

350 and 500 Tuffline® Entrances

Entrance Systems that
are Tougher than
all the Rest



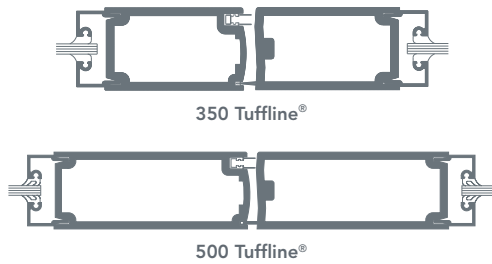
Colorado Convention Center, Denver, CO
Architect: Fentress Bradburn Architects Ltd., Denver, CO
Glazing Contractor: Elward Construction, Lakewood, CO

Kawneer's 350 and 500 Tuffline® Entrances are a complete system of door, frame and hardware, designed and engineered to create total performance. Total toughness. For schools, university buildings, shopping malls, stadiums and convention centers. For any building entrance where traffic is heavy and the potential for abuse is high. The choice is in the stiles – 350 Tuffline® has a 3-1/2" wide stile, while 500 Tuffline® has a 5" wide stile.

Performance

Tuffline® Entrances are much more than typical, heavy-wall doors. The walls are heavier – 3/16" throughout the doors and frames, with 5/16" wall thicknesses wherever hinging/pivoting hardware is applied. Tuffline® has heavy duty hinges and pivots directly mounted to these extra reinforced parts of the doors and frames. There is no cut away material that can weaken the members and no reinforcement plates to come loose. 350 and 500 Tuffline® are thicker with a door depth of 2 inches. Their 2" x 4-1/2" frame sight lines have the substantial quality necessary in extra tough entrances.





Other heavy wall doors are installed in standard door frames, so there's a risk of their hardware pulling out of the frames. But not 350 and 500 Tuffline®. The door frames have 3/16" walls engineered to match the doors' intrinsic toughness. The Tuffline® door frame design interlocks with the special door stile extrusions to provide continuous security and ability to withstand all types of weather. Heavy duty steel brackets tie the threshold into the frame, so Tuffline® Entrances are more durable and long lasting.

350 and 500 Tuffline® Entrances have corner construction that join stiles to rails by mechanical clips with two high strength fasteners, 3/16" steel nut plates, two SIGMA deep penetration plug welds and two SIGMA fillet welds – a total of 16 welds per door. The corner construction comes with a Limited Lifetime Warranty and effectively resist the lever arm and torsion forces that constantly act on doors.

Because a tough entrance needs to stand up to onslaughts of all kinds, 350 and 500 Tuffline® Entrances are available with panic hardware options, including Kawneer's Paneline® exit devices.



Comerica Park Stadium, Detroit, MI
 Architects: HOK Sport Facilities Group, Kansas City, MO;
 Smith, Hinchman and Grylls (SH&G), Detroit, MI;
 Rockwell Group, New York, NY
 Glazing Contractor: Universal Glass & Metals, Inc., Detroit, MI

Aesthetics

Despite heavy walls and reinforcements, 350 and 500 Tuffline® deliver the same clean aesthetics you expect in Kawneer Entrance Systems, including a choice of beveled or square glass stops for various glazing options. There's a door stile option that accepts the use of continuous hinges. And a one-piece cross rail that matches the use of continuous hinges. And a one-piece cross rail that matches the Paneline® Panic Device sight line. With these options, Tuffline® provides more design potential.

When it's a tough call, there's 350 and 500 Tuffline®. Complete entrance systems engineered for performance. For protection. For design flexibility. For endurance. And tougher than the rest.

For the Finishing Touch

Permanodic® Anodized finishes, available in Clear (Class I and Class II) and Color (Class I) in Champagne, Black, Light Bronze, Medium Bronze and Dark Bronze.

Painted Finishes, including fluoropolymer that meet or exceed AAMA 2605, are offered in many standard choices and an unlimited number of specially-designed colors.

Solvent-free powder coatings add the "green" element with high performance, durability and scratch resistance that meet the standards of AAMA 2604.



Fossil Ridge High School, Poudre School District, Ft. Collins, CO
 Architect: RB + B Architects, Inc., Ft. Collins, CO
 Glazing Contractor: B & W Glass, Inc., Cheyenne, WY

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