



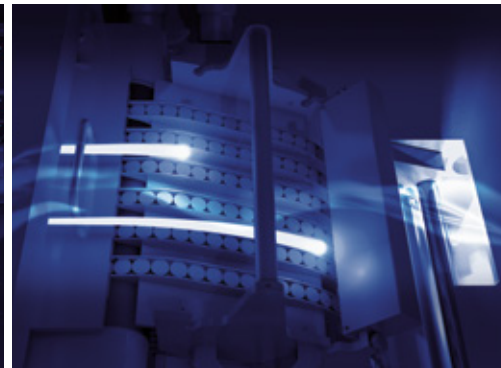
***Blister Solutions***



## Beyond Technology

The new business model from Romaco sets valuable incentives for meeting customer requirements. For the design of innovative solutions, Romaco relies on its unique knowledge portfolio. With its diverse brands, Romaco focuses on important technological fields of competence. The single product lines offer the optimum

prerequisite for the development of comprehensive solutions. Romaco promises its customers professional project handling, fast delivery times and a reliable service. Through this, Romaco provides its customers with a considerable boost to their earning and financial power.



### **Creating Value – best price/performance ratio**

Romaco wins over its customers by offering an outstanding price/performance ratio over the entire life cycle of its products. In this way, customers can systematically optimise their cash flow. With efficient production and service management, Romaco prepares its customers for future long-term commercial success.

### **Delivering Solutions – high application expertise**

Romaco offers integrated solutions for the growing markets of pharmaceuticals, cosmetics, food and industrial applications. Here, the customer benefits from the synergetic effects that result from the close collaboration of all the Romaco brands. This internal technology transfer imparts a considerable development potential and is the basis for comprehensive solutions.

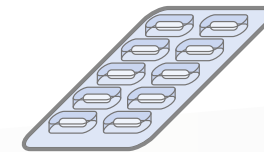
### **Exploiting Technologies – strong brands**

Romaco is synonymous with European engineering on the highest level. With its seven brands, the company is widely recognised around the world. Continuity and progress are the keys to a strong positioning on the market. Romaco relies on the profound knowledge and the long-time experience of its employees.



*»Aenova is focusing on implementing a modern lean management system and Romaco Noack's blister solutions are helping us to make full use of our capacity.«*

*Georg Reiser, Aenova Group*



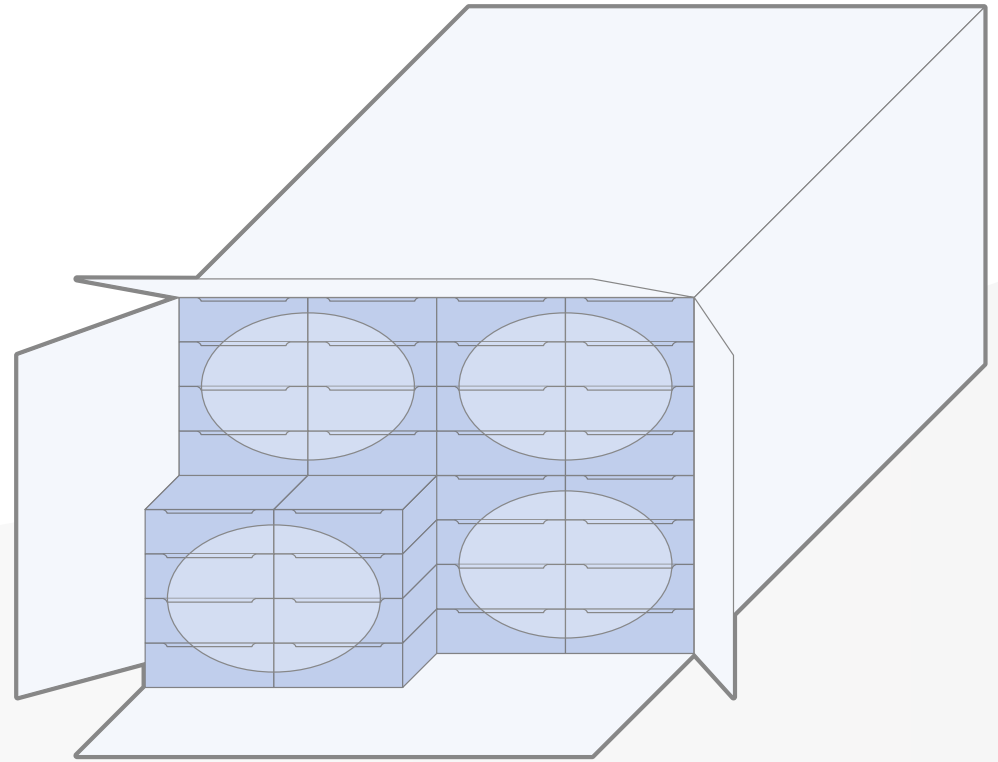
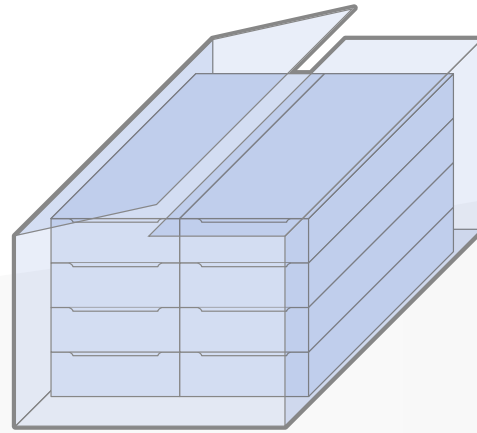
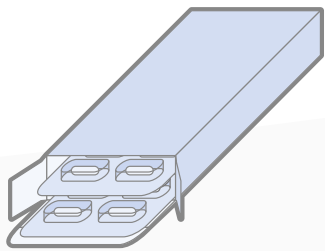
## **Delivering Solutions**

### **Blister Solutions for the Future**

Romaco develops end-to-end solutions for manufacturing and processing blister packaging. All blister lines can be individually configured according to each application and customer's specification. The Romaco portfolio comprises numerous options to enhance the primary and secondary packaging of pharmaceutical solids. Thanks to the high compatibility of the Romaco brands, integrated needs-driven solutions are now a reality.

### **Blister Packs**

- Air and moisture-tight individual packs
- Suitable for tablets, caplets and soft or hard gelatine capsules
- Packaging for standard or bespoke products
- Any standard foil type can be used, e.g. PVC, PVDC, Aclar or aluminium



### **Blister Packs in Folding Cartons**

- Wide choice of carton designs and materials
- Leaflets, booklets or medical devices can be inserted
- Glued or tuck-in closures together with a variety of tamper-evident features
- Inkjet, colour embossed, laser engraved or vignette

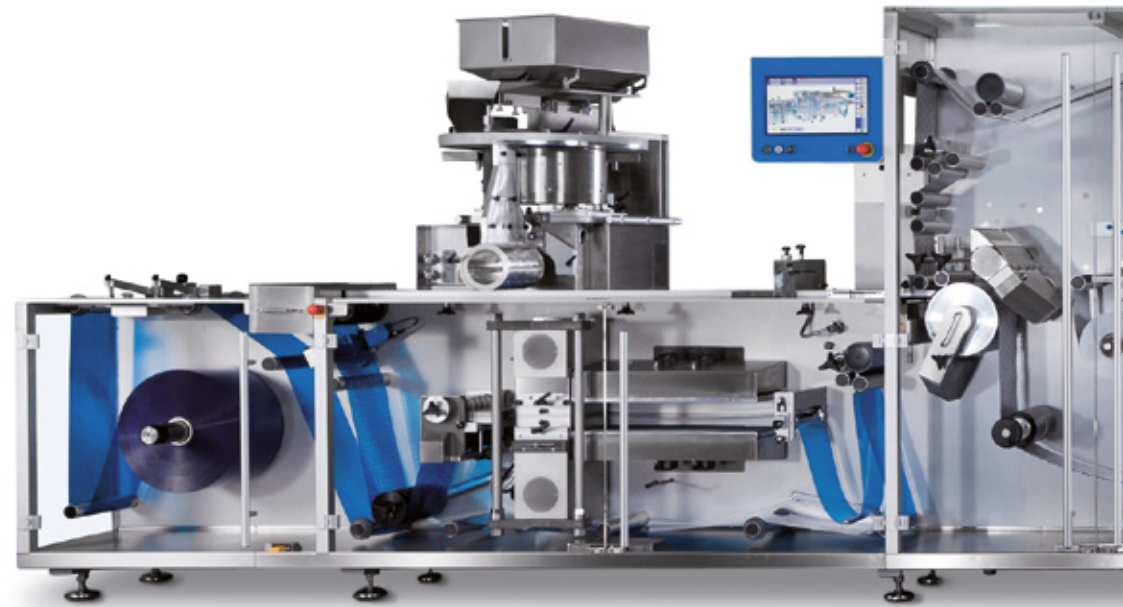
### **Carton Bundles**

- Final packaging solution for all folding carton types
- Stretch or shrink-wrapping as an alternative

### **Cartons in Shipping Cases**

- Suitable for feeding and packing single and bundled cartons
- Adhesive tape or hot melt closure



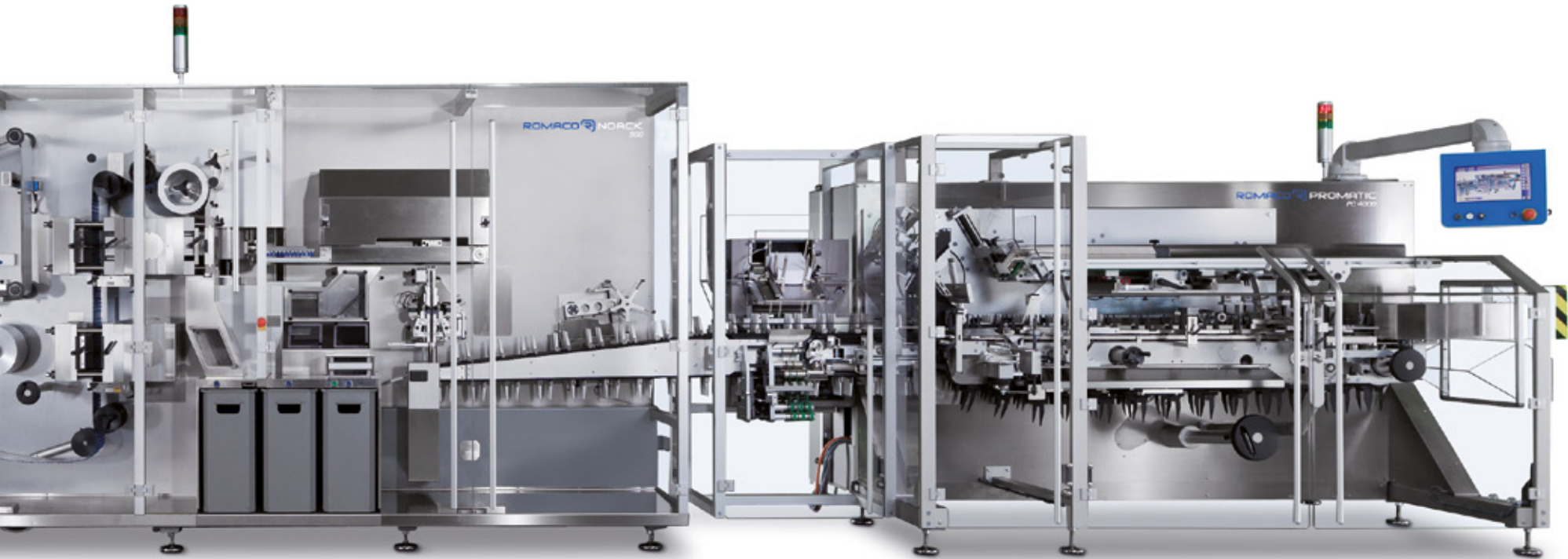


*Delivering Solutions*

**Blister Solutions  
for Demanding Applications**

The Romaco Noack Blister Solutions impress with excellent OEE values: performance, quality and availability improve the overall effectiveness of the equipment. With a maximum output of 700 blisters and 420 folding cartons per minute, these machines are suitable for very small to

medium batch sizes. Reliable processes and a high level of automation reduce product waste to a minimum. The real production time is reduced, even with frequent product changeovers. Romaco continuously cuts customer's unit packaging costs by delivering optimal value for money.



#### QuickClean – Cleaning Concept

- Modules designed without edges or corners enable significantly shorter cleaning times
- Individually configurable housings, covers and panelling enable the surfaces requiring cleaning to be reduced to a minimum
- Easy access to all machine parts considerably simplifies cleaning

#### QuickChange – Quick Product Changes

- Highly reliable processes even when both the product or the format parts are changed
- Complete changeover in less than 30 minutes
- Extremely short run-in times with the QuickAdjust, automatic station control system
- Fail-safe control for quick and secure fitting of format sets

#### QuickAdmin – Monitoring Panel

- Optimised control achieved by all processes being absolutely reproducible
- Production and format parameters can be recalled at any time
- Ergonomic HMI panel with intuitive visualisation and navigation
- High level of automation allows the machine to be operated by a single person

#### QuickControl – Maximum Safety

- Track & Trace: all requested systems can be implemented
- Seamless tracking of pharmaceutical products
- Audit trail: full documentation of all process data
- Batch records created in a few simple steps







### Unique Romaco Noack Features ensure Efficient Blister Production

The Romaco Noack 960 and 930 blister machines can be supplied with either platen or rotary sealing. A balcony structure ensuring cGMP compliance together with integrated Track & Trace and containment solutions are the hallmarks of this technology. Servo and auto controls ensure precise execution independent of the operator.

### QuickFeed

- Interchangeable feed unit that enables product changes to be completed in a matter of seconds
- Next batch can be produced concurrently if a second feed unit is installed
- Separate cleaning and tooling of the removed unit
- Parallel operating steps instead of sequential enabled by the patented Quick-Feed technology

### QuickTransfer

- Blisters fed directly to the container's bucket chain
- Servo-driven blister transfer on a vacuum assisted overhead conveyor
- Servo-controlled de-stacking independent of specific blister formats
- In-process control without stopping the machine

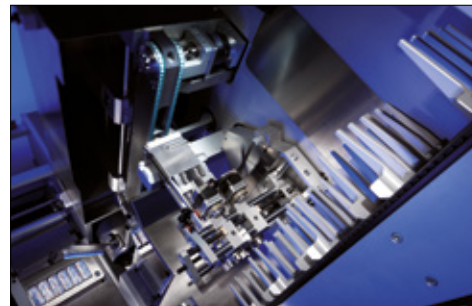
### Ergonomic Format Sets

- Precisely fitting original parts direct from Romaco reduce retooling times to a minimum, increase machine output and improve blister quality
- Plug-and-play technique for convenient handling and easy fitting
- Fewer format parts mean quick product changes with lower purchase and warehousing costs
- Lightweight construction allows quicker release of format parts
- Fail-safe control avoids complications and guarantees faster and more reliable fitting

*Exploiting Technologies  
Romaco Noack 960  
Romaco Noack 930*



*QuickFeed – Change of the feed unit within seconds*



*QuickTransfer – Direct blister transfer to the cartoner*



*Feed roller of the blister machine Romaco Noack 960*





## Blistering Made Easy

The Noack NBP 950 is the first blister machine to be built by Romaco in the new corporate industrial design. It provides easy operation and cleaning and is also very compact. This rotary sealing machine achieves a maximum output of 500 blisters a minute and is flexible in every respect. The blisters can be arranged either lengthwise or crosswise to the running direction, for example, giving users a wide range of options for blister layout and cavity geometry design. All in all, the machine is perfect for day-to-day production with frequent product and format changes.

## The Easy Principle

- Easy product changes
- Easy to clean
- Easy to operate
- Easy line integration

## Versatile System

- Suitable for all product specifications
- Blisters can be arranged lengthwise or crosswise to the running direction
- Numerous blister layouts and cavity geometries

## Innovative Design

- Ergonomic design and balcony architecture
- Hygienic design, especially in the feeding area
- Lightweight format parts
- GMP compliant: rounded edges and corners
- Systematic reduction of spare and wearing parts

## Reliable Processes

- Robust forming station with servo drive
- Draw-off roller with integral cooling for safe processing of temperature sensitive products
- Separate servo drives for individual functions
- Coding station designed for high loads
- Low-wear operation – benchmark for low lifecycle costs
- Quick access to services via the operating terminal

## High Availability

- QuickFeed: innovative change concept for the product feeding system means less downtime
- QuickAdjust: automatic station control system saves run-in time following a job change
- Full compatibility of parts with the Noack 921

*Exploiting Technologies  
Romaco Noack NBP 950*



*Dedicated feeding*

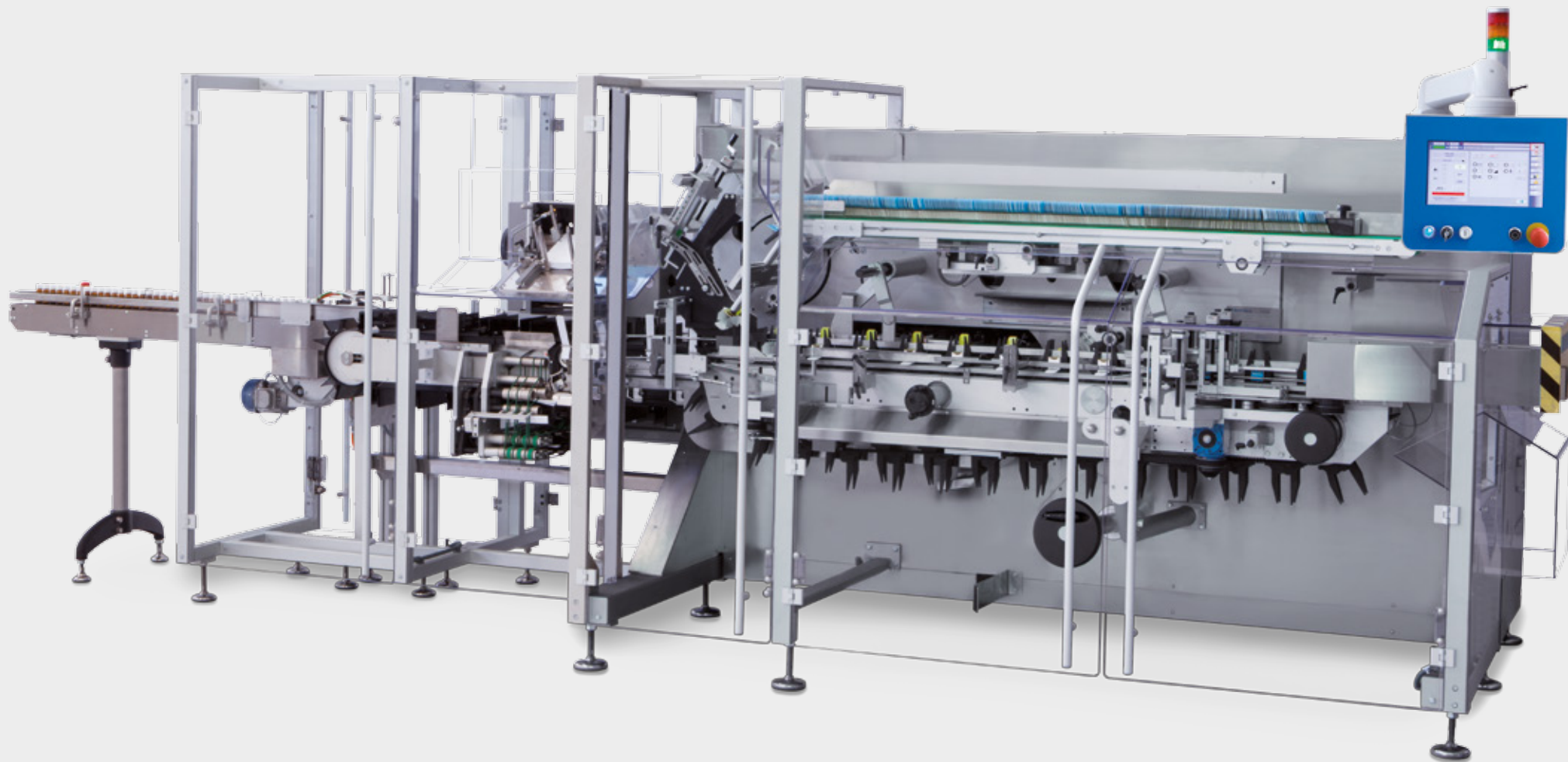


*Forming station*



*Cooled draw-off roller*





### Continuous Motion Cartoners

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 medium packaging speeds. These cartoning machines can be switched flexibly from continuous to intermittent motion – for processing high stacks, for instance. The PC 4000 cartoner series packs up to 420 folding cartons a minute in continuous mode.

### Intermittent Motion Cartoners

With a maximum output of 150 folding cartons a minute, the Promatic PCI 915 intermittent motion cartoner represents the high performance class. The models in the Romaco Promatic P 91 series are available in a standard speed (P 91) or large packaging (P 91L) version.

### cGMP Compliant Design

- Balcony architecture conforms to the highest pharmaceutical standards
- Optimal view of the process
- Cross-contamination is successfully avoided
- Very efficient line clearances

### Ergonomic Design

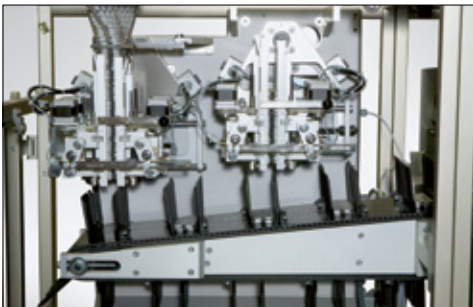
- Easy access reduces retooling and cleaning times to a minimum
- Retractable carton magazine allows optimal access to all machine components and simplifies format changes
- Ergonomic working height for maximum operating convenience
- Low vibration and noise levels thanks to servo motors and belt drives

### Technical Highlights

- Bespoke feed systems can be designed on request
- Positive carton opening system: servo-controlled carton pick-up protects the materials
- Reproducible, toolless format changes in under fifteen minutes
- Torque limiters for all drives
- Minimal costs for maintenance: toothed belts and pulleys instead of chains and mechanical gears

### Exploiting Technologies

*Romaco Promatic PC 4000 Series*  
*Romaco Promatic P 91 Series*  
*Romaco Promatic PCI 900 Series*



*Product feed into the open cartons*



*Positive carton opening and product feeding into cartons*



*cGMP compliant balcony design*





## Final Packaging Solutions

Romaco Promatic offers a wide range of final packaging solutions which can be flexibly configured according to the application.

### Carton Bundling with the SM 2000

The stretch banders in the Romaco Promatic SM 2000 series can be supplied with a pneumatic (PV) or a servo (EV) drive. They are also available with an optional shrink tunnel. Depending on the model, these balcony design banders achieve a maximum output of 50 bundles a minute. The folding cartons can be bundled either lying down or standing up on edge. A complete format set consists of only three parts.



SM 2000: stacking unit and hot sealing bar

## Semi-automatic Case Packer PAK 100

The Romaco Promatic PAK 100 is a semi-automatic case packer that is altogether affordable. This compact machine can be used to group, stack and pack folding cartons. The only manual steps are case erection, feeding and removal. Therefore PAK 100 is not only extremely reliable but also very simple to operate.

### Fully Automatic Final Packaging Solution PAK 320

The Romaco Promatic PAK 320 case packer is a fully automatic final packaging solution. This side-loading machine fills up to eight shipping cases a minute at maximum speed. Either hot melt or adhesive tape closure is possible.



PAK 320: automatic case erection

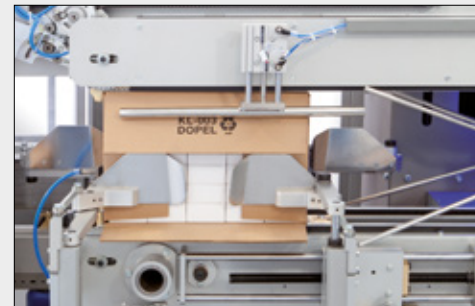
## Unique Features of the PAK 320

### Ergonomic Design

- Servo-controlled case handling with positive opening system
- Vibration-free and silent operation
- Format changes in under twenty minutes

### Quality Control

- cGMP compliant balcony architecture
- Easy integration of quality control systems
- Track & trace: customised solutions for seamless tracking
- Folding cartons identified layer by layer



PAK 320: carton flap closure

*Exploiting Technologies*  
*Romaco Promatic SM 2000*  
*Romaco Promatic PAK 100*  
*Romaco Promatic PAK 320*







**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

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

**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*

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



**Competent partner throughout the operating lifespan**

**Installation & Commissioning**

- Installation: project planning and execution
- Commissioning and initial briefing for operators
- Qualification support
- Ramp-up support with shortened start-up phase

**Training**

- Qualified training and seminars for machine operators and maintenance personnel
- FDA compliant training concepts with continuous performance reviews
- Training provided on the customer's site or at Romaco's
- OEE support: systematic optimisation of overall equipment effectiveness

**Maintenance and Remote Assist**

- Individual maintenance and Remote Assist contracts
- Remote Assist permits prompt and reliable diagnostics
- Real-time support thanks to customer service "at the push of a button"
- Virtual communication using smart glasses
- Telephone hotline in case of an emergency
- Team of service technicians on hand to carry out assignments worldwide

**Retrofits and Upgrades**

- General overhaul and modernisation projects help improve economic efficiency
- Individual solutions
- Active obsolescence management extends the service life
- Feature enhancements enable increased flexibility
- Plant relocation planning and execution

**Spare Parts**

- Spare parts packages tailored to each individual machine
- All spare parts available for a minimum of ten years
- Durable original parts that fit exactly
- Short response and delivery times
- Decentralised warehousing ensures local availability

**Original Parts**

- Format sets compatible with all machines in the same series
- High-precision parts that fit exactly
- Format centre: each part is rigorously tested by Romaco before it leaves the factory
- Machine parameters and qualification documentation included in the scope of supply



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 **SIEBLER**

 **PROMATIC**

 **MACOFAR**

 **BOSSPAK**

