

GEA PACKAGING SOLUTIONS

Integrated end of line systems for the beverage, food and powder industry



Integrated packaging for end-to-end production

Known around the world for its advanced production line solutions, GEA also specializes in tailored end of line packaging systems. By integrating packaging into their lines, producers of food, beverage and powder products can achieve end-to-end production and new levels of speed and efficiency. From discharging bulk raw materials through to packaging the finished product, GEA can design, manufacture and install any type of primary and secondary packaging to meet customer needs.

GEA offers range of innovative packaging solutions that cover all beverage and food applications, all container and secondary packaging configurations, and every type of pallet management.

Packaging machines made by GEA include conveyors, depalletizers and palletizers as well as line automation and

supervision solutions. GEA can also integrate any equipment that is not part of its manufacturing program – either by purchasing it directly or by integrating equipment supplied by the customer.

GEA packaging benefits

- End-to-end production line in one connected process
- Completely integrated engineering
- Automation systems ensure better control of the various production phases and greater speed and efficiency in packaging
- Tailor-made design and modular construction configured to meet customers' specific needs
- Unique machine interface, electrical and software design and safety approach
- Unique Service interface
- Single point of contact for the entire process



Palletizing systems - Traditional

GEA palletizing solutions maintain consistency in the packaging process, resulting in stable, secure, and uniformly shaped pallet stacks. This maximizes storage space, minimizes transportation costs and eliminates product loss.

GEA's traditional palletizers are suitable for medium/high capacity with high or low level infeed of packs, featuring single, double or triple lane.

They are fully automated, equipped with in-line or 90° forming systems and assisted by layer or row forming systems.

Palletizing system benefits:

- Improved throughput and accuracy of receiving operations
- Compact/reduced layout
- Fully customizable
- High operator safety standards and ergonomic



GEA Opera

Fully automatic palletizer with single or double infeed and fixed low-level pallet. The preformed layer lifting system is supported by two vertical columns. High performance and high energy saving for multiple packaging types.



GEA Agilis

Traditional high level infeed and layer formation palletizer with moving pallet. Offers very high outputs, reliability in terms of duration, low noise levels and automatic format changeovers. Open access to all parts of the machine, via a platform, for easy set up and maintenance.



GEA Artis

The GEA faster single-column palletizer, with low level infeed and double curtain roller head ensure high performance with reduced dimensions. Automatic format changeovers, and simple direct access for inspection, cleaning and very low maintenance.

Layer preparation system

The Polaris F layer preparation system, which can be installed as an infeed module on all GEA palletizers, is capable of preparing a complete layer of products (even the most unstable ones) without any jolts during the repositioning phases.

It is made up of one or two anthropomorphic industrial robots, characterized by a high level of robustness, which ensures low maintenance costs. It works thanks to a self-centering, fully motorized gripping head that, connected to the arm, moves and/or rotates the packs to the required position, in order to prepare a whole layer of products according to a pre-defined pattern, without any air consumption.



Palletizing systems - Robotized

For maximum flexibility, the GEA Omnia robotic palletizing system provides complete front/end-of-line solutions for food, beverage and powder applications. Full system integration services work perfectly with upstream and downstream equipment.

The GEA Omnia robot allows for:

- Simultaneous palletizing of several lines,
- Simultaneous palletizing of packages of different types and dimensions,
- Simultaneous palletizing and depalletizing.

Depending on the type and shape of the product, different gripper head solutions are available:

- Universal gripper heads for packs
- Hook and side bar grippers for crates
- Bag grippers with automatic bag width adjustment
- Magnetic grippers and single pick heads for individual loose bottles in crates or trays
- 2 and 4 gripper head types for jug containers

Grippers can also be equipped with empty pallet pick-up and/or slip-sheet pick-up devices.

The GEA Omnia system can be equipped with a layer compacting system to produce uniform and stable pallet stacks, increasing operational safety and maximizing storage space.

GEA Omnia offers a compact layout, fully customizable configuration and modular design to meet specific customer needs.

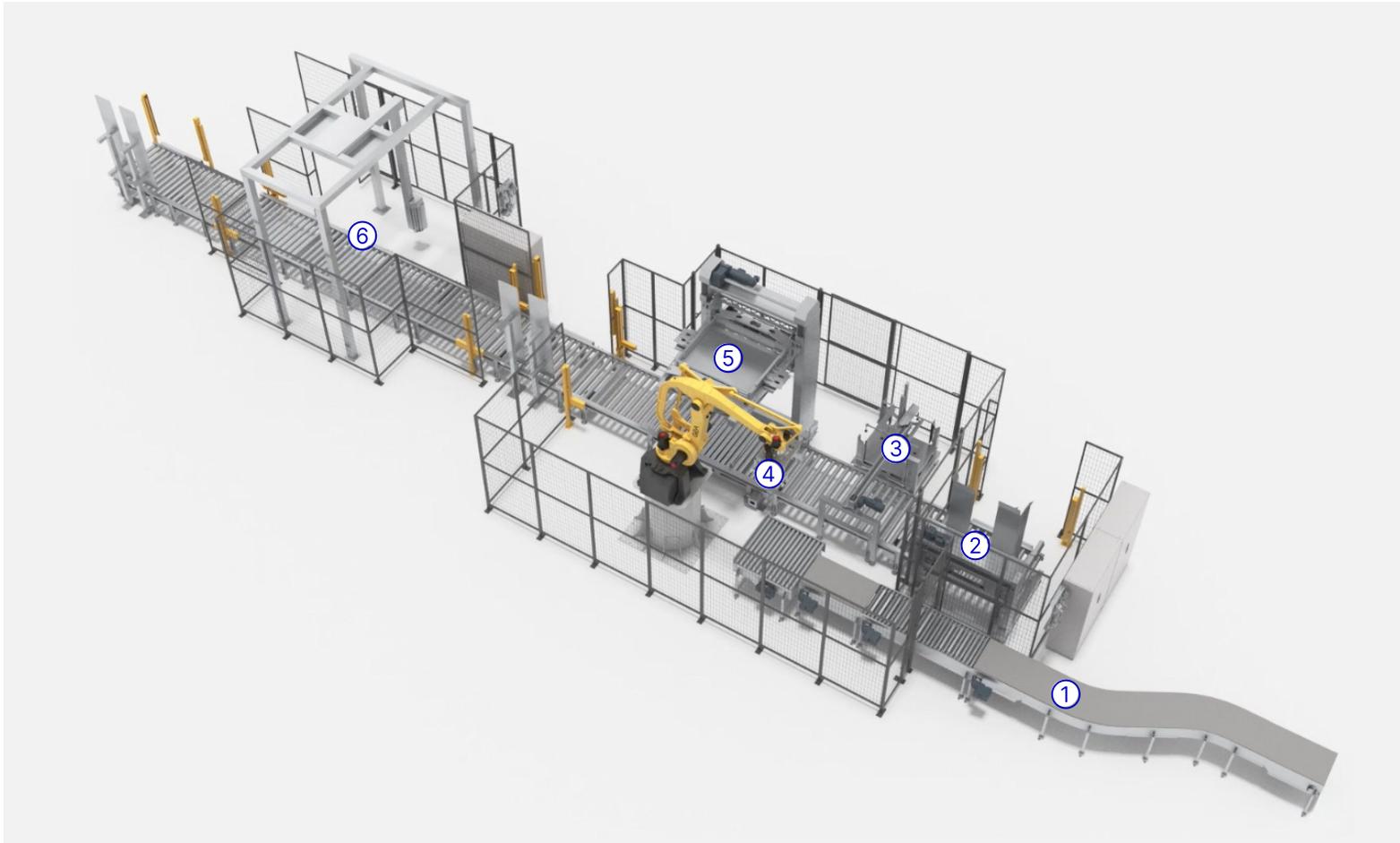


Robotic palletizing for next-level efficiency

The GEA Omnia is more than just a palletizer. By leveraging robotics to automate their palletizing and raw material management, producers can benefit from:

- Guaranteed best picking phase and perfect release onto the pallet
- Efficiently distribute and stock: Option to equip with a layer compacting system to produce safe, uniform and stable pallet stacks

- Reduced overall labor costs
- 24/7 plant operation
- Small footprint with fixed positions of package pickup and finished pallet delivery
- Can be integrated into existing facilities
- Expedited installation schedule to eliminate production stop



Sistem configuration

- 1 Bags conveyor
- 2 Automatic pallet dispenser
- 3 Automatic interlayer dispenser
- 4 Gripping tool for bag
- 5 Side pressing plate
- 6 Stretch wrapping machine

Depalletizing systems - Traditional

Depalletizing solutions simplify operations and automate processes to improve productivity and reduce manual intervention.

GEA's traditional depalletizers are suitable for medium and high capacity lines and are specifically designed to depalletize different types of containers, from glass containers to aluminum bottles, plastic bottles and cans.

GEA depalletizers can be integrated with layer pad and top frame picking devices to increase the level of automation during the depalletizing process and reduce downtime.

Benefits:

- Improved throughput and accuracy of receiving operations
- Automated stacking of pads, top frames and pallets
- Fully customizable
- High operator safety standards



GEA Resolvis

The GEA Resolvis is an automatic depalletizer with mobile head. The movement of the picking head is achieved by a horizontal trolley transfer system.



GEA Velox

The GEA Velox is an automatic mobile pallet depalletizer. The picking head is moved by a horizontal trolley transfer system and the layers are deposited from above.



Depalletizing & Palletizing Overview of applications

Complete and perfectly integrated solutions for your beverage, food or powder production lines.

				
Technology	Beverage application	Food application	PET food application	Powder application
GEA Resolvis depalletizing system	▪	▪		▪
GEA Velox depalletizing system	▪	▪		▪
GEA Opera palletizing system	▪	▪		
GEA Agilis palletizing system	▪	▪		
GEA Artis palletizing system	▪	▪		
GEA Omnia robotic system	▪	▪	▪	▪



Whether you need quick adaptation to different package types and sizes, precision and delicacy in product handling or increased palletizing speeds, GEA palletizing and depalletizing solutions offer the flexibility you need.



Technology	Primary packaging / Loose (bulk) containers				Secondary packaging				
	Glass containers	Aluminum bottles	Plastic bottles	Cans	Packs	Film packs	Crates	Trays	Bags
GEA Resolvis depalletizing system	▪	▪	▪	▪					
GEA Velox depalletizing system	▪	▪	▪	▪					
GEA Opera palletizing system					▪	▪	▪	▪	
GEA Agilis palletizing system					▪	▪	▪	▪	
GEA Artis palletizing system					▪	▪	▪	▪	
GEA Omnia robotic system	▪	▪	▪	▪	▪		▪		▪

Conveying systems

Primary and secondary conveying systems are mainly used to connect individual machines in a production line. GEA conveyors use an “intelligent automation” approach to optimize the operation of these machines and ensure the efficiency of the entire line.

The technical design of GEA conveyor systems depends on the customer’s specific installation requirements and package characteristics.

GEA conveying/handling systems can handle a wide variety of packages and include many innovative features for improved performance and flexibility:

- Primary package conveyors (bottles, jars, cans), empty and full
- Secondary pack conveyors (packs, cartons, crates, etc.)
- Pallet conveyors and pallet elevators/lowerators
- Shuttles
- Bottle dividers
- Drying systems



Based on production/package requirements, the conveyor design can include bottle aligners/dividers and dynamic accumulation tables.



Optimized transfer solutions for “difficult” shrink wraps include rubber belt elevators/lowerators.



GEA’s product range includes the most diverse solutions suitable for handling cartons and crates of very different sizes and consistencies.



Automation solutions

As an integration specialist, GEA provides automation solutions and advanced process control tools that enable customers to achieve stable and robust process conditions with the highest efficiency levels and minimum energy consumption.

Line automation

Line automation can transform a group of machines into a highly efficient plant, empowering customers to achieve optimal line operation. It consists of a series of electronic synchronization devices and control systems, along with an information network. Each line is automated to meet the specific requirements of the application.

Line performance monitoring system

The GEA Plus HD is a line performance monitoring system designed to collect, record, analyze and process the critical data of every production activity on filling and packaging lines. The system collects all quality and performance data for individual machines or complete lines and summarizes the results in clear reports. This allows customers to improve their responsiveness to critical issues with quick, targeted, more effective interventions.



Overview of benefits: fully automatic packaging and palletizing by GEA

GEA has helped numerous customers transition from manual to automatic packaging and palletizing lines. They are benefitting from:

- A comprehensive (end-to-end) line solution
- Efficient and responsive maintenance service team
- 24/7 plant operation

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