

STAR AUTOMATION

LOGISTICS



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NEW MIXED-LOAD PALLETIZING SYSTEM



Mixed-load robotic palletization

Star Automation developed an advanced mixed-load palletizing system overall based on customer needs. This system can handle boxes - even of different formats - as cartons arrive randomly. Star Automation patent-pending load building software determines optimal routing and positioning of boxes in order to build evenly aligned and well balanced pallets quickly and reliably.



ADVANTAGES

- Handling of boxes of different formats
- Pallet stability
- Space optimization
- Reduction of packaging waste
- Reduction of transportation costs
- Optimization of plant efficiency and productivity

The case study: *Just Italia*

Just Italia

Just Italia S.p.A. is the business, administrative, logistics and marketing division of *Just*, a Swiss company specialized in **natural products** for body, ambient and home care. Their products are sold in over 30 countries, with a turnover of more than 150 million euros per year.

Just Italia challenge

In 2019 *Just Italia* shipped 700.000 packages from its logistics center towards the whole Italian territory, with a **high increase in the volume of weekly orders**.

Just Italia developed **three formats of packages**, as shown in the figure aside, which allow a better fit for its orders volume.

The **total hindrance** of cartons and the number of vehicles needed for the shipment were **minimized**, but they **bound** themselves to **manual palletization** to guarantee the due flexibility.

Star Automation solution

At *Just Italia* Star Automation realized the **retrofit** and **software programming** of palletizing robotic cells that could formerly handle only one carton format.

Laser sensors were installed on the conveyor belt to measure carton heights in order to stack cartons with **different heights**.

Boxes centering systems were installed on the end-of-line conveyor belt to ensure the robot a repeatable loading of boxes.



Robot tool has been mechanically modified to reduce hindrance and to ensure the safe arrangement of all cartons.

The **new algorithm** allows to pack pallets with boxes of **different formats**.

Results obtained

Star Automation load building software allows **multiple formats** of cartons in the palletizing process. Simultaneous handling of boxes of different sizes finally improves the efficiency of the manufacturing plant.



Paolo Amadasi experience

Logistic Manager

“ Thanks to Star Automation algorithm we could completely automate the production line by using three cartons formats, employing our workers in higher value-added operations. In the future we might use other

11 formats of cartons in order to recycle the boxes sent to us by our suppliers, thus reducing waste disposal. Actually, *Just Italia* is committed to the themes of sustainability and environmental awareness.

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**MORE THAN 30% OF JUST ITALIA
PRODUCTION IS NOW
AUTOMATICALLY PALLETIZED.**

Just Italia S.p.A. - www.just.it

