

A New Kind of Thermal Roadblock



Alexan on 8th
Atlanta, Georgia
ARCHITECT
Rule Joy Trammell + Rubio, LLC, Atlanta, Georgia
CUSTOMER
Glass Systems, Lithonia, Georgia
PHOTOGRAPHY
© Bill Gnech/The Apple Group

As architects and building owners look for ways to decrease a building's energy consumption and energy costs, the need for thermally efficient products has increased throughout North America. Kawneer continues to set the standard in thermal performance with its innovative AA™250/425 Thermal Entrances. In conjunction with Kawneer's high-performing frame, the doors offer improved thermal efficiency compared to a standard door. By combining critical elements within the product design, AA™250/425 Thermal Entrances create a superior thermal roadblock. The thermal roadblock formula includes thermal breaks in the door, door frame and threshold that isolate the interior metal components from the exterior metal components; a door rail and stile design with a double air cavity provides an added layer to the thermal barrier; and dual weathering around the perimeter of the door in conjunction with a low-conductance polymer door stop minimizes air infiltration.

The benefits of Kawneer's AA™250/425 Thermal Entrances extend beyond industry-leading thermal performance. The company has introduced design flexibility in hardware options and injected value to support virtually any budget. Advanced thermally broken systems allow building owners to take advantage of tax incentive programs and green building certifications such as Leadership in Energy and Environmental Design (LEED®). And, with its proven performance and welded corner construction, Kawneer's AA™250/425 Thermal Entrances are the ideal choice for any commercial or institutional application.

PERFORMANCE

The door frame jambs and transom bar/door header tout a dual perimeter weather seal featuring Kawneer's Sealair bulb weathering. Also featured is triple-finned, soft pile weather-stripping that minimizes airflow around the perimeter edge of the door. At the bottom of the door, the combination of a thermally broken threshold and dual bottom door sweeps minimizes air infiltration. All of this adds up to a superior thermal roadblock that provides improved comfort and savings in heating and cooling costs.

AA™250/425 Thermal Entrances accommodate 1" insulating glass and insulating laminated glass to improve thermal and sound reduction performance. Laminated glass enhances STC and OITC (sound resistance) performance as well as improves occupant safety. Kawneer's thermal entrance doors have been tested and proven in accordance with North American performance standards for air, structural, sound transmission, condensation and thermal transmittance.

PERFORMANCE LEVELS

Air Infiltration	ASTM E283
Structural – uniform wind load	ASTM E330
Sound Transmission (STC, OITC)	ASTM E90, E1425
Condensation Resistance (CRF, I, CR)	AAMA 1503; CSA A440.2; NFRC 500
Thermal Transmittance – U-Factor	AAMA 1503, 507; NFRC 100

AESTHETICS

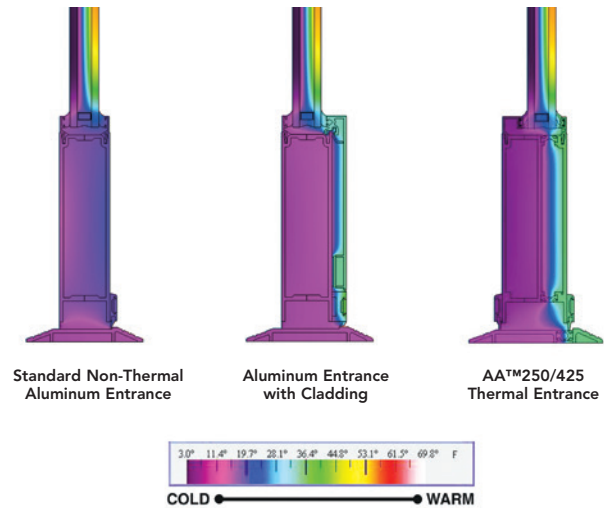
Breaking from tradition, Kawneer's AA™250/425 Thermal Entrances deliver a new aesthetic look with a 2-1/2" narrow stile and a 4-1/4" wide stile, respectively. To meet aesthetic and hardware application requirements, the entrances are also offered with a range of top and bottom rails.

	AA™250	AA™425
Stile widths	2-1/2" (63.5 mm)	4-1/4" (108 mm)
Top rail	2-1/2" (63.5 mm)	4-1/4" (108 mm)
Bottom rail	3-7/8" (98.4 mm)	6-1/2" (165.1 mm)

Horizontal mid-rails are available in 1-3/8" (34.9 mm) and 8-1/4" (209.6 mm) sizes. In addition, a 10" (254 mm) bottom rail option can be specified.

The 2-1/4" (57.2 mm) depth door uses a 14 mm polyamide strut thermal break that accommodates a dual finish as well as various combinations of hinging and locking hardware. These include offset pivots, butt hinges, continuous gear hinges, MS locking, concealed vertical rod exit devices and rim exit devices.

Thermal simulations showing temperature variations from exterior/cold side to interior/warm side.



FOR THE FINISHING TOUCH

Architectural Class I anodized aluminum finishes are available in clear and color choices. Painted finishes, including fluoropolymer, that meet AAMA 2605 standards and solvent-free powder coatings that meet AAMA 2604 standards are available in a variety of color choices.

