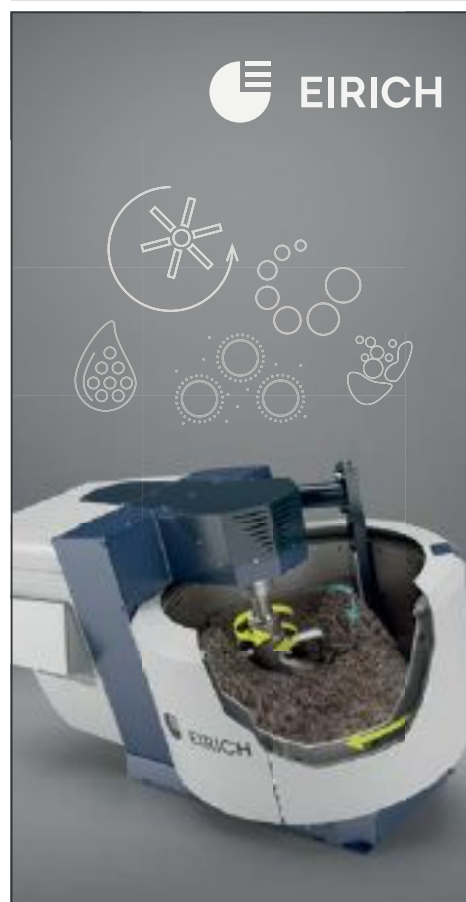
Register here: [GRANUTOOLS](https://www.granutools.com)

Verder acquires Sauermann

Dutch pumping and scientific solutions specialists Verder has acquired Sauermann, the HVAC-R supplier.

Sauermann's expertise in HVAC-R technologies, particularly in condensate removal pumps and air quality measurement & control instruments, complements Verder's range of solutions.

www.verder.com



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eirich.com

Precision dosing device for discharging salt from silo

Adding small amounts of salt to a sauce intensifies the flavours of the different ingredients. However, it is important not to add too much salt. With an automatic feed system, the amount of salt can be controlled at all times. It also replaces manual handling. Incorrect dosing does not occur and the risk of scalding when handling hot sauces in mixing containers is avoided.

A precision dosing device discharges the salt from a silo and adds the required batch quantity to a weighed vessel below. The vessel now serves as a conveying vessel for the pneumatic dense phase conveying system. With the Gericke PulseFlow PTA system, the salt is conveyed at low air velocities of typically 4 - 12 m/s through the pipework directly into the various liquid mixers with hot liquid. The



The Gericke Pulseflow pneumatic conveying sender for salt.



Liquid mixers with pneumatic feeding of salt.

respective liquid mixer can be selected with diverter valves and the required amount of salt can be added.

The PulseFlow PTA conveying system not only maintains the particle size distribution, but also requires only a small amount of compressed air, which results in low energy consumption. Thanks to the low air volume, no special dust

filter is required on the mixer.

All materials that come into contact with the product are made of 316Ti/316L stainless steel, which is suitable for corrosive products such as salt. In addition, the design of the sending container allows the material to be completely emptied.

www.gerickegroup.com

Screw auger for soda ash handling system

Solids handling equipment specialist, Ajax Equipment, has supplied industrial chemical producer, INEOS Inovyn, with a spare screw auger for a soda ash handling system which was previously supplied by Ajax. The ash handling system, consisting of inclined collecting screw conveyors and supports, chutes and diverter valve, improved production capability and capacity at INEOS Inovyn's Lstock Grlam facility near Northwich, UK.

Commenting, Jon Whieldon, Brine & Water Operations Manager, INEOS Inovyn, said, "INEOS Inovyn's experience of using Ajax equipment has been a positive one. They understand our application well and have

proven specialist knowledge in solids handling that helped us to incorporate their equipment into our overall design. This has all helped to ensure reliable operation since the installation was commissioned."

"Ash handling is a challenging application but one that Ajax has a wide range of experience helping customers with. It is always important to work with the material, however, because of ash's hard wearing nature it is crucial to manage its impact on the handling equipment. In this case stainless steel provides the performance required," says Eddie McGee, managing director, Ajax Equipment.

www.ajax.co.uk



The Ajax screw auger.

Eriez appoints VP Global Sales



Todd Loudin: VP Global Sales at Eriez.

Todd Loudin has been appointed as Vice President of Global Sales at Eriez, where he will drive revenue growth and enhance the company's global market presence.

Loudin most recently held a senior executive position at Valmet, a global leader in flow control solutions, where he significantly expanded market share and strengthened customer relationships.

www.eriez.com

High-capacity vibratory conveyors introduced

Key Technology (Key), a member of Duravant's Food Sorting and Handling Solutions group, has introduced high-capacity vibratory conveyors for advanced food handling applications.

Conveying up to 100,000 lbs. (45,359 kg.) of product an hour and available in widths more than 10 feet (3 metres), these extra-large, high-capacity

conveyors can be engineered for grading, aligning, distributing and other specialised food handling functions.

Achieving new levels of versatility at high throughputs, Key's Iso-Flo®, Impulse®, Zephyr® and Marathon® vibratory conveyors offer industry-leading reliability, superior sanitation and minimal maintenance requirements.

The conveyors – designated Iso-Flo,

Impulse, Zephyr and Marathon – are suitable for fruits, vegetables, potato strips, potato chips, nuts, meat, poultry, seafood, dairy products, confections, snacks, bakery products, cereals, grains, and more. Key customises the tune and stroke of each vibratory system to match the needs of the application so conveying performance is optimised.

www.key.net



High-capacity vibratory conveyors from Key Technology.

New FFU universal gate valve



The recently developed FFU universal gate valve.

Coperion has developed a new discharge gate valve for controlled bulk material flow from storage bins and hoppers to downstream process steps. This valve is suited for a variety of applications in the chemical and plastics industries.

One particular feature of this new discharge valve is that it closes securely and reliably while material is flowing, but usually also when the product column is stationary.

Coperion manufactures this discharge valve using a precision casting process. Its intelligent geometry,

select guide elements and the form of the seal ensure that the FFU universal gate valve can be used for a wide variety of applications with the most diverse demands – even in combustible areas (ATEX). This new geometry is what allows the gate valve to be used in the usual way even when the bulk material is stationary.

Various models with manual or pneumatic drive are available in sizes DN 150 to 400 (6 to 16 inches) and can be implemented in a variety of customer-specific options.

www.coperion.com

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Addressing chemical supply chain disruption

Tim Doggett, CEO of the Chemical Business Association (CBA) discusses the industry-wide initiatives that are seeking to ensure the chemical supply chain has a long term stable and sustainable future.



To ensure a stable and sustainable future, the chemical supply chain needs to address the issues with supply disruption.

The chemical supply chain, a vital and critical sector for UK industry, not to mention globally, continues to deal with a range of challenges and disruptions that could potentially impede the UK's productivity and future growth.

From skills shortages and post-Brexit bureaucracy, to volatile shipping costs, along with the re-routing of vessels and raw material unavailability, addressing and creating solutions to these manufacturing and resource planning challenges is essential to safeguard and facilitate a secure and reliable chemical supply chain.

European concerns

While the UK may have left the EU, it didn't leave Europe, and it remains a critically important partner, market and transit route for the UK – and indeed – global chemical supply chain.

As a result of factors such as Brexit, a global pandemic, war in Europe or threats to shipping in the Red Sea, there have been multiple disruptions, impacts and continued areas of significant and mutual concern. The Russia-Ukraine war has not only disrupted important supplies and supply routes but many Ukrainian HGV drivers, who made up as much as 40% of the workforce of some Eastern European HGV fleets, have stepped away from logistics to enlist in the armed forces.

UK, European and global trade routes have also been affected by the attacks on shipping in the Red Sea. Transport through the Suez Canal is a major ongoing risk that has led to the rerouting of vessels, meaning deliveries take longer, and container rates have risen substantially through 2024, albeit not to the peaks seen during the pandemic.

The long-term impact of Brexit is far reaching, and in many cases forced companies to move their operations to the EU, simply bypassing the UK. It has also impacted the labour market with the UK's post-Brexit immigration policy resulting in a deficit of 460,000 EU workers.

UK REACH is a result of Brexit, and unfortunately, it is fundamentally flawed in access – or rather, lack of access – to data. Pre-Brexit, the UK followed EU REACH and UK industry spent over £500 million on data to comply with the regulation. To comply with UK REACH, it requires duplication of the same data, which a Department for Environment, Food & Rural Affairs (DEFRA) Impact Assessment estimated the cost of this to be around £2 billion, with the top-end estimation coming in at as much as £3.5 billion.

Furthermore, UK REACH not only affects the chemical supply chain and the wider chemical sector, but downstream users, who were previously not within the scope of the regulation.

The CBA has been working tirelessly to make government aware of the impact of UK REACH from the outset, and following the first major breakthrough in December 2021 – when DEFRA announced it would explore alternative arrangements for UK REACH registrations and at the same time, they advised their intention to consult separately on extending the deadlines – progress has been frustrating and painfully slow. The uncertainty around UK REACH continues to stifle investment, resulting in a negative impact not only on the chemical industry, but industry as a whole and its ability to trade, innovate and grow.

While DEFRA continues to explore the alternative transitional registration model (ATRM), our ambition remains the same; to make UK REACH proportionate, effective and efficient, for industry and regulators alike, with no reduction in standards, through a pragmatic and workable model that upholds existing human health and environmental protections, whilst minimising the negative effects on UK industry.

Associations and other key organisations continue to provide input and advice to delivering a solution. In the interim, associations are closely supporting their members with training, bespoke advice services and resources, and furthermore at the CBA, through access to a Helpdesk and Compliance on Demand training.

Skills shortages

The chemical supply chain also requires a large, highly skilled workforce comprising of many different roles. With over 170,000 current employees, workforce sustainability is critical. Research has shown, however, that there is a direct link between the current shortage of skills and the recent levelling off of the sector's productivity.

Chief reasons for the skills gap include the shortage of young people studying STEM subjects, the industry's unattractiveness to job seekers, and the lack of training and career development opportunities for existing employees.

Ensuring stability and sustainability

With over 97% of manufacturing containing a chemical input, these issues affect businesses and end-consumers alike, with both feeling the pressure of rising costs and disrupted supply

chains. These factors impact manufacturing, resource planning, chemical and process engineering and logistics across every field, from plastics, rubber and composite materials to food and drink, pharmaceuticals and household goods. To address them, industry associations, the government and other stakeholders have in recent years increasingly been working in partnership and collaborating on various initiatives. This is furthered by the encouraging message from the Labour Government for even closer cooperation and partnerships.

To ease supply chain disruption, the Department for Business and Trade (DBT) set up the Critical Imports Council in April 2024. Comprised of experts from leading companies and associations, including the CBA, the Council ensures that business interests are considered when addressing supply chain policy. The CBA have called this to be continued under the Labour Government, and in any event, for this to be a key consideration as part of its Industrial Strategy.

The chemical supply chain has a wide range of roles and career opportunities, from procurement and production to distribution and quality control, and contrary to many perceptions it extends far beyond lab-based work. The sector offers a vast range of roles, including everything from HGV drivers, through to sales, marketing, finance, HR, amongst many others.



The chemical supply chain also requires a large, highly skilled workforce comprising of many different roles.

Initiatives have been launched to address skills shortages, recruitment and retention. Generation STEAM seeks to encourage more young people to study STEM subjects, but adds an A to its name for Arts, Attitude, Ability and Ambition, recognising the industry's need for creativity and problem-solving in all roles in an age of advanced, creative technologies. The initiative also aims to make STEM more Appealing and expand awareness of industry career



Tim Doggett, CEO of the Chemical Business Association.

opportunities and their pathways, while countering negative attitudes and focusing on diversity, inclusion and the societal benefits of the sector.

Other recruitment initiatives include Generation Logistics, whose campaign aims to create an early talent pipeline for the logistics industry. Backed by the Department for Transport (DfT) and supported by 40 leading organisations and associations; it aims to attract more young people into logistics. With potential employees discouraged by the sector's perception as a polluter, the Carbon Literacy Project addresses this by providing Carbon Literacy training for organisations and educating employees on environmentally friendly practices.

To address skills shortages in the current workforce, the CBA's People & Skills Hub (P&SH) provides a centre for outreach, training and upskilling, where supply chain businesses, organisations and stakeholders, including the government, industry experts, education providers and aspiring professionals, can access training programmes, research, resources and expertise, as well as facilitate job placements and easily collaborate on projects of mutual interest. The P&SH also works to present the industry as an employer of choice, with a focus on diversity, inclusion and equality, while highlighting the various new and non-traditional roles and pathways.

Two initiatives that address skills issues at different ends of the age range are the Future Council and 5050Vision. The Future Council nurtures aspiring talent by bringing together young industry professionals with a range of different skills and experience, while 5050Vision encourages recently retired employees to bring their experience back into the workforce.

To ensure a stable and sustainable future, the chemical supply chain needs to address the issues with supply disruption, UK REACH and the skills gap. Today, industry associations, like the CBA together with other organisations, businesses, government, academia and stakeholders, are increasingly working in partnership to achieve these goals through a wide range of initiatives and skills, training and outreach activities.



Threats to shipping in the Red Sea have led to multiple disruptions.

Overband magnet development

Bunting has developed three designs of Permanent Crossbelt Overband Magnet (PCB), with different magnetic polarity, to suit an ever-expanding range of applications.

Overband Magnets are mounted over conveyors to separate ferrous metal from non-magnetic material and are commonly used in industries including mining, quarrying, recycling, and wood.

The magnetic field of a PCB is generated by charging ferrite or rare earth magnet blocks mounted inside a stainless-steel box with a steel back bar. The steel bar back forces the magnetic field to propagate through and out of the bottom of the magnet box, which would be down towards a conveyor transporting bulk materials such as aggregate or waste. Although all three designs operate under this basic principle, that is where the similarities cease.

The magnetic field of the three designs of PCB is defined as being either a 'Single Pole', 'Twin Pole' or 'Tri-Pole'.

Single Pole Overband Magnets

The Single Pole design (PCB Single Pole)



PCB Single Pole installed in an e-waste recycling operation.

is the simplest and most common design of PCB. Constructed with a single magnet block and steel back bar, the north pole sits on the back bar with the south pole at the bottom of the block. The field runs vertical, from north to south, projecting out from the south pole and into material being transported on a conveyor. The Single Pole design removes general tramp metal from a range of products in various applications. This design offers a reliable, cost-effective solution for quarries, mobile recycling plant and recycling operations.

Twin Pole Overband Magnets

A Twin Pole configuration uses two separate magnet boxes, mounted side by side on a single steel back bar, each with a different magnetic pole. The magnetic field flows from south to north (from one box to the other) producing a deep magnetic field that projects away and down from the magnet faces.

The enhanced separation performance of the PCB Twin Pole enables capture of smaller ferrous particles. The twin pole configuration has the advantage of lifting



PCB Single Pole on a mobile crusher.

longer and thinner tramp ferrous metal, typically steel rebar, in a flat orientation which aids discharge and reduces belt wear.

This characteristic of the Twin Pole occurs due to the different poles of the two magnet boxes attracting opposite ends of the ferrous metal rod, forcing it to remain flat in the field. The Single Pole design attracts one end, resulting in one end striking the belt or face of the magnet box.

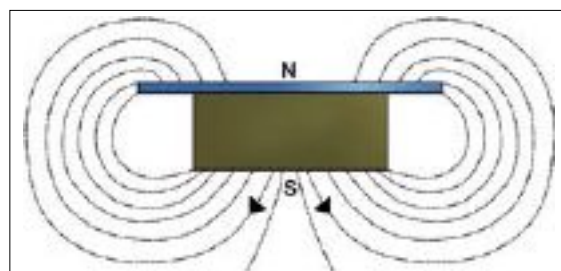
Tri-Pole Overband Magnet

The Tri-Pole PCB (PCB Tri-Pole) has two additional steel side poles mounted either side, with a gap, of a single central magnet box. Each of the side poles has a magnetic north pole, with the centre of the box being south pole (i.e. three poles).

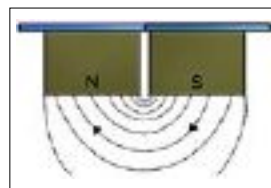
This generates two magnetic fields running from the box to the steel sidepoles. The sidepoles reduce flux leakage and concentrate the magnetic field downwards toward the product.

The greater depth of magnetic field generated by the PCB Tri-Pole results in a higher suspension height of the Overband Magnet, which is ideal for deeper

troughed conveyors and higher burdens of material. The Tri-Pole model captures



Single Pole Magnet Block.



Twin Pole Magnet Block.

smaller ferrous metals that are difficult to separate with a PCB Single Pole.

An added advantage is that the shape and direction of the magnetic field limits any magnetisation of the Overband Magnet frame, which is ideal when processing materials such as waste wood containing nails and screws.

PCB selection

Selecting the correct PCB is dictated by the application. Bunting's applications engineers assess the ferrous metal separation objective (i.e. the plant being protected or the metal being recovered); the nature of the ferrous metal (i.e. shape, size, etc.); and the conveyed material (i.e. size range, burden depth). These criteria assist the team in selecting the optimum PCB for any given application.

www.bunting-redditch.com

Reducing microbiological risks in spray drying process

Food and dairy processing solutions specialists GEA has introduced its CONTA dual block valve technology for spray dryers. This new system is designed to reduce microbiological risks, ensuring safer and more efficient processing operations.

The CONTA dual block valve receives feed from the feed supply system and distributes it to multiple atomiser nozzles, which then spray the feed into the drying chamber. Compared to traditional designs, this new design reduces the areas where feed can accumulate by up to 96 percent, allowing for more efficient cleaning in place (CIP) and reducing microbiological risks. The CONTA dual block valve system improves sanitary operation and provides greater process and product safety.

Each valve weighs approximately half the weight of traditional systems, making it easier and safer to handle. The design eliminates the use of external welded manifolds, allowing manual inspection and maintenance with simple tools. This simplified inspection and maintenance supports 24/7 operation and reduces plant downtime.

The standardised CONTA dual block valve unit can be configured for both new and existing spray drying systems. This ensures minimal disruption and quick installation, allowing plants to resume operations quickly. Retrofitting to existing spray dryers is straightforward, often requiring only minor programming changes.

gea.com



The GEA CONTA dual block valve technology reduces microbiological risks, ensures safer and more efficient processing in spray drying operations.

Standardised batch mixer model to increase cost efficiency

Lödige Maschinenbau's Ploughshare Batch Mixers of the FKM series are designed for the treatment of powdered, granular or fibrous bulk solids. According to Lödige, their main advantages are "short throughput times, excellent mixing quality and high batch reproducibility".

Like customised machines, the new FKM mixers of the "Light Series" are manufactured entirely at the Lödige Maschinenbau headquarters in Paderborn, Germany.

However, they differ from

customised solutions due to their standardised design. The reduced workload in design, engineering and programming allows Lödige Maschinenbau to offer cost benefits. Another advantage, the company notes, is the reduction in delivery times for the FKM LS series to "three to four months, a significantly shorter period than that for customised special machines".

The machines of the new mixer series are available in seven sizes from 130 to 3000 litres and designed for a clearly defined

range of functions.

At the same time, numerous standardised options permit optimal adaptation to the relevant product and process requirements. For instance, separately driven choppers rotating at high speeds can be used to support the effect of the mixing element.

Other equipment options include liquid injectors, a product thermometer, different control systems and an explosion-proof ATEX version.

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Tuf-Lok ring grip pipe and tube couplings are rugged, heavy duty, self-aligning and self-grounded couplings with a high end pull. They can be used for almost any application where pipe or tube ends need to be connected. The Tuf-Lok self-aligning couplings install quickly and easily with little effort.

Features

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Large-scale plant for producing surgical and orthopaedic filler material

“Bone cement” consists of many different components before it is used for orthopaedic surgeries. The leading manufacturer produces this kind of cement under strict clean room conditions.



Complete production plant for bone cement production.

When it comes to in-house raw material transport, a number of questions are sometimes raised:

- How can we ensure that our products can be gently and safely involved or discharged from the process?
- How can trouble-free transportation between the single process steps be achieved?
- What is the best way to handle different bin types like Big Bags, drums, container or sacks?

These questions – and many more – need to be considered for both new projects, as well as for integration into existing systems. HECHT Technologie reports that it has some of the answers.

In the pharmaceutical and life-science industry the applied substances are – amongst other things – highly active and therefore very dangerous.

Handling most of these substances requires limit values of OEB 5 (Occupational Exposure Band) in order to effectively protect the staff from consequential damages. This means that the environmental contamination must never exceed a maximum OEL (Occupational Exposure Level) of $< 1 \mu\text{g}/\text{m}^3$.

On the other hand, there are special substances that need to be protected from environmental influences. For instance, substances such as baby food, special diets for allergy sufferers or substances applied in surgeries.

The so-called “bone cement” consists of many different components before it is used for orthopaedic surgeries. The leading manufacturer of this product, based in Ireland, produces just this kind of cement under strict clean room conditions.

HECHT on site systems guarantee a proper

raw material supply and flawless blending of those different highly sensitive products within a complete process line. The complete machinery is made out of stainless steel and consist of a high-class surface quality with average roughness value of $< 0,8 \mu\text{m}$.



HECHT's PCC works on the principle of plug conveying.

Process description

For the raw material supply, five Big Bag discharging stations with cantilever gantry and containment liner systems were installed.

The Big Bags can therefore be connected without any danger of contaminating the product. In order to ensure the accuracy of the blending, some Big Bag dischargers were placed on weighing modules for loss-in-weight definition.

A pneumatic transportation to the blender turned out to be one of the most efficient conveying methods for a closed transport. Protection of the operator – and also the avoidance of cross-contamination – are the number one priorities, but also the composition of the material conveyed or its moisture level play a significant role.

For instance, when handling substances with low ignition energy, it is crucial to pay attention to the predefined EX-zones to avoid explosive mixtures. If necessary, production needs to be done in an oxygen-free environment. Furthermore, correct functional handling of the systems as well as simple cleanability need to be ensured.

HECHT's ProClean Conveyor was developed especially for those needs and it fulfils the high GMP requirements in the pharmaceutical production.

At first sight, the principle of the ProClean Conveyor (PCC) does not significantly differ from conventional pneumatic conveying devices which are operated either via overpressure or via vacuum. The system needs to run in closed operation to keep up the vacuum.

HECHT's PCC works on the principle of plug conveying which does not need a high amount of conveying air. In addition, it consists of a specially designed and comparatively small filter surface. Due to the innovative ring filter technology, the filter body acts as an extension of the knock-out

vessel. From simple assembly and disassembly up to the adherence of “Hygienic Design”, this technology offers numerous advantages. Furthermore, the filter fabric is generally FDA-compliant. More advantages are the longevity of the unique filter construction and the resistance against filter disruptions.

During the conveying process, the product-gas mixture is being aspirated via a hose or piping system and enters the knock-out vessel of the conveyor through the product entry valve.

Depending on the customer's requirements, the tablet press can now be fed with a certain amount of powder by means of a butterfly valve or a lock. The tableting process is carried out with a rotary press and the respective powder dosing setting. Due to the special construction and design, the housing cover comes with a certain arrangement of the connections. The vacuum and compressed air unit are mounted laterally at the device, so there is no need for disassembly during cleaning or maintenance.

As soon as a sufficient amount of substances has been added, the blending process can be started. In this case a Lödige ploughshare mixer has been integrated.

After the blending process the finished mixture is filled into Big Bags by means of two HECHT filling stations.

The Big Bags with inner liners are filled through one liner filling head each. The liner filling head LBK enables a contained filling of any kind of bin with inner liner. Even during the bin

exchange, a high containment can be reached by using protective foils. If no bin is attached, a protective foil seals the filling head and the lateral port. Consequently, operator and product are protected against contamination at any time. By using this special technology, there is no need for complex isolator systems during the filling process.

By means of these closed systems that connect the different steps of the process flow, a contamination-free production is possible. As those special filling materials (like in this case for orthopaedic surgeries such as hip operations) are very sensitive, product protection against cross-contamination is the most important factor.

With this complete production process, it is possible to adhere to the strict containment requirements at any time.

www.plantpartner.nl



The finished mixture is filled into Big Bags by means of two HECHT filling stations.

Other Valves Fight Friction, We Designed it Out

Unlike other valves that seal with friction, Posi-flate's unique butterfly valve uses an inflatable seat to seal with air pressure. Thus it requires less torque and a smaller actuator, resulting in lower cost. Plus, the seat automatically compensates for wear, providing longer life. Some users have reported over six million cycles and the valves are still going strong.

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The Big Bags can be connected without danger of product contamination.

What to expect from a Fike ATEX risk assessment

Explosion protection and fire suppression specialists Fike explains how it can help alleviate concerns regarding risk assessment, what can be done to prepare for it, and what the company will do, to ensure safety and business goals are met.

Does the following sound familiar?

Your facility handles combustible dust, so you know that the ATEX 153 workplace directive requires the completion of an ATEX risk assessment. You also know that the risk assessment will likely require a walkthrough of your facility to identify the suspected hazardous areas of the process, review your existing safeguards and more.

Calling a combustible dust expert has been on your to-do list, but it has yet to happen, perhaps because, for example:

- You're unsure about the logistics and duration of the visit.
- You don't want to upset your facility's production schedule.
- You worry about the number of hazards that may be found during the visit.

In this article, Fike gives details of the five parts of its risk assessment process.



1. How a Fike assessment visit works

The first thing to remember from an ATEX risk assessment conducted by Fike is that we are working with you. It's in both of our best interests to complete a risk assessment as efficiently, and most importantly as thoroughly, as possible.

Duration: Depending on the size of your facility, an ATEX risk assessment often requires one to three days on site to complete, but large facilities may take longer. Usually just one Fike combustible dust expert will visit the location.

Production: The production process rarely needs to be stopped for the risk assessment to be conducted. In fact, the Fike expert will likely want to analyze it while running, so they can have a proper understanding of the operation.. However, there may be exceptions if process startup or shutdown create unique hazards that require analysis.

Point of Contact: At the beginning of the visit, the Fike expert will meet with the facility's health and safety manager or plant manager, who will usually serve as the point of contact throughout the risk assessment. He or she should be able to provide access to areas of the plant, connect the Fike expert with other facility experts, and answer many of the Fike expert's questions or know whom to ask.



2. How to prepare for an ATEX risk assessment visit

To ensure an efficient and productive visit, your team can help prepare for the risk assessment by:

- Identifying and informing your team leads, such as engineers, operators and maintenance technicians of the upcoming risk assessment so they can provide valuable information about the production process.
- Collecting important documents such as facility layout drawings, process flow diagrams, OEM cut sheets, incident logs and more, all of which will help the risk assessor not only determine which areas could be hazardous but also which are safe and may be ignored.
- Documenting the various types of dusty

materials handled, conveyed and stored throughout the process and their locations. Any unique mixtures should also be noted, as those may require dust testing if their explosibility values are unknown.

3. What will occur during an ATEX risk assessment walkthrough?

Once the Fike combustible dust expert has met with his or her point of contact and reviewed facility drawings and other resources, he or she will begin the plant walkthrough. During this process, you can expect the completion of the following steps:

Inspect equipment for dust hazards by evaluating if the material is being handled in a

way that can create a dust cloud in the equipment. This means understanding the particle sizes involved as well as the way the material is manipulated. It's important to consider normal operations, start-up and shutdown, and potential upset conditions. The facility's team leads will be critical in providing valuable institutional knowledge of the equipment.

Inspect rooms and buildings for external hazards where dust may accumulate outside of the process, including on the ground, on overhead surfaces, on light fixtures and more. History has proven that some of the most devastating combustible dust explosions have occurred in part because of these secondary explosion hazards.



Identify potential ignition sources that may ignite a dust cloud. Possible ignition sources include open flames, overheated surfaces, sparks, foreign objects from connected equipment, electrostatic discharges, and more.

Review existing safeguards, such as hazardous area indications, use of correct electrical equipment inside hazardous areas, housekeeping and dust removal procedures, operation and maintenance routines, earthing, bonding and other ignition control systems in place, constructive explosion protection systems in place and more to ensure they are being used properly and remain compliant with the latest codes and standards.

4. How are the site visit observations processed into a formal report

After the inspection of all submitted documents and collection of all observations during the site visit walkthrough, the formal aspect of the risk assessment and report writing starts. The Fike expert will recap all information found so far and then determine if any information is missing or unacceptable residual risks exist.

Determine the need for additional dust testing, if risk evaluation needs better quantification of the explosion characteristics of the dust being

handled. For instance to define a missing quantitative number for the minimum ignition energy or temperature of the dust, as well as dust explosivity Kst and Pmax or others.

Assess the explosion risk. For this purpose, the Fike expert will set up risk tables showing the likelihood of occurrence of explosive dust clouds and ignition sources, and the severity of eventual dust explosions, to verify that the explosion risk stays below the maximum acceptable by the ATEX 153 workplace directive

Propose additional measures to reduce the explosion risk further, if the assessment shows that the current explosion risk is not yet acceptable. The Fike expert will propose additional measures in consensus with you, ranging from improved housekeeping, and operation and maintenance procedures to additional technical measures.

5. How Fike will meet your business objectives

When you hire Fike to perform your ATEX Risk Assessment, we will do everything we can to not only ensure the safety of your employees but also to protect your business' financial wellbeing. By helping you meet all of your regional standards, you can avoid dust explosion-related fines and

PROBABILITY P is increasing from F to A	A				
	B				
	C				
	D				
	E				
	F				
		IV	III	II	I
		SEVERITY/IMPACT I is increasing from IV to I			

insurance premium increases.

- Finally, we can promise you the following:
- If additional technical measures are required, we will work with you around your budgetary needs and production schedule, and will prioritise the most hazardous areas
- If another solution exists that more inexpensively solves a problem, we will identify it.

- We will always look for opportunities for you to reduce your explosion risk, which are often organisational improvements which cost you nothing.
- We will never sell you equipment you don't need; only when explosion protection equipment is required will we recommend it

www.fike.com



Carbon black: The “Clean Cycle of Packaging”



Demand for carbon black is expected to grow by about 6 percent annually in the coming years. This ultrahigh powder is used in a variety of applications across different industries.

For example, it is used as a highly effective pigment and dye in the printing industry, as a reinforcing agent in rubber and other polymer materials, in electronic components and batteries due to its electrical conductivity, and in gas or liquid absorption processes like air and water filtration.

However, carbon black is notoriously difficult to package. Its fine particle size, low bulk density, and high air retention often lead to dust contamination during conventional packaging methods, causing the surrounding equipment to become contaminated and requiring costly and labour-intensive cleanups.

Additionally, employees are at risk, as prolonged exposure can lead to chronic respiratory issues. Another common problem is “bulky”, irregularly shaped bags that are difficult to stack due to excess air being trapped during the packaging process.

Greif-Velox offers a solution with a system specifically designed for the product, enabling the efficient, clean, and compact packaging of carbon black.

The system

With Greif-Velox's VeloVac technology, carbon black producers can benefit from dust-free packaging in a fully enclosed vacuum chamber.

By compacting carbon black up to four times its

original volume, transportation and logistics costs can be reduced by up to 75%, significantly lowering the carbon footprint.

The dust-free packaging also reduces cleaning costs and protects workers from harmful dust exposure. For applications that require a highly pure product, such as battery production, packaging in a sealed vacuum chamber ensures there is no contamination.

Greif-Velox continues: “The risk of transport damage is minimised, as the bags are stably stackable, creating uniform pallet loads. Compared to pump packers, the VeloVac technology has lower maintenance costs and saves space, as complex maintenance work and calibration of vacuum rollers are no longer necessary. Finally, the use of robotic automation to remove the bags from the vacuum chamber improves workplace ergonomics and allows for labour cost savings.”



Vacuum Packer Greif-Velox VeloVac.

The bag

The Clean Cycle only works perfectly if the packaging material meets the high demands of both the machinery and the product. Greif-Velox, in collaboration with its customers and renowned packaging manufacturer dy-pack Verpackungen Gustav Dyckerhoff GmbH, has developed paper bags that are perfectly matched to both the product and the machine, ensuring maximum packaging efficiency and optimal product protection.

This development offers numerous benefits. A more streamlined development and validation process can result in time and cost savings of up to 50%. The optimised packaging concept allows for maximum utilisation of transport space without the risk of abrasion damage. A perfectly aligned process ensures that disputes over responsibilities between machine and bag manufacturers are a thing of the past, reducing the costs of complaints

and boosting brand reputation. Overall, the partnership between Greif-Velox and dy-pack provides a tailored solution that increases efficiency while ensuring product quality and protection

www.greif-velox.com

Presentation on the Clean Cycle at Solids



Sebastian Pohl, Managing Director of Greif-Velox.

Sebastian Pohl, Managing Director of Greif-Velox, will give a presentation on “The CLEAN CYCLE of Packaging” at the Solids trade fair in Dortmund on October 9th, at 12:30 PM in the Solution Center in Hall 6. Anyone who would like to discuss the topic in person with Greif-Velox can visit the company at their booth 5-N17.

“Containing everything that matters”

As well as safety and economic aspects, sustainability is a factor that is becoming increasingly important in industrial packaging. Schütz presented its holistic concept at Fachpack 2024.



At Fachpack, Schütz presented numerous packaging innovations and world premieres from the IBC, plastic and steel drums and plastic jerrycan sectors.

Environmentally-friendly industrial packaging plays a key role when it comes to making supply chains more sustainable and helping manufacturing companies reduce their carbon footprint. As resources become scarce and more expensive, the focus is shifting to recycling and reconditioning.

The packaging in the Green Layer range is based on this principle. In this product line, Schütz uses 30% high-quality, natural-coloured recycled material as the middle layer of the packaging. The recycled material is recovered as part of the company's own worldwide collection programme for emptied packaging.

At Fachpack (Nuremberg, 24-26 September), Schütz presented its entire Green Layer product portfolio, including IBCs, plastic drums and jerrycans.

Optimised pallet solutions

Schütz's new, eco-friendly plastic frame pallet, which is used in IBCs, is also made from Schütz's own high-quality recycled plastic. Thanks to its geometry, this new packaging component is optimised for the internal transportation of containers on conveyor systems and is specially designed for the safe and smooth transport of IBCs in automated warehouses. The plastic frame pallet is extremely robust and stable and therefore offers the IBCs optimum protection in challenging storage and production environments.

The second pallet innovation that Schütz is presenting at Fachpack also impresses in these environments: the 3-skid steel pallet with

embossed sheet metal skids. Compared to standard steel skid pallets, it has a new additional middle skid, which greatly enlarges the contact area. This IBC pallet is highly robust, demonstrates minimal sagging even when fully loaded and greatly improved handling properties on conveyor systems.



The new plastic frame pallet from Schütz was specially developed for safe and smooth IBC transport in modern, automated warehouses and is made entirely of recycled material.

Laser-welded steel drums

In the steel drum segment, the packaging specialist will be presenting the innovative Schütz Laser Drum, which is made of sheet steel that is hot-dip galvanised on both sides. The raw material is dipped into a molten zinc bath before the coil is wound and galvanised to obtain a high-quality, evenly distributed zinc coating on all sides. The drum body is manufactured in a special laser welding process by butt-welding the sheet metal together. After lid and base assembly,

the Schütz Laser Drum is comprehensively protected against corrosion inside and outside. The new type of drum is a high-performance alternative, especially for demanding and sensitive filling products, for which conventionally galvanised or internally coated drums have been used in the past.



The 3-skid steel pallet with embossed sheet metal skids has an additional central skid compared to standard steel skid pallets. This ensures improved weight distribution thanks to a wider contact surface.

Combi steel drums with plastic liners

The new Schütz Combi steel drum version offers even more safety and cleanliness. Here, either the new galvanised Laser Drum or a coated standard steel drum is combined with an inner liner made of HDPE plastic. To seal the space between the liner and the outer drum, an additional circular seal is inserted in the bung area to provide double leakage protection. This packaging solution is especially suitable for chemicals that are otherwise incompatible with untreated steel or the standard inner coatings of steel drums, including particularly challenging products from packaging group I that have highly permeable, aggressive and corrosive properties. Schütz combines the corrosion resistance and cleanliness of a plastic drum with the stability and permeation protection of a steel drum.

Schütz will also be presenting a new solution to efficiently secure tight-head drums during transportation: the Schütz Drumfix system quickly and easily forms four drums and a pallet into a secure and eco-friendly load unit.

Protecting flammable hazardous goods

Schütz designed the Ecobulk SX-D as a double-walled system specifically for the transport and storage of flammable hazardous liquids. This new container type offers maximum protection thanks to a closed, fire-resistant outer hull made of steel. It has FM Global and Underwriters Laboratories (UL) approval. At Fachpack, Schütz will be presenting a new variant with integrated access to an outlet fitting, thus enabling discharge from below. Full leakage and fire protection are provided when the protective lid is closed.

A licence to stir

For absolutely safe and efficient agitation and homogenisation of viscous fillers in the IBC, the packaging specialist has developed a revolutionary, self-contained concept: the Schütz Impeller, which will also be on display at the trade fair. This single-use agitator is inserted in the container at the factory. The bucket agitator has movable wings that open up automatically as the speed increases, allowing the Impeller to homogenise filling products gently and without foaming: all sediments are completely dissolved, thus minimising filling product loss. It is made of HDPE, the same chemical-resistant material as

the IBC inner bottles and is firmly integrated into the screw cap of the filling opening. With the appropriate process and container configuration, the Impeller does not need to be removed during the filling process, meaning that the ECOBULK remains permanently closed throughout the entire supply chain until the filling product is removed – even during stirring processes. This completely eliminates quality risks and the resulting costs that inevitably occur when using standard stainless steel agitators due to contamination caused by insertion, removal and reuse. This makes the Impeller an ideal solution for stirring paints and varnishes, sealants and adhesives as well as chemicals with a higher viscosity.



The Combi Laser Drum combines a galvanised Laser steel drum with an inner container made of HDPE plastic, uniting the corrosion resistance and cleanliness of a plastic drum with the stability and permeation protection of a steel drum.

MX 560: optimum storage

At Fachpack, Schütz presented the Ecobulk MX 560, a packaging solution that combines a low tare weight compared to stainless steel containers or drums with a lower container height. With its reduced capacity of 560 litres on an optimised footprint, the MX 560 provides lower capital commitment and shorter downtimes for products with a lower turnover. This is a particular advantage in industries in which large containers are not needed because the product is highly concentrated, e.g. agriculture and agrochemicals (highly concentrated, high-value crop protection agents or seed dressings). The base assembly of the MX 560 corresponds to that of the Schütz MX models with capacities of 820, 1,000 and 1,250 litres, meaning that the container is compatible with all other models in the MX line. With the pallet size, storage and transport space in standardised large-capacity containers can be optimally utilised, even with mixed loads. This is a major advantage when shipping by sea, for example.



Schütz's Impeller, a single-use agitator, is a revolutionary, self-contained concept. It allows viscous products to be stirred and homogenised efficiently – without any of the usual contamination risks.



In the IBC inner bottles and drum bodies of the Green Layer product line, Schütz incorporates 30% high-quality, natural-coloured recycled material, which the company recovers as part of its global collection programme for emptied packaging.

ITCO

The Globally Recognised Association of Choice for the Tank Container Industry

ITCO promotes Tank Containers as the safest, most efficient, reliable, and sustainable intermodal transport equipment for liquids, powders, and gases.

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- International events
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Join us in Houston for the 2024 ITCO Meeting

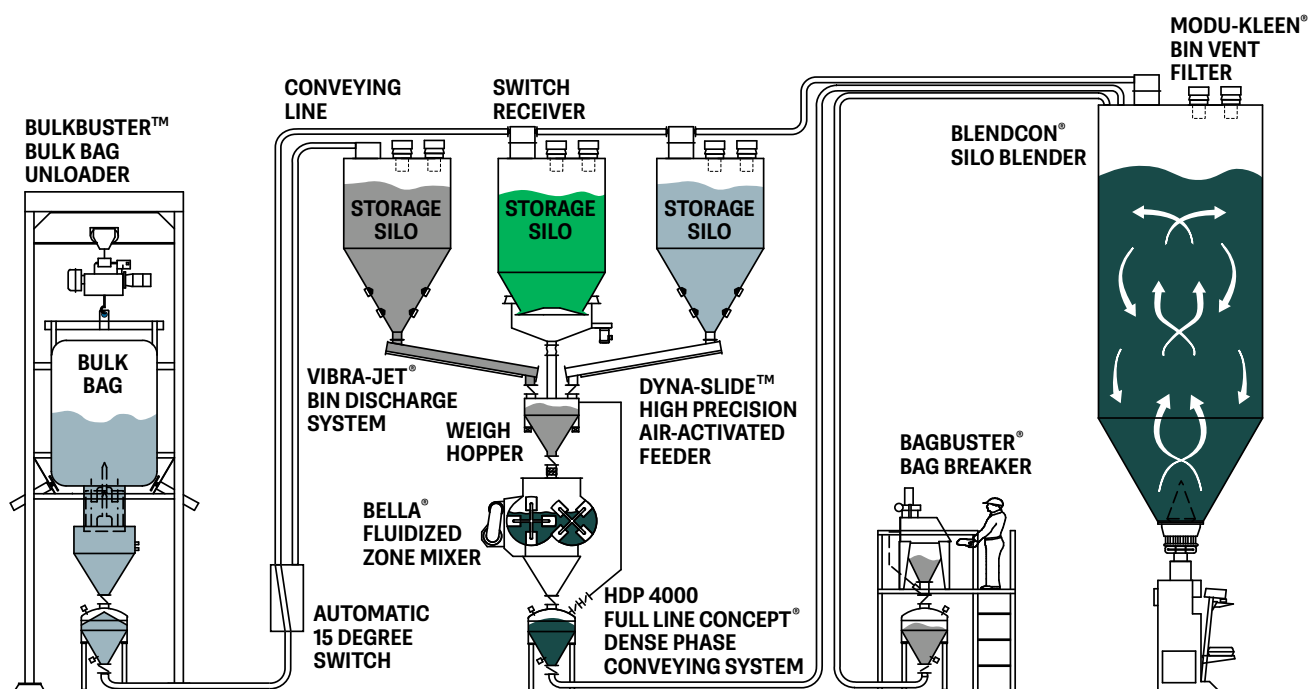
Plan now to join over 150 participants at the **2024 ITCO Members Meeting**, taking place in Houston on Tuesday 29 October. There will be a wide range of relevant industry presentations and discussions, together with an opportunity to meet and network with your industry contacts – old and new. On the day before, you can also play in the ITCO 2024 Golf Tournament and come to the "Welcome to Houston" Reception. Further information, including the Conference Agenda and Registration Form, on www.itco.org

Paul Gooch, President, ITCO

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SOLUTIONS *that Power Success*



Who We Are

Dynamic Air has over five decades of expertise in designing and manufacturing pneumatic conveying systems and equipment for handling dry bulk solids. We are a leading provider of custom solutions for the handling of bulk materials for processing businesses across various industries.

Our Approach

We never take a cookie-cutter approach just to cut costs up front; we know that the right solution will save you money in the many years to come. Our tailored solutions involve thoughtful planning, meticulous engineering and precise manufacturing that optimize efficiency and productivity.

Dynamic Difference

At Dynamic Air, we set the standard for excellence in bulk solids handling. With a relentless focus on quality, reliability, and customer satisfaction, we deliver reliable, high-quality pneumatic conveying systems, equipment, and custom solutions that exceed expectations.



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DC-5® Air Saver Control



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