



Product News

BEUMER Group supplies robust and reliable Packaging Lines for the Petrochemical Industry

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Machines used in petrochemical plants must be especially reliable and robust. Because if breakdowns occur, the owner can face costs in the millions. The BEUMER Group supplies complete packaging lines, from bagging to packing. At AICHEMA in Frankfurt, the system provider informed visitors about the new modular design of its machines and increasing connectivity and digitalization, including service. BEUMER expert Rafael Imberg explains in detail how users can profit from all these factors.



Rafael Imberg is Head of Petrochemicals Sales at the BEUMER Group.
(Pictures: ©BEUMER Group GmbH & Co. KG)

“The packaging line is at the end of the process chain. If it comes to an unexpected breakdown forced by a machine failure, there is a high risk that the upstream equipment such as extruders have to be stopped as well,” says Rafael Imberg, Head of Petrochemicals Sales at the BEUMER Group. “Every hour of such a shutdown can cost a company hundreds of thousands of euros – in one day, that can run into the millions.” Then you have the costs for operating resources, spare parts and maintenance needed to eliminate the problem – and let’s not underestimate lost business opportunities and damaged customer confidence. “In the petrochemical industry, robust and reliable operation of the machines is becoming increasingly important,” says Imberg. “This is why we’ve revised the design of our packaging equipment and made it modular.”

Complete Packaging Lines in the Program

At AICHEMA 2022 in Frankfurt am Main, the full-range supplier for packaging lines presented its BEUMER fillpac FFS on a booth area of 125 square meters. The system forms bags from a prefabricated PE tubular film and fills them reliably and gently. After filling, the bags are sealed. The machine is designed for a speed up to 2,800 bags per hour in this way. “We’ve installed the machine on a movable platform for the trade show,” Imberg reports. “We aim to show our visitors how they can flexibly fill their products in practice and with maximum performance at customers with several silos.”



The BEUMER fillpac FFS forms bags from a prefabricated PE tubular film and fills them reliably and gently.

After closing, the bags are safely and reliably stacked on a pallet for transportation. The BEUMER paletpac is ideal for this process. The system can also be individually adapted to the different requirements of the chemical industry. It achieves a throughput of up to 3,200 bags per hour. The system provider’s product range includes the BEUMER stretch hood high-performance packaging system for end-of-line packaging. The stretch film adapts to any stack. It is very stretchable and fixes the material on the pallet using horizontal and

vertical contracting forces – so this process offers high load stability.

Modular for more Simplicity

“Not only have we designed all these series to be tough and resilient, but with the new modular design, the same or similar components and modules are also installed in the systems, and – wherever feasible – we’ve implemented as identical a design as possible,” says Imberg. This reduces the number of spare parts, speeds up delivery times and makes maintenance easier. All the series in the packaging line also have the same look and feel, so an employee can easily operate a BEUMER paletpac, even though he had only worked with the BEUMER stretch hood, for instance. This also helps get to know the different machines more quickly.



The BEUMER paletpac can be individually adapted to the different requirements of the chemical industry.

The modular design also creates even more advantages. “If the user demands more performance, we can increase it on the machines relatively easily at a later date. All we have to do is reach into the construction kit,” says Imberg. Customers expect ever-higher performance, and suppliers drive each other due to fierce competition. This is what we need to respond to. Whether the system needs to be retrofitted or damage needs to be repaired, the user benefits from a significant time advantage with the new design.

Interconnected and intelligent

“If desired, we can also connect all the machines and components with a higher-level control system – the BG Software Suite,” says BEUMER expert Imberg. The

BG Fusion visualization also provides the operator with a web-enabled user interface for configuration, monitoring and reporting. With this module and the dashboards, all the information that the system provider collects using data analytics in the machine can be clearly and understandably displayed. Machine data, error messages and information on operation and maintenance are prepared so that each user finds it a simple matter to start using the data – for predictive maintenance, for instance.

Know when the Machine fails

The big question: How can maintenance be planned so we can rule out a sudden shutdown? For example, the customer wants a maintenance shift once a month. In other words, he deliberately shuts down the machines but also wants to ensure that they'll operate perfectly afterward. If an unplanned failure occurs, he won't always have the necessary tools or personnel on hand to get the system up and running again.

Data analysis can also be used to extend the service life of the components. "Time and again, our customers approach us and ask when a certain component, such as an engine, needs to be replaced," says Imberg. "After 10,000 hours of operation? We can rarely make a sweeping statement like this because it always depends on the environmental conditions. How is the machine set up, for example, and how is it maintained?"

If it is possible to monitor engines, sensors and cylinders in operation, for example, and to detect weak points electronically, a replacement can be scheduled for the most suitable time. One example: If the engine becomes unusually hot, the service technicians can deduce its condition from this. This information avoids a sudden failure because the software gives an alarm in time.

Networked from Silo to Warehouse

The system provider's scope of supply starts at the customer's site below the silo. The product falls into the bag, which is palletized, and the entire stack is covered with a stretch film hood. The BEUMER Group's Warehouse Management System (WMS) can also be connected via the BEUMER software. This can assign the goods for storage, via barcode, for example, or via an RFID or QR code. Forklifts equipped with readers "know" where to take the pallets and feed that information back to the system. "Our software can network the entire system from the silo to the warehouse," says Imberg. "Our goal is to minimize interfaces and offer the customer everything from a single source."

The petrochemical industry is still a relatively conservative sector and is reacting very hesitantly to digitalization, despite the high level of data security. “We naturally mention this possibility to users,” Imberg reports. “And we’re noticing that interest is growing.”

Making Work easier with Intelligence

“In terms of operation and maintenance, we want to relieve our customers of as many tasks as possible – the keyword here is Smart Factory,” says Imberg. “We’re working hard on that.” The personnel’s level of knowledge can vary considerably depending on the location, and employees in emerging markets are increasingly unwilling to take on repetitive tasks. The outcome of this is that fewer and fewer workers are available. “With our BG Fusion software, we can provide our customers with excellent support in this regard and make their work easier. However, the topic is far from exhausted,” says BEUMER expert Imberg. “At the BEUMER Group, we leverage our experience and developments from the Airport and Logistics business segments, such as intelligent service and visualization concepts, and are determining whether we can apply them to our packaging solutions.”

Service with BEUMER Smart Glasses



Digitalization continues to grow: With Smart Glasses, BEUMER Customer Support can tell the customer exactly what to do since the technician sees the same as the wearer on site.

However – what if a malfunction occurs or the machine fails? “We send our localized technicians to customers worldwide to support operators and prevent longer downtimes,” explains Imberg. BEUMER Customer Support also offers a hotline available around the clock every day of the year. However, a complex problem cannot always be described quickly and clearly on the phone. This is why the BEUMER Group developed a futuristic product – the BEUMER Smart Glasses. “We use it to virtually look over the shoulder of the customer’s service technician

and troubleshoot together with images and sound,” says Imberg. The customer can use the Smart Glasses to quickly send a picture to the BEUMER expert, who can also send a picture back. This digital solution reduces time-consuming travel and high additional costs. “The next level of remote diagnostics used to be the telephone, but now it’s voice and picture,” says Imberg.

For greenfield and brownfield Projects

BEUMER Group develops its solutions for both greenfield and brownfield projects. This is important because the system provider supports many systems that have already been installed worldwide. Many customers often opt for a retrofit years later, and in most cases, this is also unavoidable due to the spare parts situation or process changes. In these cases, BEUMER technicians replace older components and increase performance via the software.