

press release

Largest all-glass structure in Canada

Façade construction specialist seele has installed a 42m long glass roof at Place Ville Marie in Montréal according to the designs of Sid Lee Architecture and Menkès Shooner Dagenais Létourneux Architectes. The roof is made up of just 18 insulating glass units. "Grand Hall" is seele's fourth project in Canada.

Montréal, 24 January 2020. The Place Ville Marie is located in the heart of Montréal directly adjacent to the Boulevard René-Lévesque. This large central square includes an entrance leading directly to an underground food and shopping mall. The refurbishment of the Place Ville Marie by owners Ivanhoé Cambridge called for a new entrance pavilion for the mall consisting of an approx. 630sqm glass roof and canopies cantilevering up to 4.2m. The all-glass structure enables an uninterrupted view of the shopping area below. Large-format glazing units create a feeling of transparency and spaciousness and thus make this an appealing central venue. This project has enabled seele to demonstrate its structural glass proficiency to the Canadian market.

"Weightless" design as novum in Canada

Steel-and-glass designs and modular façades are not unusual in Canada. However, all-glass designs are rather more special, almost sensational. The glass roof in Montréal is seele's first project in Québec, the company's fourth in Canada. More than anything else, it is the project with the largest insulating glass units and glass beams in the whole country. The 15m long x 2.5m wide insulating glass units, weighing up to 5.6t, are supported on 8-ply laminated glass beams, which are also 15m long. In compliance with the architects' design, the corbels supporting the beams are hidden in the walls, so the roof appears to "hover", ensuring maximum transparency.

The entrance canopies at both ends of the roof are particularly noteworthy. They cantilever up to 4.2 m beyond the entrance façades and are supported by 14-ply glass beams.

Sebastian Keller, Project Manager at seele: "As this project involves the largest all-glass structure in Canada to date, great expectations were placed on seele's expertise. We have been building structural glass façades with amazing pane sizes since 2007. The standards and methods of testing valid in the different countries make the work particularly fascinating. We were able to work very constructively with the building authority and, as you can see, this has led to a real novum in Canada."

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Analysing the load transfer together with local structural engineering firm NCK was particularly important because the glass roof and the cantilevering canopies have to carry huge loads due to Canada's extreme weather conditions.

Logistics and construction challenges in the middle of Montréal

Almost every building project in a big city gives rise to particular demands when it comes to logistics and actual construction. In the case of the glass roof at Place Ville Marie, those demands were primarily the confined site, the special vacuum lifter for the panes and the weather.

This project required a 2.5t vacuum lifter with up to 60 suction cups to be specially designed and manufactured in Europe. And in order to be able to set up a mobile crane on site, the existing structure had to be strengthened for installing the glass. Further, as the work took place during the winter, additional enclosures had to be set up so that the silicone could be injected properly.

This exceptional, one-off project enabled seele to demonstrate once again it's all-round structural glass skills – from design to construction.

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seele group

The seele group, with headquarters in Gersthofen in Bavaria, is one of the world's top companies specialising in the design and construction of façades and complex building envelopes made from glass, steel, aluminium, membranes and other high-tech materials. The technology leader in façade construction was founded in 1984 by master glazier Gerhard Seele and steelwork engineer Siegfried Gossner.

Based on a profound understanding of design and materials, seele provides everything necessary for ambitious one-off designs true to the original ideas of engineers and architects. The seele group offers its building sector and industrial customers a complete package of services ranging from R&D, individual advice and joint conceptual design right up to the planning, detailed design and construction of their projects. seele's own production plants for technologically challenging designs and the group's own erection crews on site provide a guarantee of the very highest quality "made by seele".

The 1,000 employees of the seele group worldwide together generate an annual turnover of about €250 million.

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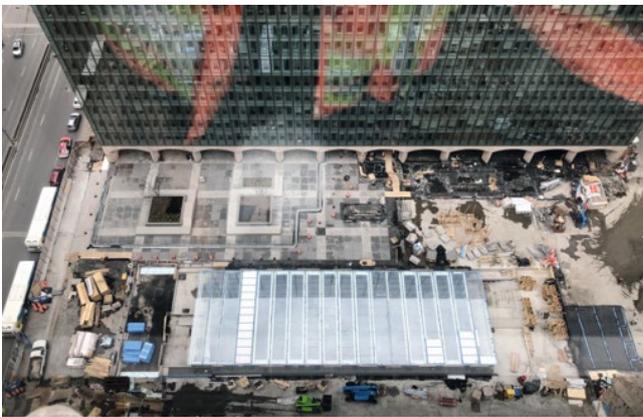
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visual material



Computer rendering of glass roof over "Grand Hall", Place Ville Marie, Montréal © Sid Lee & MSDL



Completed glass roof © seele

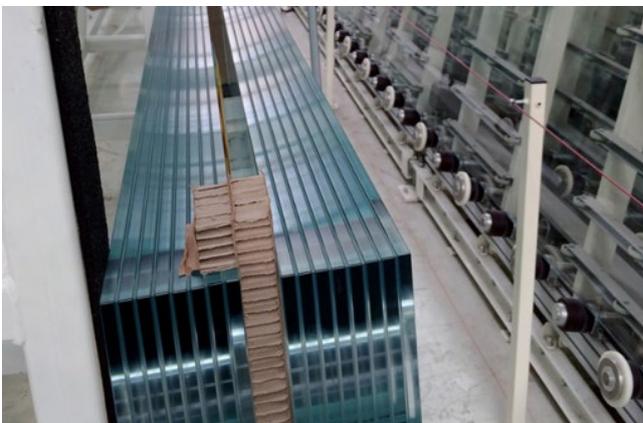
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Looking up through the new roof over the food and shopping mall © Techniverre



Vacuum lifter raising one of the 15 x 2.5m insulating glass units © seele



Two of the 8-ply laminated glass beams for supporting the roof glazing © seele