

Beverage

COCA-COLA IBERIAN PARTNERS - DSL

Valencia, Spain



The Company

Compañía Levantina de Bebidas Gaseosas S.A. (hereinafter referred to as Colebega) is a Spanish company headquartered in Quart de Poblet (Valencia) and produces and markets COCA-COLA products for the Valencia region. Colebega distributes to the large-scale retail trade and other intermediate regional distributors who in their turn take care of widespread delivery of the products to the end customers. In addition, the company distributes products originating from third-party producers, but in a much smaller percentage than the flow of the COCA-COLA brand.



Problems and Objectives

The project System Logistics developed for Colebega sprung from the need to build a new logistic unit where to store the entire production coming from the production site of Quart de Poblet Valencia.

System Logistics proved itself capable of satisfying all the customer's requirements in developing a completely new logistic pole, routing the entire daily production from the production site of Quart de Poblet to the automated warehouse, fully exploiting the existing areas by decentralising the entire logistic warehouse management to another site, and making use of a vertical warehouse with outright reduction of the space occupied on the ground.



The solution and the results achieved

The Vertical Automated Warehouse designed by System Logistics for Colebega receives 180 pallets per hour from the production facility and a further 40 pallets from third-party producers for a total of 400 items. Pallet transfer between the production site and the logistic unit was solved by implementing a fully automatic loading/unloading solution. The shuttle trucks are loaded at the end of the line and when they arrive at the tipping station, four automatic unloading platforms in just a few minutes transfer the entire load from the truck to the size sorting stations.

The system consists of seven 33-metre high two-slot, two-column stacker cranes. The self-supporting double-deep racking has a storage capacity of 47,000 pallet slots, but expansion to 10 aisles is still underway, which will allow managing a total of 67,000 pallet slots. A characteristic feature of this solution is the flexibility it provides, as the system can handle both 800x1200 full-sized and 600x800 half-sized pallets with no need to use a slave pallet.

The goods receipt area has three stations for quality control and integrity checks of the incoming pallets, and a station for manually handling non-conformities. The warehouse handling head is on two levels: incoming goods on the first floor and outgoing goods on the ground floor. The incoming pallets to be stored in the vertical automated warehouse are carried to the top floor by means of three elevators where they are fed to all the stacker cranes through roller conveyors that form the connection backbone. The manual picking activities are carried out in a 4000 m² area next to the warehouse. Class A goods are carried on 60 gravity roller conveyor stations served by a rectilinear shuttle that takes care of automatic replenishment. The low-turnover items are handled on the ground. In this area, the mixed pallets are assembled according to "man to goods" logic.

The completed picking pallets are fed back into the system, conveyed to the wrapping and labelling station, and finally sent to the vertical automatic warehouse that acts as *meeting point* for shipping.

Shipments are made from the ground floor using SVL technology, where a loop of 9 steering shuttles

capable of simultaneously carrying 2 pallets operates.

The high speed at which this pallet sorting system operates allows serving the 14 shipping bays using the Just-in-Time (JIT) method without the need for any pallet pre-preparation. Each of these 14 double bays corresponds to a shipping dock, which is thus managed by means of a *dynamic buffer*, allowing a clear reduction in loading times and hence requiring a smaller number of shipping docks. Moreover, each shipping bay has a pallet rotation system which, depending on the type of truck, orients the pallet in a way best suited to the load. Finally, the transporters themselves independently load their own trucks, another element that makes this logistic platform so efficient. This loading procedure is possible thanks to the SVL system, which serves the pallets to the operator already in the right sequence and correctly oriented, guiding the loading process via a user-friendly display.

TECHNICAL SPECIFICATIONS

Height: 35 m

Length: 139m (only the tall body)

surface area: 12,700sqm (7,600sqm + 5,100sqm)

Stacking cranes: 10 (7+3) two-column with two pallet slots (height 33 m)

Loading unit: 800X1200 pallets and 600X800 pallets with no need to use the slave pallet

Pallet slots: 67,000 (47,000 + 20,000)

Maximum load capacity: 1,000 Kg

SVL: 9 (6+3)

Bays: 14 pairs (9 + 5)

SKU: 400

Flow: 400 pallets/hour out

PICKING AREA SPECIFICATIONS

Surface area: 4,000 sqm

Gravity roller conveyors: 60 stations

Flow: 60 pallet/h