

## **First Buderus ene.field fuel cell system successfully tested in single-family home**

Energy centre  
Logapower FC10  
September 2014

### **Highly efficient Buderus Logapower FC10 energy centre supplies both heat and electricity**

A Logapower FC10 energy centre from Buderus has been operating in a single-family home in Weinstadt (Germany) since July. The system of the heating technology specialist has proven to be a highly efficient solution for the decentralised generation of electricity and heat. Buderus installed the Logapower FC10 energy centre in the context of the European "ene.field" fuel cell initiative. Bosch Thermotechnik plans to operate a total of 70 demonstration systems.

In the modernised building constructed in 1953, Logapower FC10 replaced the former oil-fired boiler. The energy centre with a total efficiency of 90 percent generates both heat and electricity by way of co-generation. The electrical energy is consumed by the residents who can feed any excess electricity into the public grid and receive a government guaranteed price for it. Generating their own electricity allows home owners to cut their energy costs by an expected EUR 800 to 1,300 p.a. and reduces their exposure to rising electricity prices.

A ceramic solid oxide fuel cell (SOFC) is at the heart of the Logapower FC10 energy centre. It operates at 700 °C and achieves an electrical efficiency of up to 45 percent. The system also houses a Buderus Logamax plus GBH172 hybrid gas condensing boiler with a nominal output of 14 kW, a 75-litre hot water storage tank and a 150-litre buffer tank. An integrated mixing valve ensures that the gas condensing boiler is used only

to cover peak requirements – e.g. when a large amount of hot water is needed instantly. All components are modular and pre-assembled. This allows them to be transported individually and connected with pre-fabricated pipes, obviating the need for complex piping by a heating engineer. “We are very happy about this successful start of the ene.field project,” says Wolfram Faas, Development Engineer at Bosch Thermotechnology. “Thanks to its high energy efficiency the Logapower FC10 energy centre is suited for a wide array of applications. In addition, its small footprint makes it very compact and ideal for the modernisation of existing buildings.”

Energy centre	
Output gas condensing boiler GBH172 T75S (kW)	14/24
Size W x H x D (mm)	1200 x 1800 x 600
Weight (kg)	220
DHW storage tank (l)	75
Buffer storage tank (l)	150
Fuel cell	
Electrical output (W)	700
Thermal output (W)	700
Electrical efficiency (%)	45
Total efficiency (%)	90



**Caption:**

All components of the Logapower FC10 energy centre are modular and pre-assembled, facilitating its delivery and installation.

**Source: Buderus**



**Caption:**

Easy to install: No complex piping by a heating engineer required.

**Source: Buderus**



**Caption:**

A footprint of only 0.7 square metres makes this compact system the ideal solution for the modernisation of buildings.

**Source: Buderus**



**Caption:**

Buderus installed the Logapower FC10 energy centre in the context of the European “ene.field” fuel cell initiative.

**Source: Buderus**



## **Caption:**

The project team (from left to right): Uwe Limbeck, Head of Product Development – Fuel Cell Systems at Bosch Thermotechnology, Alexander Cordes, Head of Sales at the Buderus Branch in Esslingen, Roland Krauter, home owner, Walter Hanig, Walter Hanig GmbH Heizungsbau, and Wolfram Faas, Development Engineer at Bosch Thermotechnology

**Source: Buderus**

*Buderus, a leading European thermotechnology brand, offers advanced heating, ventilation and air-conditioning systems for a perfect indoor climate. Innovative control systems make it easy to combine different types of renewable energy systems with each other or with existing oil and gas heatings. Buderus is a wholesale specialist for heating and installation equipment and maintains a total of 124 branches in over 50 countries. Buderus customers benefit from professional advice, reliable service as well as ideally matched energy-efficient systems from a single source.*

*For more information, visit [www.buderus.com](http://www.buderus.com)*

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