SACAR DEL CENTRO DE MÉXICO | VUTEQ

AUTOMOTIVE SUPPLY

CASE STUDY

SACAR DEL CENTRO INSTALLS R&M CRANES IN AUTOMOTIVE SUPPLY FACILITY

This case study documents the execution of one of the most ambitious lifting projects in the history of Sacar del Centro de México: the installation of two double-girder overhead traveling cranes—180/60 and 25/15 tons—at the facilities of a leading automotive sector supplier located in Apaseo El Grande, Guanajuato.

From the engineering phase through to commissioning, the project involved specialized lifting solutions for plastic injection molds, combining innovation, safety and close collaboration with the client to meet the industry's highest standards.

THE APPLICATION

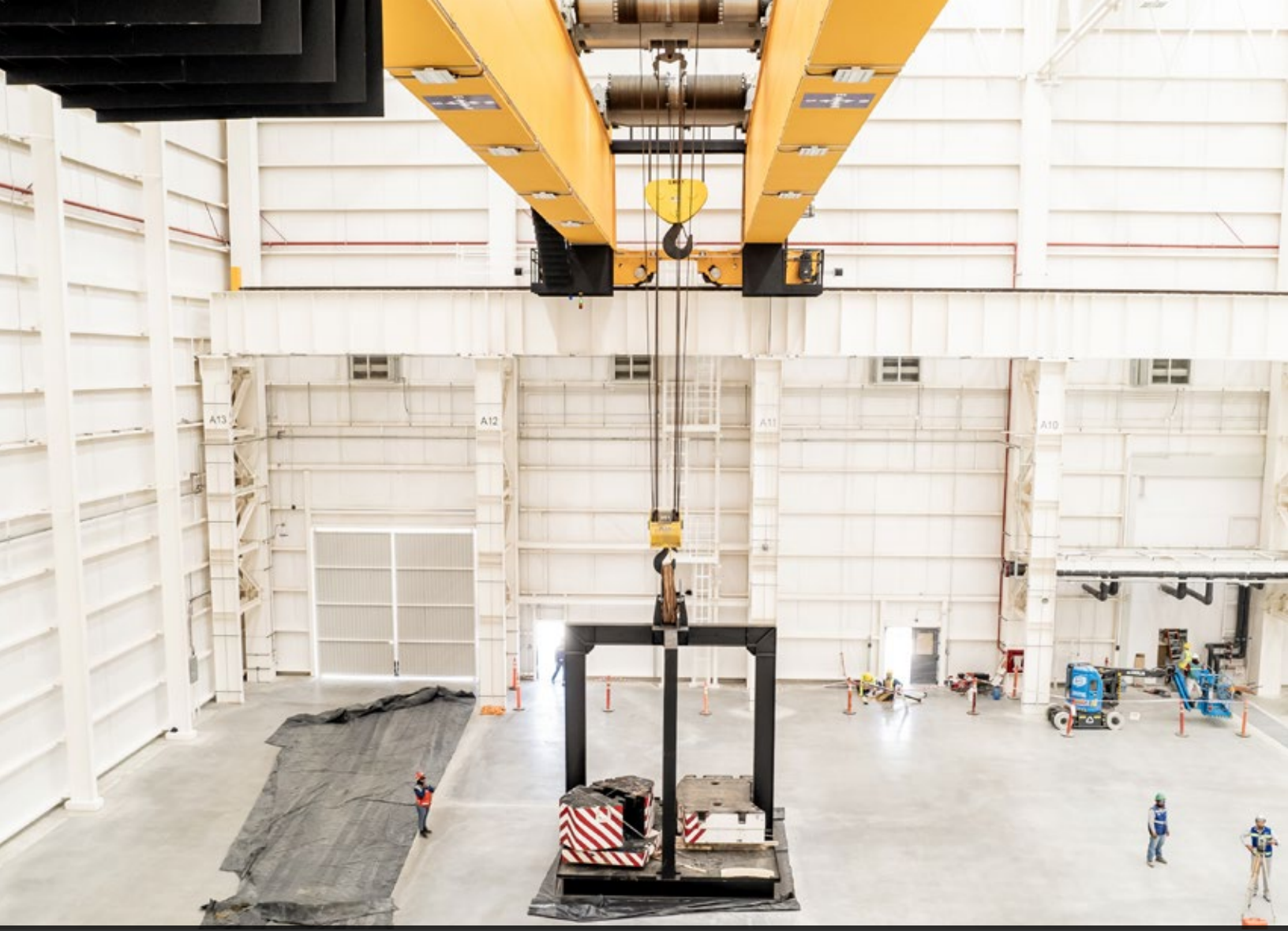
A strategic supplier in the automotive sector, dedicated to plastic injection molding for the manufacture of automotive components, was preparing to launch a new process using cutting-edge technology at its plant in Apaseo El Grande. To support this, it required a high-capacity, safe lifting solution tailored to the complexity of the injection area.

Sacar del Centro de México was selected to design and install crane systems capable of handling big and heavy molds while ensuring uninterrupted operation. The company worked together with the client for 8 months on detailed engineering to guarantee technical, structural and operational excellence.

THE CHALLENGE

The plastic injection area, where the cranes needed to be installed, presented demanding conditions. The total operational travel was 103 meters within the industrial facility, with a clear span of 45 meters and an effective height of lift of nearly 11 meters. The cranes were required to operate simultaneously, complying with an FEM 2m duty classification—suitable for the handling of heavy injection molds.

The major challenge was the structural design of the bridge girders. Due to the project's dimensions and required capacity, detailed structural calculations were carried out by both internal and external engineering firms. The objective was to ensure that the cranes complied with current Mexican standards and the client's requirement of achieving a maximum allowable deflection of L/1000.



THE SOLUTION

Sacar del Centro de México carried out the installation of two supported double-girder overhead traveling cranes: a primary crane with a 180-ton main hook and a 60-ton auxiliary hook, and another with a 25-ton main hook and a 15-ton auxiliary hook. Both were mounted on a rail-type runway system, which facilitated their integration into the plant's infrastructure.

For the higher-capacity crane, open winches from R&M Materials Handling were used, chosen for their responsiveness in critical load applications. The 25/15-ton crane was equipped with electric wire rope hoists from the same brand, enabling precise, reliable and low-maintenance lifting.

Multiple safety requirements requested by the client were integrated, including anti-sway systems, restricted operation zones, auto-centering functions, anti-collision sensors, remote radio controls, as well as the standard safety systems included in the R&M equipment. This ensured both personnel safety and the continuity of the operational process.

For the electrical power supply of the 180/60-ton crane, the NRGmaster Energy Chain system was used—a robust and efficient solution that replaced the conventional festoon system, which proved impractical due to the size and weight of the components. The overall system electrification was complemented with Akapp technology, ensuring reliability and performance over long travel distances.

During assembly, various lifting devices were used to ensure a clean and safe installation inside the building. Although the commissioning phase involved a complex connection of wiring and control panels on both the bridges and hoists, the final result was satisfactory. The system's speeds, travel ranges and functions met the client's full satisfaction.

"The operation of the equipment was verified to our full satisfaction. The project was received in complete agreement."

Vuteq Official Project Delivery Statement

THE RESULTS

Before the project was completed, load and operational tests were conducted using certified structures and controlled weights that simulated real-world conditions. These tests validated the stability, precision and performance of both systems, meeting all the client's technical requirements.

Both Sacar del Centro de México and the client's operations personnel actively participated in the system validation, confirming compliance with every safety, capacity and control parameter. Today, the cranes are fully operational, delivering complete reliability in the handling of plastic injection molds.

Thanks to precise technical planning and flawless execution, Sacar del Centro de México successfully delivered one of the most ambitious lifting projects in its history—enhancing the operational capacity of a highly competitive plant and reinforcing its commitment to industrial innovation.