



Powder Dosing 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!



» *Romaco Macofar supplies end-to-end, needs-driven solutions for powder dosing which offer excellent value for money.* «

Nicola Magriotis, Sales Director, Romaco S.r.l.



Delivering Solutions

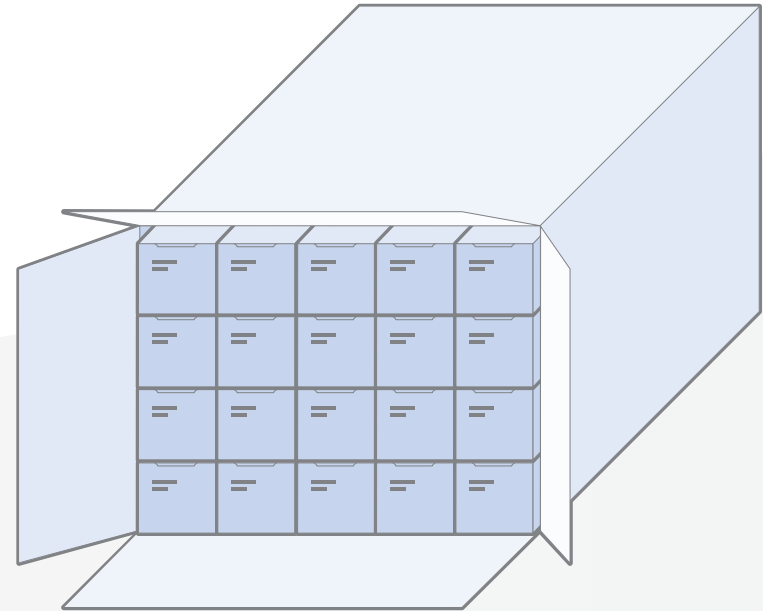
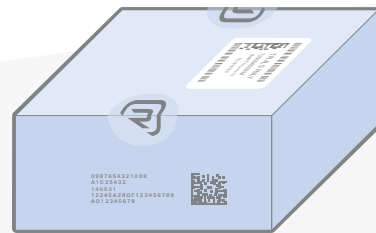
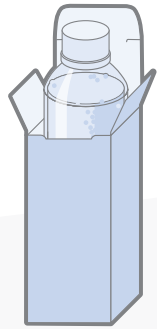
Powder Dosing – Needs-Driven Solutions Based on Several Decades of Experience

Romaco Macofar's reputation has been built on over forty years experience as a supplier of macrodosing machines for pharmaceutical powders. Most powders or granules can be filled into glass or plastic bottles, depending on the application and the customer's individual specification.

Due to the full compatibility of Romaco Macofar and Promatic equipment, powder dosing systems can be combined very efficiently with Romaco's comprehensive portfolio of secondary and tertiary packaging solutions. Romaco is optimally equipped to provide end-to-end, needs-driven solutions for powder processing.

Filling into Bottles

- Suitable for cylindrical glass or plastic bottles
- Non-free-flowing powders, dry syrups and similar substances dosed using a vacuum/pressure system
- Designed to handle containers 30 to 60 mm in diameter and 50 to 170 mm in height
- For dosing volumes from a minimum of 6 cc to a maximum of 95 cc
- Closure with almost any type of cap including CRC (child resistant closures)



Bottles 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

Track & Trace

- Tracking devices as inkjet or laser printers
- Application of vignette label on top carton flaps
- Verification of 2D codes and human readable variable data

Cartons in Shipping Cases

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





Delivering Solutions

Dosing and Cartoning – In-line Synchronised Manufacturing at High Speeds

Based on a vacuum/pressure system, Romaco Macofar powder dosing machines process non-free-flowing powders, dry syrups and similar substances flexibly and efficiently. The fully automatic Macofar MT 6 and F4/PC models can be supplied in several different versions, depending on the product and the application.

Their compact design saves space and money on the production floor. The full compatibility of the various Romaco brands is a significant advantage to providing complete solutions. In combination with Romaco Promatic secondary and tertiary packaging solutions, which are optionally installable downstream, your Romaco Macofar macrodosing machine can be expanded into a complete production line.



Flexible Machine Configurations

- Several different models for different speed requirements
- Modular architecture permits customised solutions
- Flexible handling of numerous container sizes and dosing volumes
- Compact design saves space and money on the production floor
- High level of automation assures absolutely reliable processes and optimal overall equipment effectiveness

Continuous Process and Vacuum/Pressure System

- Minimal product loss
- No mechanical movements and hence no contamination of the powder by metal particles
- No significant dispersion when the powder slug is ejected via the funnels
- No product heating thanks to absence of mechanical movements
- No risk of powder contamination from lubricants
- No shear forces on the powder

Wide Range of Closure Systems

- A wide variety of closure systems, e.g. pilfer-proof, screw or press-on caps, child resistant
- Adjustable capping torque
- Glass partition wall separating the closing station from the filling station





Automatic Powder Dosing Solutions for High Product Quality

The Romaco Macofar MT 6 and F4/PC master the challenge of dosing and filling non-free-flowing powders, dry syrups and similar substances efficiently and precisely. The powders are dosed by this range of fully automatic machines using a vacuum/pressure system. The products are filled into stable cylindrical glass or plastic containers. Closure is possible with a wide variety of caps, including CRC (child resistant closures), depending on the customer's requirements. The machine can optionally be equipped to enable a dosing cup to be fitted to the closed bottles.

The MT 6 achieves a maximum mechanical output of 5000 bottles an hour. With its maximum hourly output of 8000 containers, the Romaco Macofar F4/PC is ideal for high speed dosing of orally administered antibiotic powders.

Efficient Filling, Minimal Product Loss

- Bottles fed via a motorized belt
- Infeed screw and starwheel for transferring the bottles to the dosing carousel
- Exit starwheels from the dosing carousel to the closing area
- Vacuum circuit for forming and retaining the powder slug inside the dosing ports
- Sterile compressed air circuit for ejecting the powder slug into the bottles and cleaning the filtration material of the pistons
- Powder de-dusting circuit for removing any residual product from the pistons and ports prior to refilling
- Closure and bottle transport controlled by a starwheel
- Closures fed by means of a vibrating bowl and feeding chutes
- Bottles exit via a motorized belt

Technical Highlights

- Compact design with a small footprint
- Mechanical output: 5000 (MT 6) or 8000 (F4/PC) bottles per hour depending on the stability of the containers, the properties of the powder and the closures required
- Dosing volumes from 6 to 95 cc
- Compressed air: 6 bar
- Compressed air consumption: 70 NI/min

*Exploiting Technologies
Romaco Macofar MT 6
and F4/PC*



Powder filling station

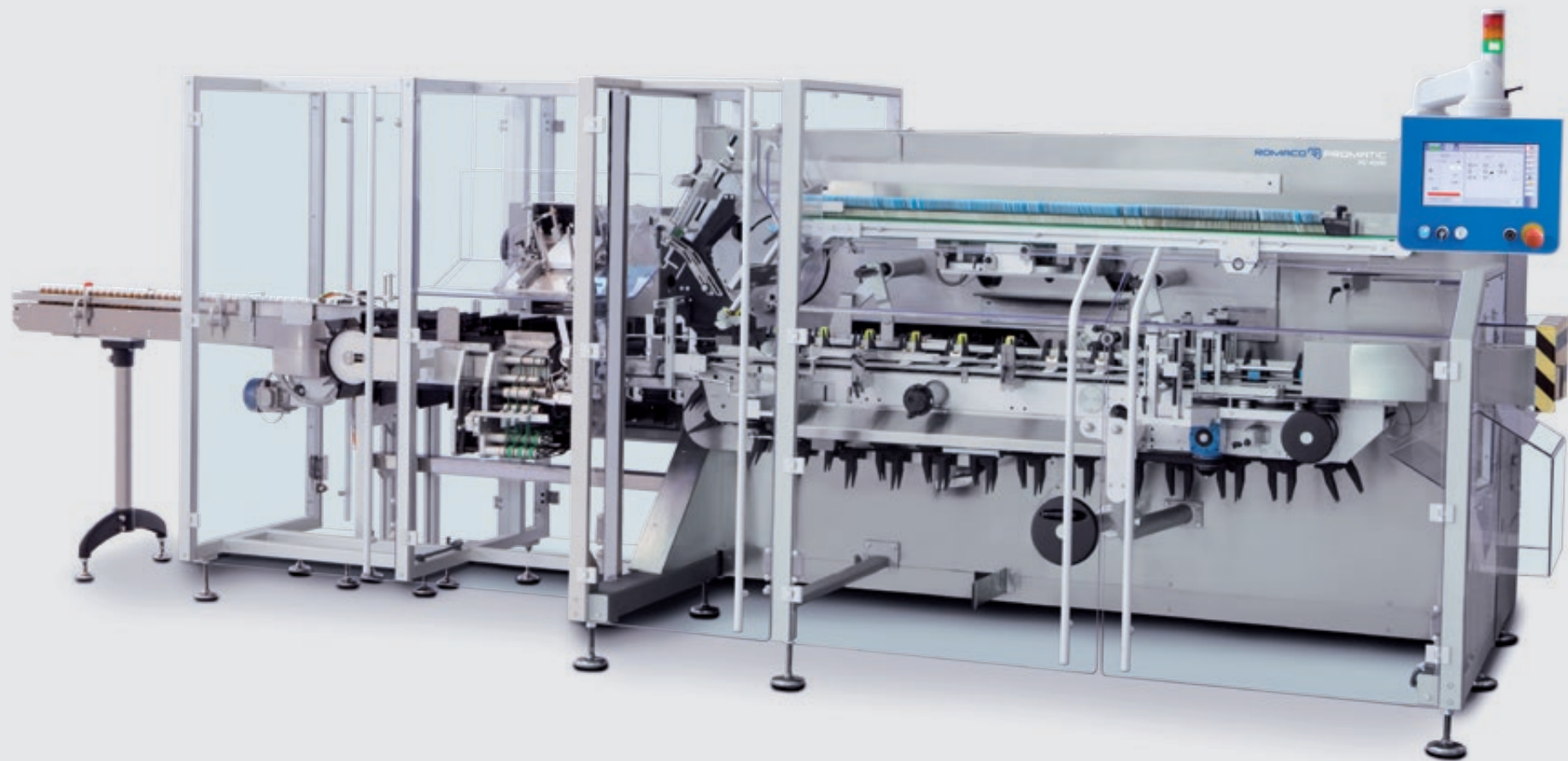


Closing station



Dosing cap application





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 motion. 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 a high-speed version (P 91S). These compact machines boast a maximum output of 140 folding cartons a minute.

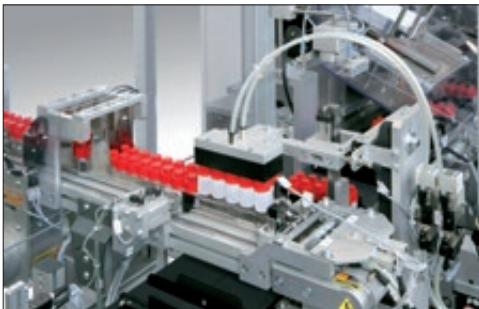
Ergonomic Design

- 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
- 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
Romaco Promatic PCI 900 Series

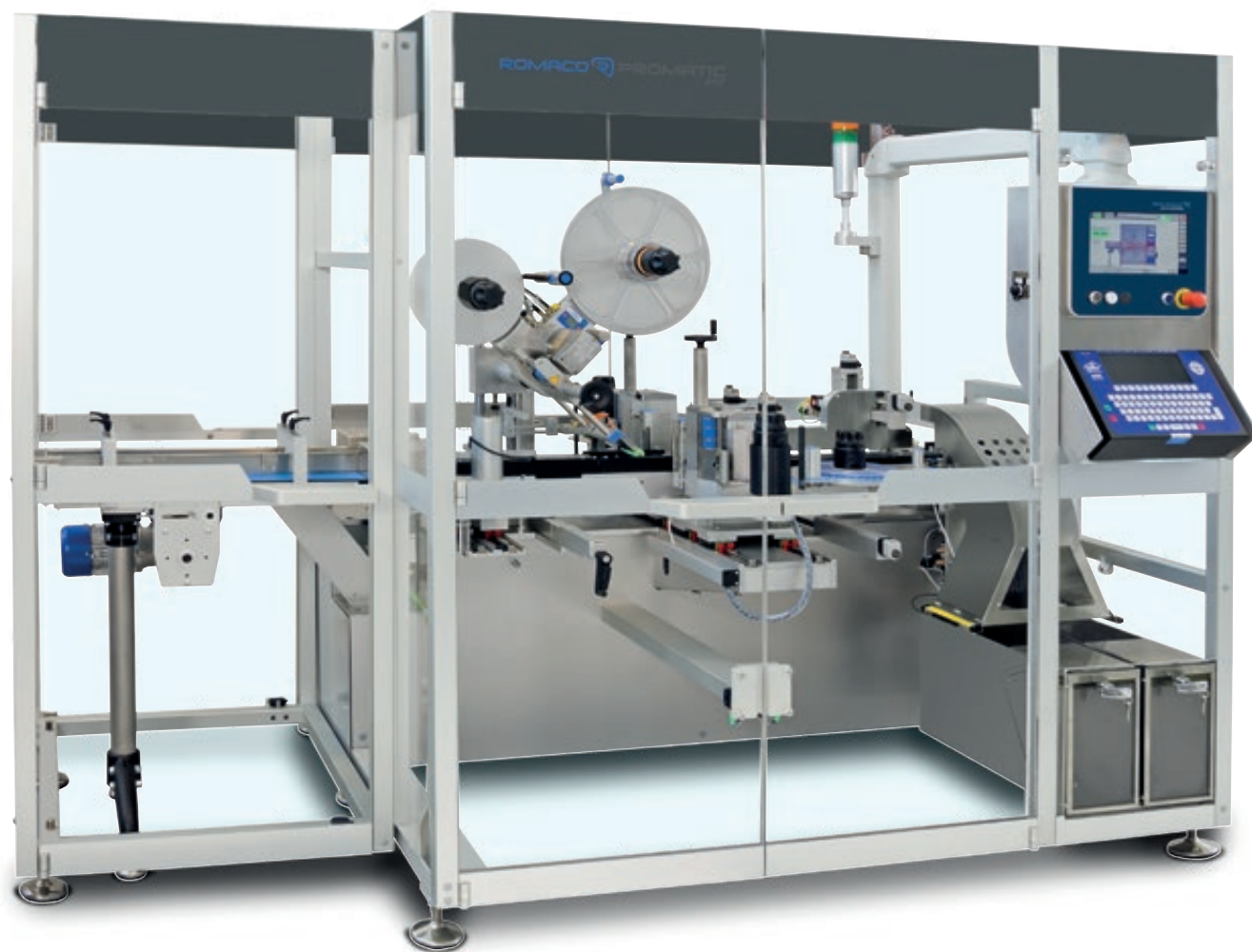


Bottle feeding into bucket chain



Product feed into the open cartons





Romaco integrated solution for seamless track & trace

A Track and Trace system is a mass serialization 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

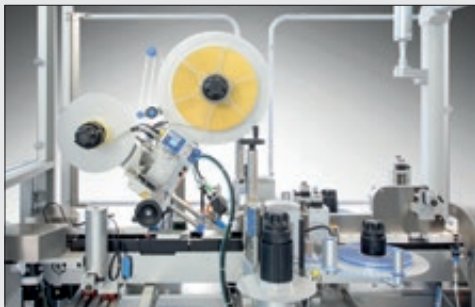
Quick Product Changes

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

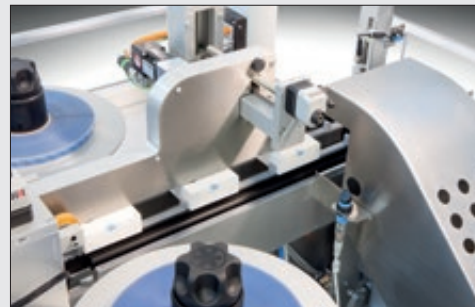
Technical Highlights

- 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)

*Exploiting Technologies
Romaco Promatic PTT Series*



General overview



Tamper evident application



Rejection in lockable bin





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

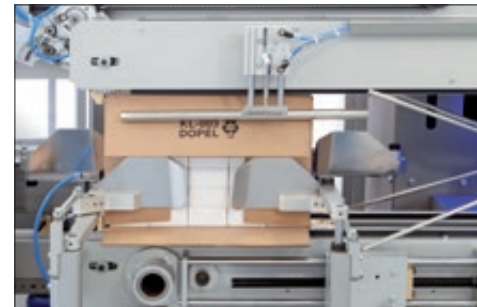
Exploiting Technologies
Romaco Promatic PAK 320
Romaco Promatic PAK 100
Romaco Promatic PAK 130



Case 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)

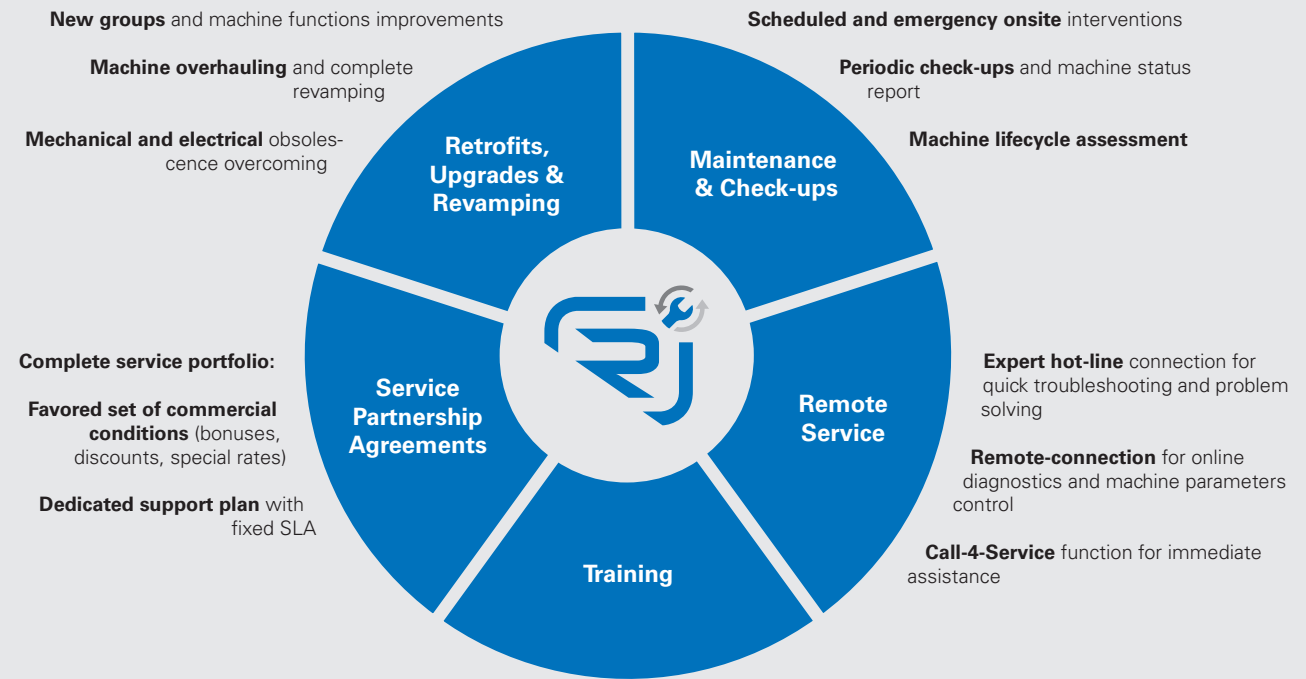
- Maintenance of the value stream due to quick customer service response times
- Best delivery times in service, format and spare parts
- Consulting on the optimisation of the OEE
- Continuous training of the customer team
- Extension of the life span

Creating Value

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



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



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



Training



PartGuard



Remote Assist with smart glass



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