Cartoning Solutions
Delivering Solutions – Application Expertise

We are thoroughly familiar with your products and applications! Romaco specialises in engineering technologies for solid pharmaceutical dosage forms. Our concepts and system solutions are inspired by the rich experience and know-how of our 600-strong team of employees.

Creating Value – Enhanced Performance

Profit from Romaco’s excellent value for money! We help you optimise your OEE balance systematically. With our efficient production and service management, we cut the running costs for your machines and increase your output in the long term.

Exploiting Technologies – Product Diversity

Our product diversity knows no bounds! The modular concept behind Romaco machines and equipment is the key to your success. With seven product lines, we are in a position to respond promptly and flexibly to changing market requirements. Together we are stronger!
We provide our customers with ergonomic and flexible cartoning solutions that are very simple to operate and extremely efficient.

Marco Mandrioli, Product Manager Promatic, Romaco S.r.l.
<table>
<thead>
<tr>
<th>Packing in Cartons</th>
<th>Track &amp; Trace</th>
<th>Cartons in Shipping Cases</th>
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</thead>
<tbody>
<tr>
<td>• Wide choice of designs and materials</td>
<td>• Tracking devices as inkjet or laser printers</td>
<td>• Suitable for feeding and packing single or bundled folding cartons</td>
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<tr>
<td>• Suitable for many different carton sizes</td>
<td>• Application of vignette label on top carton flaps</td>
<td>• Adhesive tape or hot melt closure</td>
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<tr>
<td>• Glued or tuck-in closures together with a variety of tamper-evident features</td>
<td>• Verification of 2D codes and human readable variable data</td>
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<tr>
<td>• Inkjet, colour embossed, laser engraved or vignette coding</td>
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**Efficient Answers**

Romaco Promatic cartoning and final packaging solutions are extremely versatile and available in flexible combinations. They can be supplied as standalone equipment or in line with selected primary packaging solutions, depending on your individual requirements.

All horizontal and vertical cartoners, stretch banders and case packers built by Romaco Promatic have an ergonomic design throughout and are exceptionally easy to operate. The machines are ideal for a wide range of applications. Their level of automation is determined by the specific needs of Romaco Promatic customers.
Customised Feed Systems
- Direct connection to primary packaging solutions
- Robotic feed systems can be integrated easily
- Servo controlled Pick & Place systems
- Different items can be packed in the same container
- Multiple packs are not a problem
- Folding cartons can optionally be filled manually

Customised Automation
- Choice of robotic, servo controlled or manual solutions
- Very flexible feeding of products, package inserts and packaging
- Individually defined automation level supports product and format changes
- Fully automatic integration of lines and feed systems

Efficient Line Configurations
- Direct connection to Romaco blister and strip packaging solutions
- Integrated cartoning solutions for filling liquids and powders
- Secondary and final packaging solutions for electronic counting systems
- Flexible configuration of cartoners, stretch banders and case packers

Total Control
- Track & Trace: selected solutions can be provided as options
- Leaflet and carton code readers
- Automatic presence detection for products, leaflets and tamper-evident features
- Positive separation of good packs
- Clearly visualised error messages permit prompt and efficient troubleshooting
Where special applications become customer-friendly solutions

The Romaco Promatic P 91 intermittent cartoner range features a fully GMP compliant balcony design that facilitates high accessibility and easy cleaning, reducing the risk of cross contamination. The P 91 is designed as a modular system suitable for a range of standard and bespoke feeding systems providing a flexible platform for many cartoning applications.

Ergonomic design

The P 91 cartoner series is designed to achieve maximum production performance together with a high level of comfort and safety for the operators. The P91 is driven by servomotors with belt drives providing a quiet, smooth and effortless operation. The operator has good accessibility to the carton and leaflet magazines. P91 cantilever design allows great visibility, easy line clearance, faster change over times. Cleaning and maintenance operations are also simplified due to the design philosophy.

Technical Highlights

- Cartoner key movements handled by servomotors and electronic cams, allowing smooth handling of all kind of products
- HMI touchscreen controls majority of machine functions, with diagnostics and troubleshooting functions
- Simple operator interface and machine set up features
- Positive vacuum carton pick-up able to handle varying carton types
- Low maintenance, high productivity

Bottle pick & place group
Tray pick & place group
Booklet feeding group

Exploiting Technologies
Romaco Promatic P 91 Series
Promatic – fastest intermittent cartoner, ideal for limited industrial spaces

The PCI 915 is aimed to satisfy medium packaging speed needs. Thanks to the incredibly compact footprint, these cartoners are the ideal solution for industrial environments with significant space constraints. Only 3.500 mm in length, the PCI 915 delivers 150 cartons per minute.

Technology at operator’s service

The ergonomics of the PCI 915 is focused towards operators. Leaflet and cartons loading points are positioned at the most convenient height for production personnel. The machine balcony design cuts down line clearance time and format changeover time. Noise levels have been reduced thanks to the implementation of brushless motorisation in place of mechanical movements wherever possible.

The user manual and spare parts manual are conveniently stored on the machine’s PC panel.

Technology matching production needs

- Rejected leaflets and rejected cartons boxes can be removed and discharged with no machine stop
- Buffer belt for rejected leaflets and cartons
- Reduced mechanical parts, replacement of mechanical movements with dedicated brushless motors wherever possible.
- Electronic cams allow the smoothest handling of products, granting the highest product quality obtainable on an intermittent motion machine
- Machine brushless motorisation reduces wear on parts and maintenance time
The Perfect Solution to any Challenge

The continuous motion cartoners in the Romaco Promatic PC 4000 series are ideally suited for a wide range of applications. They are designed for both high-speed operation and also for medium packaging speeds. These cartoners can be switched flexibly between continuous and intermittent – the recommended mode for processing high stacks, for instance. The PC 4000 cartoner series packs up to 420 folding cartons a minute in continuous mode.

Ergonomic Design
- Strict balcony architecture with no supporting structure at the operator side
- cGMP compliant design meets even the most demanding standards in pharmaceutical production
- Easy access reduces retooling and cleaning times to a minimum
- Retractable carton magazine allows optimal access to all machine components and makes format changes easy
- Ergonomic working height for maximum operating convenience

Technical Highlights
- Positive carton opening system: servo controlled carton pick-up protects the materials
- Torque limiters for all drives
- Modular design allows bespoke feed systems and the integration of numerous additional functions
- Reproducible and tool-less format changes in under 15 minutes; stack heights can be modified in less than 10 minutes
- No vacuum pumps: Venturi nozzles produce the vacuum for opening the cartons and folding the booklets
- Low vibration and noise levels thanks to servo motors and belt drives
- Minimal costs for maintenance: toothed belts and pulleys instead of chains and mechanical gears

Exploiting Technologies
Romaco Promatic PC 4000 Series

Blister feeding group
Multiple bottles feeding group
Pouch feeding group
The Romaco Promatic Bipak vertical cartoner can be flexibly switched between continuous and intermittent mode. With the standard version, the folding cartons are filled manually, which accommodated by the machine design providing sufficient space for up to four operators. Where Bipak is optionally equipped with various automatic feeding units, the cartons are filled using a Pick & Place system. The products are always fed vertically from above. The cartons are opened and closed automatically. The Romaco Promatic Bipak is therefore ideal for packing upright products.

**Continuous or Intermittent Motion**
- Continuous or intermittent motion
- Manual or automatic product feeding
- Servo controlled main drive allows flexible selection of the operating mode
- Numerous bespoke feed systems available

**Ergonomic Design**
- Extended feed conveyor simplifies manual carton filling
- Belt drives guarantee low noise level
- Simple control and monitoring on the HMI panel with intuitive navigation
- Quick and easy product changeover
- Manual feeding independent of specific formats

**Maximum Flexibility**
- Continuous or intermittent motion
- Manual or automatic product feeding
- Servo controlled main drive allows flexible selection of the operating mode
- Numerous bespoke feed systems available

**Very Wide Range of Applications**
- Suitable for various product types: pharmaceuticals, cosmetics, foods, chemicals and industrial devices
- Gentle packing of vials, jars, tins or unstable containers like lamp bulbs
- Cartons of any size up to 120 mm width, height 80 mm, depth 250 mm can be handled
- Different products or inserts can be packed in the same carton, e.g. spoons, pipettes, gloves and applicators
- Patient information, booklets or instructions for use can be added to each pack
- Multiple packs of upright products are not a problem
Romaco integrated solution for seamless track & trace

A Track and Trace system is a mass serial-ization solution for pharmaceutical and food companies that prints a unique identifying code onto each product after it has been packaged. Enabling the implementation of anti-counterfeiting devices for cartons and ensuring product easy identification, the Promatic PTT is designed to allow the installation of various tracking devices.

Variable data and the Pharmacode – either a 2D Data Matrix or a QR code – are printed on the carton side flaps and on the top. The printed data can then be read optically and verified using OCR/OCV. This system is also suitable for connection to software. The Promatic PTT can be flexibly configured and easily integrated into new or existing pharmaceutical secondary packaging line.

Servo-driven machine
- synchronized operation of the upstream and downstream line components
- indexed carton transfer with toothed belts for correct position of the carton during code printing

Balcony design
- easy and fast line clearance operations
- Compact footprint, ideal to be integrated within existing production lines

Quick Product Changes
- User friendly interface, ergonomic adjustments and changeovers
- Flexibility to install any kind of vision system and integrate serialization software

Technical Highlights
- Laser or ink-jet printing on cartons
- OCR/OCV of printed data
- Application of label on top of cartons (vignette/bollino)
- Barcode/datamatrix reading
- Temper evident seal application on carton closing flaps
- TouchControl HMI and printer HMI-integrated
- Labels presence verification
- Rejection in lockable bin (optionally sorted per type of error)
Ideal Solution for a Wide Range of Final Packaging Applications

The Romaco Promatic PAK 320 case packer is a fully automatic final packaging solution. This side-loading machine fills up to 8 shipping cases a minute at maximum speed. Either hot melt or adhesive tape closure is possible. The clear design of the case packer enables critical operations to be checked optimally, so that machine downtime is reduced to a minimum.

The Romaco Promatic PAK 100 is a semi-automatic case packer that is absolutely affordable. This machine can be used to group, stack and insert folding cartons. The only manual steps are case erection and feeding. Thanks to the simple, compact design, the machine is also extremely simple to operate.

The Romaco Promatic PAK 130, a semi-automatic case packer, is the ideal solution for serialization and data aggregation.

Special Features of the Promatic PAK 320

Ergonomic Design
- Servo controlled case handling with positive opening system
- Vacuum produced by Venturi nozzles
- Vibration-free and silent operation
- Format changes in under 20 minutes
- Modular design with cGMP compliant balcony structure

Quality Control
- Easy integration of quality control systems
- Track & Trace: all systems required for seamless tracking implemented by Romaco
- Folding cartons identified layer by layer
Creating Value – Romaco generates added value for the customer across the entire life cycle of its solutions

- Romaco is interested in a long-term solution partnership with its customers
- Romaco is familiar with its customers’ critical success factors throughout the different life cycle phases of our jointly developed solutions
- The range of services from Romaco is specifically designed for these phases and is delivered through the appropriate modular components
- Romaco optimises the internal processes so that the customer can benefit from more secure decisions within the time gained
- In April 2014 the new business unit Romaco Systems was founded within the Romaco Group: the aim of this unit is to integrate the offering of the Romaco Group into comprehensive solutions

Benefit for the customer

Across the entire life cycle
- Minimal life cycle costs and low TCO guarantee fast amortisation of the financial investment
- The wide range of customer service products ensures sustainable value creation

In the investment phase (designing value)
- Professional consulting to increase decision-making security
- Short processing and delivery times give maximum scope for investment decision and thus optimum decision flexibility
- Customised solutions development for the optimum preparation of the implementation phases (ramp-up and production)
- Reliable and customer-orientated project management according to efficient milestone principles provides professional delivery

In the ramp-up phase (leveraging value)
- The production phase is reached more quickly due to shortening of ramp-up
- Transfer of expertise provides increased security to the customer in implementing production systems at the highest level
- Minimisation of ramp-up costs

In the production phase (harvesting value)
- Maintenance of the value stream due to quick customer service response times
- Best delivery times in service, format and spare parts
- Consulting on the optimisation of the OEE
- Continuous training of the customer team
- Extension of the life span

Creating Value describes our constant willingness to secure our customers’ – and our own – financial success.

We understand the business model of our customers and with a diverse portfolio we offer the best price/performanace ratio for generating additional cash flow.
Customer Service

Comprehensive Range of Service from Initial Installation and Throughout the Operating Lifespan

- **Remote Assist with smart glass**
- **PartGuard**
- **Training**
- **Retrofits, Upgrades & Revamping**
  - New groups and machine functions improvements
  - Machine overhauling and complete revamping
  - Mechanical and electrical obsolescence overcoming
- **Maintenance & Check-ups**
  - Scheduled and emergency onsite interventions
  - Periodic check-ups and machine status report
  - Machine lifecycle assessment
- **Service Partnership Agreements**
  - Complete service portfolio: Favored set of commercial conditions (bonuses, discounts, special rates)
  - Dedicated support plan with fixed SLA
- **Remote Service**
  - Expert hot-line connection for quick troubleshooting and problem solving
  - Remote-connection for online diagnostics and machine parameters control
  - Call-4-Service function for immediate assistance

**Qualified training and seminars** for machine operators and maintenance personnel

**FDA compliant training concepts** with continuous performance reviews

`Provided on the customer’s site or at the Romaco site`