



*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.

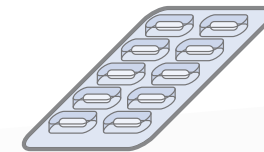
### **Exploiting Technologies – strong brands**

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, Head of the Packaging Competence Centre Bad Aibling,  
Aenova Holding GmbH, Germany*



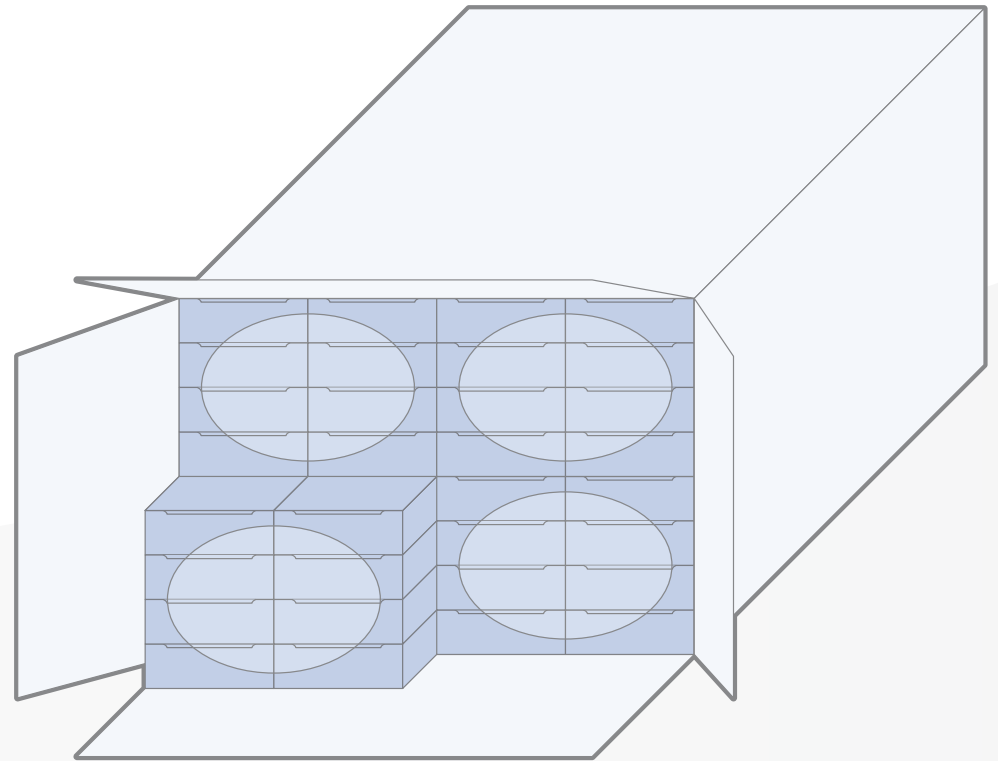
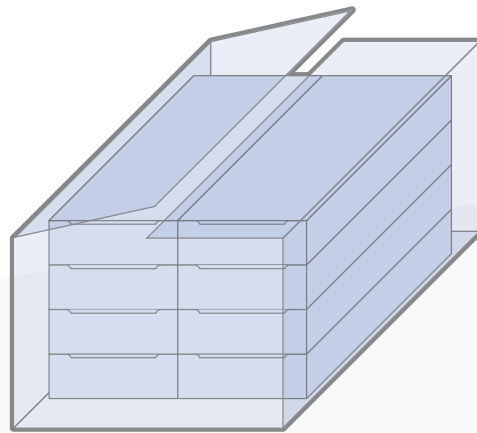
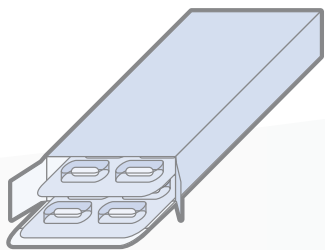
### **Delivering Solutions**

#### **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 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 930 and 960 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

All blister machines in the Romaco Noack 900 series 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 precision execution independent of the operator. The blisters can be arranged either parallel or at right angles to the running direction.

### 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 auto-adjustment without stopping the machine

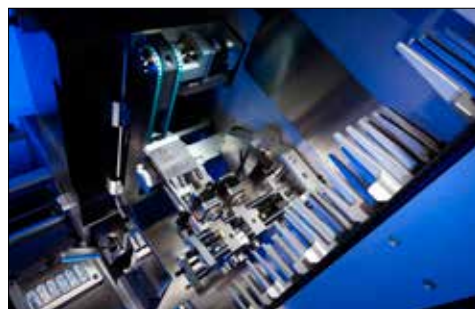
### Ergonomic Format Sets

- Precisely fitting original parts direct from Romaco reduce re-tooling times to a minimum, increase machine output and improve blister quality
- Plug-and-play technique for convenient handling and easy fitting
- Fewer format sets 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 900 Series



*QuickFeed – Change of the feeding unit within seconds*

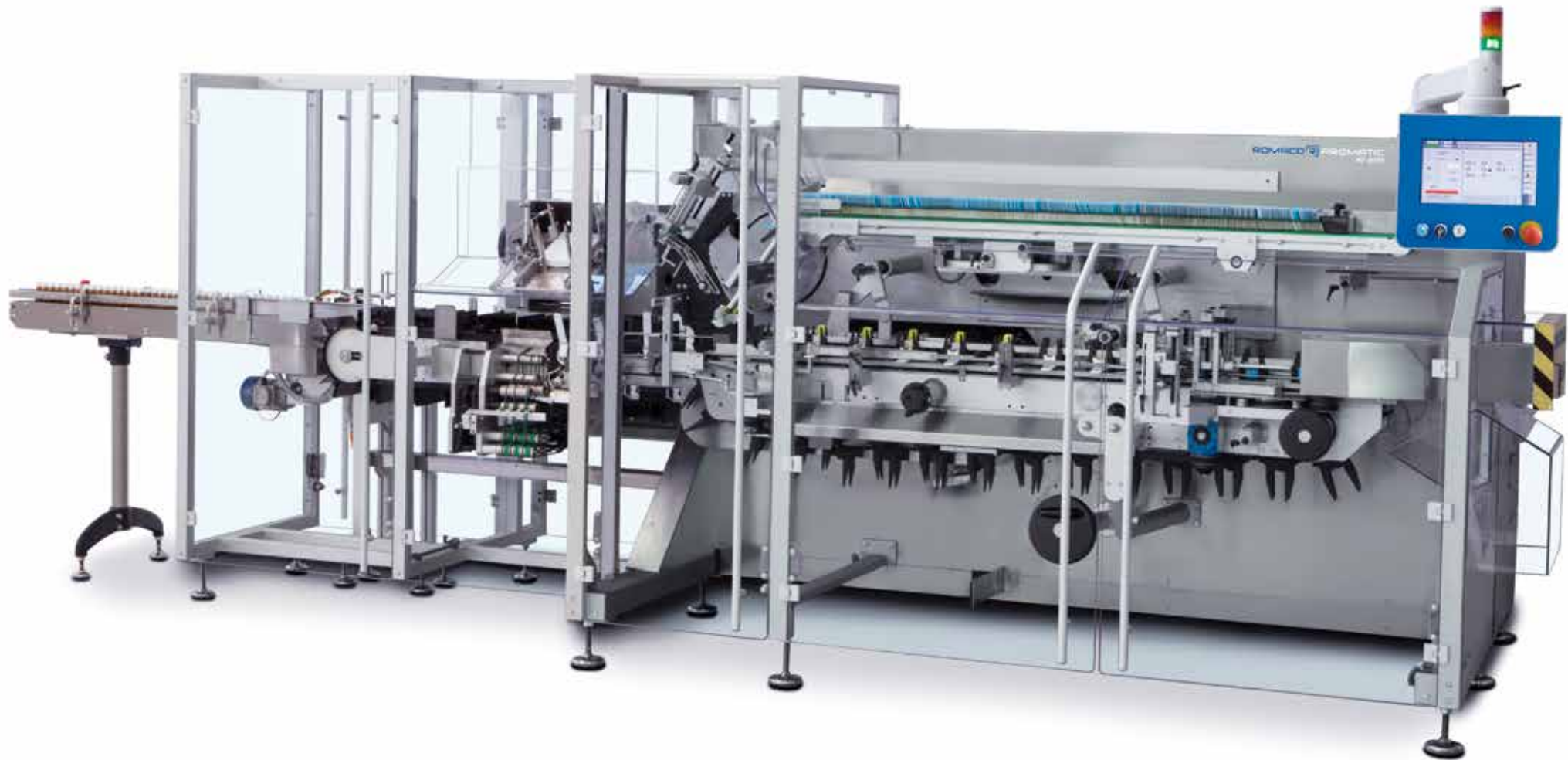


*QuickTransfer – Direct blister transfer to the container*



*Feeding roller of the blister machine Romaco Noack 960*





## 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.

The intermittent motion cartoners in the Romaco Promatic P 91 series are available in a standard or high-speed version (P 91S). These compact machines boast a maximum output of 140 folding cartons a minute.

## 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*  
*Romaco Promatic P 91 Series*



*Product feed into the open cartons*



*cGMP compliant balcony design*



*Blister stacking into the bucket chain*





### Carton Bundling Made Easy

The stretch banders in the Romaco Promatic SM 2000 series can be supplied with a mechanical (MV) or a servo (EV) drive. Depending on the model, these banders achieve a maximum output of 50 bundles a minute. They are also available with an optional shrink wrapper. The folding cartons can be stacked either lying down or standing up on edge. A carton feed system can be configured on the front of the machine if necessary.

### Quick Product Changes

- Tool-less adjustment to the required format in less than 5 minutes
- A complete set of format parts consists of just 3 pieces
- Automatic quick-release system speeds up film changes

### Balcony Structure

- Optimal access to all parts
- Short times for retooling, cleaning and maintenance

### cGMP Compliance

- Clear structure conforms to high cGMP standards
- Self-cleaning heat-sealing bar prevents foil residues from accumulating

### Technical Highlights

- Motorised film handling system at the top and bottom
- Dynamic stacking unit permits higher production speeds
- Sealing station cooled by an air gun

*Exploiting Technologies*  
*Romaco Promatic SM 2000 Series*



*Motorised film handling*



*Strain release during foil unwinding*



*Stacking unit and hot sealing bar*







## 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 easy to operate.

## 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

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



*Carton feeding*



*Automatic case erection*



*Carton flap closure*





**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.**



**Comprehensive Range of Services from the Initial Installation Throughout the Machine Lifespan**

**Original Parts**

- Format sets compatible with all machines in the same series
- High-precision parts that fit exactly: extremely light and made to last
- Fast track service: delivery in less than four weeks
- 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

**Commissioning**

- Installation: project planning and execution
- Commissioning and initial briefing of operators
- Process validation support
- Ramp-up support with shortened start-up phase

**Maintenance**

- Telephone advice available from Romaco experts
- Expert system guarantees coherent and efficient assistance
- Remote online support: prompt and reliable diagnostics using digital access
- On-site service: local emergency support provided when necessary
- Maintenance contracts: preventive maintenance reducing breakdowns to a minimum

**Training**

- 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 training centre

**Production Optimisation**

- Support for customers regarding the systematic optimisation of OEE values
- OEE audits on the customer's premises
- Detailed analyses of internal processes and downtime
- Combination of lean expertise and technical plant know-how

**Retrofit, Expansion and Relocation**

- Standard packages and customised solutions for machines in all series
- Special feed systems for complex products and specific layouts
- Plant relocation planning and execution





**Romaco Pharmatechnik GmbH**

Am Heegwald 11  
76227 Karlsruhe  
Germany

P +49 (0)721 4804 0  
F +49 (0)721 4804 211  
E [noack@romaco.com](mailto:noack@romaco.com)

[www.romaco.com](http://www.romaco.com)

 KILIAN

 NOACK

 SIEBLER

 PROMATIC

 MACOFAR

 UNIPAC

 BOSSPAK

