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Without Compromise: Strength Meets Thermal Performance With Innergy® AP

Custom-Designed Components Make Meeting Energy Requirements Easier Than Ever Before

Coming out of the pandemic, curtain wall OEMs seek dependable suppliers, those who can provide products that mitigate risk and minimize supply interruptions. They are also seeking new, innovative technologies that make complex building designs easier, and products that boast higher energy performance ratings and improve sustainability.

For commercial markets, this is especially important for window, door, and curtain wall construction. For 21st-century curtain wall fabrication, manufacturers and glaziers are looking for enhanced thermal performance and products that offer durability and flexibility. Plus, with ever-evolving building codes that require

project teams to meet more stringent energy standards, it is important to remain on top of the latest trends and product innovations.

Trends in architectural design come and go, but for building exteriors, strength and thermal performance are mainstays. That's why the Deceuninck North America team is committed to the elements of the building exterior that matter most: aesthetics, long-term product strength, and first-rate thermal performance.

To meet this demand, Deceuninck North America created Innergy® Architectural Products (AP).

Three High-Performance Solutions

The Innergy® AP line is comprised of three similar yet unique product categories: pressure plates, rigid thermal reinforcements, and curtain wall components.

The same advanced material technology goes into each Innergy® AP solution. Therefore, OEMs, architects, and other stakeholders involved in the construction process can deliver unmatched thermal

performance and strength regardless of the application. In fact, curtain wall projects completed with Innergy® AP components impart 900 times more energy efficiency than aluminum, 100 percent flexural memory, zero creep under structural load, and a 7,500 Kilopounds per square inch (Kpsi) bending modulus.



Innergy® AP pressure plates provide immediate and significant thermal benefits because of the material's very low thermal conductivity rate, especially when compared to aluminum pressure plates.

#1 — Pressure Plates

Pressure plates are fastened to the outside of mullions in a curtain wall system to hold the glass in place. Like all Innergy® AP components, these pressure plates are custom-designed to fit into an OEM's proprietary fenestration systems – making life easier for Deceuninck customers seeking a new and innovative pressure plate solution for window and curtain wall fabrication.

Projects utilizing Innergy® AP pressure plates, such as the [North American headquarters for Vaisala](#), will notice immediate and significant thermal benefits because of the material's very low thermal conductivity rate, especially when compared to aluminum pressure plates. In addition to outperforming aluminum, Innergy® AP provides more compressive and flexural strength when compared to polyamide.



Innergy® AP reinforcements decrease thermal loss for buildings, meaning less loss of heat in the winter and less heat entering the building during the summer months.

#2 — Rigid Thermal Reinforcements

Innergy® AP reinforcements provide support and a thermal break for window and door systems and serve as an energy-efficient alternative to aluminum inserts. With Innergy® AP, there is no need to redesign current products or systems for fabricators or OEMs. Deceuninck is committed to working with its partners to provide turnkey solutions for systems that already work well for customers. The idea is to take an OEM's existing window, door, or curtain wall design and bolster its overall performance.

Made from advanced fiber-reinforced polyurethane, Innergy® AP reinforcements will easily slide into window and door frame chambers. For owners and occupants, these rigid thermal reinforcements decrease thermal loss for buildings, meaning less loss of heat in the winter and less heat entering the building during the summer months. They also reduce condensation and are impermeable to virtually any natural heat or cold with temperature resistance ranging from -40° F to more than 200° F.

#3 — Curtain Wall Components

The final solution under the Innergy® AP umbrella of products are curtain wall components. In a single, custom solution, Innergy® AP curtain wall components meet the needs of architectural design, structural support, and the energy efficiency of a building and curtain wall system they are used on.

As an example of their performance, a large-scale curtain wall on a college campus that is constructed of aluminum framing will engage in rapid energy transfer because of aluminum's high conductivity. Add in Innergy® AP curtain wall components, and students and staff in a common area behind the curtain

wall can work or relax in comfort. In this scenario, the transfer of heat or cold is significantly minimized. In addition, the benefit for owners becomes apparent when they pay the energy bill: Less thermal loss means less reliance on a commercial structure's HVAC system.

The experts at Deceuninck work with fabricators' existing unitized or stick-built curtain wall systems and recommend how to best integrate Innergy® AP curtain wall components. These components are designed to improve thermal performance with equal or better structural properties to enable superior building envelope design.

The Next Generation of Performance

The manner with which the architecture, building, and construction industry is evolving is requiring manufacturers to think innovatively when designing products and materials. With Innergy® AP, Deceuninck takes thermal efficiency and structural performance to the next level. This allows OEMs, glaziers, and storefront manufacturers to deliver windows, doors, and curtain wall systems that meets the industry's latest, most stringent building code requirements as well as owner and architect demands.

By partnering with a global leader in fenestration such as Deceuninck for Innergy® AP components, those in charge of designing and building commercial buildings can deliver on the promise of strength and sustainability for their customers.

Learn more about Innergy® AP and put your project on the path to enhanced strength and thermal performance at innergy-ap.com.

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