



Case study: Laboratorios Americanos

Pharmaceutical products on earthquake-proof racks

Country: Peru



Pharmaceutical firm Laboratorios Americanos has transformed and modernised its logistics systems in order to meet an ambitious challenge of international expansion in the coming years. The business has opened a new warehouse in Lima, Peru, designed to store a greater number of products and promptly supply hundreds of chemists and medical centres located throughout the country. Mecalux has equipped the installation with pallet racking that facilitates storage and order prep tasks by offering direct access to the products, ensuring the safety of the medicines at all times. In addition, the racks have been specifically reinforced to absorb the force generated by potential seismic movement.

Health and well-being

Founded in 1965 in Peru, Laboratorios Americanos manufactures medications, bandages and medical supplies. It has established itself as the third-ranking business in its sector in Peru in terms of sales, *“and in the next few years, we intend to market our products abroad,”* notes Ismael Yaya, the company’s Operations Manager. One of the priorities of Laboratorios Americanos is to provide its customers with good service. To do so, it needs to efficiently and safely manage its inventory and, at the same time, make goods inflows and outflows as agile as possible.

For over 10 years, the firm has relied on the storage solutions of Mecalux, the perfect partner for boosting its logistics capacity. Laboratorios Americanos has a produc-

tion centre in Lima’s Ate district and multiple warehouses in San Luis, Salaverry and Lurin, all fitted out with pallet racks by Mecalux. *“We have confidence in Mecalux because of its international reputation and the quality of its racking systems,”* highlights the Operations Manager at Laboratorios Americanos. To increase its production pace, the business needed to raise its storage capacity. As a result, it decided to open a new production plant and a 4,980 m² logistics centre in the Lurin district, also in Lima.

“We were looking for the maximum possible storage capacity,” stresses Ismael Yaya. Laboratorios Americanos has always stored its products in pallet racks, and it intended to continue doing this at its new installation. This is due to the fact that they can be adapted to accommodate any

product, and, in turn, they ensure the stability of the goods; this is essential when dealing with drugs and medical supplies. The centre is divided into two warehouses operating at ambient temperature: one devoted to medication and the other to healthcare materials. Having two different facilities simplifies goods sorting and prevents interference. As the facilities are clad-rack structures, the racking not only supports the unit loads, but also the rest of the building, since the roof and side walls are attached to the racking.

Solution: pallet racks

“We chose this type of racking because it helps us to easily manage the products,” indicates Ismael Yaya. Direct access is indispensable for streamlining storage and picking tasks. Moreover, it enables quicker and error-free inventory management.

The aisles are designed to facilitate operator manoeuvres when inserting and extracting goods from their locations. This storage system was built for loads of varying sizes, weights and shapes. The racks mainly store raw materials from China that are sent to the production lines, located between the two installations. They also hold finished products, which are distributed to clients all over Peru. The proximity between both warehouses and the manufacturing area speeds up goods movements.

"These racks provide us with the ideal storage capacity," affirms Ismael Yaya. Leveraging all available height, the racking is 12 m high and can store up to 3,100 pallets measuring 1,250 x 1,350 mm.

Seismic-resistant

Peru is located in the Pacific Ring of Fire, that is, in one of the regions with the highest levels of earthquake and volcanic activity in the world. Therefore, when devising the structure of the Laboratorios Americanos installation, Mecalux took into account the loads the building would have to withstand in addition to the seismic parameters of the local area.

"The strength of the racks and their finishes ensure that the structure will be able to absorb any potential earthquake tremors. Plus, they are really durable," remarks the Operations Manager at Laboratorios Americanos. Mecalux's technical team based the design of the warehouse racks on Peruvian standards such as RNE-E.030

(Earthquake Resistant Design), as well as on the indications of the ANSI RMI-MH16.1 American National Standard drafted by the Rack Manufacturers Institute, a US organization that develops standards for products, services, processes and systems. The racking can bear large loads by means of the connections between the uprights and beams.

As the racks form part of the building structure, external forces on the installation also had to be considered, such as wind thrust. For this, the team applied Peruvian Regulation RNE-E.020, which includes the specifications to take into account when erecting a building, based on the characteristics of the region in which it will be located. According to Peru's national building regulation, the country is divided into four areas; depending on the location of the warehouse, the facility will require either more or less reinforcement.

Following the study, a three-dimensional model of the structure was created us-

ing finite element programs. A set of data—including, for example, material type, profile size and unit load characteristics—was entered into the software. This simulation was vital for testing the resistance of the racks to earthquakes.

Safety and effectiveness

With its new installation, Laboratorios Americanos can better serve the hundreds of chemists and medical centres across Peru and speed up its growth rate. Logistics is one of the basic activities for the company to meet its customers' needs in the shortest time possible. Mecalux pallet racking not only provides enough storage capacity to house all the products, but also safeguards the medicines and healthcare supplies.

Likewise, one of the priorities of Laboratorios Americanos was to ensure that the racks could resist earthquakes. Mecalux has reinforced the uprights and beams so that they are capable of absorbing any possible seismic event.



Ismael Yaya
Operations Manager
at Laboratorios Americanos

"Mecalux pallet racking stands out for its optimal storage capacity, its high-quality finishes and its durability."

Advantages for Laboratorios Americanos

- **Resistant racking:** the racks are built to endure potential seismic activity.
- **Multiple SKUs:** the racking is designed to store 3,100 pallets of varying sizes, weights and shapes (with drugs and medical supplies).
- **Organisation equals efficiency:** the logistics centre is divided into two areas, each dedicated to a certain type of product. This layout prevents interference and mistakes.



Technical data

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| Storage capacity | 3,100 pallets |
| Pallet sizes | 1,250 x 1,350 mm |
| Max. pallet weight | 1,400 kg |
| Racking height | 12 m |
| Racking length | 28 m |

