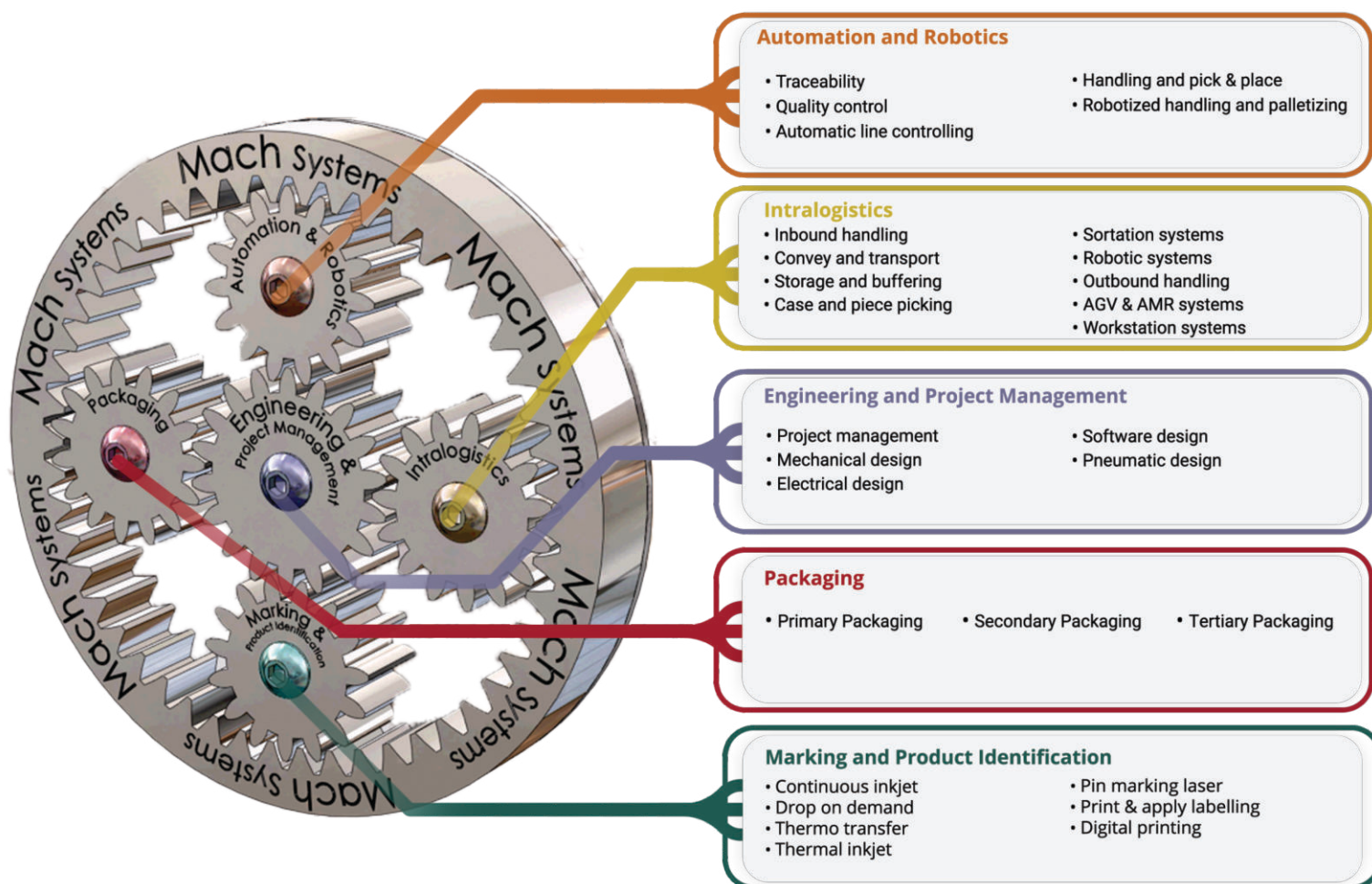


Automation and Robotics Division

About us

Mach Foreign Trade Distribution is the main industrial integrator with Romanian capital which implements complex industrial projects. Over time, we have diversified our portfolio of equipment and the applications we address, aiming at quality and efficiency in the following **domains**:



Automation and Robotics Division

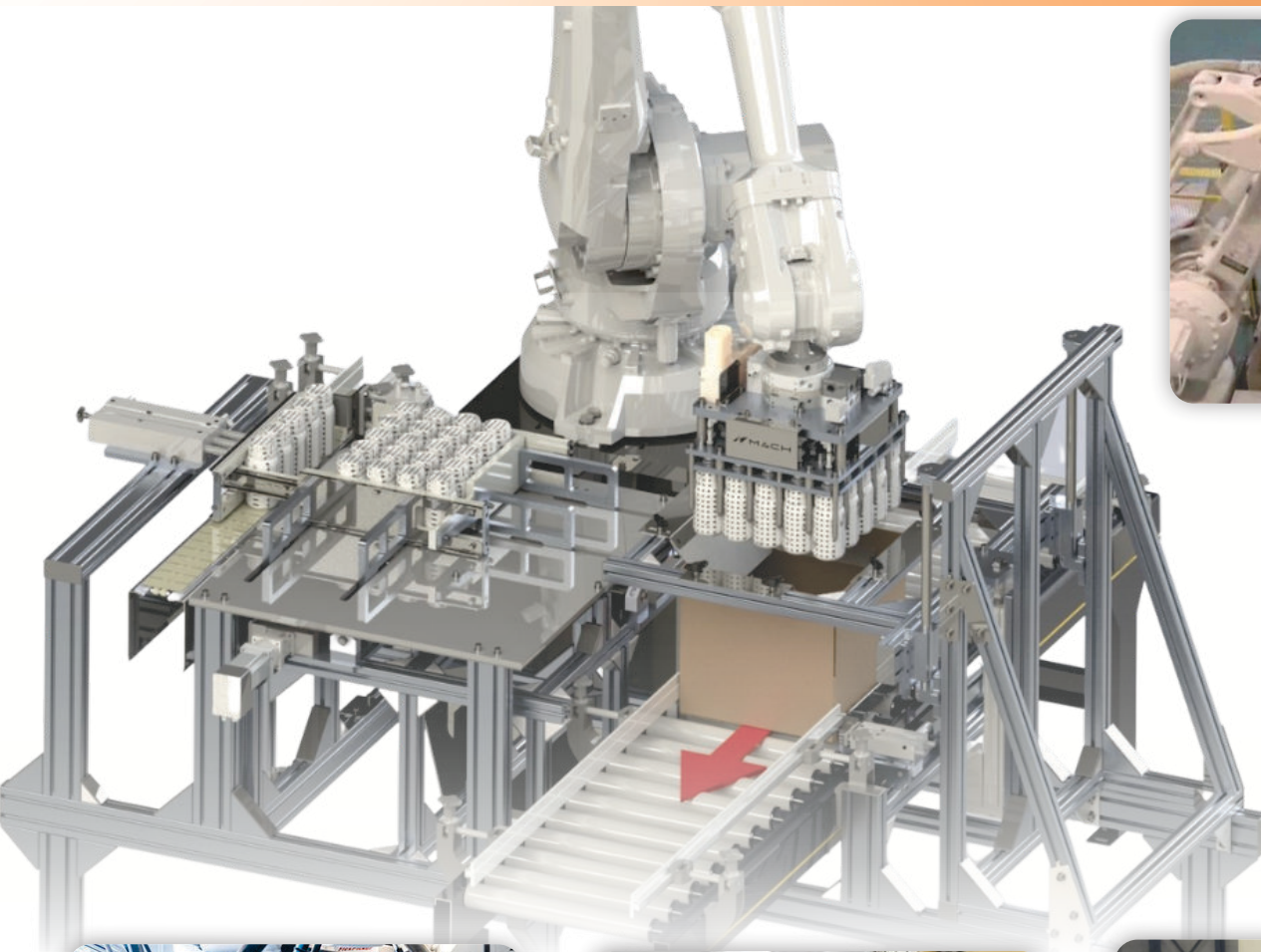
The Automation and Robotics Division provides customers with complete automation and robot integration solutions, starting with the process of analyzing the input data of the application, the graphic representation (2D, 3D) of the concept and up to the implementation of the solutions in the production flow. Our range of solutions includes **applications for packaging, palletizing, assembly, machine tool servicing, applying edge and corner adhesive, etc.**

Robotized solutions for automated packaging

Industrial packaging refers to the process of applying protection to a product in order to maintain its integrity and content within specific quality parameters.

Robotic automation of the packaging process can be implemented in all three stages (primary, secondary, and tertiary).

The **benefits of using robots** in such applications include availability, performance, and quality, resulting in a high Overall Equipment Effectiveness (OEE).





Pick and place is a process that involves the action of **picking up and placing** products within production and packaging processes.

Another type of process that utilizes robots is **bin picking**, which entails the individual collection of parts from a container containing bulk pieces and inserting them into a downstream production flow.

Robotized solutions for palletizing/depalletizing

Palletization is the process of arranging packaged products on a pallet for **storage and transportation** purposes. Regardless of the packaging format (boxes, bags, crates), the palletization process requires high speed and accuracy, even when handling heavy products.

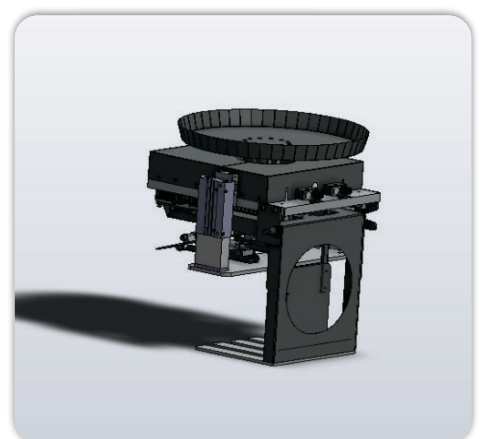
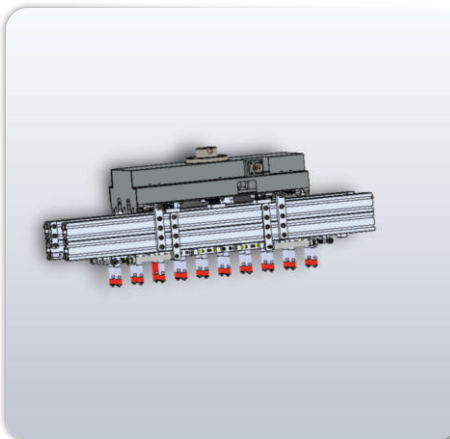
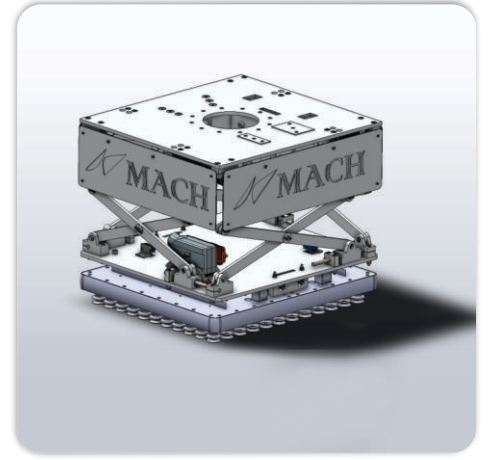
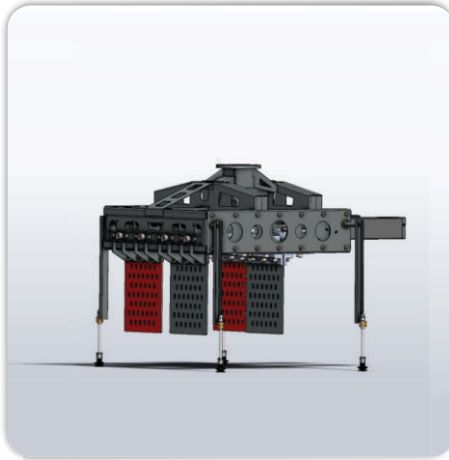
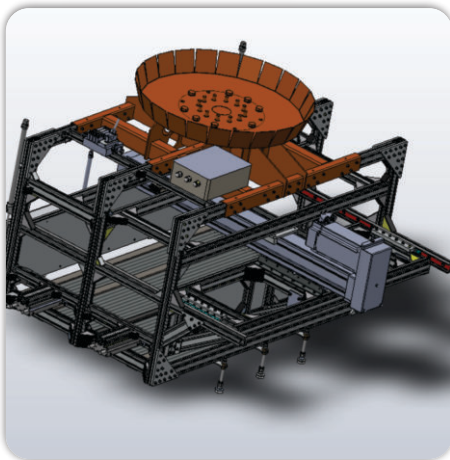


By choosing a **robot in the palletization process**, you can save time, financial resources, minimize losses, and provide employees with a healthy working.



Custom effector (grippers)

An essential component in robotic applications is the gripper, and Mach FTD possesses extensive experience in designing and executing them. In this regard, we offer a diverse range of grippers for individual products (bottles, boxes, bags) as well as for groups of products, including complete layers.



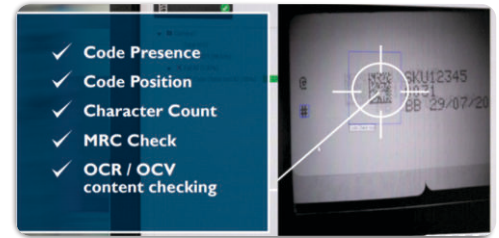
Quality control in automated workflows

We continuously strive to provide modern technologies in the field of quality control:

- Computer Vision for quality control, traceability, and management of robotic operations
- Automatic detection of metals and other inclusions
- Automated weighing in the production flow

Benefits:

- Ensuring a consistently high product quality
- Eliminating errors while maintaining high production capacity, including in conjunction with robotic applications
- Streamlining workflow and optimizing the utilization of human resources
- Enhancing workplace safety

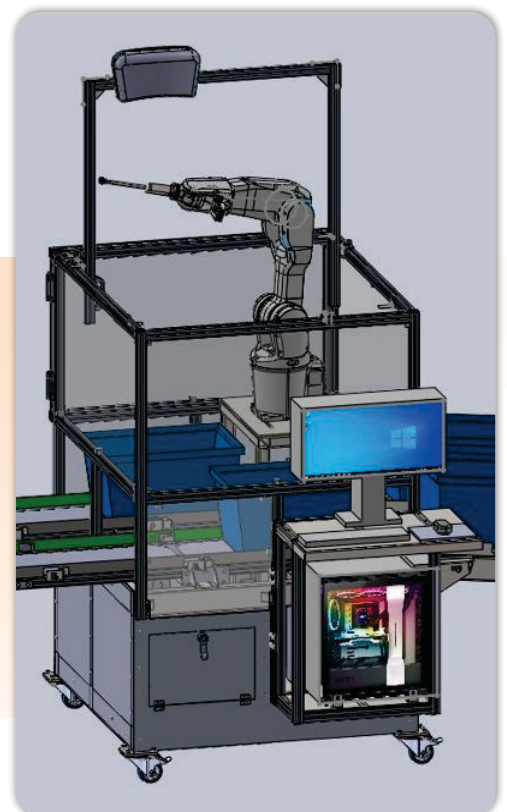


Custom industrial modules

Based on our experience with our clients and the challenges they face, the Mach FTD team has designed and created customized automated modules.

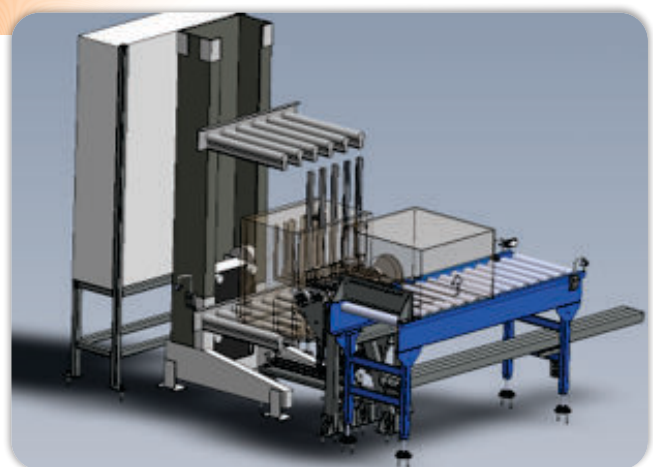
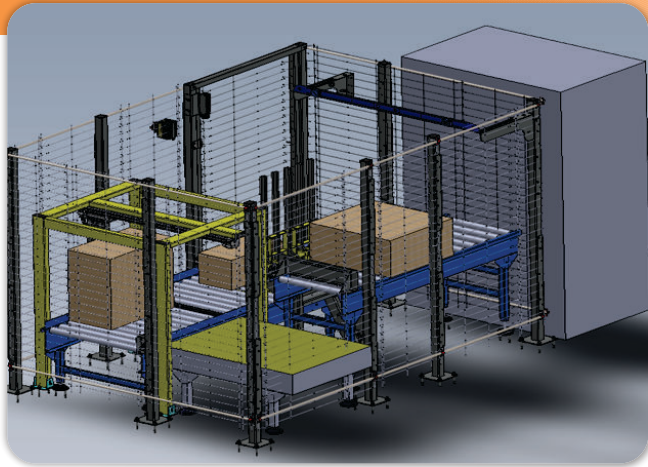
3D Vision Picking System for multiple industries

The **3D Vision Picking System** is developed by our Automation and Robotics division to adapt to various production scenarios based on the specific technological processes involved, such as packaging, storage, loading and unloading, and optical inspection.



Handling and lifting units

The equipment in this category is used in the process of material transportation. In complex industrial lines, the route of products may involve ascent, diversion, repositioning, alignment, rejection, etc.



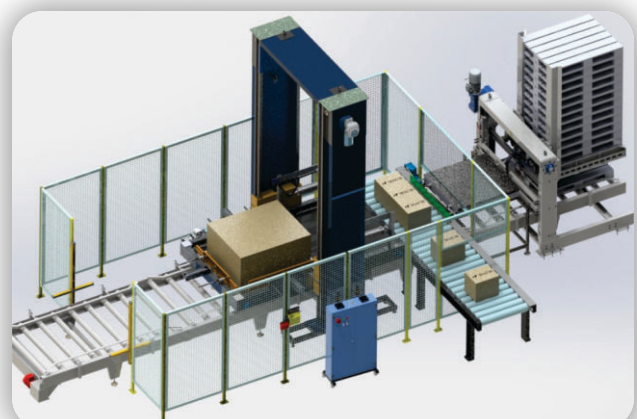
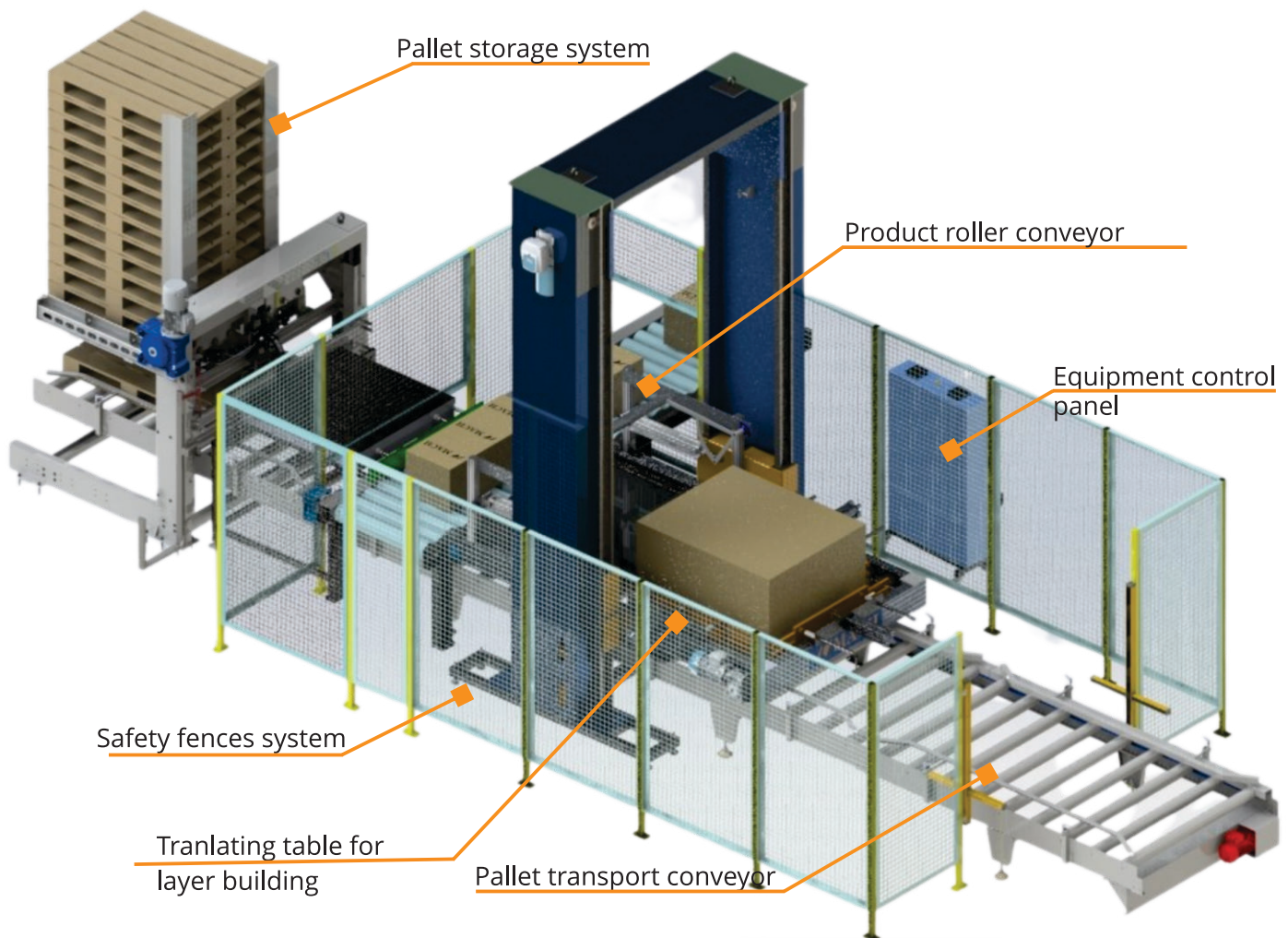
Automated storage system for containers, profiled sheets, pallets and cardboard boxes

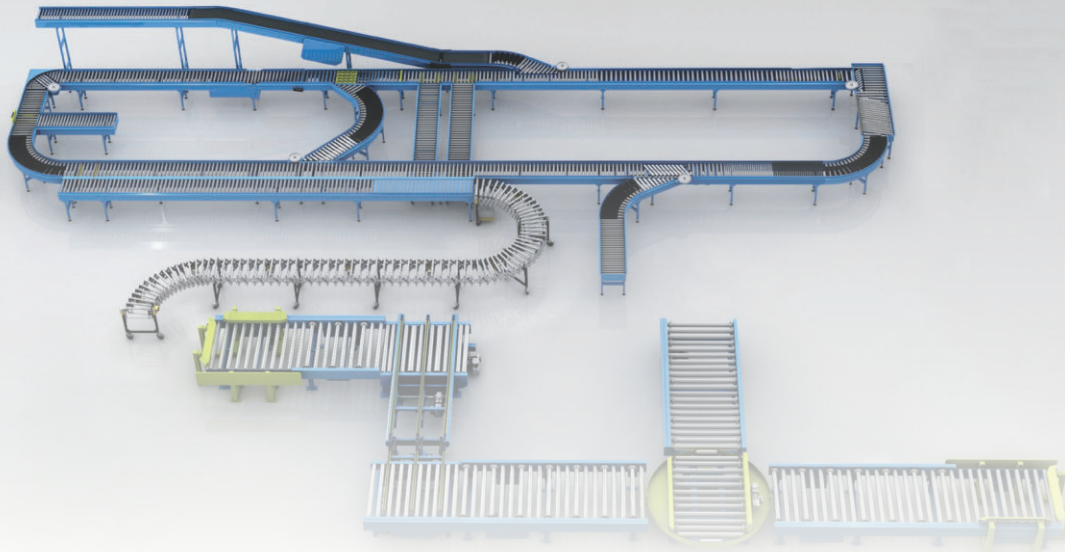
The automated storage system for cardboard boxes and pallets are auxiliary equipment that can support other automated equipment such as linear axes, articulated robots, Cartesian robots, or collaborative robots. They are used in both secondary and tertiary packaging and can be easily adapted to the requirements of each production process.



Palletizing equipment with a translating table

- Cost-effective in relation to the desired productivity.
- An advantageous solution for applications that do not permit installing a robot (due to location or production limitations).
- An application specifically designed for easy operation and minimal human resources involved in the process.





Interoperational transport

The range of conveyors found in Mach FTD's equipment portfolio is highly diverse and includes the following: roller conveyors, belt conveyors, chain conveyors, magnetic conveyors, pneumatic conveyors, vertical conveyors, elevating conveyors, spiral conveyors, and more. In addition to these, customized solutions are also provided based on productivity requirements and product types.

Special functions: automatic vertical movement of products, rotation/reversal of products to adapt their position from one equipment to another in the production process, roller conveyors with special materials for increased product grip, grooved roller conveyors, square roller conveyors for leveling products in bags, belt conveyors with scrapers, and accumulation conveyors.



Pallet elevator



Product elevator



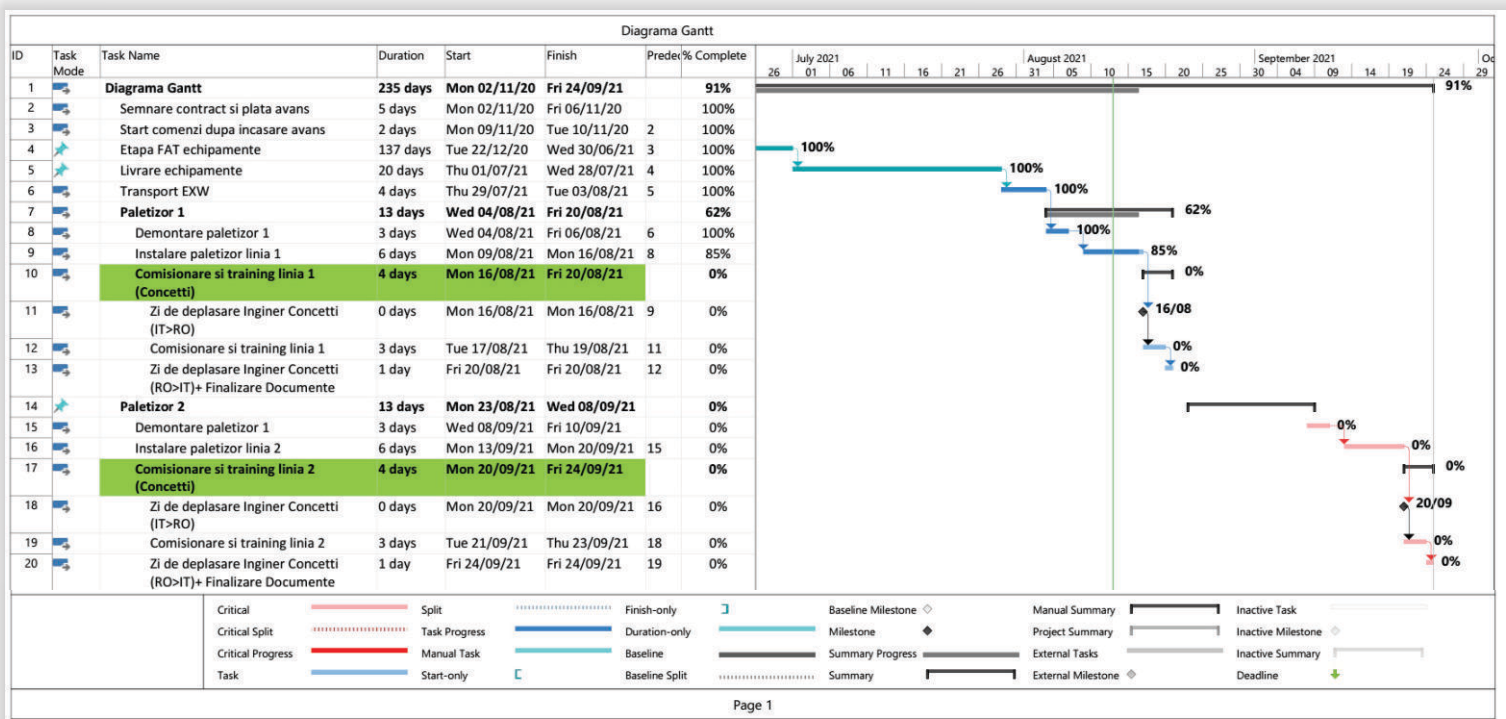
Plastic chain conveyors or
modular belt conveyors



Chain spirals or
modular belt spirals

Engineering and project management

In order to implement automated solutions within industrial applications, Mach FTD provides service packages to assist customers, including consulting, mechanical, pneumatic, and electrical design, software applications for flow control, implementation and testing of solutions, including overall project management.



Industrial solutions and equipment

ABB: Sweden - Industrial Robots

AMBAFLEX: Netherlands - Conveying systems

CONVEYOR UNITS: United Kingdom - Conveying systems

FANUC: Japan - Industrial Robots

FLEXLINK: Sweden - Conveying systems for product and pallets

FUJI ROBOTICS: USA - Development and manufacturing of industrial robots

INTERROLL: Switzerland - Global provider for material handling solutions

KUKA: Germany - Industrial Robots

QIMAROX: Netherlands - Material handling systems, logistics solution, packaging and supply chain solutions

PRIME VISION: Netherlands - Integration, automation, processing and identification solutions for international postal, warehousing, logistics and airport markets



Components, sensors and Vision systems

COGNEX: USA - Vision systems

COVAL: France - Vacuum automation systems

FESTO: Germany - Components, pneumatic and electrical sensor systems

KEYENCE: USA - Sensors and Vision systems

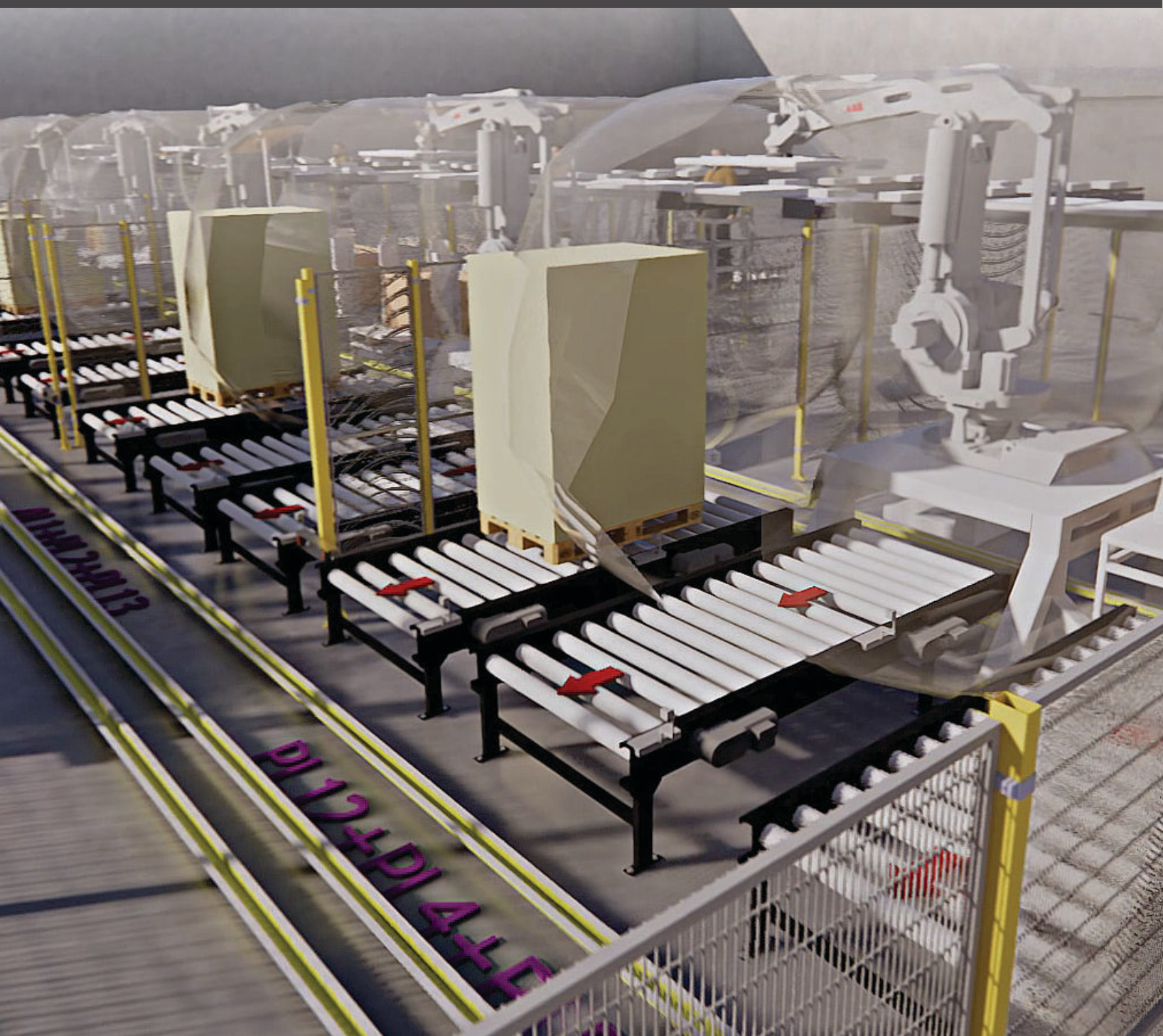
PHOENIX CONTACT: Germany - Connecting, electronics and industrial automation technology

SICK: Germany - Sensors

SIEMENS: Germany - Sensors

WENGLOR: Germany - Sensors





Automation and Robotics Division

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