



New production facility for Modelo Group: a warehouse for finish products with an entirely automatic internal system for material handling, a record pace. The new factory of Modelo, the beer giant, is unique in the world.

The company

Established in 1925, Modelo Group is a leader in the production, distribution and marketing of beer in Mexico. Among the top beer producers in the world, the company owns seven factories in Mexico, with an annual production capacity of 60 million hectolitres. The Group currently produces and distributes 12 brands of beer, which include Corona Extra, the Mexican blockbuster of beer sales worldwide, as well as brands Modelo Especial, Victoria, Pacífico and Negra Modelo. Production facilities are settled only in the Mexican area, even if the company exports all over the world, and is present in 159 countries.

The Task

The warehouse, installed by System Logistics inside Modelo's new production facilities in the State of Coahuila, is one of the largest of the Group.

Situated in Piedras Negras (in Mexico, near the U.S. border), in the first production phase the plant boasts a production of 10 million hectolitres of beer per year, destined for exportation to the United States and Canada, and the production will be doubled in very short time. Piedras Negras caters for almost the entire demand of North America which, after Mexico, is the most important market for Modelo for the production of three brands: Corona, Modelo Light and Modelo Especial. The level of automation here is the highest of all the company's factories.

The solutions and the results

In response to problems posed by the management of a high production flow, System Logistics has supplied Modelo with a warehouse that is capable of handling 400 incoming pallets/h, which originate from the production and the bottling lines. The system functions non-stop for 6 days a week, 24 h/day, for a total of 86,400 pallets handled per week, i.e. one pallet every 6 seconds.

A storage capacity of 71,800 pallets (that correspond to 7 days of stock), has been achieved on a surface of approx. 19.300 sq. m., divided into 16 double-depth stocking lanes.

Within the 11 levels of 33.5 Hx120x158 m racks operate 16 stacker cranes of 31 m height, each of them capable of handling 2 pallets of 1,100 kg at a time.



Entirely automated, the warehouse is connected to another glassware warehouse through a finger of over 100 m. length, with 16 entrance bays (empty bottle reception line). The 16 bays for the finished product grant the same outgoing pallet flow for shipment.

The bays of incoming finished product from the production and of incoming empty bottles are interfaced with 4-pallet QUAD automatic trucks.

A fire-fighting system with over 20,000 sprinklers has been installed in the automatic warehouse.

Owing to its high level of automation, the company is able to process orders in a very short time, with reduced personnel.

TECHNICAL CHARACTERISTICS

Piedras Negras Warehouse

Loading units

- Type: Wood pallet
- Dimensions: 935x1.040; 935x1.080; 930x840
- Weight: up to 1.100 kg

Stocking

- Capacity: 71.800 pallets
- Rack: self-supporting
- Dimensions: 122x158xH33 m
- Stacker cranes: 16 with H 31 m
- Load handling device: two double depth telescopic forks

Handling system

- chain and roller conveyors served by LGV vehicles

Incoming goods from production department

- Capacity: 370plt/h, 125 pallets empty glass bottles
- Capacity: 370plt/h coming in from filling lines
- Capacity: 125 plt/h empty bottles to filling lines

Outgoing goods to shipment department

- Capacity: 400 plt/h
- Staging criteria: Just-in-time for train and truck loading

WMS

- Software: Systore® with SAP® company host interface

