

Palletiser M4000S



The M4000S palletiser is a high-capacity machine designed for the most demanding applications as regards performance and good layout quality of the finished pallet.

It is equipped to palletise 50, 40, 35, 30 and 25 kg bags or others in accordance with the specific requirements of each application.

Its particular design represents an innovation in the field of bag palletising. The incorporated distribution system enables work to be carried out at low linear speeds,

preventing the bags from being deformed, and with a high final output.

The conception of the machine, which is always in line with METRAL philosophy, is characterised by its excellent level of both robustness and simplicity.

Changes in format are quickly and simply carried out. The machine can be fitted with automatic regulation systems so that all the elements are positioned by simply selecting the necessary program from the operating terminal.

The distribution assembly performs the bag-positioning operation, guiding the bags to each entry line to the main machine body without any displacers or other mechanical means being necessary.

On the next conveyor belt, the bags are rotated or they pass straight through, depending on the associated mosaic layout.

Entrance to the whole layer formation area is carried out step by step, without the bags coming into contact with each other, thus preventing them from being deformed.

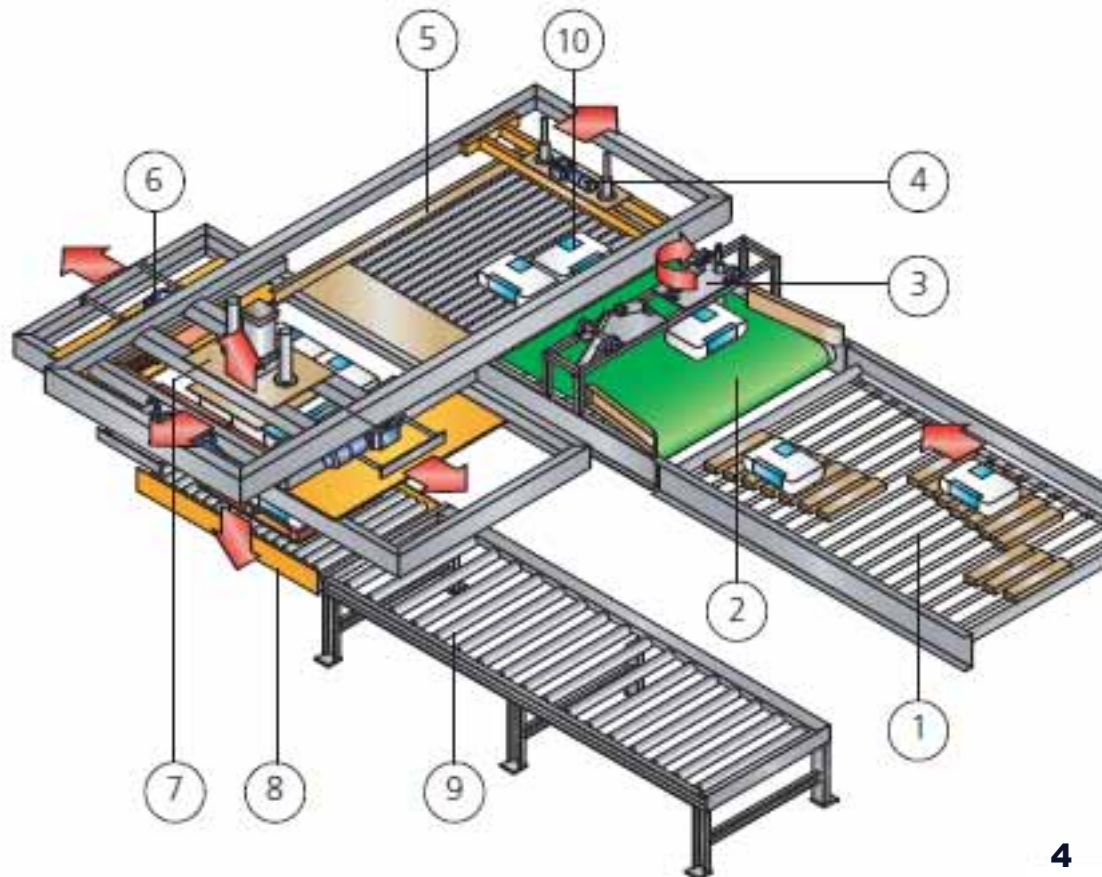
The next stage of the palletising process positions the whole layer of bags on the hatches, using the main pusher, which is also known as the pusher device.

Once the mosaic layer is on the hatches, the side presses are activated, together with the upper layer press, which produces the required geometric shape for the layer thereby achieving adequate bag layout on the pallet.





Bag handling is carried out carefully thanks to a steady linear speed throughout the entire machine. In this way the number of breakages is minimised and, at the same time, a compact and perfectly finished pallet is obtained.



- 1 - Distribution conveyor
- 2 - Programmed belt
- 3 - Swing arm
- 4 - Pushing device
- 5 - Front stopper
- 6 - Side press
- 7 - Upper press
- 8 - Lift
- 9 - Full pallets roller conveyor
- 10 - Bags

Our machines are equipped with auxiliary devices to carry out the specific functions of each application.

The manufacturing program includes:

- Packing machines of several types and capacities.
- Bag placers.
- Check-weighers.
- Bag rejection systems.
- Bag destroyers with elements for the separation of the product from the paper.
- Bag accumulation conveyor belts.
- Flattening belts with double belt.
- Flattening belt with vibrator.
- Mechanical or electrical bag shifters.
- Rotation system with cross, gripper or swinging arm.
- Hydraulic pallet presses.
- Various packaging machines for protecting the pallet with plastic.
- Pallet transport and stock systems.
- Machines for automatic positioning of boxes.
- Machines for the positioning of plastic sheets.
- Truck loading conveyors.
- Train loading conveyors.



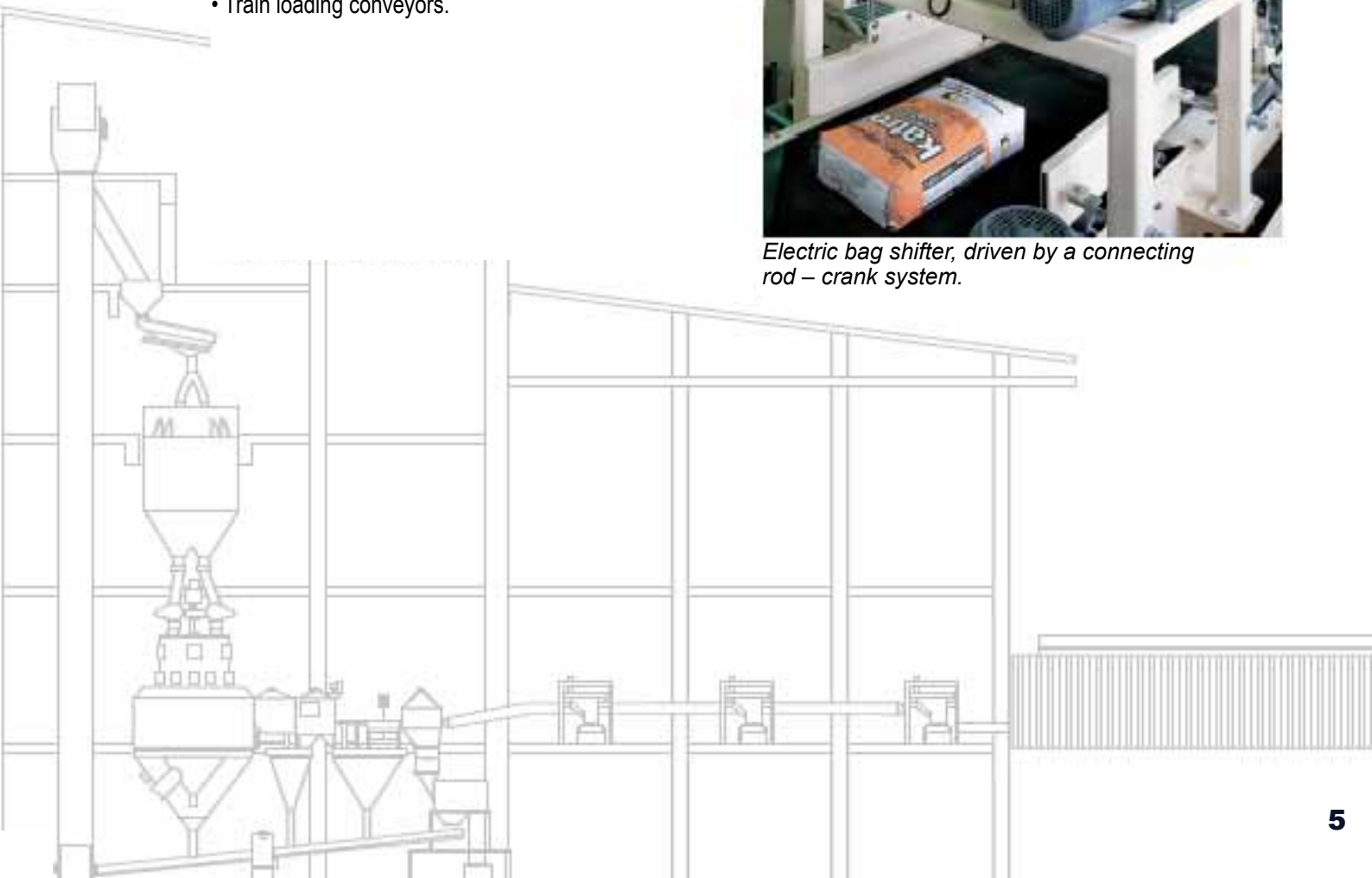
Layers press.

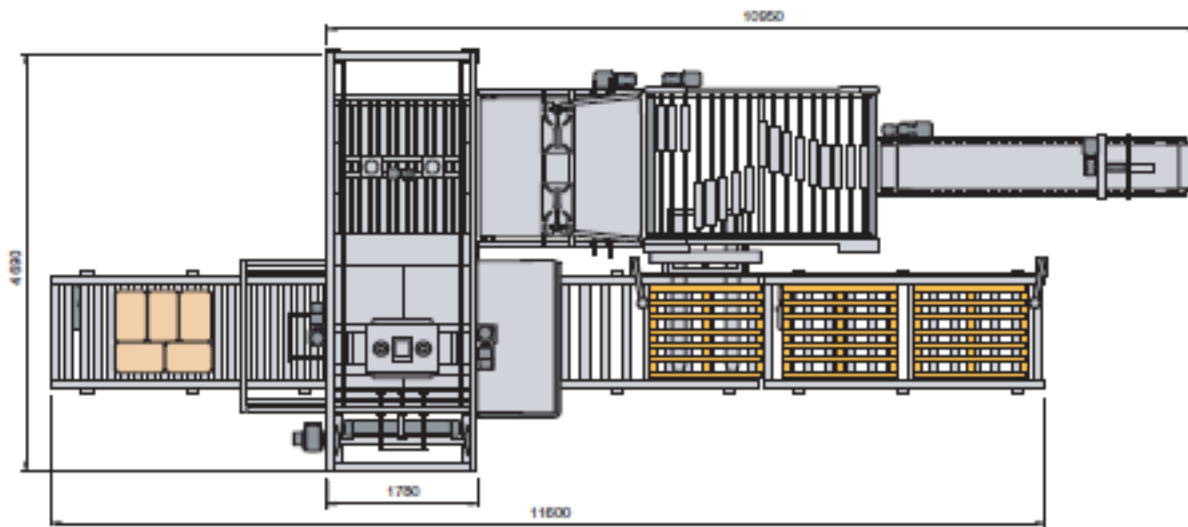
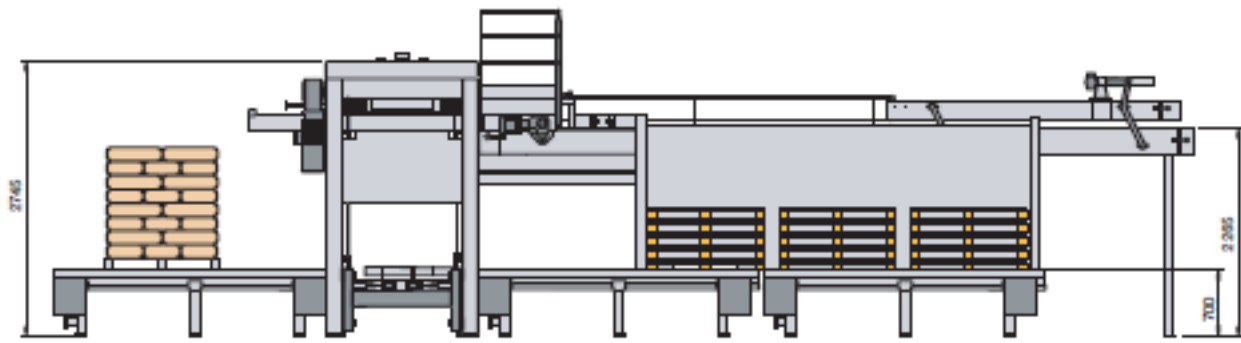


Bags pneumatic shifter.



Electric bag shifter, driven by a connecting rod – crank system.

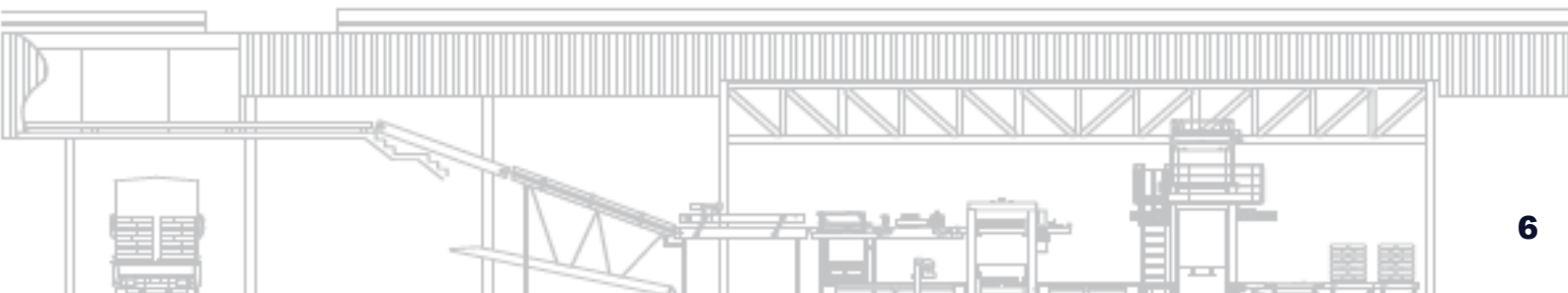




Typical layout of the model M4000S palletiser.

The machine can be configured in various layouts, adapting in each case to the customer's needs.

The dimensions shown are for guidance purposes only and are for a pallet with dimensions 1000 x 1200 and a height of 1400 mm.



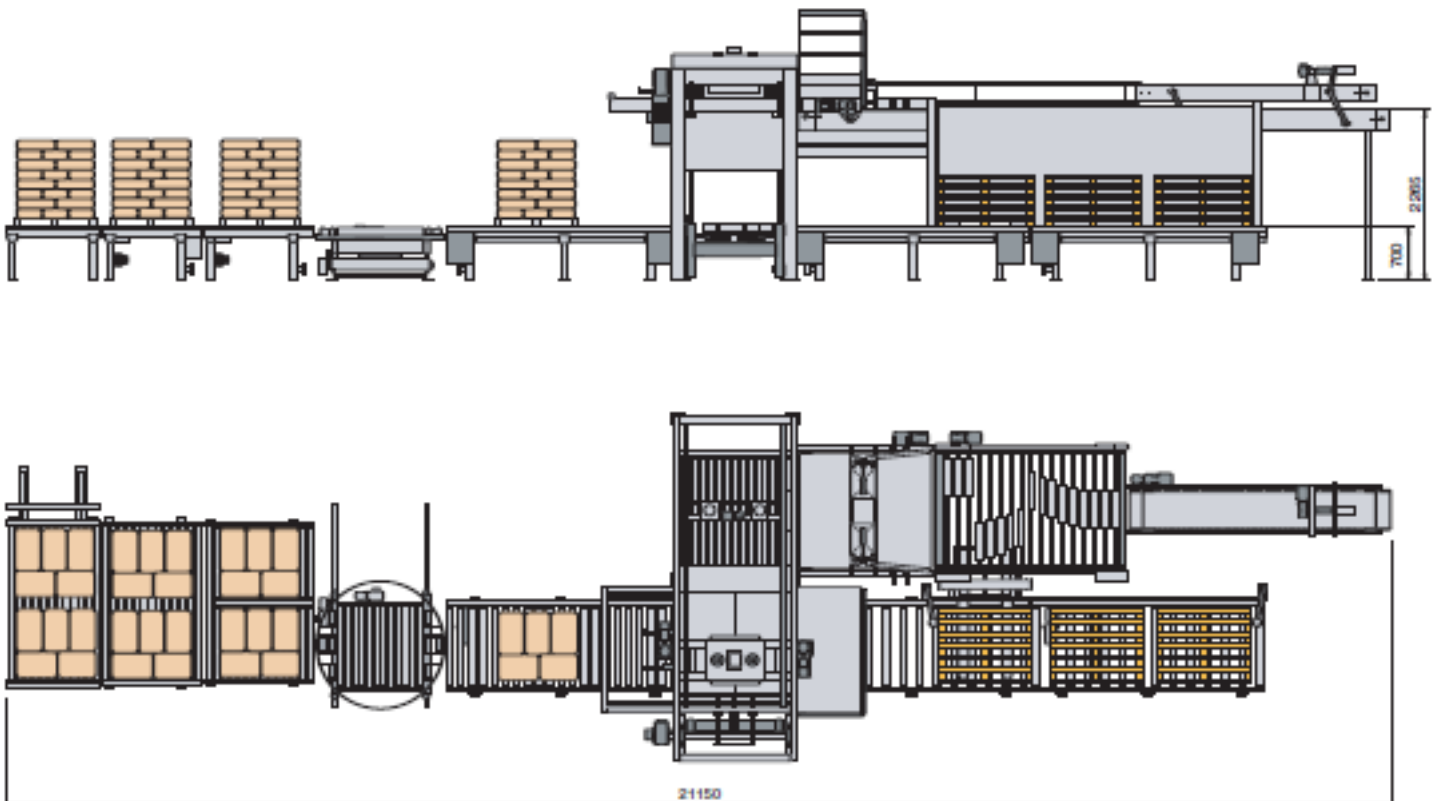
In addition to the palletiser, METRAL designs, manufactures and supplies the rest of the machines which are necessary for completing an installation.




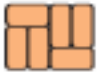









Band conveyors for bag stock prior to the palletising and wrapping machine with stretch film (Stretch Hood).



Stretch hood

A diagram of a typical layout of the M4000S palletiser with 6+2 roller conveyors for the accumulation of loaded pallets.



Bags per layer	2	3	4	5	6	7	8
Pallet 1200 x 800							
Pallet 1200 x 1000							
Pallet 1100 x 1000							
Pallet 1100 x 1100							
Production bags/hour	600	800	1200	3000	3400	4000	4000
Pallets/hour 6 layers	25	44	50	100	95	86	83

