

SCHOTT
glass made of ideas

Abbey Library St. Gallen, Switzerland

Project report

World Heritage site: St. Gall Abbey Library

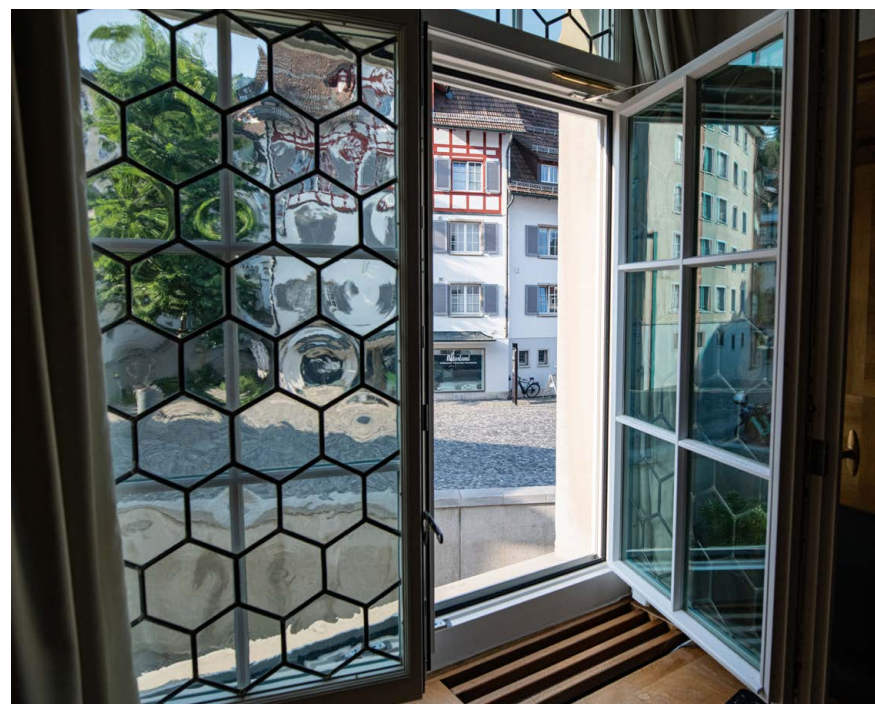
Contemporary renovation to state-of-the-art standards

At the end of 2020, extensive restoration of the St. Gall Abbey Library, the centerpiece of the UNESCO World Heritage site of St. Gall Abbey, was completed. RESTOVER®, the high-quality glass for restoration from SCHOTT, played a key role in preserving the historic façade.

Background

The St. Gall Abbey Library is one of the oldest and most important libraries in the world. Its valuable book collection highlights European cultural developments while documenting the cultural output of the Abbey of St. Gall from the 8th century until the abbey's dissolution in 1805. Many important works of European intellectual history are preserved here as original manuscripts, with the collection's core being its corpus of early medieval manuscripts from the 8th to 11th centuries, which were largely produced within the abbey.

The Abbey Library, together with the entire Abbey of St. Gall, was included in the UNESCO World Heritage List in 1983.



The challenge

To improve indoor climatic conditions in the library rooms the primary focus was placed on exterior glazing.

The right choice of glass not only required consideration of the historical context, particularly the characteristic irregular surface structure of the glass, but also the building's usage. It was essential to meet all the demands of modern, high-quality window glass, and especially the stringent requirements for preserving historic buildings and monuments.

The solution

The 44 windows were produced and installed by the company Blumer Techno Fenster AG from Waldstatt AR, Switzerland.

They used RESTOVER® glass for restoration from SCHOTT. This glass features irregular surface structures resembling historical glass of past centuries. It is easy to fit into existing frames due to the low thickness of the glass. Dynamic surfaces prevent reflections that would impair the window's aesthetic quality. The glass is produced using the original Fourcault process to create surfaces similar to those of glass from past eras. A range of further processing options also enable modern building technology and efficiency requirements to be met.

This has resulted in new high-tech safety windows based on historical models. Although they look almost identical to their predecessors, they also must meet much higher standards: keeping out heat, cold and UV rays while also providing protection against unauthorized access and breakage.

The leaded honeycomb hand-blown glass panes were removed, restored and reused in the room side of the new window to preserve the original look of the interior.

The windows are double-glazed. The exterior glass is fitted with SCHOTT RESTOVER® laminated safety glass with quadruple film and a sun protection layer. The film prevents UV rays from entering while also contributing to break-in protection. The glass is designed to reduce room temperatures by around two degrees in summer and increase it by around two degrees in winter. The drawn glass used for the external panels is slightly undulating to give it a historical look.



Images: SCHOTT

All measures were agreed with the Swiss cantonal monument preservation authority.

Glazing for the Abbey Library involved 176 panes of SCHOTT RESTOVER® glass for restoration covering 81.5 m² of window area. Using the latest insulating glazing has had no negative impact at all on the façade's harmonious look.

The material

- SCHOTT RESTOVER® with slightly irregular surface, processed into laminated safety glass with quadruple film and sun protection layer
- ETA-12/0159 certification
- Range of processing options for norm-compliant standard construction products (e.g. as toughened safety glass, laminated safety glass and insulating glass)
- Glazing sizes:
55 x 37 / 55 x 110 cm



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SCHOTT North America, Inc., 5530 Shepherdsville Road, Louisville, KY 40228, USA
Phone +1 (502) 657-4417, info.architecture@us.schott.com