EuroBulk Systems

The European journal for handling, processing and transport of premium bulk products

INTERNATIONAL NEWS • PEOPLE • PRODUCTS

SEPTEMBER/OCTOBER 2025 ISSUE 107

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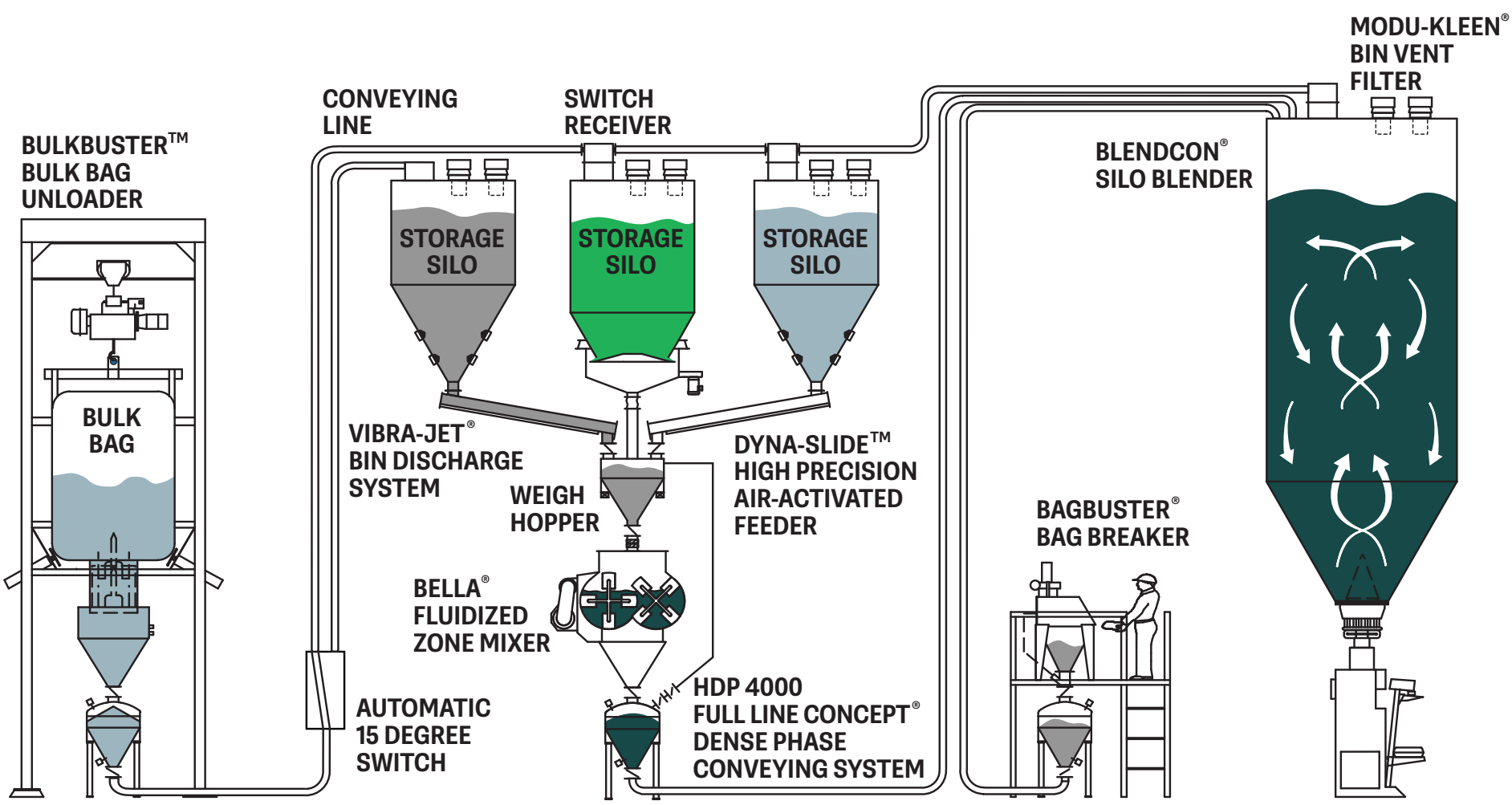
SOLUTIONS *that Power Success*



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

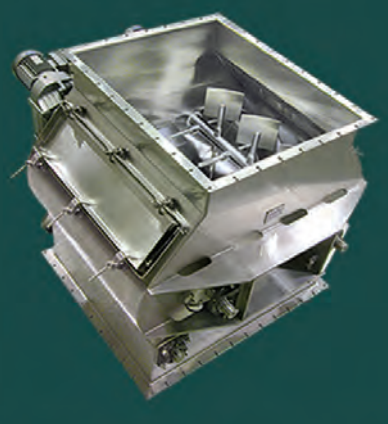
We never take a cookie-cutter approach just to cut costs up front; we know that the right solution will save you money in the many years to come. Our tailored solutions involve thoughtful planning, meticulous engineering and precise manufacturing that optimize efficiency and productivity.

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.

Dense Phase Transporter

DC-5® Air Saver Control



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www.dynamicair.com

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EuroBulkSystems ***is published 6 times per year by***

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Containerised ballast water treatment for offshore wind sector

BIO-UV Group has developed and successfully tested a new containerised ballast water treatment (BWT) system aimed at supporting the growing floating offshore wind industry. The innovation addresses the specific compliance challenges faced by floating platforms, which must manage ballast water when moving across territorial waters to prevent the spread of invasive species.

The project, funded through the European Union's Elbe Eurocluster programme in 2024, adapts BIO-UV's type-approved BIO-SEA system for deployment within a standard TEU container. This allows operators to treat ballast water on-site during the assembly, transport, and maintenance of floating wind installations.

Initial trials took place at the Port-la-Nouvelle facility in France, using a 300cu m/hr BIO-SEA B02-0340 containerised unit. Unlike traditional onboard systems, the prototype includes a separate waste treatment line to handle backwashed water at the discharge site. Testing demonstrated the system's ability to perform BIO-SEA's dual-stage process – filtration followed by UV disinfection – and to meet the IMO D-2 standard for treated water.

Phase One of the project focused on engineering and validation between January and June 2024, while Phase Two extended from July to December 2024, examining market potential and engaging industry stakeholders.

The containerised ballast water treatment system.

Charlene Ceresola, Project Manager at BIO-UV Group, said: "The modularity and portability of this solution make it ideal not only for offshore wind operations but also for vessels experiencing ballast water system failures. It offers ports and operators a practical contingency option."

The company has already delivered its first commercial containerised unit under a "ballast-as-a-service" rental model. Interest is growing from several Mediterranean ports, particularly those linked to the EU's Treasure programme, as BIO-UV continues to advance scalable and sustainable water management technologies.

www.seabornecomms.com

Setting new standards in polystyrene production

Focusing on innovative manufacturing processes and sustainability, NexKemia provides products for the packaging industry and as well as for building insulation: white EPS, EPS mixed with graphite, as well as products containing up to 30% recyclate.

NexKemia Petrochemicals, a specialist in expandable polystyrene (EPS) production, is expanding its manufacturing capabilities using Coperion's ZSK twin screw extruder technology. The system enables continuous, energy-efficient, and environmentally friendly production of white and graphite-enhanced EPS (GPS), as well as products containing up to 30% recycled material.

Traditionally, EPS has been produced through batch-based suspension polymerisation, a process requiring tight chemical control. Coperion's ZSK twin screw extruder simplifies this with a single-step, continuous manufacturing process. All raw materials are precisely dosed via Coperion K-Tron feeders and homogeneously mixed in the extruder with minimal shear and short residence time, ensuring gentle handling and consistent quality. The resulting micropellets, produced via underwater pelletisation, feature a narrow particle size distribution and superior material performance.

Beyond simplifying production, the ZSK extruder enables the seamless integration of recycled content. Cleaned and compacted regrind can be directly reintroduced into the process without compromising quality, supporting circular economy goals. Compared with conventional methods, the process produces significantly fewer airborne emissions and less wastewater, enhancing both sustainability and cost-efficiency.

"NexKemia and Coperion have worked closely to create new, sustainable processes for EPS production," said Michael Hays, President of Integreon, NexKemia's parent company. "This collaboration allows us to innovate responsibly while delivering high-performance, eco-friendly insulation and packaging materials."

With the Coperion ZSK twin screw extruder efficient production of EPS microbeads is possible on a single machine.

Akona's new website

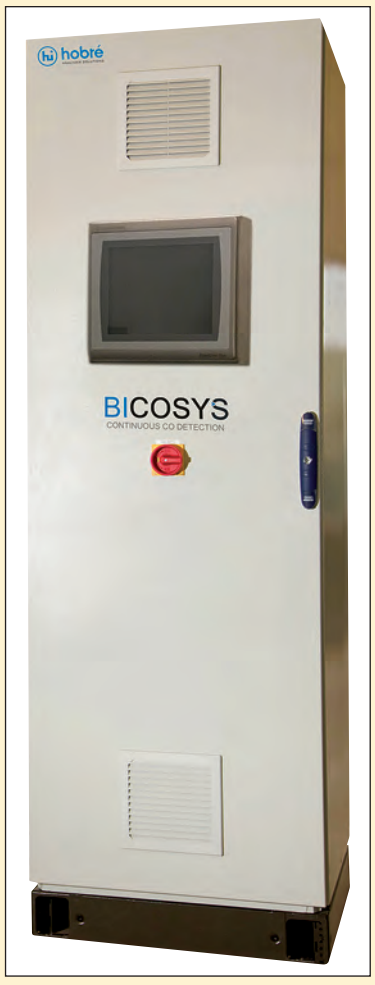
Akona Process Solutions has launched a new website that reflects its growth into a comprehensive provider of material processing and handling solutions. The move marks a significant milestone in a journey that has seen four leading brands – Cablevey, Kason, Marion, and Spiroflow – unite under the Akona name. Designed with customers in mind, the website not only offers clear navigation across Akona's full range of processing technologies but also features interactive content that brings the company's story and equipment to life.

Among its highlights is a compelling animation video, providing a dynamic introduction to Akona's capabilities, along with rotating 3D/AR models of equipment that enable users to examine technologies in detail and from all angles - an invaluable tool for decision-making and project planning.

www.akonasolutions.com

Fike and Hobré form partnership

Fike Corporation, specialists in industrial safety solutions, has partnered with Hobré International, a process analytics company, to improve fire and explosion prevention in industrial drying systems. The collaboration focuses on mitigating the risks associated with spray dryers - common in food, beverage, and pharmaceutical manufacturing - which accounted for nearly 18% of all reported fire and explosion incidents in 2023, according to Dust Safety Science.



Spray dryers are particularly vulnerable to ignition hazards caused by product buildup and smoldering under high heat. Hobré's BICOSYS system detects the earliest stages of smouldering by monitoring carbon monoxide (CO) levels, identifying combustion up to 30 minutes before a fire could start. By comparing CO concentrations at both the dryer's inlet and outlet, BICOSYS helps prevent false alarms while providing accurate, real-time safety data.

"This technology fills an important role in Fike's explosion prevention efforts," says Jan-Bart Seymortier, Fike's Director of Sales, Europe. "Early detection can prevent fires and deflagrations, reducing downtime and protecting both people and equipment."

The partnership also includes Hobré's HICOSYS humidity monitoring system, which provides precise control to prevent sticky product buildup - further reducing smouldering risks. Together, the companies aim to deliver integrated safety solutions that enhance reliability and lower operational costs.

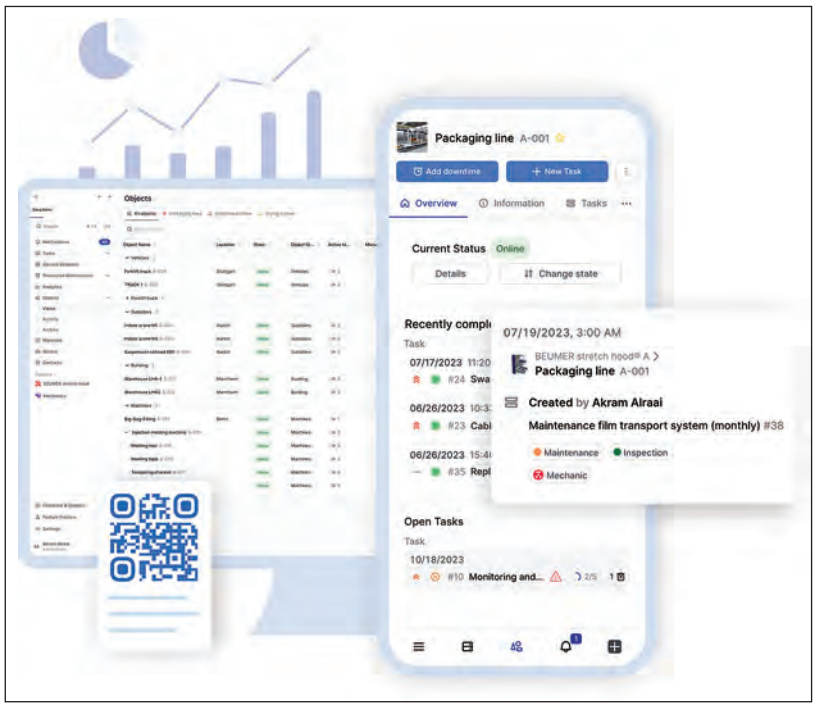
fike.com

Beumer's strategy to strengthen its digital capabilities

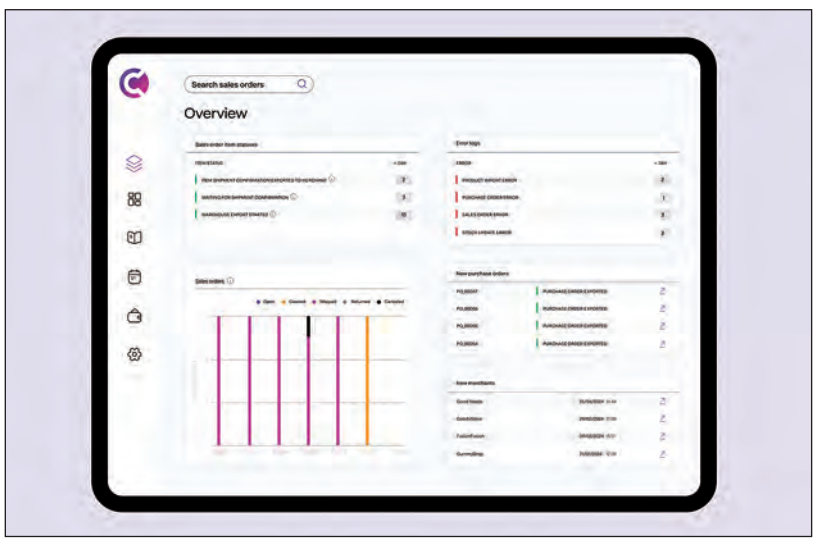
Beumer Group has announced the full integration of its digital ventures Codept and Elara into the company's corporate structure. Both firms were originally developed within Beumer's in-house incubator, Beam, and will now operate as wholly owned subsidiaries.

The move is part of Beumer's broader strategy to strengthen its digital capabilities and support customers in addressing key logistics and maintenance challenges. Codept, founded in 2019, provides an integration platform that links logistics service providers with online retailers, regardless of existing ERP, WMS or marketplace systems. Its no-code approach streamlines onboarding, while more than 40 system integrations allow for greater flexibility and scalability across fulfilment operations.

Elara, launched in 2020, offers a cloud-based maintenance management system already in use at airports, logistics hubs and manufacturing facilities. The platform enables predictive maintenance, spare parts transparency and reduced downtime, helping operators lower costs and improve efficiency.



Elara dashboard.

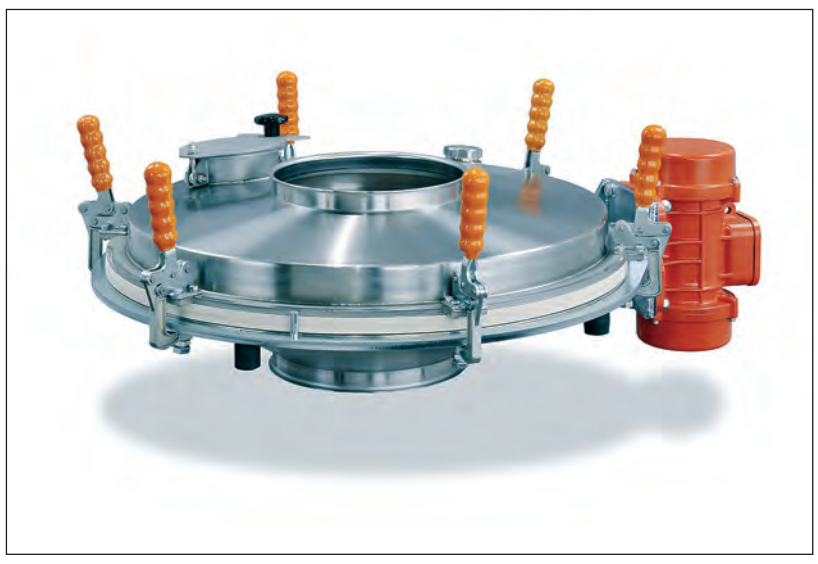


Codept dashboard.

Beumer said both companies will retain their leadership teams and entrepreneurial structures while benefiting from greater alignment with the group's global innovation strategy. The integration underlines Beumer's goal of delivering market-ready innovations on a regular basis, reinforcing its position as a partner for digital transformation in intralogistics.

www.beumer.com

Sifting is not simply sifting

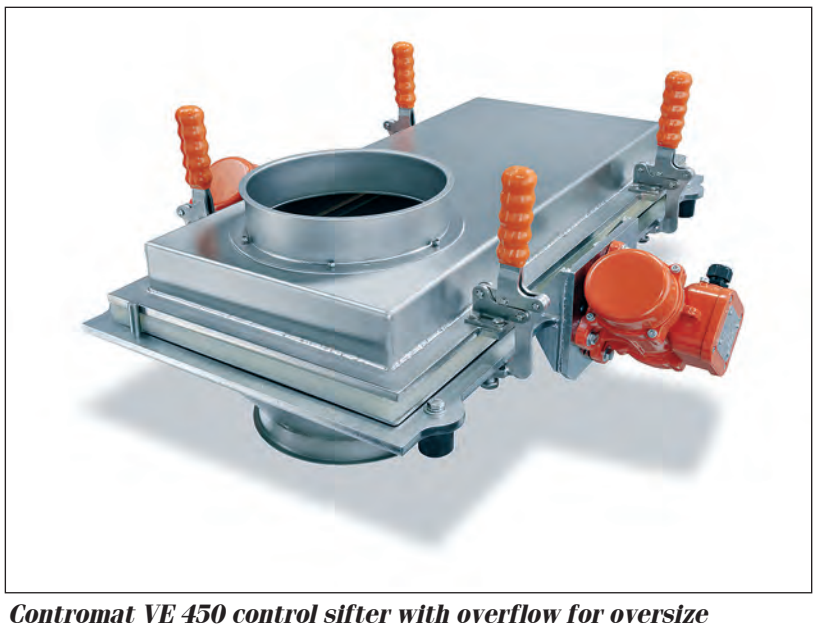


Contromat VR 630 control sifter without overflow for oversize material.

Industrial sifting may appear straightforward, but the process varies greatly depending on the material, application, and desired outcome. From food and pharmaceuticals to plastics and chemicals, selecting the right sifting technology is essential for ensuring product quality, efficiency, and cost-effectiveness.

Fuchs Maschinen AG, Switzerland, outlines some of the technology options

• **Vibratory sifters** are the classic and most cost-effective solution, ideal for control or safety sifting to remove unwanted particles from good product. They are versatile, suitable for dedusting bulk materials, and offer a good balance between simplicity and performance.



Contromat VE 450 control sifter with overflow for oversize material.

• **Cyclone sifters**, or rotary sifters, use a high-speed rotor to throw material through a cylindrical basket. Fines are separated by centrifugal force, while oversized particles are discharged. These compact systems deliver high throughput with minimal space requirements.

• **Tumbler sifters** provide gentle yet highly precise sifting. Their eccentric, oscillating motion creates a slow, tumbling action, protecting both product and machine. The result is quieter operation and more accurate particle separation compared to standard vibratory sifters.

• **Plansifters**, such as Fuchs' Siftomat series, combine precision and practicality. With adjustable slopes and multiple sieve decks, they allow fine-tuned control of dwell time and flow rate. Quick to dismantle and clean, these sifters are particularly valued in the food and pharmaceutical industries. Their robust design and long service life make them ideal where precise particle separation is essential, such as in plastics masterbatch production.

Siftomat plansifter with bagging device in the food industry.

Sustainable compressed air systems on show

Covering flow rates from 0.26 to 2.7 cu m/min, Kaeser's Aircenter series models provide dependable and efficient compressed air production, treatment and storage within a single compact unit.

Kaeser Kompressoren presented its latest energy-efficient compressed air and blower technologies at the recent Powtech Technopharm, highlighting sustainable solutions for the conveying of powders and bulk materials. The company's portfolio focuses on cost-effective air generation, dependable supply, and long-term energy efficiency across industrial processes.

At the centre of Kaeser's display was the Aircenter, a compact, all-in-one compressed air station built around the SM 13 fluid-cooled rotary screw compressor. With an integrated refrigeration dryer and air receiver, the system offers a complete, ready-to-use solution that requires minimal installation space. Available with or without a frequency converter, the Aircenter delivers flexible, efficient performance for a wide range of applications.

Kaeser also featured its EBS-series rotary screw blowers with the patented Sigma Profile. Designed for maximum efficiency, these units combine a compact footprint with advanced drive technology, including synchronous reluctance motors and optional frequency converters. The EBS series allows for easy front-side maintenance and side-by-side installation, optimising space and uptime.

The company's BBC Compact-series rotary lobe blowers were presented as "plug & work" solutions. Pre-assembled, CE- and EMC-certified, and equipped with the Sigma Control system, these units reduce installation and commissioning costs while ensuring reliable, energy-efficient operation.

For applications demanding oil-free air, Kaeser's CSG rotary screw compressors incorporate IE5-class synchronous motors and refined airends with the Sigma Profile, these systems deliver exceptional energy savings. The water-cooled version with i.HOC dryer and heat recovery system enhances sustainability by reusing generated heat.

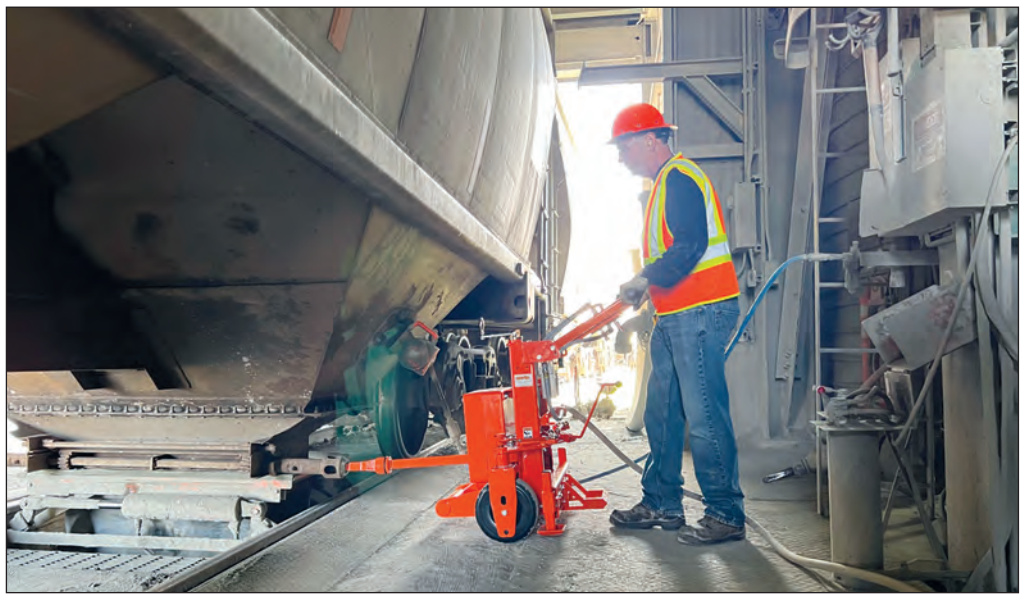
Finally, the Sigma Air Manager 4.0 provides intelligent, networked control of entire compressed air systems, enabling real-time monitoring, predictive maintenance, and optimised energy use.

www.kaeser.de

EBS series rotary screw blowers are true standouts with their high efficiency and compact design.

Kaeser's Compact series BBC/FBC rotary blowers combine clever design with exceptional efficiency and dependability. Their access-friendly configuration enables side-by-side installation of multiple units.

Martin launches "Gen 4" railcar opener



A worker inserts the bit into the capstan on a stopped hopper car to release the gate.

Martin Engineering has introduced the fourth generation of its railcar opener, designed to improve ease of use and reduce risks during unloading operations. The company states that the Martin Gen 4 Railcar Opener delivers "controlled, non-impacting torque to open and close even difficult hopper car gates, aiming to enhance workplace safety while lowering overall operating costs."

The two-wheeled unit features lateral turning wheels for moving capstans, outrigger support for stability, and an adjustable driveshaft to accommodate varying gate heights. A newly developed "stepped" drive tip increases contact with the capstan, reducing rollback under load and minimising wear on both the opener and the gate components.

Built with a heavy-duty steel frame, the Gen 4 requires an air supply of 75 cfm at 100 psi and produces 3750 ft/lbs (5080 N-m) of torque. Despite its robust performance, the 305 lb (139 kg) machine is designed for single-operator use. Adjustable handlebars, "Never Flat" tires, and pivoting wheels that rotate 90 degrees allow greater manoeuvrability, including the ability to follow travelling capstans.

Noise levels are reported at 88 dBa, which reduces the need for extensive hearing protection compared to traditional impact-type openers. The ergonomic design is intended to make operation less physically demanding and more consistent across shifts.

According to the company, field trials have demonstrated improved unloading efficiency and reduced demurrage, alongside greater operator safety. The new model builds on customer feedback gathered over several years, with an emphasis on durability, versatility, and reliability in demanding bulk handling environments.

www.martin-eng.com

Qlar re-enters food and pet food markets

Manfred Bruckner, Chief Sales Officer, Qlar Group.

Bulk material specialist Qlar, formerly known as Schenck Process, re-entered the global food and pet food industries from 1 September 2025. The move follows its rebranding in 2024 and the conclusion of a non-compete agreement after the sale of its Food and Performance Materials business in 2023.

Qlar aims to meet growing demand for hygienic, energy-efficient and precise process technologies in sectors facing stricter safety and sustainability requirements. The company's portfolio includes weighing, feeding and digital monitoring systems, all designed to support consistent product quality, flexible production and resource optimisation.

Chief Sales Officer Manfred Bruckner said Qlar's solutions are intended to help manufacturers adapt to tougher regulatory standards while advancing circularity and reducing waste. The offering is supported by aftermarket services, including maintenance, spare parts and upgrades, aimed at maximising uptime and operational efficiency.

www.qlar.com

Bühler announces leadership change in Grains & Food business

The Bühler Group has confirmed that a change in leadership will take place in its Grains & Food business at the start of 2026. Current CEO Johannes Wick will step down from the role at the end of 2025, moving into a new strategic position within the company. He will be succeeded by Mike Häfeli, who will also join Bühler's Executive Board.

Wick has led the Grains & Food business for ten years, during which time Bühler reports that the division expanded its market presence, introduced new ventures, and strengthened partnerships with industry players in Mexico, Germany, Canada, and China. The business also broadened its activities in areas such as alternative proteins, chocolate processing, and cereal ingredients.

Johannes Wick will step down from his role as Head of Grains & Food at the end of 2025 to take on a new strategic position within Bühler.

Mike Häfeli, current CEO of the Eisberg Group and member of the Executive Board of the Bell Food Group, will return to Bühler and assume the role of Head of Grains & Food, effective 1 January 2026.

Häfeli began his career with Bühler more than 30 years ago, training as a mechatronic engineer before holding positions in automation, sales, and business management. He spent several years as Vice President Automation in North America and from 2015 to 2023 headed Bühler's Grain Quality & Supply unit. Most recently, he was CEO of the Eisberg Group and a board member of the Bell Food Group.

Häfeli will take up his new position as CEO Grains & Food on 1 January 2026

Eriez to present inspection and separation technology

Eriez X8 metal detector.

Eriez will showcase a range of inspection and magnetic separation equipment at PACK EXPO 2025, taking place from 29 September to 1 October at the Las Vegas Convention Center. Visitors to booth SL-11000 in the Lower South Hall will be able to view live demonstrations and speak directly with company specialists about processing requirements and application-specific solutions.

Among the technologies on display will be the PrecisionGuard X8 Metal Detector, the SenseGuard X-ray Inspection System, magnetic separators, and vibratory feeders. According to Eriez, the X8 "Metal Detector has been designed to detect ferrous, nonferrous, and stainless-steel contaminants with high sensitivity, while its interface incorporates a large touchscreen and auto-learn functionality to simplify setup. The SenseGuard X-ray system provides high-resolution imaging and adaptable software intended to identify foreign objects and product irregularities.

Dinnissen establishes Belgian branch

Process technology specialist Dinnissen has opened a new branch in Melle, near Ghent, as part of its strategy to expand its international network. The new office, led by Operations Director Belgium Stefaan Cottenie, will serve customers in Belgium and Northern France, with a particular focus on the food and chemical sectors.

The company says the move responds to growing demand in the region for advanced processing solutions that meet strict quality and safety standards. In addition to food and chemicals, the Belgian operation will also support feed, aquafeed, and pet food industries.

Dinnissen highlights its integrated approach, with in-house capabilities ranging from sheet metal processing and system construction to engineering, software, and electrical work. Customers are also able to test equipment and complete systems at the company's production facilities in Sevenum, the Netherlands, where the new D-Innocenter research and testing centre is due to open later this year. The facility will allow full installations to be set up and tested with product prior to delivery, enabling faster commissioning on site.

The Belgian branch forms part of Dinnissen's wider international expansion, following recent openings in the United Kingdom and New Zealand. The company states that its strategy is to combine local presence with global expertise, providing consistent support across all regions.

Managing Director Wouter Kuijpers says the aim of the expansion is not growth for its own sake, but to be closer to customers and better positioned to respond to their requirements.

www.dinnissen.com

Stefaan Cottenie, Operations Director Belgium.

Meeting demanding petrochemical and bulk handling applications

Gericke Rotary Valve in Chemical Application.

Rotary valves are widely used in bulk solids handling, serving as discharge devices, airlocks in pneumatic conveying systems, and safety components for isolating pressure differentials or preventing flame and explosion propagation. UK-based Gericke RotaVal, part of the Gericke Group, specialises in the design and manufacture of rotary valves.

In addition to standard metering and airlock duties - such as feeding conveying lines or filling FIBCs - Gericke RotaVal develops large rotary valves for applications requiring high throughputs or the handling of oversized and abrasive materials. These units are particularly relevant in petrochemical and chemical industries, where bulk materials such as catalysts, resins, polymers, or additives must be transferred under strict process control.

In petrochemical environments, rotary valves play a key role in maintaining pressure differentials between process zones including reactors, storage silos, conveying lines, and dust collection systems. This helps prevent gas leakage, reduce contamination risks, and support plant safety. Robust construction allows the valves to withstand corrosive or abrasive conditions, while precise operation ensures accurate dosing and consistent feed rates.

For demanding duties, Gericke RotaVal offers designs incorporating explosion-proof drives, high-temperature seals, wear-resistant internal coatings, and easy-clean access to facilitate maintenance. The company manufactures rotary valves in sizes up to 600 by 1200 mm, often with specialised surface treatments. These features enable reliable performance in challenging petrochemical processes, helping operators meet operational efficiency targets as well as environmental and safety requirements.

Gericke RotaVal up to 600 by 1200mm.

Manager appointed

Eriez has named Chien Dang Tran as Country Manager in Vietnam, reinforcing the company's commitment to expanding across Southeast Asia while delivering more responsive support for local industries.

In this newly established position, Tran will shape Eriez' strategy in Vietnam by cultivating lasting partnerships, uncovering emerging opportunities, and collaborating with regional representatives to provide separation technologies tailored to market needs.

"This appointment represents another milestone for Eriez as we extend our reach across the Asia-Pacific (APAC) region," said Ezio

Viti, Regional Sales Director for Eriez Asia-Pacific. "Chien's customer-focused mindset and deep knowledge of Southeast Asian markets make him uniquely equipped to accelerate our expansion in Vietnam."

W&H resolves patent dispute with Chinese manufacturer

Windmöller & Hölscher (W&H), the Lengerich-based machinery manufacturer, has successfully concluded a patent dispute with a Chinese company concerning its CONVERTEX woven bag production technology. The case involved eight patents covering key processes, from tubing perforation to the ejection of defective bags.

As part of the settlement, the Chinese manufacturer has admitted to infringing at least one claim in each of the patents and agreed to cease production and distribution of the affected machines. Compensation will also be paid. While W&H has decided not to pursue legal action against purchasers or users of the disputed equipment in this instance, the company noted that such action remains possible in future cases.

Chief Executive Officer Dr. Falco Paepenmüller said the outcome underlined W&H's commitment to protecting its intellectual property. He stressed that the company invests heavily in research and development, with patents safeguarding both technological leadership and customer value.

Chief Sales Officer Dr. Sascha Witt added that protecting proprietary developments benefits customers using W&H equipment to produce high-quality bags, while also supporting fair competition. The company stated that enforcing patent rights ensures innovations continue to deliver competitive advantages in speed, quality and flexibility for its customers.

SPONSORED ARTICLE

A Success Story

An eightfold increase in performance thanks to Feige FILLING

The investment in three filling machines has led to a significant increase in performance at Van Moer Logistics in Antwerp: thanks to the modern equipment from Feige FILLING in Bad Oldesloe, 500 tons of liquid products can now be filled per day instead of 400 tons per week. And that without additional personnel in the same hall. Every day, ships loaded with tank containers arrive at the port of Antwerp. These containers hold a wide variety of liquids, which are filled into drums or IBCs, placed on pallets, secured, and prepared for onward transport. The faster this happens, the more economical it is for companies. Maximum safety also plays a crucial role here, as toxic substances are being filled.

Complete solution from Feige FILLING for toxic substances

Van Moer processes toluene diisocyanate (TDI), a highly toxic liquid, in the port of Antwerp. This means that filling must be particularly safe. Until now, the safe processing of such substances has been outsourced to specialised companies in the area.

But in 2023, everything changed: thanks to the efficient interaction of three FEIGE INTEGRA automatic drum and pallet filling machines, Van Moer Logistics is one of the few companies in the region to offer a complete solution for the logistical handling and picking of various types of liquids. In addition, the fully automatic machines deliver very high performance and processing rates reliably.

Drum Filling units Feige INTEGRA®86 perfectly placed for an economic operation.

"The Perfect Flow" with three filling machines from Feige FILLING

The three most powerful models from Feige FILLING have made this change possible.

"First, we integrated the Feige INTEGRA 86 high-performance machine," explains Kevin De Jonghe, division manager at Van Moer Logistics "This machine fills 110 drums per hour. We also have the INTEGRA 84, which fills 40 drums per hour and is suitable for filling toxic or foaming liquids. And finally, the INTEGRA 71 automatic pallet filling machine, which can fill 14 IBCs per hour."

Drum Filling units Feige INTEGRA®86 perfectly placed for an economic operation.

Since the commissioning of the FEIGE filling systems and the associated implementation of "The Perfect Flow" – a perfected logistics process – the company has been able to offer its customers a truly complete solution and act as a one-stop shop for the processing of all conceivable types of liquids, especially flammable and toxic substances.

Only four people needed

This solution results in a filling capacity of 500 tons of liquid per day, compared to "only" 400 tons per week previously - an eightfold increase in performance.

As the machines are fully automatic, only a small number of staff is required. "On a normal day, only one operator per shift is needed to operate the machines and monitor the operation. There is also a forklift driver outside the hall and two other people to provide support," says Kevin De Jonghe. All transport is automated via roller conveyors. Distances are short and accessible. This is not only efficient but also offers the greatest possible safety in the workplace for staff.

Ultimate efficiency with filling machines from Feige FILLING

Van Moer Logistics found the ideal partner in the manufacturer of the filling machines to maximise performance.

The plans were worked out in detail together with Vermeulen Ingenieursbureau from Helmond, the local representative of Feige FILLING. The goal: to find the ideal way for the substances to pass through the processing process, both inside and outside the building. Wherever possible, everything was automated to achieve maximum performance.

The result is the only plant in the world where any chemical can be processed in any direction: from drum to drum or IBC or between tankers. Filling, cleaning, storage, and strapping are now all possible in one place and according to a sophisticated scheme. Customers do not have to deal with multiple contractors, but can rely on safe, professional, and fast processing by a single provider.

Feige FILLING: Innovation based on tradition

The North German company was founded in 1972 by Gerhard Feige. Thanks to a constant stream of new, innovative ideas and steady growth, it has developed into the global market leader in the field of filling technology. Feige FILLING offers systems of various sizes: from semi-automatic filling stations to fully automatic turnkey packaging systems, for containers from 1 to 2,000 kg – always in proven FEIGE quality. Since 2003, Feige FILLING has been part of the group of companies of the globally active mechanical engineering company HAVER & BOECKER.

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Feed system helps filter cake flow for Cargill

Ajax Equipment utilised material testing to develop a system which would provide a reliable feed of filter cake.

Solids handling specialist Ajax Equipment has supplied Cargill, the leading food and agricultural products manufacturer, with a stainless steel buffer hopper and twin screw feeder to handle filter cake. The system allows spent filter cake to be held as required and then emptied at a consistent rate.

Ajax designed the handling system's vee-shaped hopper and twin screw feeder together to help ensure the smooth transfer of filter cake. Utilising a screw feeder below the steep walled hopper facilitates the reliable flow by providing active extraction of material. Due to the demanding characteristics of the filter cake, Ajax recommended the screw's flights be manufactured in a wear resistant steel and with geometry to fully serve the hopper outlet.

"The Ajax team were great to work from first contact and then through design, manufacture and the FAT. They certainly know the technology and their products," says Gary Cotter, project engineer at Cargill.

Lewis Shaw, technical sales engineer, Ajax Equipment, comments, "Ajax Equipment has worked with Cargill many times. We frequently work with engineers around the world but in this case, we were very happy to be able to support Cargill's Manchester site in Trafford Park, not far from Bolton where Ajax is based.

"After going on site to discuss the requirements of the handling system and conducting flow property testing on sample material in our lab, we worked with Cargill to develop a system which would provide a reliable feed of spent filter cake, determining that a vee-shaped hopper and twin screw feeder would deliver the performance required."

www.ajax.co.uk

Material flow monitoring for modern bulk handling operations

A modular, non-contact system provides precise volume and mass flow monitoring across the entire bulk material process chain. Quirin Kraus, Managing Director, Sachtleben Technology GmbH explains the Owl Eye technology.

Owl Eye Dashboard: Volume Flow Measurement.

A modular, non-contact system provides precise volume and mass flow monitoring across the entire bulk material process chain. Quirin Kraus, Managing Director, Sachtleben Technology GmbH explains the Owl Eye technology.

In modern bulk material processing, accurate monitoring of material flow is essential — from extraction and handling to logistics. Owl Eye, developed by Sachtleben Technology GmbH, is a modular platform offering a comprehensive solution for non-contact volume and mass flow measurement across the entire process chain.

Combining advanced sensor technology with intelligent data analysis and condition monitoring, the system supports continuous and precise control of bulk material movement.

Why material flow monitoring matters

Mining and bulk logistics depend on the efficient movement of material. However, fluctuating extraction volumes, limited plant capacity, and transport disruptions can cause stockpile imbalances, bottlenecks, or underused storage space.

Continuous monitoring of material quantities provides valuable transparency, enabling operators to identify inefficiencies, coordinate operations, and make data-driven decisions. Accurate knowledge of real-time material flow is key to reliable, economical, and well-controlled processes.

One system: multiple applications

Owl Eye is a scalable, integrative platform designed to monitor mass flows at various points within an operation. Its modules include:

The Owl Eye LiDAR sensor above a conveyor belt.

1. **Static Stockpile Volume Measurement** – Fixed LiDAR or 3D sensors record stockpile growth or reduction, generating 3D models for inventory documentation.
2. **Mobile Stockpile Scanning** – Units mounted on conveyors or stackers measure material build-up and available capacity, improving internal logistics.
3. **Wheel Loader Mapping** – Loader-mounted 3D sensors create real-time stockpile models during normal operation for efficient space management.
4. **Bin and Hopper Monitoring** – Continuous volume measurement in silos, crushers, or hoppers, even in dusty or low-light environments.
5. **Conveyor Belt Volume Flow Measurement** – Non-contact 2D LiDAR sensors scan belt loads to calculate throughput with ±1% accuracy.

In addition to measuring volume, the system detects belt misalignment, foreign objects, and load anomalies - supporting automated process control and maintenance.

Advanced conveyor diagnostics

In addition to throughput measurement, Owl Eye's condition monitoring provides early detection of belt misalignment, unstable loading, large foreign objects, or feed irregularities.

By analysing the material profile, the system can detect deviations and potential damage early on. These include:

- Belt misalignment due to uneven loading or roller defects
- Asymmetrical or unstable loading, indicated by shifting mass centres
- Large foreign objects (Big Rock Detection) that may damage mechanical parts or downstream processes
- Profile anomalies that indicate material buildup, belt damage, or upstream feed issues

These events are recorded continuously and evaluated against predefined thresholds. This allows for targeted maintenance before failures occur, increasing operational reliability and minimising downtime.

Designed for continuous industrial use, the platform integrates easily with existing automation systems through REST API, OPC UA, or analog outputs. A web-based dashboard offers real-time monitoring, historical visualisation, and customisable alerts. Optional automatic air-cleaning ensures sensor performance even in harsh environments.

Suitable for all bulk materials

The system is adaptable to virtually all bulk materials, from ores, aggregates, and minerals to wood products, chemicals, and agricultural materials — regardless of density or moisture content.

Owl Eye offers a robust, flexible solution for comprehensive material flow monitoring and condition diagnostics. By combining precise sensor technology with modular design and seamless IT integration, it provides real-time transparency, early fault detection, and reliable data to optimise both strategic and day-to-day operations across the bulk material industry.

The Owl Eye LiDAR sensor.

Servicing the conveyor cleaning blade

Safe maintenance on a belt cleaner system requires training and adherence to the proper safety procedures.

Effective conveyor belt cleaning is essential to maintaining system performance, extending belt life, and protecting worker safety. Excessive carryback can shorten component life by up to 30%, while properly maintained cleaning systems typically contribute to less than 5% of belt wear - an excellent trade-off for the performance gained.

Safe and efficient belt cleaner maintenance requires both training and the right equipment. Industry best practice recommends using at least two cleaners per discharge point (primary and secondary) to ensure thorough cleaning and provide redundancy, which extends service intervals. The blade composition must also suit the application, as incorrect materials or excessive cleaning pressure can cause premature wear and reduced performance.

All cleaner maintenance should strictly follow lockout, tagout, blockout, and testout (LO/TO/BO/TO) procedures to prevent injury. Trained service technicians understand how to adjust tensioners, remove buildup, and replace worn blades safely and effectively.

Innovations like Martin Engineering's CleanScrape primary cleaner simplify this process. Its design requires only initial tensioning, minimal maintenance, and provides up to four times the service life of traditional urethane cleaners.

To further enhance safety and efficiency, automated systems such as the N2 Position Indicator monitor cleaner wear and transmit alerts via Wi-Fi or cellular networks, reducing the need for manual inspection.

The CleanScrape primary cleaner takes up less room and requires less maintenance than standard cleaners.

Martin's N2 Position Indicator communicates with maintenance staff and servicers, reducing the need for regular inspection.

Mettler-Toledo publishes Corporate Responsibility Report

Solar panels were installed earlier this year on one of the Mettler-Toledo's buildings at its Giesen site.

Mettler-Toledo has released its 2025 Corporate Responsibility Report, covering the 2024 reporting year, which outlines progress in environmental, social and governance (ESG) initiatives. The company reports continued advances under its long-running GreenMT programme, which is now in its 15th year.

In 2024, Mettler-Toledo maintained carbon-neutral operations and achieved 100% renewable electricity sourcing across its global sites. Waste to landfill has been reduced by 74% since 2018, with the company on track to meet its 2025 target of less than 5% waste-to-landfill.

Product innovation featured prominently, with most business units applying Design for Environment (DfE) principles. Packaging redesign at manufacturing sites in the UK and Germany increased recyclability to 90% by shifting from plastic and wood to paper-based alternatives, reducing weight, cost, and assembly times. Other initiatives included recyclable shrink wrap, paper strapping, and pallet reuse, cutting wood use by up to 60%.

At the Giesen check-weighing site in Germany, new bi-valent heat pumps reduced greenhouse gas emissions by 80% and energy costs by 40%, while recently installed solar panels provided 39% of site consumption in their first month, avoiding more than four tonnes of CO_2. The site also installed 12 EV charging stations. In Manchester, the metal detection site eliminated plastic-based packaging foam, replacing it with recyclable paper-based solutions that can be reused by customers.

On supply chain responsibility, the company engaged nearly 450 suppliers in 2024, representing around 65% of global direct spend, to align with ESG expectations under its Responsible Sourcing Framework.

Mettler-Toledo has also committed to Science Based Targets, aiming to cut Scope 1 and 2 emissions by 70% by 2030 (compared with 2018 levels) and Scope 3 emissions by 30% from a 2019 baseline.

The company describes sustainability as integral to its operations, product development and culture, with the latest report highlighting its focus on climate, people, and product innovation.

The full 2025 Corporate Responsibility Report is available at **www.mt.com/pi-sustainability-pr**

Bi-valent heat pumps were introduced to reduce greenhouse gas emissions by 80% and energy costs by 40%.

Patent granted for "Optimised Grind Finishing" process

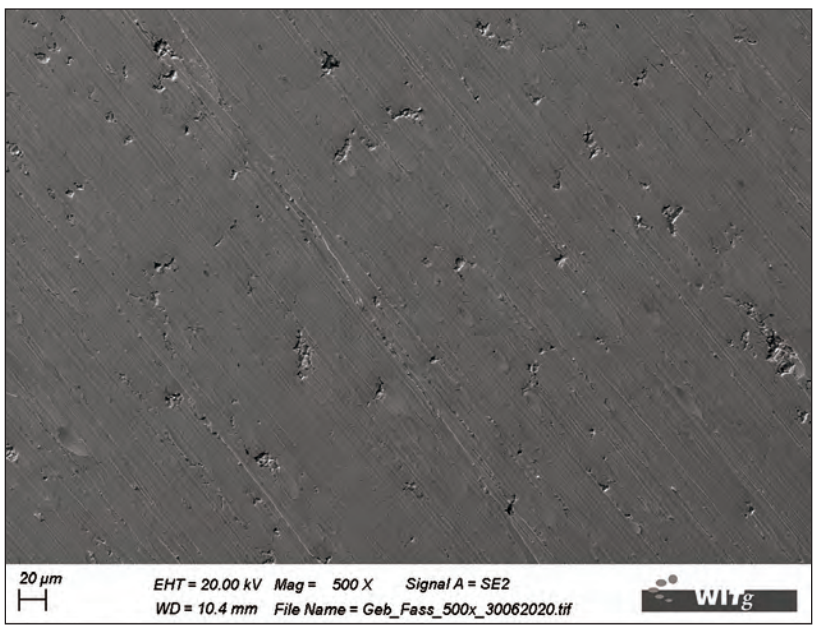
Cornelius Mauch, CEO Bolz Intec GmbH.

Bolz Intec GmbH has achieved a major milestone in stainless steel surface technology with the successful patenting of its Optimised Grind Finishing (OGF) process. Developed in collaboration with the University of Konstanz, this breakthrough marks the culmination of several years of intensive research and innovation.

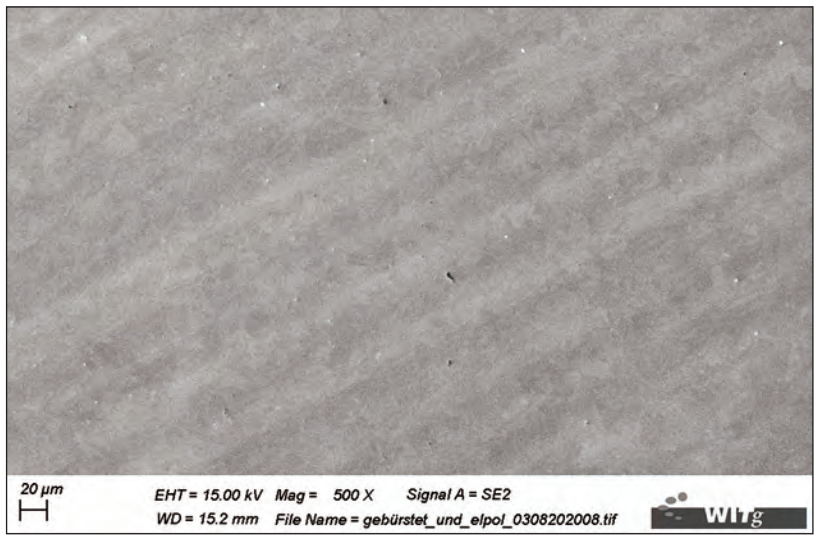
The OGF process significantly reduces particle adhesion on stainless steel surfaces, minimising the risk of product contamination and improving the integrity of sensitive manufacturing processes in industries such as pharmaceuticals, cosmetics, and fine chemicals. Enhanced surface cleanability also allows for reduced use of cleaning chemicals, abrasives, water, and energy - delivering both performance and sustainability benefits.

"Patenting the OGF process represents the successful completion of a long-term innovation project that unites technological precision with environmental responsibility," said Cornelius Mauch, Managing Director of Bolz Intec. "Our cooperation with the University of Konstanz was instrumental in creating a solution that offers enduring ecological and technical value."

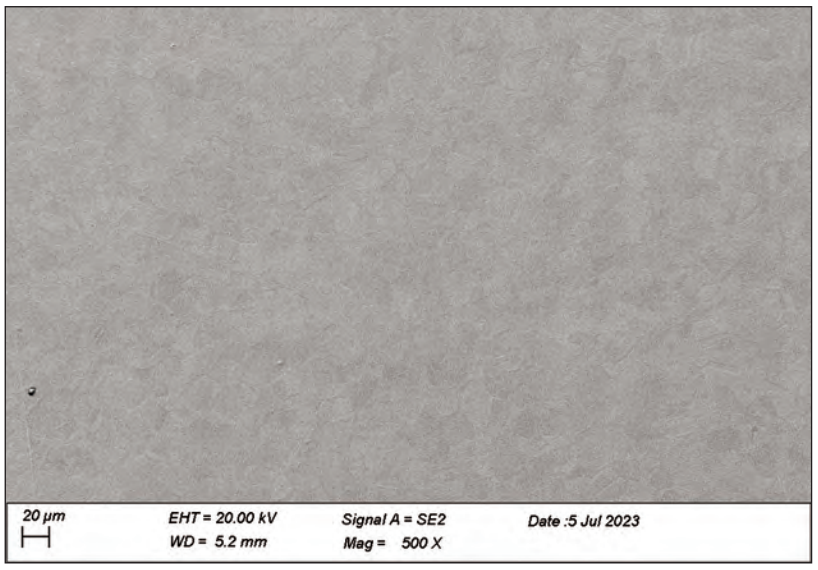
Producing high-precision, metallically pure surfaces with defined roughness, the OGF process ensures exceptional process reliability. It is already being applied to the manufacture of stainless steel containers, funnels, and custom components for leading global pharmaceutical companies, setting new standards in surface innovation and industrial sustainability.



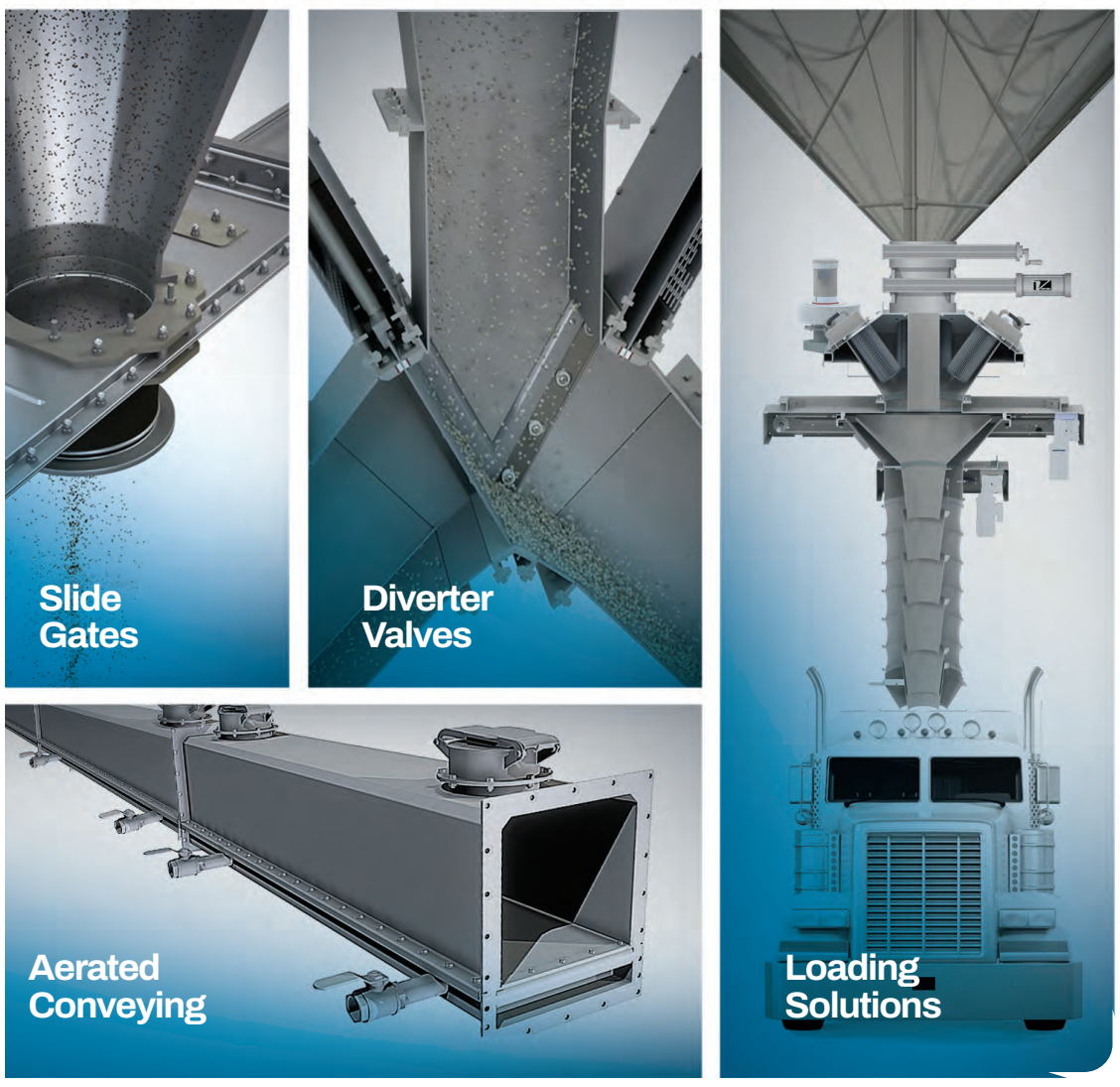
Bolz Intec Stainless Steel Drum.



Stainless steel surface brushed.



Stainless steel surface brushed and electropolished.



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Application Engineering

Vortex believes in offering only value-added products that are designed for purpose, rather than producing off-the-shelf, commodity components. With an in-house team of application engineers, Vortex designs for the most demanding applications.

Compensate for Wear

Vortex closely studies the characteristics of thousands of dry bulk materials and how they interact with various materials of construction. We assess the wear potential for each client's process and make application-specific modifications to ensure reliability, durability and longevity.

Maintenance Friendly

Our priority is to keep you up and running – because in your world, there is no time for downtime. Vortex components are engineered with in-line service features that accelerate the system maintenance process, saving your team time and money.

Minimal Spare Parts

Vortex approaches wear parts with simple, durable design. Doing so means maintenance procedures are also kept simple while the need to perform maintenance is infrequent. This leads to a reduction in spare part inventories and a reduction in costs.

Long Service Life

End users are often attracted to equipment on the fallacy of low price, ignoring the cost-benefits of reliability and longevity. Vortex believes in designing products that will out-perform and outlast market alternatives – so that end users realize the full value of their investment.

Dust Free Environments

Facilities have an ethical obligation to protect against the hazards of manufacturing. Vortex closely studies trends in air quality, environmental dust emissions, workplace safety and evolving regulations. Our components are designed with these concerns in mind.