



*Tableting solutions
for food, chemical and
industrial applications*





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.

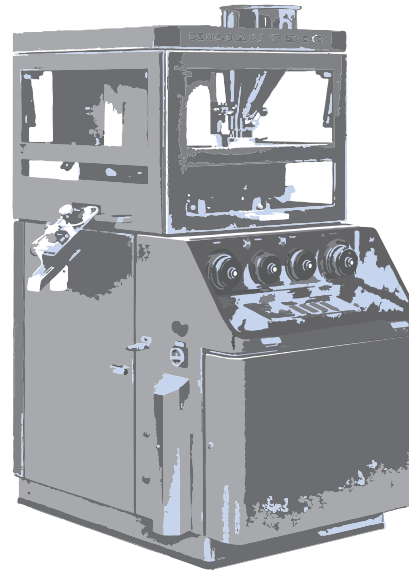
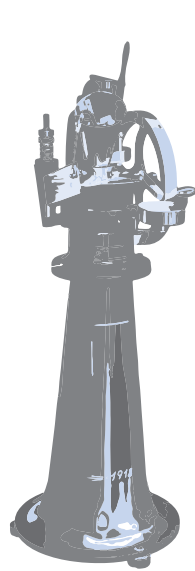
Creating Value – Enhanced Performance

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!



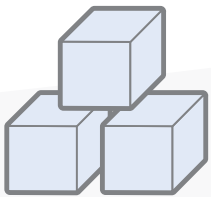


Delivering Solutions

Versatile tablet presses for applications in the areas of food, chemistry and industry

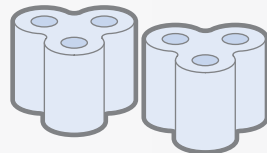
Tablet presses which are used in the food or chemical industry must feature great machine efficiency, high compression forces and large production capacities. The Romaco Kilian equipment meets all of

these requirements and also offers reliability and technical highlights which provide for extremely high performance. In addition, they are perfectly suited for the integration into a packaging line.



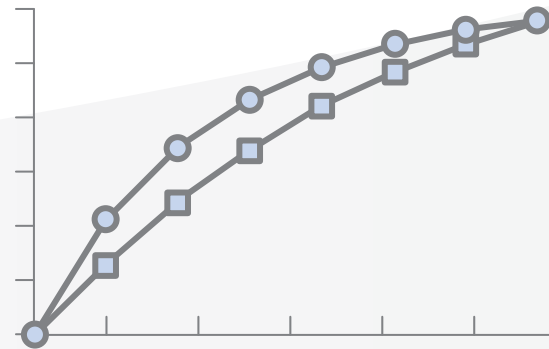
Tableting machines for food applications

- For applications such as sweeteners, sugar, dextrose, fructose, stock cubes, dietary supplements
- Robust design and high reliability for the perfect processing of abrasive or hard-to-handle products
- Special filling systems: high performance even with poorly flowing products



Tableting machines for chemical applications

- For applications such as catalysts, salt tablets, fertilisers, pesticides, naphthalene, paints, cleaning agents, batteries, airbags
- Perfect compensation of high ejection forces
- Explosion-proof design
- Adjusted machine configurations ready for the production of special chemical applications



Tableting machines for individual applications

- Continuous development of new customer-specific solutions: perfect solution for customer products and their challenges
- Test laboratory KiTech: analysis and consultation regarding product processing





Delivering Solutions

Various types of tablets

Romaco Kilian has adapted its machines to the requirements of the chemical and food industry in an optimum way that allows for highly efficient compression of any customer product into various tablet forms and types:

- Single-layer, double-layer and triple-layer tablets
- Core tablets (Tab-in-Tab)
- The shape can be freely chosen (e.g. bone shape, faces, stars, animals)

Different application-specific filling and output systems provide for a continuously high machine performance, even with abrasive, poorly flowing and explosive products. It is possible to compress very large (up to 44 mm) tablets as well as extremely small (0.8 mm) micro tablets. Different multi-tip tooling increases the output and reduces production times.





High Productivity

The K 720 high speed double-sided rotary press, with a maximum output of 1,000,000 tablets per hour, combines optimal OEE (overall equipment effectiveness) with excellent output, availability and quality.

Numerous Applications

The K 720 is available in the following configurations:

- Mono-layer mode
- Bi-layer mode
- Dual mode (mono/bi-layer)

It is the solution of choice for:

- Effervescent applications
- Denture cleaners
- Food supplements

Low Product Loss

Product scrapers with magnets which are perfectly set to a defined distance from the die table with a vertical wobble in the micron range, ensure low product loss and hence save money with every single tablet.



Low product loss

Reliable Production

Effervescent solutions are often hygroscopic and sticky, with poor flow properties.

- Low temperatures because the fill shoe gear is outside the process area
- Less risk of capping because the KILIAN "28/41" tooling extends the dwell time
- Paddle force fill shoes enable uniform product distribution

This all adds up to reliable production.

Breakage-Free Tablet Transfer

The TabTrans transfer technology is more than just a conveyor belt for tablets. It provides numerous supplementary functions during the fast, controlled, breakage-free transfer to the primary packaging machine

- Dedusting
- Process control with selective sampling
- Built-in metal check unit for detecting foreign particles



TabTrans

Optimal Availability

- Hermetic separation of the process area restricts cleaning to a minimum and extends the production time between cleaning cycles
- Robust pressure rollers, a maintenance-free torque drive and wear-free punch brake magnets mean downtime is minimised
- Call4Service directly on the HMI reduces the time to obtain Remote Assist support

Consistently High Quality

- Patented punch bellows for black spot-free tablets
- Constant braking forces due to the patented punch brake magnets result in a small standard deviation of the tablet weight

Intuitive Operation

- 21" HMI provides maximum ease of use
- Touch screen featuring swipe navigation
- Optimised GUI (almost anywhere in the menu structure with just two clicks)



Intuitive and ergonomic HMI screen





Reliable solutions also for highly viscous materials

Romaco Kilian KTS 1000 is a very reliable tablet press and perfectly suited for applications in the food and chemical industry which require compression forces of up to 120 kN. The machine features an exceptionally robust design. Vibrations have been reduced to a minimum and the penetration of granulates into the mechanical part of the machine has been eliminated.

The KTS 1000 is available in two configurations

- 2L (single-layer/double-layer machine)
- 3L (single-layer/double-layer/triple-layer machine)

The most important applications of the KTS 1000 at a glance

The Kilian KTS 1000 is known for its special capability to compress highly viscous materials perfectly. It is particularly suited for the production of tablets from corrosive, abrasive or acidic materials.

Chemicals

- Dishwasher tablets
- Cleaning tablets
- Fertiliser
- Pesticides
- Naphthalene
- Paint

Food

- Stock cubes
- Sweeteners
- Dextrose
- Fructose
- Dietary supplements

Sintered metals, ceramics, electrics

- Sintered metals
- Coal products

Cosmetics

- Denture cleaners
- Bath salts

Flexibility

- Flexible capabilities for different applications

- Suited for abrasive products
- Use of special tooling for products that are difficult to compress
- Optimised product feeding system for sticky and poorly flowing products
- Availability of different filling systems for optimised powder feeding into the dies

Technical highlights

- High overall equipment effectiveness
- Extremely robust machine design for compression forces of up to 120 kN
- Triple-layer tableting possible thanks to three pressing stations
- Large pitch circle diameter of 840 mm for high performance
- Hydraulic overload protection
- Patented wear-free punch braking magnets for constant redosing
- Maximum output of 3,000 (single-layer) and/or 1,500 tablets (double-layer) per minute with one tip tooling
- Maximum pre-pressure and main pressure forces of 120 kN
- T(otal) P(reventive) M(aintenance) design

*Exploiting Technologies
KTS 1000 series from Romaco Kilian*



Lower pressure rollers



Special tablet discharge



Robust design





Double-sided rotary press for industrial and technical tableting applications

RX is a robust and reliable double-sided rotary tablet press which can be configured as single-layer or double-layer press.

The most important applications

This worldwide established machine type is preferred for the processing of

- Chemicals (catalysts, salt tablets, fertilisers, pesticides, naphthalene, paints, dishwasher tablets)
- Food (sweeteners, sugar, dextrose, fructose, dietary supplements)
- Sintered metals, ceramics, electrics (hard metals, airbags, coal products)
- Cosmetics (denture cleaners, bath salts)

Optimised overall equipment effectiveness

- Minimum product loss
- Extremely robust design for the reliable compression of abrasive products
- High operator convenience
- Minimum demand for spare parts
- High output of up to 680,000 tablets per hour
- Punch bellows for long production processes

Technical highlights

- Double-sided rotary design for higher performance
- Optimised lubricating system for less wear
- Patented wear-free punch braking magnets for constant redosing
- Machine room separated from the process area for easy cleaning
- Different filling systems for optimised powder feeding available
- Only small floor space required which saves space during the production
- Low noise operation

*Exploiting Technologies
RX from Romaco Kilian*



Patented brake magnets



Special machine design



Hand wheels





High reliability at low operational costs

The E 150 PLUS from Romaco Kilian offers excellent tablet quality and high reliability at low operational costs. It guarantees a high output and a long lifespan

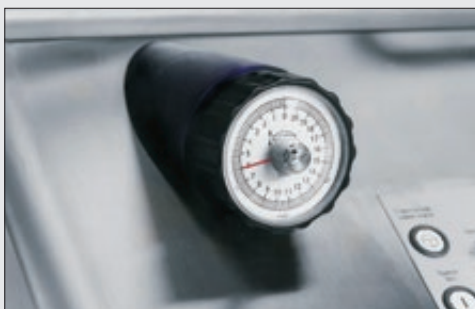
Fast changes

- Good accessibility for fast tooling change
- Availability of different filling systems for optimised powder feeding
- System upgrades for the operation with IPC unit allow for a direct weight monitoring
- Monitoring of all process parameters
- Operation via 12" touch-screen

Technical highlights

- Patented wear-free punch braking magnets for constant redosing
- Overload protection of the machine and the tooling
- High stability despite low weight
- Control cabinet and HMI are integrated
- Space-saving thanks to small floor space requirements
- Fitted with pre-pressure and main pressure station
- Maximum output of 225,000 tablets per hour with 36 punches, 200,400 with 32 punches, 162,800 with 26 punches, 131,500 with 21 punches
- Special design for ring tablets
- Maximum filling height 45 mm
- Maximum tablet diameter up to 40 mm
- Patented Kilian bellow system

*Exploiting Technologies
E 150 PLUS from Romaco Kilian*



Hand wheel



HMI screen



Filling system





Perfect solution for the compression of stock cubes

The S 250 B is a medium-sized and very reliable tablet press for poorly flowing products.

The most important applications

This machine type has been especially developed for the manufacture of stock cubes and complies with the internationally established standards of the food industry.

Robust and reliable

- High performance
- Robust structure for reliability even under difficult conditions such as extreme heat
- "Non-stick-design" of the product contact parts
- Special multi-purpose tools
- Optimised product feeding system for poorly flowing stock cube granulate
- Large filling area

Technical highlights

- Maximum output of up to 1,800 tablets per minute
- Filling depth of up to 45 mm
- Tablet scraper and tablet chute optimised for stock cubes
- Prepared for connection to a packaging line
- Machine in TPM design
- Patented Kilian bellow system

*Exploiting Technologies
S 250 B from Romaco Kilian*



Sight glass



Special tablet chute



Multi-tip tooling with bellows





Tablet press + measuring instrument

The Romaco Kilian STYL'ONE is a single-stroke tablet press and measuring instrument in one, which targets the following applications:

- Research
- Production of clinical batches
- Scale-up
- Product optimisation

It is suitable for compressing any type of tablets as:

- Mono-layer tablets
- Multilayer tablets (up to 5 layers with 3 different products)
- Core tablets

The machine is available in two configurations:

- STYL'ONE Evolution
- STYL'ONE Evolution High Containment

The configuration can be tailored exactly to your individual requirements.

The faster and more efficient path to new formulations

Thanks to ANALIS, the PAT (process analytical technology) software, the STYL'ONE can perform fully automatic compression studies in addition to force or displacement controlled cycles.

The roller compaction package RoCo™ Pack can be used both to replicate production presses and to manufacture pellets.

It provides a very convenient tool for granulation studies.

Realistic scale-up

All standard rotary presses can be replicated on the STYL'ONE, which allows realistic simulations of production presses with up to 2.6 G punch acceleration at speeds of up to 390 mm/s (e.g. up to 104 rpm on a KTP 420X).

Rapid production support

The STYL'ONE's simulation capabilities also help optimise existing tableting processes, so that the ideal parameters for the production press can be determined using less product and in less time.

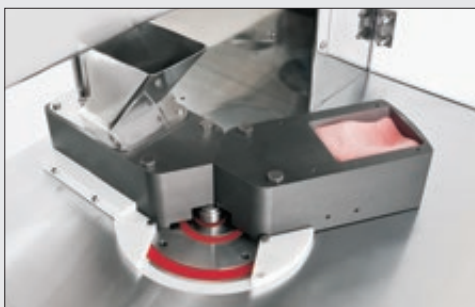
Inexpensive clinical batches

The STYL'ONE is a high speed single-stroke tablet press which achieves up to 1,750 tablets an hour (in mono-layer mode).

When equipped with the production module for:

- Indirect weight control (based on the filling)
 - Tablet chute with tablet selection
 - Batch report and 21 CFR Part 11 software
- it is perfect for the inexpensive production of clinical batches, thanks also to the quick and easy set-up process.

*Exploiting Technologies
STYL'ONE series from Romaco Kilian*



Multilayer (5 layers with 3 products)



RoCo™ Pack



Replication of production presses





Compact rotary press for R&D applications

This compact machine is the ideal solution for R&D applications and is also suited for small batch production.

Available in two configurations

- KTP 180X Laboratory
- KTP 180X Production

Technical highlights

- Completely automated machine without hand wheels
- Operation via an integrated HMI with 12" touch-screen
- Data acquisition and analysis system integrated into the operating software
- Exchangeable die table in a very compact design
- Patented wear-free brake magnets

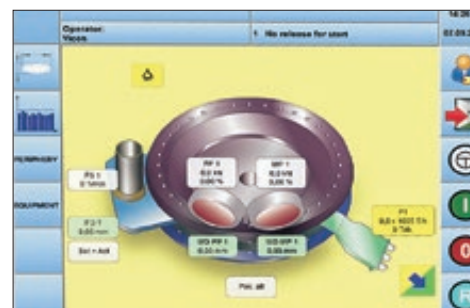
*Exploiting Technologies
KTP 180X from Romaco Kilian*



Easy access



Easy cleaning

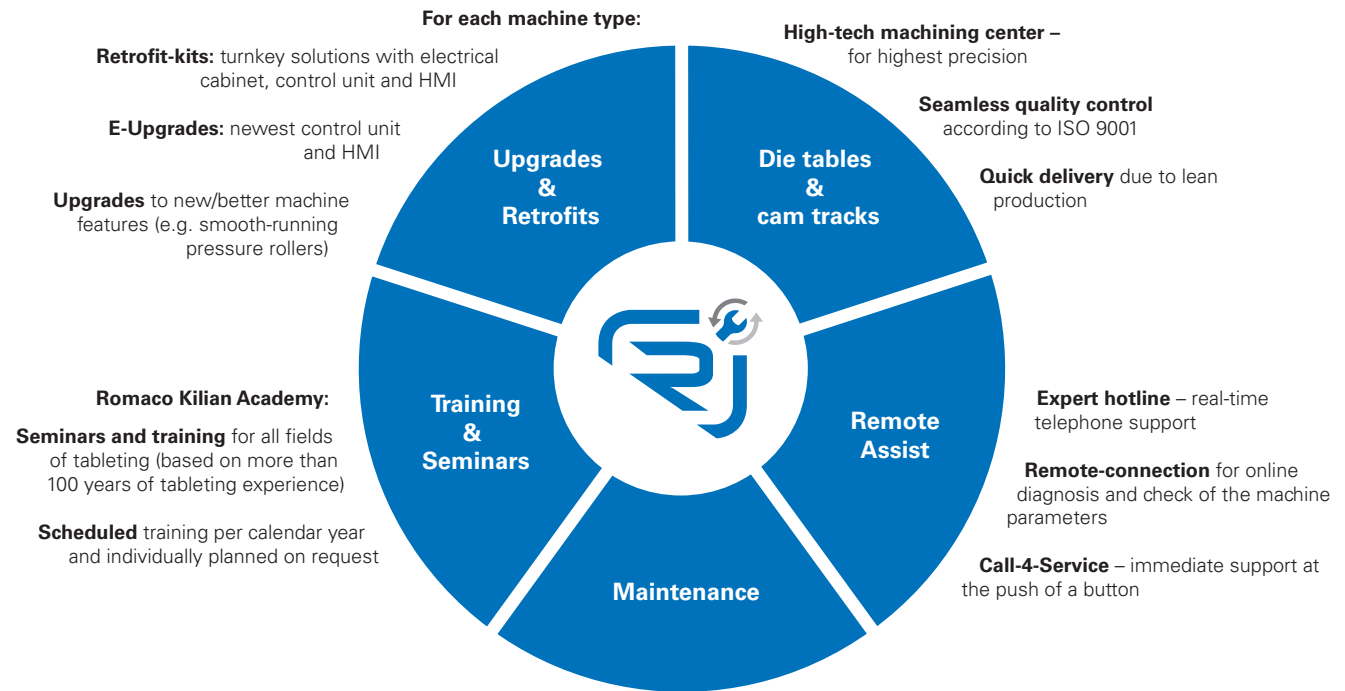


Self-explanatory menu



Customer Service

Reliable – competent – global
From installation through the
entire service life of the equipment



Training



PartGuard



Remote Assist with smart glass



Romaco Kilian GmbH

Scarletallee 11
50735 Köln
Germany

P +49 (0)221 7174 100
F +49 (0)221 7174 110
E kilian@romaco.com

www.romaco.com

 **INNOJET**
Herbert Hüttlin

 **KILIAN**

 **NOACK**

 **SIEBLER**

 **PROMATIC**

 **MACOFAR**

 **BOSSPAK**

