

6 key figures behind a pioneering battery centre

- **SEAT S.A.'s Test Center Energy has a 1.3 megawatts test capacity, which equals 350 households' consumption**
- **This pioneering centre in southern Europe is used to develop the energy systems of electric and plug-in hybrid vehicles**
- **The batteries are subjected to more than 17,500 hours of testing to ensure their performance during their life cycle**

Martorell, 03/02/2022. The journey towards electrification requires an industrial transformation at all levels. Within this framework, SEAT S.A. closed 2021 by inaugurating the Test Center Energy (TCE), a pioneering battery research and development centre for electric and plug-in hybrid vehicles. The facility represents a major step forward in the company's commitment to boosting electrification in Spain, and to transforming the country into a leading European hub for electric mobility. Here are six key figures about the first battery centre of its kind in southern Europe.

Up to 6,000 analyses per year. The Test Center Energy has the capacity to perform up to 6,000 complete high-voltage system tests (battery, load, safety) per year. **“This centre allows us to position ourselves as a benchmark in the development of solutions for sustainable mobility”** says Josep Bons, Head of Electrical and Electronic Engineering at SEAT S.A. Its 1,500 square metres of floor space are used to develop and test the performance of the power systems of electric and hybrid vehicles for CUPRA, SEAT and SEAT MÓ, as well as other Volkswagen Group brands. As a result, the centre's activities never stop, operating 24 hours a day, 365 days a year.

Similar to 350 households at full power. That's the equivalent of the the centre's testing capacity. **“1.3 megawatts of testing capacity, which is what 350 households would consume with all their devices connected at the same time, or more than 100,000 mobile phones charging simultaneously”** explains Francesc Sabaté, Head of the TCE. Along with Sabaté, more than 25 highly qualified professionals work at this facility.

5 test benches and 5 climatic chambers. At the TCE, they reproduce all kinds of situations a battery could face, including fast and slow driving simulations, different slopes or road surfaces and also different weather conditions. **“ This way, we put batteries to the limit. It allows us to guarantee their perfect operation in any circumstances throughout their life cycle”** says Sabaté.

From -25°C to +55°C. In the climatic chambers, the batteries are exposed to extreme temperatures, which can differ by up to 80 degrees centigrades. **“Our hybrid and electric vehicles are sold all over the world. With these tests we verify that the batteries will work perfectly in hot areas such as Mexico, as well as in cold countries like Sweden, where temperatures easily drop to well below zero degrees in winter”** he adds.



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17,500 hours of testing. This is the average amount of time that each battery is tested. **"Multiple charge and discharge cycles are applied to them at different temperature profiles, monitoring in real time all the parameters of the cells and the battery as a whole"** says Sabaté. The focus today is on the batteries of the MEB (electric) and MQB (hybrid) platforms as well as different chargers used in electrified vehicles. Batteries are not only analysed individually, but also after they've been integrated into the vehicles. **"On average, a total of 900 static tests and 2,500 dynamic tests are carried out for a single project"**, according to Sabaté.

120 solar panels. The Test Center Energy represents a commitment to sustainability in every sense - in the promotion of electrification and also in design. Thanks to the systems used to build it, it has obtained LEED® certification as a leading facility in energy efficiency and sustainable design. The 120 solar panels on its roof save 39 tonnes of CO₂ per month. In addition, its indoor temperature is self-regulating thanks to 95 dynamic blinds on its facade that move to make efficient use of outside light.

SEAT S.A. is the only company that designs, develops, manufactures and markets cars in Spain. A member of the Volkswagen Group, the multinational has its headquarters in Martorell (Barcelona), sells vehicles under the CUPRA and SEAT brands, while SEAT MÓ is the business unit that covers urban mobility products and solutions.

SEAT S.A. exports more than 80% of its vehicles and is present in 75 countries. The company employs over 15,000 professionals and has three production centres - Barcelona, El Prat de Llobregat and Martorell, where it manufactures the SEAT Ibiza, SEAT Arona, Leon family and the CUPRA Formentor. Additionally, SEAT S.A. produces the Ateca in the Czech Republic, the SEAT Tarraco in Germany and the SEAT Alhambra in Portugal. The company also has the SEAT:CODE software development centre, located in Barcelona.

SEAT S.A. will invest 5 billion euros through to 2025 to develop new models for the two commercial brands, SEAT and CUPRA, and to electrify the range. The company aims to play a relevant role in the electrification of urban electric vehicles, with a special focus on the transformation of the Spanish automotive industry.

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