



# HYCOGENERATION

The fuel cell system for  
your hydrogen – with and without fire prevention



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## We use what you have left over

Our HyCogeneration fuel cell system runs on hydrogen which is found in large quantities in the chemicals industry or in the storage of renewable energies – as a by-product, reformat or from electrolysis. If you have sufficient quantities of hydrogen available, HyCogeneration is the ideal fuel cell system for the **economical and sustainable use** of this precious element for your **supply of electricity, heat and cooling air**.

## Oxygen reduction – the best type of fire prevention

In addition to efficient energy, HyCogeneration also provides low-oxygen air which you can use to ensure **fire prevention in your facilities**. Through the **controlled and permanent lowering of oxygen content**, there is a **lasting protective atmosphere** in which fires cannot start. Accessibility of the facilities can be preserved depending on the oxygen content.

## Efficient energy and fire prevention in one system

With HyCogeneration, you convert the energy of your hydrogen directly to electricity and heat – with an **electrical efficiency of up to 48 %**. If you thus reduce procurement of electricity from the public grid, and also integrate the

warm water in your heating facility or production processes or convert the heat to cooling air using absorber/adsorber systems, you will receive a combined heat and power and cooling system which can also even protect you from fire.

## Efficient, sustainable, economical

There are a range of benefits of HyCogeneration. You can increase **power supply redundancy**, **reduce your operating costs sustainably** and also improve fire protection if required. Under the cogeneration act, fuel cell power receives an additional **compensation of 5.41 cent/kWh** – also in the case of self-use and for a ten year period.

## What you can expect from HyCogeneration

- › Use of your hydrogen for independent and decentralised energy supply on site
- › Safety and redundancy in power supply
- › Reduction of operating costs through maximum efficiency
- › Environmental protection through high CO<sub>2</sub> savings
- › Modular system that grows with you and your requirements

## Technical information

Electrical power	100 kW
Voltage	400 VAC
Frequency	50 Hz
Heat extraction	~ 68 kW to 90 °C ~ 36 kW to 55 °C <sup>1</sup>
Energy efficiency	> 90 %
Optional with fire protection	Protection for room sizes of up to several 1,000 m <sup>3</sup>
Energy source	Hydrogen
Operating mode	Fully automated, grid operation
Dimensions (WxLxH)	2.2 m x 6.5 m x 3.4 m
Weight	15.0t during operation

<sup>1</sup>alternatively approx. 50 kW cooling capacity via external absorber

## Functional principle of HyCogeneration

