



# > YHS 50 FI

Impact Resistant and Blast Mitigation  
Storefront System for Insulating Glass



YKK AP Hurricane & Blast Solutions

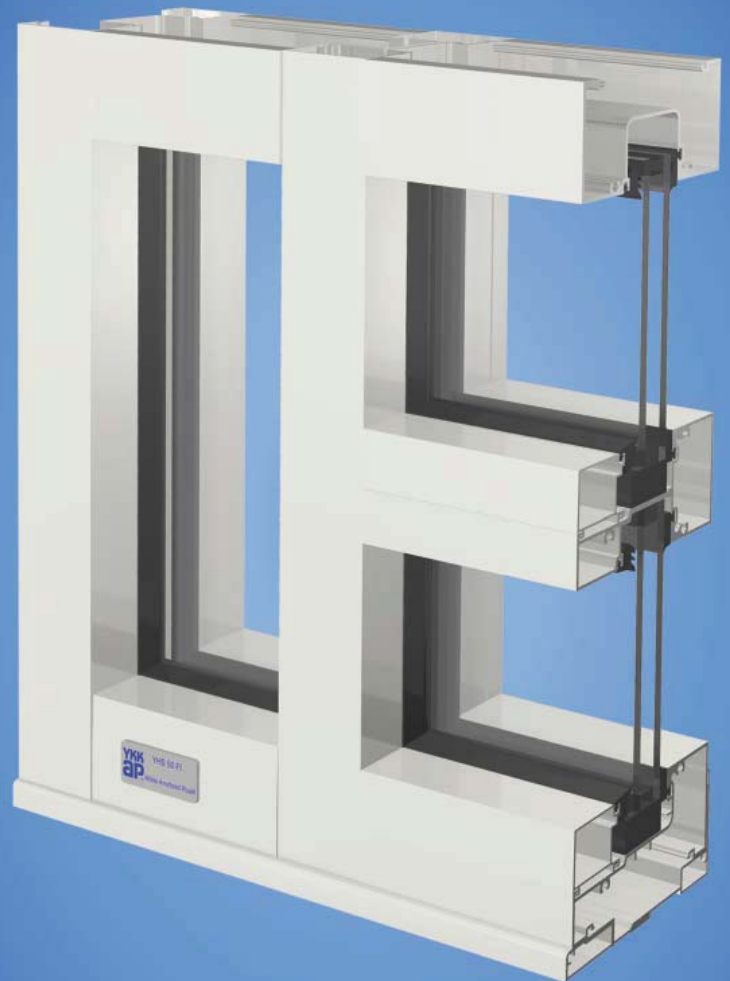
## SYSTEM DESCRIPTION:

YHS 50 FI is a high performance storefront system designed for insulating glass 1" to 1-5/16" thick and tested to meet the most demanding conditions. With varied infill and components, YHS 50 FI can meet the requirements for Impact Resistance, Blast Mitigation or both. The system features the Model 35H entrance door with maximum-security dead bolts or optional exit devices for egress requirements.

## OPTIONS & FEATURES:

- Large & Small Missile
  - ◆ Small Missile is Dry Glazed
  - ◆ Large Missile is Wet or Dry Glazed
- ASTM E 1886 / 1996, TAS 201 – 203
  - ◆ Tested to +/- 70 psf \*
  - ◆ Florida State-Wide Product Approval
  - ◆ Approved for High Velocity Hurricane Zone
- Blast Mitigation
  - ◆ YHS 50 FI meets UFC 4-010-01 prescriptive standard in accordance with 2007 revisions.
  - ◆ Model 35H - "Low Hazard" per ASTM F 1642 Test @ 6 psi / 41 psi-ms

\*Contact YKK AP Engineering for Job Specific Wind Load analysis at higher levels.



# > YHS 50 FI

## Impact Resistant and Blast Mitigation Storefront System Specifications

### 1.01 SUMMARY

- A. Section includes: Aluminum Storefront Systems
  - 1. YKK AP Series YHS 50 FI Impact Resistant Storefront System (Insulated Glazing)
- B. Related Sections:
  - 1. 08410 35H Impact Resistant Heavy Duty Swing Doors.
  - 2. Glass: Contact YKK AP for approved glass types.
  - 3. Glazing: Dow Corning® 995 Structural Silicone for large missile.

### 1.02 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide aluminum storefront systems that comply with performance requirements indicated, as demonstrated by testing manufacturers assemblies in accordance with Florida Building Code Protocol TAS-201, TAS-202 and TAS-203.
  - 1. Air Infiltration: Completed storefront systems shall have 0.06 CFM/FT<sup>2</sup> (1.10 m<sup>3</sup>/h·m<sup>2</sup>) maximum allowable infiltration when tested in accordance with ASTM E 283 at differential static pressure of 6.24 psf (299 Pa).
  - 2. Water Infiltration: No uncontrolled water when tested in accordance with ASTM E 331 (or when required, field tested in accordance with AAMA 503) at test pressure differential of: 12 PSF (575 Pa). Fastener Heads must be seated and sealed against Sill Flashing on any fasteners that penetrate through the Sill Flashing.
  - 3. Wind Loads: Completed storefront system shall withstand wind pressure loads normal to wall plane indicated:
    - a. Exterior Walls:
      - 1) Positive Pressure: 70 psf.
      - 2) Negative Pressure: 70 psf.
  - 4. Deflection: Maximum allowable deflection in any member when tested in accordance with ASTM E 330 with allowable stress in accordance with AAMA Specifications for Aluminum Structures.
    - a. L/175 or 3/4" (19.1mm) maximum.
  - 5. Thermal Movement: Provide for thermal movement caused by 180 degrees F. (82.2 degrees C.) surface temperature, without causing buckling stresses on glass, joint seal failure, undue stress on structural elements, damaging loads on fasteners, reduction of performance, or detrimental effects.

### 2.01 MANUFACTURERS

- A. Acceptable Manufacturers: YKK AP America Inc.
  - 1. Storefront System: YKK AP YHS 50 FI Impact Resistant Storefront System.
- B. Storefront Framing Systems:
  - 1. Description: Center set, exterior flush glazed; jambs and vertical mullions continuous; head, sill, intermediate horizontal attached by screw spline joinery. Continuous and wept sill flashing.
  - 2. Components: Manufacturer's standard extruded aluminum mullions, entrance doors, framing, and indicated shapes, perimeter anchor fillers and steel reinforcing as required.
  - 3. Glazing: Manufacturer's standard glazing stops with EPDM glazing gaskets to prevent water infiltration at the exterior and Dow Corning 995 Structural Silicone Adhesive with fixed stops at the interior for large missile. EPDM interior gasket for small missile and non-impact applications.

### 2.02 MATERIALS

- A. Extrusions: ASTM B 221 (ASTM B 221M), 6063-T5 and 6063-T6 Aluminum Alloy.

### 2.03 ACCESSORIES

- A. Manufacturer's Standard Accessories:
  - 1. Fasteners: Zinc plated steel concealed fasteners; Hardened aluminum alloys or AISI 300 series stainless steel exposed fasteners.
  - 2. Glazing: Setting blocks, edge blocks, and spacers in accordance with ASTM C 864, shore durometer hardness as recommended by manufacturer; Glazing gaskets in accordance with ASTM C 864.
  - 3. 0.050 Aluminum Sill Flashing End Dams must have 3 point attachment.

### 2.06 FINISHES

- A. Anodic Coating: Electrolytic color coating followed by an organic seal applied in accordance with the requirements of AAMA 612.
- B. High Performance Organic Coating Finish: Type Factory applied two-coat 70% Kynar resin by Arkema or 70% Hylar resin by Solvay Solexis, fluoropolymer based coating system, Polyvinylidene Fluoride (PVF-2), applied in accordance with YKK AP procedures and meeting AAMA 2605 specifications.

For additional information on architectural aluminum products offered by YKK AP America Inc. visit our web site at [www.ykkap.com](http://www.ykkap.com).



# > Model 35H

YKK AP's ProTek® Impact Resistant and Blast Mitigating Entrances



YKK AP Hurricane & Blast Solutions

## Protection You Can Count On

The industry's most durable hurricane impact / blast mitigation entrance system just got better. In addition to a comprehensive array of locking and hinging options, this product is now available with 1" laminated insulating glass. New mid rail and bottom rail options provide design flexibility for the specifier.

YKK AP has also addressed ongoing maintenance in abusive environments, such as schools and military bases. To reduce maintenance costs choose either rim panic exit devices combined with an impact rated aluminum removable mullion or single point locks paired with flush bolts on the inactive panel. These institutional grade entrance systems provide maximum security under the most demanding conditions without the need for steel reinforcing. They also integrates with YHS storefront and YHC curtain wall framing systems.

Model 35H entrances are Large and Small Missile Impact resistant tested as well as Blast Mitigation Tested. With the expansion of hardware and performance options, they are your single source for hurricane resistant, government, and DoD applications.

## Product Benefits

- Large & Small Missile Impact – To 90 PSF
- Florida Product Approval – HVHZ
- Blast Mitigation Testing – ASTM F 1642 – Level 2
- YKK AP VersaJamb® Door Frame
- Water Performance – ASTM E 331 – 10.5 PSF



# > Model 35H

YKK AP's ProTek® Impact Resistant and Blast Mitigating Entrances

## Redesigned Glazing Pocket

Glazings for ¼" to 1" can be accommodated with a variety of glazing stops and gaskets.

## Thermal Performance

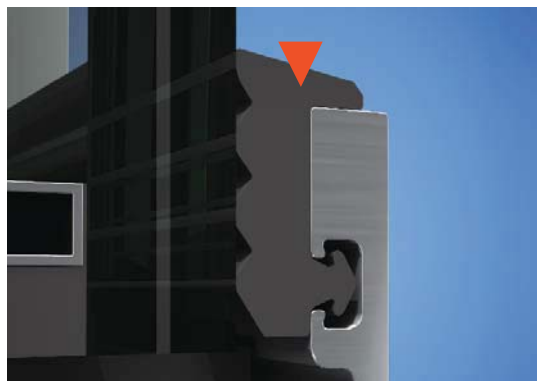
Improved thermal performance can be achieved with Insulating Glass. Entrances have been thermally tested utilizing insulated glass with 0.29 center of glass "U" factor.

## Integral Muntins

For increased aesthetic possibilities Insulating Glass units can be ordered with internal muntins.

## Glazing Options

For reduced installation labor, dry glaze solutions (to 90 PSF) are available. Wet and Dry Glaze options are available for both hurricane impact and blast mitigation.



## Standard Entrances

- Singles: 3'-0" x 7'-0" & 3'-0" x 8'-0"
- Pairs: 6'-0" x 7'-0" & 6'-0" x 8'-0"
- Rixson Pivot, Butt Hung and Continuous Hinge
- Single and 3-Point Locks for Single Doors, 5-Point Locks for Pairs
- Rim and CVR Exit Devices

## Custom Entrances

- Singles: Up to 4'-0" x 8'-0"
- Pairs: Up to 8'-0" x 8'-0"
- Pairs: Up to 7'-0" x 8'-0" with Rim Panic
- Standard and Custom Hardware

For additional information on architectural aluminum products offered by YKK AP America Inc. visit our web site at [www.ykkap.com](http://www.ykkap.com).