



# **CHEMICAL LOGISTICS** **MADE DIFFERENT**

# INTEGRATED SYSTEMS AND SERVICES



Customer: Clariant GmbH, factory: Gersthofen, Germany

As a world-leading system solutions provider, the BEUMER Group knows the chemical industry inside out. We provide an exceptional one-stop shop service for our customers worldwide with a complete portfolio of integrated warehouse management, materials transport, and conveying and packaging technology to individually tailored customer service programmes.

Our deep insight into the complex working processes in the logistics area makes us the perfect partner for service and support for your company.

## WE KNOW YOUR INDUSTRY: CHEMICAL LOGISTICS

Since 1935, the specific characteristics, products and challenges of the chemical industry have been our daily business. The BEUMER Group knows the risks when dealing with sensitive materials and the complexities involved in their handling and transportation – and what it takes to organise the entire process from start to finish.

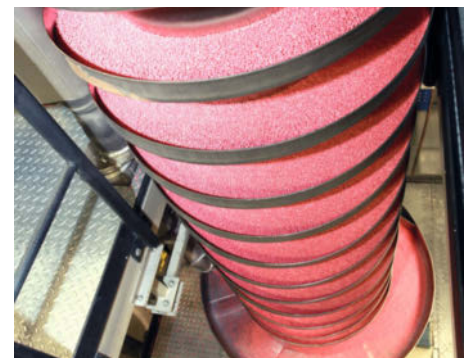
The chemical industry requires full attention 24/7, and even the smallest disruption can have far-reaching consequences on profits, reputations and brands. A reliable partner understands its customers' products and processes inside out and knows how to responsibly handle sensitive, valuable materials. We're happy to take up these challenges – which require innovative thinking and precision engineering.







*Our experts are on hand at a moment's notice, 24/7.*



*The BEUMER Group is a trusted provider of intralogistics solutions for the chemical industry worldwide. We work closely with customers to develop innovative, application-specific systems and processes.*

## INTEGRATED SOLUTIONS – EVERYTHING FROM A SINGLE SOURCE

Our global support network and vast pool of specialist knowledge and high-quality products give the BEUMER Group the unique advantage of being able to provide support for every customer and every project. We support our fully integrated systems with flexible maintenance and post-installation support programmes to secure our customers' continued success.

We take the time to understand our customers' production situations to be able to implement an innovative, individually tailored solution – whether it involves a new technology or product, process optimisation, cost savings or improvements to their warehouse management.

## WORLD-CLASS SERVICE – WORLDWIDE SUPPORT

The BEUMER Group delivers leading customer service of a unique depth and breadth in our industry. Engineers, experts and technicians are available 24/7 in our global sales and service network. Around the clock, around the world – with support specifically geared to your needs.

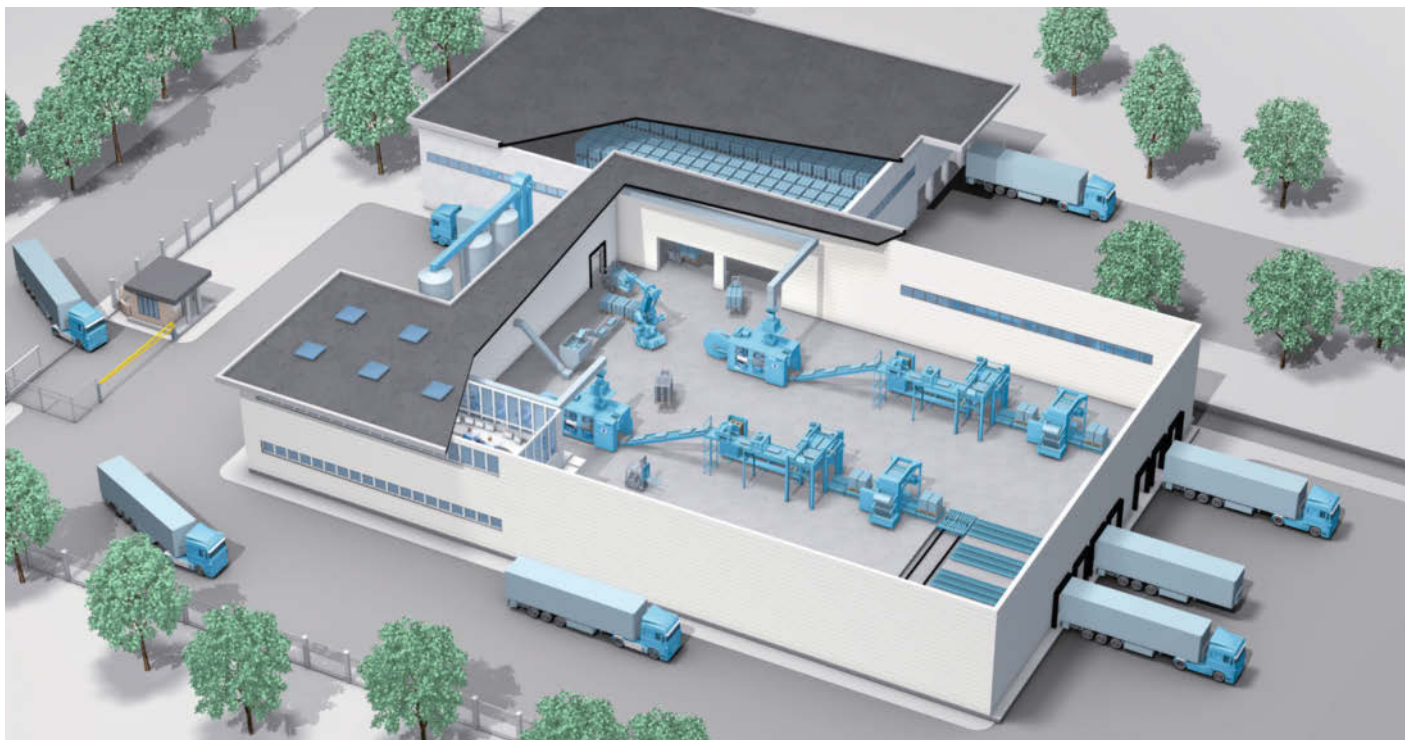
The BEUMER Group is a people-focused company that builds strong partnerships through personal relationships and individual attention. Our local offices, service centres and support teams are active worldwide and can adapt quickly to any situation or customer need.

## ONE-STOP SUPPLIER

The BEUMER Group brings everything together under one roof:

- › **Partnerships** – we listen, develop solutions, take care of your needs
- › **Technology** – we know about conveying, loading, palletising and packaging technology
- › **Logistics** – we plan, transport, install, commission and perform maintenance
- › **Control** – we deliver customised, location-specific software for your warehouse management
- › **Service** – world-wide customer service and support programmes

# END-TO-END WAREHOUSE MANAGEMENT SYSTEMS



We know that system integration is more than just management software – it requires optimising processes continually from start to finish. That's why we configure BEUMER warehouse management systems individually to match each customer's exact specifications. Thanks to in-depth analyses of the starting situation and the requirements, our solutions can be integrated seamlessly into the existing overall concept at a later time.

## THE BIG PICTURE CONSISTS OF SMALL DETAILS

Chemical companies run highly complex processes that require a careful balance of management at both the micro and macro level. The control systems designed by the BEUMER Group are therefore especially intelligent and fit perfectly with BEUMER equipment and existing infrastructures.

Effective solutions require complete control over material flow and distribution. From goods receipt through storage and retrieval, advanced picking, sorting and order assembly to dispatch, BEUMER systems help customers optimise their logistics operations at every point and thus improve overall efficiency.

## SOPHISTICATED WAREHOUSE MANAGEMENT SYSTEMS

BEUMER's user-friendly warehouse management systems were specifically designed to control complex logistics processes. Powerful and flexible, these systems can easily be tailored to suit different business segments, no matter what the requirements, size or specifications.

Our software solutions provide an overview of all your processes at any time and, with the help of numerous specific parameters, support optimisation of the following areas:

### BEUMER BEPRO SYSTEM

The BEUMER BePro system digitally monitors the sequence of operations and the machines on the production line. If necessary, it also draws the attention of the control room to situations such as malfunctions or machines that need refilling. The system functions autonomously, but also merges seamlessly into a production environment controlled by a BEUMER warehouse management system.

### BEUMER STRETCH HOOD®

The vertical BEUMER hood stretching machine efficiently packages the pallets loaded in the previous step in special shrink films. The extremely resilient, weather-resistant packaging of highly sensitive products guarantees the safety of goods during storage and shipment. When it comes to flexibility in packaging products and handling pallets, the BEUMER stretch hood® series is unchallenged.

### WAREHOUSE MANAGEMENT SYSTEM

The BEUMER warehouse management system (WMS) is the central intelligence behind the entire merchandise management process. It controls goods input, the packaging and warehousing processes, coordinates the forklifts and ensures that the goods retrieval process runs smoothly. It develops its full potential in interaction with a BEUMER BePro system for digital machine monitoring. Both systems can, however, also be operated independently or as a component in an existing IT infrastructure.

### FORKLIFTING GUIDE

A state-of-the-art forklift guide system makes sure that goods can be loaded without long intermediate storage. The BEUMER warehouse management system quickly and efficiently coordinates the processes.

### BEUMER PALETPAC®

The palletising machine stacks the individual bags delivered by the conveying system onto pallets securely with minimum space requirements. The BEUMER paletpac® is tailored specifically to the requirements of the chemical industry, which is its main area of application. The ventilated stacking table minimises friction when handling the PE bags before the machine stacks the valuable products of the chemical industry in the desired form.

### RETRIEVAL

The moment drivers announce their arrival at the gate, the BEUMER warehouse management system initiates the process of picking the goods to be collected. A magnetic card is used at the appropriate loading ramp to ensure that the correct goods scheduled for collection are loaded onto the right lorry.

- › Warehouse and production management
- › Product tracking
- › Forklift transportation
- › Productivity and efficiency
- › Avoidance of errors during storage and shipping
- › Process transparency

As with all products from the BEUMER Group, our warehouse management systems are subjected to multistage testing during installation. Detailed simulation and emulation ensures that the system design meets all requirements, and training programmes ensure that users are fully up to speed with its operation.

### COMPLETE CONTROL

The BEUMER Group warehouse management solution incorporates a web server application that enables operators to map all logistics processes to be able to control, coordinate and monitor them. The software can be flexibly adjusted to the needs of the customer and provides multiple extra functions.

### SOPHISTICATED, USER-FRIENDLY USER INTERFACES

The graphical user interface (GUI) clearly shows all information from the entire line, both from BEUMER components and third-party components, and creates statistical analyses of various machines and subsystems. On an optional basis, the interface can also be configured with multiple access levels.

# COMPREHENSIVE SOLUTION FOR FORMING, FILLING & SEALING



Accurate and careful filling and bagging ensure top-quality palletising, and are the first step in getting your products to their final destination. As a partner to the chemical industry, the BEUMER Group has developed an innovative and comprehensive system that does everything fully automatically, from forming and filling through to sealing the bags.

## BEUMER FILLPAC® FFS

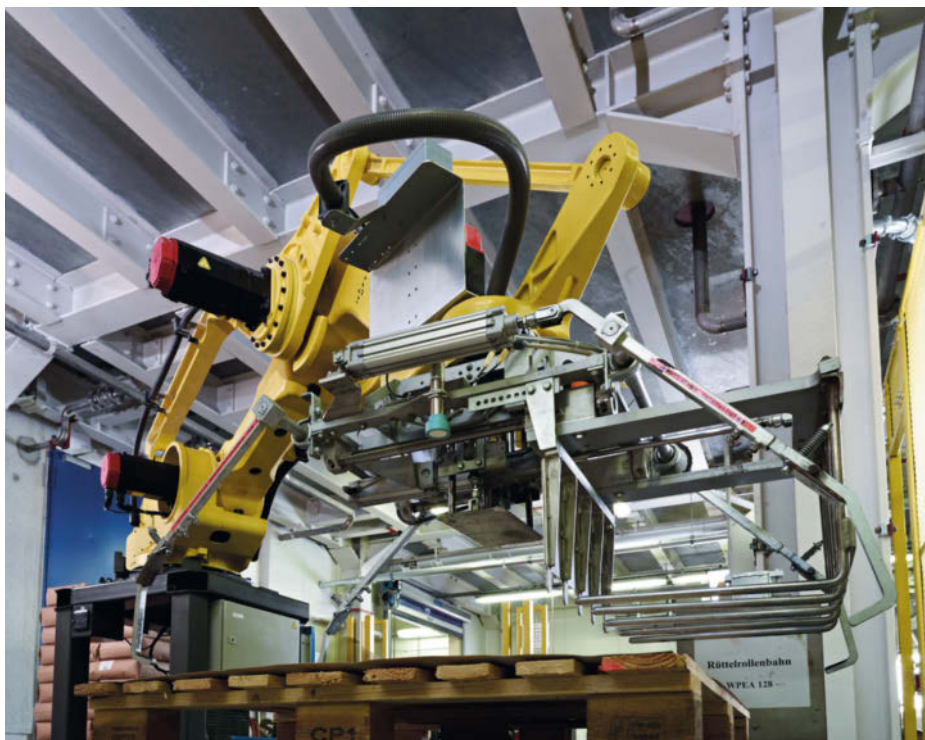
BEUMER fillpac® FFS forms bags from prefabricated PE tubular film and fills them both reliably and carefully. The bags are then automatically sealed. The BEUMER fillpac® FFS can form, fill and seal up to 2,600 bags every hour. An integrated weighing system ensures that filling is accurate to the last gram.

Besides being easy and highly flexible to use thanks to the many options that it offers, the BEUMER fillpac® FFS also stands out on account of its sturdiness and ease of maintenance. Bags are moved extremely smoothly with no swinging, which keeps wear to a minimum.



# PALLETISING SYSTEMS

## END-OF-LINE LOGISTICS



BEUMER robotpac® series, reference system at Clariant GmbH



Fork gripper takes and stacks high-quality, bagged amide wax powder.

End-of-line palletising plays a critical role in safeguarding products for delivery and later processing, and also for the earning power of the entire packaging system. The BEUMER Group's expertise in this area goes beyond specialised requirements; when it comes to packaging materials, we know how to handle highly sensitive products, high temperatures, unusual flow properties, different bulk densities and different packaging materials.

### EFFICIENT. EFFECTIVE. SAFE.

The BEUMER Group offers a complete range of palletising systems that integrate flexibly into an overall production and warehouse management process. Our innovative technology provides reliable and fast throughput of goods, and also ensures that your products reach the end customer safely and properly protected.

Due to their robust, flexible designs and great economic appeal, the various designs of the BEUMER robotpac® and BEUMER paletpac® systems are widely used throughout the chemical industry.

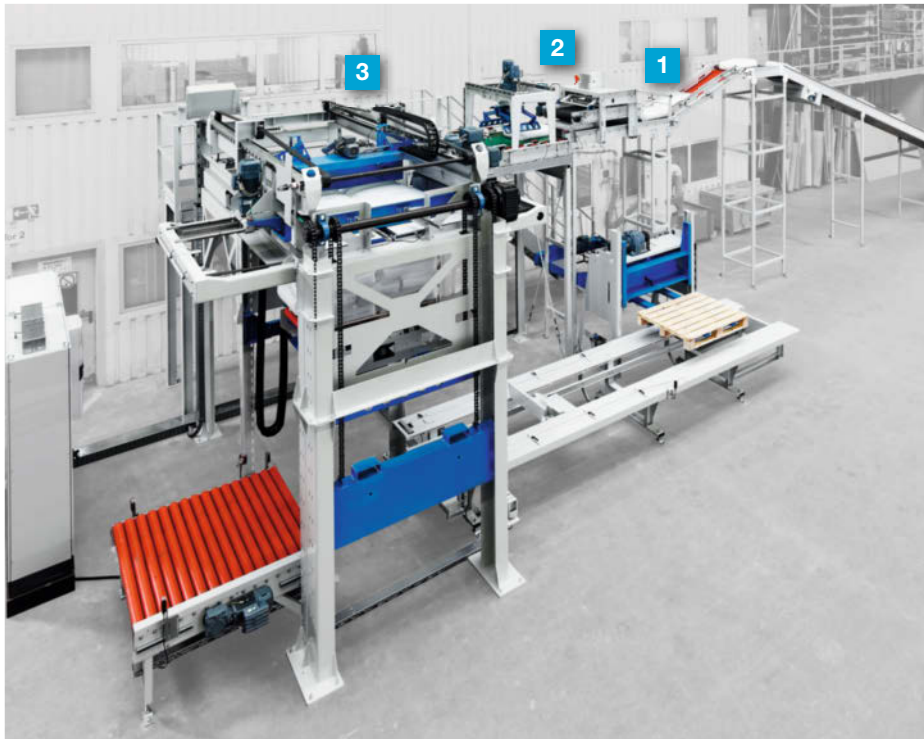
### BEUMER ROBOTPAC®

The BEUMER robotpac® systems palletise and depalletise any type of package using specially developed sector-specific and task-specific gripper tools. The BEUMER adjustment control system ensures simple operation and a smooth flow, even for complex processes with varying parameters. Reliably and efficiently.

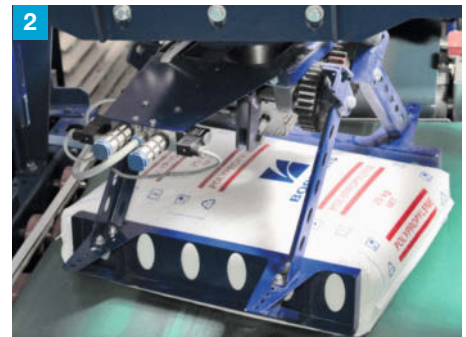
BEUMER robotpac® systems stand out especially on account of their energy efficiency and maximum accuracy during palletising, including in very small areas. They are suitable for simultaneously bagged products (batch processing) and can be reconfigured very easily for frequent product changes.

# PALLETISING SYSTEMS

## END-OF-LINE LOGISTICS



BEUMER twin-belt turning device



BEUMER clamp-type turning device



BEUMER ventilated stacking table

### BEUMER PALETPAC®

BEUMER paletpac® systems provide excellent stacking quality and reliability and can be individually adapted to the various demands of the chemical industry. The IE2 energy-saving motors provide for a throughput of up to 2,500 bags per hour, whereby the unique design minimises friction via a ventilated stacking table or special coatings. With a wide range of models, the BEUMER paletpac® systems provide the perfect blend of performance and precision.

### BEUMER BARCODE SYSTEM – FOR FAST ALLOCATION

The BEUMER Group's barcode system ensures that your products can be uniquely identified and features all important information about product designation, storage site, special handling requirements, inventory and production dates. We offer it as a conventional barcode system and an RFID system. Both systems can be used together for greater security.



# FLEXIBLE PACKAGING SOLUTIONS



*The BEUMER stretch hood® systems offer better load stability, higher throughput, reduced film consumption and measurable energy savings.*



*Our flexible systems are designed for high throughput and energy efficiency.*

All BEUMER packaging systems work based on the 3P™ principle, which intelligently ensures sustainability for end-of-line delivery. Our systems thus flexibly cover a comprehensive range of solutions for the protection of palletised load units – from weatherproofing to transport packaging and much more.

## COMPLETE PACKAGING PORTFOLIO

End-of-line packaging plays a critical role in protecting your products. That is why BEUMER's full range of packaging systems has been designed for high-quality end-of-line packaging results, cost control and reliable operation.

Our powerful packaging machines combine the latest technology, highly advanced functional modules and a unique film handling system that efficiently meets the diverse demands that packaging products for shipment entails.

## BEUMER STRETCH HOOD® A

Whether you are dealing with plastic granulates, fertiliser, powder or other chemical substances, the BEUMER stretch hood® A high-performance packaging system brings everything under the film hood efficiently with minimum space requirements: it takes up only 13.7 m². The innovative film transport system guarantees safe and rapid tool changes straight from the floor. Optimised processes improve plant availability and reduce the number of film roll change cycles.

## BEUMER STRETCHPAC®

The BEUMER stretchpac® is used for low unit quantities in combination with a robot loading system. It packages up to 100 stacks per hour.

# TAILORED CONVEYING SOLUTIONS



Customer: terrasan Haus- + Gartenbedarf GmbH & Co. KG

BEUMER pallet conveying systems are the perfect answer for products with specific transportation requirements. Engineered especially to handle the extreme conditions found in chemical production, our comprehensive range of customised conveying solutions is as broad as our customers' challenges and needs.

## ROLLER, PALLET AND BELT CONVEYING

BEUMER roller, pallet and belt conveyor systems are ideally suited to the transportation of sensitive products. We understand the challenges involved when dealing with delicate materials and have developed innovative ways to overcome them, including systems for heavy loads, extreme temperatures, toxic goods and high bag stacks.

BEUMER conveying systems also use IE2 energy-saving motors and drive elements with frequency converters that enable systems to be started up and shut down gently to accommodate sensitive materials.

## CUSTOMER-SPECIFIC SOLUTIONS

The BEUMER Group designs, installs and maintains application-specific and product-specific conveying systems for the chemical industry, worldwide. Using efficient and reliable technology, we offer the right solution for every requirement.

# WORLD-CLASS CUSTOMER SERVICE



*The BEUMER Group is a people-focused company that builds strong partnerships through personal relationships and individual attention.*

The BEUMER Group is known the world over for providing individually tailored customer service based on a global network of regional service centres. Our on-site support solutions keep your systems running 24/7, 365 days a year.



## CUSTOMER CARE

Our customer care programme entitles you to multiple service options, such as maintenance and repair on site through our field service engineers or regular safety checks according to statutory rights. If hardware replacements are needed, our comprehensive warranty service ensures you are always covered.



## MODERNISATION

We are constantly developing new ways to upgrade our software and hardware to extend a system's lifetime, lower energy costs and increase efficiency. We will keep you informed of all relevant upgrade opportunities, based on an understanding of your business and system needs.



## TRAINING AND QUALIFICATION

We offer standard and tailored customer training programmes to make sure your teams are fully qualified to operate your systems. With hands-on guidance, your teams can maintain optimal operational performance.



## PARTS LOGISTICS

We guarantee spare part replacements around the world through our local companies. As a BEUMER Group customer, you will have your own individual contact to assist you with technical inquiries, warranty issues or repair orders and to secure that your order is delivered on time.



## HOTLINE SUPPORT

Our hotline support is manned 24/7 by highly trained, multi-skilled engineers who all have at least four years of direct field experience. Most cases are solved remotely, however, should the problem require more specialised attention, a BEUMER engineer will be quickly sent out.



## RESIDENTIAL SERVICE

With our residential service, we are on-site every day to take complete responsibility for your system uptime, performance and operational efficiency. We can take care of all maintenance and management.



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sustainability based on their economic, environ-  
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the BEUMER Sustainability Index (BSI).*