



# > YES 45 TU

Thermally Broken Center Set Storefront

## SYSTEM DESCRIPTION:

YES 45 TU is a thermally broken, center set, flush glazed storefront system for insulating glass. The system is thermally broken by means of a poured and debridged pocket that employs a patented process, ThermaBond Plus®, to greatly improve adhesion of the polyurethane to the extruded aluminum. Combining science and technology, ThermaBond Plus resolves the problem of adhesion and the resultant dry shrinkage associated with typical poured and debridged systems.

## OPTIONS & FEATURES:

- 2" Face by 4-1/2" Overall Depth
- Outside or Inside Glazed
- Accepts 1" Insulating Glass
- High Performance Sill Flashing
  - ◆ No Blind Seals
  - ◆ Tall back leg for enhanced water resistance
  - ◆ Patented 3 point attachment of end dam
- Patented Screw Spline or Shear Block Assembly
- ThermaBond Plus Thermal Break
- Model 20D/35D/50D Single Doors up to 4'-0" x 8'-0"
- Model 20D/35D/50D Pairs up to 8'-0" x 8'-0"



# > YES 45 TU Center Set

## Thermally Broken Storefront System Specifications

### 1.01 SUMMARY

- A. Section Includes: Aluminum Storefront Systems.
  - 1. YKK AP Series YES 45 TU Center Set Aluminum Storefront System.
- B. Related Sections:
  - 1. Glass and Glazing: Refer to Division 8 Glass and Glazing Section for glass and glazing requirements

### 1.02 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide aluminum storefront systems that comply with performance requirements indicated, as demonstrated by testing manufacturer's assemblies in accordance with test method indicated.
    - 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 at test pressure differential of: 10 PSF (479 Pa) (or when required, field tested in accordance with AAMA 503). 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:
        - 2) Negative Pressure:
      - b. Interior Walls (Pressure Acting in Either Direction):
    - 4. Deflection: Maximum allowable deflection in any member when tested in accordance with ASTM E 330 with allowable stress in accordance with AA Specifications for Aluminum Structures.
      - a. Without Horizontals: L/175 maximum.
      - b. With Horizontals: L/175 or L/240 + 1/4" (6.4mm) for spans greater than 13'-6" (4.1m) but less than 40'-0" (12.2m).
    - 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.
    - 6. Thermal Performance: When tested in accordance with AAMA 507, AAMA 1503 and NFRC 100:
      - a. Condensation Resistance Factor (CRFf): A minimum of 60.
      - b. Thermal Transmittance U Value: 0.45 BTU/HR/FT<sup>2</sup>/°F or less.
- Note: Thermal Performance for the glazed system as a whole will be affected by the characteristics of the glass specified and percentage of vision area.
- 7. Acoustical Performance: Acoustical Performance: When tested in accordance with AAMA 1801:
    - a. Sound Transmission Class (STC) shall not be less than 35 laminated.
    - b. Outdoor-Indoor Transmission Class (OITC) shall not be less than 29 laminated.

### 2.01 MANUFACTURERS

- A. Acceptable Manufacturers: YKK AP America, Inc.
  - 1. Storefront System: YKK AP YES 45 TU Storefront System.
- B. Storefront Framing System:
  - 1. Description: Center set, exterior flush glazed; jambs and vertical mullions continuous; head, sill, intermediate horizontal attached by screw spline joinery or shear block attachment.
  - 2. Components: Manufacturer's standard extruded aluminum mullions, 90 degree corner posts, entrance door framing, and indicated shapes.
  - 3. Thermal Barrier: Provide continuous thermal barrier by means of a poured and debridged pocket consisting of a two-part, chemically cured high density polyurethane which is bonded to the aluminum by YKK AP ThermaBond Plus®. Systems employing non structural thermal barriers are not acceptable.

### 2.02 MATERIALS

- A. Extrusions: ASTM B 221 (ASTM B 221M), 6063-T5 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: 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).