

DA 20

**PACKAGING MACHINE FOR SMALL BAGS FROM
500g TO 1,5 kg - FOR LOW 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**.



3

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.



4

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.



5

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.



6

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**.



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.

DA 20

- ✓ **COMPACT AND ECONOMICAL**
- ✓ **FOR PREFORMED BAGS FROM 500 g TO 1,5 kg ***
- ✓ **FOR LOW PRODUCTION RATES**

*Bag weight refers to packs of products having specific weight from 0.5 to 0.8 kg/dm³.
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



sealed



stitched



glued

FLAT-TOP (BRICK)

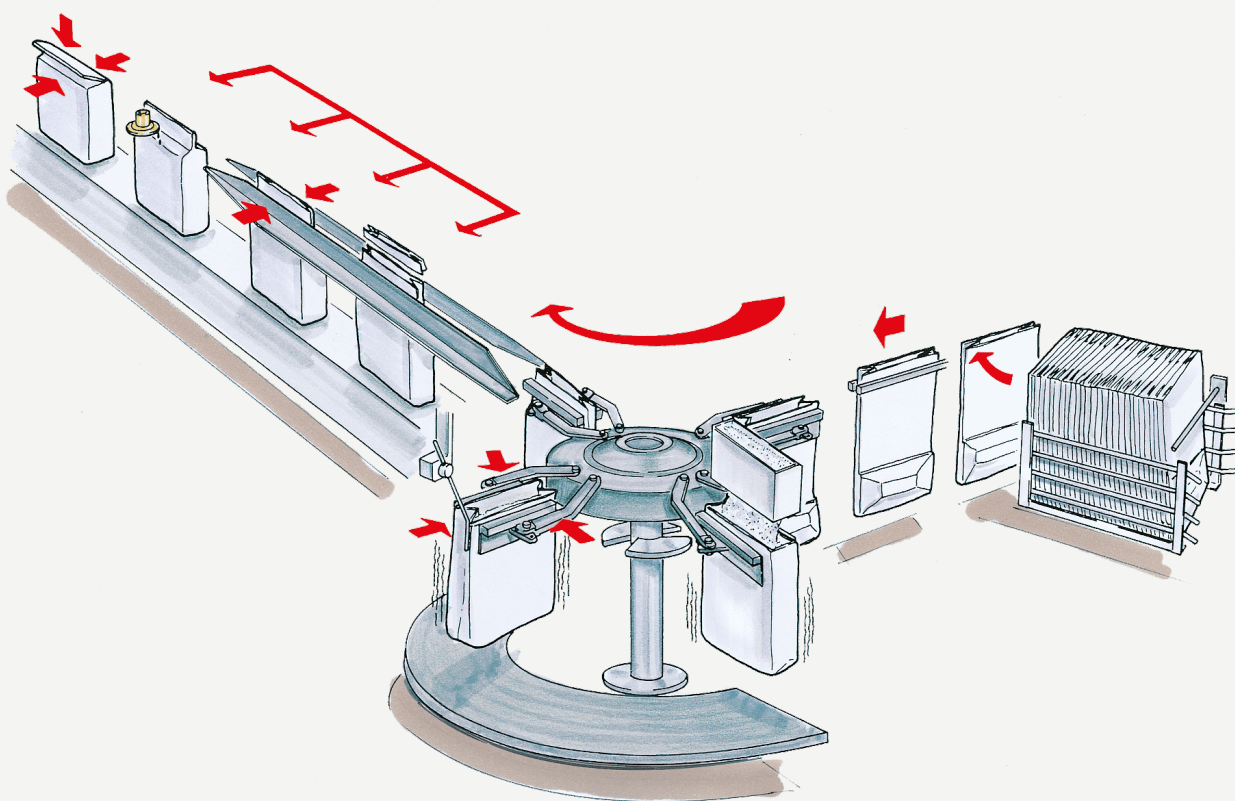


APPLICATIONS

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



Compact and economical: these are the peculiarities of the small packaging machine model DA 20.

In 4 stations (carousel design) the machine performs:

- empty bag presentation;
- filling;
- vibration (to settle the product inside the bag);
- preparation of top edge of bag for downstream closure.

The closing system, located at the packaging carousel exit, is inline type.

The main movements are driven by mechanical cams, which guarantee:

- **high precision,**
- **perfect synchronisation,**
- **minimal maintenance.**

Side hatches ensure **excellent access** and **compliance with the most restrictive safety regulations.**



GENERAL CHARACTERISTICS

MAIN DRIVE UNIT

- mechanical cam type;
- grease-lubricated.

BAG MAGAZINE

- quick and easy to adjust;
- convenient to refill;
- 300/350 bags capacity per magazine;
- empty magazine alarm;
- can be refilled without having to stop the machine.



4-STATION CAROUSEL

- operated by mechanical cams;
 - die-cast aluminium head, completely enclosed to guarantee hygiene and prevent dust from reaching the mechanisms **(1)**;
 - bag presence sensor (no bag - no filling);
 - top edge of the bag supported by suction cups connected to the vacuum pump **(2)**;
 - dust extraction hoods **(2)**;
 - vibration table **(2)**.
- Bags rest on a vibrating table.
The vibration stroke can be adjusted to meet different needs.

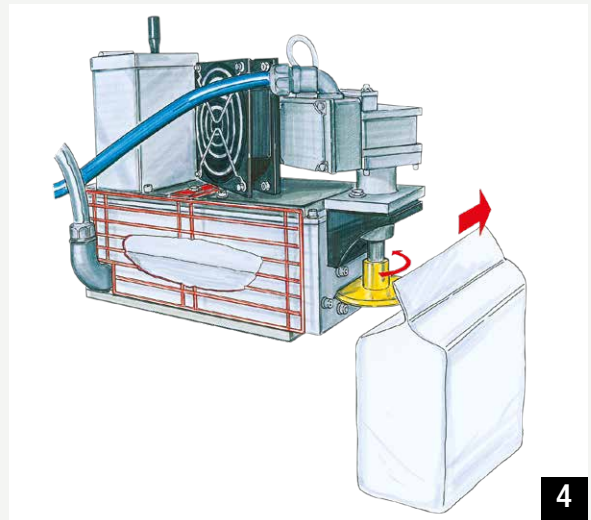


GENERAL CHARACTERISTICS

HOT-MELT GLUE CLOSURE

The filled, vibrated bags are conveyed step-by-step in a straight line through the glue closing station, where the following actions are performed in sequence:

- trimming of the top edge **(3)**;
- double folding of the edge **(3)**;
- application of hot-melt glue by a rotary disc distributor **(4)**;
as an alternative, for special requirements and applications, a spray module for hot-melt glue application is installed;
- pressing of the sides (and top for flat-top closure) to create a compact, properly squared bag **(5)**.



GENERAL CHARACTERISTICS

WELDED CLOSURE

As an alternative to glue closure, welding can be used (on bags in weldable material). Bags are conveyed, step-by-step, to the welding station, before which the top edge of the bag is trimmed.

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

Welding temperature and time are fully adjustable parameters.



STITCHED CLOSURE

After packaging, bags are evacuated from the carousel for closure by stitching. The packaging machine is combined with the model LCS stitching system and is available in the following versions:

- **SC: single seam;**
- **CR: seam with fold;**
- **CC: seam with crepe paper.**



CONTROL BOARD

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.



ELECTRICAL PANEL

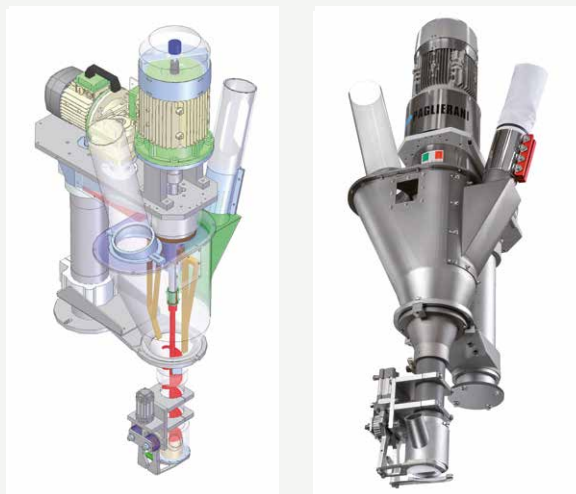
The electrical panel is integrated on board the machine, completely wired, and easily accessible.

The operational control is with PLC logic.

The standard degree of protection is IP 54.

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

- 2 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;
- single discharge channel in **AISI 304 stainless steel**;
- dust extraction intakes.



INLINE WEIGHING UNITS

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



BUNDLER F/70 MODEL

The bundler groups bags into bundles and wraps them with shrink-wrap film.

Suitable for bundles of sizes:

Min.

160 x 160 x 90 (h) mm

Max.

450 x 350 x 300 (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.

It is available in single input version (**6** and **7**).

Bundling programs are always custom-created and can manage one or more sizes, selected with just a switch.



Control board



6



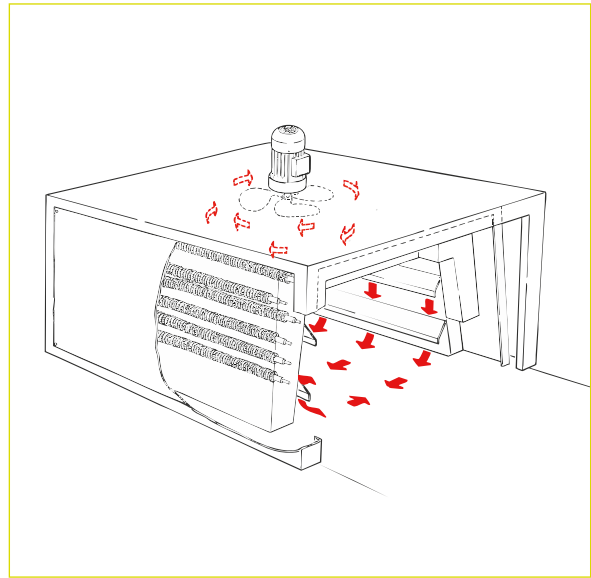
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HEAT-SHRINKING OVEN F/70 MODEL

After wrapping with film, the bundle undergoes heat-shrinking in the oven.

The metal mesh conveyor (with adjustable speed) carries the bundles through the heat-shrinking chamber, which is heated by electrical elements and has forced-air ventilation.

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



OPTIONALS

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;
- display of counts of in tolerance, minor out of tolerance, and rejected major out of tolerance bags;
- feedback to the doser for automatic adjustment of weight in case of deviation.

The system comprises:

- weighing belt (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 detector coil (conveyor at least 2250 mm long, 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 (l) 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 change 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**.



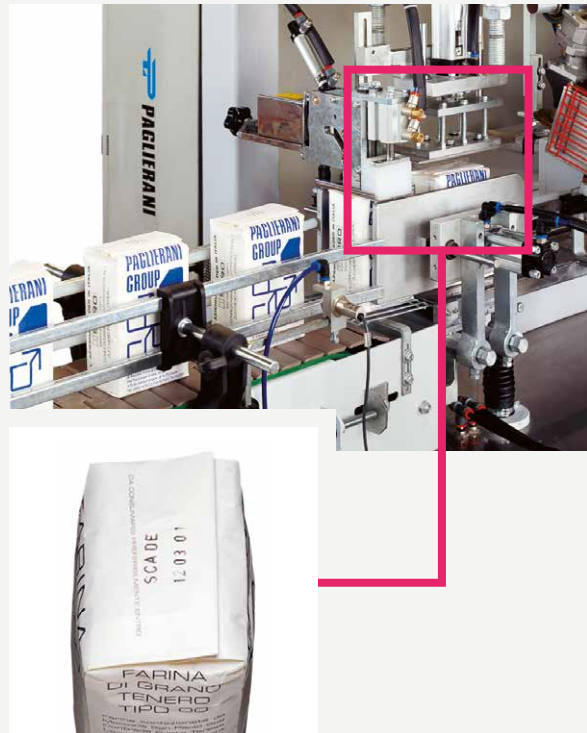
OPTIONALS

DATE / CODE STAMPING SYSTEM

For basic marking (date or code), an “ink pad” date stamping system is available.

Effective and efficient, it is installed at the closing system exit in a single arrangement.

Inkjet date / code printing units are also available.



LABELLING UNIT

After closing, 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.



OPTIONALS

SIZE CHANGE

Packaging machines can be used for multiple sizes. 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:
1.5 hours approx.

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.

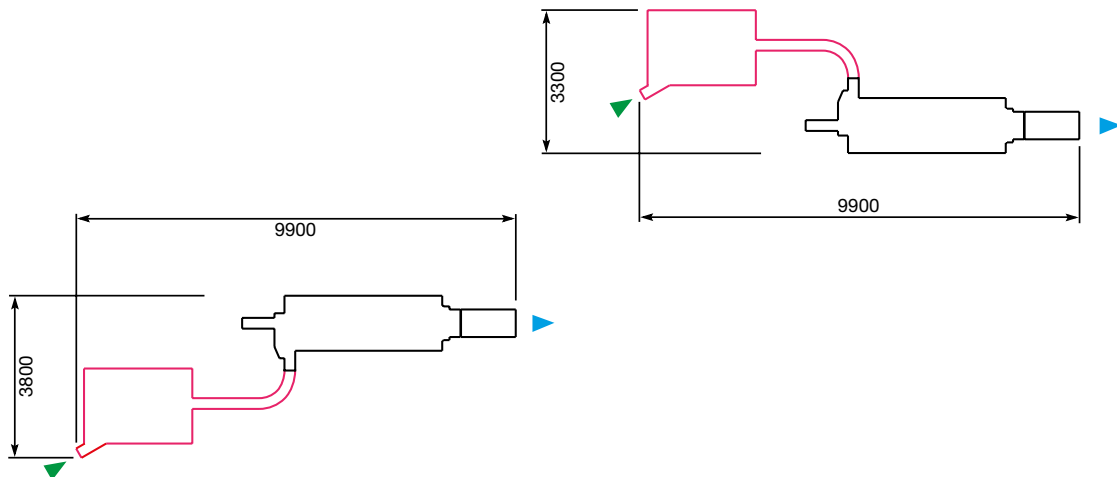
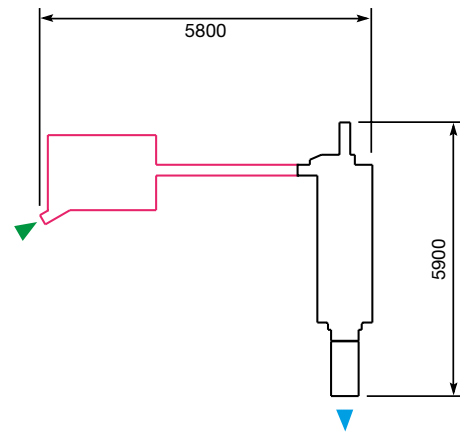
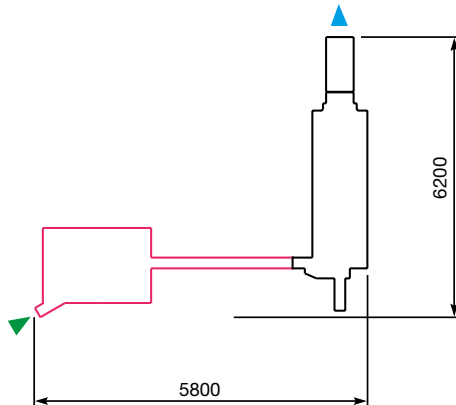
DA 20 SIZE CHANGE

 **1.5h approx.**



SYSTEM DESIGN

- DA 20 packaging machine
- Bundler and heat-shrinking oven
- Empty bag feeding system
- Shrink-wrapped bundle exit



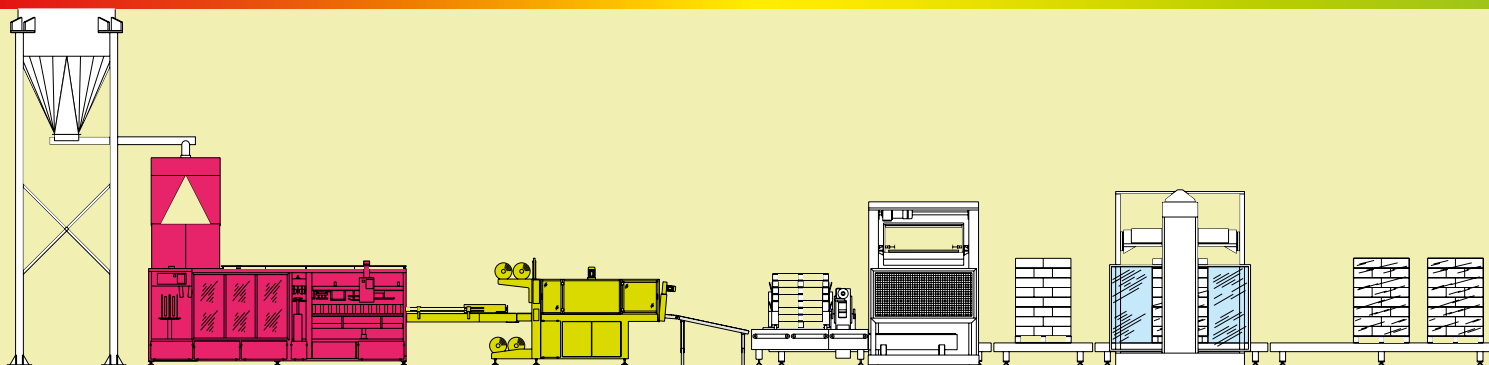
Dimensions in mm

TECHNICAL SPECIFICATIONS

	 BAG SIZE mm	 MECHANICAL PRODUCTION RATE bags/min.	 POWER kW	 COMPRESSED AIR CONSUMPTION l/min. at 6 barg
DA 20	MIN. 80 x 45 x 200 (h) MAX. 100 x 70 x 290 (h)	20	9	300

	 BUNDLE SIZE mm	 POWER kW	 COMPRESSED AIR CONSUMPTION l/bundle at 6 barg
F/70	MIN. 160 x 160 x 90 (h) MAX. 450 x 350 x 300 (h)	20	35

PAGLIERANI: A LINE COMPOSED OF STRONG POINTS.





PAGLIERANI

**WEIGHING, PACKING FILLING, PALLETISING &
STRETCH WRAPPING SYSTEMS.**

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