

## "Record-Breaking Station": A decade of uninterrupted NGV supply in Spain

*With NGV refueling technology developed by Galileo Technologies, Empresa Municipal de Transporte de Madrid continues to reduce its carbon footprint with 400 vehicles powered by clean energy.*

Galileo Technologies marks a new milestone in the industry with 14 years of uninterrupted operation at the Sanchinarro Operations Center of the Municipal Transport Company of Madrid (EMT) with the supply of compressed natural gas (CNG) to 400 buses circulating in the Spanish capital.

In 2010 the EMT, to reduce its environmental impact, decided to replace its diesel vehicles with new buses powered by NGV (Natural Gas Vehicle). And, in order to quickly and efficiently refuel the renewed fleet, Galileo Technologies designed and built the fastest CNG refueling station in Europe, with nine MICROBOX CORE® CNG Compressors and nine EMB50® ultra-fast refueling dispensers, supplying each bus with an average of approximately 150 kg in less than 3 minutes. In addition, the station has a low-flow dispenser line to supply light vehicles.

"The CNG refueling facility has considered an innovative design to be able to refuel the buses in an ultra-fast way. It is an example of sustainability, due to the optimization of its energy consumption and the recovery of gas venting, guaranteeing the non-emission of methane into the atmosphere, being the largest compressed natural gas refueling station in Europe. We are proud to be able to reach a new milestone in the industry, contribute to the environment and make our customers' consumption more profitable," said Juan Fornaso, Commercial Vice President Europe & CIS at Galileo Technologies.

Distinguished with the name "Record-Breaking Station", it collaborates with the objective established by the Madrid City Council to accompany its citizens on the road to a more sustainable future, with greater opportunities for progress and a higher quality of life.

"After 14 years of experience with Galileo compression equipment, its performance has been highly satisfactory. With nine compressors in operation, the system has facilitated the 24x7

refueling of a bus fleet, with a high degree of automation that simplifies operational control," said Rafael Orihuela Navarro, Head of the Sanchinarro Operations Center (EMT Madrid). He added: "The Sanchinarro Operations Center, the largest of its kind in Europe, led the transition to a 100% gas fleet. This project, EMT Madrid's biggest commitment to the transition to CNG, demonstrated the City Council's commitment to its citizens and its search for cleaner energies for public transport, thus improving the quality of service and the environment".

It is estimated that the installation (which can be accessed by cabs, transport fleets and private vehicles in a segregated area) reduces emissions by approximately 54 tons of nitrogen oxides and nearly 4 tons of particles per year.

### **More than a decade of cutting-edge technology**

The EMT site includes 5,500 m<sup>2</sup> of refueling area, divided into nine loading lanes. Each of the nine lanes is equipped with MICROBOX CORE® model compressors to provide a total compression capacity of 25,000 cubic meters per hour (m<sup>3</sup>/h). Thanks to the unique direct-loading Common Manifold® technology, this compression capacity translates into the simultaneous operation of nine EMB® ultra-fast flow dispensers.

Another of the objectives pursued by EMT was to keep the station operational 24 hours a day. In this regard, Galileo Technologies developed a central control system that manages the start-up and shutdown of the equipment, optimizing its operating hours and ensuring a constant supply of NGVs.

However, the MICROBOX CORE® has an intelligent speed control system, called Enersave®. This control system regulates and adjusts the compression capacity according to the expected NGV demand. This ensures the availability of NGV flow at the very moment it is required and, in turn, energy savings by reducing the number of equipment starts and stops.

### **About Galileo Technologies**

Galileo Technologies is a leading company in the engineering and manufacturing of high-value-added energy solutions. For more than 30 years, it has been dedicated to expanding access to energy sources



associated with carbon footprint reduction. Characterized by its modularity and scalability, Galileo's technologies provide solutions for the production, distribution, and consumption of Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG), Renewable Natural Gas (RNG), and Hydrogen (H<sub>2</sub>). With corporate offices and service hubs in the United States, Argentina, Brazil, and France, Galileo Technologies markets and provides ongoing support to 70 countries worldwide.

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