



SOLUTIONS WITH POWER



ENGINEERING FOR SMART SOLUTIONS
Let us shape the future together.

www.koehl-mb.eu



„Our mission is to develop innovative, tailor-made solutions for and with our customers“.

„The digital networking of industrial processes presents us and our customers with new challenges. KÖHL Maschinenbau can look back on a 45-year tradition in which we have successfully responded to market changes with innovative technology and a broad portfolio.

Thanks to our high engineering know-how, we will continue to be the strategic partner for innovative concepts and „smart solutions“ in order to fully exploit the potential of Industry 4.0 in the future.

For our 180 employees from the Tobacco Technology, Intralogistics, Robotic Systems, Automation and Manufacturing-IT business units, partnership-based cooperation and flexible response to individual customer requirements are at the forefront. The target-oriented and competent

consideration of the task leads to tailor-made system solutions in very different dimensions and varying industries.

The world is becoming more interactive and more complex - all the more reason for many customers to appreciate KÖHL Maschinenbau's general contractor concept. The big advantage: from consulting to planning to integrated implementation, you are in dialogue with us“.

Stefan Hahn
Managing Director



„Qualified and determined employees are the pillars of our international success“.

„The success of KÖHL Maschinenbau is based on motivated and well-trained employees. Their creativity and determination have established us in the international market as a partner for technologically highly efficient plants.

Whether in engineering, design, production or in the final assembly of our plants on site - our qualified teams realise the most demanding projects with commitment, competence and flexibility.

In addition, we offer a further customer advantage with our own production facilities. Here the KÖHL products from the fields of conveyor technology & logistics, robot systems and tobacco technology. Modern equipment such as CNC sheet metal working, metalworking shop, metal cutting, and painting is available for this purpose.

The lean company hierarchy and the synergy effects between the KÖHL business areas ensure direct contact between the responsible employees, e.g. in order to clarify technical production questions directly and constructively.

This enables us to react flexibly to changing customer requirements or planning specifications - sometimes even within a narrow time corridor“.

Norbert Theobald
Managing Director

KÖHL portfolio at a glance

We bundle our core competencies into tailor-made turnkey solutions.



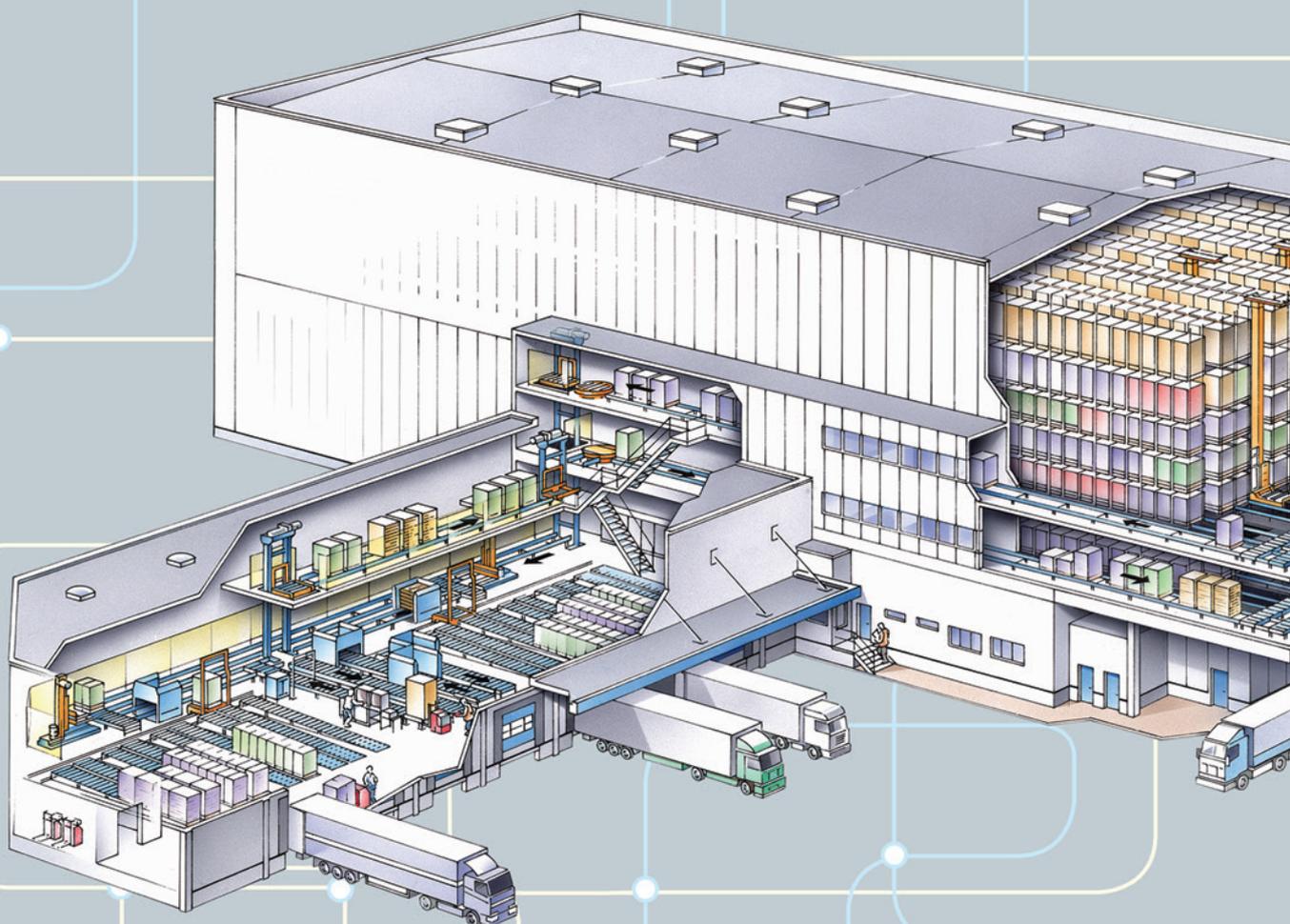
INTRALOGISTICS



ROBOTIC SYSTEMS



TOBACCO TECHNOLOGY

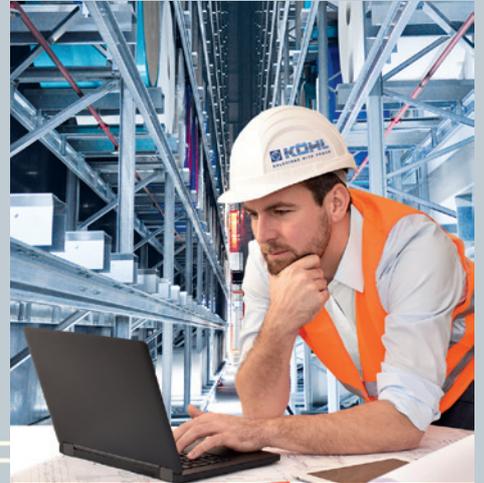




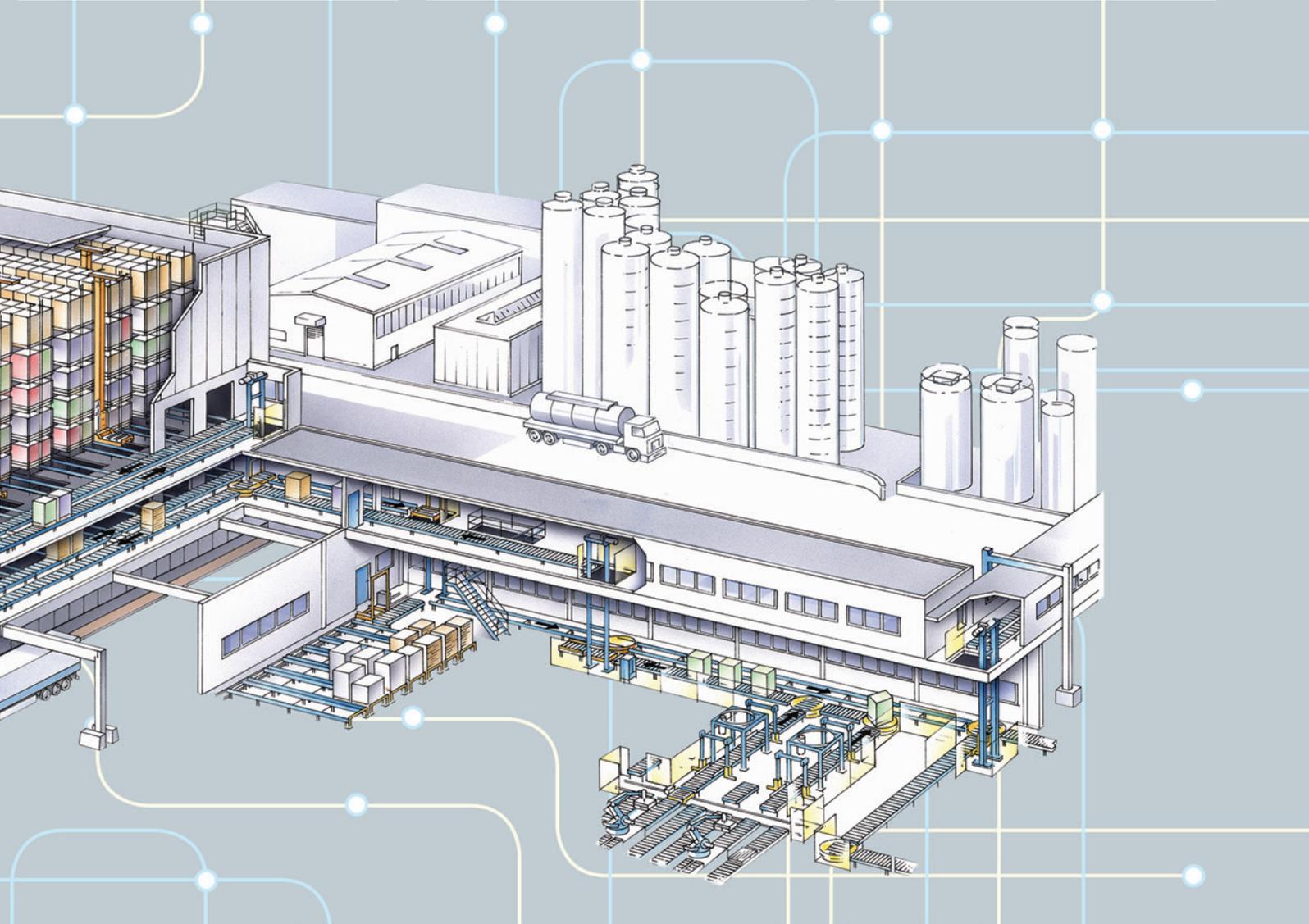
AUTOMATION



MANUFACTURING-IT



AFTER SALES SERVICE



KÖHL Intralogistics 4.0

High-end technologies - individually designed and intelligently networked

Complex and heterogeneous intralogistics processes require an efficient coordination of the Warehouse and conveyor technology with robot-based automation and digitalized management (warehouse management system) or control (material flow system). KÖHL Maschinenbau combines these key technologies into a complete system tailored to the customer.



FEATURE FACTS

- Conveyor systems for pallets, containers & roller boxes
- Packaging lines for pallets
- Traversing carriage systems
- Vertical conveyor systems
- Flow storage
- Delivery systems

As a general contractor with engineering competence and industry know-how, we implement high-bay warehouse & conveyor systems that significantly optimize the internal supply chain. Depending on the requirements profile, we design the most economical solution for the customer with a wide range of storage and transport variants.

A further advantage is the in-house production of conveyor systems that are built to meet specific requirements. After installation by our assembly team, we take over the commissioning and accompany you after the turnkey handover with training and after sales services.

Smooth intralogistics processes require modern digitization. The KÖHL business units Robotic Systems and Manufacturing-IT establish automation solutions that make your supply chain more productive and transparent.

Robot-based palletizing, packaging or loading guarantees high precision and availability; the implemented IT infrastructure with its data analysis tools provides actual information and predictive calculations about events in the warehouse and material flow.



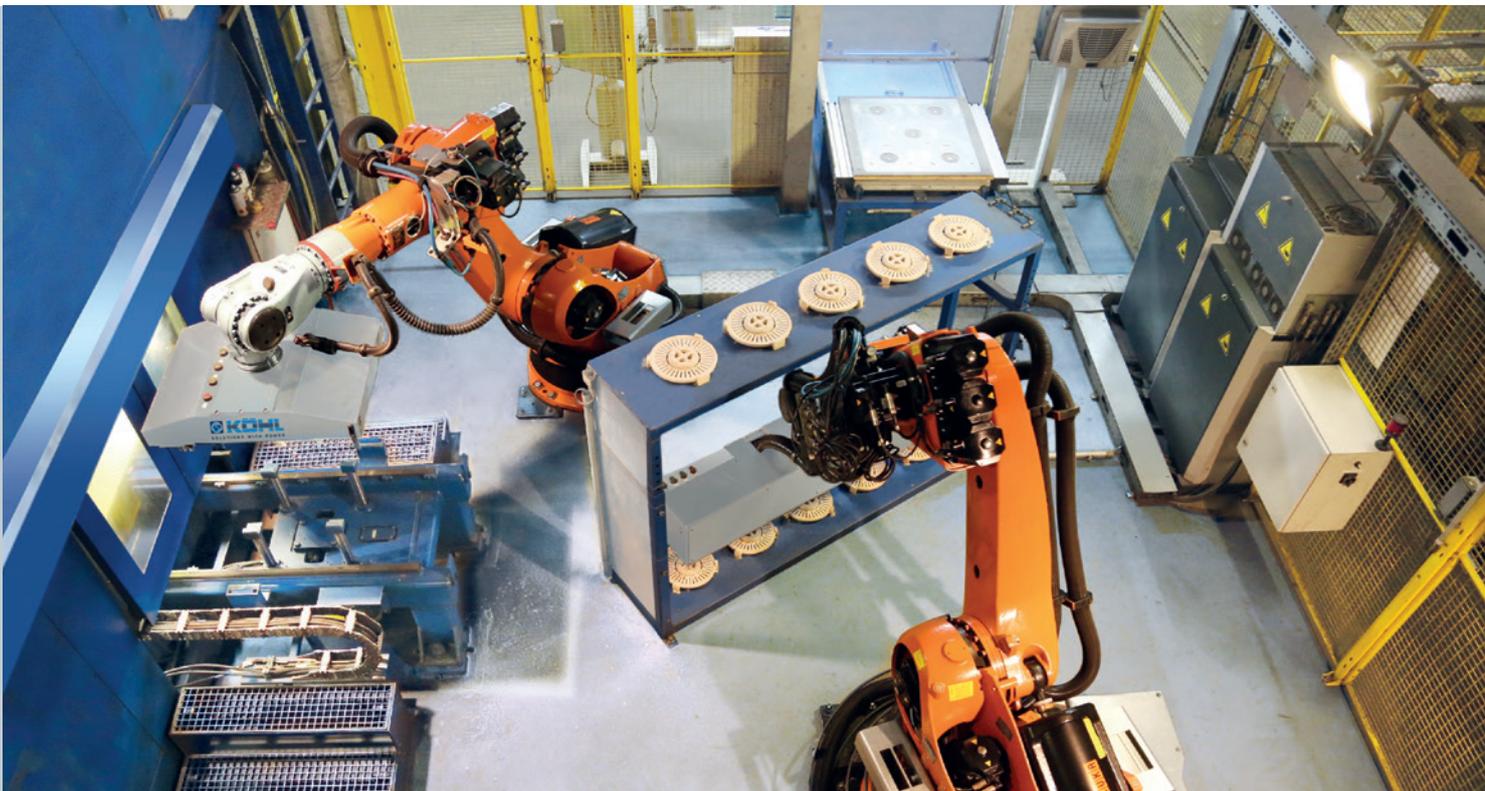
FEATURE FACTS

- **Storage systems:**
Silo high-bay & in-house warehouse, single & multiple location warehouse
- **Loading units:**
Pallets, paper rolls, containers
- **Bearing variants:**
Single, double & multiple depths
- **Stacker cranes:**
Single & twin-mast construction
- **Load handling attachments:**
Telescopic forks (single, double, triple deep)
- **Technical solutions:**
Curved walker, energy feedback systems, positioning systems
- **Steel construction:**
Construction, delivery & assembly, Roof & wall conving

KÖHL Robotic Systems

Complex automation solutions - realized task & industry specific

KÖHL Maschinenbau specializes in robot-based production processes and is familiar with demanding requirements in a wide variety of industries. The Robotic Systems business unit develops task and customer-specific applications and supplies the entire range from cells to complex process systems - even in special designs, e.g. for particularly harsh environments.



Robots are the key technology for making production methods more user-friendly, faster and with high precision. After an extensive consultation and planning phase, our team of experienced specialists designs specific grippers for the industrial robots so that they can perform their tasks in the conveying and order picking sector in a highly flexible and autonomous manner.

This includes palletizing & depalletizing, packing & loading, pick & place, processing & assembly, track & trace and other handling tasks.

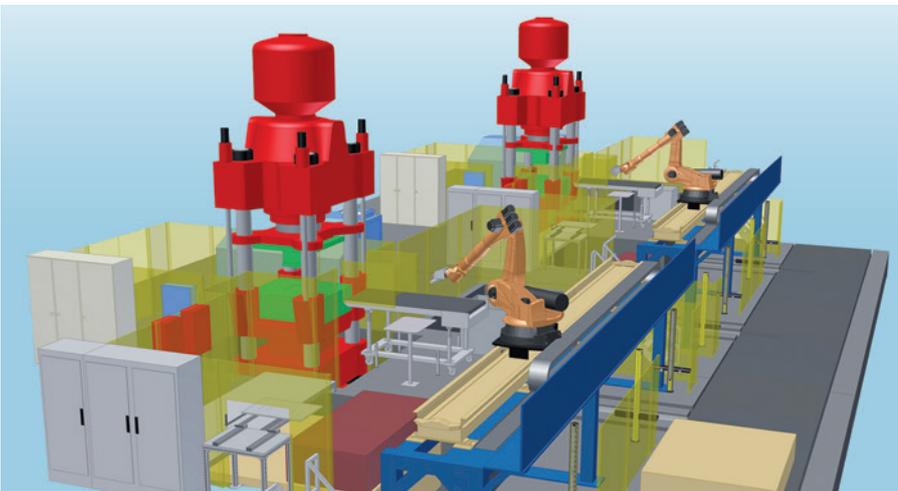
Using 3D simulation tools, the complete production plant is constantly tested virtually, i.e. interactions of the robots used with the production machines are checked, machine movements evaluated and material flow calculations carried out.

Our robot-based automation and IT solutions enable companies to react highly effectively to capacity requirements and goods flows and to align their production smartly.



FEATURE FACTS

- Planning & commissioning of the complete process plant
- Plants for palletizing, depalletizing and handling tasks
- Robot applications with special gripper technology
- Plant control with integrated robot control
- User-friendly control & visualization
- Vision systems identify chaotic lying products
- After-sales service: Helpdesk, Remote, Diagnostics, Maintenance



The system simulation checks and analyses the functionality before commissioning.

KÖHL Automation

Productivity-enhancing industrial automation for all requirements

Industrial automation must respond to the increasing digitalization of manufacturing processes with state-of-the-art solutions. For our qualified team of engineers, factors such as individualization, resource efficiency and rapid availability have always played a central role in the development of highly complex automation solutions.

KÖHL Automation looks back on more than 45 years of experience and offers an outstanding service portfolio: Drive technology, industrial communication, operating and monitoring systems, PC-based automation, industrial software, process analytics, identification systems, switching technology and services.

Professional planning and implementation has the clear objective of reliably and securely networking machines and systems in order to achieve greater efficiency and productivity.

KÖHL also demonstrates its innovative strength in the design of isolated solutions. For example, we achieve maximum production transparency with the “**Part-Trace-System**” specially developed for the casting industry; or we guarantee modern adaptation to your existing plant with our **K-Retrofit “Panel update on Windows 10”**.

If you want to save energy sustainably, you can decide in favor of our **Eco.On** energy management system, which automatically records all energy-relevant data in accordance with ISO 50001 (ff) and evaluates them for optimization measures.





eco.on
ENERGY MANAGEMENT SYSTEM



FEATURE FACTS

- Industrial automation (SPS, sensors, actuators etc.)
- Plant visualization (SCADA systems)
- Bus-based safety concepts (Profisafe / ASI)
- Production control & process data analysis
- Control console applications
- Electrical & mechanical installation
- **Eco.On** energy management system according to ISO 50001 ff.
- **Part Trace System** for more transparency in the casting industry
- **K-Retrofit** for Panel update to Windows 10

KÖHL Manufacturing-IT

Software competence for the interactive, smart process world



Today's production processes are characterized by a large number of data interfaces and the switch between automated and manual activities.

Our Manufacturing-IT division focuses on mapping them in real time and analyzing them in a value-adding manner.

We develop software solutions for you that achieve high variability and availability. Composed of intelligent modular components, they can be integrated into existing systems for an entirely digitalized value chain.

Ensuring product quality, optimizing production processes and making them transparent: these are the essential benefits of modern information and communication systems. Strategic, individually scalable solutions are intelligently networked.

The KÖHL team, consisting of experienced high-level language programmers, plans and implements IT infrastructures that intelligently connect the merchandise management level with the control systems in production - the physical production world merges seamlessly with the digital information streams.



FEATURE FACTS

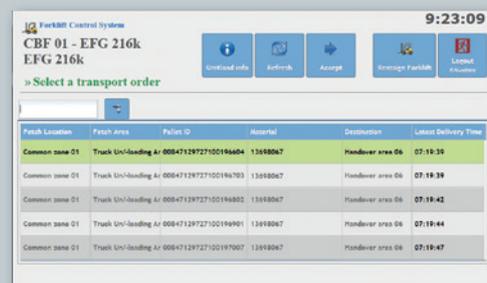
- **WMS & MFS:** Warehouse Management & Material Flow Systems
- **MOM95:** Efficient interoperability between business and production levels
- **AOS:** Production Planning & Control Systems
- **EBR:** all relevant batch & production data are available electronically at all times
- **OEE:** Machines / production data acquisition with evaluation
- **Reporting system:** Machine & production data acquisition and evaluation
- **Track & Trace:** Systems to ensure product quality and traceability
- **Process visualization:** Documentation of the production process as well as the current production progress based on an Oracle database
- **Image processing:** from simple inspections to complex optical measuring tasks



Automatic Order Scheduling



Overall Equipment Effectiveness



Stacker control system

HEINEN-KÖHL Tobacco Technology

Pulse generator for innovative system solutions with high customer benefit

HEINEN-KÖHL is the more competent partner for the international cigarette & tobacco industry. In the areas of tobacco processing and secondary, logistics and automation, we plan and implement high-end technologies and innovative products that simplify production and make it more effective.



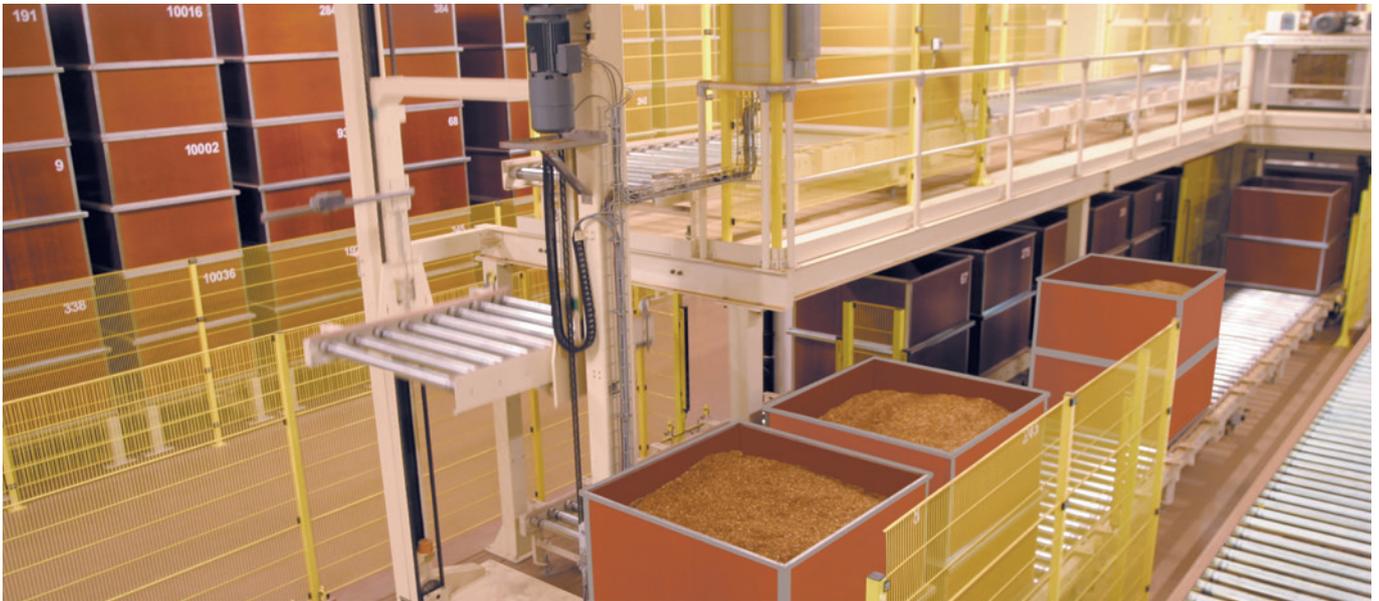
HEINEN-KÖHL sees itself not only as a supplier of individualized components, but also as a driving force for smart, operative complete solutions. Synergy effects to the KÖHL business fields Intralogistics, Automation and Manufacturing-IT are used to implement process optimizations and achieve more productivity.

We are in close dialogue with our customers! This enables us to quickly identify technical potential in production and respond to it with innovative solutions. In this context, our **Flavour Application System FAS** and the **Label Coding Extension LCE** are a prime example.

Whether improvements in detail or new developments: HEINEN-KÖHL supports the tobacco industry with a future-oriented product portfolio.



FAS Flavour Application System



FEATURE FACTS

- Complete tobacco processing plants
- Special systems for Primary & Secondary
- Innovative tobacco process & flavour solutions
- Highspeed Laser Coding Systems (1100 packs/min.)
- Track & Trace
- **Logistics:** Bin & Case Filling, Bin Handling & Feeding, End-of-Line Palletizing
- **Automation:** control & automation solutions, SCADA systems, warehouse management & material flow systems



LCE Laser Coding Extension



DCP Dual Chamber Processing

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