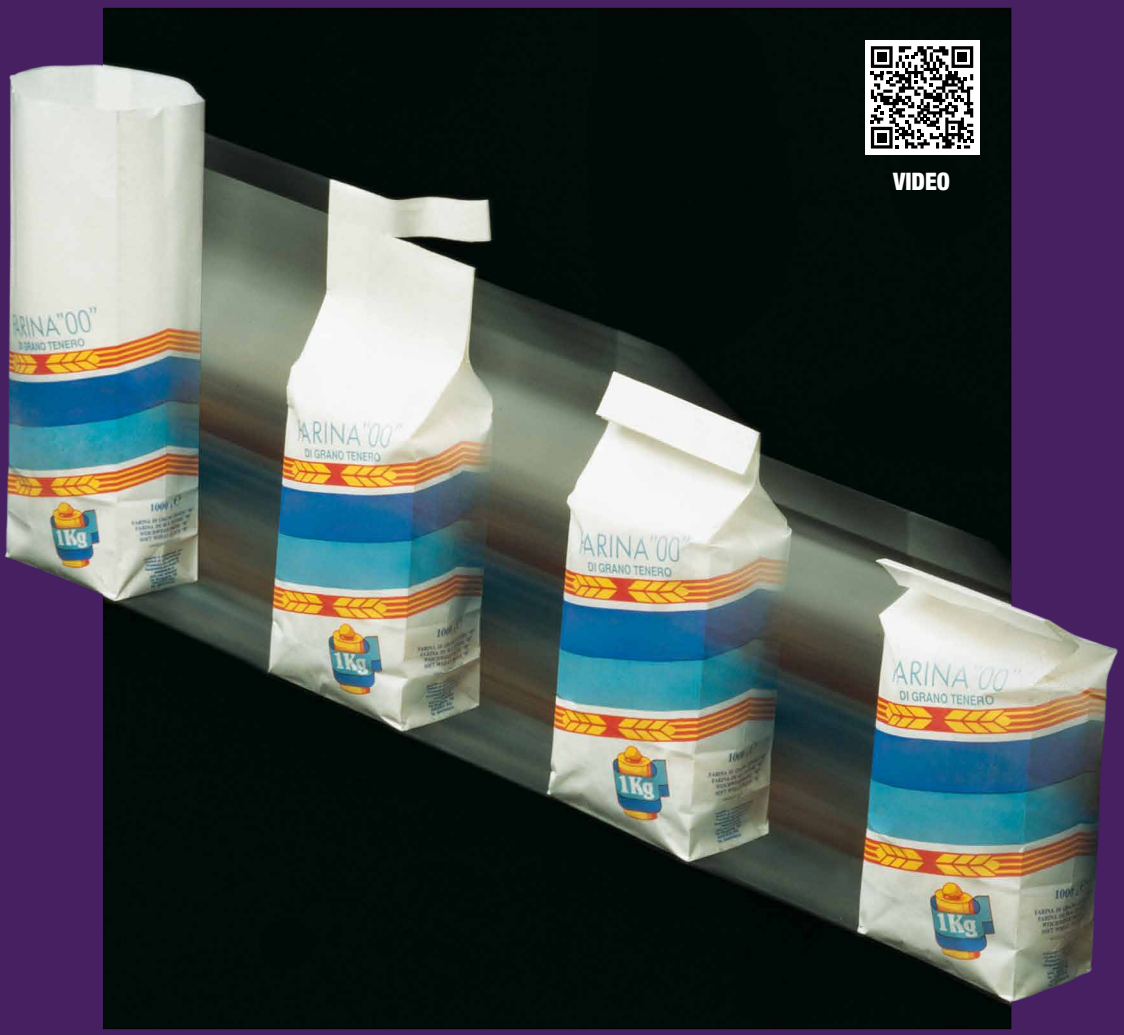
DA 120

PACKAGING MACHINE FOR PREFORMED PAPER BAGS FROM 500 g TO 1 kg FOR VERY HIGH PRODUCTION RATES



PAGLIERANI

mechatronics at its best

Paglierani World

Paglierani offers you 10 fundamental benefits for strengthening your business.

SINGLE PARTNER

From a single machine to a complete line, from a simple standard system to a custom solution, Paglierani is your single partner to **reduce costs and risks** in the realisation of a high-performance plant.

99.9% RELIABILITY

Standard machines industrially constructed, almost a century of know-how in the weighing and bagging field are your guarantees of **high-performance and reliable machines**, perfectly **coordinated** with **the upstream and downstream machinery**.

EVEN IN AGGRESSIVE ENVIRONMENTS

For use in aggressive environments, the machines are treated with **anti-corrosion painting** cycles and the parts in contact with the product are in **stainless steel**, nuts and bolts included.

SAFETY AND REGULATORY COMPLIANCE

Perimeter protection and light curtains guarantee the most complete **extrinsic safety** while **intrinsic safety** is ensured by the machine's construction type.

ITALIAN MADE

All Paglierani products are **designed, produced and assembled in Italy**, in our plants. With an all-Italian know-how to guarantee the highest quality level.

REFERENCES ALL OVER THE WORLD

Our installations have been improving our customers' business **since 1926**. Almost a century of experience in the field and hundreds of **references across the globe**.

7 8 9 10

PRE-SHIPMENT TESTING

Prior to shipment, all machines are **pre-assembled, connected and tested**. Thus ensuring their proper functioning and high performance. During this procedure, **the customer may attend all tests**.

USER-FRIENDLY & SMART

Machines and complete lines that are **easy to use, quick to clean and simple to maintain**. Constantly monitored remotely with the **on-line service**.

TECHNOLOGY AND SUSTAINABILITY

Our machines are designed to guarantee **optimal use of energy** and deliver the highest performance with **minimal consumption**.

ORIGINAL SPARE PARTS. ANYTIME AND ANYWHERE

The high and constant availability of original spare parts, **guaranteed for machines' entire lifecycle**, makes Paglierani a totally reliable partner, with **fast deliveries anywhere in the world**. And your business is guaranteed to never stop.

Born from the DA 80, the DA 120 packaging machine is the answer to high production rates requests.

DA 120

- ✔ FOR PREFORMED PAPER BAGS FROM 500 g TO 1 kg *
- ✔ FOR VERY HIGH PRODUCTION RATES

*Bag weight refers to packs of products having specific weight from 0.5 to 0.8 kg/dm^3.
Different specific weights will affect the bag's weight.

TYPES OF CLOSURE

The filling system produces perfectly squared flat-bottomed, self-standing bags with fin and flat-top (brick) closure.

FIN

welded

glued

FLAT-TOP (BRICK)

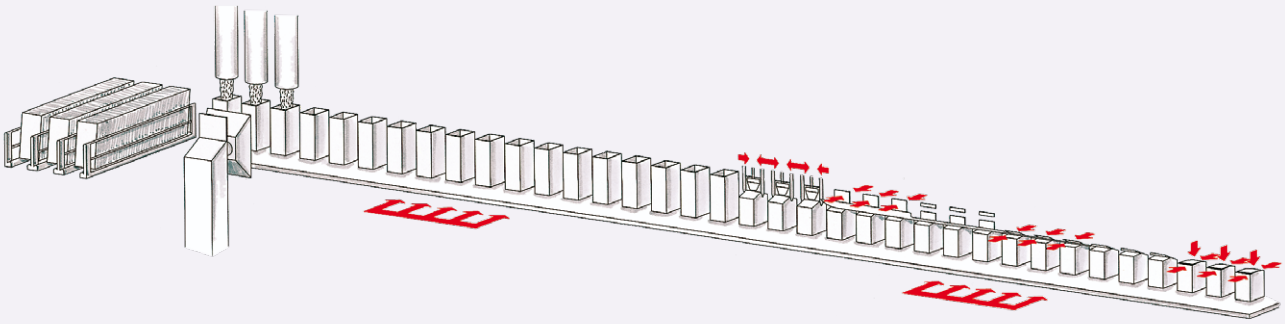
APPLICATIONS

The range of options and equipments available meets the most varied applications and needs:

- dosing or weighing;
- electronic weight checking with automatic feedback to the dosing system, rejection of the out-of-tolerance bag and weight logging;
- closure using glue, stitching or welding;
- labelling;
- bundling and heat-shrinking;
- online process monitoring and telephone support.

GENERAL CHARACTERISTICS

VIDEO



The mechanical operation and the minimization of pneumatic and wear parts guarantee the achievement of **extremely high performance** and **high reliability**.

With a step-by-step motion, the bags are transported (in groups of 3) through the 14 consecutive stations for the following operations:

- bag retrieval from the 3 magazines;
- opening and filling;
- vibration;
- closing;
- weight control (optional).

The entire packaging area (from bag retrieval to closure) is protected by transparent sliding doors.

Opening them immediately stops the machine and allows wide access to the various devices.

High performance and **minimal maintenance** are guaranteed by the fully mechanical operation achieved with cams, by the absence of vacuum pumps, and by the minimization of pneumatic components.

GENERAL CHARACTERISTICS

FRAME

The frame is constructed of tubular profiles; a **sturdy "framework"** within which the electrical and pneumatic cables run.

Thanks to the design carried out with computer simulation, a **perfect balance between weight and rigidity** has been achieved.

Dust collection areas are **minimized yet accessible**, in accordance with sanitation regulations.

MAIN DRIVE UNIT

- With large-diameter mechanical cams to ensure low rpm and therefore total absence of vibration and wear;
- Grease lubrication.

Cam assembly is performed on a bench to ensure **perfect mechanical assembly**.

The 4 assemblies that house all the kinematic mechanisms (cams and levers) are easily removable from the machine frame, **facilitating maintenance** when and where required.

BAG MAGAZINES (3 IN PARALLEL)

Three parallel magazines are provided.
Their **replenishment** is **handy** and it's **easy** to **adjust** them to the size of the bags.
The capacity is approximately 1200 bags, ensuring 12 minutes of autonomy.

An alarm is provided to stop the machine in case of lack of bags.

Refueling does not affect the operating cycle and can be performed without production stops.

BAG PICK-UP

The bags are picked up with the aid of **extractor hoods** (**1**) (total absence of filters, vacuum pumps, and suction cups) and opened with **mechanical grippers** (**2**) that hold them under the filling area.

The perfect positioning of the bag is controlled by sensors (no bag - no filling).

View from above

VIBRATION TABLE

A long vibrating table, on which the bags rest, ensures **perfect product settling**.

For maximum performance, the vibration **amplitude and frequency are adjustable** (the former via an eccentric and the latter with an inverter).

HOT-MELT GLUE CLOSURE

Bag closing is achieved through:
- bag mouth forming (**3**) (**4**);
- trimming of the top edge;
- double folding of the edge (**5**);
- application of hot-melt glue by sprayer (**6**);
- pressing of the top (in the case of flat-top closure) to create a compact, properly squared bag (**7**);
- fin closure (**8**).


3


4


5


6


7


8

WELDED CLOSURE

As an alternative to glue closure, welding can be used (on bags in weldable material).

The welder, with heated bars controlled by thermostat or with on-off operation, is pneumatically operated.

Welding temperature and time are fully adjustable parameters.

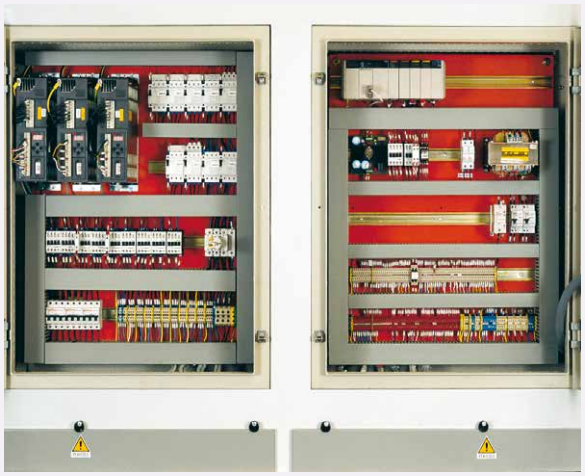
ELECTRICAL PANEL

The electrical panel is integrated on board the machine, completely wired and widely accessible.

The packaging speed is controlled by a frequency changer (inverter), while the operational control is provided by a PLC.

Alarm messages and cyclical maintenance alerts will be shown on a display.

The standard degree of protection is **IP 54**.



CONTROL PANEL

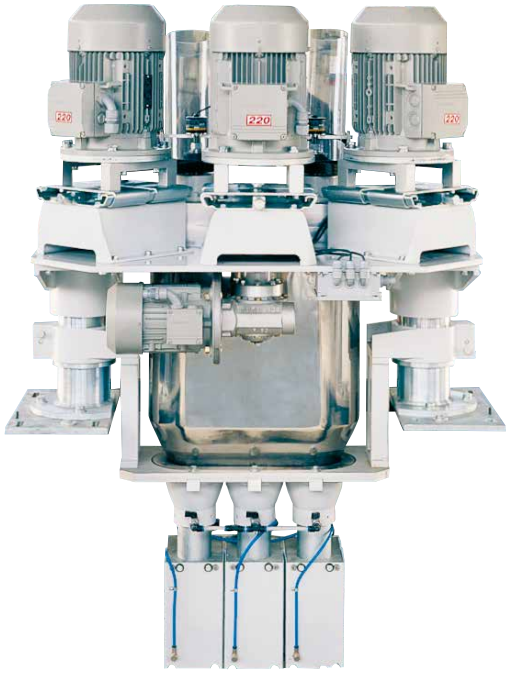
The control panel is assembled within reach of the operator.

The push-button control board is structured to ensure user-friendly operation of the packaging line.

An operator interface is also provided to allow access to the machine settings and alarm messages.

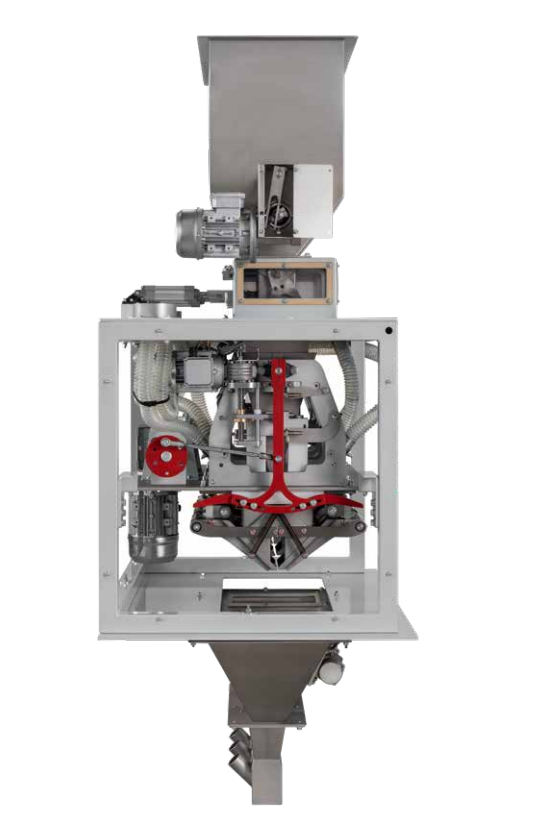
VERTICAL SCREW DOSER FOR POWDERS

- container in **AISI 304 stainless steel**;
- motor-driven internal agitator;
- speed control system with encoder;
- speed control with frequency changer (inverter);
- pneumatically operated shut-off gates;
- dust extraction intake at discharge outlet;
- rapid change for the dosing screw (quick coupling).



SWINGING CUP DOSER FOR GRANULAR PRODUCTS

- 6 cups in **AISI 304 stainless steel**;
- cup volume adjustment with electric remote control (motor + encoder);
- discharge hatches with return spring;
- swinging motion powered by a motor driven by inverter for a perfect synchronisation according to the packaging speed;
- 3 discharge channels in **AISI 304 stainless steel**;
- dust extraction intakes.



INLINE WEIGHING UNITS

For applications where weighing is required (powder detergents, tea, biscuits, short pasta, etc.) it is possible to integrate the packaging machine with one or more net weight inline weighing units, NE model.

MULTIHEAD WEIGHER

Very high production rates and high weighing precision (for granular products) are achieved with the use of a multihead weigher.

BUNDLER F/75 MODEL

Thanks to the bundling machine, the bags are grouped into bundles and wrapped with shrink film.

Suitable for bundles sized:

Min.
160 x 160 x 90 (h) mm

Max.
550 x 350 x 320 (h) mm

It is equipped with:

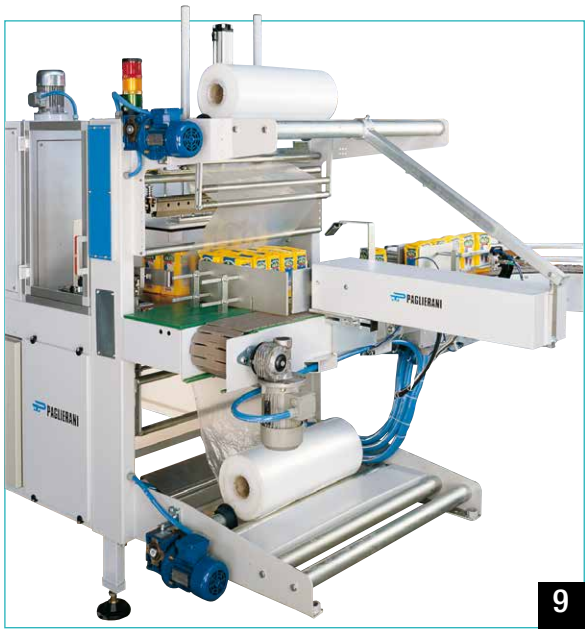
- pneumatic pushers for bundle formation;
- bag flow monitoring system with photocells;
- support for the 2 reels of wrapping film;
- thermostat-controlled welder and cutting blade for the wrapping film;
- perimeter guards.

The double inlet (**9**) (**10**) (**11**) (**12**) guarantees high production rates.

The bundling programs are always dedicated to individual needs and can manage one or more formats simply by using a selector.

VIDEO

Control panel



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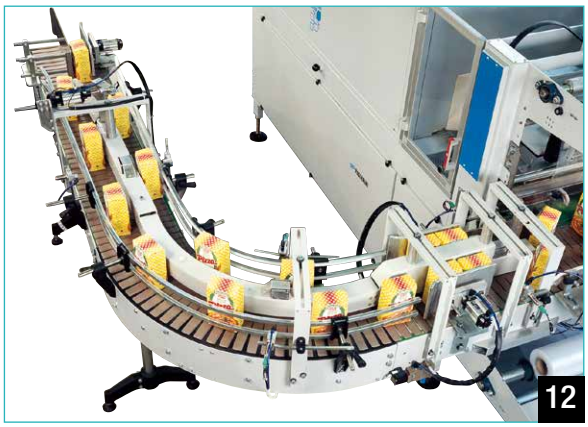
10

11



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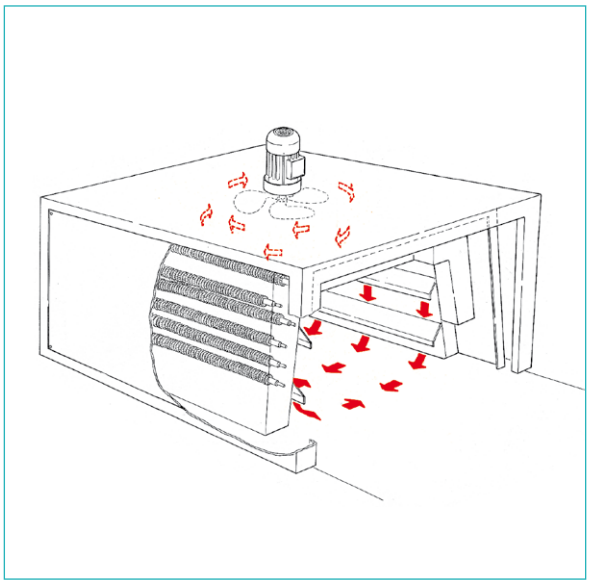
HEAT-SHRINKING OVEN F/75 MODEL

The bundle, properly wrapped in film, undergoes heat-shrinking in the oven.

A wire mesh conveyor (with adjustable speed) carries the bundles through the heat-shrinking chamber, which is heated by electric resistances and ventilated by force ventilation.

The chamber is insulated with rock wool. Bundles leaving the oven are cooled by an electric fan and conveyed onto a parking roller conveyor.



WEIGHT CHECKING, FEEDBACK, AND OUT-OF-TOLERANCE BAG REJECTION

The application of the “weight checking” system provides continual monitoring of the weights obtained, plus:

- rejection of bags with weight outside the tolerance range;
- display of current weight;
- setting and recall of different sizes (up to 9);
- display of the last 20 weights checked for each doser;
- average weight calculation for each doser;
- display of the number of bags checked within tolerance, outside minor tolerance, outside major tolerance, and rejected;
- feedback to the doser for automatic adjustment of weight in case of deviation.

The system comprises:

- triple weighing plate (on load cell);
- analogue digital hardware system;
- dedicated software program.

The system is installed at the line exit, immediately after the closing area.

METAL DETECTOR

Main constituent parts:

- motorized belt conveyor appropriately designed to prevent magnetic interference with the detection coil (minimum conveyor length 2250 mm, in relation to the bag passage opening);
- detection system;
- digital electronic terminal installed on board the detector coil structure;
- standard bag passage opening 300 (h) x 700 (w) mm (larger or smaller sizes are available);
- Ethernet interface.

General characteristics:

- automatic **self-calibration function** cyclically programmable from a keyboard;
- scanning field adjustment;
- **automatic compensation** of the sensitivity level in relation to the percentage in product humidity;
- **event log** displayable on the local control panel (or transferable via Ethernet) including:
  - current date
  - last reset date
  - total bags inspected
  - total bags rejected;
- protection class **IP 69**;
- MD detection system + terminal constructed in **AISI 304 stainless steel**;
- visual and acoustic **alarm** for out-of-tolerance bags;
- remote connection for **bag rejector**.

LABELLING UNIT

Once the closure has been completed, an adhesive label can be applied on the bag to guarantee its closure.

The equipment comprises:

- reel holder (label support);
- device which separates the label and rewinds the backing film;
- pneumatic label applicator.

SIZE CHANGE

Packaging machines can be used for multiple sizes ranging from min. 500 g to max. 1 kg. In this case, the packaging machine will have to be equipped with the related size change accessories.

Size change procedures are **simple mechanical operations** which can be performed by unskilled workers trained for this task.

Estimated size change time:
2,5 hours approx.

DA 120 SIZE CHANGE

2.5 h approx.

OPTIONALS

SIFTER (FOR FLOUR SAFETY)

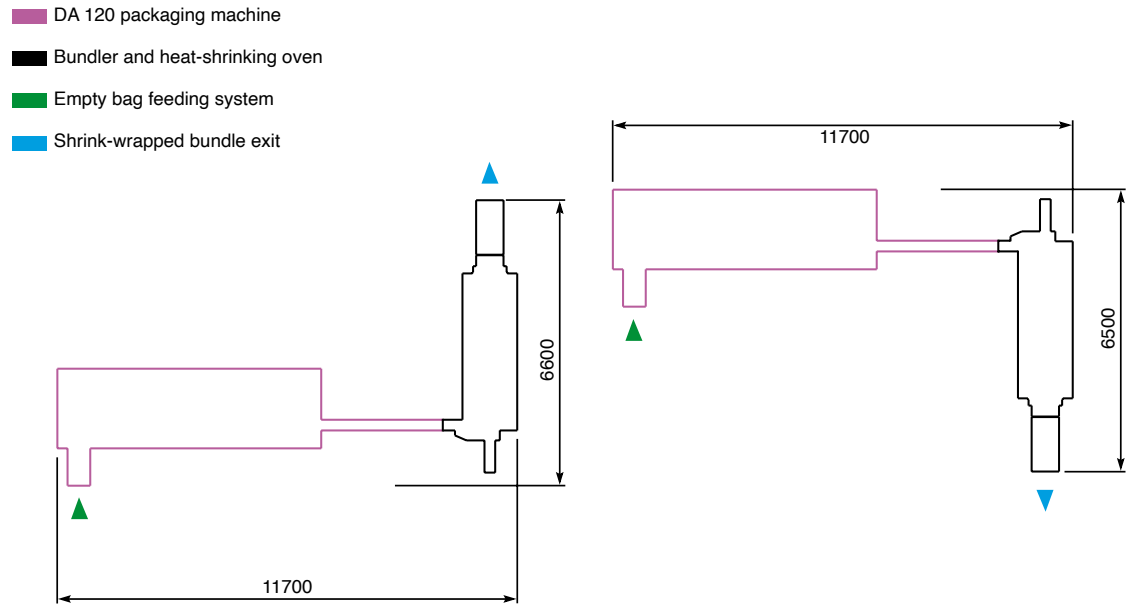
This machine guarantees **perfect product separation** by means of the centrifugal motion of the machine and its internal drum.

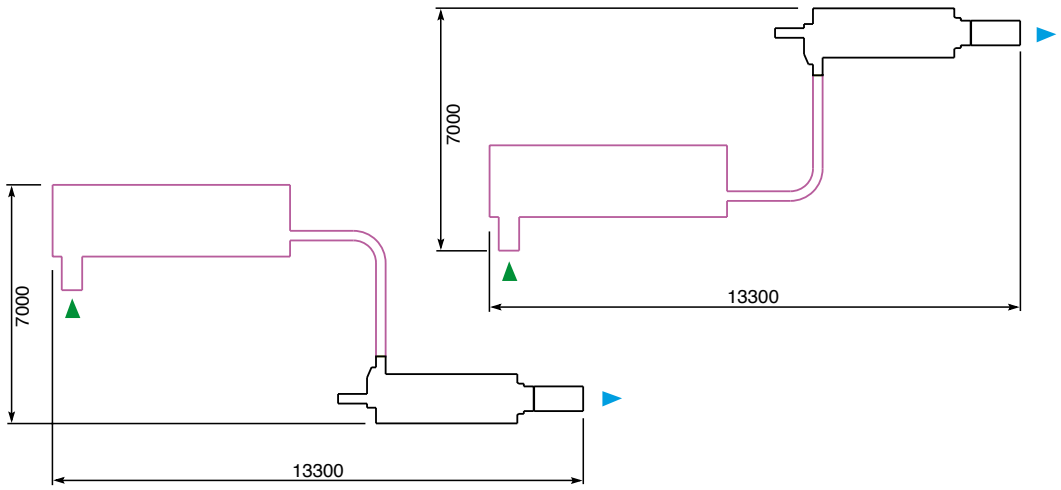
The drum can be either in stainless steel or nylon depending on the **required granulometry and flow rate**, and the various models can be equipped with paddles or shakers.

END-OF-LINE

Palletizing of 1 kg single bags on Düsseldorf pallets (600 mm x 800 mm).

VIDEO





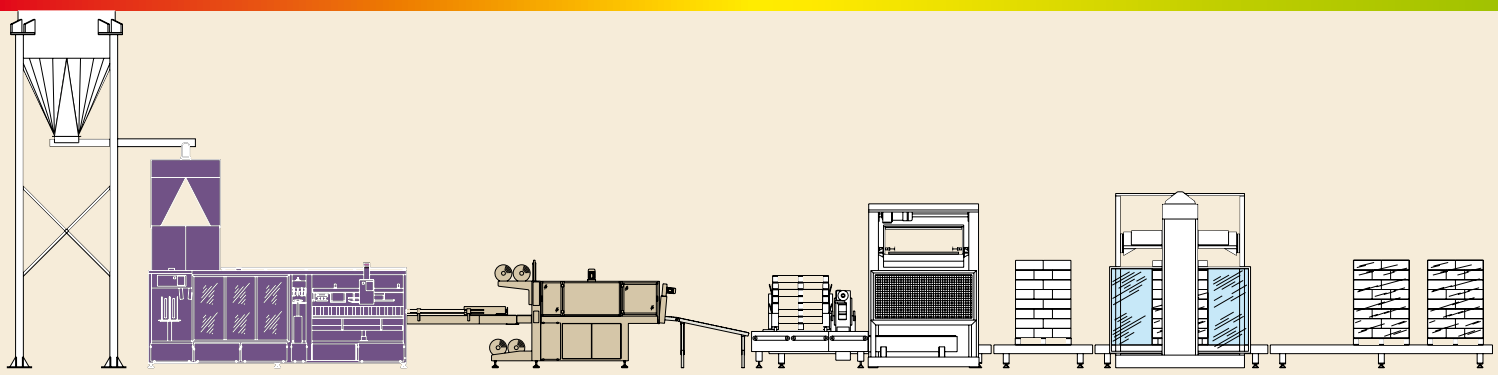
Dimensions in mm

TECHNICAL SPECIFICATIONS

	BAG SIZE mm	MECHANICAL PRODUCTION RATE bags/min.	POWER kW	COMPRESSED AIR CONSUMPTION Nl/min at 6 barg
DA 120	**MIN.** 80 x 50 x 230 (h) **MAX.** 100 x 70 x 290 (h)	105	20	1000

	BUNDLE SIZE mm	MECHANICAL PRODUCTION RATE bundle/min.	POWER kW	COMPRESSED AIR CONSUMPTION Nl/bundle at 6 barg
F/75	**MIN.** 160 x 160 x 90 (h) **MAX.** 550 x 350 x 320 (h)	10	20	35

PAGLIERANI: A LINE COMPOSED OF STRONG POINTS.



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PAGLIERANI GROUP

PAGLIERANI

WEIGHING, PACKING FILLING, PALLETISING & STRETCH WRAPPING SYSTEMS.

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