BORTOLINKEMO

packaging and closures plants

Packing Solutions

The reliability of over 79 years of experience

It all began with an intuition...

In 1945, Mario Bortolin, the company's founder, had the idea to manufacture and sell small wine-pouring plants for bars and restaurants.
Mario's entrepreneurial spirit has always been his driving force throughout his career. In the 1960s, he realised that the demand for bottled wine was increasing. Therefore, he decided to add bottling lines with semi-automatic machines to the production.
The innovative production process obtained by transferring the first proprietary workshop to Porcia allowed Mario to meet the market's needs quickly and efficiently.

A solid family projected into the future

The market became more dynamic in the 1970s, thus machines needed to be faster.
The company has been focusing on end-of-line packaging machines since 1972.

In 1987, the company acquired Kemo Industries based in Aviano, specialising in the production of closures. With this operation, Bortolin's market could expand to machines producing metal and plastic closures.

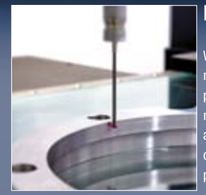
That's how Bortolin Kemo spa was established.
In 2000, the factory expanded even more, consolidating the two production branches.

Our services

Design, innovation and service:
Find out more about our value added services

Design and co-design

Starting from an analysis of customer needs or of a specific market, we study ad-hoc solutions together with our customers for the packaging and closures sector.



Prototyping and testing

We offer a service for the manufacture of prototypes, in particular for closures division machines, to test production and assembly of special caps and closures in aluminium, tinplate and plastic.

“Turnkey” Transport and installation

Shipping and transport of plants in italy and abroad.

Classroom and on-line training

Training sessions for personnel involved in the use of new plants.

After-sales service and maintenance

We preserve the value of our plants, maintaining their performance and functionality over time thanks to fast and punctual service and maintenance in all phases of the machine life cycle.

Spare parts supply

Reliability and long lifetime of our machines ensure that they will be used for many decades. For this reason, we offer a maintenance and upgrading service for outdated plants and we are able to supply spare parts for machines manufactured even more than 30 years ago.

Why choosing us

Reliability, flexibility, innovation and solidity are
The main strengths our customer recognize in our solutions

Reliability and Precision

The quality of our materials and components combined with the competence and experience of our technicians translate into solid, reliable machines and plants, as well as punctual service that is attentive to customers' needs.

Innovation and Customisation

We invest in knowledge and provide our expertise to create new solutions which are able to meet the specific needs of our customers.

Passionand Performance

We have inherited all our passion for work and for the creation of solutions to improve our customers' production performance from our founder.

People and relationships at the centre

We place a strong emphasis on sharing values, knowledge and objectives and on creating a climate of trust and respect with employees, suppliers, partners and customers, knowing that the quality of relationships is the basis of the quality of company performance and results.

The right machines for your PACKAGING

Bortolin Kemo studies, designs and manufactures machines for the packaging sector:
depalletizers at the beginning of the line, up to end line machines such as case erectors, case packers, partition inserters, case sealers, palletizers and conveyors.

With its presence on the market for over 75 years, Bortolin Kemo confirms its position as leader in the packaging sector for medium-high productions, ranging from wine and beverage up to food, oil, as well as pharmaceutical and chemical industries.
Thanks to its team of specialized engineers, the company is able to fulfill the most varied needs of the customer, manufacturing customized machines, which process different formats simultaneously, durable in time, requiring little maintenance.

Bortolin Kemo machines combine innovation, mechanical simplicity and ease of use.

We design machines and complete lines for packaging systems

Depalletizers

Portal or robotic depalletizing systems for bottles and containers

10

Case erectors Feeding units

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High-speed automatic machines for case erecting and gluing and case storage

Case packers

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Automatic machines with pick-and-place system for case packing in various containers

Partitions I Dividers I Flap inserters

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Automatic machines for picking, opening and inserting partitions inside cases

Case sealers

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Automatic high-speed machines for sealing pre-glued cases

Packing monobloc

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Automatic machines that combine the entire packing process in a single structure

Palletizers

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Portal or robotic depalletizing systems for boxes, trays, rigid containers and shrink-wrap packs

Depalletizers

Portal or robotic depalletizing systems for bottles and containers

Steady-pallet depalletizing systems with layer sweep-off technology.
The pallet transport system and the depalletizer trolley make it possible to handle any type of container, even if it is unstable.
It is possible to handle palletized containers with plastic or cardboard interlayers, inverted trays, thermoformed flaps or plastic or metal frames. Palletized containers with partitions can also be depalletized.

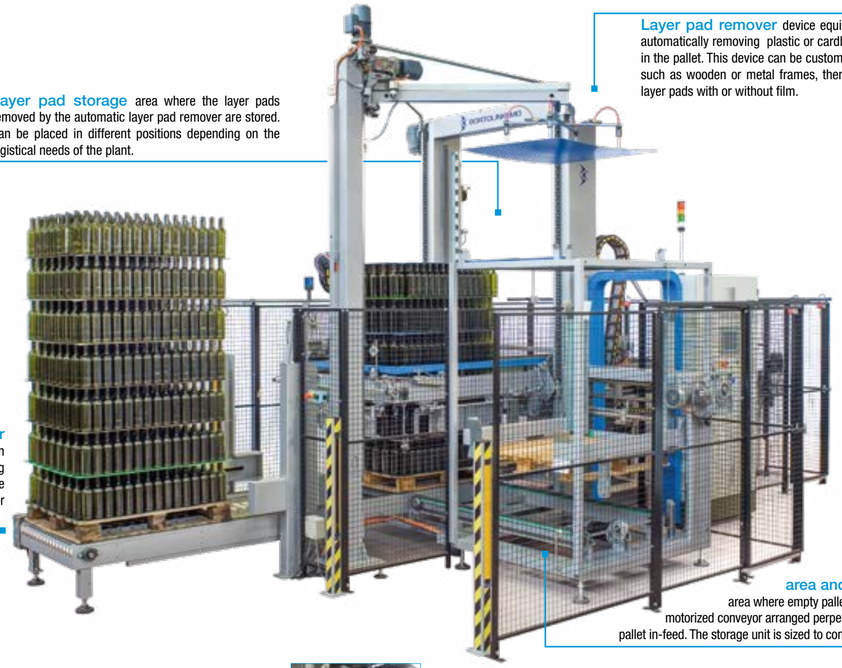
plus

- Depalletizers with automatic format change
- Depalletizers with automatic shrink film removal

Uses

- plastic or glass bottles and jars
- tin-plate or aluminium cans
- plastic or metal boxes, crates and baskets

OPTIONAL possibility of customising your machine to increase performance and automation



Layer pad remover device equipped with vacuum picking for automatically removing plastic or cardboard pads between the layers in the pallet. This device can be customised to handle other elements, such as wooden or metal frames, thermoformed plastic flaps, cover layer pads with or without film.

Layer pad storage area where the layer pads removed by the automatic layer pad remover are stored. Can be placed in different positions depending on the logistical needs of the plant.

Full pallet conveyor consisting of a motorised chain conveyor sized to hold a waiting pallet and to transfer it to the depalletizing station. The conveyor can be extended upon request.

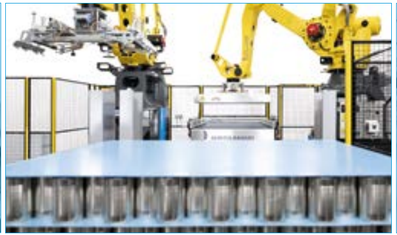
Empty pallet out-feed area and empty pallet storage area where empty pallets are conveyed by means of a motorized conveyor arranged perpendicularly or in line with the full pallet in-feed. The storage unit is sized to contain up to 10-15 empty pallets.

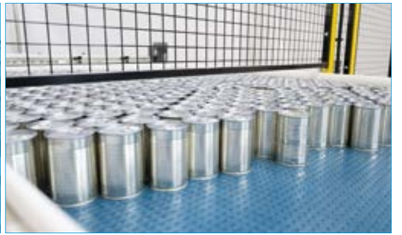
Partition remover device* plier device for removing pallet partitions. The operation is carried out on the platform on which the sweep-off carriage places the bottles before they are released onto the conveyor belts. Once the partition has been collected, it is released onto a chute that takes it to a storage station.

Top-pad opener* device for tearing open the corners of inverted trays. This device can also allow top pads to be stored upside down in order to optimise their stability in the machine's storage area.

* not shown in the reference image

Automatic machines suitable for depalletizing pallets containing full jars, closed with ferromagnetic material caps, which have been palletized by separating the layers with plastic dividers, solid cardboard, inverted trays and thermoformed flaps.





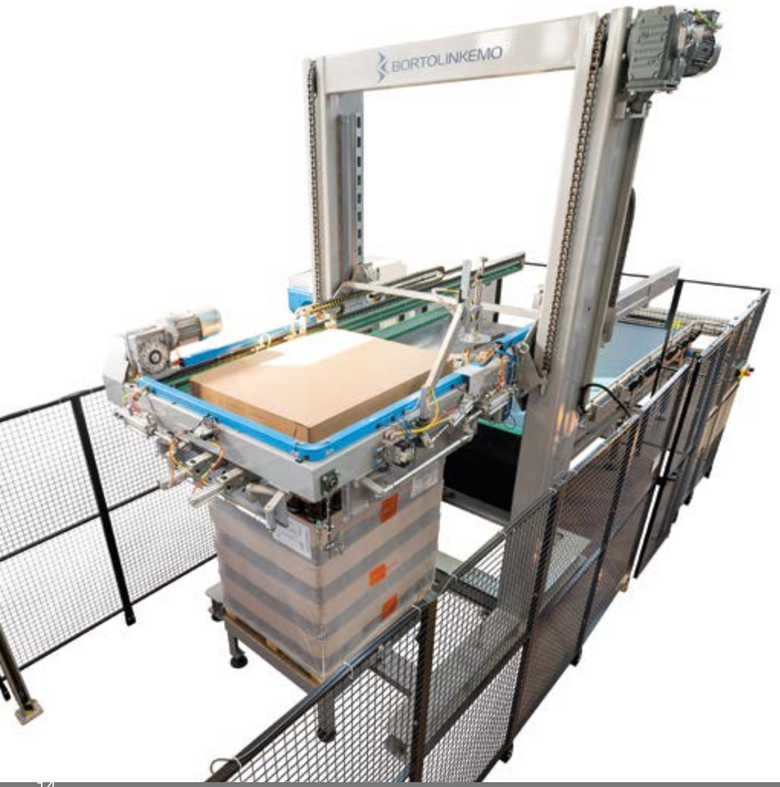
Robotic system with 3 chain conveyors, each consisting of two motorized sections, advancing in both directions and with the infeed and out-feed stations aligned with each other.

1. The first, dedicated to pallets to be depalletized, is suitable for handling one pallet during work and another in stand-by. The positioning of the full pallet and the eventual removal of the excess pallet at the end of production is carried out by forklifts.
2. The second, dedicated to storing the interlayers between layers, is suitable for handling a pallet on which one of the two robots neatly deposits all the plastic or cardboard separators on the pallet to be depalletized. Once production has finished or the limit quantity of separators has been reached, the full pallet is removed by forklift.
3. The third is dedicated to the storage of empty pallets, stacked one on top of the other. The full pallets are removed by means of a forklift.

A robot equipped with a magnetic head picks up the containers with ferromagnetic caps from the pallet and deposits them gently onto the conveyor belt, which is appropriately sized for the necessary accumulation.

A second robot equipped with a head with suction cups collects and deposits the interlayers on the pallet in the central conveyor. Once production has been completed, the same head, also equipped with clamps, has the task of picking up the empty pallet and stacking it with the others on the third conveyor.

The control panel is equipped with a touch screen that monitors all the working steps of the machine, indicating any anomalies and malfunctions, helping the operator in troubleshooting.



Machine suitable for automatically depalletizing pallets containing bottles, jars or cans, provided they are palletized with flat plastic layer-pads, rigid cardboard or inverted trays, and inserting them onto the conveyor belts on the production line.

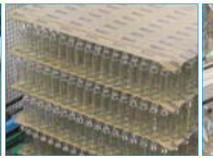
Steady-pallet depalletizer with layer sweep-off technology. This technical choice offers particular advantages related to minimising pallet movement once the protective film has been removed, thus minimising the risk of the product falling off. The sweep-off transfer allows the machine to easily adapt to numerous product formats and sizes.

Depalletizers can be equipped with a vacuum head, magnetic or inflatable pipes depending on product characteristics. The special configuration of the pallet transport system and the transfer trolley allow any type of container (round, oval, square, conical or specially shaped) to be handled, even if unstable. The product unloading platform can be installed within a wide range of heights so as to easily adapt to the needs of the plant.

Palletized containers with plastic or cardboard interlayers, inverted trays, thermoformed flaps or glass bottles in cardboard trays can be handled.

Wooden or metal frames usually placed at the top can also be removed automatically to facilitate strap pulling and strap removal around the layer.

Palletized containers with partitions can also be depalletized.



Model	DEP001	DEP002	DEP003	DEP004
Characteristic	Standard depal	Fast depal	With inflatable pipes	Reduced depal
Speed	1.5-2.0 layers/min	3 layers/min	1.5 layers/min	

AUTOMATIC SHRINK FILM REMOVAL MODULE

The module for automatic removal of shrink film, wrapping pallets of empty glass containers, is the ultimate solution for completely safe depalletizing. The film cutting device increases the safety of the plant by eliminating the most dangerous phase for the operator, namely the manual removal of the shrink film from the pallet. The use of this innovative technical solution means that the pallet is only in motion with the shrink film still applied, eliminating the risk of the product falling and any resulting plant downtime to restore normal operating conditions, also leading to savings in terms of undamaged products.

This operating principle offers multiple advantages, such as:

- Considerable increase in plant safety;
- Only the portion of shrink film strictly necessary is removed from the pallet, thus preserving the integrity of the remaining portion of the pallet;
- The possibility of removing incomplete pallets from the line;
- Transfer of the layer with the film ring still wrapped, preventing products from falling or being damaged during transfer;
- Removal of the film ring from the layer takes place in a safe position and without cycle time increments.

Minimum size column depalletizer DEPC

Semi-automatic machine with single column structure with head suitable for depalletizing bottles, jars and cans, having a very small footprint to allow flexible integration even in existing lines.

The picking head can be equipped with inflatable pipes, magnetic heads, pneumatic bells or pliers or vacuum head depending on the type of container to be handled.

Unloading operations are always carried out by the operator, who manoeuvres the bottle picking head directly from the console. This allows the machine to be without guards and therefore fully accessible.

A series of solenoid valves and photoelectric sensors allow the correct approaching of the equipment to the pallet, this prevents any accidental dropping of the load. Adjustment of the pipes between the rows of bottles is always performed by the operator.

The lifting movement of the bottles from the pallet is achieved by means of a patented telescopic system, while the side transfer of the head is obtained by means of a double-speed gear motor that prevents rocking of the bottles during movement.

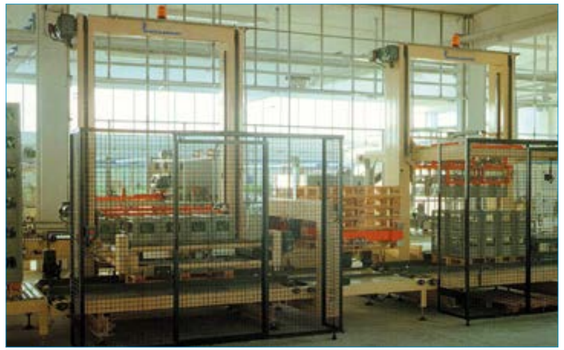
Excluded from delivery are all out-feed conveyors and the bottle conveyor on a single-track belt.

The plastic interlayers between one layer of bottles are removed manually by the operator.

The electrical, pneumatic and mechanical components that make up the machine come from a careful selection carried out in-house by our technicians and have passed stringent quality-reliability tests.

DEG Depalletizer with dual gear motor

Machine with hooked picking head specifically for depalletizing plastic baskets with windows. Suitable for medium and high-capacity VAR (vacuum container) plant production lines. The depalletizing system is a steady-pallet with bottom unloading.



Central frame with portal structure equipped with vertical sliding guides for the carriage. The weight of the carriage is balanced by 2 steel counterweights sliding inside the columns.

The carriage is provided with vertical movement by means of a gear motor with inverter speed variation. Horizontal carriage movement is achieved by gear motor with kinematic crank mechanism.

The out-feed conveyor is equipped with a crate turning device controlled by a photocell system.

Central control panel with display for setting and guiding the operator to the controls and assisted troubleshooting with machine stop or emergency signalling.

Maximum pallet size 1200x1200x2100 mm.

Case Erectors

High-speed and non high-speed automatic machines for case erecting and gluing and case storage

High-speed automatic machines for erecting American type (RSC) cases and gluing bottom flaps with hot melt gluing. Case erectors can be combined with case feeding units to increase their loading capacity.

plus

- Automatic box feeding unit
- Automatic case opening
- Automatic folding, gluing and pressing of flaps
- Reaches high speeds

Uses

- standard HSC, RSC, RSC cases
- cases with removable display top
- cases with shaped interlayers and windows
- Tab-Lock type cases
- cases with overlapping flaps
- BAGinBOX

The high degree of customisation of our machines makes it possible to handle a variety of standard or special case formats, such as cases with overlapping flaps or with windows and very large or small cases.

Standard RSC cases

Cases with removable display top

Cases with shaped interlayers and windows

HSC cases

Bag in Box

Tab-Lock type cases

BK BOX

Bortolin Kemo has patented a special type of box, called BK-Box, to ensure professional, elegant product presentation.
This package offers significant advantages in terms of marketing and practicality thanks to its special configuration, as it allows the bottles to be presented flat and can be easily closed.

Speed	30-80 cases /min
Power	4.15/4.4 kW
Pressure	6 bar
Air consumption	200-650 Nl/min

Built-in printing unit
(see page 26)

Automatic machines for erecting pre-glued cases (RSC) and for gluing bottom flaps with HOT MELT glue.

The machine opens the boxes with kinematic systems, bends its internal bottom flaps, glues and presses the internal bottom flaps onto the outer bottom flaps with pneumatic cylinders. The cases are straightened at out-feed.

The speed depends on the model and size of the cardboard.

Fast, simple, intuitive format changes using numbering and millimetre scales.

Case erectors can be equipped with case feeding and storage units of variable sizes according to the production speed.

The models available for FCE: ACF, perpendicular side-by-side storage unit; ACL, linear storage unit; ACM linear with horizontal cases; ACS storage unit with case printing; ACP robot system.

The presser axis is driven by an electric motor on model FCE451.

The largest model of the family, the single motor FCE801 controls all actions and has no pneumatic movements.

All FCE machines can be equipped with hot melt units supplied directly by the customer, as a replacement for the standard glue unit, according to specific needs.

Model	FCE301	FCE351	FCE451	FCE801
Maximum productivity (cases/min.)	30	37	50	80
Installed power (kW)	5	5	6.7	7.2
Operating pressure (bar)	6	6	6	6
Air consumption (Nl/min)	650	650	380	200

Preforming machine with folding and bending of the 2 bottom flaps by means of rotating pneumatic cylinders.

Machine includes a horizontal storage unit with 150/300 cases (depending on thickness). Fitted for combination with case packers equipped with belt conveyor.

The suction cup unit picks up the case from the storage unit and, while moving, pneumatic-mechanical devices shape the case, fold the 2 minor flaps and release it for its descent in phase with the transfer.

With a vacuum pump or suction nozzles to drive suction cups, output up to 1000 cases/hour.

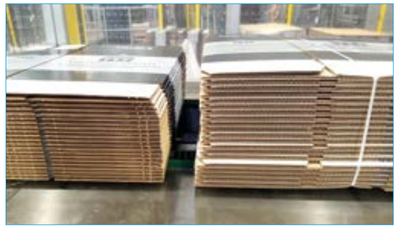
Feeding units

ACL Linear feeding unit

Automatic in-line case feeding devices to increase the loading autonomy of erectors.

Suitable for case erectors FCE301, FCE351, FCE451 and FCE801. Cases are loaded vertically, slightly inclined with respect to the support surface, and fed by means of rubber cog belts or chains driven by a pneumatic cylinder that synchronizes their feeding. The case guides can be adjusted according to the cardboard format.

Indicative speed (depending on case size and quality) of 20 to 50 cases/minute, has a loading capacity of 200 to 600 cases, depending on case size and thickness. They can be 1.5, 3 or 6 metres long. Simple, fast format changes.



ACM Linear feeding unit with horizontal cases

Automatic case feeding device for case erectors mod. FCE301, FCE351, FCE451 and FCE801 for increased autonomy. The cases are arranged horizontally as they are on the pallets coming from carton manufacturers.

It can also be easily installed on existing machines as its operation is completely autonomous.

Loading autonomy from 300 to 600 cases (depending on the size of the box and the thickness of the cardboard).

Mainly composed of 2 motorized chains mounted on a motorized mobile support.

Operation is completely electromechanical and therefore there are no pneumatic parts.

Feeding units

ACF Side-by-side feeding unit

Case feeding unit positioned perpendicularly to the case erectors.

The cases are loaded vertically (for case erectors mod. FCE301, FCE351, FCE451 and FCE801), slightly inclined with respect to the support surface, and fed by means of rubber cog belts or chains driven by a pneumatic cylinder that synchronizes their feeding. The case guides can be adjusted according to the cardboard format. Loading capacity from 200 to 400 cases (depending on case size and thickness). Case stop and guide can be manually adjusted with handwheel.

Approximate speed (depending on case size and quality):

from 20 to 80 cases/minute.

Storage unit easily loaded during production without stopping the machine. Simple, fast format changes.

ACS Built-in printing unit

Automatic machine consisting of a flat box storage unit for about 200 boxes (depending on the thickness) and which allows printing on both sides of the flat boxes.

The machine performs a dual function: it allows the FCE case erectors to operate more autonomously and at the same time allows the surface of the cases to be written on with high-quality printing before they are erected and glued by the case erector. Printing can be in inkjet or resin jet mode and the device can be adapted for the application of self-adhesive labels. Printing can take place simultaneously on one short and one long side.

Approximate speed (depending on case size and quality): 35 cases/minute

Device for tipping the box after printing to bring it into a horizontal position for optimum feeding of the case forming units

ACP Robotic feeding unit

Robotic case feeding system. The pallets arrive from the carton manufacturer palletised, the Robot picks up the top layer and unloads it into a special container. The Robot head detects the position of the cases and proceeds with depalletizing.

If the case storage unit is full, the Robot places the cases on buffer stations, so that they can be picked up during the pallet change, thus avoiding waiting times and giving continuity to the line.

This robotic system can be adapted to depalletizing and palletizing various types of rigid elements such as boxes, crates and shrink-wrap packs.

It is possible to handle palletized containers with plastic or cardboard interlayers, inverted trays, thermoformed flaps or plastic or metal frames.

Each solution is carefully evaluated by the Bortolin Kemo staff to guarantee the utmost reliability and quality of the system adopted.

Case Packers

Automatic pick-and-place machines for packing in RSC cases, in trays or in plastic baskets or wooden crates

Distinguished by main movement controlled by two synchronized brushless servo-motors with optimization of trajectory, speed and acceleration.

plus

- Automatic adjustable head
- Adjustable box centring device
- Electronic bottle collection control

Uses

- bottles and cases, including high quality and with different shapes
- jars, plastic, glass or metal cans of any shape
- small pharmaceutical or cosmetic packaging

Our machines can handle different bottle and gift-box formats and are equipped with all the devices to take care of every stage of packaging and safeguard finished products.

High-speed telescopic divider for continuous sorting, so as never to hold up products. Use of brushless motors for complete control of acceleration to minimise package oscillations. Conveyor belts coated in scratch-resistant plastic resin to preserve the conditions of labels and single-product gift-boxes. Guided product feeding device with brushless motors to prevent vibrations and sudden accelerations. Scratch-proof product centring systems.

Gift-boxes

Wine bottles

Special shapes

Sparkling wine bottles

Empty bottles for glassworks

Bottles for motor oils and chemicals

Detergent bottles

Small size Pharmaceutical and Cosmetic

Different formats for food

Crossed pattern 2x3

We are able to perform cross bottle packing to fulfil product presentation needs, especially in the case of premium bottles.

Crossed pattern 3x4

Crossed pattern 2x6

Latest generation case packer for secure case packing and QR-Code tracking

The new IAX case packer is a latest-generation machine designed by us to meet specific customer requirements, preserving the aesthetics of the product by picking bottles or cases with suction cups on their side. Another plus of this new machine is the possibility of having tracking by reading the QR-code on the bottle label.

It can be equipped with four heads driven by brushless motors:

1. The first header takes the bottle from the belt and places it in the plates, reads the QR code in the label and orients the bottle according to packaging requirements.
2. The bottles are picked up from the plate and placed crosswise in the box.
3. The trays from the inserter are placed in the boxes.

Suitable for bottles and gift-boxes with horizontal positioning on RSC cases; processes up to 7200 bottles/hour.

Can also pack straight bottles.

Speed	8-80 cases/min
Power	from 6 to 20 kW
Pressure	6 bar
Air consumption	from 200 to 500 Nl/min

Machine with picking system suitable for packing products such as bottles, jars, cans, boxes, in American type cartons (RSC), in trays, or in plastic baskets.

Machines with main movement of the head controlled by two synchronized brushless servo-motors with optimization of trajectory, speed and acceleration, with all the functionality of a 2-axis robot.

Consisting of a frame open and accessible on all 4 sides, composed of two columns within which the counterweights are located, where the head is well balanced so as to reduce mechanical stresses and thus be able to use less electrical power.

Case and basket conveyor with inverter-driven gear motor, equipped with automatisms and controls for feeding containers (cases, trays, baskets), with selector for the centring phase of the same. Can feed boxes on a single row or on two rows.

The cases or baskets are centred through the centring unit with encoder-driven gear motor. The height is determined automatically according to the chosen format. The format centring unit or a single adjustable device for the various formats (ADJUSTABLE CENTRING UNIT) can be fitted to this unit.

The same machine can be equipped with an automatic self-adjusting head with 2/3/4/5 axes, to be able to process formats from diam. 50 to diam.110 mm in formats 3x2, 3x4, 4x6 and others.

The number of machine picking heads can be defined based on production needs.

Machine with picking system suitable for packing products such as bottles, jars, cans, boxes, in American type cartons (RSC), in trays, or in plastic baskets. Standard configuration to process 1-2-3-4-5-6-8 3x4 containers (or twice as many 2x3 containers in each cycle) for a maximum output of 6-12-18-24-30-36-45,000.

Can process 6-bottle boxes in double row.

Model	IAB011	IAB021	IAB031	IAB041	IAB051	IAB061
Maximum speed (cycles/min.)	500	500	500	500	500	500
Example of packaging pattern	2 (3x2) 1row	4 (3x2) 1row	6 (3x2) 1row	8 (2x3) 2rows	10 (2x3) 2rows	12 (2x3) 2rows
Installed power (kW)	5.2	5.2	8.5	8.5	12.5	12.5
Operating pressure (bar)	6	6	6	6	6	6
Air consumption (Nl/min)	120	150	160	200	250	280

In ser ters

Automatic machines for picking, opening and inserting partitions inside cases

Machines that perform fully automatic picking, opening and insertion of partitions into cases.
Our partition inserters are characterized mainly by their precision and reliability, even at high speeds. All models can be customized to operate either with containers already inserted in cases, or in the opposite case when the partition must be inserted before the product.

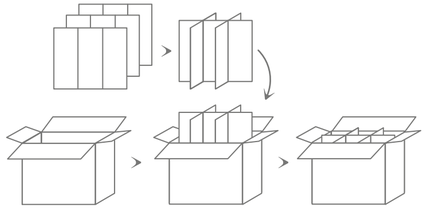
plus

- Adjustable tools (Patented system)
- Partition loading without stopping the machine and can be robotized
- Photocells to detect faults and missing separators

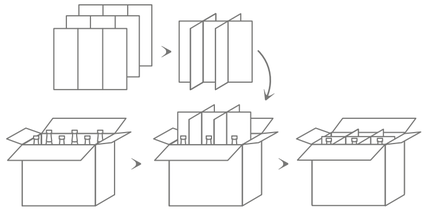
Uses

- partitions
- dividers
- interlayers

PARTITION INSERTION: BEFORE



PARTITION INSERTION: AFTER



EASY FORMAT CHANGES

The changeover procedure is fast and easy thanks to the reduced number of adjustments required and is carried out through the movement of simple, lightweight mechanical parts located in easily accessible housings. A touch screen user interface can be installed for extremely user-friendly operation.

ADJUSTABLE EQUIPMENT

For companies that have to handle different sized partitions for the same packaging pattern, Bortolin Kemo has developed and patented special adjustable equipment that further reduces changeover times and considerably reduces the amount of equipment to be handled. This equipment can be adjusted according to the size of the partition to be inserted into the case, requiring the operator only a few minutes to complete the changeover operation.

Speed	1200/1000 cycles/hour
Power	from 1.2 to 5 kW
Pressure	6 bar
Air consumption	from 100 to 500 Nl/min

Machines that perform fully automatic picking, opening and insertion of partitions into cases.

Machine suitable for inserting partitions made of tightly packed cardboard into boxes.

The head with suction cups picks up the partition from the magazine and, during the transfer stroke, opens it by means of a pneumatically-controlled device. The opened partition is deposited in the bottom of the case (in the case of later partitions, it is deposited on the neck of the bottle). The case with the partition is released and another case is brought into working position for the next cycle.

Partition inserters are characterized mainly by their precision and reliability, even at high speeds. The range of models covers a wide range of productivity.

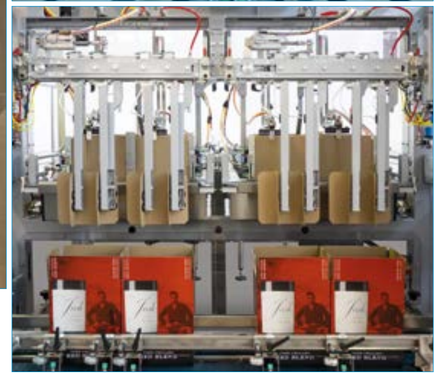
Main drive with kinematics ensuring fast, vibration-free movement.

The machines are equipped with a partition opening control device.

Their storage units are easy to load and have high autonomy so that operators do not need to be continuously present.

All models can be customized to operate either with containers already inserted in cases, or in the opposite case when the partition must be inserted before the product.

Equipped with a motorized vibrating conveyor belt for inserting partitions into cases with containers already inside. The 1 or 2-metre belt is installed downstream of the machine and facilitates the descent of the partitions into the correct position, without applying any outside force. The speed of the belt and the frequency of the vibrations are adjustable.



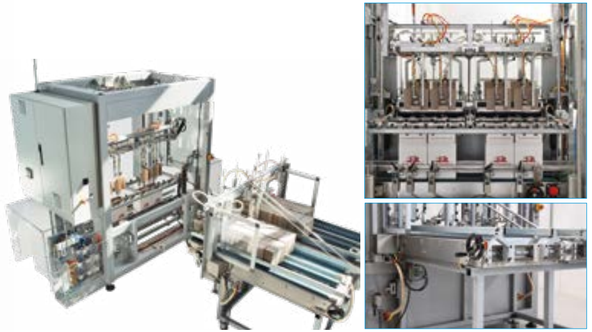
Model	MAM111	MAM121	MAM221	MAM241	MAM331	MAG111
Maximum speed (cycles/hour)	1200	1200	1140	1140	1000	500
Maximum productivity (cases/hour) 2x3 format*	1200	2280	2280	4560	3000	900
Maximum productivity (cases/hour) 3x4-6x4- etc. format	1200	1200	2280	2280	3000	500
Installed power (kW)	1.5	1.5	2.2	2.2	2.2	1.2
Operating pressure (bar)	6	6	6	6	6	6
Air consumption (Nl/min)	170	200	200	230	500	100

Speed	1350 cycles/hour
Power	5.7 to 7 kW
Pressure	6 bar
Air consumption	from 170 to 800 Nl/min

Partition inserter with brushless servo-motors for fast, vibration-free movement.

Partition inserter with brushless servo-motors for fast, vibration-free movement. Case conveyor with spacer and synchronizer. Partition control and opening device.

Possibility of an optional additional storage unit for interchangeability with other partition sizes; quick system.



Model	MAB111	MAB121	MAB221	MAB241	MAB331
Maximum speed (cycles/hour)	1200	1200	1140	1140	1000
Max productivity (cases/hour) 2x3 format*	1200	1200	2280	4560	3000
Max productivity (cases/hour) 3x4-6x4- etc. format	1200	1200	2280	2280	3000
Installed power (kW)	1.87	1.87	3	4	5
Operating pressure (bar)	6	6	6	6	6
Air consumption (Nl/min)	50	50	100	150	150

Speed	20-80 boxes/min
Power	1-1.2 kW
Pressure	6 bar

A machine suitable for introducing partitions between bottles previously placed on the bottle box, towards the bottom of the case, without using any outside force besides vibration. This preserves the integrity of the product.

Vibration is vertical and is obtained with an eccentric rotating mass system.

The motorized vibrating belt is suitable for plants producing up to 25,000 bottles per hour.

If required, the motorized vibrating belt can also be used for case transit only.

Case Sealers

Automatic machines for top sealing of pre-glued cases

Automatic high-speed machines for sealing pre-glued cases
Depending on the model, the machines can seal top flaps, bottom flaps or both.
Sealing can be performed with hot melt glue, cold melt glue and/or with adhesive tape, depending on customer needs.

plus

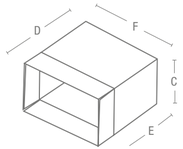
- Extremely fast manual or automated format change
- Automatic flap closing device synchronized with the glue spraying guns
- Case pressing device at output

Uses

- bottles, jars, plastic, glass or metal cans of any shape and with any glue
- boxes

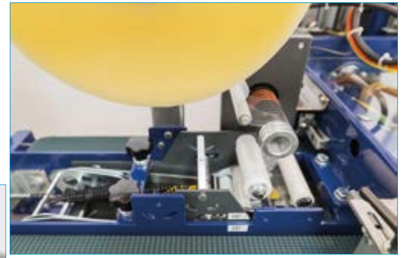
WIDE RANGE OF MACHINABLE SIZES

Measurements are approximate; dimensions of top and bottom limits may vary from model to model.



mm	C	D	E	F
Min.	150	215	140	200
Max.	390	530	400	500

GLUING and/or TAPING



Model		ICL	ICN	ICP	INA	NAT
Top flaps	Gluing	•	•	•	•	
	Taping				•	•
Bottom flaps	Gluing			•		
	Taping				•	•
Max productivity (cases/hour) 2x3 format*		4800	4000	1500	2100	2100
Installed power (kW)		5.8	4.8	5.1	5.4	0.64
Operating pressure (bar)		6	6	6	6	6
Air consumption (Nl/min)		100	160	160	160	30

High-speed gluer ICL

Speed	80 cases/min
Power	5.8 kW
Pressure	6 bar
Air consumption	100 Nl/min

High-speed machine which guarantees the utmost reliability and precision in the sealing of the top flaps of cases by means of hot melt gluing

High-speed machine suitable for the fully mechanical folding and sealing of top flaps on boxes using “HOT-MELT” glue. The speed can be adjusted by means of an inverter, in relation to productivity requirements.

Lateral transport system with positive gripping of boxes: the boxes are pushed at half height by means of special flat buffers fixed on two special toothed belts. Perfect squaring of the boxes is achieved during pushing. When adjusting the height of the boxes, which is done by means of a handwheel with a graduated scale, the belt system automatically follows half of the adjustment, always positioning itself in the middle of the boxes. Box width adjustment via handwheel with graduated scale: the side guides positioned at the top of the boxes are automatically adjusted.

On request, handwheel adjustments can be automated with the application of servo-motors.

Continuously rotating flap-closing mechanism, kinematically linked to the movement of the conveyor system.

Flap pressing device with single spring-compensated rollers to achieve uniform compression of the glue strips.

Inverter-controlled main drive which controls all machine movements via appropriate kinematics, always guaranteeing perfect synchronism, even during speed variations.

Pneumatic system complete with filtration and pressure reduction unit.

ICN Top flap gluer

Speed	60 cases/min
Power	4.8 kW
Pressure	6 bar
Air consumption	160 Nl/min

Machine developed for sealing the top flaps of cases using “HOT- MELT” glue.

Supporting frame made of pressed and welded sheet steel, supported by height-adjustable feet.

Support for upper spraying device and height-adjustable flap-closing mechanism.

The machine is equipped with stainless steel self-centring sides, adjustable according to the size of the boxes. With flap-closing mechanism consisting of a pneumatically-operated arm and flap-closing sides.

Motorised case spacer belt integrated in the machine.

Motorised knurled rubber belts for case advancement, with case-pressing device at the out-feed.

Pneumatic system complete with filtration and pressure reduction unit.

Extremely fast manual or automated format change.

It is possible to equip the machine with a cold gluing unit in addition to the standard hot melt unit.

The machine can also be equipped with a taping device for top flaps, in addition to the standard hot melt unit.

In addition, it can be equipped with an AntiSlip Gluing assembly to be applied to the top outside of the boxes.

Top and bottom flap sealer ICP

Machine developed for sealing the top and bottom flaps of cases using hot melt glue.

The box gluer seals the top and bottom flaps of RSC boxes by spraying a jet of Hot Melt glue.

The machine is designed to ensure perfect case squaring, thanks to the pusher posts at right angles to the side guides.

Possibility of gluing matching bottom flaps and crossed top flaps at the same time.

Spraying length and format variation adjustment by means of millimetre sliders to minimise adjustment times.

Case-pressing device with rollers on adjustable springs.

Extremely fast manual or automated format change.

Mixed sealer INA

Machine for sealing the top flaps of cases with ”HOT-MELT“ glue and sealing the top and bottom flaps using adhesive PVC tape.

Upper taping device and height-adjustable flap-closing mechanism with upper hot-melt glue spraying device.

Stainless steel self-centring sides, adjustable according to the size of the boxes.

Flap-closing mechanism consisting of a pneumatically-operated arm and shaped sides.

Motorised case spacing belt and motorised knurled rubber belts for case advancement, with case-pressing device at the out-feed.

Optical sensor device with acoustic and light signal for signalling the end of the adhesive tape reel and stopping the machine.

Speed 35 cases/min.

Taping machine NAT

Machine for sealing cases by means of adhesive PVC tape, suitable for sealing top and/or bottom flaps.

Support for upper taping device and height-adjustable flap-closing mechanism. Upper taping device with reel unwinder.

Stainless steel self-centring sides, adjustable according to the size of the boxes. The flap-closing mechanism consists of a pneumatically-operated arm and shaped sides.

Motorised knurled rubber belts for case advancement.

Pneumatic system complete with filtration and pressure reduction unit.

Optical sensor device with acoustic and light signal for signalling the end of the tape reel and stopping the machine.

Approximately 35 cases/min

Mo no bloc

Automatic machines that combine the entire packing process in a single structure

The case packing monobloc is a machine specially designed to manage all stages of the product wrapping process within a single structure: RSC carton preforming, insertion of partitions or flaps, product insertion.

The monobloc is suitable for packing plastic, glass or metal bottles, jars and pots, canisters, boxes and bags in flexible packaging.

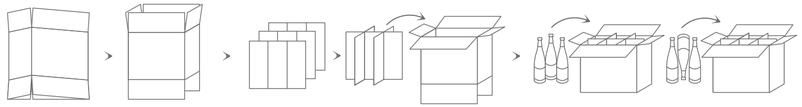
plus

- One machine combining 3 or 4 functions
- Perfect box squaring
- Partition inserter before or after

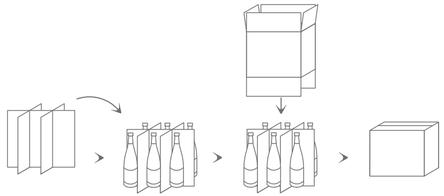
Uses

- plastic, glass or metal bottles, jars, cans
- boxes

3 EST STAGES



TOP DOWN



SIMPLE, FAST FORMAT CHANGES

Adjustments are simple and facilitate the operator during format changes. The same advantages of the case packers and partition inserters can also be found on the monobloc.

The machine-operator interface is especially intuitive thanks to the possibility of installing touch screen panels.

The technical solutions concerning the self-adjusting picking heads, already mentioned in the section dedicated to case packers, are also applicable to the case packer monobloc, allowing a drastic reduction in changeover times in this case too.

3EST - CROSS INSERTION OF BOTTLES

The same device for inserting crossed bottles into boxes, available for the case packers, can also be applied to the monobloc and provides the same advantages, both in terms of production and image.

The special patented variable geometry centring device is available for the cross insertion of sparkling wine bottles, which accompanies the bottles inside the box in a single step, preserving their integrity and maintaining the production capacity of the line.

An automatic Randa model gluer can be installed downstream of the monobloc for case sealing requirements, which provides for the sealing and/or taping of the top and bottom flaps of the cases.

Speed	**2EST** 500 cycles/hour	**3EST** 500 cycles/hour
Power	**2EST** 6.6 kW	**3EST** 7.8 kW
Pressure	**2EST** 6 bar	**3EST** 6 bar
Air consumption	**2EST** 370 Nl/min	**3EST** 600 Nl/min

This 2EST monobloc is composed of a CASE OPENING machine combined with a CASE PACKER, up to 2 heads for 6-bottle boxes, while the 3EST also combines a PARTITION INSERTER.

The case packing monobloc is a machine specially designed to manage all stages of the product wrapping process within a single structure: RSC carton preforming, insertion of partitions or flaps, product insertion.

The monobloc is suitable for packing plastic, glass or metal bottles, jars and pots, canisters, boxes and bags in flexible packaging.

In its most complete version, the packing monobloc consists of three synchronized work stations in a continuous cycle:

Box preforming - The flattened boxes, positioned vertically on a storage unit, are picked up to be preformed (opened with the lower flaps folded) and then released onto the transfer belt.

Interlayer or partition insertion - Only present in the 3 EST version of the monobloc, this station provides for insertion of the interlayers or partitions inside the preformed case, taking them from the special storage unit and depositing them inside the box..

Product insertion - The product is deposited inside the box, thanks to special picking systems, customised according to the characteristics of the product.

Speed	with partition without partitions	15 cycles/min. 15 cycles/min.
Power	with partition without partitions	8.95 Kw 7.95 Kw
Pressure		6 bar
Air consumption		270 Nl/min

The monobloc is suitable for packing plastic, glass or metal bottles, jars and pots, canisters, boxes and gift-boxes.

The TOP DOWN version of the monobloc consists of 4 stations:

Bottle pack preparation

Partition insertion: Present if requested by the customer; this station positions the partitions on top of the bottle pack, picking them from the corresponding storage unit.

Box preforming: The flattened boxes, positioned vertically on a storage unit, are picked up to be preformed by the robot, complete with storage unit, and then released on top of the bottle pack before moving on to the next step.

Gluing: Once the box has been placed on the bottle pack, the next step is gluing. Special kinematics seal both the top and bottom flaps. The Gluer allows the box to be perfectly squared and glued, thanks to the synchronized prongs that accompany the various closing phases.

The monobloc is customised according to customer requirements: with or without partitions.

Pal le tize rs

Portal or robotic depalletizing systems for boxes, trays, rigid containers and shrink-wrap packs

The product handling system can manage any kind of palletizing pattern - with or without middle spaces - thanks to the in-feed spacing device and the case-shrink-wrap pack-crate turning device.
It is possible to palletize products without interlayers or to equip the machine for automatic placement of plastic or cardboard interlayers.

plus

- Completely automatic format change
- Fast palletizing of up to 80 cases per minute
- The machine is equipped with a unit for collecting and positioning a separator between each layer of the pallet

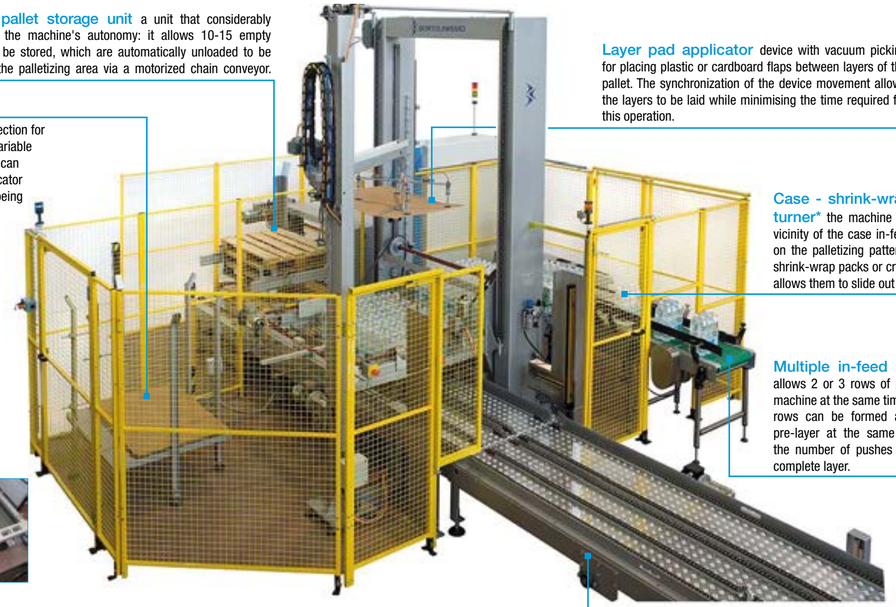
Uses

- bottles, jars, plastic, glass or metal cans of any shape and with any glue
- plastic or metal boxes, crates and baskets

Empty pallet storage unit a unit that considerably increases the machine's autonomy: it allows 10-15 empty pallets to be stored, which are automatically unloaded to be taken to the palletizing area via a motorized chain conveyor.

Layer pad storage unit section for storing a quantity of interlayers, variable according to configuration, which can be taken from the layer pad applicator and then deposited on the pallet being processed.

Our palletizers can also be equipped with a layer-forming area which eliminates machine cycle downtime: while the complete layer is deposited on the pallet, the next layer is formed in the dedicated area, without waiting for the transfer system to return.



Layer pad applicator device with vacuum picking for placing plastic or cardboard flaps between layers of the pallet. The synchronization of the device movement allows the layers to be laid while minimising the time required for this operation.

Case - shrink-wrap pack - crate turner* the machine has a device in the vicinity of the case in-feed which, depending on the palletizing pattern, rotates the cases, shrink-wrap packs or crates by 90 degrees or allows them to slide out without intervening.

Multiple in-feed lanes solution that allows 2 or 3 rows of products to enter the machine at the same time. In this way, several rows can be formed and loaded onto the pre-layer at the same time, thus reducing the number of pushes required to form the complete layer.

Automatic pallet unloading full pallets can be automatically conveyed to suitably equipped areas to be picked up by forklifts, or fed to subsequent machines that perform other processes such as wrapping with stretch film or shrink-wrap or applying strapping.

Machine suitable for palletizing stationary pallet bottles with loading from below by means of a removable plate.

Modular configuration with extensive possibilities for increased automation. Carriage vertical movement performed by inverter-driven gear motor. Carriage horizontal movement performed by gear motor with kinematic crank mechanism.

The inverter-controlled pusher to vary the pushing speed in relation to the stability and rigidity of the product to be palletized..

Mechanically-operated plate extension bar with programmable automatic positioning.

Automated adjustment of guides and squaring devices.

The machine can be equipped with an area dedicated to the formation of a layer while the ready layer is deposited on the pallet. This eliminates machine cycle downtime.

This machine can store 10-15 empty pallets which are then brought to the palletizing area using motorized chains.

In addition, a device can be supplied that allows the automatic transport of a full pallet to the areas for further processing (e.g. in the strapping area).

Layer pad applicators and layer pad storage units are optional extras that can be added. The first, a device with vacuum picking for placing plastic or cardboard flaps between layers of the pallet. Instead the storage area is for the storage of a variable quantity of interlayers, depending on configuration.

Machine suitable for palletizing boxes, plastic baskets, shrink-wrap packs, trays, bins, BIBs, etc. with a stationary pallet with loading from below by means of a removable plate.

Central frame with portal structure equipped with vertical sliding guides for the carriage. The weight of the carriage is balanced by 2 steel counterweights sliding inside the columns.

The carriage is equipped with vertical motion via gear motor with inverter speed variation or, in the case of high-speed machines, with brushless motors. Horizontal carriage movement is achieved by gear motor with kinematic crank mechanism.

The plate descends to the level of the container in-feed conveyor where a pusher loads one row at a time until the layer is completed. Having completed the layer, the carriage raises the plate to a level slightly above the height of the pallet. This is followed by a horizontal movement of the plate that brings the layer at the pallet, followed by the sliding off of the plate that leaves the layer of boxes on the pallet.

Central control panel with display for setting and guiding the operator to the controls and assisted troubleshooting with machine stop or emergency signalling. A socket for PLC and modem for remote assistance, external to the control panel, is provided. Operation display on touch screen panel, with movement indication to guide the operator in manual manoeuvres. The display also indicates reasons for machine stops or emergencies.

Pneumatic system complete with filtration unit and compressed air pressure reduction gauge.

Maximum pallet size 1200x1200x2100 mm.

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