
NEW OFFICE BUILDING OF LANO CARPET GROUP

PRECAST CONCRETE APPLICATION: AALBORG WHITE ® CEMI 52,5R-SR5



PROJECT DESCRIPTION

The Harelbeek carpet manufacturer Lano commissioned architect Luc Vandewynckel from Poperinge to design a new-build office with a showroom. In the austere and sleek volume with 2,500 m² of usable space on 2 levels, attention was paid not only to the incidence of natural light, but also to ergonomic and acoustic working comfort and smart energy solutions.

The existing situation was a site of 20 hectares, built with large, solid concrete volumes with no openings and a uniform height of 10 meters. In line with this, the new building was added at the front, which makes an architectural statement through its refined lines and rhythmic proportioning. The technical installations, IT rooms and printer room, archive and storage rooms were encapsulated in the first route of the existing production building.

Stability, Prefabrication and Techniques Fully Worked Out in Revit

The new building rests partly on well foundations where pegs on the existing building and partly on soles excavated a little deeper and supplemented with stabilized sand. This was followed by a combination of architectural Aalborg White cement based concrete columns outside and inside where all connections were concealed invisibly. The thick white concrete floor slab separates levels 0 and 1. To make the large

span and cantilevers possible, the surface has been worked out with lightweight predrills. In addition, polystyrene blocks are collapsed to reduce the weight of the predrills. The joints of the columns were carried out at the request of the contractor with metal base plates, which ensure a faster execution of the works. Just like the reinforcement, the base plates were modeled in 3D to avoid errors in the prefabricated sheets.

Moreover, a smooth placement of the techniques on site was already taken into account during the study and design phase. Openings and passages in beams were provided in advance. Because in addition to stability and prefabrication, the techniques were also integrated into the 3D model, all conflicts and clashes could be detected and resolved at a virtual level in advance.

Light, Modular and Comfortable for Customers and Employees

All facades are glazed, allowing sufficient daylight to flow in, supplemented if necessary with day-controlled and energy-efficient LED lighting to achieve a constant light level. This is not only important for the office space on the floor, also for the ground floor showroom where it allows customers to have a clear picture of displayed carpet products. Overheating of the rooms is avoided by the architectural concrete columns on the longitudinal sides and the larger volume of the first floor. Heating and cooling are done by means of an air-to-water heat pump that controls climate bars in the room. Moreover, energy efficiency is promoted through permanent monitoring via a building management system.

The first floor consists of a landscape office with working islands and a few smaller office spaces with glass walls. The rhythmic placement of the techniques ensures maximum flexibility and makes subsequent rearrangements and functional changes perfectly possible. Working comfort is optimal: white office furniture with electrically height-adjustable desks provides a calming and practical working atmosphere. In addition, great importance was given to acoustic comfort. The use of quality fixed carpet dampens working noises and makes collaboration and frequent calling possible without disturbing colleagues.

PROJECT PARTICIPANTS

Concrete column walls, floor and terrace precastor: Enjoy Concrete

Architects: Luc Vandewynckel

White Cement Producer: Aalborg Portland A/S

