

## **ZENTRUM PAUL KLEE** 1999-2005 Bern, Switzerland

The Zentrum Paul Klee holds some 40% of the Bernese artist's whole output with a total of more than 4,000 works. Set on the edge of the city, on a site between town and countryside, the building has the ambition to convey the complex and interdisciplinary character of Klee, who was also a musician, writer and one of the most respected teachers at the Bauhaus.

In 1990, on the death of Klee's only son Felix, the family and the Paul Klee Foundation decided to donate a large part of their collection to the state, provided that those responsible for the Kunstmuseum and the Canton of Bern committed themselves to creating a new museum. The impasse was solved by the intervention of the famous surgeon Maurice E. Müller and his wife Martha who, in July 1998, decided to donate 30 million francs to cover the costs of the project and purchase a plot of land on the city's outskirts.

The architectural project had to adhere to a complex exhibition program that, in addition to temporary exhibitions, would include theatrical productions, concerts, conferences and a workshop for children. The building is divided into three pavilions with a shell roof, supported by metal beams designing a series of sine waves. The external shape of the museum emerges gently from the hill behind sown with cereals, and returns to it sinking into the ground where the service areas and educational laboratories are set. A path running along the glass front connects the three pavilions and contains the entrance spaces, cafeteria and bookshop. The north pavilion, the largest, measures 70 by 75 meters and rises to a height of 21 meters, necessary to contain the auditorium and museum deposits. The two large exhibition halls, characterized by flexible and undivided surfaces, are superimposed in the central pavilion, which extends for 55 meters in width, 70 in length and 14 in height. Finally the south pavilion, the smallest with a floor space of 2,400 square meters and a height of 12 meters, embodies the library and study center.

The sinuous shape of the roof is undoubtedly the museum's hallmark. The geometry of the roof is so complex that every single meter of the 4.2 kilometers of steel beams is different from the others. The building's idiosyncratic geometry is such that the section of the steel arches is slightly inclined, always at a different angle. Likewise the extremities of the steel arches are stressed together with the aid of tiebacks and connected with the floors and the floor slabs to prevent the steel arches from slipping apart at their base. The individual sections are made from large steel sheets, using high-precision computerized instruments for cutting and then hand-welded.



The strong curvature of the steel girders prevented them from being machine-welded, which meant that more than 40 kilometers of seams had to be welded by hand. The extreme delicacy of the artworks – especially watercolors and drawings – prevented the use of natural light. Klee's works are also very sensitive to changes in temperature and humidity, and this meant ensuring strict control over hygrometric values. The excellent insulation of the roof, ceilings and floors reduces heat loss to a minimum, while a sophisticated system of external awnings protects the works from summer light and heat.

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