

Energy-efficient venue at a former coal mine

The old compressor hall at the Zeche Zollverein – a decommissioned coal mine in Essen – has gained a new lease of life. It is now a multifunctional event location. Thanks to innovative technology from SAUTER, guests at the Grand Hall ZOLLVEREIN® can celebrate while limiting their environmental impact.



Up until 1986, hundreds of workers mined coal on the site of the Zeche Zollverein. Covering about 100 hectares, it is now an architectural and industrial monument. Around 1.5 million guests visit the location annually. Besides its extraordinary architecture, the building hosts events and exhibitions and even has a park. In 2001, the entire colliery area and adjacent coking plant were named as a UNESCO World Heritage Site.

The Grand Hall ZOLLVEREIN® was the brainchild of a group of investors. In 2016, they converted one of the disused compressor halls into a multifunctional event hall. An intelligent and user-friendly SAUTER solution controls the equipment in the building. This helps to minimise energy demand and maintain a low environmental footprint.

A modular design for every taste

Great care was taken when refurbishing the compressor hall, with a focus very much on modularity. The listed Grand Hall ZOLLVEREIN® accommodates parties large and small. There is a 4,000 m² floor area for bigger events. Numerous spaces and room segments can be combined, producing a highly flexible venue.

Creating variable zones and protecting a historical structure: these were key challenges for efficient building and room automation. Hence modular solution was chosen. Adapting the heating and ventilation is therefore simple, no matter how the different hall areas are used.



For this task, the SAUTER EY-modulo 5 product family was perfect. It supports open communication with BACnet/IP. All equipment systems are integrated using four cabinets, providing the optimum overall solution.

The ideal climate for events

SAUTER moduWeb Vision, the Web-based building management system, was incorporated. It is a central solution allowing facility managers to monitor and efficiently control the heating, ventilation and cooling. It also ensures access to other installations, such as the smoke extraction system.

Staff can monitor – even remotely – all areas of the hall and see immediately where improvements are needed. If a room being used for a family celebration is too cold, the temperature can be increased using a tablet. And if the air is becoming warm and unpleasant in another room, more fresh air can be supplied in an instant. SAUTER moduWeb Vision enables operators to keep in check climate parameters throughout the building.

At a large venue such as the Grand Hall ZOLLVEREIN®, visitor safety plays a crucial role. In the event of a fire, state-of-the-art smoke extraction technology ensures that there is enough time for evacuation. Also integrated seamlessly using BACnet, the system activates the smoke extractors if there is an emergency.

Sustainability instead of coal mining

Today, converted industrial areas are enjoying ever-growing popularity. With a user-friendly and intelligent automation solution from SAUTER, operators of the Grand Hall ZOLLVEREIN® in Essen have achieved their goal: running a highly energy-efficient, multifunctional event location. Where once everything revolved around coal, the focus is now on conserving resources.

SAUTER highlights 