



Greif-Velox has introduced the Essential Line, a new range of preconfigured filling and bagging systems (see p6).



Haver & Boecker's new Radimat Pathfinder transfers bags from the Radimat – a bag separation and feeding device – to the Roto-Packjer automatic packing machine (see p3).



Nord Drivesystems celebrates 60 years of drive innovation (see p4).



With the completion of the renovation of its TestCenter in Darmstadt, Qlar now offers its customers comprehensive support in the simulation of mixing processes (see p8).



An facility for stripping chrome-plated plastic parts through shockwave treatment, in combination with pre-shredding and magnetic separation, has been commissioned at sanitary engineering manufacturer Hansgrohe (see p9).

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Optimising valve bag packing



The Pathfinder transfers bags from the Radimat – a bag separation and feeding device – to the Roto-Packjer automatic packing machine, achieving a fully automated packing line even in space-constrained plants.

Packing operations in the cement, building materials, and food industries are benefiting from greater flexibility and efficiency with Haver & Boecker's new Radimat Pathfinder edition. The Pathfinder conveyor system transfers bags from the Radimat, an automatic empty bag applicator, to the Roto-Packjer packing machine. Designed to overcome space limitations and enhance automation, the system supports improved safety and productivity. With a 20-metre length and a flexible route, the

Pathfinder enables separate positioning of the Radimat and Roto-Packjer. The fully automated setup reduces worker exposure to dust and simplifies maintenance by improving access to equipment. Haver & Boecker's solution allows facilities that previously lacked space for a bag applicator to integrate the Radimat, enhancing operational capability and safety.

www.haverboecker.com



Operations can experience great adaptability by curving the Pathfinder's route to either the left or right to transfer bags.

Enhancing sieving performance



Farleygreene's new standard Disc Oversize Outlet Control (DOSC) for the Sievmaster Slimline range of sieving machines.

Farleygreene has unveiled its latest innovation in sieving technology: the Disc Oversize Outlet Control (DOSC), now a standard feature across the company's Sievmaster Slimline range. This development represents a significant enhancement in oversize material management, designed to meet the demands of modern bulk handling industries. The DOSC system features a hygienic, easily adjustable plate and cap assembly that allows operators to control the ejection of oversize material from the sieving mesh. This reduces product dwell time, prevents material degradation, and ensures that true oversize particles are efficiently separated, thereby improving both sieving accuracy and throughput. The design allows for quick set-up and easy adjustment to accommodate various material sizes, supporting consistent product quality while saving time and reducing waste. As a built-in standard for all Slimline machines, the DOSC sits neatly within the machine footprint and enhances usability without compromising hygiene or safety. Applicable across a broad spectrum of industries—including food processing, pharmaceuticals, chemicals, and construction materials—the DOSC system is built for durability, reliability, and ease of operation. It is especially valuable in environments requiring strict contamination control and efficient material separation.

Bühler announces succession plan

Bühler Group has announced its leadership succession plans for 2026, reinforcing its commitment to long-term continuity as a family-owned business. As of January 2026, Samuel Schär is set to become CEO. Schär has been with Bühler for 20 years, having led the Nanotechnology business unit, the Grinding & Dispersing division, and most recently served as Chief Services & Sales Officer. At the 2026 Annual General Meeting, the Board of Directors will also propose Stefan Scheiber as the new Chairman. Scheiber brings 35 years of experience within Bühler, including 10 years as CEO and two decades in Group Management. He will succeed Calvin Grieder, who will step down after 25 years of leadership across several roles. This transition supports the long-term strategy initiated by Urs Bühler and continued by the fifth generation of the



Stefan Scheiber, CEO, Bühler Group.

Bühler family, ensuring the company's future as a stable, family-owned global technology provider.



Samuel Schär, Chief Services & Sales Officer, Bühler Group.

Reducing tubular cable conveyor maintenance costs

Flexicon Corporation has announced a major maintenance cost reduction for its Flexi-Disc Tubular Cable Conveyors through the introduction of replaceable sprocket tips, now standard on the system's drive and tensioner wheels. Unlike one-piece sprockets, each tip comprises two halves that bolt directly onto each spoke, eliminating the need to remove the sprocket during maintenance. This simplifies the process and minimises downtime. In terms of cost efficiency, the tips can be replaced at up to 90% less than the cost of replacing full sprocket assemblies. Beyond maintenance savings, the new design offers functional advantages. The sprocket tips feature a larger pick-up face and improved seating stability, which helps reduce



Each replaceable sprocket tip consists of two halves that bolt onto each spoke, without the need to remove the sprocket.

the contact pressure between the conveyor slug and sprocket spoke. This leads to significantly extended cable life.

A wear indicator moulded into each sprocket tip allows operators to monitor wear levels and replace components before damage occurs. This preventative approach helps protect both the sprocket and the more expensive cable-disc assembly from excessive wear or failure. The sprocket tip design is also compatible with all previous models of Flexi-Disc conveyors, offering a retrofit solution. Flexi-Disc Tubular Cable Conveyors transport bulk materials using polymer discs attached to stainless steel cables, powered by a drive system that circulates the assembly between wheel housings at either end of the circuit. This new development is designed to further enhance system longevity, reduce unplanned downtime, and lower total cost of ownership.

www.flexicon.com

Enhancing air cannon installation safety and efficiency



Martin X-Stand organises air cannons and protects maintenance staff.

Martin Engineering, bulk material flow solutions specialists, has launched a new mounting system designed to improve the safety, accessibility, and performance of industrial air cannons. Known as the Martin X-Stand, the unit provides a stable framework that allows cannons to be positioned away from extreme heat sources and congested areas, without compromising functionality or maintenance access.

Air cannons are commonly used across bulk handling industries to dislodge material blockages and buildup in

preheaters, bins, silos, and drop chutes. However, traditional installation methods often leave tanks suspended near high-temperature equipment or obstructing walkways, creating both safety and operational challenges. The X-Stand is intended to offer a practical and modular alternative, aimed at improving plant safety and equipment uptime while simplifying maintenance procedures.

Design and technical features

The X-Stand is a cube-shaped, heavy-duty steel frame available in three sizes to accommodate Martin Hurricane and Typhoon Air Cannons with 35, 70, or 150-litre tanks. The largest version measures 36x36x36 inches (91.5x91.5x91.5 cm) and weighs approximately 175 lbs (80 kg). It includes an open design for accessibility and a robust cross-bar construction to absorb vibration from repeated firing.

Central access holes at the top and bottom allow for easy connection to the cannon valve and standard ANSI flanges. Open sides simplify installation and maintenance tasks such as tank replacement and hose connection. Solenoid boxes, which control firing sequences, can be mounted directly onto the stand, further streamlining setup and servicing.

The modular design allows for flexible placement, including stacking or custom arrangements to suit specific site layouts. The cannon itself remains tethered for

additional safety, and each unit is shipped fully assembled, complete with hardware for secure mounting.

Practical benefits

By relocating air cannons off hot kiln walls or tight operational zones, the X-Stand minimises heat exposure and reduces the risks posed by obstructed walkways. This is particularly relevant in settings where access for inspection or maintenance is limited, and where slips, trips, or contact with hot surfaces can present hazards.

Field applications have demonstrated the X-Stand's effectiveness. At a cement plant, operators used the stands to relocate cannons away from a high-temperature kiln, routing pipes overhead via Y-pipe assemblies and installing safety shields. This configuration allowed for faster, safer nozzle replacements and reduced the need for prolonged exposure to hot surfaces.

Similarly, in a steel mill, air cannons originally placed in front of inspection doors were moved to stacked X-Stands a few feet back. This not only improved inspection access but also reduced heat exposure for maintenance crews. In another case, a bulk material operation rerouted pipes under a grated walkway, using upward-facing valves in the X-Stand to keep paths clear while maintaining effective clog prevention in the downspout.



Martin X-Stand set away from the hot wall with pipes running overhead.



Martin X-Stand organises air cannons and protects maintenance staff.

Functionality and reliability

Air cannons remain a proven solution for addressing material hang-ups that cause process interruptions and require manual intervention. By delivering powerful bursts of compressed air through nozzle assemblies, they dislodge material without the need for direct human contact with hazardous environments. Martin's air cannons can be fired remotely from up to 200 feet away via solenoid control systems.

Notably, Martin Engineering recently celebrated the 50th anniversary of its pioneering work in air cannon technology and holds patents for low-pressure cannon designs. The X-Stand reflects the company's ongoing commitment to safety-focused innovation.

Industry response

Initial feedback from field users of the X-Stand has been positive, with operators citing improved organisation, reduced congestion, and no noticeable decline in cannon performance due to slightly longer pipe runs or adjusted angles. Martin Engineering's testing suggests minimal power loss—only around 5% for each pipe elbow—making the trade-off for improved safety and layout worthwhile.

Field applications

Recent field tests have demonstrated the flexibility and safety advantages of the Martin® X-Stand air cannon mounting system across a range of bulk handling operations.

At a cement plant, operators repositioned cannons away from a superheated kiln wall, routing pipes overhead via Y-pipe assemblies and using Thermo Safety Shields. This arrangement allowed safer, more frequent maintenance in a less hazardous environment. Nozzle changes could be completed without interrupting production, typically in 5 to 15 minutes.

In a steel mill, ash accumulation along a hot wall was causing production issues. Air cannons installed to address the buildup initially blocked inspection door access. Relocating them onto stacked X-Stands improved both access and crew safety by reducing exposure to heat during inspections and maintenance.

At a bulk loading facility, moisture-related clogging in a downspout was compounded by air cannons obstructing walkways. By installing X-Stands with upward-facing valves and routing pipes beneath the grated platform, the facility maintained clear access for personnel while enhancing material flow.

www.martin-eng.com

Nord Drivesystems celebrates 60 years of drive innovation

This year marks the 60th anniversary of Nord Drivesystems, a leading global provider of mechanical and electronic drive technology. Founded on 1 April 1965 by G.A. Küchenmeister and Günter Schlicht, the company has grown from a small family business into a worldwide operation employing more than 4,800 people. Today, Nord serves customers across over 100 industries, offering tailored solutions through its modular product range and global network of 48 subsidiaries in 36 countries.

Nord's evolution has been driven

by consistent investment in in-house manufacturing and technological innovation. Key developments include the launch of the UNICASE housing in 1981, decentralised drive technology in 2000, and the recent introduction of high-efficiency IE5+ synchronous motors and DuoDrive systems. In 2025, NORD is adding the NXD BASIC and NXD tupH to its portfolio.

The company surpassed €1 billion in annual sales in 2022/2023, underlining its relevance across industrial sectors. In parallel, Nord is pursuing ambitious goals in sustainability and digitalisation.

Its 2025 strategy focuses on reducing energy consumption and CO₂ emissions while enhancing customer support through digital tools such as the myNORD platform and the NORD ECO

efficiency analysis service.

With continuous development at its facilities in Germany, Italy, Poland, the USA and China, NORD looks to the future with confidence. As it celebrates

six decades of success, the company remains committed to delivering reliable, efficient and innovative drive solutions to meet evolving industry needs worldwide.

www.nord.com



For over 60 years, Nord has been representing reliable and innovative drive solutions.

The importance of screen selection in nibbling applications



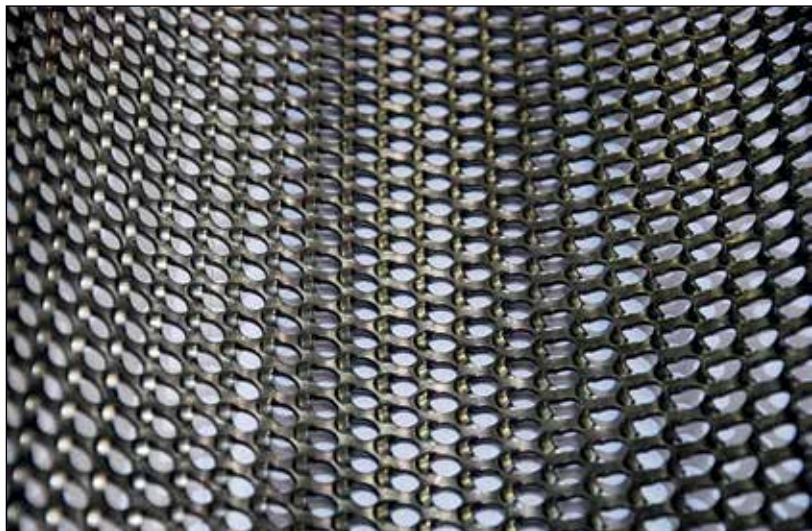
Size reduction results in rework tests.

Gericke, a long-established specialist in size reduction and particle processing, continues to refine its offering of milling and granulation equipment under the “nibbler” brand. Drawing on extensive industry experience, Gericke’s experts provide tailored advice on the optimal screen or shredder configuration based on specific product characteristics and processing goals.

The latest generation of Gericke nibblers, the GNB series, introduces new screen options designed to address a broader range of material types and production challenges. These machines are used to break down lumps, agglomerates, filter cakes, frozen materials, and rework into uniform, processable grain sizes.

Choosing the right screen is critical. For brittle materials, where minimising

fines is essential, different screen inserts are required compared to those for



Example of a screen in a Gericke Nibbler.

tough, greasy or moist materials that risk clogging the mesh. For example, dried but hygroscopic products such as those from a belt dryer require screen designs that maintain product integrity and throughput while reducing fines.

Tougher materials like cocoa, which exert higher mechanical stress on the equipment, demand reinforced graters capable of withstanding these loads. In many deagglomeration scenarios, the selected screen may not match the final desired particle size, but instead prepares the product for further processing with consistent results.

Gericke offers both loan units and access to global test centres, allowing users to determine the optimal configuration for their application. This flexibility ensures customers can balance throughput, product quality and machine longevity with confidence.

www.gerickegroup.com

Simplifying silo weighing with new mounting kit



The PR 6003 mounting kit.

Minebea Intec has introduced the PR 6003 mounting kit, a new solution for silo weighing applications designed to combine ease of installation with high accuracy and robust safety features. Engineered for demanding industrial environments, the PR 6003 offers reliable performance under challenging conditions, including wind loads, seismic activity, and vibration.

Covering a wide nominal load range from 500 kg to 75 tonnes, the mounting kit provides broad flexibility. Users can choose between mild steel and stainless steel versions, depending on corrosion resistance requirements. With permissible horizontal forces of up to 82 kN and an anti-lift device rated to withstand 120 kN, the kit offers strong mechanical protection.

The PR 6003 incorporates a range of features that simplify installation.

Its dummy function allows mounting without the load cell in place, preventing damage during setup. The optional jack-up tool enables lifting of the silo to remove safety plates without external lifting equipment. With a compact design and total weight under 20 kg, one-person installation is achievable, making it particularly suited for on-site applications.

Minebea Intec also supports users with a dedicated wind and earthquake calculation tool to assist in structural planning. According to Product Manager Yannick Salzmann, the PR 6003 is a significant evolution of the proven PR 6001, offering enhanced performance and cost-efficiency.

Now available to order, the PR 6003 mounting kit reflects Minebea Intec’s commitment to innovation and engineering support in the field of industrial weighing.

www.minebea-intec.com

Dust collector monitoring and control system

Emerson has introduced a new dust collector monitoring and control solution aimed at improving the efficiency, reliability, and environmental performance of dust collection systems used in industrial applications. Industries such as cement, mining, chemicals, plastics, food processing, and power generation often handle materials that generate significant airborne dust, requiring effective filtration to meet safety and environmental standards.

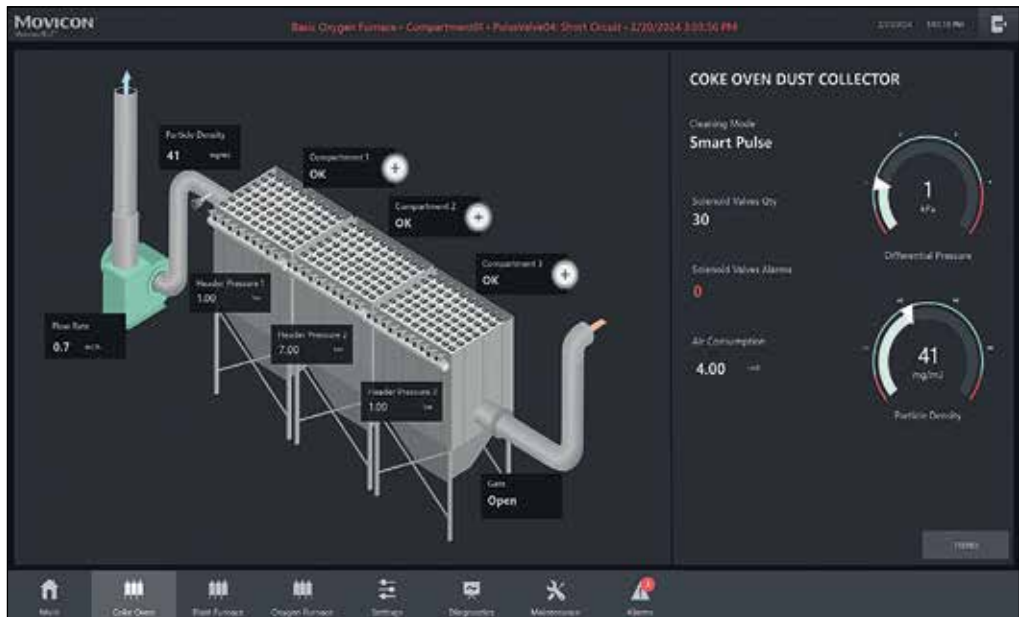
The new solution is designed to automate the monitoring and control of dust collectors, helping to ensure timely filter cleaning, detect filter failures, and manage compressed air use. By integrating with existing automation systems, it can support improved equipment performance and reduce maintenance demands.

Dust collectors vary in size and configuration but commonly include filter elements that must be periodically cleaned and replaced. Automated

systems can optimise this process by adjusting cleaning schedules based on actual performance, reducing energy and compressed air consumption. Monitoring tools also assist in identifying failed filters, supporting regulatory compliance and avoiding unplanned downtime.

Emerson’s offering includes mechanical and automation components such as pulse valves, pressure sensors, flow sensors, sequencer controllers, and HMI/SCADA interfaces. These elements support data collection, system visualisation, and control across a range of dust management applications.

According to Emerson, the system can contribute to lowering total cost of ownership and extending the service life of key components, including filters and valves. The company’s portfolio is intended to support modular upgrades or complete system integration, depending on user requirements.



Emerson’s Dust Collector Monitoring and Control Solution empowers operators with real-time insights and advanced diagnostics through intuitive HMI and SCADA interfaces.

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Pasteurisation capability added with NapaRoast integration

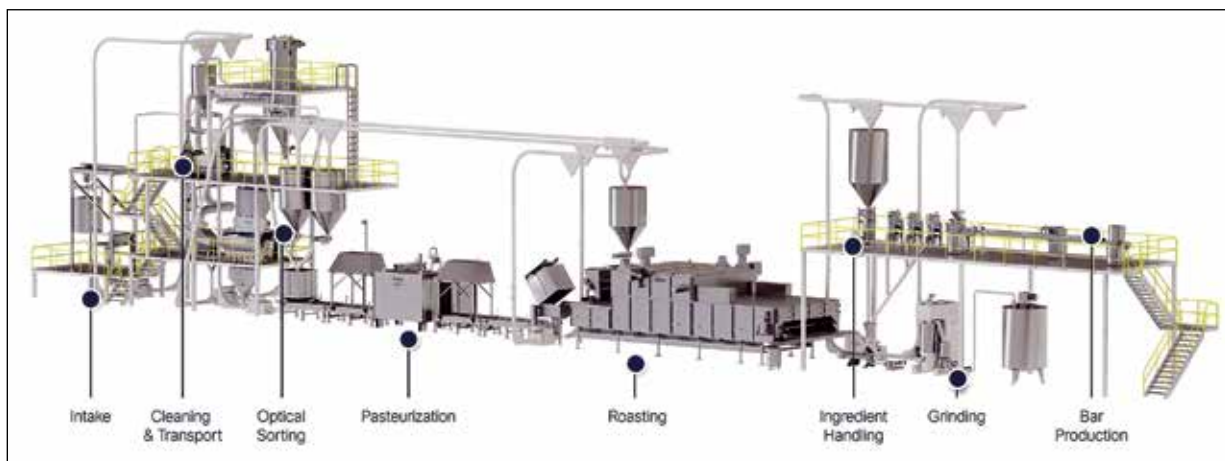
Swiss technology firm Bühler Group has enhanced its food processing capabilities by integrating NapaRoast's steam-vacuum pasteurisation technology into its product portfolio. This move strengthens Bühler's position in the growing nuts processing market, which is expanding at a rate of up to 7% annually, driven by demand for healthy snacking options.

NapaRoast's system offers a high level of microbial safety with a >5 log pathogen reduction in nuts, seeds, and other low-moisture foods. The process uses saturated steam to heat product surfaces in a partial vacuum, effectively pasteurising without the need for a drying phase. This gentle approach helps

preserve product quality, including texture, color, and flavor, while ensuring safety and regulatory compliance.

"The integration of NapaRoast puts us in the unique position to be a one-stop shop for our customers," says Cathrin Flühler, Head of Market Segment Nuts at Bühler. "It complements our existing offerings in transport, sorting, storage, roasting, and grinding, and creates synergies across the value chain."

The technology has already been implemented in over 40 facilities across the US, Europe, and Africa. Systems are available in throughput capacities from 1 to 6 tonnes per hour. The design allows bulk-bin treatment, which reduces product breakage, dust, and downtime during



The integration of NapaRoast's steam vacuum pasteurisation technology strengthens Bühler's market position in the nuts processing industry.



The Bühler NapaRoast StatiSafe pasteurisation solution.

changeovers. It is suitable for processing whole nuts, chopped ingredients, and powders.

Cameon Ivarsson, Co-Founder of NapaRoast, highlights the potential impact of the partnership: "With Bühler's global reach and engineering expertise, we see a great opportunity to expand the application of our pasteurisation solution worldwide."

To support customer training and innovation, Bühler has incorporated the pasteurisation system into its upgraded Flavor Creation Research and Training Center in Uzwil, Switzerland. The facility will open for customer trials in August, followed by a dedicated training session on November 4–5.

This strategic integration aligns with Bühler's ongoing focus on food safety, process efficiency, and sustainability in food production.



The pasteurisation process offers a high pathogen reduction of >5 log in nuts, seeds, and other low moisture foods.

Akona debuts

Akona Process Solutions made its first appearance at CHEMUK 2025, presenting its integrated material handling and processing capabilities on Stand H30 at the NEC Birmingham, 21–22 May.

The company brings together the expertise of Cablevey, Kason, Marion and Spiroflow under one brand, offering tailored systems for conveying, mixing, drying, sifting, and automation.

www.akonasolutions.com



A key feature on display on the Akona stand will be a working demonstration of the Spiroflow flexible screw conveyor.

Vortex expands in NZ



Vortex Global has expanded its long-standing partnership with Pneuway Engineering, appointing the company as its official representative in New Zealand. This development marks a strategic move to extend Vortex's presence in the region and reflects the ongoing success of the companies' collaboration in Australia.

Pneuway Engineering has established a strong track record as a trusted provider of dry bulk solids handling solutions. The new arrangement enables New Zealand-based businesses to access Vortex's full range of customisable flow control equipment with the added benefit of local support and expertise.

Essential Line launched for packaging solutions

Packaging machinery specialist Greif-Velox, based in Lübeck, has introduced the Essential Line, a new range of preconfigured filling and bagging systems designed to provide reliable performance at a lower cost with reduced lead times. The new product line includes the proven VeloVac and BVP systems, alongside the newly developed R-Dos Essential.

The Essential Line is intended for companies seeking dependable, day-to-day packaging solutions without the complexity of fully customised systems. Each model in the range is optimised for straightforward operation, integration, and maintenance while retaining key Greif-Velox design principles.

"Customers benefit from proven Greif-Velox quality, combined with streamlined processes and quicker delivery," said



(from left to right): Tobias Elsner (Greif-Velox), John E. Thompson (Trans Automation Technologies), and Sebastian Pohl (Greif-Velox).

Managing Director Sebastian Pohl. "This enables manufacturers to adjust more quickly to production demands."

The line includes:

- **R-Dos Essential:** A compact liquid filling system with optimised controls and reduced variants, already available. It addresses approximately 80% of common liquid filling applications.
- **BVP Essential:** A pneumatic bagging system for granular materials, available from early 2026. It features a robust design and modular integration.
- **VeloVac Essential:** Currently in development, this system targets the packaging of ultra-light powders using a vacuum process. It will offer simplified planning and a modular structure.

A dedicated section on the Greif-Velox website provides a detailed overview of the Essential Line, its application areas, and contact options.

www.greif-velox.com/essential-line



R-Dos Essential.

• Greif-Velox has also announced a new partnership with U.S.-based Trans Automation Technologies, which will serve as the official sales partner for Greif-Velox in California. The collaboration aims to expand Greif-Velox's market presence in the U.S., particularly within the food industry, and facilitate local value creation in response to tariff-related considerations.

The partnership combines Greif-Velox's packaging machinery expertise with Trans Automation Technologies' experience in robotic and PLC-based automation, including Rockwell Automation and Fanuc systems. This allows for enhanced system integration and better alignment with U.S. technical standards.

Joint projects are planned nationwide, focusing on automation and end-of-line solutions such as palletising and transport systems.

Equipment rebuilds and upgrades on offer

Haver & Boecker, a manufacturer of packing, palletising and bagging equipment based in Oelde, Germany, has expanded its support services to include equipment rebuilds and upgrades designed to extend the service life of existing systems and improve overall operational efficiency.

The company's rebuild and upgrade services are intended for customers operating legacy equipment that may still function reliably but lack the features found in more recent models. These services offer an alternative to full equipment replacement and can help adapt existing systems to updated

safety, energy efficiency, and operational standards.

A core component of this offering is the Performance+ Kit series, which includes modular upgrade options. One such kit, the Roto-Lock Performance+ Kit, replaces legacy dosing components with a more enclosed and sealed system. This reduces dust emissions and product loss and is compatible with equipment models including the Roto-Packer, Integra, Elementra, and Adams packing machines. Haver & Boecker currently offers over 120 kits in areas such as sealing, drive systems, and digital control technology.

In addition to modular upgrades,

the company provides Performance+ Rebuilds, which are more extensive and address aging equipment where spare parts availability and increasing maintenance demands become concerns. These rebuilds can improve processing speed, reduce material waste, and reduce the wear on associated equipment. For example, one rebuild project involved a 36-year-old Roto-Packer system. The upgrade included improvements to filling and dosing technology, resulting in improved product handling, better air control, and increased line performance.

All rebuild and upgrade services fall within Haver & Boecker's PROcheck lifecycle framework. This process typically begins with a Plant Optimisation Plan — an on-site evaluation of current equipment and operations. Following this assessment, customers receive a report outlining recommended upgrades or retrofits, which may include hardware replacement or modifications to improve maintenance accessibility.

These services are aimed at manufacturers seeking to maintain production reliability while incorporating incremental technological improvements. The rebuilds and upgrades are designed to support continued use of existing equipment while aligning with changing production and regulatory needs.

www.haverboecker.com/en/product-solutions/rebuilds-and-upgrades



Customers benefit from updated technological innovations - such as Performance+ Kits and other options which modernise their process and prolong equipment lifespan - without the larger investment of replacing a machine or equipment line.

Lightweighting standard with PET bottle innovation

KHS, in collaboration with Canadian firm Husky Technologies, has developed what it claims to be one of the world's lightest PET bottles for still beverages. The new design, known as Factor 101, weighs just 5.89 grams while holding 591 milliliters - equivalent to the US 20-ounce format.

Building on KHS's 2017 Factor 100 concept, the latest iteration incorporates key structural enhancements. Reinforced webbing, a redesigned shoulder, and a pop-in base collectively provide a top load of 220 newtons, surpassing industry benchmarks for bottle strength and stability.

Achieving this required close integration between KHS's bottle design and Husky's preform injection moulding expertise.

Adjustments to preform geometry and precise temperature control during stretch blow moulding allowed for significant material reduction without compromising performance.

Compared to the typical 7-gram PET bottle used for 500-milliliter still water in the US, Factor 101 reduces plastic use by approximately 30%. The bottle can also be manufactured entirely from recycled PET (rPET).

Despite its low weight, the bottle maintains high-speed line compatibility, handling up to 90,000 units per hour. First presented at NPE 2024 in Orlando, Factor 101 is already drawing strong interest from contract fillers in the US, Middle East, and South America.



Consistent concept: from preform through blown PET container to filled, labelled and capped bottle.

Signal light for hazardous environments

Visual monitoring plays an important role in safety-critical industrial settings, particularly in hazardous zones where environmental conditions may present operational challenges. The NivoLED NL 9000 signal light from UWT is designed for use in such areas, supporting process monitoring and status indication.

The NL 9000 provides 360-degree visibility and features a dual-colour LED system (red/green) to indicate operational states or faults. It can be applied in various settings, including silos, tanks, control cabinets, and processing equipment.

The unit is certified according to ATEX, IECEx, and cFmus standards for use in potentially explosive environments. Its housing is made from PVDF plastic and is rated to IP66/ NEMA Type 4X, offering resistance to dust, moisture, and some chemicals. The specified operating temperature

range is -40°C to +60°C.

The NL 9000 is available with different thread options (M20x1.5, NPT 1/2") and is compatible with standard relay and transistor outputs, allowing integration into existing control systems. The LED technology used is designed to reduce energy consumption and support extended operation with minimal maintenance.

Applications include chemical, petrochemical, food and beverage, pharmaceutical, energy, and waste management sectors, where visual indicators are used to support routine operations, safety protocols, or equipment status monitoring.

The NL 9000 is available as part of UWT's broader product offering aimed at monitoring and control in industrial environments. Further technical specifications and installation guidance are available from the manufacturer.

Managing plant room temperatures

As summer temperatures rise, ensuring vacuum pumps remain cool is essential to maintaining their performance and longevity. Most vacuum pumps are designed to operate in ambient temperatures up to 40°C. When this threshold is exceeded, overheating can occur, leading to rapid oil degradation, increased maintenance requirements, equipment failures, and costly production downtime.

In high-temperature environments, the oil within a vacuum pump breaks down more quickly, meaning more frequent oil changes are necessary, which drives up operating costs. If temperatures within the plant room climb beyond the design limit, pumps may overheat and fail, interrupting processes and potentially incurring expensive repairs.

Proper plant room ventilation is critical in preventing such issues. Natural ventilation—relying on vents and louvres—is often insufficient, especially during warmer weather, unless large portions of walls are vented. In confined plant rooms, forced ventilation using fans is often required

to maintain acceptable temperatures. As ambient temperatures increase, the frequency of air changes must also rise. For instance, in a plant room measuring 8m x 4m with 25kW of heat output, up to 79 air changes per hour may be required when the outside temperature is 30°C.

To calculate required airflow, a simple formula can be used: Heat emission (kW) x 200 = ventilation flow (m³/h)

Additional heat management strategies include installing exhaust piping to vent hot

air outside—reducing internal heat by up to 35%—and using heat recovery systems, which can capture up to 80% of the energy to heat water. Plant room layout is also important, ensuring good air circulation and separating heat-sensitive equipment.

Managing plant room temperatures effectively extends vacuum pump life and reduces costs. With expertise in thermal management and vacuum systems, Busch offers tailored advice and solutions to meet specific operational needs.



Busch vacuum pump.

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TestCenter expanded to support sustainable cement production



With the completion of the renovation of its TestCenter in Darmstadt, Qlar now offers its customers comprehensive support in the simulation of mixing processes.

Qlar (formerly Schenck Process) has expanded its TestCenter in Darmstadt, Germany, to support customers in testing material blending and dosing processes - particularly for sustainable cement production. The updated facility now enables detailed simulation and evaluation of alternative material combinations used to reduce clinker content in cement, which is a key strategy for lowering CO₂ emissions in the industry.

The expanded TestCenter allows customers to conduct trials using additives such as granulated blast furnace slag, fly ash, calcined clay, and recycled materials. The aim is to determine optimal mixing ratios and assess material compatibility before large-scale production.



Our goal is to play a leading role in implementing solutions and validating clinker substitutes in order to significantly reduce CO₂ emissions in cement production,' says André Appel, Head of the Test Centre in Darmstadt.



The new circulation system at the TestCenter allows different products to be combined with one another and accuracy tests to be carried out using different measuring principles.

The upgraded facility includes a closed-loop system equipped with the MULTICOR S mass flow meter and the LIW Feeder MET screw feeder. The MULTICOR S measures material flow up to 7 tonnes per hour with an accuracy of $\pm 0.5\%$, using the Coriolis principle. This precision enables reliable blending of materials with varying particle sizes. In combination with the screw feeder, two-component processes can be simulated, with initial mixing occurring as the material passes through the measuring wheel.

According to Qlar, customers can analyse the results of these trials to fine-tune their production parameters. The facility complements Qlar's existing test capabilities, which include weighing, feeding, and pneumatic conveying. In addition to Darmstadt, Qlar operates testing facilities in Prague and Doncaster, focusing on alternative fuels and conveying systems respectively. An initial trial with an international cement producer has been completed, and further test series are underway.

www.qlar.com/services/testing

Precision-Flo circular screening technology launched



Kason Vibroscreen circular screener.

Kason Corporation, now part of the newly formed Akona Process Solutions brand, has introduced an innovation in circular screening technology: Precision-Flo. As a specialist in screening, sifting, and processing equipment, Kason's latest development is intended to improve the efficiency of adjusting eccentric weights in its Vibroscreen circular screeners.

Traditionally, adjusting eccentric weights has been a slow and complex task, often requiring tools and partial disassembly. The Precision-Flo system eliminates these challenges with a tool-free mechanism that allows rapid adjustment—ideal for initial setup or ongoing amplitude modifications for different materials.

In circular screeners, the top eccentric weight controls the radial material flow across the screen, with heavier weights increasing horizontal amplitude. The bottom weight drives vertical motion, essential for clearing clogged apertures. Precision-Flo simplifies these critical adjustments without the need for extra weights or complex configurations.

Key benefits of Precision-Flo include tool-less adjustment, time efficiency, no additional weights required and airlift compatibility.

Since February 2024, all new Vibroscreen models up to 72 inches feature the Precision-Flo design. Existing units can also be retrofitted in about an hour, ensuring customers benefit from the latest advancements in screening performance.

Checkweigher updated with smart production packages

Mettler-Toledo Product Inspection has introduced updates to its C31 StandardLine Checkweigher, adding a series of smart production packages designed to improve functionality and adaptability for small- and mid-sized food manufacturers. The changes aim to address ongoing requirements for regulatory compliance, data accessibility, and production efficiency.

The C31 StandardLine Checkweigher now includes a two-belt conveyor

system as standard and features a modular design to accommodate varying operational needs. The system is intended for use in both dry and wet environments and supports inline weight control through its Intelligent Weighing Automation system, reducing the need for manual checks.

Lead times for the updated C31 are now set at three or more weeks (excluding packing and shipping), allowing for quicker integration into existing production setups.



The C31 StandardLine Checkweigher.

The newly introduced smart production packages offer optional, pre-configured tools for manufacturers seeking to tailor their checkweighing operations. These packages include:

- **Reporting Package:** Offers automated batch and hourly output reporting, data interface tools, and print support for compliance with net weight regulations.
- **Sorting Package:** Enables air blast or pusher-based product sorting, includes error messaging, and provides conveyor stop functions for non-compliant product detection.
- **Connectivity Package:** Provides integration with remote control systems and SCADA or ERP platforms via VNC Server, OPC UA, and Fieldbus interfaces, supporting real-time monitoring and planning.
- **Integration Package:** Detects and alerts operators to repeated process errors, with additional controls for line start/stop and fault signals to assist with production monitoring.
- **Cost Control Package:** Includes feedback control and error detection to help reduce over-filling, material waste, and associated costs.

Each package is optional and can be added as needed, allowing manufacturers to scale the system's capabilities according to operational requirements. Customers can also combine features into a single package to reduce the cost compared to sourcing components individually.

The C31 Checkweigher and its Smart Production Packages are positioned to support various objectives such as regulatory compliance, process optimisation, and digital integration.

www.mt.com/cw-c31-guide

Electrohydraulic fragmentation enables recycling milestone

In early 2024, Hansgrohe Group commissioned what is considered the first industrial-scale facility for electrohydraulic fragmentation and material separation of electroplated plastic components. The facility, designed in partnership with ImpulsTec GmbH, achieves a material purity of over 99.8% by mass, enabling the reuse of both plastic and metal fractions in premium sanitary products.

Electroplated plastic components have long posed challenges in recycling due to the complex bonding between metal coatings and plastic substrates. Conventional recycling processes typically focus on extracting only one material - most often the metal - while the remaining materials are downcycled or discarded. This has limited the potential for true circular use of resources and has made recycling these components economically inefficient. The new process developed by Hansgrohe and ImpulsTec addresses this limitation by enabling the separation of materials with high precision and minimal loss in quality.

At its production site in Offenburg-Elgersweier, Germany, Hansgrohe now

operates a custom facility that integrates pre-shredding, shockwave fragmentation, and magnetic separation. The facility processes chrome-plated ABS plastic components—such as shower housings, pipe collars, and control knobs—which are commonly used in Hansgrohe's high-quality product lines. Due to stringent durability requirements, these components require a strong bond between plastic and metal, which historically made material separation difficult during recycling.

David Zapf, a surface technology specialist at Hansgrohe, played a key role in initiating this project. His exploration of ImpulsTec's technology during his academic studies in 2019 led to a collaboration that began in 2021. The development phase included adapting the shockwave process for Hansgrohe's specific components and integrating additional steps such as pre-shredding and magnetic separation. After extensive testing and optimisation, the facility began operations in early 2024.

The shockwave fragmentation process, based on electrohydraulic principles, uses a high-voltage arc discharge within

a water bath to generate shockwaves. These mechanical pulses pass through the pre-shredded material, separating the bonded layers of metal and plastic without excessive damage to either material. The water used in the process is continuously filtered and reused in a closed-loop system.

The facility is modular in design, comprising three weather-resistant container units. This setup accommodates Hansgrohe's need for outdoor installation within a limited footprint of 22 metres by 10 metres. The first container houses the pre-shredding and screening system, producing uniform granulate. The second container contains the shockwave treatment unit. The final container is used for drying the output and separating the material fractions using magnetic processes.

The result of this multi-stage treatment is a plastic fraction - making up 70 to 80% of the output - that meets the required >99.8% purity level for use in new, high-grade components. The remaining fraction, composed of copper, nickel, and chrome from the galvanic coating, is sent to metal recyclers. According to ImpulsTec



As the galvanised parts to be recycled are of different sizes and complexity levels, the first container deals with pre-shredding and includes a screening column.

Managing Director Stefan Eisert, each step of the process was developed and refined to meet Hansgrohe's performance criteria for purity and operational reliability.

Operating on a standard 8-hour shift for approximately 250 days per year, the facility can process around 100,000 kg of chrome-plated plastic annually. Zapf notes that the process enables reuse of approximately 98% of the raw materials from production waste. This directly supports Hansgrohe's circular economy goals, reducing the demand for virgin resources and lowering the environmental impact associated with sourcing and manufacturing materials. The company has already applied some of these recycled materials in commercial products, including the Pulsify Planet Edition, introduced in 2023.

The successful integration of electrohydraulic fragmentation marks a notable development in recycling technology for complex material composites. It demonstrates a practical, scalable solution to separating tightly bonded material layers, which could otherwise not be processed effectively with existing methods.

The collaboration between Hansgrohe and ImpulsTec also opens the door to further applications. Zapf mentions that the company is now exploring whether this technology could be applied to complete, end-of-life products returned by customers. This would represent a further advancement in Hansgrohe's sustainability strategy, potentially closing the loop on the full product lifecycle.

From ImpulsTec's perspective, the Hansgrohe facility serves as a proof of

concept with broader industrial relevance. Eisert sees potential for this technology in other sectors, such as automotive and electronics, where composite materials are common and difficult to recycle. Future applications may include the separation of materials from circuit boards, electronic housings, and vehicle components at the end of their usable life.

Electrohydraulic fragmentation, while still relatively uncommon in Germany, has shown that it can address some of the limitations of traditional recycling methods, particularly in cases involving tightly bonded materials with differing properties. The development and commissioning of Hansgrohe's pilot facility show how targeted innovation and cross-sector collaboration can lead to practical improvements in materials recovery and reuse.

With an emphasis on precise separation and high material purity, this approach may serve as a model for other manufacturers seeking sustainable solutions for production waste. The process does not rely on high-temperature incineration or chemical treatment, offering an energy-efficient and environmentally responsible method of recovering valuable resources.

Hansgrohe and ImpulsTec have shown that, with the right investment in technology and development, it is possible to overcome one of the more stubborn challenges in modern industrial recycling. The integration of this system not only aligns with corporate sustainability targets but also enhances resource efficiency and economic viability.

www.hansgrohe-group.de
www.impulstec.com



An in-house-designed facility for stripping chrome-plated plastic parts through shockwave treatment, in combination with pre-shredding and magnetic separation, was commissioned at sanitary engineering manufacturer Hansgrohe at the start of the year.

Key appoints EMEA/Asia MD

Key Technology, part of Duravant's Food Sorting and Handling group, has appointed Robert van Dorst as Managing Director for EMEA and Asia.

Based in the Netherlands, van Dorst will lead strategies to deliver Key's optical sorting, conveying, and automation systems to food processors across Europe, the Middle East,

Africa, and Asia.

With over 20 years of executive experience in high-tech manufacturing, van Dorst brings strong international leadership and a proven track record in driving growth. His appointment supports Key's commitment to expanding capabilities and service across rapidly developing global markets.



Robert van Dorst, Managing Director for EMEA and Asia, Key Technology.

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Signal light for hazardous environments

Visual monitoring plays an important role in safety-critical industrial settings, particularly in hazardous zones where environmental conditions may present operational challenges. The NivoLED NL 9000 signal light from UWT is designed for use in such areas, supporting process monitoring and status indication.

The NL 9000 provides 360-degree visibility and features a dual-colour LED system (red/green) to indicate operational states or faults. It can be applied in various settings, including silos, tanks, control cabinets, and processing equipment.

The unit is certified according to ATEX, IECEx, and cFmus standards for use in potentially explosive environments. Its housing is made from PVDF plastic and is rated to IP66/NEMA Type 4X, offering resistance to dust, moisture, and some chemicals. The specified operating temperature range is -40°C to +60°C.

The NL 9000 is available with different thread options (M20x1.5, NPT 1/2") and is compatible with standard relay and transistor outputs, allowing integration into existing control systems. The LED technology used is designed

to reduce energy consumption and support extended operation with minimal maintenance.

Applications include chemical, petrochemical, food and beverage, pharmaceutical, energy, and waste management sectors, where visual indicators are used to support routine operations, safety protocols, or equipment status monitoring.

The NL 9000 is available as part of UWT's broader product offering aimed at monitoring and control in industrial environments. Further technical specifications and installation guidance are available from the manufacturer.



Brenntag opens first CO₂-emission-free chemical distribution site



Brenntag, specialists in chemicals and ingredients distribution, has inaugurated the first CO₂-emission-free chemical distribution site globally. For this purpose, the site in Traun, Austria, has been upgraded in terms of energy efficiency and a redesign of the entire energy system in recent months. The site is now considered a blueprint and global lighthouse project for Brenntag's other around 600 sites in more than 70 countries worldwide.

In total, more than €1.5 million was invested in reducing energy consumption

in a very holistic concept through thermal building renovation and control optimization of the heated acid/alkali tanks, converting the heating system to groundwater heat pumps and low-temperature radiators, as well as covering the electricity requirements for the heat pump, site consumers and e-charging stations by installing a photovoltaic system. The total savings amount to around 120 tons of CO₂ per year, which is roughly equivalent to the total energy consumption of 50 households per year. The

photovoltaic system will generate around 220,000 kWh of electricity per year at 220 kWp and thus cover the annual consumption of the two heat pumps (73 and 110 kW).

Political and public representatives took part in the inauguration and were invited to the Ribbon Cut Ceremony on May 30. They welcomed the investment in sustainability and industrial jobs, showing great interest in details of this modernized site in one of Europe's major industrial regions.

Other Valves Fight Friction, We Designed it Out

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

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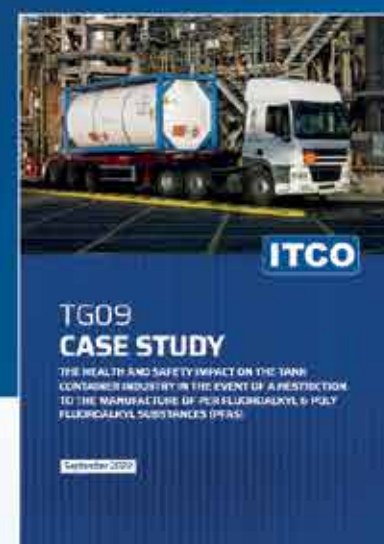


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Planning ITCO Events in 2025

ITCO will be arranging three important events in 2025:

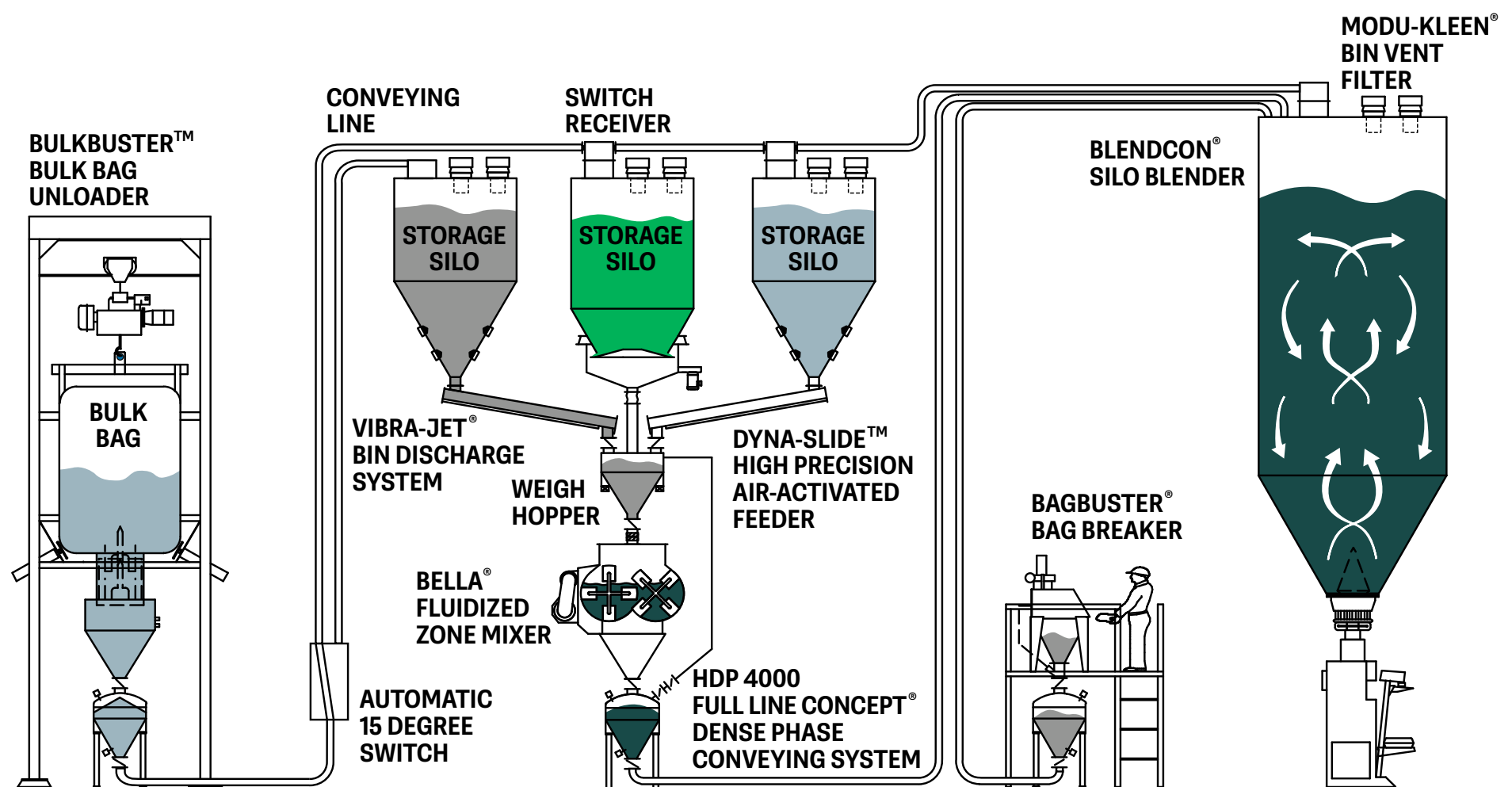
- Tank Container Digitalisation and Efficiency Conference - Antwerp, April 2025
- Tank Container Village at transport logistic 2025 - Munich, June 2025
- ITCO 2025 Annual Members Meeting - Singapore, November 2025

Further details on www.itco.org

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