



## Functional characteristics



- Main frame made by 4 heavy pillars and the lifting table system has been designed and driven by 4 chains located in each of them.
- Long life 1 inch chains self lubricated engineered to minimize standard maintenance.
- All Mariani's palletizers are designed to have a huge modularity that allows to obtain multiple layout configuration, that leads them to be extremely flexible and one of the most compact in the market.
- Thanks to the Mariani overlap system for infeed of empty pallets and outfeed of finished ones the front view of machine layout fits in just 3,4 m.

## Technical overview

Layer pre-formation is made using three different devices controlled by brushless drive unit:

- Timing belts;
- Boxes turning;
- Stepper belts;

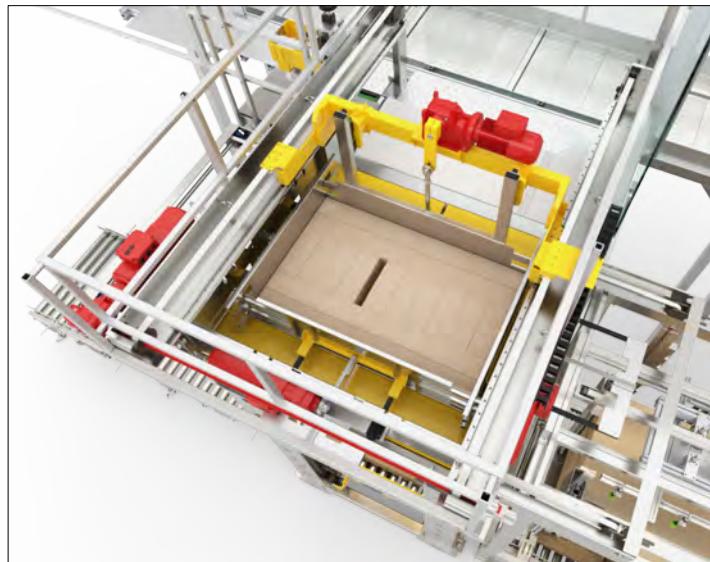
An overhead reciprocating pusher transfers the row of packs from the row formation conveyor to a bi-parting layer forming table for high speed layer deposit. The layer is squared up by means of three independently operated guides prior to the opening of the bi-parting table.

After the layer has been accurately deposited on the pallet under construction the lift table indexes down to allow the layer forming table to close in preparation to receive the next row.



## Layer Forming Table

The bi-parting layer table ensures high speed deposit and reduced friction. Particularly difficult stacking patterns with "holes" can be achieved without special tools and the table tapered profile ensures a minimum layer drop and a gentle deposit.



### Optional palletiser features:

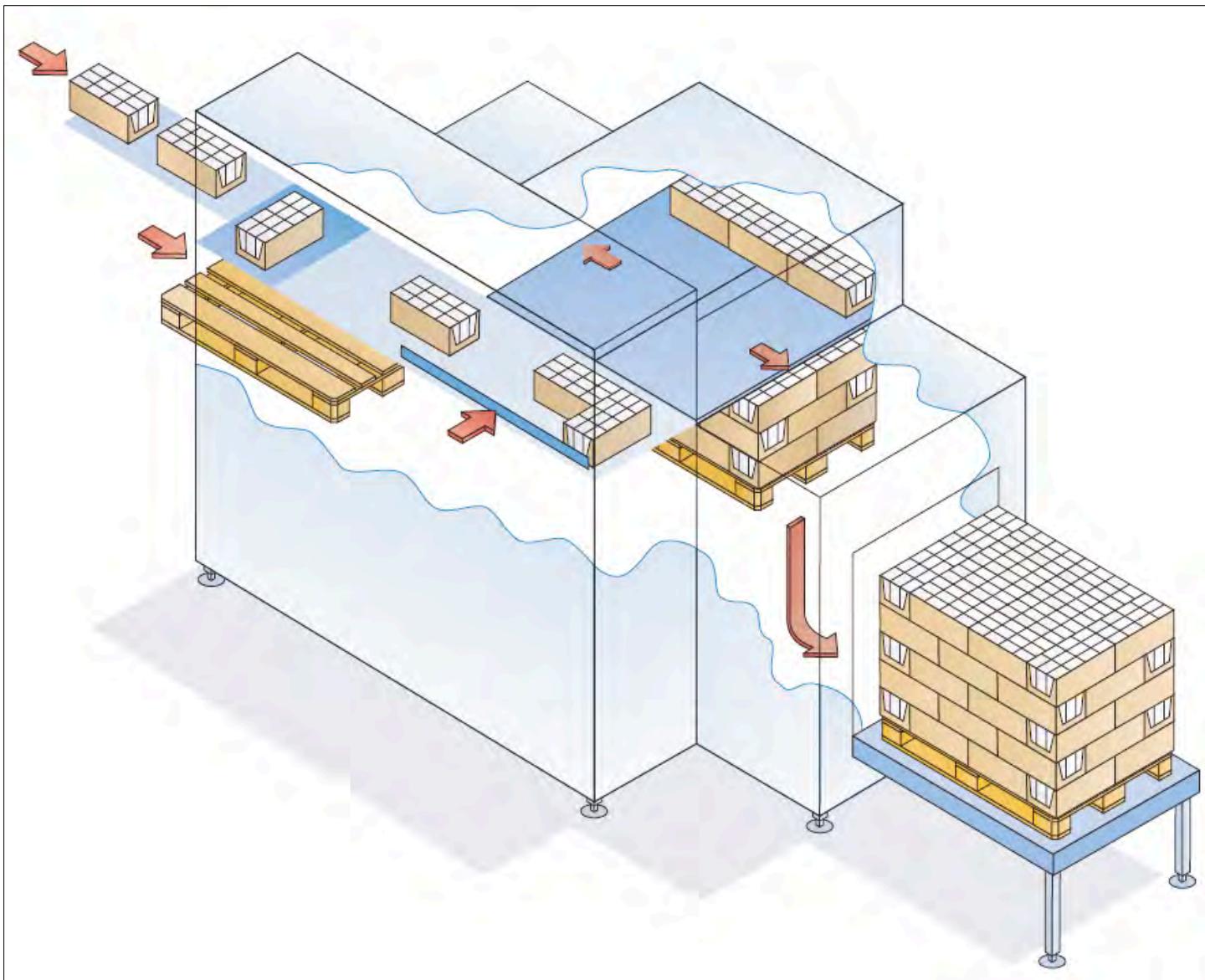
- Timing belts and turning devices customized depending of the products manipulated
- Automatic pallet dispenser (15 pieces stuck)
- Layer pad applicator with lift table and floor loading facility
- Self programming tool to create patterns directly from the touch screen operator interface

### Palletiser main features:

- Modular design
- Clean and open construction
- Heavy steel frame construction
- Small footprint
- Inspection platform
- 10" colour touch screen operator interface for machine jog, diagnostic, troubleshooting, changeover settings
- Quality components
- Low maintenance cost
- Centralized and automatic lubrication
- Motorized layer, independent 3 side pressors
- Modular and standard software
- Safety PLC
- User-friendly HMI helping also in maintenance and diagnostic in "real time"



## Working cycle



The palletizer work cycle is summarized in the description hereunder.

The boxes reach the palletizer via the infeed conveyors. The automatic loading will stabilize their entrance allowing a photocell to count them and set them in rows according to the set palletizing scheme.

Once the number of packs forming a row has been reached, the row will be shifted onto the pre-formation area. After the following rows have been shifted, the resulting layer will be moved onto the shutter plate.

The layers will close and the shutter plate will open thus depositing the layer onto the underlying pallet. These operations will be repeated until the number of layers set for each pallet has been reached.

After this:

1. The completed pallet will be sent towards the outfeed
2. An empty pallet request will be sent by the shuttle

## HMI control panel

### Diagnostic function

If a main alarm triggers, a screen appears on the touch screen panel that shows the cause of the alarm. A flashing spot will show where the cause for the alarm resides. When a red warning triangle is displayed, it means that an information text with further information on how to solve the cause is available. The alarm disappears as soon as the cause has been eliminated.



## Technical data

Mechanical speed rate	40 bundles or packs/ minute - 10 layer /minute
Packs dimensions	min. 70 x 70 x h 40 mm - Max 600 x 400 x h 600 mm
Electrical Connections	Power: 19 KW - 3 x 400 V, 50 Hz + neutral + protected earth
Electrical Consumption	Medium 5 KW - Maximum 7 KW
Air supply	6 bar minimum, clean, dry
Air consumption	Medium: 450 nl/min -> 24 mc/h - Maximum 600 nl/min -> 36 mc/h

## Machine layout

Layout of complete version with automatic pallet dispenser and layer and base pad applicator

