ENTRANCES & FRAMING

Kawneer offers a comprehensive line of architectural aluminum building products and systems for commercial construction – entrances, framing systems, windows and curtain wall systems.

Hurricane Resistant and Blast Mitigation Products
Kawneer offers single-source responsibility with a comprehensive group of independently tested hurricane resistant and blast mitigation products. Many hurricane resistant products have received Notices of Acceptance (NOAs) issued by Miami-Dade County BCCO and Florida Product Approvals. Blast mitigation products meet requirements of the General Services Administration (GSA), Interagency Security Committee (ISC) and Department of Defense (DoD). For more information, visit Kawneer.com.

ADA Accessibility Guidelines
Kawneer entrances include options such as hardware, door controls and threshold heights that satisfy the guidelines of the Americans with Disabilities Act (ADA). Entrances are easily configured to meet ADA traffic control guidelines and state and local building accessibility codes.

Kawneer’s Limited Lifetime Welded Door Corner Warranty
Every door with welded corner joinery comes with a limited lifetime warranty, including 190/350/500 Standard Entrances, 350/500 Heavy Wall™ Entrances, 350/500 Tuffline™ Entrances, Flushline™ Entrances and 260/360/560 Insulclad™ Thermal Entrances. The corner joinery limited warranty is good for the life of the door under normal operation. The limited lifetime warranty is transferable from building owner to building owner and is in addition to the standard two-year warranty covering each Kawneer door.

190/350/500 Standard Entrances
A single-source, easily adaptable package of door, door frame and hardware
Our 190/350/500 Standard Entrances have been designed for accessibility, durability, flexibility and continuous use. These entrance systems can be fabricated with a myriad of hardware options to meet the most stringent design requirements.

190 Narrow Stile: engineered for moderate traffic | Slim-looking 2-1/8" vertical stiles with 2-1/4" top rail and 3-7/8" bottom rail
350 Medium Stile: provides extra strength for high traffic | Vertical stiles and top rail 3-1/2" with 6-1/2" bottom rail
500 Wide Stile: monumental visual statement for heaviest traffic | Vertical stiles and top rail 5" with 6-1/2" bottom rail

All three entrances feature welded corner construction with sigma deep penetration and fillet welds, plus corner mechanical fastenings | Door operation is single/double acting with maximum security locks or touch bar panic standard | Architect’s Classic 1” round bent bar push/pull hardware in various finishes and sizes | Infill range from 1/4” to 1” | Door frames feature Sealair bulb polymeric weather stripping | Tested to NFRC thermal standards

AA™250/425 Thermal Entrances
Narrow and wide stile entrances designed to provide thermal performance to meet the most stringent requirements of the IECC and ASHRAE 90.1 standards.

AA250: 2-1/2” vertical stiles and top rail with 3-7/8” bottom rail
AA425: 4-1/4” vertical stiles and top rail with 6-1/2” bottom rail

Thermal breaks in the door, door frame and threshold isolate the interior metal components from the exterior metal components | Door rail and stile design with a double air cavity provides an added layer to the thermal barrier | Dual weathering around the perimeter of the door in conjunction with a low conductance polymer door stop minimizes air infiltration | Entrance is single acting and mounted on offset pivots, butt hinges or continuous geared hinges | Accepts 1” glazing infill | Optional 10” bottom rail | Horizontal cross rails of 1-3/8” and 8-1/4” | Tested to NFRC thermal standards | Tested for large missile impact for windborne debris

500 Wide Stile Entrance, 1600 Wall System™1 Curtain Wall
Carmel High School Theatre, Carmel, California
Architect: Kasavan Architects, Salinas, California
Glazing Contractor: Atascadero Glass, Atascadero, California
Photography: © Brett Drury

350 Medium Stile Paneline™ Entrances, Trilab™ VG (VersaGlaze™) 451T Framing, 1600 Wall System™1 Curtain Wall
Hurst Conference Center, Hurst, Texas
Architect: Ron Hobbs Architects, Garland, Texas
Glazing Contractor: Alliance Glass and Mirror Ltd., Keller, Texas
Photography: © Wes Thompson

190 Narrow Stile Entrance (with high bottom rail) and Trilab™ VG (VersaGlaze™) 451T Framing used for auto showroom entrance application
Weeks Automotive/Danbury Audi, Danbury, Connecticut
Architect: Austin Patterson Disston Architects, LLC, Southport, Connecticut
Glazing Contractor: Advanced Performance Glass, Inc., South Windsor, Connecticut
Photography: © CJBerg Photographics

ABA250/425 Thermal Entrances
Narrow and wide stile entrances designed to provide thermal performance to meet the most stringent requirements of the IECC and ASHRAE 90.1 standards.

AA250: 2-1/2” vertical stiles and top rail with 3-7/8” bottom rail
AA425: 4-1/4” vertical stiles and top rail with 6-1/2” bottom rail

Thermal breaks in the door, door frame and threshold isolate the interior metal components from the exterior metal components | Door rail and stile design with a double air cavity provides an added layer to the thermal barrier | Dual weathering around the perimeter of the door in conjunction with a low conductance polymer door stop minimizes air infiltration | Entrance is single acting and mounted on offset pivots, butt hinges or continuous geared hinges | Accepts 1” glazing infill | Optional 10” bottom rail | Horizontal cross rails of 1-3/8” and 8-1/4” | Tested to NFRC thermal standards | Tested for large missile impact for windborne debris
For over a century, Kawneer has been recognized as an innovator. Since that time, we’ve balanced experience with change and continuous improvement. We strive every day to develop solutions that promote integrated, sustainable building practices, and we are dedicated to providing the tools our customers need to succeed. Welded door corners, unique thermal breaks, cutting-edge design and fabrication flexibility are just a few examples of how we have responded to customer needs.

350/500 Heavy Wall™ Entrances
Medium and wide stile doors designed for durability in heavy-traffic areas

Heavy Wall™ entrance doors are designed for high-traffic applications such as schools, universities and office buildings. Door and frame have 3/16” walls throughout for added durability and strength. Door is 2” deep | Vertical stiles and top rails 3-1/2” and bottom rail 6-1/2” | Accepts glazing infills from 1/4” to 1” | Incorporates Kawneer’s standard welded corner construction | Blast tested per ASTM F 1642 | Tested for large missile impact for windborne debris

350/500 Tuffline™ Entrances
Heavy-duty medium and wide stile doors engineered to withstand high traffic in schools, universities, malls and supermarkets

Constructed for unequalled strength with 3/16” walls throughout door and frame | 3-1/2” wide stiles and 3-3/8” top rail on 350 door | 5” wide stiles and top rail on 500 door | 2” deep door sections and 6-3/4” bottom rail | Door heights range from 7’ to 9’; widths from 3’ to 4’ | Door frame face width is 2”, depth is 4-1/2” | Accepts glazing infills of 1/4” to 1” | Complete package of door, door frame and hardware | Kawneer’s welded corner construction resists both the lever arm and torsion forces all doors experience | Tested to NFRC thermal standards

350/500 IR Entrances
Medium and wide entrances designed for hurricane prone regions provide extra strength to meet the stringent code requirements for windborne debris and blast protection

1-3/4” deep with 3-1/2” or 5” vertical stiles and top rails and 6-1/2” bottom rails | Optional 7-1/2” and 10” bottom rails available | Square glass stops with options for interior silicone, 3M VHB tape or dry gaskets for impact resistant glazing | Single acting with offset pivots, butt hinges or continuous geared hinge | M.S. 3-point locks, M.S. locks with manual flush bolts or panic hardware options | Adjustable astragal and bottom rail sweep | Kawneer Sealair bulb polymeric weather stripping in door frames | Tested to meet current codes requiring protection of openings in windborne debris regions: ASTM E 1886, E 1996 and Florida Building Code TAS 201, 202 and 203 | Blast tested per ASTM F 1642 | Kawneer’s welded corner construction resists both the lever arm and torsion forces all doors experience | Tested to NFRC thermal standards

2000T Terrace Doors
Designed for use in condominiums, lofts, apartments and hotels

Single or pair – outswing or inswing | 2-1/4” deep door rails and stiles | Thermally broken door and frame | Tested per NAFS, AAMA/WDMA/CSA 101/I.S.2/A440 | Thermal tested per CAN/CSA A-440, AAMA 1503 and NFRC 100 | Stainless steel multi-point locks and options | Contemporary lever handle with finish options | Mitered door and frame corners with rigid heavy-duty clips | Three-way adjustable butt hinge | Double weatherstripping | Accommodates 1/4” to 1-1/8” infills | Low-profile threshold (single or pair – outswing doors only) | Factory glazed | Kawneer standard and custom finishes and colors | Two-color option | Tested to NFRC thermal standards

350/500 Heavy Wall™ Entrances

500 Tuffline™ Entrances and Trifab™ VG (VersaGlaze™)

2000T Terrace Doors, Arconic – Reynobond®
ACM 4 mm PE and 4 mm FR Panels
W Hotel, Austin, Texas
LEED® registered project
Architects: Andersson-Wise Architects, Design Architect, Austin, Texas, and BCKA Powell, Architect of Record, Dallas, Texas
Glazing Contractor: Win-Con Enterprises, New Braunfels, Texas
Photography: © CJBerg Photographics

500 Tuffline™ Entrances and Trifab™ VG (VersaGlaze™)
451T Framing
Pennsylvania State University School of Architecture and Landscape Architecture (SALA), State College, Pennsylvania
LEED® Gold certified
Architect: Overland Partners Architects, San Antonio, Texas
Glazing Contractor: Nittany Building Specialties, Port Matilda, Pennsylvania
Photography: © CJBerg Photographics

350 Heavy Wall™ Entrances

350 Heavy Wall™ Entrances

Kaufman Stadium, Kansas City, Missouri
Architect: Populous, Kansas City, Missouri
Glazing Contractor: The Bratton Corporation, Kansas City, Missouri
Photography: © Mark Kempf

2000T Terrace Doors, Arconic – Reynobond®
ACM 4 mm PE and 4 mm FR Panels
W Hotel, Austin, Texas
LEED® registered project
Architects: Andersson-Wise Architects, Design Architect, Austin, Texas, and BCKA Powell, Architect of Record, Dallas, Texas
Glazing Contractor: Win-Con Enterprises, New Braunfels, Texas
Photography: © CJBerg Photographics

500 Tuffline™ Entrances and Trifab™ VG (VersaGlaze™)
451T Framing
Pennsylvania State University School of Architecture and Landscape Architecture (SALA), State College, Pennsylvania
LEED® Gold certified
Architect: Overland Partners Architects, San Antonio, Texas
Glazing Contractor: Nittany Building Specialties, Port Matilda, Pennsylvania
Photography: © CJBerg Photographics

350 Heavy Wall™ Entrances

Kaufman Stadium, Kansas City, Missouri
Architect: Populous, Kansas City, Missouri
Glazing Contractor: The Bratton Corporation, Kansas City, Missouri
Photography: © Mark Kempf
Flushline™ Entrances
Single-acting entrances provide durability with design flexibility for applications such as schools and manufacturing facilities and applications where hurricane impact and blast protection is required. Offers a flush appearance with a face sheet of fiberglass-reinforced polyester (FRP) or aluminum in a variety of colors and captured on four sides by integral, extruded reglets. Heights range from less than 7’ to a maximum of 10’. Additional strength is achieved by the urethane foam core that interlocks with the aluminum and creates an extremely stable, durable entrance door. Paneline™ Exit Device with minimal 1-1/8” projection is available. Door vision lites are available in aluminum frames with 1/4” or 1” infill. Tested to NFRC thermal standards. 5 lb. per cubic foot poured-in-place closed-cell rigid urethane foam core (meets ASTM E84 rating with ≤ 450 smoke density and ≤ 25 flame spread). Tested for both large and small missile impact for windborne debris and blast mitigation.

260/360/560 Insulclad™ Thermal Entrances
Narrow, medium and wide stile, providing thermal efficiency for the entire building façade. Both the door and frame are thermally broken. Complete package of door, fully integrated door frame (with or without transoms) and integrated hardware. Stile face widths of 2-1/8”, 3-1/2” and 5”.

Narrow heights range from approximately 7’ to 8’ and widths from 3’ to 3’ 6”.

Medium Kawneer standard welded corner construction. Engineered for use with Kawneer’s Trifab™ VG 451T Framing Systems and 1600 Wall Systems™.

Entrance is single acting and mounted on offset pivots, butt or continuous geared hinges. Accepts glazing infill of 1”. Tested to NFRC thermal standards.

560 Insulclad™ Thermal Entrances, 1600UT System™
Curtain Wall, Trifab™ 451UT Framing
Community College of Denver – Confluence Building
Architect: OZ Architecture, Denver, Colorado
Glazing Contractor: Horizon Glass & Glazing Co., Inc., Denver, Colorado
Photography: © CJBerg Photographics

Paneline™ and Paneline™ EL Exit Devices
The only clues that this is an exit device are the “push” indication and unlocking action. Paneline™ Exit Devices have been large-missile hurricane impact and cycle tested. Pressure on the push panel quickly releases the door for emergency egress. Offers improved safety since Paneline™ cannot be chained or blocked. Available with 190/350/500 Standard Entrances, 350 Heavy Wall™ Entrances, 350/500 Tuffline™ Entrances and Flushline™ Entrances. Optional matching dummy panels are available for vestibule doors and fixed panels are available for side lites. Available with electric option for access control.

Left to right: EPT (electric power transfer) mounted to door in retrofit application; Paneline™ EL Concealed Rod Push Panel; Paneline™ EL Outside Control Switch.
HPS™ and HPX Monumental Sliding Doors
High performance designed to meet extreme conditions
HPS™ and HPX Monumental Sliding Doors have been hurricane impact and cycle tested.

HPS™ Sliding Doors are available in four different performance ranges for low- and medium-rise applications
- Tested for Performance Class and Grade HC60, HC80, HC100 and HC120
- Small-missile impact and cycle tested

HPX Sliding Doors are designed for high-rise coastal applications requiring greater wind load and superior water performance
- Tested for Performance Class and Grade HC160
- Large- and small-missile impact and cycle tested

1010/1010C and 1040 Sliding Mall Fronts
For single- and multi-track interior and exterior applications
- Available with both fixed and operable panels
- The 1010/1010C Sliding Mall Front has a low-profile multi-track that can be recessed or surface applied
- Interior applications only
- Accepts infills from 1/4” to 1”

The 1040 Sliding Mall Front is a single-track unit with three stacking options: parallel staggered, parallel even and 90°
- Accepts 1/4” infills

AA™3200 Thermal Sliding Doors
A high-performance sliding door that meets thermal, coastal and impact resistant requirements
Available in both high performance (HP) and impact resistant (IR) versions
- An IsoWeb™ thermal break meets current energy codes and allows a dual finish
- Accommodates 1” insulating and 1-5/16” insulating/laminated glass for improved thermal, acoustic and impact performance
- Large wheel, stainless steel tandem roller with precision ground sealed bearings provides smoother operation even on large/heavy panels
- Corrosion-resistant stainless steel locks and fasteners
- 2-1/4” standard sill provides an aesthetically pleasing smaller sightline
- Slab-to-slab operable panels can span up to 10’ tall
- Unique beveled profiles create architectural shadow lines, allowing commercial product to receive mid- to high-rise residential acceptance
- Multiple configurations: OX, XO, OXXO and OXOO
- Tested to NFRC thermal standards

990 Sliding Doors
Engineered for rain-battered high- and low-rise applications
Features an adjustable steel ball-bearing, tandem-roller assembly to assure trouble-free, smooth operation and positive weatherseals on all sides
- The manual sliding 990 is a complete system of door, door frame and hardware, available in four configurations
- Stile face width is 2-1/2” (63.5 mm) and the door accepts infills from 3/16” to 1” (4.8 mm to 25.4 mm)
- Withstands water infiltration at 10 PSF and meets or exceeds all criteria established by AAMA for ratings of C30, HC40 and HC60

990 Sliding Doors
Hurst Conference Center, Hurst, Texas
Architect: Ron Hobbs Architects, Garland, Texas
Glazing Contractor: Alliance Glass and Mirror Ltd., Keller, Texas
Photography: © Wes Thompson

1010 Sliding Mall Front (modified)
W Dallas Victory Hotel & Residence, Dallas, Texas
Architect: HKS, Inc., Dallas, Texas
Customer: Win-Con Enterprises, Inc., New Braunfels, Texas
Photography: © Blake Marvin - HKS, Inc.

HP™ Monumental Sliding Doors (modified)
Realm Condominiums, Atlanta, Georgia
Architect: The Preston Partnership, LLC, Atlanta, Georgia
Glazing Contractor: Glass Systems Inc., Lithonia, Georgia
Photography: © Jim Roof
**FRAMING**

**Trifab™ 400 Framing System**
Proven solution for storefront and low-rise applications
1-3/4” x 4” frame members
Accepts 1/8”, 1/4” and 3/8” monolithic infills
May be flush glazed from the inside or outside
Choice of screw spline, shear block or stick fabrication

**Trifab™ VG (VersaGlaze™) 450, Trifab™ VG 451, Trifab™ VG 451T and Trifab™ 451UT Framing Systems**
Built on the proven and successful Trifab™ platform, these framing systems offer design versatility with unmatched fabrication flexibility

**Trifab™ VG 450:** 1-3/4” x 4-1/2” frame members
accept 1/8”, 1/4” and 3/8” monolithic infills

**Trifab™ VG 451, 451T and Trifab™ 451UT:** 2” x 4-1/2” frame members accept infills up to 1-1/8”
Tested to NFRC thermal standards

Choice of front, center, back or multi-plane glass applications with VG frames
Choice of screw spline, shear block, stick or punched opening fabrication
High-performance (HP) flashing and HP interlock clip are engineered to eliminate the perimeter sill fasteners and their associated blind seals and are compatible with all glass planes
Flush glazed from either the inside or outside
Weatherseal is not silicone, but an ABS/Geloy™ extrusion offering a consistent sightline of 15/16” at every glass joint
Weatherseal allows complete inside glazing with no scaffolding or swing stages to run typical exterior silicone weatherseal
Trifab™ 451UT is designed for the most demanding thermal performance and employs a dual IsoLock™ thermal break
IsoLock™ thermal break option (Trifab™ VG 451T) and dual IsoLock™ thermal break (Trifab™ 451UT) are designed to AAMA TIR-A8 and tested to AAMA 505
U-factors, CRF values and STC ratings for Trifab™ VG 451T and 451UT vary and depend on glass
Project-specific U-factors are easily calculated using technical charts (see Kawneer.com or Architectural Manual)

**Trifab™ 601, 601T and 601UT Framing Systems**
Larger, more versatile span delivers more thermal options and more design choices
Three-in-one framing series includes the non-thermal Trifab™ 601, the single IsoLock™ thermal break Trifab™ 601T and the dual IsoLock™ thermal break Trifab™ 601UT
The greater system depth combined with three thermal performance options make this one of the most versatile framing systems available
2” x 6” frame members accept infills up to 1-1/8”
Tested to NFRC thermal standards
Glass pockets are aligned to the 4-1/2”-deep center set Trifab™ framing systems, allowing integration of the two system depths on the same façade
Screw spline fabrication
High-performance (HP) flashing and HP interlock clip are engineered to eliminate the perimeter sill fasteners and their associated blind seals
U-factors, CRF values and STC ratings for Trifab™ 601T and 601UT vary and depend on glass
Project-specific U-factors are easily calculated using technical charts (see Kawneer.com or Architectural Manual)
**EnCORE™ Thermal Framing System**
The two-piece, face-and-gutter system that offers thermal economy with numerous design options
Offers a broad selection of system depths and a 1-3/4” sightline | Accepts 1/4” and 1” glazing infills and can be quickly adapted to accept other infills in 1/8” increments | Two-piece assembly easily accommodates two-color finish options and curved applications | Glazing plane can be to the exterior or centered in the mullion | Can be structural silicone glazed | Choice of screw spline, shear block or punched opening fabrication | Type A (vertical members run through) or Type B (head and sill members run through) | Project-specific U-factors are easily calculated using technical charts (see Kawneer.com or Architectural Manual) | Tested to NFRC thermal standards

**IR 500/501 Framing System**
A center-glazed storefront framing system for hurricane impact/windborne debris requirements
2-1/2” x 5” frame members accept 9/16” and 5/8” impact or 1/4” non-impact infills (IR 500) | 2-3/4” x 5” frame members accept 1-5/16” impact or 1” non-impact infills (IR 501) | Flush glazed from the outside, with options for interior silicone seal or dry gasket | Screw spline fabrication | High-performance sill flashing | IR 501 tested to NFRC thermal standards | Hurricane impact and cycle tested | Blast tested per ASTM F 1642 | 350 IR singles or pairs of entrances available with 3-point lock, touch bar panic or Paneline™ panics

**IR 501T/501UT Thermal Framing System**
A center-glazed thermally broken storefront framing system for hurricane impact/windborne regions and blast mitigation projects
2-3/4” x 5” frame members accept 1-5/16” insulating laminated glass | Flush glazed from the exterior | Screw spline fabrication | High-performance sill flashing | Dual IsoLock™ thermal break for maximum thermal performance | Large- and small-missile hurricane impact and cycle tested | Tested to NFRC thermal standards | Blast tested per ASTM F 1642

**InFrame™ Interior Framing System**
An interior framing system that captures drywall
2” (50.8 mm) sightline x 6” (152.4 mm) depth members accept 1/8”, 1/4” or 3/8” infill | Screw spline joinery | Wraparound perimeter profile captures drywall | Accommodates standard Kawneer entrances | Features perimeter bulb gasket to compensate for variations in drywall thickness and inconsistencies

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**EnCORE™ Thermal Framing System**
Manitowoc Public Library, Manitowoc, Wisconsin
Architect: Engberg Anderson Design, Milwaukee, Wisconsin
Glazing Contractor: Sheboygan Glass Company, Inc., Sheboygan, Wisconsin
Photography: © Bob Freund

**IR 500 Framing System**
Tarpon Springs Public Safety Building, Tarpon Springs, Florida
Architect: Gee & Jenson Engineers Architects Planners Inc., West Palm Beach, Florida
Glazing Contractor: Ashe Glass & Mirror, Temple Terrace, Florida
Photography: © Gordon Schenck

**Trifab™ VG 451T (Thermal) Rear Glazed Framing**
Preston Pointe, Louisville, Kentucky
Architect: Potter & Associates Architects PLLC, Louisville, Kentucky
Glazing Contractor: Kentucky Mirror & Plate Glass Company, Louisville, Kentucky
Photography: © Moberly Photography Inc.
FINISHES

ANODIZED FINISHES
Long-lasting, protective coatings resist abrasion, corrosion and UV rays, and meet or exceed AAMA 611

Architectural Metals
Light satin is a Class I finish with a chrome-like brightness and light brushed texture | Available on a variety of products

Permanodic™ Clear Finishes
Available in Anodized Class I (#14) or Class II (#17)

Permanodic™ Color Finishes
Available in clear (Class I and Class II) and color (Class I) choices, including champagne, black, light bronze, medium bronze and dark bronze

PAINTED FINISHES
Fluoropolymer Coatings – Enduring color with high performance and durability
Available in many standard choices and unlimited custom colors | These include Permafluor™ and Permadize™ finishes, which meet or exceed AAMA 2604 or AAMA 2605

Powder Coatings – Create a green element with solvent-free high performance, durability and scratch resistance
Permacoat™ finishes available in 24 standard colors | Powder coatings meet or exceed AAMA 2604

NOTICE
Laws and building and safety codes governing the design and use of windows, glazed entrance, framing, curtain wall and overhead glazing products vary widely. Kawneer does not control the selection of product configuration, operating hardware or glazing materials, and assumes no responsibility thereof.

Information contained in this catalog is subject to change without notice.

OTHER PRODUCTS FROM KAWNEER
Curtain Wall & Overhead Glazing 08 44 00; Windows 08 51 00

FOR MORE INFORMATION
Visit Kawneer.com for more detailed information, including the most current Guide Specifications, CAD libraries and BIM product models.

COVER PHOTO:
Trifab™ 451 Framing System, 500 Wide Stile Entrances with 10" Bottom Rails (interior application shown)
North American corporate headquarters of Saint-Gobain and CertainTeed, Malvern, Pennsylvania
Architect: Bernardon, Kennett Square, Pennsylvania
and Jacobs, Philadelphia, Pennsylvania
Glazing Contractor: Malvern Glass, Malvern, Pennsylvania
Photography: © Jeffrey Totaro

HPS™ Monumental Sliding Doors
Atlantis Casino & Resort, Paradise Island (Nassau), Bahamas
Architect: HKS, Inc., Dallas, Texas
Glazing Contractor: Commonwealth Building Supply Ltd., Nassau, Bahamas
Photography: © Gordon Schenck