KALWALL®

high performance translucent building systems

Project Report

Industrial Design Center at Howest

Kortrijk, Belgium

Architect: bildt. architecten

Photos: Klaas Verdru

Wall Systems | Skyroof™ + Skylight Systems | Canopies + Walkways | Hurricane-Rated E-Series™ Windows

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KALWALL SPECIFICATION:

Panel: 2.75″ | 70 mm
Grid core: shoji
Exterior FRP: crystal
Interior FRP: white
Curtain wall system: Reynaers CW 50
U-Value: .18 | .99 Wm^2K
Solar Heat Gain Coefficient: .09
Visible Light Transmission: 6%

WHAT IS KALWALL?

A translucent, structural sandwich panel that provides:
Glare-free, balanced daylighting
Superior thermal performance
Energy + electricity saving
Low maintenance life cycle requirements
Safety + security through visual privacy
Durability + graffiti / vandal-resistance
Hurricane, explosion venting + blast rated options

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For unparalleled thermal performance in translucent daylighting, consider specifying Kalwall with **CABOT's Lumira®** aerogel insulation. Available in 2.75" (70 mm) panel formats up to: 4' x 12' (1200 mm x 3600 mm) and 5' x 10' (1500 mm x 3000 mm) maximum.

Industrial Design Center at Howest, Kortrijk, Belgium

DAYLIGHTING DESIGN IS JUST THE BEGINNING

Howest, de Hogeschool West-Vlaanderen is a university of applied sciences with multiple campuses in Belgium. Howest endeavors to be a creative and innovative institution that helps prepare students to make a positive impact on society and our global future.

These aspirations can flourish at the new Industrial Design Center for Howest Kortrijk, which expands the university's product development capabilities. The bildt. architecten was charged with designing a building that fit between two existing structures. Due to its intended purpose, line-of-site protection was a key requirement for the building's façade. A translucent daylighting solution with Kalwall ensures brightly lit workspaces with privacy from neighboring plots.

The benefits of daylighting for education spaces are well proven, but Kalwall's unmatched panel technology takes this even further. Unlike transparent materials, Kalwall scatters full-spectrum visible light waves in perfect Lambertian diffusion. This means that usable light penetrates deeper into spaces, enhancing occupant comfort and wellness while reducing reliance on artificial lighting. The advantages of diffuse, full-spectrum light compared to alternative daylighting options include better visual acuity and color rendition; improved focus and productivity; boosted mood and alertness; and promotion of proper circadian rhythms for overall health. All these benefits work together to create an ideal environment for working students.

Like these students, Kalwall prides itself on product innovation. As the inventor of the original translucent sandwich panel, Kalwall has evolved the product over decades to provide best-in-industry thermal performance (up to an r-20) and solar heat gain control (as low as .04). The panels meet a multitude of stringent building codes, including codes related to structural requirements and fire performance.

Kalwall's long, reliable product lifespan and energy-efficient technology helped this project meet sustainability goals. The highly insulating material reduces HVAC loads while autonomous daylighting reduces electricity costs. The Industrial Design Center also features a high-performance heat pump and concrete floors with core activation for heating and cooling.

It is not all about function, though, as form can make or break a design. With Kalwall, function met form to help the architect achieve the desired minimalist aesthetic. "The façades have a very neutral grid structure and the color is clean gray. As a result, the building is merely a structure, and the content—the students' designs—speaks for itself," says bildt. The Kalwall façade jumps forward, and at night, panels may emit a soft glow to highlight the entrance.

It is an honor for Kalwall to shine a light on the work the students at the Industrial Design Center will do.

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