

## Kilden Performing Arts Centre

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## Partners

- Client and main contractor: AF-Gruppen Norge AS
- Main structural designer: Multiconsult AS, Kristiansand, Norway
- Architect: ALA Architects Ltd, Finland



Located on the Odderøya island in Kristiansand, Norway, the Kilden Performing Arts Centre serves as a venue for concerts and theatre performances. In scope, the cultural development project was second only to the Oslo opera hall, and the building is one of the big three performing arts centres in Norway, the two others being in Oslo and Stavanger. The decision for constructing the centre was made in 2002. In 2004–2005, an architectural design competition was held, attracting 96 architectural firms to submit their proposal. The design by the Finnish company ALA Architects won first place, and, two years later, the groundwork for Kilden began. Autumn 2011 saw the grand opening of the Kilden Performing Arts Centre.

What sets Kilden apart from other venues is its wavy facade. The facade structure continues indoors as the ceiling of the building. The top part of the facade is supported by bent steel columns every 25 metres. The building itself serves as the counterweight for the steel structure. Due to challenging wind conditions, it would have been impossible to create the complex wave pattern with any other material than steel. The building itself is located between a steep cliff and the ocean. Local oak was used for coating the facade.

## Challenges

In addition to the special form of the facade, the biggest challenge for the project was limited on-site storage for steel components. The project site manager was tasked with ordering the required materials, which could be brought in only 2–3 days prior to installation. This required seamless communication between all parties at all stages of the project. Communications were smooth thanks to an extensive building information model (BIM) created for the project, allowing designers to identify critical structures and joints already at the planning stage. The model allowed designers to find optimal solutions and installation methods beforehand and check how they would perform in the finished building. In addition, Ruukki's experts helped with steel structure optimisation and cost assessment.

## **Kilden Performing Arts Centre in brief**

Kilden has a total volume of 128,000 m<sup>3</sup>. It has four different halls seating a total of 2,270 people.

In 2011, the building was awarded an annual Finnish award presented for outstanding steel structure design.

## **Impressive facade made possible by using a steel frame**

Ruukki delivered steel structures for the Kilden TKS i Kristiansand project in Norway. The delivery consisted of the workshop design, fabrication and installation of steel structures.

“We decided to partner with Ruukki because we trust their expertise and ability to complete extensive projects,” says Project Manager Torstein Lange Larssen, who served as the representative for AF-Gruppen Norge AS.







