



**INNOVATION & KNOW-HOW
IN ENGINEERING**



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DESSL MASCHINENBAU GMBH from Schwaz in Tirol has established itself on the market since its foundation in 2002 as a full-range supplier with focus on jig construction, mechanical engineering, mechatronics and robotics.

The now more than 25 employees look after your needs in a customer-oriented manner and solve the tasks goal-oriented through innovative ideas and new developments.

Individualised courses and training for our employees enables us to equip our products with state-of-the-art technologies and to ensure consistent quality.

DESSL MASCHINENBAU develops customized production machines for you, from simple conveyor belts to complex systems.

All parts and systems are designed and manufactured by us specifically for you. The materials are carefully matched to your applications.

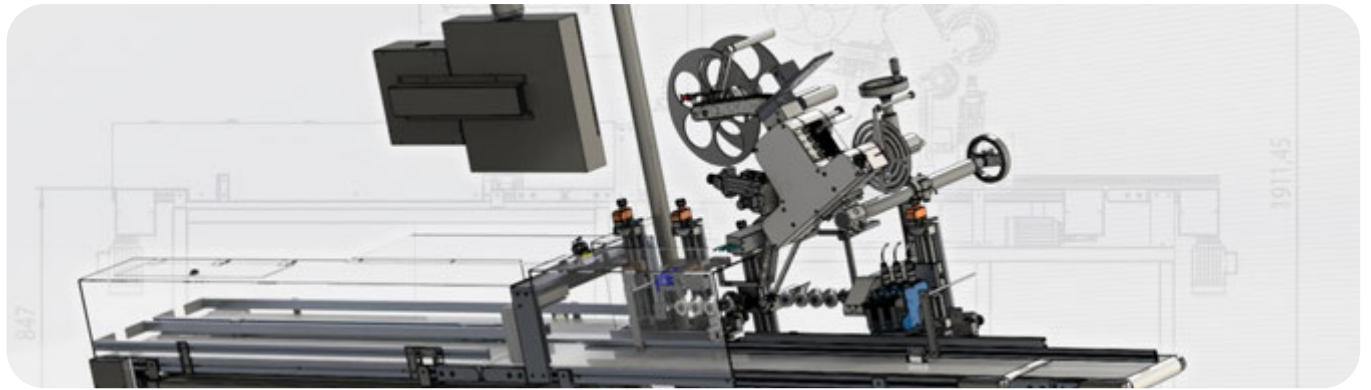
Especially for the pharmaceutical sector and cleanrooms, the selection is made according to the applicable regulations and standards (FDA, etc.).

Robots and PLC controls are programmed in-house to ensure the highest levels of flexibility and customer service possible. We offer everything from installation, commissioning to employee training for our systems and everything according to customer requirements.

We also retrofit your older, existing systems and manufacture plant and product-specific individual parts and assemblies, so that existing production processes can be optimized and adapted.



OUR SKILLS



CONCEPTION & CONSULTING



We work out an individual concept for you. Due to our many years of experience, we guarantee our customers a smooth process from planning through programming to the finished system. A one-stop service.

3D-CONSTRUCTION



Thanks to state-of-the-art 3D technology we are able to plan our projects in detail. From single parts to complex machines, everything is perfectly prepared for production.

MANUFACTURING



Versatility and perfection are our strength. With state-of-the-art CNC technology and the latest CAM software, we offer you maximum precision in milling, turning or water jet cutting.

3D WATER JET CUTTING



Thanks to our new water jet cutting machine with state-of-the-art 3D cutting technology, we are able to cut even the most complicated shapes. This enables us, for example, to machine tubes and fittings up to an opening angle of 120 ° or to cut freeforms and shape transitions (for example: square to round).

ROBOTICS



Whether packaging, welding, painting, positioning or testing - the application possibilities of industrial robots are virtually unlimited. We have been using this technology successfully for a long time and are incorporating the well-engineered systems of STÄUBLI.

SYSTEM CONTROL



The control of the machines is realized by using modern automation and process control systems from SIEMENS. The programming and the optimization process take place in-house by qualified specialists.



TECHNICAL DOCUMENTATION



The technical documentation is based on the MSV 2010. For safety, standardized construction and risk assessment, the established program SAFEXPERT is used in our company.

We offer:

- complete operating and operating instructions
- hardware plans
- software documentation
- maintenance plans
- declaration of conformity according to MRL 2006/42 / EC
- CE marking

INSTALLATION & COMMISSIONING



Before machines and systems are delivered, they undergo a final functional check in our workshop:

- Building the welded construction and assembly of the individual prefabricated parts
- Attachment of drive technology
- Installation of pneumatics, electrics and hydraulics
- Positioning of actuators and sensors
- Commissioning by means of control systems

SERVICE & MAINTENANCE



We support you constantly to ensure a smooth production process.

No matter if it concerns spare parts, a conversion, a relocation of the existing machine is pending or an update must be uploaded via remote maintenance. We are there for you.





OPTIMAL SOLUTIONS IN MECHANICAL ENGINEERING

For over 16 years, we have been offering our customers high-tech products and services for a wide variety of industries.

It is our goal in close cooperation with our partners and customers to offer optimal solutions for the respective requirements and to master challenges.

The cross-industry experience and ongoing training of our employees provide for innovation and new solutions.



PHARMACEUTICALS

Especially in the pharmaceutical sector precision, easy cleaning and the right choice of materials are important. Strict specifications require clean solutions. Be it the transport, the portioning or the packaging of products.



FOODS

When it comes to food, ease of disassembly and hygiene as well as portioning and changing of product lines are in the foreground. Creative solutions can help the customer to success and the end user to enjoy the product.



INDUSTRY

In production of today's industries flexible solutions are required to meet the needs of modern material processing and personnel development. We offer customized solutions for unique requirements.

PRODUCT OVERVIEW FOR THE PHARMACEUTICAL INDUSTRY



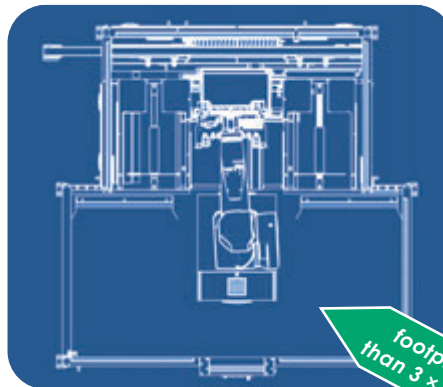
COLLECTOR

The solution for the temporary storage of vials in plastic boxes and the fully automated loading and unloading of stacking containers on pallets.

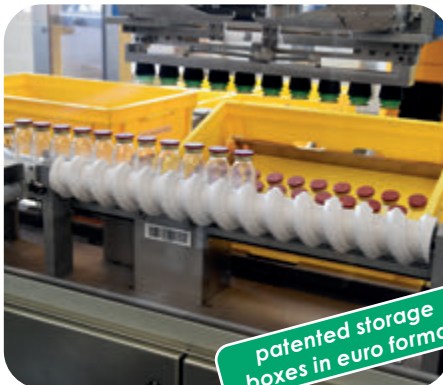
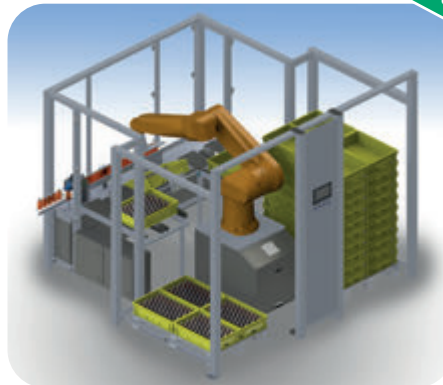
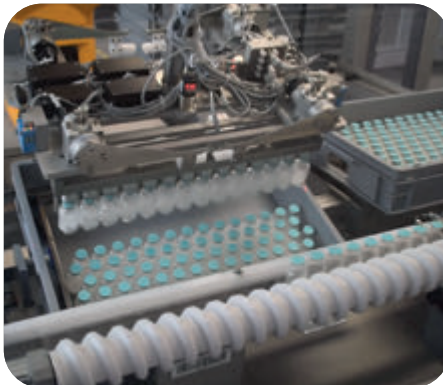
- loading and unloading with the same machine
- option to place inlet and outlet on right or left side
- easy option for pass-through of the machine
- machine can take role as buffer
- simple format change
- precise positioning thanks to the worm gear tailored to the product
- product identification through integrated or decoupled printing station with camera system
- use of different printing systems possible
- patented storage boxes with spring system prevent overturning of the vials
- integrated control cabinet with touch operation
- safety cell
- base area only 2.95 m × 2.95 m



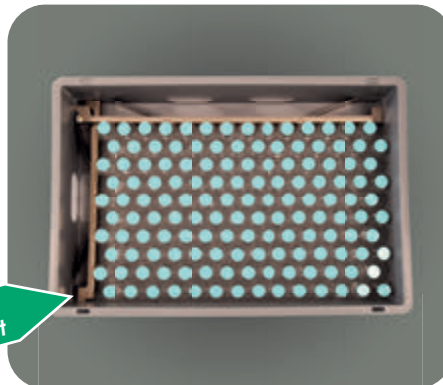
**Youtube-Video:
The Collector in action**



footprint less
than 3 × 3 meters



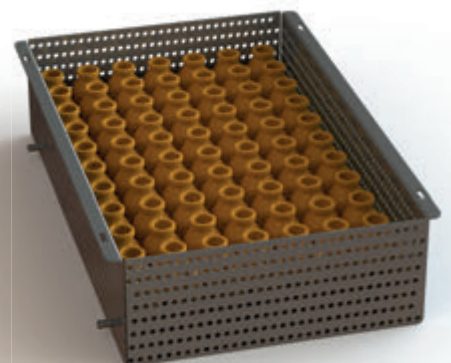
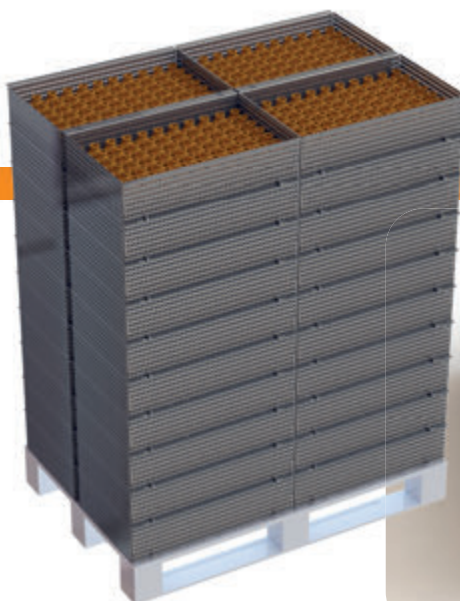
patented storage
boxes in euro format





AUTOCLAVE PLACEMENT

Our Collector is also able to load and unload pallets for autoclaves with specially made trays fully automated. The vials can be fed into the further production process immediately after autoclaving.



PACKAGING MACHINE FOR VIALS



The 6-axis robot arm allows flexible solutions for packaging vials into folding card boxes including information leaflets and an optional cardboard separator..

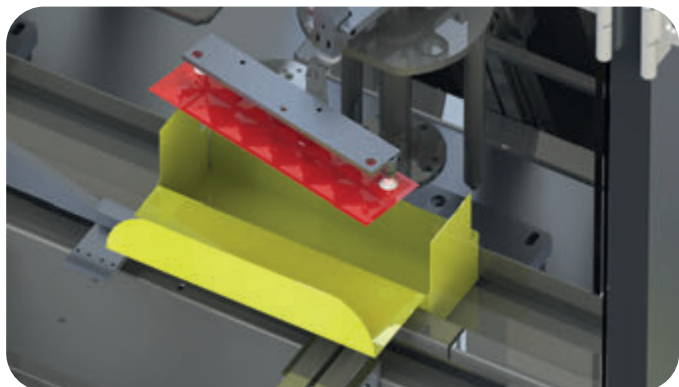
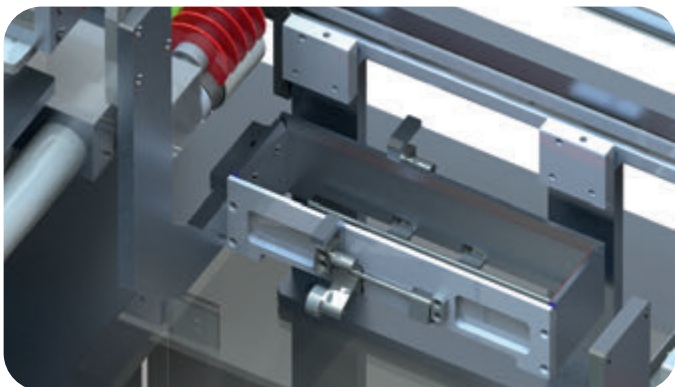
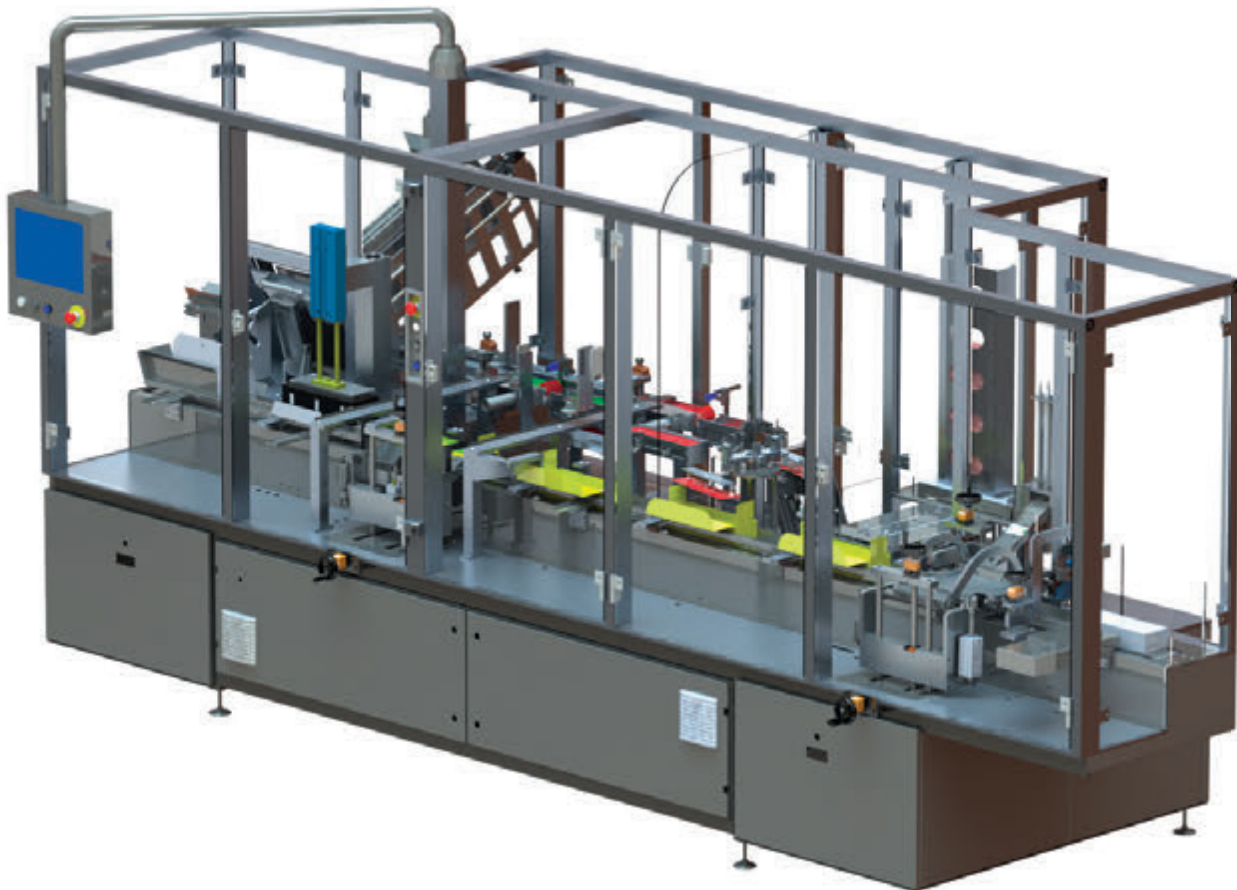
- top loading
- minimal required space
- highest reliability and safety by in-house developed, patented mechanisms
- easy handling and service
- short retooling times (10 minutes)
- individual packaging formats
- smooth, easy to clean surfaces
- open station for printing systems
- possible integration of Tamper Evident
- automated placement of patient information leaflets
- automated loading for cardboard separators
- validation check for packaging parts and imprints
- optional track-and-trace features



PACKAGING MACHINE FOR STRIP PACKS

Strip pack packaging into folding card boxes

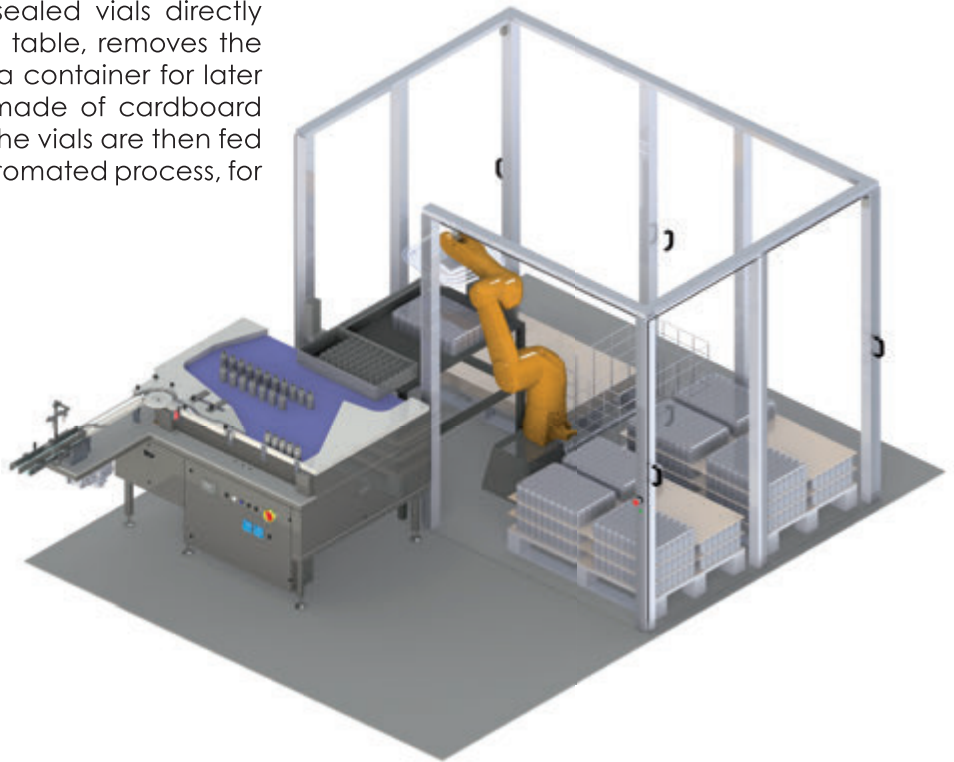
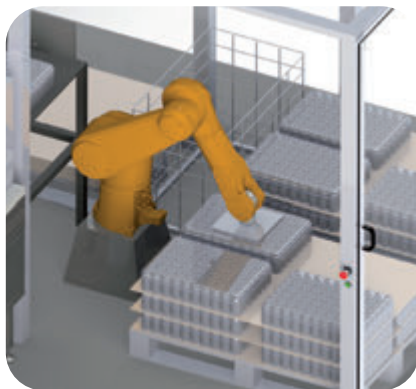
- different options for collecting and piling the strip packs
- minimal required space
- highest reliability and safety by in-house developed, patented mechanisms
- easy handling and service
- short retooling times (10 minutes)
- individual packaging formats
- smooth, easy to clean surfaces
- open station for printing systems
- possible integration of Tamper Evident
- automated placement of patient information leaflets
- validation check for packaging parts and imprints
- optional track-and-trace features



DEPACKING

Automated depacking of foil-sealed vials

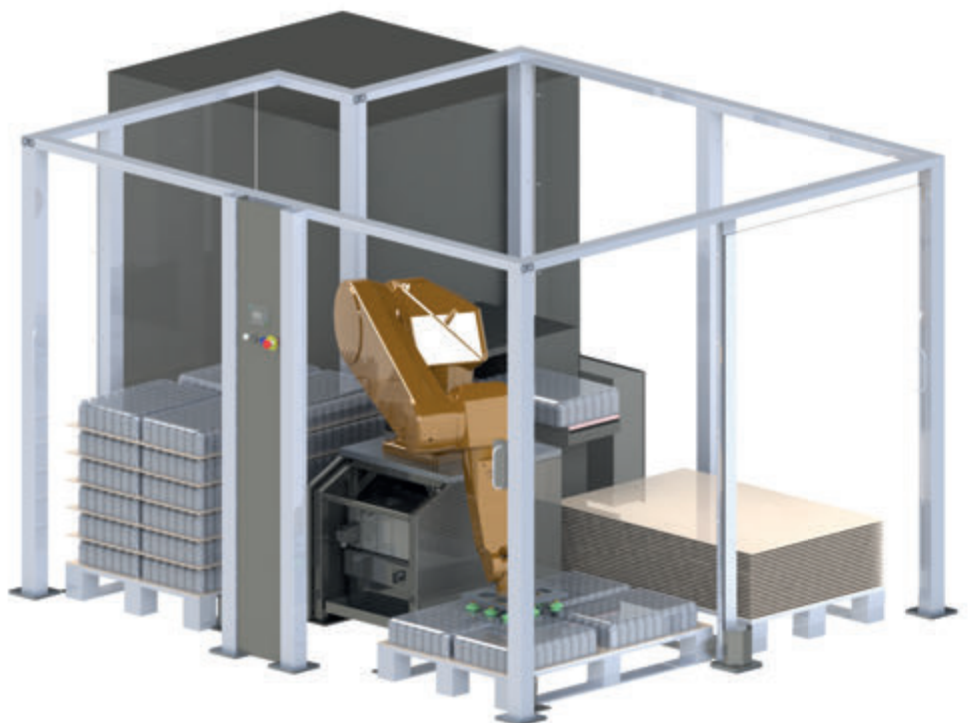
The robot lifts trays with foil-sealed vials directly from the pallet onto the feed table, removes the sealing foil and places it into a container for later recycling. Separation layers made of cardboard are stored on another pallet. The vials are then fed to the production line in an automated process, for example via bi-flow.



TRAY LOADING

Automated feeding of foil-sealed vials off pallet to following depackaging machine

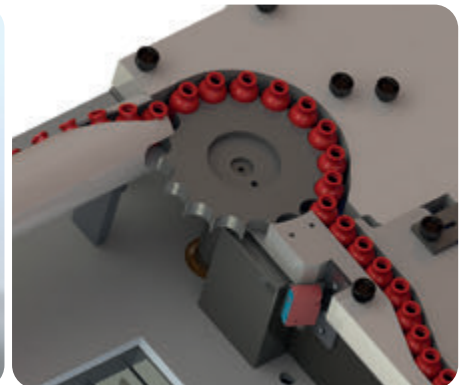
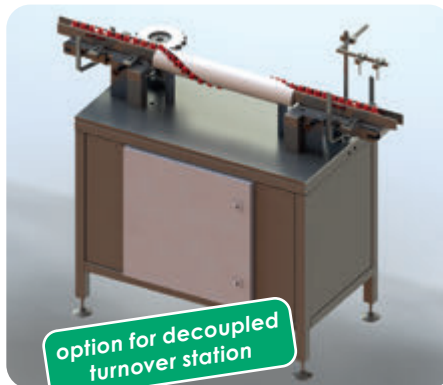
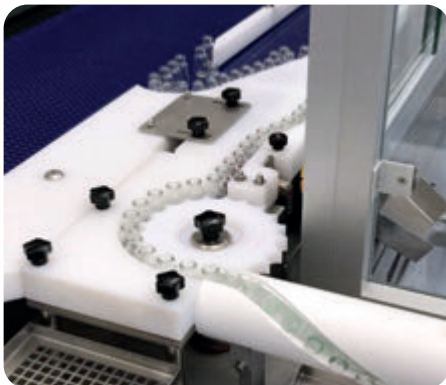
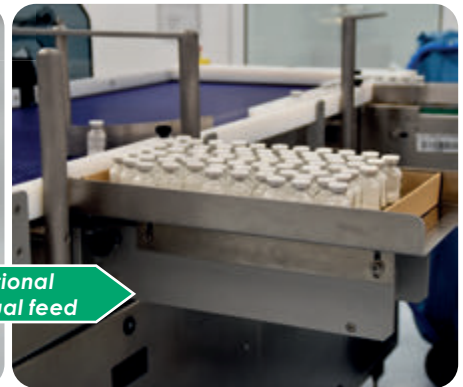
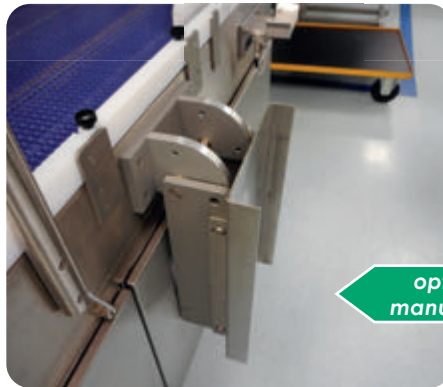
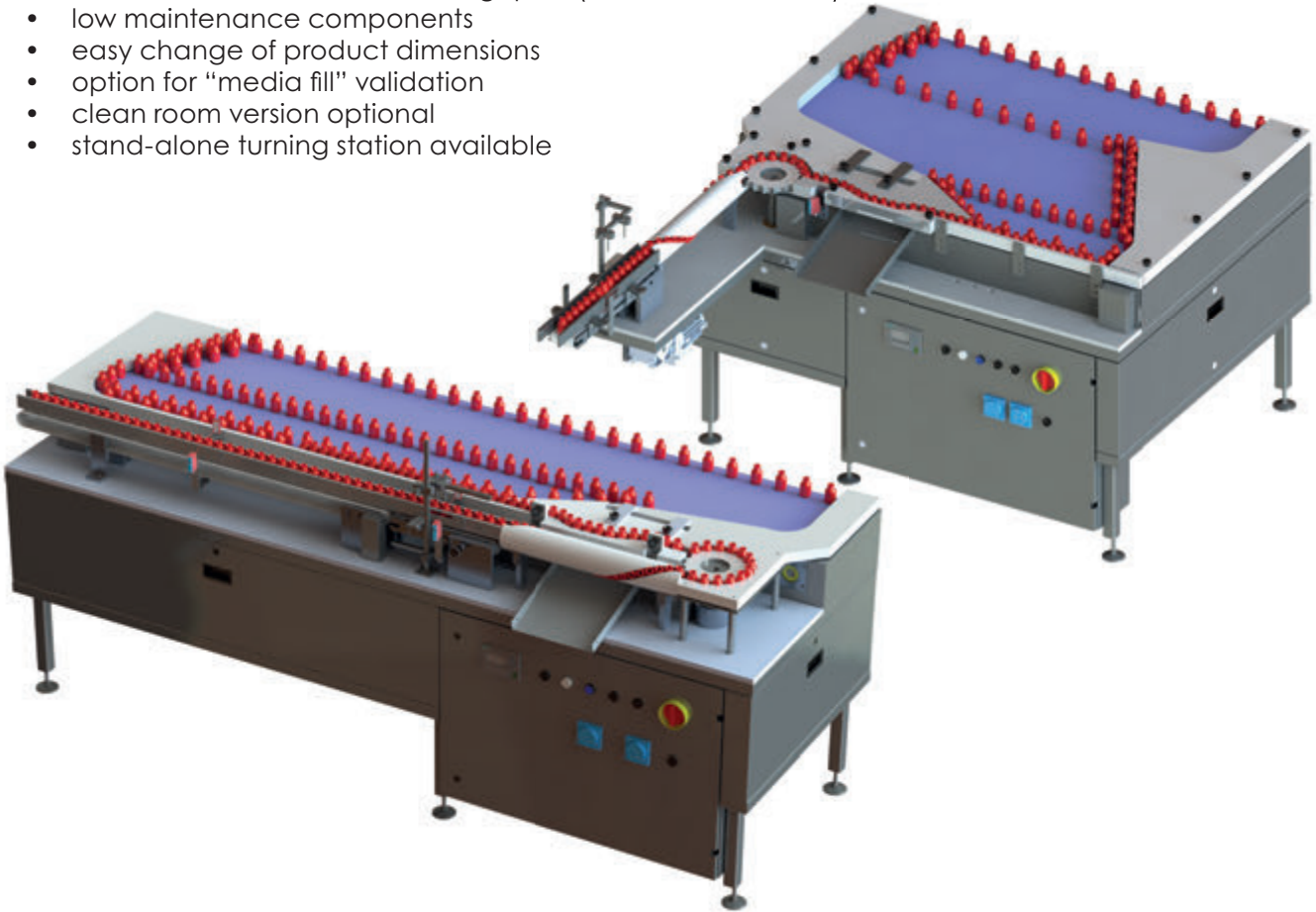
The robot lifts trays with foil-sealed vials off the pallet directly onto the belt or the inlet of the following machine. Separation boards are lifted off and placed on another pallet.



BI-FLOW WITH AND WITHOUT TURNOVER STATION

Functions as buffer and separator by means of modular conveyors working in opposite directions

- individual adaptation to the production environment
- number of changes in transport direction according to customer requirements
- versions with and without turning spiral (360° horizontal axis)
- low maintenance components
- easy change of product dimensions
- option for "media fill" validation
- clean room version optional
- stand-alone turning station available

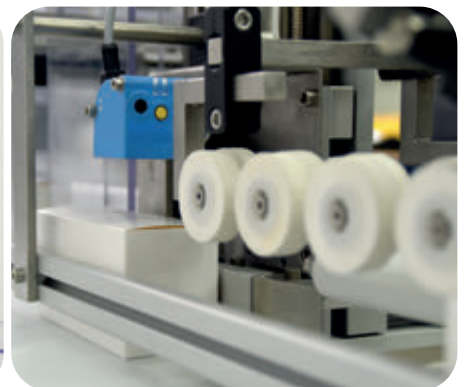
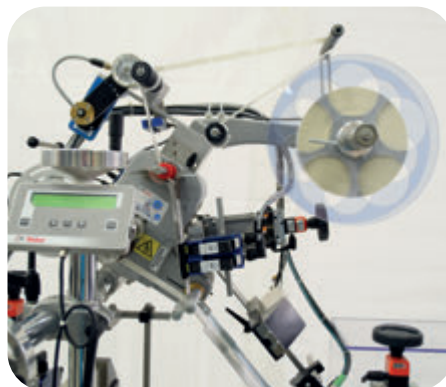
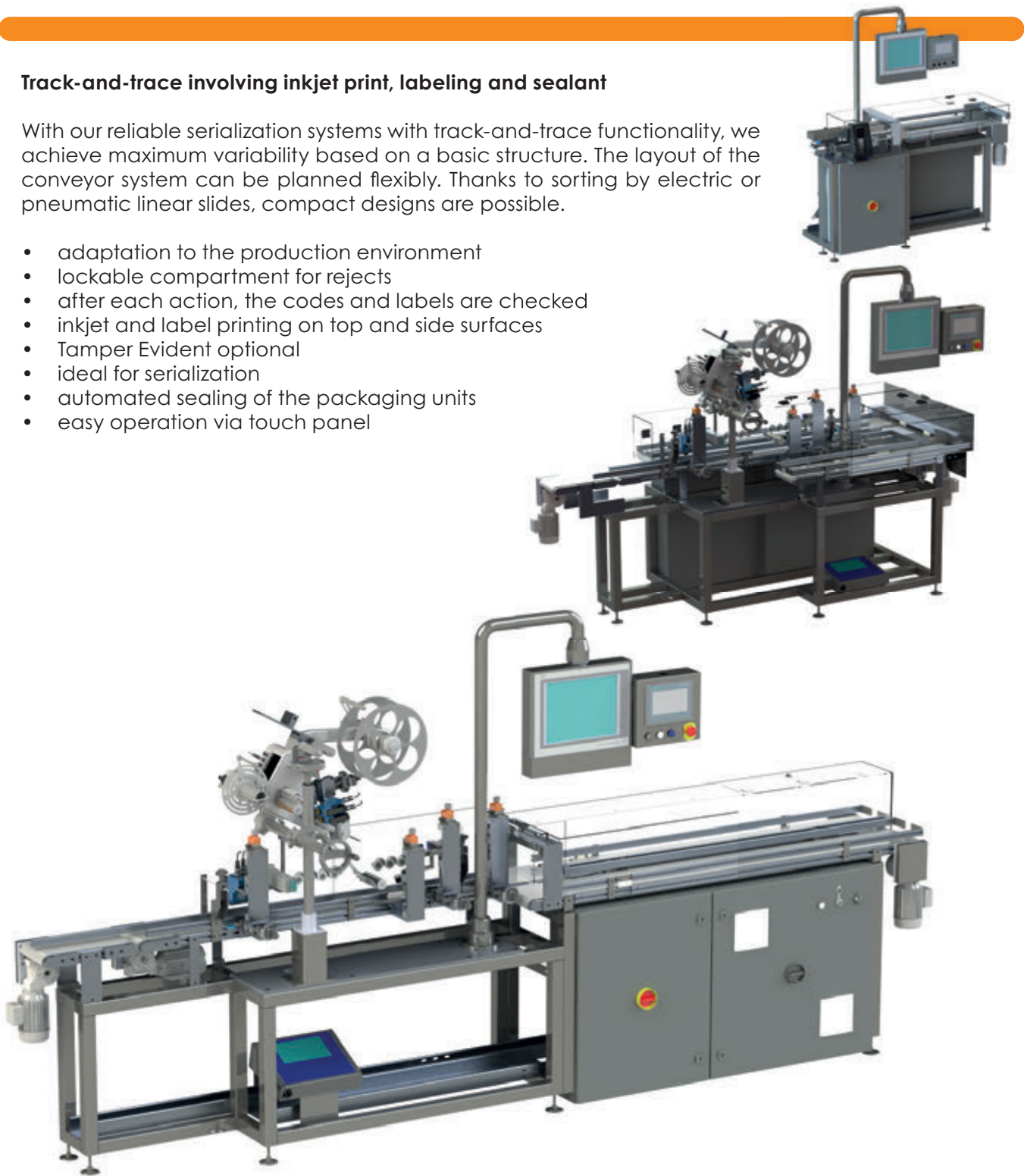


SERIALIZATION

Track-and-trace involving inkjet print, labeling and sealant

With our reliable serialization systems with track-and-trace functionality, we achieve maximum variability based on a basic structure. The layout of the conveyor system can be planned flexibly. Thanks to sorting by electric or pneumatic linear slides, compact designs are possible.

- adaptation to the production environment
- lockable compartment for rejects
- after each action, the codes and labels are checked
- inkjet and label printing on top and side surfaces
- Tamper Evident optional
- ideal for serialization
- automated sealing of the packaging units
- easy operation via touch panel

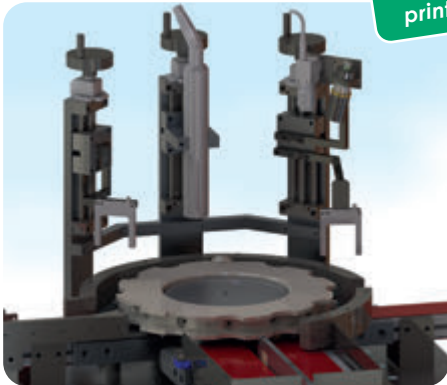


PRINT & CONTROL STATION

Enables to print codes on vials in the running process and readouts via a camera system.

- reliable positioning by notched wheels
- vials are fixed with suckers when printed on
- faulty or unreadable vials are automatically routed to a reject belt
- 2 reject belts
- use of various printing systems possible, e.g. inkjet with invisible UV fluorescence ink
- double control of printing possible

flexible configuration of
print and test systems



PILL FRACTION CONTROL

Fully automated control of product quality

- pills and capsules processable
- check broken products
- output volume up to 10,000 pcs / min
- removal of fragments
- compact design
- number of lanes variable

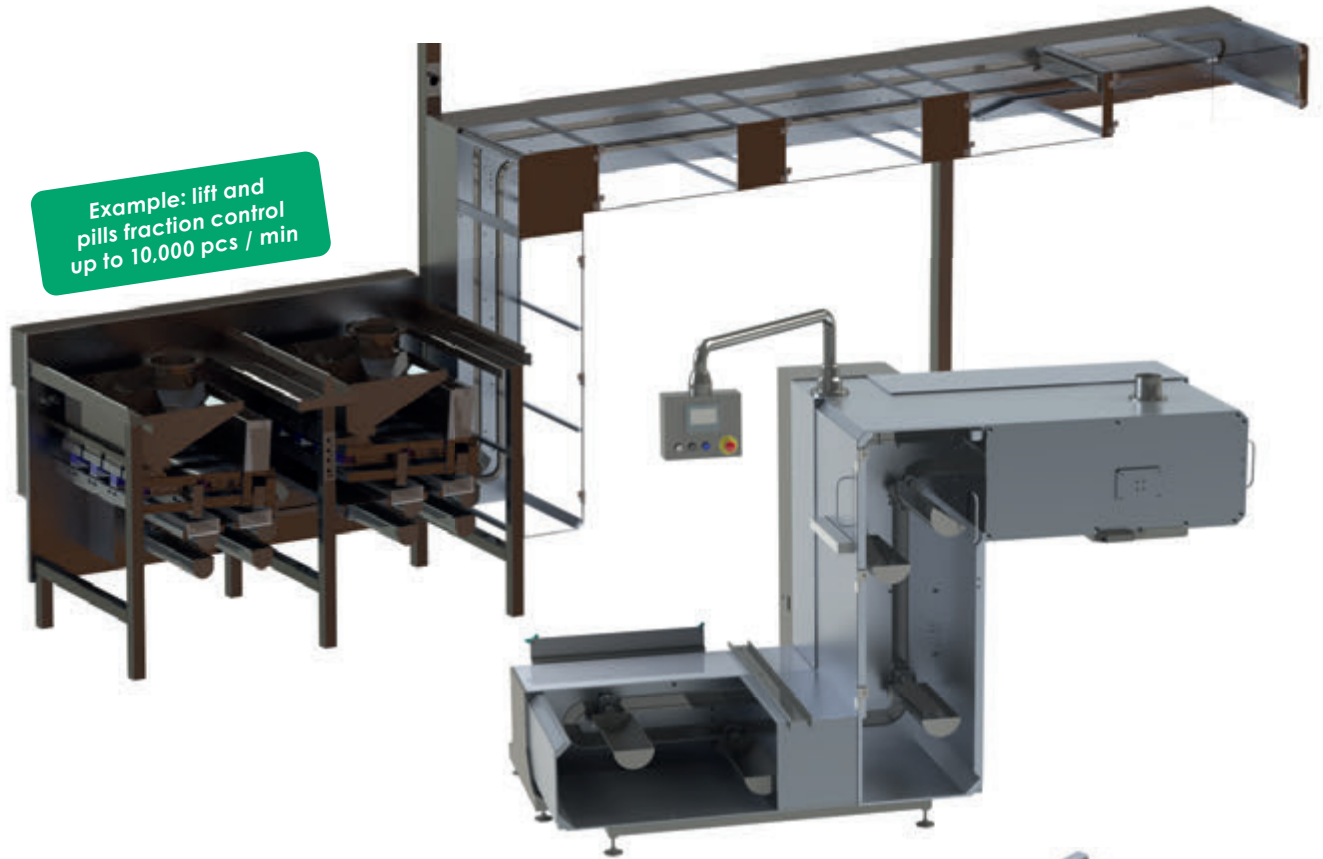
Proof of concept:
2,000 pieces per min.



LIFTING SYSTEMS FOR PILLS AND POWDERS

Ladle transport to overcome level differences

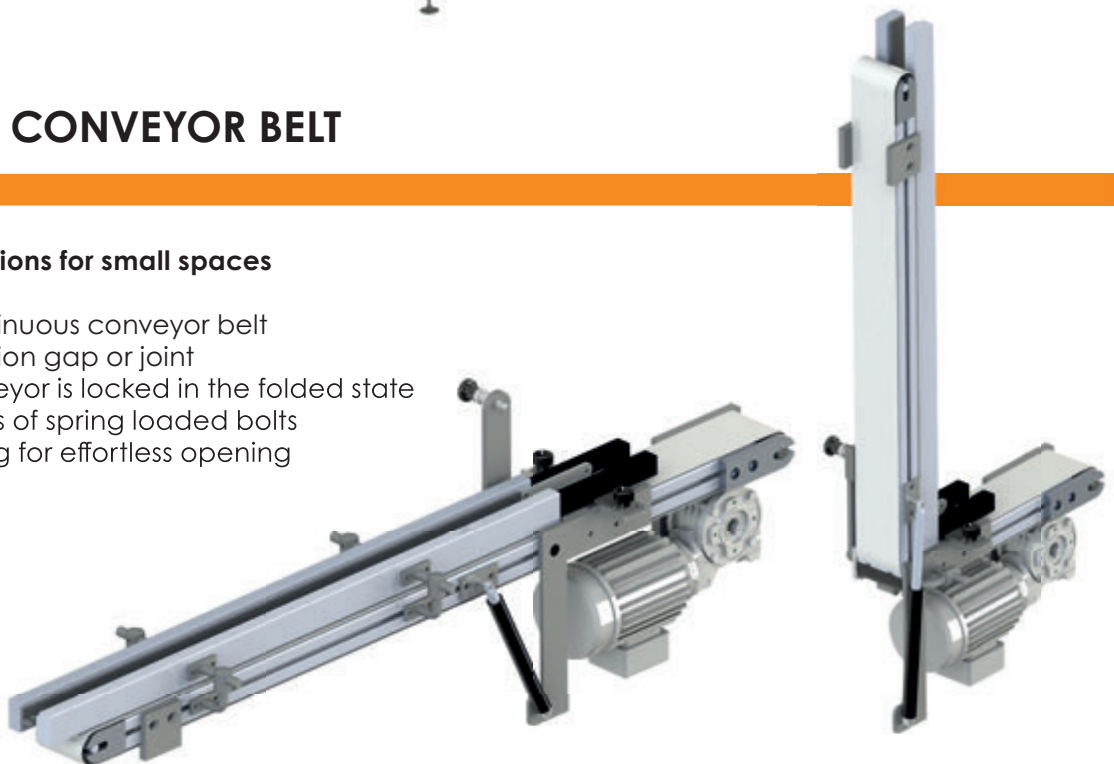
- flexible number of transport ladles
- flexible size of the ladles
- compact design
- height according to your needs
- easy cleaning thanks to smooth surfaces
- special version also suitable for granulates and powders



FOLDABLE CONVEYOR BELT

Flexible solutions for small spaces

- one continuous conveyor belt
- no transition gap or joint
- the conveyor is locked in the folded state by means of spring loaded bolts
- gas spring for effortless opening



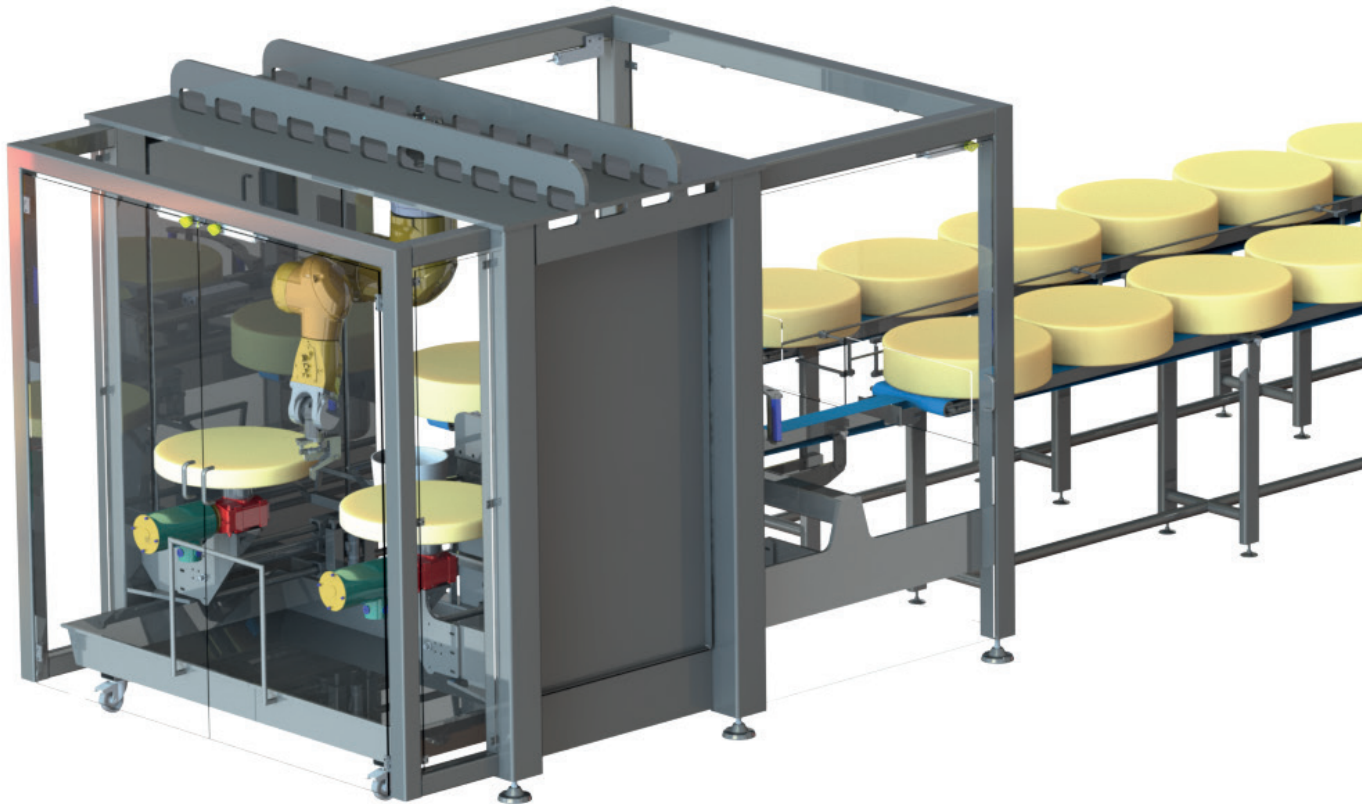


HANDLING OF CHEESE, MAINTENANCE AND PROCESSING

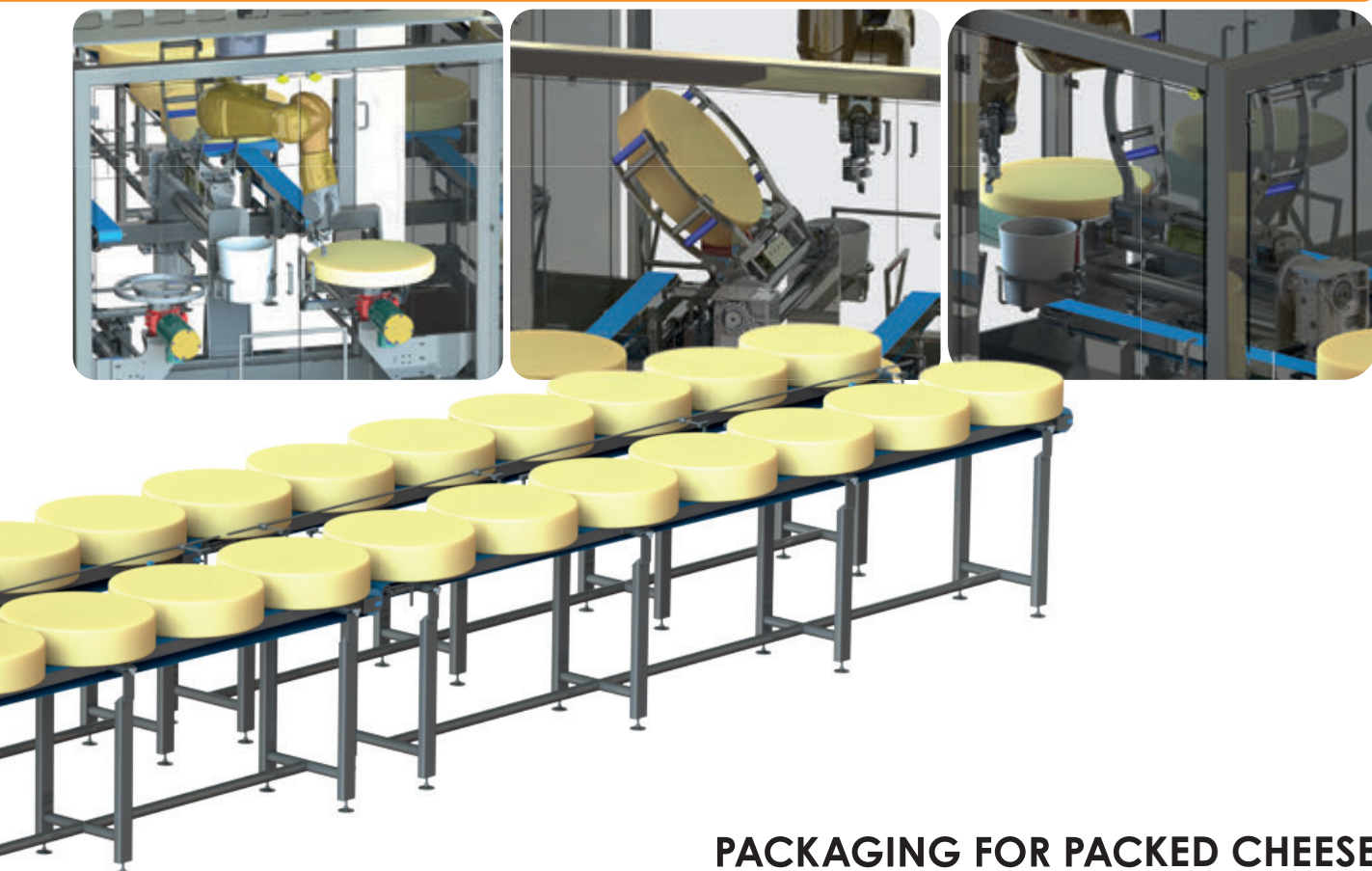
Automated processing of cheese wheels, e.g. debarking or brushing

The machine design allows the cheese wheels to be processed on the top, bottom and on the lateral surface. The machine automatically detects whether there are products on the conveyor belts or the individual stations, so that loading or unloading during operation is possible at any time. The loading and unloading can be done manually or by a palletizing robot.

The processing cell is safety-shielded. The unhandled and processed goods remain spatially separated during the entire process in order to avoid cross-contamination.



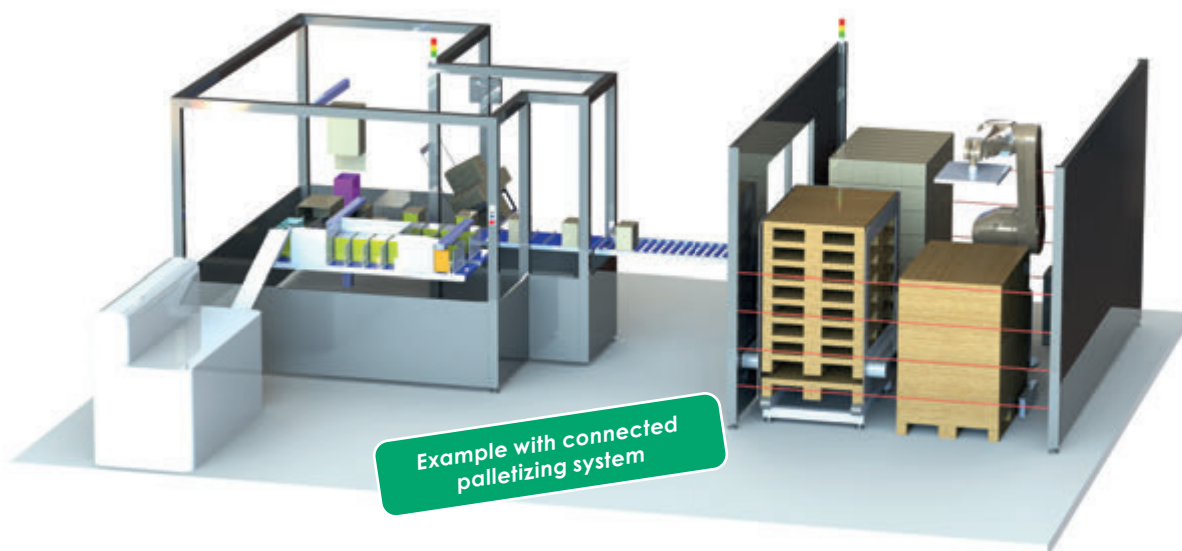
- hygienic design
- cleaning-optimized, no dead spaces
- optional self-cleaning function of the cell
- acid and base resistant materials
- drives of the cell made of stainless steel
- HE robot from Stäubli, specially developed for humid and cleaning-intensive working conditions
- Tool change manually or fully automated
- operation via touch panel
- flexible processing of different formats
- manual and fully automatic format selection linked to the storage system
- Each cheese is measured by sensors, compared with the template and ejected in case of errors
- fed manually or fully automated
- Dimensions (without conveyor) 2.3 meters × 2.8 meters, height 2.3 meters



PACKAGING FOR PACKED CHEESE

Automated sorted and mixed packaging

Before being transferred to the cycle conveyor, the cardboard boxes are folded and glued. The sensor-monitored picking or stacking of the cheese packs takes place parallel to the box erecting. These are fed via a conveyor belt from the upstream machine. The construction of the system allows additional or exclusively manual loading via a safety-protected area. This ensures the variable production of mixed boxes. The cycle time from the box removal from the magazine, the folding, filling and gluing of the box, is about 5 seconds. This results in a machine output of about 750 boxes per hour.



Example with connected
palletizing system

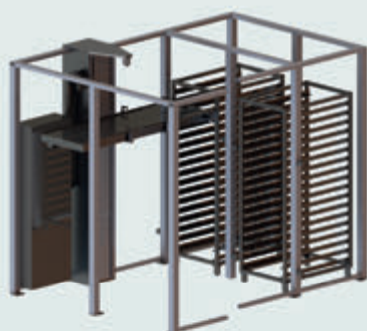
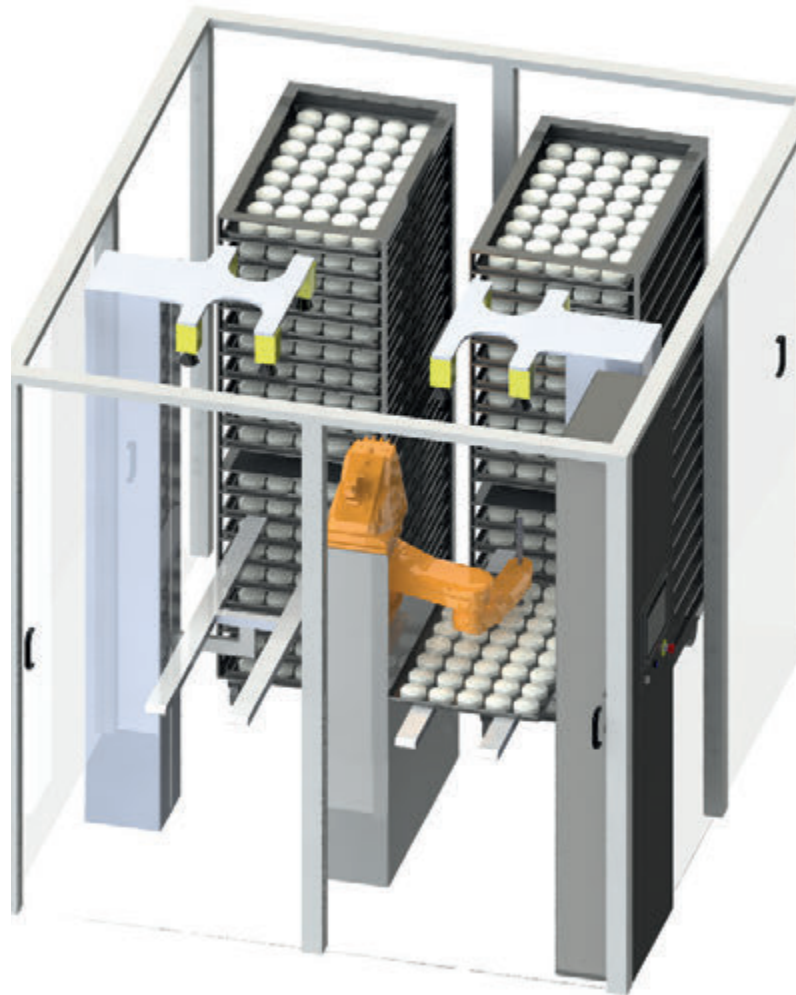
AUTOMATED CELL FOR BAKERIES

Automated bread tray wagon handling

- separating stacked baking sheets
- loading following machines like ovens and conveyors with baking sheets
- thanks to the modular setup and by installing a robot the machine can take over more tasks with minimal effort

The flexible configuration of the machine allows more functions than just loading and unloading of rack trolleys in the bakery.

- controlling, counting and measuring dough pieces
- cutting dough pieces by a predefined pattern
- handling dough pieces (e.g. curling)
- returning the baking sheets back to the rack after dough handling



PACKAGING MACHINE FOR VEGETABLES

Packaging machine for vegetables with quality check, sorting and weighing

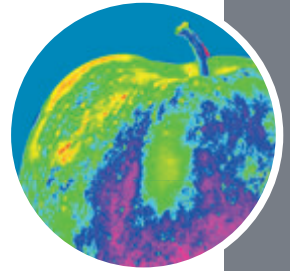
Intelligent sorting by size and weight

Thanks to the camera system above the conveyor belt and integrated scales the system learns to gauge the product by its size (or volume) and weight. Bowls are filled by predefined parameters homogeneous or mixed. Each station can be loaded with a different product.

Quality Checks

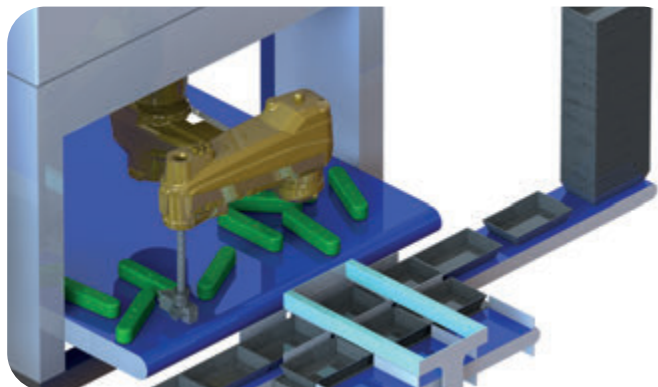
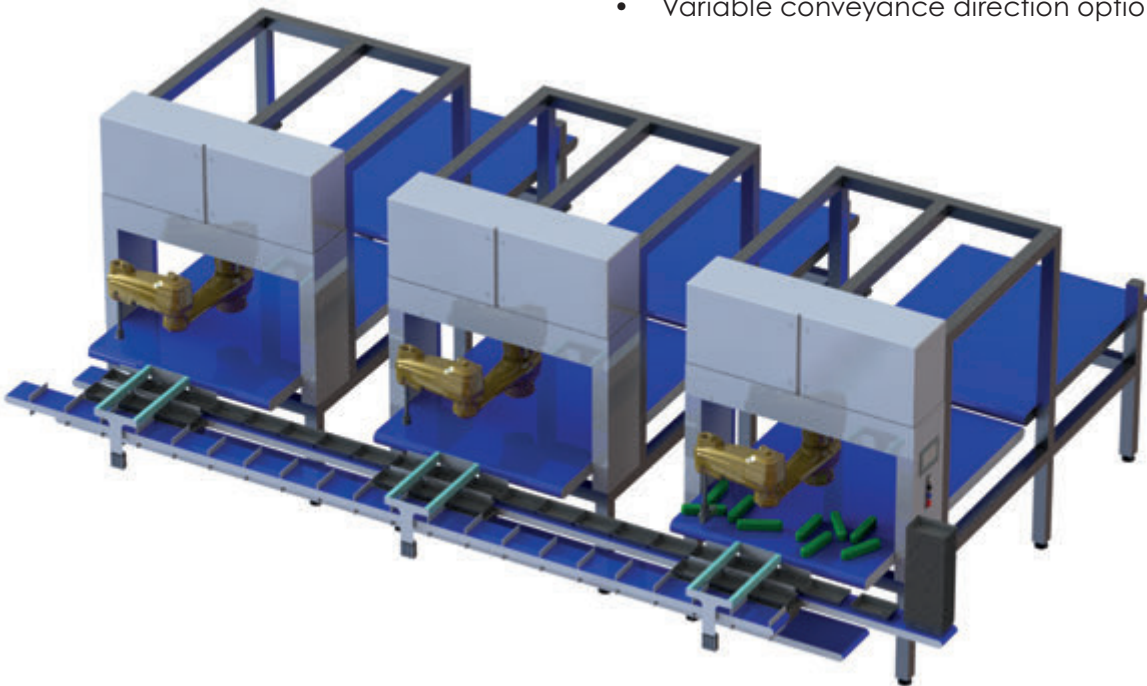
As an option the machine can be upgraded with a 100% quality check system. By this defective products can be detected and sorted out:

- Hyper spectral analysis → most advanced method. Even pressure marks under the vegetables skin can be detected.
- Multi spectral analysis → provides an option of checking the vegetables for changes and marks in colour
- Monochrome imaging → rough changes in contrast can be detected



Smart Design

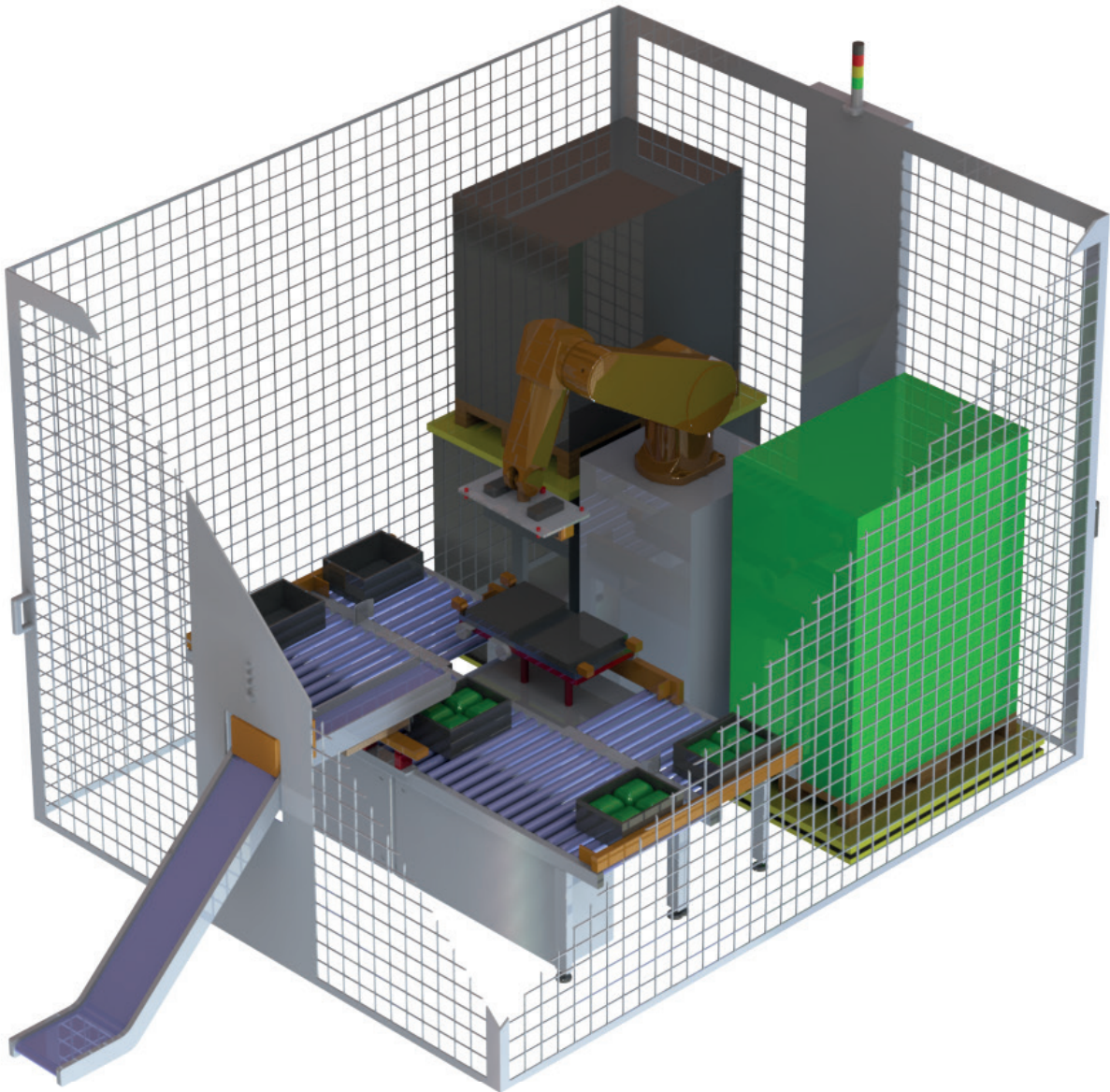
- Can be extended with additional units easily
- Easy integration to follow-up tube packaging
- Easy to clean surfaces
- Flexible conveyor dimensions
- Variable conveyance direction optional

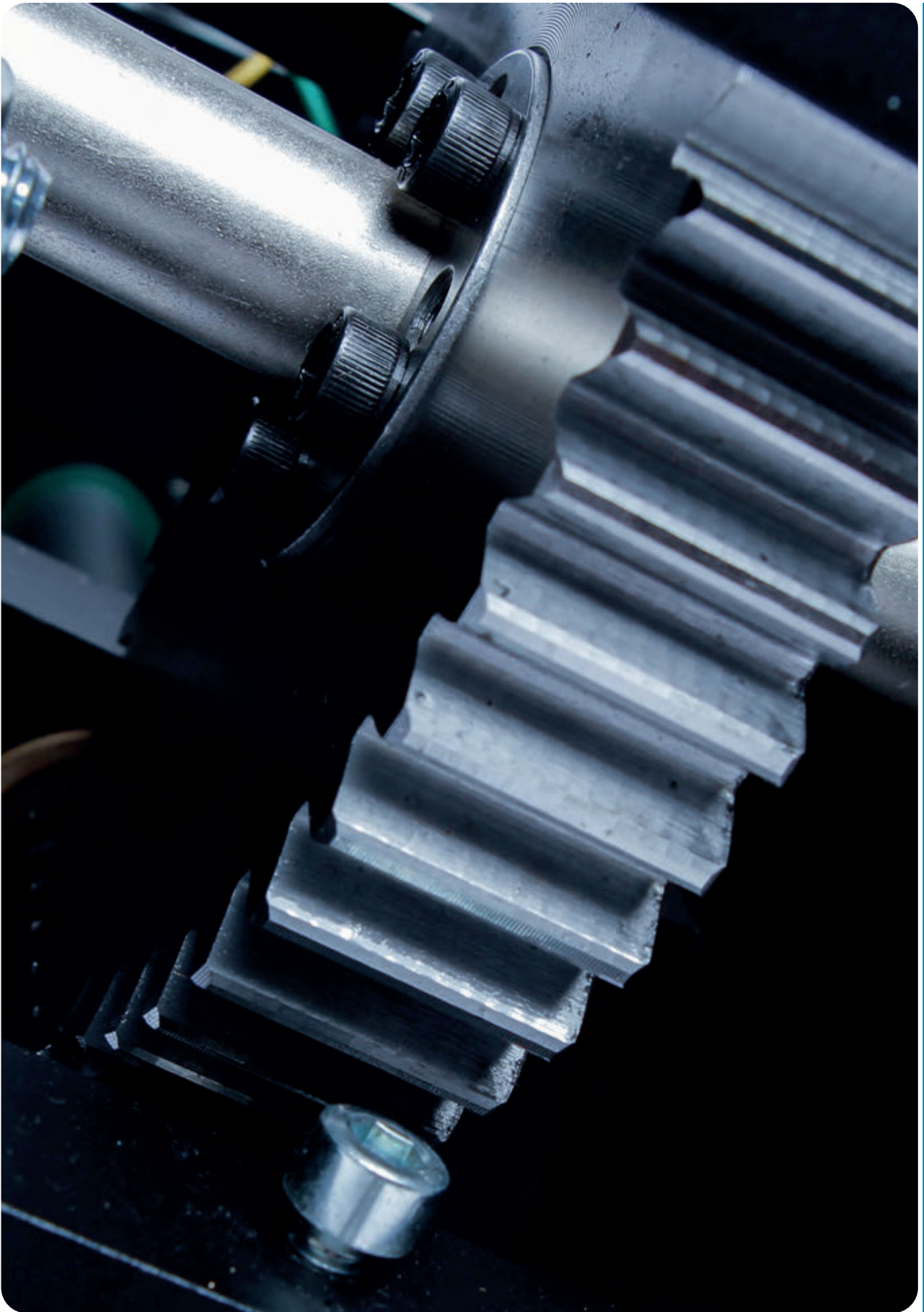


VEGETABLE CRATE PALLETIZING

Fully automated filling and palletizing of vegetable crates.

A fully automated robot cell for filling vegetable crates. The robot can take folded boxes from the pallet, unfolds them and fills them with goods, which are transported via a conveyor belt into the cell. The filled boxes are stacked by the robot on a second pallet.





PUSHROD ASSEMBLY

Fully automated assembly of pushrods for internal combustion engines.

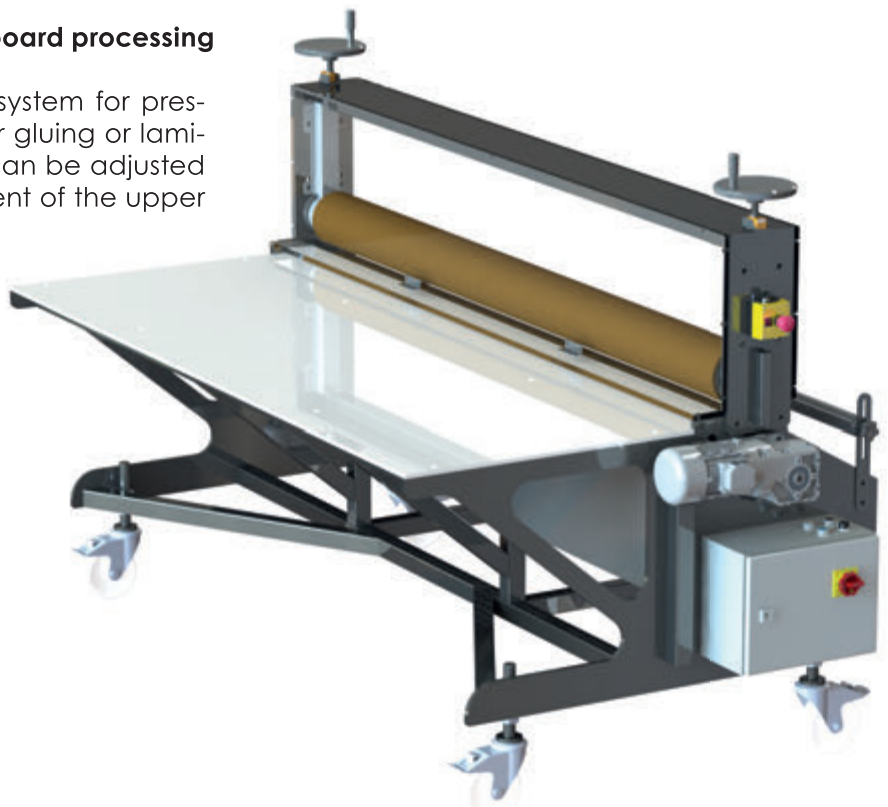
Shafts and caps are loaded from magazines and pressed together. The finished rods are measured and sorted according to the test result. The entire process is fully automated by modern robotics.



ROLLER PRESS MACHINE

Roller press machine for cardboard processing

The roller press machine is a system for pressing cardboard sheets, e.g. for gluing or lamination. The contact pressure can be adjusted via the simple height adjustment of the upper roller.



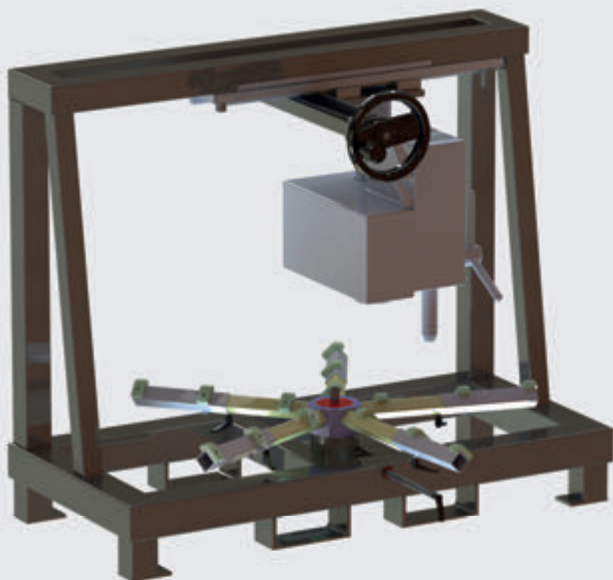
INDIVIDUAL DEVICES FOR INDUSTRIAL TASKS



Pressing device for camshaft bushes



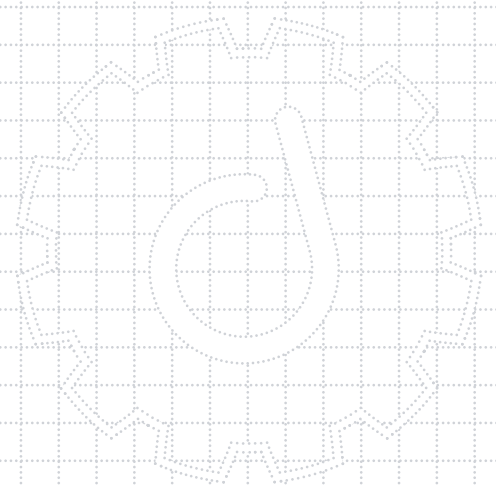
Swiveling table for pressed grinding wheels

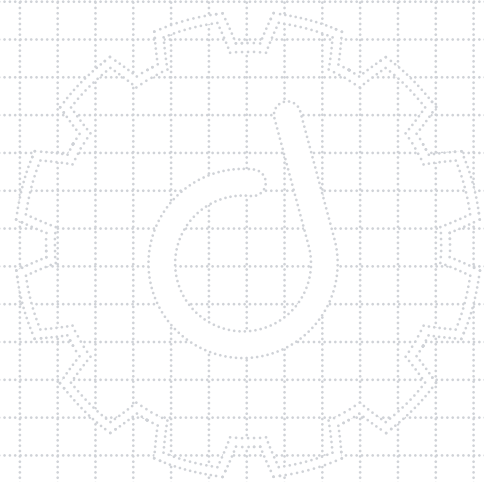


Drilling device for grinding wheels



Clamping device for grinding wheels





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