

Tecnalia presents electric vehicle that reaches 140 km/h in 10 seconds

31 May 2010



Dynacar

The Tecnalia Technological Corporation (Spain) has presented its experimental vehicle -- 'Dynacar' -- , an electric car that can reach a speed of 140 kilometres per hour in 10 seconds.

The presentation took place at the International Eco Friendly Vehicle & Sustainable Mobility Show in Madrid, held between the 20th and 23rd of May.

Although it is a totally electric vehicle, 'Dynacar' takes on board the possibility of integrating range extension concepts, i.e. a battery or small internal combustion engine that will enable the car battery to be supplied with energy in a supplementary mode. The car is a two-seater and has a complete instrument panel to validate systems relative to longitudinal and lateral dynamics. It uses a single-shell, high-rigidity lightweight chassis of steel and aluminium alloy, with an adjustable deformable parallelogram suspension system for the four wheels.

The vehicle has a peak power of 100 kW provided by a permanent magnet synchronous electric motor, a total weight of 700 kg and an energy storage capacity of 15 kWh.

Acceleration from 0 to 100 km/h is estimated to be under 5.7 seconds, the optimum management of traction control being critical. The peak speed is approximately 140 km/h, reaching this figure in 10 seconds. Autonomy in an urban cycle is some 70 kilometres; "an appropriate distance for the purpose of the experimental vehicle", according to those responsible at Tecnalia.

The vehicle will be adapted to run on the open road, but its main application is to act as a research platform for new concepts in high-powered electric traction, as well as active systems that enable maximum advantage to be taken of new propulsion systems, such as boost vectorisation or the concepts of distributed traction by means of incorporating in-wheel motors, regenerative braking, etc.

The researchers who have devised 'Dynacar' state that "the electrification of road transport is one of the priorities of the research, given that the dependence on fossil fuels and the greenhouse effect has focused everyone's attention on the traditional concept of transport based on vehicles with conventional motor drive".

Over the past five years the Tecnalia Corporation has been undertaking research into advanced configuration tools and the virtual evaluation of vehicles, in order to develop new solutions for electric and hybrid vehicles. 'Dynacar' will be used to check the hypotheses used with high performance electric and hybrid vehicles and to develop new concepts for vehicles of the future.

Provided by Elhuyar Fundazioa

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