

VITOTALOR

Independence squared.
Combined heat and power
generation.



The future of energy saving, today:
Generate heat and electricity at the same time.



With the powerful Vitovalor PT2 fuel cell, you can get twice as much out of the energy you use. The heat that is generated during power generation can be used for both central heating and domestic hot water heating. The Vitovalor PT2 is perfectly designed to meet the needs of detached and semi-detached homes, and will easily cover the base load of your electricity requirements. In combination with a photovoltaic system and a power storage unit, it can give you up to 85 percent independence from external power suppliers.

**It's worth it for you and the environment:
Up to 40% lower energy costs,
up to 30% less CO₂,
up to 85 % more independence.**

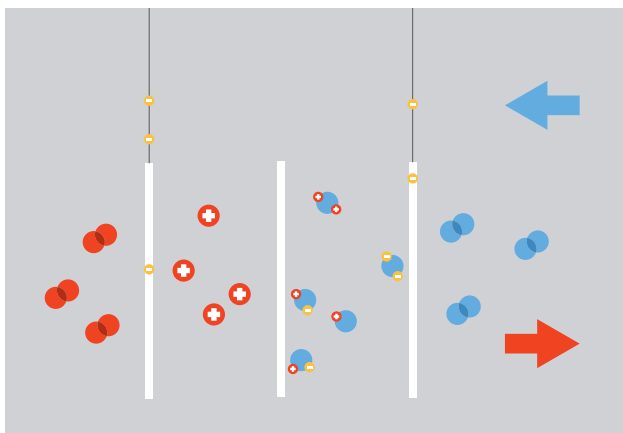


"This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 700209. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme and Hydrogen Europe and N-ERGY."



How does a fuel cell boiler actually work?





Negative electrons flow from the anode to the cathode. They produce electricity while releasing heat at the same time.

Behind it is a simple chemical reaction.

The Vitovalor PT2 uses the functional principle of combined heat and power generation to simultaneously generate both electricity and warmth. Hydrogen, which has previously been extracted from natural gas, is used as the energy source.

Hot tip for energy savers: "Cold" combustion

The generation of electricity and heat takes place by means of an electrochemical reaction known as "cold" combustion. The principle is basically quite simple: Hydrogen contains positive ions and negative electrons. These are separated and the negative electrons then migrate from the anode to the cathode. Not only is electricity generated, but also warmth. This is controlled by a heat exchanger, used for room heating or drinking water heating.

How much heat and electricity does the Vitovalor produce?





Enough to supply the needs of a family of four.

The Vitovalor PT2 was specially designed and developed for detached and semi-detached homes. With a thermal output of up to 30.8 kW, it covers the heat requirement of an average four person family - and at peak load times is supported by the integrated gas condensing boiler.

Focus on electricity production

The system works with a very high overall efficiency. The maximum electrical output of 18 kWh produced during the course of the day is sufficient for the average basic requirement of a household, and the integrated, self-learning energy manager optimises the rate of self-consumption - for minimum consumption of expensive electricity from the grid.

How much can I save with fuel cell technology?

EXAMPLE CALCULATION ANNUAL COST SAVINGS THROUGH POWER GENERATION WITH VITOVALOR PT2

Based on average electricity charges

14p/kWh

With optimal integration, a fuel cell can generate 16.5 kWh of electricity per day (6,000 kWh / year). In a "normal" application in a single-family home, electricity production is assumed to be between 4,000 and 4,500 kWh.

4.500 kWh
(max. 6.000 kWh is possible)

With "normal" usage in a single-family home, approx. 60 % of the self-generated electricity can now also be used.

These are then:

$2.700 \text{ kWh} / \text{a} \times 0.14 \text{p} / \text{kWh} = 378 - \text{£/a}$

£378.00

(maximum £840.00 with 100 % own consumption possible)

ANNUAL ENERGY COST SAVING £378 - £840 (without FiT)

Saving money year after year: We have calculated the average cost savings with Vitovalor PT2 in modernised buildings for you.



Up to 40 percent of the costs of electricity and heating.

Exceptionally high energy efficiency and optimum coordination of all components are the key to significantly reduced energy costs. Particularly attractive: Own use of electricity drastically reduces your electricity bill, so constantly rising electricity prices don't leave you cold.

Sustainability is a top priority, as well as savings

With a long service life of more than 80,000 operating hours as well as maintenance intervals of five years, the Viessmann fuel cell heating unit has become a truly sustainable investment.

Exactly how environmentally friendly is a fuel cell boiler?





The benchmark for sustainable power generation.

The Vitocalor PT2 is particularly energy-efficient. Electricity and heat is generated where it is needed, without losses in transmission. This results in up to 40 percent less consumption of fossil fuels compared to the conventional generation of electricity and heat, along with up to 30 percent CO2 savings. No wonder that the Vitocalor PT2 has been awarded the the highest possible energy label: A++ in the energy efficiency class for heating.

Is the Vitovvalor fuel cell safe to operate?





Yes, it has been
proven a hundred
thousand times
worldwide.

An environmentally friendly energy source for fuel cells, hydrogen is in use in vehicles and ships already in operation, among other things. Fuel cell heating systems have been used in living spaces in Japan, for example, since 2009. Over 200,000 such systems are now in use there.

Tested and proven hundreds of thousands of times

Viessmann's fuel cell heating unit incorporates a tried and tested fuel cell module from Panasonic. It has been specially adapted to the other components and guarantees a long service life, with a useful lifespan of more than 80,000 operating hours.

Can I install a fuel cell anywhere in the building?





High performance on a small footprint: The Vitovalor PT2 occupies less than one square metre of floor space.

Yes, the Vitovalor is ideal for modernisations.

The innovative Vitovalor PT2 fuel cell heating unit has proven efficiency everywhere and is specially designed to meet the energy requirements of detached and semi-detached homes with a typical heat demand. It is ideal for existing buildings that have been comprehensively modernised. You will not only save energy costs, but also improve the energy efficiency rating of your home.

Efficiency in the smallest space

The two components - the fuel cell module and gas-fired condensing boiler - are not only technically perfect together, they require an area of just 0.72 square metres.

Is this equipment
complicated to
operate?





The app is available free of charge for mobile devices with iOS or Android operating systems.

With the ViCare App it's a piece of cake.

With the Vitoconnect internet interface and your smartphone, PC or Tablet, operation of the Vitovalor PT2 is a piece of cake. With the ViCare App and the clearly arranged graphic user interface of ViCare, you have intuitive control in the palm of your hand.

Heating operation made easy

This allows you to control the heating operation and also to generate electricity. The most important information is available at a glance at any time, whenever you want and wherever you are.

Where can I get a Viessmann Vitovalor fuel cell?





For a no obligation consultation

www.viessmann.co.uk/vitovvalor-consultation

Support from a qualified specialist

When it comes to innovative, sustainable heating technologies, you can rely on your local Viessmann Trained Installer.

With a Viessmann Trained Installer, you are in safe hands: from consultation and planning to installation and customer service.

The best way to greater energy efficiency

You can be sure at all times that you have a competent partner at your side, supported by regular, state-of-the-art training and familiar with the latest funding programmes. You can trust your installer to always be there for expert maintenance to ensure the long-term profitability of your equipment.



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9451 198 GB 04/2019

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