

Project Information

Subject **High pressure cartridge for Hydrogen distribution for portable and mobile fuel-cell-systems**

Project

Management: Dynetek Europe GmbH
40885 Ratingen

Project Duration: April 2004 – April 2008

Project partner: GHR Hochdruck-
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Project description:

A cartridge system is developed for simple storage and distribution of Hydrogen as a fuel for fuel cell systems. The user interface will supply the Hydrogen with a usable pressure of app. 5 bar. The cartridge is comprised of an aluminium liner wrapped by carbon fibre and an integrated pressure regulator and control system. With a net volume of two litres and a mass of about four kilograms 90 g of Hydrogen will be supplied, which corresponds to 3 kWh of chemical energy.

Hydrogen is with this system an easy fuel for mobile and portable fuel cell applications like scooters, wheelchairs or mobile offices. An easy to use automatic coupler makes the replacement safe and secure. A logistic distribution system delivers and withdraws the cartridges directly at the end user.

Certification will be according to the European directives TPED and ADR.

Design variants of the gas bottle up to 5 litre capacity will extend the possible applications to hydrogen consumers with higher power output resp. longer operating time and therefore having an increased hydrogen demand.