

AUTOMATION IN PRODUCTION AND INTRALOGISTICS

SMART SOLUTIONS FOR HANDLING, LOGISTICS, ASSEMBLY
AND QUALITY ASSURANCE





AUTOMATION IN MANUFACTURING

Efficient automation solutions for flexible and high-performance production processes



With automation solutions from **REIS ROBOTICS**, you can boost the efficiency, flexibility and future-proofing of your production. We integrate robotics, machinery and peripheral equipment into a perfectly coordinated end-to-end solution that simplifies and accelerates your processes in the long term.

From material handling and parts transport, through pick-and-place applications, to machine loading and flexible manufacturing cells, you receive end-to-end automation from a single source. All process steps are intelligently linked together to reduce throughput times, increase productivity and ensure consistently high quality.

Material handling – reliable and efficient

- Reliable and automated parts transport
- Precise handover between process steps
- Reduction in manual handling
- Optimised material flow
- Flexible integration into existing production environments

Pick & Place – precise and flexible

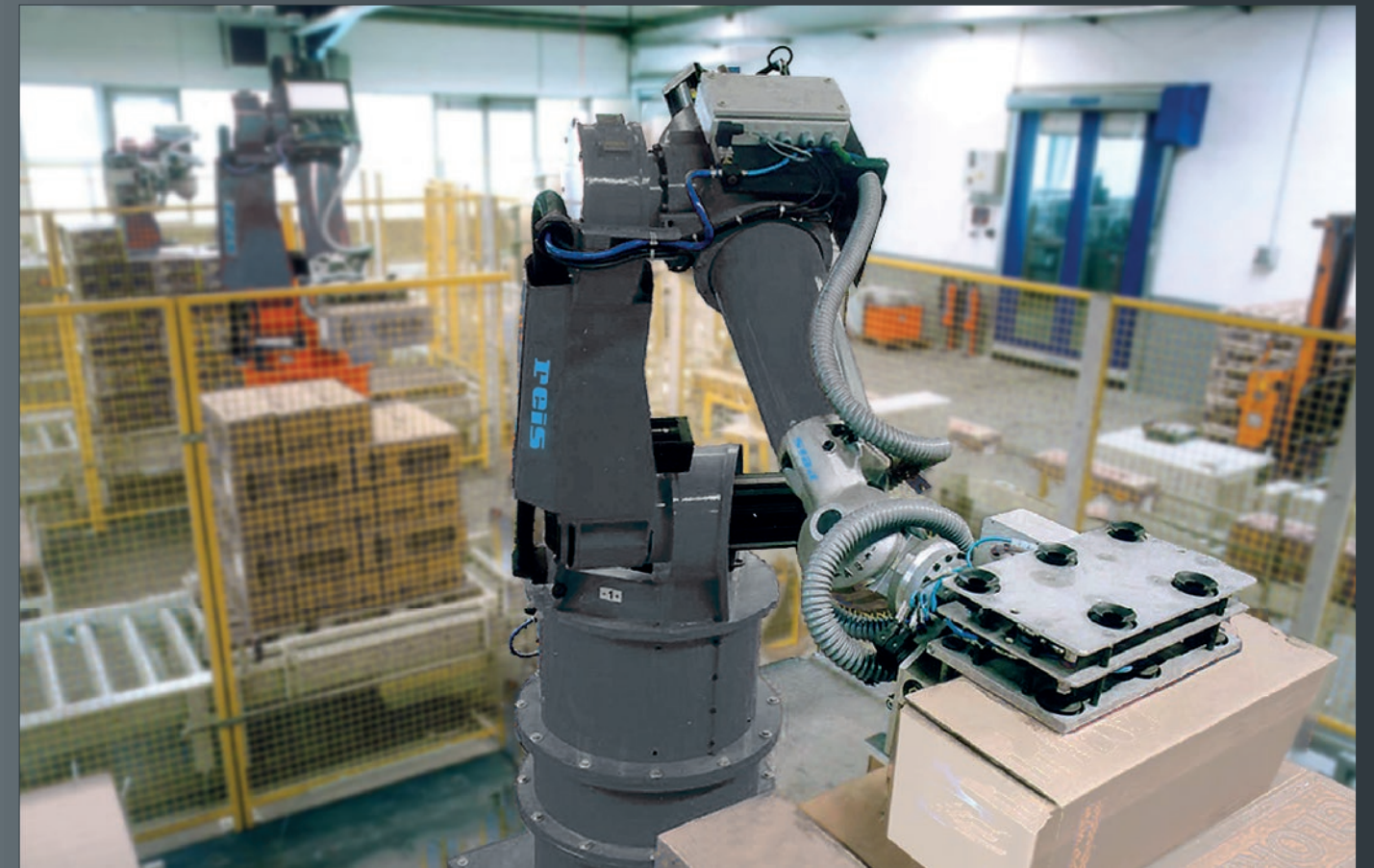
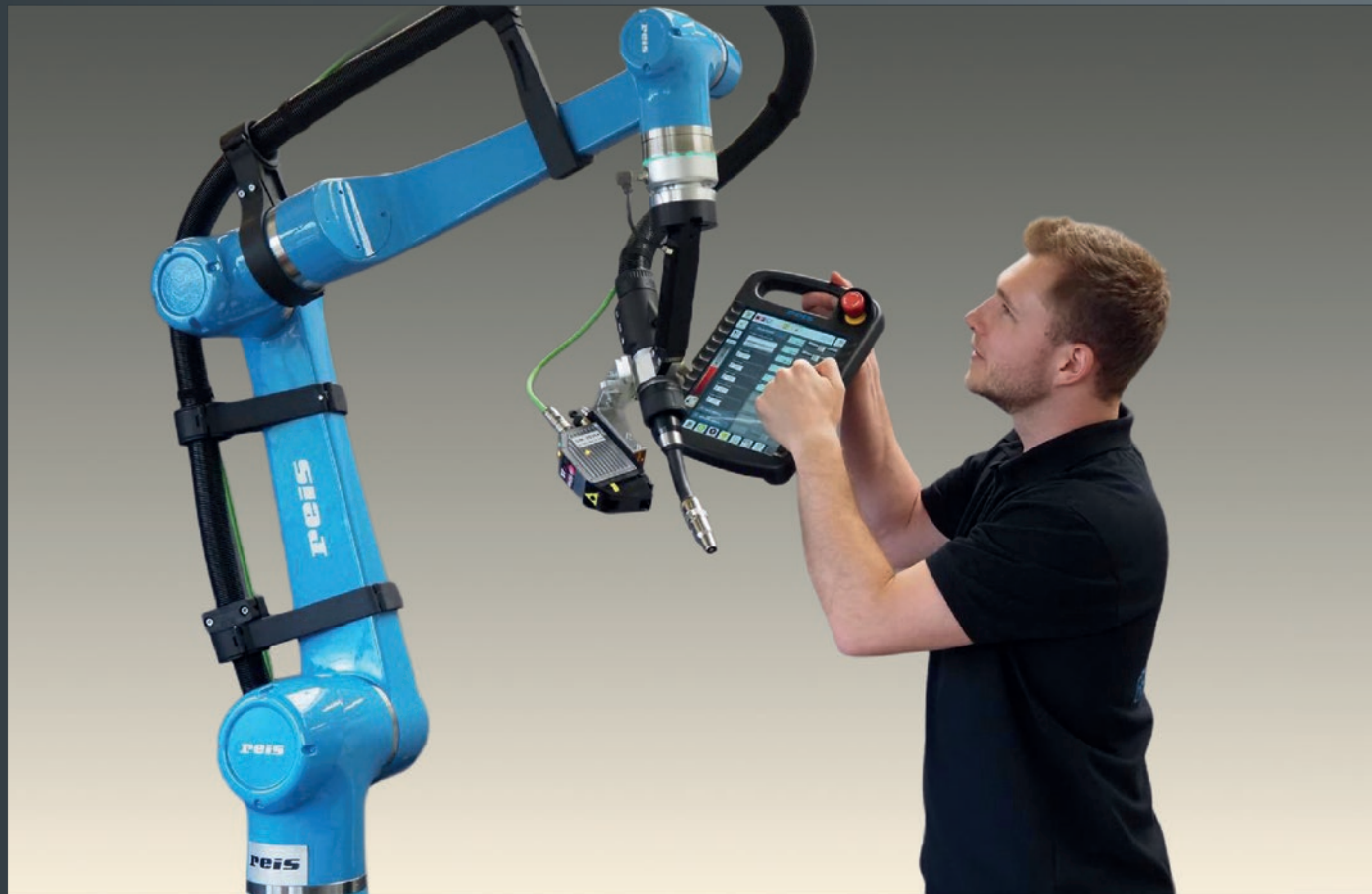
- Fast and precise picking, positioning, sorting and placing
- Solutions tailored to workpiece geometry, weight, cycle time and process requirements
- Flexible gripping and handling concepts
- Handling of different workpiece variants
- Automation of repetitive handling tasks ensures consistent process quality

Machine Tool Automation – Making Efficient Use of Machine

- Automatic loading and unloading of machine tools (CNC machining, turning, milling, machining or pressing)
- Seamless integration into existing systems possible
- Co-ordination of multiple machining stations
- Reduction in manual intervention
- Optimised machine utilisation
- Flexible adaptation to different machining processes

Machine feeding – automated supply

- Automated supply of production materials (cardboard blanks, rolls and spools of film, or other consumables)
- Reliable machine supply
- Reduction in manual and ergonomically demanding tasks
- Customisable gripping and feeding systems



Humans and Robotics Working Together

Not every task needs to be fully automated. Cobots and collaborative robots can provide targeted support to workers carrying out repetitive, ergonomically demanding or time-consuming tasks.

- Support for workers carrying out repetitive tasks
- Relief from ergonomically demanding tasks
- Flexible applications
- Combination of human experience and robotic precision
- Customisable solutions for different workplaces

Flexible manufacturing cells – different products, one automated process

Modern manufacturing increasingly requires flexible solutions capable of handling different products and variants within a single process.

- Processing of different product variants
- Flexible adaptation to changing workpiece sizes and production requirements
- Modularly designed automation cells

YOUR **BENEFITS** AT A GLANCE

A range of modules for automated material flows – intelligently networked and scalable

- Higher productivity and throughput
- Fewer manual tasks and lower labour costs
- Maximum flexibility during product and format changes
- High process reliability and reproducible quality
- Scalable solutions for future growth
- Sustainable reduction in total cost of ownership (TCO)
- A single point of contact for the complete automation solution

AUTOMATION IN INTRALOGISTICS

With automation solutions from **REIS ROBOTICS**, you can sustainably boost the efficiency of your logistics processes. By utilising state-of-the-art robotics and control technologies, you can increase productivity, quality and process reliability, whilst at the same time gaining the flexibility to respond to future market demands.

Our intelligent **palletising** and **depalletizing systems** reliably handle a wide variety of products such as sacks, cartons, crates, containers and canisters. Even with frequently changing formats, small batch sizes or complex layer configurations, you benefit from a stable, automated material flow and high system availability.

Specially developed **gripper systems** ensure that your solution is precisely tailored to your products and processes. This enables you to reduce manual tasks, minimise sources of error and sustainably increase your efficiency.

With the powerful **ROBOTstar VII** control platform, you retain full control over your material flows, even with a high variety of product variants and demanding **mixed orders**. The result: shorter cycle times, higher throughput and cost-effective automation that grows with your requirements.

GOODS TO ROBOT BY PALLET "LAYER"

Layer-based mixed palletising of various source pallets onto the destination pallet



DEPALLETIZING "CASE"

Piece-goods-based depalletizing from the pallet onto the conveyor system



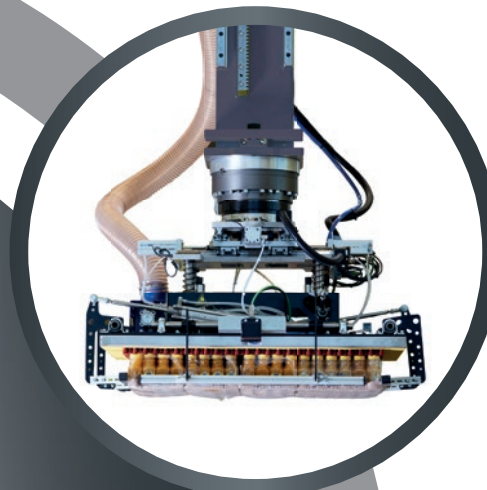
GOODS TO ROBOT BY PALLET "CASE"

Mixed palletising of general cargo from various source pallets onto the destination pallet



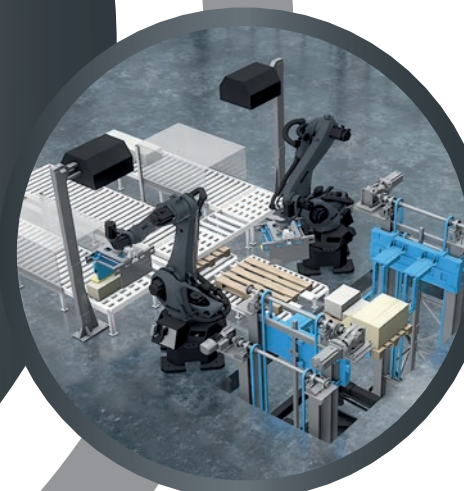
DEPALLETIZING "LAYER"

Layer-based depalletizing from the pallet and separation using conveyor technology



PACKSTATION

with one or two robots, including load-securing film wrappers integrated directly into the line



GOODS TO ROBOT VIA CONVEYOR

Mixed palletising of general cargo onto the destination pallet via conveyor systems



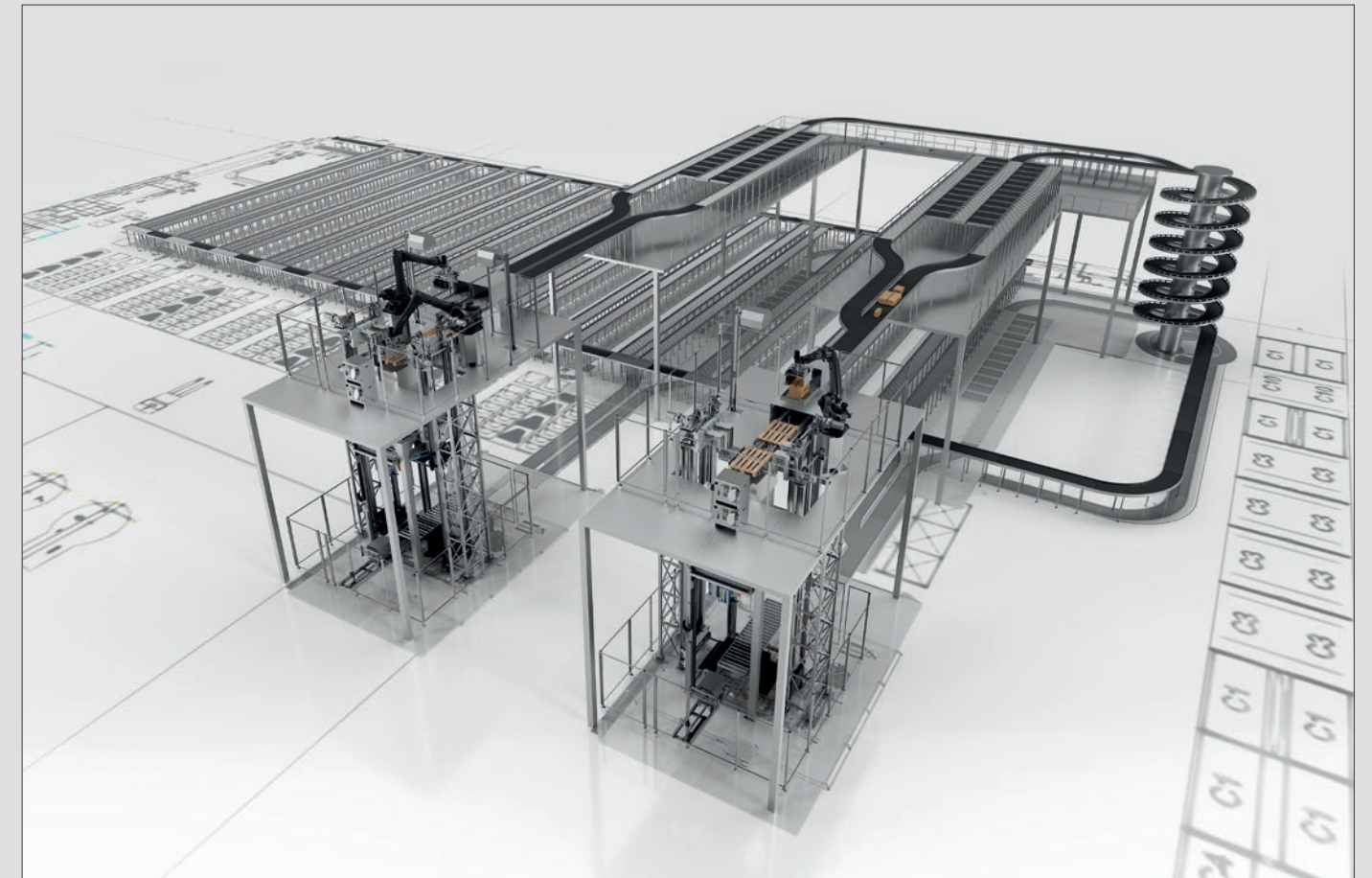
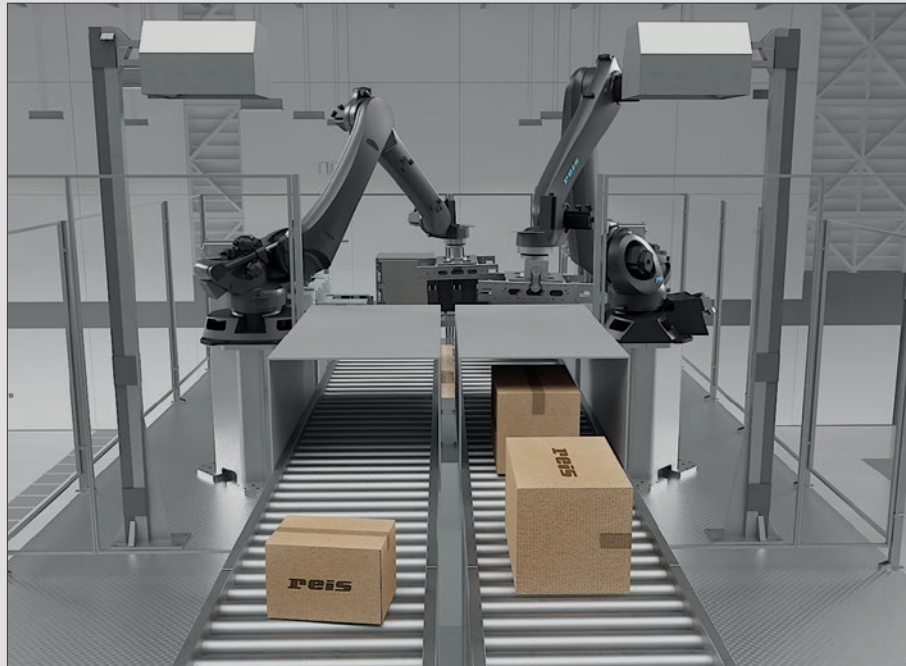
GOODS TO ROBOT

EFFICIENT CONVEYOR SOLUTIONS FOR FULLY AUTOMATED PALLETISING OF MIXED ORDERS

Our “Goods to Robot” system enables the precise, fully automated

feeding of products for **case** and **layer** palletising. An intelligently controlled **conveyor belt** solution efficiently separates and sorts different items, then transfers them to the robot with precise positioning.

The system supports both the palletising of mixed individual cartons (cases) and the formation of complete mixed layers (rainbow palletising). Seamless integration into existing intralogistics processes creates a continuous, transparent material flow – flexibly scalable and designed for the highest throughput with maximum process reliability.

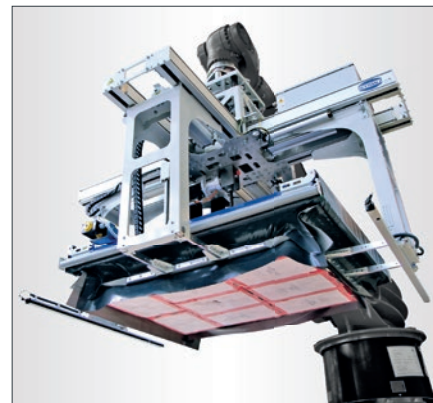


CONVEYOR BELT

- High capacity and a wide variety of SKUs and packaging types
- A mix of large and small orders that can be processed in exactly the same way for all products
- Error-free and damage-free palletisation
- Flexible and scalable solution

LAYER

- Creation of a palletising pattern using software
- Handling of different product dimensions and types
- Combination of vacuum and clamping gripper systems
- Flexible design with one or more robots
- Precise and gentle layer formation



CASE

- Creation of a palletising pattern using software
- Stable mixed pallets with high packing density
- Handling of products of different sizes and types
- Depalletising and mixed palletising using the same gripper
- Flexible concept with one or more robots
- Safe and stable palletising



PACKSTATION

High-performance end-of-line palletising

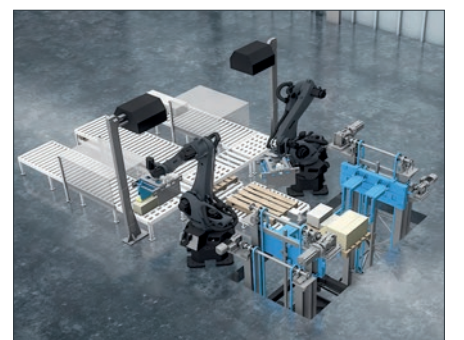
The modern packing station combines maximum performance with the highest level of flexibility and forms the central element of efficient **end-of-line automation**.

The single-robot solution achieves a throughput of up to 500 cases per hour. Thanks to its modular design, the cell can be expanded with an additional robot to meet growing production and logistics requirements (up to 900 cases per hour).

- Handling a wide variety of items and packaging types
- A reliable mix of large and small orders – standardised, efficient and product-independent.
- Consistently high quality in order picking and dispatch
- Possible integration of wrapping systems, labelling machines and the customer's own product and pallet handling equipment



SCAN ME





DEPALLE

Intelligent depalletizing solutions for maximum process reliability and flexibility

REIS ROBOTICS depalletizing solutions are synonymous with the highest level of precision, intelligent image recognition and maximum adaptability to a wide range of product requirements. Whether carton- or layer-based, our systems ensure reliable, gentle and efficient depalletizing of palletised loads, as well as seamless handover to downstream processes.

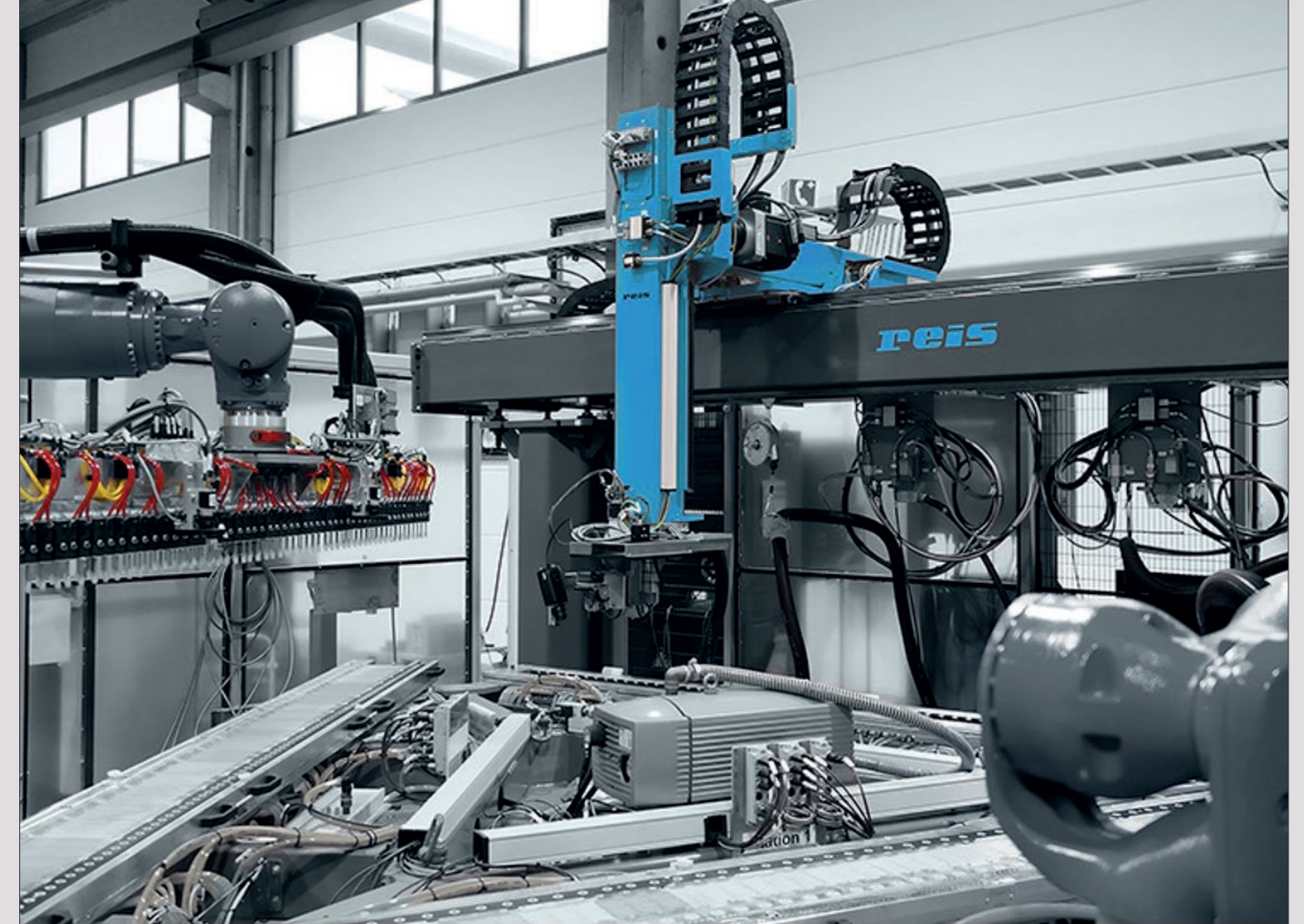
With modular technology, intelligent control systems and customised gripper designs, **REIS ROBOTICS** offers high-performance depalletizing solutions for a wide range of industries and applications.

CASE

- Recognition of the palletising pattern and automatic determination of the optimal picking sequence by the vision system
- Handling of products of different dimensions and types
- Use of specially adapted gripper systems (fork, vacuum or clamping grippers)
- Transfer of products to the customer's systems (e.g. high-bay warehouses, conveyor systems, etc.)

LAYER

- Removal of complete layers in a single step
- Automated separation of products via integrated conveyor systems
- High product throughput



AMR & AGV – FLEXIBLE ON THE MOVE

- Versatile options thanks to AMR (Autonomous Mobile Robots) and AGV (Automated Guided Vehicles)
- Seamless integration into automation cells and production lines
- Reliable and continuous material handling
- Flexible adaptation to different products and transport tasks
- Precise handover between individual process steps
- AI-based optimisation of throughput times and material flow routes





HOLISTIC PROCESS INTEGRATION

Intelligent integration of robotics, processes and peripherals



Modern automation solutions go far beyond mere robotic handling. **REIS ROBOTICS** combines robotics, sensor technology, testing and process technology, as well as conveyor and packaging technology, to create **high-performance turnkey solutions**.

From automated part recognition and quality control, through additional processing steps, to labelling, packaging and pallet securing, the individual processes are optimally coordinated with one another. This results in end-to-end automation solutions offering high process reliability, flexibility and transparency.

Vision systems – precise detection and reliable operation

- Automated detection and identification of components
- Precise orientation and position detection
- Support for automated inspection processes
- Flexible integration of suitable camera systems
- Optimised interaction between vision systems and robotics

Automated inspection and testing systems – Quality built into the process

- Automated and reproducible quality control
- In-line testing directly within the production process
- Flexible sampling control
- Reliable detection of defined quality characteristics
- Reduction in manual testing steps
- Seamless integration into the production process

Traceability and data tracking – documenting processes transparently

- End-to-end traceability of products and processes
- Automated recording of relevant process data
- Transparent production workflows
- Support for quality and process assurance
- Basis for targeted process optimisation

Conveyor technology and parts transport – seamless material flow

- Seamless, automated parts transport
- Reliable handover between process stations
- Optimised material flow
- Reduction in manual transport routes
- Flexible integration into existing and new production facilities

Additional processes – Options for integrating further peripheral equipment

- Integration of additional process steps (weighing, screwing, joining, cleaning, gluing, greasing, etc.)
- Reduction in manual interfaces
- Seamless process flows
- Precise positioning and handling
- Flexible adaptation to individual production requirements

FROM THE COMPONENT TO THE **SHIPPING PALLET**

REIS ROBOTICS combines individual process steps, robotics and peripheral equipment to create comprehensive automation solutions. From automatic labelling and packaging, through the erection and sealing of cartons, to pallet securing, all processes are optimally coordinated with one another. Customised gripping systems, fixtures and a range of automation components ensure the necessary flexibility.

This results in integrated solutions that simplify production processes, reduce manual intervention and enable a reliable flow of materials and information.



DEMO CELL AT **REIS ROBOTICS**

Test your own products – under real-world conditions

Bring your original products with you and experience your future automation solution in a practical test. In our specially developed demo cell, we work with you to validate processes, components and cycle times based on your actual requirements.

Step by step, this results in a bespoke mixed-palletising solution that is precisely tailored to your production and logistics processes

OUR EXPERTS ANALYSE

- Product structure and packaging variants
- Layer diagrams and mixed palletisation strategies
- Material flow and cycle times
- Opportunities for automation and integration

Pallet securing – automated right through to dispatch

- Automated securing of finished pallets
- Integration of stretch-wrapping, strapping and wrapping systems
- End-to-end process right through to preparation for dispatch
- Reduction in manual rework
- High process reliability and reproducible results

Labelling – automatic and process-reliable

- Automated and reliable labelling
- Flexible integration into production and packaging processes
- Reduction in manual steps
- Assignment of product and process information
- High repeatability
- Integration of identification and data tracking systems

Erecting and sealing cartons – automated packaging processes

- Automated erection and sealing of cartons
- Integration into existing production and packaging processes
- Reduction in manual packaging steps
- Continuous flow of materials
- Flexible adaptation to different packaging requirements

Different robot kinematics and control systems flexibly integrated

- Integration of different robot kinematics
- Flexible adaptation to different automation tasks
- Optimal interaction between robotics and peripherals
- Scalable and individually configurable system solutions
- In-house robot controller ROBOTstar VII with integrated Siemens PLC

In-house fixture and gripper manufacture – tailored to the process

- Development and manufacture of our own fixtures and grippers
- Specific solutions for individual workpieces
- Process-dependent design of the gripping systems
- Safe and precise workpiece handling
- Optimal coordination of gripper, robot and process

REIS ROBOTICS stands for

- Holistic automation solutions
- End-to-end automation from goods receipt to dispatch
- Optimal integration of robotics, software and peripherals
- Maximum flexibility for individual requirements
- Efficient and transparent production processes
- Future-proof and scalable systems
- Tailor-made solutions from a single source

Automated palletising is a key component of modern intralogistics and end-of-line automation. Our robotic systems reliably handle a wide variety of products, packaging types and formats.

Our mixed-palletising solutions enable different products to be efficiently combined into stable mixed pallets. This ensures maximum flexibility, optimal use of space and efficient material flows.

Intelligent depalletizing solutions complement the system. Camera-based detection and application-specific grippers ensure precise and safe transfer to downstream processes.

REIS ROBOTICS combines intelligent software, robotics and material flow solutions into a seamless, integrated system.

At the heart of this are our own software solutions for controlling palletising, material flow and warehouse processes. The systems communicate seamlessly with warehouse control systems (WCS) as well as higher-level WMS structures and enable transparent control of all processes.

In addition, an integrated fleet management system coordinates AGVs and AMRs. Flexible gripper systems, high-performance 6-axis robots and gantry systems enable optimal adaptation to a wide variety of requirements.

APPLICATIONS

- Live mixed-case palletising
- Mixed-palletising software
- Warehouse Control System (WCS)
- AGV/AMR fleet management
- Camera-assisted depalletizing
- Flexible gripper systems
- 6-axis robots and gantry solutions
- Product tests in the **REIS** demo cells





For further information, please contact us at sales@reisrobotics.com

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Find out more about
our company

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