



Rely on it.

Unique, aesthetic and ecological

RENOLIT ALKORSOLAR carrier profile



Ghent Diamond

CHALLENGE

The Ghent Diamond is proudly overlooking the Ghent-Sint-Pieters railway station and surrounding neighbourhood. On top of a stone-like base with a pattern inspired by the city of Ghent's historical architecture, an impressive crystalline edifice rises.

The 33m high office building has – as the name indicates – not only the brilliance, but also the shape of a gigantic, polished diamond with numerous facets.

*The special design makes the building unique, and that is exactly where the difficulty lies: roof surfaces with **different inclines, steep and hard-to-reach slopes, kinks in the façade and a serious wind load.***

*On the pitched roof segments connecting the glass facade, an exterior roof finish with **Linus RENSON blades** is to be installed. Just for aesthetic reasons! Such a finish creates a nice play of light, shadow and reflection. But this can only be achieved if the finish has been executed perfectly! But how to execute the construction so precisely, and at the same time be perfectly watertight? A true challenge for both architect and roofing contractor.*

SOLUTION

For the internationally renowned New York-based architects practice Asymptote this monumental Diamond project is just another jewel in the crown. Innovative and visionary, they always pursue extreme and experimental challenges. And yes, this impressive Diamond really was a challenge, especially for the Belgian ROTEAM roof experts. The special shape, the height and the different slopes up to 47° made it a complex, gargantuan waterproofing project.

On top of the steel deck structure tongue and groove insulation panels were installed. This guarantees a strong, perfectly fitting and smooth construction. After all this is very important in order to achieve this monumental task. The high wind load and shear forces were decisive for the choice of roofing membrane to be used on this difficult structure. Asymptote architects therefore opted for the mechanically fastened **RENOLIT ALKORPLAN F** membrane. This PVC-P roofing membrane is specifically suited for such a project, thanks mainly to its flexibility, lightweight and long life.

Unique system

Apart from the above properties, the **RENOLIT** roofing membrane has another major benefit: it can be paired with the fully compatible **RENOLIT ALKORSOLAR** carrier profile.

The aluminium supports for the **RENSON** blades had to be fixed to the roof structure in a 100% reliable, practical and above all waterproof way. Without the slightest risk of penetrating the waterproofing membrane! On top of that the blades had to be positioned very accurately according to position and slope, if not the building would lose the intended anticipated pleasing reflection of the blades. The initial solution to secure the supports to a bitumen roofing membrane appeared to be too complex and for practical reasons actually not feasible.

The **RENOLIT ALKORPLAN** membrane in combination with the ingenious **RENOLIT ALKORSOLAR** profile system accomplished all these points perfectly for this application. The PVC-P mounting profile was originally designed to secure solar panels on a roof but is now also used for alternative aesthetic roof finishes such as timber planking, cedar shingles, aluminium composite sheets, and, in this specific case, **RENSON** blades. Reliable and sustainable! Over ten years of experience without failure is testimony of this.

Lightweight but very strong

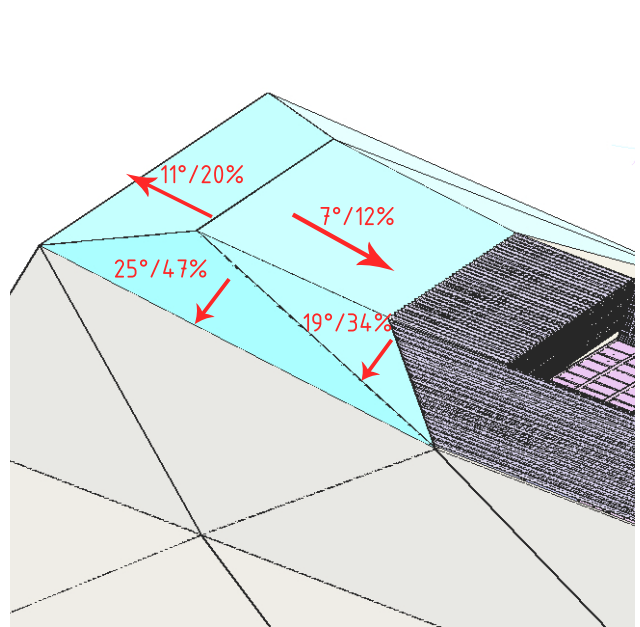
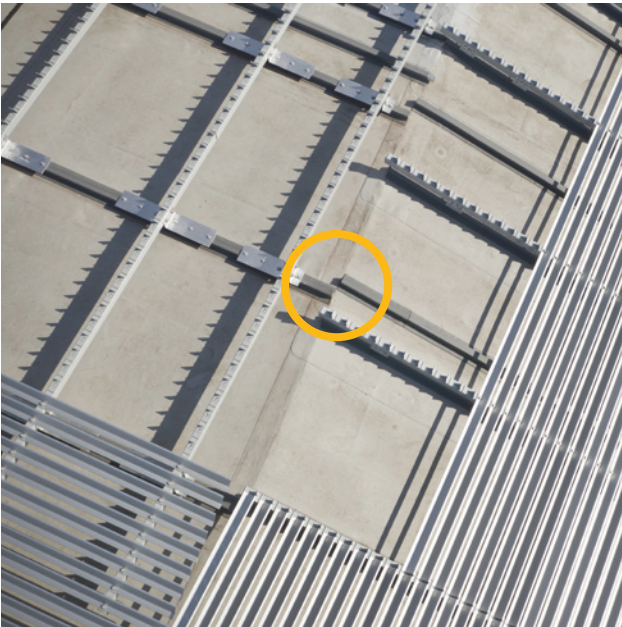
Hot air welding is used to fuse the **RENOLIT ALKORSOLAR** profiles to the roofing membrane for a fully integrated finish. This is absolutely the system's major strength, which makes it resistant to high wind loads and other weather elements. An aluminium box section is inserted into this profile to fasten the substructure. On the Diamond building, the aluminium supports for the **RENSON** blades system were fixed securely thanks to these profiles, without any risk at all of penetration into the waterproofing membrane. The light weight of the **RENOLIT ALKORSOLAR** system is definitely an asset in order to limit the load bearing capacity and the shear forces. The **RENOLIT ALKORPLAN** membrane width was adapted to the spacing between the **RENOLIT ALKORSOLAR** profiles as required by the different roof slopes. A perfect illustration of the versatility of **RENOLIT** products.

Durable Diamond

Apart from the architectural aspect the building has an important ecological asset as well. Ghent Diamond was entirely constructed with **BREEAM** regulations regarding energy-efficiency and sustainability in mind. **BREEAM** is an objective and internationally recognized method to evaluate the durability of building projects. For this building the focus lies on **less energy consumption, lower CO₂ emissions and more thermal comfort**. The ultimate goal: a modern, sustainable and energy-efficient office building, ready to face the future.

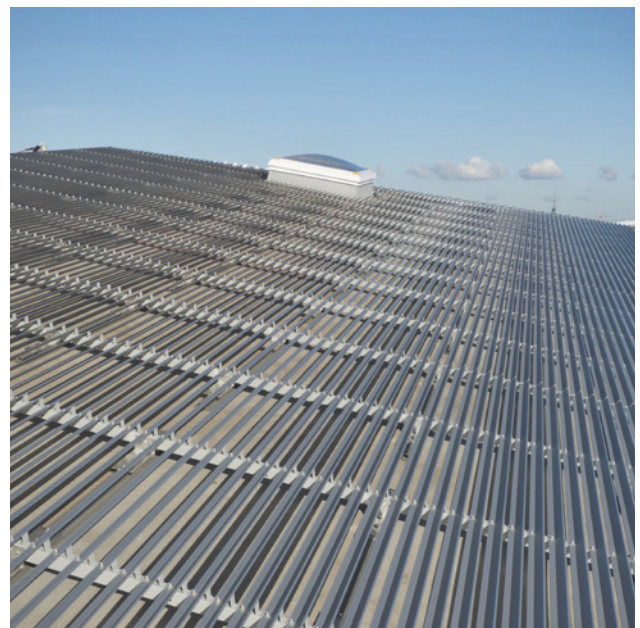


RENOLIT ALKORSOLAR carrier profile



BRILLIANT OFFICE BLOCK

The 6-story Diamond building includes no less than 17,000 sqm of high quality and comfortable office space, extra public amenities, multifunctional spaces and a spacious patio. The ground level comprises an impressive lobby with lots of daylight, a common entrance desk and reception, meeting rooms and a café.





DIAMOND OFFICE BUILDING

- Ghent
- Project developer: Global Estate Group
- Architects: Asymptote Architecture
- Technical follow-up: Bontinck Architecture & Engineering
- Roofing contractor: Roteam

PRODUCTS

- Steeldeck
- IKO-Enertherm tongued and grooved insulation
- Roofing membrane **RENOLIT ALKORPLAN F** - 1.5 mm - 1,700 m²
- **RENOLIT ALKORSOLAR** fixing profiles (DIBT Approval) - 1,400 lm
- Aesthetic Linius **RENSON** blades on aluminium supports for cladding

BREEM®

