



THE COMPANY

FEMSA is a leading Mexican company in the food and beverage industry based in Mexico and Latin America, with 52 beverage bottling plants located in 10 countries.

Since its history began (1890), this company has always been considered at the cutting edge of the beverage industry thanks to its continuous innovation, efficient performance, and constant growth. The Femsa Jundiaí facility is the production centre for The Coca-Cola Company, with more production lines than anywhere in the world.

PROBLEMS AND OBJECTIVES

The problem raised by Femsa Jundiaí was the complete over-saturation of the storage capacity in the factory, resulting in a number of problems affecting the logistics management of products. The facility had a capacity of 15,000 pallets over an area of 20,000 m², and rather than designing a new distribution centre, Femsa Jundiaí decided to look for an ad hoc technological solution that would allow it to manage its new warehousing requirements (26,000 pallets) and to increase the speed of order preparation (420 pallets/hour IN + 420 pallets/hour OUT).

THE SOLUTION AND THE RESULTS ACHIVED

System Logistics proposed an automated warehouse located outside the production area known as FRS (Fast Rotation Storage). This storage system receives products coming from the 17 production lines (12 PET, 5 cans and glass PET, 5 cans and glass products), managing a total of 171 codes. The whole pallets are taken from the line-end and deposited in the vertical "high density" automated warehouse. The FRS (Fast Rotation System) automated warehouse occupies an area of 7,700 m² and handles a rate of 420 pallets/hour IN coming from the production area and 420 pallets/hour OUT to shipment.

The original facility, which was 10 metres high, was raised up to 23 metres in height, thus limiting the amount of building work required and resolving the storage problem. Thanks to this technology, a capacity of 25,920 pallets was created in an area of just 7,700 m², almost double the original capacity.

The warehouse is structured into 3 blocks, each with its own entrance. For each block, a lift feeds the 8 storage levels, within which different goods are stored. Each level works independently with a dedicated shuttle: the main shuttle works lengthwise within the channel, meanwhile the Digisat shuttle works across the multi-depth channels (15-deep along each side of the channel), thus making up the FRS system.

Soon the input of products from the production lines to the entrance of each block will be carried out automatically by means of 11 LGV vehicles, which will pick up the finished product from the different line-ends and then deposit them at the warehouse entrance. This technology will also be used to supply line-ends with the required raw materials.

In relation to order preparation and shipment, the shuttles take the reverse route to collect the required pallet and transfer it to the despatch lifts.

These lifts transport the required pallets to an SVL system made up of shuttles which, moving around a loop from which they collect the pallets associated with the order, transport the pallets to various conveyor belts for shipment based on the loading bay associated with the order in question.

This technology enables the shipment speed to be increased, meanwhile the loads are reorganized according to the appropriate sequence, ensuring greater reliability and flexibility compared to other more traditional technologies available on the market.

The management software WMS (SYSTO-RE) provides information on product stocks and manages all warehouse operations, optimizing them based on customer requirements.

TECHNICAL SPECIFICATIONS

Height: 23 m

Length: 70 m

Width: 113 m

Surface area: 7,700 sqm

Structure: Three 8-level FRS blocks

SKU: 1.000x1.200

Pallet slots: 25,920

Max. pallet load capacity

1,000mm X 1,200mmX

1,950mm

1,450 Kg/SKU

SVL: 14

LGV: 11

Lifts: 12

Pre-staging roller conveyors: 114

Digisat shuttles: 24

Flows: 420 pallets/h in from production, 420 pallets/hour out in shipping

Beverage & Food

COCA-COLA FEMSA

Jundiaí - Brazil