



Ajax's feed system is part of a pilot plant designed to modernise iron production (see p8).



The health of the conveyor belt bearings is critical. Identifying early signs of failure can prevent catastrophic downtime (see p4).



Gericke has introduced the GFS LAB system, for the continuous manufacturing and formulation of oral solid dosage forms in the pharmaceutical industry (see p4).



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Bird's-eye-view of the trimodal Bertschi terminal, plastics hub, and warehouse facility at the Antwerp Zomerweg port. (see p11).

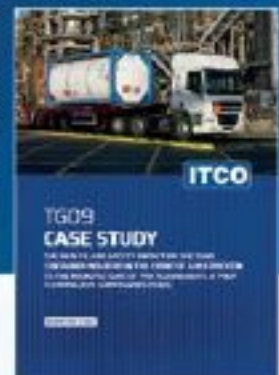


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Boosting fertiliser spike production

Düngemittelwerk (DMW) Coswig has expanded its production capacity with the installation of a new Coperion ZSK twin screw extruder. The ZSK 76 Mv PLUS extruder, with a screw diameter of 76 mm, is equipped with a ProRate PLUS-MT twin screw feeder. This system is designed to manufacture high-quality fertiliser spikes in various formulations, ensuring consistency and reliability.

Coperion's technology has been a partner for DMW Coswig for years, and the company chose it again for this expansion due to its reputation for high performance in fertiliser spike extrusion. The ProRate PLUS-MT feeder was specifically developed to handle powder premixes that tend to stick together. With its integrated ProFlow flow aid and horizontal agitator, the feeder prevents material bridging and ensures consistent feeding into the extrusion process.

Once fed into the ZSK 76 Mv PLUS extruder, the fertiliser powder is mixed with liquid components and compacted efficiently. The large screw volume and gentle handling of the ZSK extruder make the process fast, while the intensive mixing guarantees a homogeneous mass. After exiting the extruder, the mixture is dried and pelletised into solid fertiliser spikes.

One of the features of the new system is its quick recipe changes, facilitated by the self-cleaning properties of both the extruder and the ProRate PLUS-MT feeder. This minimises downtime, ensuring efficient, economical production.

Peter von Hoffmann, General Manager at Coperion, commented, "Our ZSK extruder's high reliability and gentle processing offer substantial value across various applications. We look forward to continued collaboration with DMW Coswig."

www.coperion.com


The Düngemittelwerk Coswig company has expanded production of fertiliser spikes with a Coperion ZSK extruder, equipped with a ProRate PLUS-MT twin screw feeder.

AMP and AHS merge to form Akona



Akona has been formed by the merger of AMP and AHS.

Material processing and material handling solutions companies, Advanced Material Processing (AMP) and Automated Handling Solutions (AHS), have merged and rebranded as Akona Process Solutions (Akona), a portfolio company of Chicago-based, May River Capital.

The new company will continue to leverage AMP's and AHS's Cablevey, Kason, Marion, and Spiroflow brands. Akona is headquartered in Charlotte, North Carolina, USA, with engineering, sales, and service centers across the USA and Europe.

The new company's portfolio includes mixers, blenders, dryers, screeners, conveyors, bulk material filling and discharging systems, as well as integrated control solutions. Through uniting complementary technologies and know-how, Akona will enable customers to streamline their operations, reduce downtime and improve productivity – all while working with a trusted and reliable partner.

www.mayrivercapital.com

Ensuring hygiene and quality for the food industry

Stringent global regulations such as HACCP, ISO 22000, and NSF compel the food industry to maintain impeccable hygiene and quality standards. As costs for raw materials, energy, and labor rise, food manufacturers face the dual challenge of compliance and cost-efficiency. Minebea Intec, specialists in weighing and inspection technologies, offers tailored solutions to meet these demands, ensuring food safety and operational efficiency.

Foreign body contamination, like metal shavings, is a major cause of recalls, accounting for 23% of cases in industrialised countries. Recalls are costly and damage reputations. Minebea Intec addresses this with advanced systems like the Mitus metal detector, capable of identifying even the smallest contaminants. Similarly, their Dymond X-ray systems detect metals, glass, stones, and plastics while verifying packaging integrity and fill levels.

Regulations like HACCP mandate the identification of hazards and implementation of Critical Control Points (CCPs). Minebea Intec's technologies, including dynamic checkweighers, help monitor CCPs, ensuring compliance with ISO 22000 by enhancing traceability and accurate weight monitoring.

The innovative Blue HMI interface simplifies checkweigher operations, while software solutions like SPC@Enterprise and ProRecipe XT ensure traceability and precision in recipe management. Additionally, the NSF-certified MiNexx 3000 platform guarantees the highest hygiene standards, minimising contamination risks.

Beyond cutting-edge products, Minebea Intec offers end-to-end customer support, from consultation to commissioning. By prioritising hygiene, precision, and sustainability, the company empowers food producers to focus on quality and growth, safeguarding both their reputation and consumers' trust.

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Schütz launches SC1 range of jerrycans



Schütz SC1 jerrycans are also available with an optional barrier layer. This ensures increased resistance to solvents and, depending on the contents, offers greater transport safety and a longer shelf life.

Schütz has introduced the SC1 series of jerrycans for handling smaller filling quantities. Designed for a wide range of applications, these plastic containers are produced with 3-layer extrusion technology, aimed at ensuring outstanding stability, safety, and sustainability during transport.

The SC1 jerrycans are available in six sizes—ranging from 5L to 30L—and three colour options, making them adaptable for different needs. Their robust construction, including pronounced ribbed geometry and uniform wall thickness, enhances crush resistance and dimensional stability, even when stacked. The perfectly aligned top ring and base geometry enable secure stacking, preventing slipping while providing excellent grip.

The SC1 jerrycans are designed for easy handling and residue-free emptying, making them user-friendly and practical. Schütz also offers optional embossed and transparent litre gauges for precise volume measurement.

In line with its commitment to sustainability, Schütz offers the Green Layer version of the SC1, made with 30% high-quality recycled material. The jerrycans are available with hazardous goods approval and optional barrier layers for increased solvent resistance, offering enhanced transport safety and longer shelf life. The SC1 range combines innovation, flexibility, and environmental responsibility in one comprehensive solution.

Mauser to produce IBCs in China

Mauser Packaging Solutions has expanded its Haiyan, China, facility to include the manufacturing of Intermediate Bulk Containers (IBCs). This investment responds to the rising demand for IBCs in the region – and supports the company's commitment to sustainability and innovation.

The new production line creates UN-certified IBCs suitable for chemical, food, and additive industries. It also enhances the company's Infinity Series IBC portfolio, which incorporates Recolene, an in-house-produced recycled plastic derived from industrial packaging collected through Mauser's Recover Syst-M. This initiative reduces waste,

conserves raw materials, and lowers greenhouse gas emissions.

"This investment reinforces our commitment to supporting the Chinese market and multinational customers," said Ali Ozbudak, Vice President, Head of Asia Pacific. "It's about meeting demand while driving sustainability and innovation."

In addition to IBCs, the Haiyan facility produces various plastic drums and has earned certifications like ISO 9001, 14001, HACCP, and FSSC 22000. A 10K-grade clean room ensures the facility meets stringent requirements for industries handling high-purity products.

www.mauserpackaging.com

TBMA appoints Danish representative

TBMA has strengthened its presence in Northern Europe by appointing Lochtec ApS as its agent in Denmark. Lochtec, known for its expertise in the process industry, will promote TBMA's rotary and diverter valves, widely used across sectors like food, pharma, and minerals.

Thomas Locht of Lochtec expressed excitement about the partnership, highlighting the synergy between both companies. Ed Wisse, Managing Director of TBMA Europe, praised Locht's familiarity with the Danish market, ensuring a strong collaboration.

www.lochtec.eu

The hidden threat of conveyor belt bearing failures

It's said that the smallest elements can have the greatest impact. This lesson is illustrated by a famous moment during a rehearsal with Sir John Barbirolli, conductor of the world-renowned Halle Orchestra. He shouted, "Where's the piccolo?"—a tiny instrument that, despite its size, was crucial to the performance. This anecdote resonates within industrial operations too, where seemingly insignificant components, like roller bearings in conveyor belts, can bring entire production systems to a halt if they fail.

Consider a quarry, where mined aggregate is conveyed via conveyor belts to a ship or loading point. These massive belts are supported by roller bearings, often overlooked in comparison to larger machinery like crushers and gearboxes. However, when these bearings seize or fail, the entire conveyor system can come to a grinding stop, halting production and costing valuable time and money.

One of the largest conveyor belt systems in the world, the 31-kilometre-long conveyor between Mount Saddleback mine and Worsley refinery in Australia, carries 2,700 metric tonnes of bauxite



The health of the bearings is critical. Identifying early signs of failure can prevent catastrophic downtime.

are annually. Despite the scale of such operations, the health of the bearings is critical. Identifying early signs of failure can prevent catastrophic downtime.

Thermal imaging cameras have long been used to spot potential bearing failures, saving millions in production costs. But newer technologies, such as the FLIR Si2 LD acoustic imaging camera, offer even earlier warnings. Its Mech Mode

detects mechanical issues with bearings and gears before they fail, making it easier to conduct regular, detailed health checks on extensive conveyor systems. With capabilities like 2x and 8x digital zoom, GPS tagging, and cloud storage, this advanced tool helps identify problems early, reducing downtime and maintenance costs, and ultimately keeping production running smoothly.



Capabilities include 2x and 8x digital zoom.



Acoustic imaging cameras can offer early warnings.

Improving continuous OSD manufacturing and formulation

Gericke has introduced the GFS LAB system, designed to support the continuous manufacturing and formulation of oral solid dosage (OSD) forms in the pharmaceutical industry. This innovative system enhances product quality, reduces drug shortages, and shortens development times by allowing for efficient, small-scale production with minimal active pharmaceutical ingredient (API) consumption.

The GFS LAB system utilises modular

skid technology, enabling the production of new drugs during early development phases. Gericke offers a versatile portfolio of lab-sized equipment, including full- and semi-continuous blenders, as well as interchangeable feeders. This modular approach ensures flexibility, as the system can operate as an individual machine or be integrated with other equipment.

One of the key advantages of the GFS LAB system is its portability and compact design, making it ideal for fast, agile

integration into any production environment. The system requires only a few grams of API for operation, making it both cost-effective and environmentally friendly. Additionally, it meets Code 21 Part 11 standards for data acquisition.

Gericke's GFS LAB system offers advanced solutions for dry/wet granulation, capsule filling, and more, available for rent or on-site trials at Gericke's global test centers, backed by extensive local support.

www.gerickegroup.com



Gericke Formulation Skid GFS LAB.

Focus on machine durability



The ToughFlex Belt.

In the world of waste management and mineral processing, machinery durability is key. When Bunting, a leader in magnetic separation technology, partnered with Smiley Monroe, a renowned manufacturer of conveyor belts, they sought to solve a pressing issue: wear and tear on Overband Magnet cleaning belts.

Overband magnets, integral in separating ferrous metals from materials like waste and quarried rock, had long been plagued by the damaging effects of sharp, angular metal fragments. The belts used in these systems, especially in industries handling industrial and commercial waste, suffered from frequent punctures and tears. As metal separation efficiency increased, so did the belt damage.

Bunting's customers using the ElectroMax Overband Magnet faced higher levels of metal separation, but the increased power of the magnet also

accelerated belt wear. While permanent magnets had lower power and caused less damage, the need for stronger separation was undeniable.

To extend belt life in these harsh conditions, Bunting approached Smiley Monroe. Known for their expertise in producing durable, high-performance

conveyor belts, Smiley Monroe's rigorous testing ensured their products met stringent industry standards for abrasion resistance, tensile strength, and adhesion.

After evaluating several materials, Smiley Monroe recommended the ToughFlex Belt – a robust solution designed for tough applications like bulk handling and mobile crushing. Featuring a special weave of reinforced fabric plies and heavy-duty wear-resistant covers, the ToughFlex Belt was able to resist the punctures and tears caused by sharp ferrous metals.

Together, Bunting and Smiley Monroe modified the ToughFlex Belt for Overband Magnets by adding integrally moulded cleats to facilitate the transfer of captured metal. The result? Less maintenance, longer production hours, and a solution that worked as hard as the machines it served.

"We're always looking for ways to improve," said Adrian Coleman, Bunting's Technical Director. "The ToughFlex Belt is a perfect fit for industries facing extreme conditions, helping our customers keep their operations running longer."



The Powerful ElectroMax Overband Magnet.

Polymer Solutions acquires recycling site

Polymer Solutions GmbH, a subsidiary of Krall Kunststoff-Recycling GmbH, has acquired Mocom GmbH's former recycling site in Erlenbach, Germany, as of January 1, 2025. The facility, with a capacity of 5,500 tonnes per year, will process polyamide from industrial sources, producing high-quality recycled pellets and regrind for the plastics industry.

Jörn Bahr, with over 25 years in plastics, leads the operation. Markus Krall, Managing Director of Krall Kunststoff-Recycling, emphasised the acquisition as key to expanding technical recyclates production and advancing the circular economy. The integration enables seamless recycling solutions, meeting growing market demands.

<https://kunststoff-recycling.de>



Jörn Bahr, left, Managing Director of Polymer Solutions, and Louis Krall, authorised signatory of both Polymer Solutions and Krall Kunststoff-Recycling, in the incoming goods department © Polymer Solutions.

Absolute precision in CNC milling



FA milling tool removes metal chips from a workpiece.

Lorenz Hoffmann GmbH, a mechanical engineering company based in Kressberg, Germany, is revolutionising CNC milling precision with the help of advanced vacuum technology from Busch Vacuum Solutions. The company, led by Andreas and Christina Hoffmann, has been at the forefront of producing high-precision prototypes and small-series components for industries like automotive, medical technology, and machine building for over forty years.

The key to their precision lies in the vacuum clamping of workpieces during the milling process. With CNC milling machines that rotate up to 40,000 RPM, ensuring the workpieces are fixed with micrometer accuracy is essential. To optimise this system, Lorenz Hoffmann transitioned from oil-lubricated rotary vane vacuum pumps to a single COBRA PLUS dry screw vacuum pump. This upgrade not only saved 3,500 kWh per year but also provided better holding power and more reliable operation. The COBRA PLUS is speed-controlled, adapting its power based on real-time demand, improving

energy efficiency across multiple machines.

In addition to energy savings, the switch to the COBRA PLUS vacuum pump has improved working conditions. The machine operates at a quieter 63 decibels, compared to the previous 72 decibels of four rotary vane pumps, significantly reducing noise in the production hall. Furthermore, the pump's waste heat is repurposed through a heat recovery system to help heat the production hall during winter, reducing the need for heating oil.

Lorenz Hoffmann also benefits from Germany's energy-efficiency initiatives, receiving 40% reimbursement on the COBRA PLUS purchase through BAFA funding. For Hoffmann, the integration of vacuum technology has not only enhanced precision but also driven energy savings and sustainability. "The purchase of the COBRA has paid off for us twice over," says Hoffmann, showcasing the financial and environmental advantages of the upgrade.

www.buschvacuum.com



A COBRA PLUS supplies four CNC milling machines with the required vacuum.

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Keys to successful conveyor safety & maintenance training



Conveyor drive motors can be as large as 600 HP (450 kW), moving belts as fast as 2000 fpm (10 mps).

Bulk-handling conveyors are essential in industries like mining, cement

production, and ports, moving tons of material per hour over long distances.



Best Practice: Expert trainers who focus on operational issues and safety, not selling products.

However, their massive size, speed, and power also pose significant safety risks. Conveyor drive motors can reach up to 600 HP, with belts moving as fast as 2000 feet per minute, making training in conveyor safety and maintenance critical to preventing catastrophic injuries.

One of the biggest challenges in conveyor training is the retirement of experienced workers, which often leaves a gap in expertise and mentorship. While on-the-job training can be valuable, it can also perpetuate bad habits and unsafe practices if proper knowledge isn't passed down. A solid understanding of bulk material handling is essential for maintenance workers to make informed decisions and avoid costly, dangerous trial-and-error learning.

Effective training goes beyond teaching workers how to maintain equipment; it focuses on preventing accidents by helping employees understand why they happen. By providing long-term solutions rather than quick fixes, organisations



Some conveyor training providers offer online options that are available 24/7.

can reduce unsafe practices, improve efficiency, and enhance profitability. To improve conveyor safety, operators should seek training programs led by qualified specialists. Training from equipment manufacturers, like Martin Engineering, integrates real-world expertise with modern engineering, ensuring operators make informed decisions. It's also essential for trainers to offer a variety of learning methods, such

as visual aids, hands-on demonstrations, and clear documentation, to accommodate different learning styles.

Investing in comprehensive training, such as Martin Engineering's Foundations™ Training, provides long-term benefits. Not only does it reduce downtime and safety incidents, but it also improves overall performance, resulting in higher productivity and profitability.

www.martin-eng.com



Best Practice: Bulk handling specialists who conduct a site-specific analysis before any training sessions.

Schütz signs Saudi IBC production licence

Industrial packaging manufacturer Schütz has signed a licence agreement with the National Plastic Factory Company (NPF). NPF will produce Ecobulk Intermediate Bulk Containers

(IBCs) with a filling volume of 1,000 litres for the Saudi Arabian market and the entire Gulf Cooperation Council (GCC) region. A state-of-the-art factory will be built in the east of the country

near the strategic port city of Dammam.

Established in Riyadh in 1976, NPF is one of the leading manufacturers of plastic packaging in Saudi Arabia, including drums and jerrycans. From its two modern production plants in the capital, the ISO 9001-certified company supplies a wide range of industries at home and abroad. One of the major export ports on the Arabian Gulf, Dammam is a central hub for the Saudi Arabian oil industry. The construction of a new, state-of-the-art production facility nearby ensures the future regional supply of Schütz Ecobulk IBCs.

The IBCs are produced on original Schütz machines and equipment. Schütz will supply NPF with the steel and plastic components required for further processing, such as tubes for the IBC cage, screw caps and outlet valves.

The first IBCs are scheduled for delivery from Saudi Arabia to the domestic market and neighbouring countries in the Gulf region in 2026.



Veit Enders (left), Member of the Board at Schütz, Shaker al-Tajer (centre), Chairman of NPF, and Roland Strassburger (right), CEO of Schütz.



The 1,000-litre Ecobulk IBC will also be produced in Saudi Arabia from 2026.

Solving quarrying and mining tramp metal problems



Electro Overband Magnet installed in a gold mine.

Tramp metal is an unavoidable challenge in mining and quarrying operations. The extraction process, which involves large machinery and heavy equipment, inevitably introduces unwanted metal contaminants into the mined material. These contaminants can cause significant damage to processing equipment such as crushers, screens, and conveyors. Additionally, mining operations often have strict limits on metal contamination, particularly in industries like coal supply for power stations. Identifying and removing tramp metal is crucial to maintaining efficient operations and preventing costly damage.

Tramp metal refers to any unwanted metallic objects that are not naturally present in the extracted material. Common examples include digger teeth, pit props, blasting caps, nuts and bolts, and worn parts from processing equipment. These contaminants pose a serious risk, especially during size reduction (crushing and milling) and material segregation (screening), where they can damage expensive machinery.

The optimal solution for dealing with tramp metal depends on the specific mining process, the type of material being processed, and the nature of the contaminants. The most effective

technologies used in mining and quarrying operations to prevent equipment damage are Magnetic Separators and Metal Detectors.

Magnetic Separators

Magnetic separators remove magnetically susceptible metals like iron and steel,



Typical tramp metal separated by a magnetic separator.

automatically extracting them from the conveyed material. The two most common types are Overband Magnets and Suspension Magnets.

- **Overband Magnets:** Installed above conveyor belts, these magnets attract and remove tramp iron. The self-cleaning design continuously removes separated metal, making it ideal for operations with high contamination levels.

- **Suspension Magnets:** Similar to Overband Magnets but require manual removal of collected metal. These are more suited to operations with occasional contamination.

Permanent Overband Magnets are commonly used on mobile crushers and screens, especially in quarries and recycling sites. However, in high-volume mining operations with deep material layers, Electro Overband Magnets are preferred due to their stronger magnetic fields. These electromagnets require efficient cooling systems, either oil or air-cooled, to maintain optimal performance.

Another effective magnetic separation method is the Magnetic Head Pulley, which replaces the head pulley of a conveyor. It captures tramp iron as the material reaches the end of the belt,



TN77 Metal Detector operating in an aggregate quarry.

directing contaminants to a collection area.

For the most effective separation, Drum Magnets are used. These feature a stationary magnetic core with a rotating shell, ensuring maximum tramp metal removal. They are especially useful for processing large volumes of rock, as the metal particles are exposed to a strong magnetic field.

Metal Detectors

Unlike magnetic separators, metal detectors identify all types of metal contamination, including non-magnetic metals like aluminium.

Metal detectors can be installed either before or after magnetic separators, depending on the setup. If positioned before a separator, they can activate electromagnets only when metal is detected, reducing energy consumption. When placed after a separator, they ensure the detection of any remaining non-magnetic contaminants.

Real-World Applications

In a gold mine in Northern Finland, a 13-tonne Electro Overband Magnet removes tramp metal from 2.7 million tonnes of ore annually, protecting critical processing equipment.

Similarly, in a Swedish iron ore mine, 1.2-metre-diameter Magnetic Head Pulleys remove large tramp metal from iron ore before crushing and screening.

Customised Solutions

Large mining projects often require customised solutions to handle unique challenges such as deep burden depths and wide conveyors. Bunting's engineering team collaborates with contractors and designers to develop tailored magnetic separation and metal detection solutions.

With over 40 years of experience in designing and manufacturing this technology, Bunting ensures efficient tramp metal removal, protecting both equipment and operational efficiency.

Conclusion

Tramp metal contamination is a major issue in mining and quarrying. By integrating Magnetic Separators and Metal Detectors, operators can effectively remove unwanted metal, prevent costly equipment damage, and maintain compliance with industry regulations. As mining technology advances, customised metal removal solutions continue to play a vital role in ensuring efficient and safe operations.

New Kazakhstan business unit for Martin



Kazakhstan in Central Asia is a key producer of minerals that are exported worldwide.

Bulk handling solutions specialist Martin Engineering, has expanded in Central Asia with a new business unit in Kazakhstan.

Based in Almaty, in the South East of Kazakhstan (the country's largest city and commercial centre), the new venture will act as a regional hub enabling Martin to bring its products and services to the fast-growing mining sector across Central Asia.

Kazakhstan is the world's ninth-largest

country by land area (approximately 1,000,000 square miles) and has a diverse geology comprising a rich array of metal ores and mineral resources. Consequently mining and minerals production is playing an increasingly important role in the Kazakh economy with most materials exported.

The decision to establish a business unit in Kazakhstan builds on the Martin Engineering's success in the country to date. That includes delivering innovative

conveyor belt cleaning solutions to one of Kazakhstan's largest copper producers to maximise plant efficiency and productivity.

The new business will be led by General Manager Oleg Glukhov, who has worked with Martin Engineering for the past seven years. He says Martin is well placed to support Kazakhstan's leading minerals processing firms to improve operational performance and safety.

www.martin-eng.com



Martin Engineering's CleanScape conveyor belt cleaners.



Martin Engineering's SQ2S Secondary Belt Cleaner.

Feed system for iron ore pilot plant

Solids handling specialist Ajax Equipment has supplied a cutting-edge feed system for Binding Solutions

Limited's (BSL) new pilot plant, which processes iron ore and additives. BSL's innovative technology transforms iron

ore fines into high-value pellets for steelmaking, reducing emissions and enhancing energy efficiency compared to traditional methods like sintering and induration.

The Ajax Equipment system includes a buffer hopper, screw feeder, and agitated screw feeder. The hopper, capable of holding approximately 1 ton of material, features a steep-walled 'V' section to ensure smooth material flow. The horizontal screw feeder ensures consistent material extraction, while the agitated screw feeder, made from wear-resistant steel, provides precise feed control for downstream processing. A retractable screw and casing design allow for easy maintenance.

Lewis Shaw, technical sales engineer at Ajax, conducted material flow tests to optimise the hopper design and feeder configuration. "We ensured the system handles even the most challenging materials reliably," Shaw said.

Paul Wrathmall, Head of



The Ajax Equipment hopper holds approximately 1 ton of iron ore and additives.

Applications Technology at BSL, praised Ajax's innovative solutions, stating their partnership is advancing

the modernisation of the ironmaking industry.

www.ajax.co.uk



Ajax's feed system is part of a pilot plant designed to modernise iron production.

Ajax feeders for atomising technology provider

Solids handling specialist, Ajax Equipment, has supplied atomising technology and atomised metal powder provider, Atomising Systems Limited, with a pair of stainless steel feed hoppers and mass flow screw feeders for metal powder handling in the USA.



Stainless steel feed hopper and mass flow screw feeder for metal powder handling.

To secure mass flow and provide a consistent feed of powder, Ajax designed the screw feeder and two stage plane flow hopper to work together. The interface between a hopper and screw feeder is key for mass flow as material extraction must occur over the whole cross section of the outlet.

The equipment's design was adopted for the USA from a hopper and screw feeder recently supplied by Ajax Equipment to expand Atomising Systems' production capacity at its Sheffield, UK site.

Commenting, Craig Winfield, Project Manager at Atomising Systems Limited, says: "We've used Ajax on several occasions for screw feeders and mass flow hoppers and so when this new requirement came up, we were happy to work with Ajax again and have not been disappointed."

Eddie McGee, managing director, Ajax Equipment, continues "When Atomising Systems approached us it was clear the turnaround required would be challenging. However, we have developed an excellent working relationship with Atomising Systems over many years and so we were happy to go the extra mile to adapt the previous equipment's design to meet the relevant dust hazard standards in the USA which were NFPA 70 NEC class II, division 2, group F and G."

www.ajax.co.uk

Schweppes Zimbabwe boosts efficiency with advanced PET line



Stretch blow molder and filler in one: the InnoPET BloFill block from KHS allows up to 36,000 containers to be manufactured and filled per hour.

Schweppes Zimbabwe Limited (SZL) has revolutionised its production capacity at its Harare plant with the installation of a non-returnable PET line from German supplier KHS. The state-of-the-art system includes an InnoPET BloFill stretch blow moulder/filler, an Innoket Neo labeler, and advanced packing and palletising solutions. Designed for maximum efficiency, the new line can

process up to 36,000 containers per hour and handle various packaging formats between 400 milliliters and two litres.

The new line has increased SZL's production capacity by 300%, allowing the company to meet growing domestic and regional demand for beverages like Mazoe Orange Crush, Minute Maid, Bonaqua, and Schweppes water. "This upgrade gives us a competitive edge by enabling faster format changeovers and reducing operator intervention, which improves efficiency," said Ropafadzo Gwanetsa, Corporate Affairs Executive at SZL.

In addition to boosting productivity, the KHS technology significantly enhances sustainability. It has reduced SZL's energy consumption by 30%, water and CO₂ use,

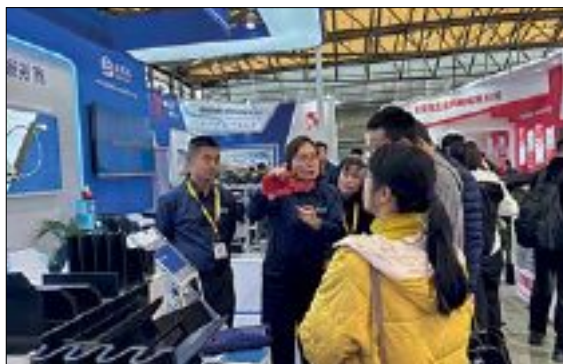
and primary packaging materials by up to 15%. These advancements align with SZL's sustainability strategy and commitment to cutting greenhouse gas emissions.

The project faced space constraints, requiring the system to be installed in a custom L-shape. Despite this challenge, the first products rolled off the line within six weeks, thanks to seamless collaboration between KHS and SZL teams.

SZL also benefits from tailored palletising solutions, advanced training, and KHS' remote diagnostic service for ongoing support. "We're now producing better-quality beverages at lower costs with a smaller carbon footprint," said KHS Sales Manager Bradley Naicker.

www.khs.com

AirScrape impresses at Bauma China 2024



Scrapetec reports that last month's Bauma China 2024 in Shanghai was an "outstanding success". Together with its long-standing representative, Qingdao Best Friend Rubber & Plastic Co. Ltd, they presented their innovative solutions, in particular the AirScrape – the patented side seal for transfers on conveyor belt systems.

The booth of Scrapetec and Qingdao Best Friend Rubber & Plastic Co. Ltd attracted considerable attention, especially for the new AirScrape, dust control technology. The positive response came mainly from mining specialists from various departments, who showed great interest in the system's improved efficiency and dust reduction.

Industry Updates – Every Week

Every week, EuroBulkSystems publishes a digest of the latest industry developments:

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AI: From “Predictive” to “Prescriptive”

The progression of intelligent automation in manufacturing and supply chain management has been nothing short of groundbreaking. From the early days of the Industrial Revolution to today's era of smart factories and agentic AI, the journey has been marked by continuous innovation and adaptation. This evolution has not only modernised production processes but has also redefined the role of human workers in these industries.

The recent integration of information technology with automation led to the development of programmable logic controllers (PLCs) and computer numerical control (CNC) machines, allowing for more complex and precise automation processes. The introduction of the internet further transformed logistics, enabling real-time tracking and data analytics to optimise supply chains.

Changes already happening to Industry 4.0

Today, we find ourselves in the midst of Industry 4.0, characterised by the fusion of digital, physical, and biological worlds through advanced technologies such as the Internet of Things (IoT), artificial intelligence (AI), and big data analytics.

This new era has given rise to smart factories, where machines can communicate with each other and make autonomous decisions to optimise production processes.

Introducing agentic AI in manufacturing

The latest frontier in this evolution is the emergence of agentic AI, a progressive technology that combines autonomous decision-making with real-time adaptability. Unlike traditional

automation, agentic AI enhances efficiency, reduces costs, and fosters sustainable practices, making it indispensable for smart factories.

Agentic AI is reshaping manufacturing processes in several key areas. One of the most significant applications is in predictive maintenance. Traditional maintenance models are reactive, addressing failures after they occur. In contrast, agentic AI enables predictive maintenance, where systems monitor machinery in real-time, identifying signs of wear or potential failure before they disrupt production. This not only saves costs but also enhances efficiency by allowing manufacturers to schedule repairs at optimal times, avoiding unexpected disruptions.

For inventory management, agentic AI systems use real-time data and demand forecasts to optimise stock levels, ensuring the availability of raw materials while avoiding overstocking. Automation here reduces carrying costs and improves supply chain efficiency, allowing manufacturers to maintain lean inventories while meeting production schedules seamlessly.

In robotic assembly lines, agentic AI enables dynamic task allocation and real-time adaptability. Unlike traditional robots that follow pre-programmed instructions, AI-powered robots learn from their environment and adjust to changing tasks on the fly. This significantly reduces errors, optimises resource usage, and enables scalability in production, making them a cornerstone of smart factory operations.

It's important to understand that the implementation of intelligent automation and agentic AI in manufacturing is not about replacing human capital. Instead, it's about reallocating human resources

to other critical areas of manufacturing planning, business operations, analysis, operations, and reporting functions.

Through automating repetitive and time-consuming tasks, agentic AI frees up human resources for strategic decision-making activities, which allows manufacturers to leverage their workforce's creativity, problem-solving skills, and adaptability in areas where human input is most valuable.

The adoption of intelligent automation and agentic AI is also changing the paradigm of how manufacturers view software solutions. Instead of merely leveraging software as a service, the industry is evolving toward service as software functions within the business through agentic automated decisioning opportunities. This shift allows for more integrated, customised, and responsive solutions that can adapt to the unique needs of each manufacturing operation.

Examples for varying industries

Let's consider some industry-specific examples to illustrate how intelligent automation and agentic AI are being applied:

- In the aerospace industry, automated decisioning powered by agentic AI is changing aircraft maintenance and manufacturing. For instance, predictive maintenance algorithms can analyse data from sensors throughout an aircraft to predict when components are likely to fail, allowing for proactive maintenance and minimising downtime. In manufacturing, AI-powered robots can perform intricate assembly tasks with high precision, improving quality and reducing production time.
- The automotive industry is leveraging intelligent automation for everything from supply chain optimisation to autonomous

vehicle development. Agentic AI is being used to optimise production schedules, manage inventory, and even design new vehicle models. In assembly lines, collaborative robots (cobots) work alongside human workers, handling repetitive tasks while humans focus on more complex assembly operations.

- In the construction industry, intelligent automation is improving project planning and execution. AI algorithms can analyse historical project data to provide more accurate cost and time estimates. On construction sites, autonomous vehicles and drones are being used for surveying and material transport, improving safety and efficiency.
- The military and defense sector is utilising intelligent automation and agentic AI for logistics, training, and even combat operations. AI-powered systems can optimise supply chains, ensuring that troops have the necessary equipment and supplies when and where they need them. In training, virtual and augmented reality simulations powered by AI provide realistic simulations for soldiers, improving readiness and reducing training costs.

The use of digital twins

A key component in the implementation of automated decisioning across these industries is the use of digital twins. A digital twin is a virtual representation of a physical object or system, updated in real-time using data from sensors in the physical world. In manufacturing, digital twins of production lines or entire factories allow for real-time monitoring, predictive maintenance, and optimisation of operations.

For example, in aerospace manufacturing, a digital twin of an aircraft engine can be used

to simulate different operating conditions, predict wear and tear, and optimise maintenance schedules. In automotive production, a digital twin of the assembly line can help identify bottlenecks, optimise workflows, and even test new production configurations virtually before implementing them in the physical world.

The integration of digital twins with agentic AI takes this concept even further. AI algorithms can analyse the vast amounts of data generated by digital twins to make autonomous decisions and optimisations. For instance, an AI system could use data from a digital twin of a manufacturing plant to automatically adjust production parameters in real-time, optimising for factors such as energy efficiency, output quality, and equipment lifespan.

As we look to the future, the potential of intelligent automation and agentic AI in manufacturing seems boundless. These technologies are not just improving efficiency and reducing costs; they're enabling new levels of customisation, sustainability, and innovation. By 2025, it's predicted that AI-powered automation could save manufacturers up to 25% of their operational costs.

About The Author:

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www.gridraster.com

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Coperion announces expansion of Switzerland Test Centre

Coperion K-Tron, Switzerland, specialists in feeding and pneumatic conveying technology solutions, has expanded its Test Center at its facility in Niederlenz. This strategic move is designed to enhance the company's capabilities, particularly for tests involving materials that require containment.

The expansion will allow Coperion to conduct more comprehensive and diverse testing, providing customers with a broader range of solutions for their

specific material handling needs.

The addition to the Test Center will feature advanced containment systems for handling all types of materials, including an airlock system with filtration, ensuring the safety of both the testing process and the staff as well as the environment. This will allow the company to better serve industries such as battery, chemicals, pharmaceuticals, and food processing, where containment and hygienic requirements can be a critical concern.

"Coperion is committed to delivering the best possible solutions to our customers," said Marco Hadrys, Test Center Manager in Niederlenz. "The expansion of our Test Center is a significant step towards achieving this goal. It will enable us to conduct more extensive tests, particularly with materials that require containment, and provide our customers with even more reliable and efficient solutions."

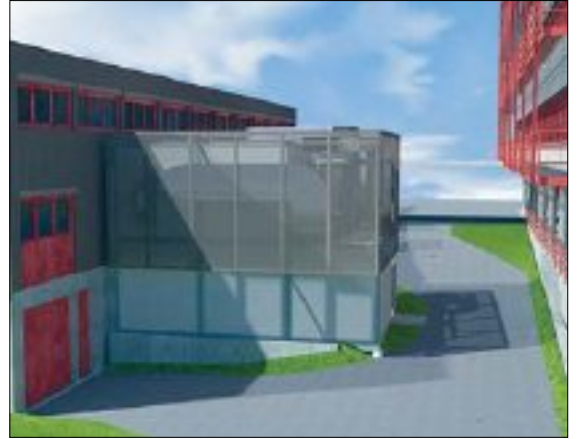
The purpose of customer tests is twofold: to confirm the handling of customer-specific bulk materials and to pinpoint and resolve any potential issues before the customer commits to a purchase. The goal of each test is to offer the customer the most suitable feeding and/or conveying equipment ensuring they feel confident in their decision for the most reliable technology available.

In addition, the Test Center also provides opportunities to the Research and Development teams to test prototypes when developing new products or improving existing equipment and processes.

Coperion performs an average of 150 tests per year in Niederlenz, testing a broad range of raw materials such as plastic pellets, granulates, powders, flakes or liquids as well as end products such as bottle caps, chocolate chips or breakfast cereal, from all industries (including plastics, battery, chemicals, food and pharmaceuticals).

The new addition is expected to be completed by April 2025, and the company looks forward to welcoming customers to the new facilities. "Coperion is confident that this investment will further strengthen our position as a leading provider of material handling solutions and contribute to our ongoing growth and success" said Michael Reinhard, General Manager at Coperion K-Tron (Switzerland).

www.coperion.com



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The new facility will be equipped with the latest technology and equipment.



Breaking ground on the much-anticipated expansion. From left to right: Keith Melton, Sales Manager Battery Industry, Marco Hadrys, Test Center Manager, Manfred Bossart, Facility Manager, Michael Reinhard, General Manager.

Optimising packaging efficiency with flexible automation for existing lines

Companies seeking to automate their packaging processes often face the challenge of integrating automated palletising and load securing technology into existing systems. Specialist packaging machinery manufacturer, Greif-Velox offers customised solutions, permitting the integration of state-of-the-art palletising robots and load securing elements into existing packaging lines—

regardless of whether the original filling or bagging system was supplied by Greif-Velox.

By utilising the VeloPack robotic palletiser, the VeloFlexLabeler for robotic labelling, and automated load securing systems, Greif-Velox says that it can enhance packaging efficiency with its solutions, to help minimise manual intervention and downtime, improve

workplace safety, and ensure optimised process flow. Thanks to their modular design, their systems can be easily integrated into existing packaging lines, thereby optimising the handling of various packaging types—including bags, drums, canisters, hobboscks, cartons and roll goods.

Greif-Velox solutions include:

- VeloPack Palletising Robot: Offers

highly precise, fully automated palletising and depalletising solutions with configurable gripping tools for diverse products and handling tasks.

- Top Sheet Handling: The automatic pallet coverage secures loads and helps minimise manual labor.
- Bag Equalisation: Various available technologies (e.g. roller belts, vibration plates, press stations and compaction

sections) ensure the optimum stackability of bags.

- Stretch Wrapping Systems: Automated stretch wrapping systems reduce material usage and ensure secure pallet loads and are capable of handling up to 80 pallets per hour.
- Edge and Corner Protection Systems: The integration of automated protective materials prevents packaging damage and enhances overall load stability.
- Conveying Technology: Roller and chain conveyors, corner transfer units, turntables, and pallet lifts facilitate a fully automated material flow for pallets or drums.
- Robotic Labelling: The VeloFlexLabeler enables flexible, automated labeling of pallets, bags, cartons, and drums—with both static and variable labels (e.g., batch numbers, barcodes, hazardous material markings). It seamlessly integrates into existing production and packaging lines, replacing manual labelling steps.

Thanks to a strategic partnership with KUKA, one of the world's leading robotics manufacturers, Greif-Velox leverages cutting-edge robotics and automation technologies to make packaging processes more efficient, safer, and sustainable.

www.greif-velox.com/en/systems/load-securing

www.greif-velox.com/en/systems/robot-palletizing



Full-line solution for solid material filling with handling robots and pallet conveyor technology.

Bertschi: expanding globally – and leading the way in decarbonised logistics



Bird's-eye-view of the trimodal Bertschi terminal, plastics hub, and warehouse facility at the Antwerp Zomerweg port.

Bertschi Group, a leader in chemical logistics, has successfully expanded its global operations in 2024, reinforcing its commitment to sustainable logistics and digital transformation.

With new ventures in Japan, Korea, and India, the company is well-positioned to meet evolving global supply chain demands.

Bertschi has also taken bold steps toward decarbonised logistics, investing in renewable energy transport solutions and advancing its digital capabilities to enhance customer service.

Bertschi's expansion into Asia marks a significant milestone. Alongside its established Isotank operations in Shanghai, Tianjin, and Singapore, the company launched new ventures in Japan, Korea, and India. A joint venture in Tokyo with Uyeno Group and a wholly owned subsidiary in Seoul have already shown promising results, while a strategic partnership with Samsara Group in India further strengthens Bertschi's foothold in the region.

In Europe, Bertschi responded to changing market dynamics with strategic

towards tank containers as a sustainable and cost-effective alternative to traditional storage methods.

Advancing digitalisation

Bertschi has leveraged digital transformation to improve customer service.

Automated quotation, order tracking, and invoicing processes allow for greater efficiency and accuracy, freeing up teams to focus on personalised client engagement.

This shift ensures increased reliability and strengthens customer relationships in an increasingly digital world.

Promoting diversity in logistics

Recognising the value of diversity in the workplace, Bertschi co-founded the Women in Logistics (WIL) consortium with ten industry partners.

This initiative aims to increase gender diversity in the logistics sector, fostering an inclusive environment that enhances decision-making and operational outcomes.

"Women in Logistics is all about meaningful change through collaboration beyond competition," stated Hans-Jörg Bertschi, Chairman of the Board of Directors. The consortium is actively working to promote equality and empower women across all levels of employment.

Leading the charge in decarbonised logistics

Bertschi has intensified its focus on sustainable logistics, supporting the chemical industry's transition from fossil-based products to renewable alternatives. Through its Bertschi Renewables initiative, the company provides logistics solutions for sustainable chemicals such as Sustainable Aviation



View from the Gantry Crane at Bertschi Zhangjiagang Liquid Hub, Bertschi's largest supply chain solution hub located in China.

Fuel (SAF), Hydrotreated Vegetable Oil (HVO), and pyrolysis oil. These efforts align with global climate goals and contribute to reducing greenhouse gas emissions.

Over 90% of Bertschi's European container transport is conducted via rail or barge, significantly lowering carbon emissions compared to traditional road transport. The company is also expanding its fleet of HVO- and electric-powered trucks for last-mile delivery, further minimising its environmental footprint.

to continue influencing global markets, and Bertschi is well-equipped to manage increasing intra-Asian Isotank logistics. The company is also prepared to handle anticipated trade disruptions between the U.S. and China, ensuring seamless door-to-door solutions through alternative trade routes.

In Europe, widespread chemical plant closures due to high energy costs will reshape the industry. Bertschi anticipates increased chemical imports, compensating for production losses with its expanded storage and multimodal transportation



Bertschi Seoul established in the first half of 2024 with the Global management team and Seoul subsidiary manager in photo.

"These initiatives build on Bertschi's history of intermodal transport, which combines rail, ship, and road logistics to reduce emissions," said Jan Arnet, Group CEO. Notably, in 2024, Bertschi celebrated 60 years of intermodal transport since its founder, Hans Bertschi, pioneered the concept in Europe.

infrastructure. These developments will further strengthen its role in Europe's evolving supply chain landscape.

Sustainability remains a top priority for Bertschi. The company is committed to achieving carbon neutrality by 2050 and is preparing to integrate electric trucks into its European fleet by 2026. These vehicles, once approved for Dangerous Goods transport, will mark a significant step toward sustainable logistics.

With strategic expansions, technological advancements, and a strong focus on sustainability, Bertschi continues to lead the chemical logistics industry into a more resilient and environmentally responsible future.

www.bertschi.com



Bertschi employee remote operating the gantry crane of the Antwerp Zomerweg Terminal from nearby office.

Strengthening global presence and infrastructure

In 2024, Bertschi Group achieved a turnover of CHF 1.01 billion, reflecting a 5% growth despite market challenges.

The company invested over CHF 90 million in infrastructure expansion, sustainable logistics, and digitalisation, ensuring its resilience in a shifting global economy.

infrastructure investments. The Antwerp Zomerweg Terminal, launched in August 2024, has become a key hub for chemical imports, featuring state-of-the-art storage and multimodal transport solutions.

Additionally, the expansion of Bertschi's Rotterdam Botlek facilities increased Isotank storage capacity by 30,000 tonnes, reinforcing the shift



Bird's-eye-view of the expanded Bertschi Rotterdam Botlek facilities with an additional 30,000 tonnes of DG Isotank storage capacity.

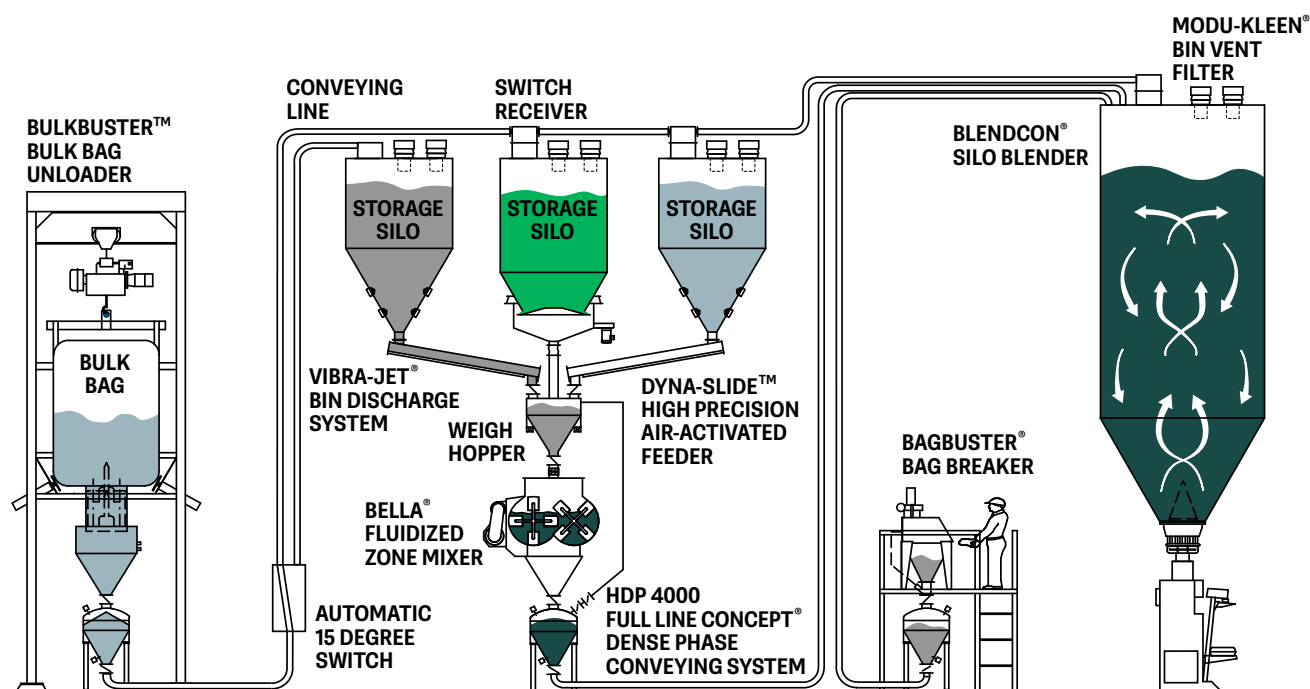


Women in Logistics stand at the EPCA seminar in October 2024 with Bertschi employees posing for a photograph.



Bertschi Biofuel Truck on site in Bertschi Italy, servicing the last-mile of a decarbonised supply chain from the Netherlands.

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.

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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

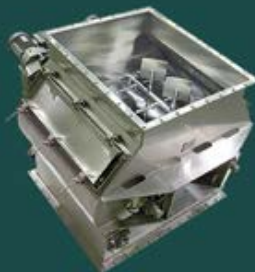
At Dynamic Air, we set the standard for excellence in bulk solids handling. With a relentless focus on quality, reliability, and customer satisfaction, we deliver reliable, high-quality pneumatic conveying systems, equipment, and custom solutions that exceed expectations.



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