

Project Profile: Convent of Fra Angelico, Louvain La Neuve, Belgium

The new convent was the result of a limited competition for the Order of Dominican in Louvain La Neuve, Belgium. It was designed by the architectural practice AGDA in a joint venture with Group Wave 34, whose architect and manager Stephen Braun is also a member of the Dominican community.



The convent reflects the long history of the Dominican order. In spite of the constraints of a small site, it has been developed as a fully working residential community with ten bedrooms for the Brothers, each with shower and balcony, together with common rooms, living areas and work spaces.

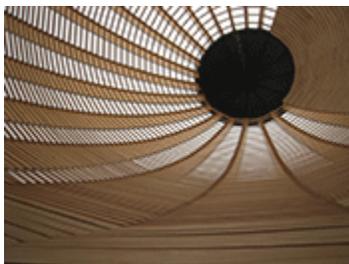
The brief for the chapel dictated a small room where up to 50 people could participate. The inspired choice of an egg-shaped structure provides a dramatic feature for the project, expressing its purpose without resorting to the traditional steeple and cross design. At the same time, it was important to maximize the light levels within the chapel because the main facade faced north which meant that the chapel would enjoy very limited sunlight during the day.

Solution:

Architects Gery Despret and Benoit Gillon saw the curved structure as both logical and symbolic - the focal point of the project and the interface between the community and the outside world. It was purposely designed as egg-shaped to create a feeling of lightness and intimacy and a dramatic statement. Constructed largely in wood with 7mm high polycarbonate sheets to minimize weight, the cladding evenly diffuses natural daylight across the interior. At night artificial lighting gives the chapel an ethereal glow.

The new chapel is a completely different construction to the convent itself and the surrounding buildings which are all built in brick. It is also designed to be low energy efficient. For example, the ambience inside the chapel is very warm and serene because of the unique way in which it is insulated. The very high insulating performance has been achieved by filling the 25mm thick polycarbonate sheets, supplied by EMB-Products from Germany, with translucent Lumira® aerogel. This provides a U value of 0.91W/m²K, 55% light transmission and 24dB sound insulation. Supplementary heating is only required when the outside temperature is very low.

Comments:



For Architects Gery Despret and Benoit Gillon, it was the first time they had specified Lumira® aerogel. When the chapel was finished they commented, "Although we are two individuals we only have one brain when we work together! Consequently, we are both delighted with the performance of the insulation and the diffused lighting within the chapel. We intend to use the material again and are already designing an indoor tennis-hall where the combination of polycarbonate and aerogel will play an important role in creating

the right lighting conditions and ambience which will be perfect for indoor sports."

Owner: Order of Dominican

Architect: AGDA with Group Wave 34

Lumira® aerogel partner:

