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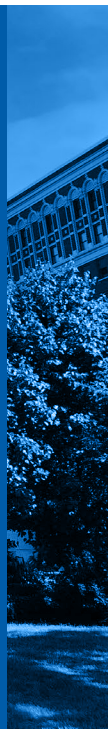
INNERGY® AP
ARCHITECTURAL PRODUCTS

Project Profile

Tommy G. Thompson Center

MADISON, WI



Named after the longest-serving governor in Wisconsin history, the 150,000 square-foot Tommy G. Thompson Center has served as an important piece of architecture in downtown Madison since 1996. The mid-rise structure is the home office for the Wisconsin Housing and Economic Development Authority, the Wisconsin Economic Development Corporation, and the state's Department of Tourism.

Over the decades, the building's exterior curtainwall experienced significant deterioration and was leaking air into the building. The glass curtainwall had a number of failed insulating units, and the original manufacturer no longer made the system used on the building. Therefore, the project and ownership teams needed to identify a custom solution that would meet the performance requirements for the building's restoration while staying within the budget established by the state of Wisconsin.

A MODERNIZATION IN MADISON

The challenge was clear: Modernize the Tommy G. Thompson Center curtainwall while ensuring optimal thermal performance and condensation resistance. Deceuninck's Innergy® AP emerged as the answer, promising to create a thermal block from the exterior to keep the hard-at-work staff comfortable inside.

"We conducted a thorough study on the building to determine the best approach for window replacement," said Erin Detwiler, AIA, NCARB, project architect at KONTEXT Architects, which oversaw design of the project. "With a limited budget from the state, we needed to sufficiently address numerous window panes affected by broken gaskets, which was leading to moisture on sills."

The project team needed to work within the parameters of a building with a completely sealed envelope from the exterior with no weeps to drain water. Therefore, they needed to work within the already established barrier system while upgrading the necessary components.

"To stay on budget and avoid excessive disruption to the interior, we decided to retain the back body hardware of the existing curtainwall and replace the glass, gaskets, and pressure plates," said Detwiler.

Those gaskets and pressure plates came in the form of Deceuninck's revolutionary Innergy® AP, custom-designed components that are made to specifications so that the parts fit any fenestration system and offer immediate and significant thermal benefits.

The KONTEXT Architects team worked directly with AluSpec and Manko Window Systems to get the precise fit for the renovation that would integrate seamlessly with all other system components.

"Innergy AP components were a really important piece of the restoration," said Mark Sheskey, president and owner of Lake City Glass, the glazing contractor on the job. "Aluminum would not have been able to achieve the required U-value for performance and fiberglass has other inherent problems."

In addition to thermal performance, the Innergy AP pressure plates provide structural strength for the entire system. They outperform polyamide alternatives in both compressive and flexural strength and exhibit no creep under sustained loads. Innergy AP parts also have a 7,500 Kilopounds per square inch (Kpsi) bending modulus.

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Innergy AP products remain unaffected by environmental conditions such as corrosion from salt air or water, which is beneficial for the long-term health and structural integrity of a curtainwall. This particular renovation also demonstrated a commitment to environmental stewardship.

In total, the project features 14,750 square feet of Innergy AP gaskets and pressure plates that were fit into the curtainwall systems prior to outfitting the exterior side with all new hardware and glass. The installers then applied a sealant to ensure a watertight seal, which KONTEXT says is one of the most crucial steps in creating an impermeable barrier.

Project at a Glance

To solve for a failing curtainwall at the Tommy G. Thompson Center, Deceuninck provided Innergy AP components to retrofit the system. The curtainwall now delivers top-notch thermal performance and much-needed condensation resistance.

WHO

- Deceuninck North America
- Manko Window Systems
- AluSpec
- KONTEXT Architects
- Lake City Glass

WHAT

- Renovation

WHY

- Enhanced thermal performance
- Condensation resistance

FEATURED PRODUCT

- Innergy AP gaskets and pressure plates

BIG SAVINGS: ENERGY AND COSTS

By not having to remove and replace the curtainwall in its entirety, the project realized substantial cost savings. The team could only achieve this using a custom-designed product such as Innergy® AP.

"We seriously saved a ton of money by not taking out the back body structure of the curtainwall. From that perspective, there was significantly less waste generated during the retrofitting process," Detwiler added.

In addition, Innergy AP offers unprecedented thermal benefits designed to save commercial buildings on heating and cooling costs. In fact, Innergy AP components impart 900 times more energy efficiency than aluminum.

"The pressure plate and the trim system make sure water isn't getting into the glass and that the system is maintaining a temperature barrier from inside and out," explained Detwiler. "The pressure plates really help by not allowing significant temperature changes over the course of seasons."

RESTORING A LEGACY

The transformation of the Tommy G. Thompson Center stands as a testament to the power of innovation in modern-day curtainwall restoration.

By embracing Deceuninck's Innergy AP, the project team overcame challenging circumstances, revitalizing a key Madison landmark with purpose that is now built for the future. This curtainwall solution ensures gains in energy conservation for the structure, should ease the load on the HVAC system, and ultimately delivers utility cost savings for the owners.

The success of this project not only honors the legacy of Governor Tommy G. Thompson but also paves the way for future architectural retrofit successes in Madison.

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