



FUEL CELL TODAY

Opening doors to fuel cell commercialisation

DaimlerChrysler F-Cell

Stefan Geiger, Fuel Cell Today – 05 April 2004

In 2002, eight years after the launch of the NECAR 1 concept study, DaimlerChrysler presented the first fuel cell vehicles which will be deployed in fleets and tested by customers in Europe, the USA, Japan and Singapore. This will involve 30 Citaro city buses which will be supplied to transport undertakings in ten major European cities from 2003, as well as 60 Mercedes-Benz A-Class "F-Cell" models. These cars will likewise be operated and tested by customers within the framework of cooperative ventures in Europe, the USA, Japan and Singapore from 2003/04. With this step, DaimlerChrysler leaves the concept vehicle stage and sets another milestone on the way to the marketability of this promising propulsion technology.



Prof. Klaus-Dieter Vöhringer, responsible for Research on the DaimlerChrysler Board of Management: "Overcoming the dependence on crude oil and finding solutions to the energy problems of the future is one of the biggest challenges with which researchers and engineers are faced."

Since introducing the first NECAR (New Electric Car) in 1994, pioneer DaimlerChrysler has decisively advanced the fuel cell technology and presented 20 concept vehicles, thus demonstrating the technical feasibility of the revolutionary new propulsion principle employing the "fuel cell". The fuel cell functions as an electrochemical energy converter on board the vehicle to generate energy from hydrogen for an electric motor. The size and weight of the drive unit have been reduced considerably since then while performance has improved tremendously.

Now, with the Mercedes-Benz A-Class "F-Cell", the first cars to grow out of the research stage go on the road. The cars in this fleet feature a special, innovative interior design, offer just as much space as the production cars and are being manufactured under near-standard conditions. The development of this technology will now be furthered mainly in practical operation. The A-Class "F-Cell" marks a milestone in automotive history and once again demonstrates the technological competence of the company.

Prof. Jürgen Hubbert, member of the DaimlerChrysler Board of Management: "The fuel cell technology gives us the opportunity to bring mobility together with environmental compatibility and so make a major contribution to society. To enable the fuel cell to go on the market in the foreseeable future, most importantly the fuel and infrastructure issues must be clarified in a worldwide initiative, jointly with the political community, the mineral oil industry and the energy sector. But development engineers, too, still face numerous challenges, referring mainly to the further reduction of weight and cost and the improvement of reliability and durability. In this field, manufacturers should cooperate more intensively so as to promote the breakthrough of this key technology."

Specifications

Platform	Mercedes A-class
Max Speed	140km/h (87 mph)
Driving Range	150km (93 miles)
Fuel Cell stack	Ballard PEM
Max Power	65kW
Fuel	CH ₂ @ 350 bar
Acceleration 0-100km/h (0-62mph)	16sec
Fuel Efficiency	Equivalent to 4.2l/100km

