

# “Licence to save energy” at over 3,000 metres

The ice Q design restaurant sits on the peak of Gaislachkogel, in the Austrian ski resort of Sölden. It is famous for being the starting point of spectacular chase scenes in the James Bond film “Spectre”. The building, constructed on permafrost and offering a 360-degree panoramic view, features an automation solution from SAUTER to achieve outstanding energy efficiency.



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Skiers have left their tracks in the snow-covered mountain slopes of Sölden in Austria for more than 100 years. During this time, the former mountain village has grown into a beloved winter sports destination in the Alps with exclusive accommodation and state-of-the-art lift systems.

In the 1960s, engineers started developing the area on the 3,056-metre-high Gaislachkogel peak. Some 50 years later, to meet increasing tourism demands and impress with something unique, Sölden upgraded the cable car and replaced the outdated summit restaurant.

## **An ice block par excellence**

Within just six months, the destination’s spectacular new building – the evocatively named “ice Q” – quickly rose on the rocky site at a cost of approximately 4.5 million. The building, visually reminiscent of a stack of ice blocks, includes a restaurant for over 200 diners

and a panoramic sun terrace. Thanks to the huge glass façade, guests can also enjoy the breathtaking 360-degree panorama of the Ötztal alpine landscape from the comfort of the building’s interior.

Challenged with unusual and extreme temperature conditions, this development required sound technical expertise throughout the construction. At this altitude, the subsurface is frozen all year round. Flexible foundations prevent subsidence and stop the building from shifting in the icy ground. The unusually short deadline also meant that SAUTER had to pull out all the stops. The team therefore sometimes worked in shifts.

## **Cooling in winter**

The special construction of ice Q results in more cooling energy being required than heat – even during wintertime. This, for example, prevents the ground thawing out. To ensure the rock structure remains frozen all year round, a subterranean channel, 500 metres long,

## SAUTER highlights



with rear ventilation was installed. SAUTER was tasked with regulating the entire system using a modern building automation system. This means that ice Q is cosy inside while the temperature of the restaurant's extract air never exceeds 5°C.

The visualisation software, SAUTER moduWeb Vision, allows operators to monitor all equipment around the clock. The BACnet/IP-compatible software consolidates data from all heating, cooling and ventilation components and ensures smooth operation – even with extremely changeable ambient temperatures. A sophisticated heat recovery system, buffering and using the installation's own heat and controlled by the SAUTER automation solution, also increases the restaurant's energy efficiency sustainably.

### **007 at ice Q**

The futuristic architecture of the glass building, visible from afar, is today unquestionably the highlight of the local skiing region. It's no surprise then that star director Sam Mendes and his team selected the building as an impressive location for the James Bond film "Spectre". Converted into the clinic of Bond adversary Ernst Stavro Blofeld (Christoph Waltz), ice Q was the starting place for action-packed chase scenes through snowy fields and the nearby glacier tunnel.