

Case History

Wafers

CHALLENGES

A European leading wafer manufacturer was looking for a supplier to satisfy his packaging needs. The challenge was to supply a complete packaging system. And the solution was to carry out handling, wrapping, and display-filling operations with efficiency and flexibility. The customer turned to Cavanna and found the ideal partner to get a turn-key packaging solution. An alliance of great confidence and no worries.

How did Cavanna design and study the project for the whole line?

SOLUTIONS/STRENGTHS

Cavanna equipped the packaging line with:

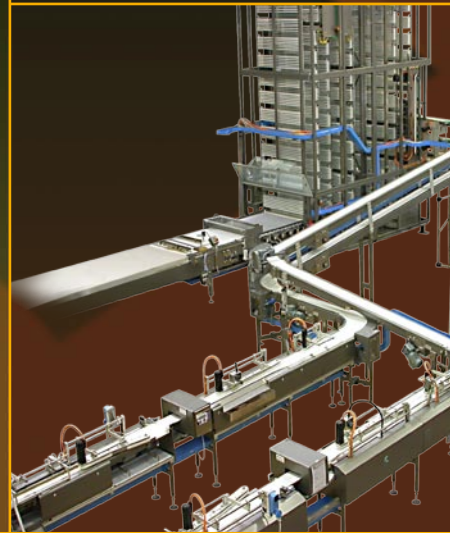
- High speed vertical buffer (100 incoming rows – up to 110 outgoing rows)
- 2 Cavanna Zero 5 wrapping machines
- 2 integrated robotic islands G35

Before being inserted in the wrapping process, products are stored in a vertical buffer (6.500 mm x 3.800 mm x 2 modules) with large capacity, up to 8 minutes. The storage unit has two discharging levels, each of them connected to a feeding system.

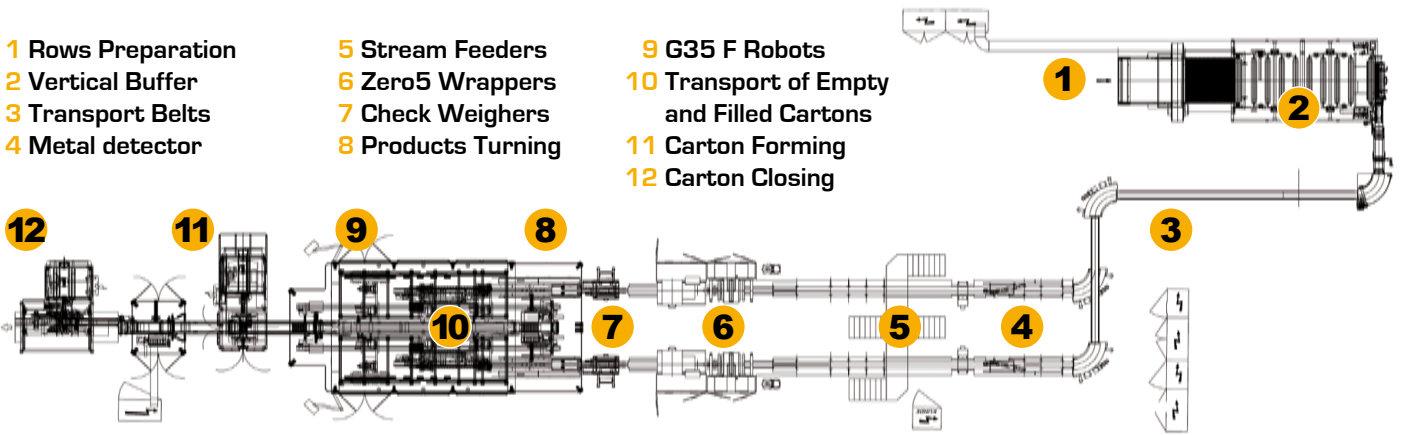
From there wafers pass to the Cavanna Zero 5 wrappers which carry out the wrapping operation. After that, all the products are turned with broad side leading and conveyed to the robotic island. The filling is carried out by a head that takes the products from the a Vertical Multipack Collator device (VMC), continuously fed from the wrapping machines. There are two different handling systems depending if products are treated on edge or flat. The products on edge are transferred from a robot to a grouping system, then they are moved to a shuttle and get labelled. Afterwards, the product groups are taken by a second robot to fill cartons. An elevating and belt system moves the cartons towards the exit. Then, cartons are ready to be palletised. The flat products are directly taken by the second robot from the VMC device and inserted into cardboard displays.

The second robot is equipped with a special head with 26 independent sampling units. Each unit is driven by a micro-motor. This technology allows maximum flexibility of the sampling and deposit configuration. Also, the positioning of micro-motors can easily be changed through the operator's control panel (HMI). The system does neither require any mechanic regulation not any setting of new parameters for change-overs.

The products



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|--------------------|--------------------|--|
| 1 Rows Preparation | 5 Stream Feeders | 9 G35 F Robots |
| 2 Vertical Buffer | 6 Zero5 Wrappers | 10 Transport of Empty and Filled Cartons |
| 3 Transport Belts | 7 Check Weighers | 11 Carton Forming |
| 4 Metal detector | 8 Products Turning | 12 Carton Closing |



RESULTS/BENEFITS

Cavanna has succeeded in supplying a complex and customized packaging solution. The packaging flow is integrated with a buffering storage unit to recover up to 8 minutes. The line performs the entire packaging process – from the primary wrapping to the robotic filling and labelling. The innovation and the engineering of the whole system ensures 99% efficiency and a high level of flexibility.