

# Modernizing a castle hotel

G-BOX 50 RELIABLY SUPPLIES THE HOTEL WITH ELECTRICITY AND HEAT



*The SportSchloss Velen is a four-star superior hotel in the Münsterland town of Velen, Germany. Built in 1240, the castle has delighted people with its fairytale-like charm. Today, modern gas condensing boilers in combination with a g-box 50 supply the hotel complex with electricity and heat.*

## **€ 4,000 less energy expenses each month**

Opened in 1988, the hotel complex has 102 comfortable rooms and suites, 19 event rooms and two restaurants. The old boiler was replaced with a cascade of three gas condensing boilers in the first step of the modernization in 2009. In the second stage of expansion in 2012, a

combination of heat & power cogeneration and condensing was used: a cascade of two 115 kW gas condensing boilers and a g-box 50 with 50 kW of electrical output and 100 kW of thermal output. The g-box was estimated to run for 8,000 hours a year. The combination of condensing boiler with the g-box will save roughly € 4,000 in energy expenses each month.

## **Environmentally friendly heat for the swimming pool**

The output of the g-box 50 running on natural gas covers the hotel's base load in the summer months. The electricity generated is mostly used



by the hotel itself. The heat is used to heat the swimming pool, amongst other things.

The g-box 50 was housed in a space-saving, purpose-built underground bunker next to the castle hotel's orangery, and can be accessed through a service passage. All that has to be done for the inspection due in ten years is to remove the bunker's cover plate and lift out the module with a crane. To connect the g-box 50 to the castle, a 170-metre-long trenchless pipeline was laid through the castle park and beneath the moat at a depth of three metres.



### Hotel SportSchloss Velen

- g-box 50
- Natural gas
- 50 kW electrical
- 100 kW thermal
- Engine room installation

