

PRESS RELEASE

Light and sculpture in harmony at Museum Insel Hombroich

OKALUX enables complex energy-efficient refurbishment of the Labyrinth's folded glass roof



View of the Labyrinth from above, showing the extensive OKALUX roof glazing. Photo: Hahn Helten Architektur

Marktheidenfeld (D), October 2026. *Museum Insel Hombroich in Neuss, North Rhine-Westphalia, celebrates its 40th anniversary in 2026. Among the site's most distinctive buildings are the pavilions designed as walk-in sculptures by sculptor Erwin Heerich. The largest exhibition pavilion in the ensemble, the Labyrinth, was the first major project in a five-year programme of environmentally sustainable refurbishment and has now reopened to visitors. The*

aim was to preserve Heerich's distinctive architectural language while bringing the building envelope up to modern standards of conservation and energy efficiency. A key element of the project is the OKALUX daylighting system. The bespoke insulating glass meets the demanding aesthetic and building physics requirements.



Specially manufactured to accommodate the Labyrinth's complex roof geometry, the OKALUX insulating glass system distributes daylight evenly deep into the interior, regardless of the angle of incidence. Photo: Hahn Helten Architektur

A seamless upgrade through precision fitting

As daylight enters the Labyrinth's enclosed structure exclusively through its glass roof, the glazing is essential both to the atmosphere inside the building and to the protection of the artworks on display. The glass roof follows a square structural grid measuring 5.5×5.5 metres, with each grid bay topped by a folded glass module. The original glazing was covered with a



white solar control film that had cracked and begun to peel away over time. As it also no longer met modern energy efficiency standards, replacement was essential. However, the refurbishment had to leave the appearance of this walk-in sculpture entirely unchanged. The new insulating glass units were therefore precisely fitted into the existing folded roof geometry across a total glazed area of 1,530 square metres. The result is a virtually invisible upgrade that delivers high standards of energy efficiency and daylighting performance.

Light-diffusing roof glazing for demanding spaces

The refurbishment uses the OKALUX light-diffusing insulating glass system, which incorporates capillary inserts within the cavity between the glass panes. These capillaries transform sunlight entering through the roof into diffuse daylight, directing it deep into every part of the interior without glare, regardless of the angle of incidence. This eliminates harsh, distracting shadows and allows the sculptural qualities of the walk-in structure to be appreciated to their full effect. Beyond enhancing the spatial experience, the glazing also performs vital functions in protecting the indoor environment. The insulating glass filters out virtually all harmful UV radiation, reduces total solar energy transmittance to prevent overheating in summer, and limits heat loss through the glazing in winter. The protected position of the capillaries offers another significant economic and environmental advantage for the long-term preservation of the walk-in sculpture. As they are securely enclosed within the insulating glass units, they remain protected from weathering and dirt, making the system maintenance-free. Working alongside an underground geothermal system that provides heating and cooling, the bespoke OKALUX units integrate seamlessly into the museum's overall climate-conscious design strategy.



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The pavilion blends harmoniously into the parkland setting of Insel Hombroich. Photo: Hahn Helten Architektur

Project details

Project: Labyrinth, Museum Insel Hombroich, Neuss
Client: Stiftung Insel Hombroich
Architect: Hahn Helten Architektur, hucke architektur | büro für schöne sachen
Completion: 2024
Photography: Hahn Helten Architektur
Daylighting solution: OKALUX (1,530 m²)



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Further information:

Andreas Scheib | Glas Trösch Holding AG
Head of Communications/CCO
Industriestrasse 29, CH-4922 Bützberg
press@glastroesch.com
www.okalux.com

Press contact:

Arno Heitland | mai public relations GmbH
Leuschnerdamm 13 | D-10999 Berlin
+49 (0) 30 66 40 40 553 | okalux@maipr.com