



Series 510-I Thermal 2 7/16" Heavy Commercial Projected Window

Configurations Project-In • Project-Out • Casement • Fixed

Series 510-I retains an AAMA Heavy Commercial and Architectural Grade rating to meet the most demanding specifications. Designed for educational, office or healthcare facilities, the 510-I window system is an attractive product for a wide range of applications. Multiple glazing options give you flexibility to meet specific design requirements. The thermal barrier is achieved with E-Strut™ thermal isolators providing enhanced thermal performance and allows dual finish capability. Offered with a complete line of sub frames, mullions and architectural sills the 510-I window provides the complete solution for your fenestration needs.

Features

Benefits

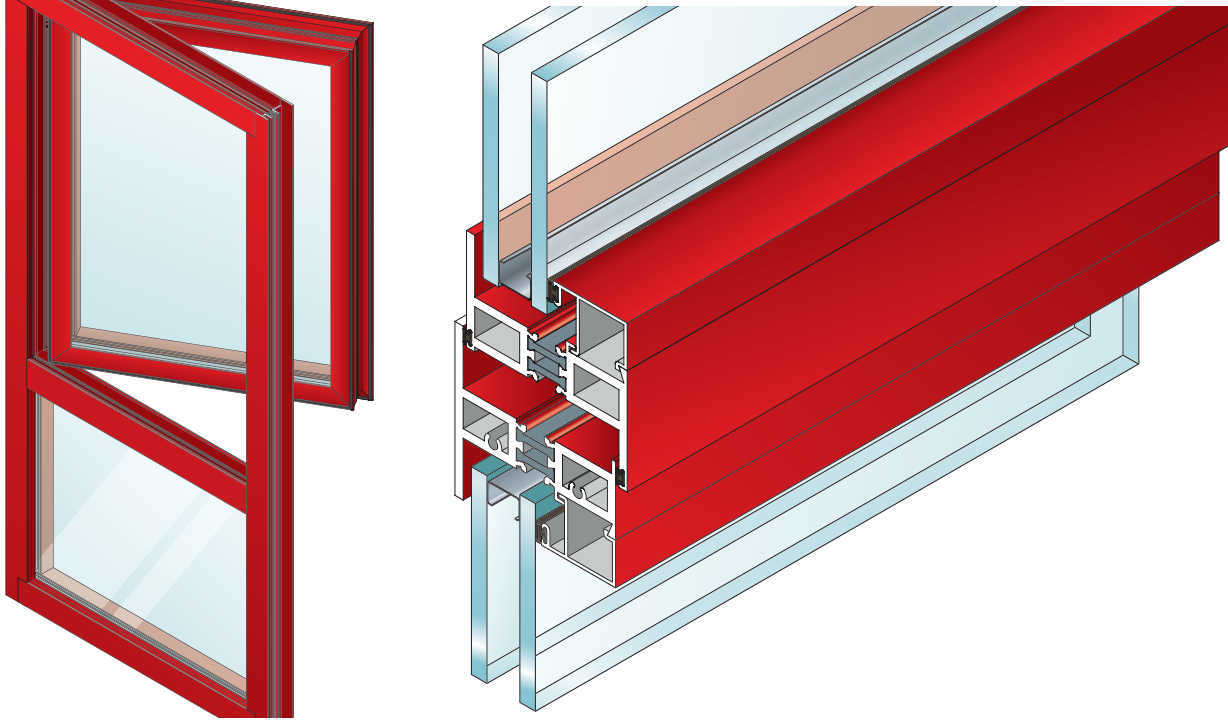
| | |
|--|---|
| E-Strut™ thermal isolator | Improves U-Value performance Dual finish capability Completely eliminates dry shrinkage |
| Vertical or horizontal stacking members | Increases configuration options |
| Accommodates glazing units from 3/16" to 2" depth | Expands design and energy savings options |
| Dual glazing with optional integral blinds | Improved energy savings and interior light or privacy control with low maintenance |
| Pressure equalization | Superior water resistance |
| Angle reinforced vent corners | Improves sash/vent rigidity |
| Screen frames of extruded aluminum alloy are available | Stronger more durable screens |
| Accessory line of subframes, mullions, and architectural sills | Allows custom designs with standard product |
| Anodized or painted finishes available | Unlimited options to answer economic and aesthetic concerns |

Manufacturer
Of
Architectural
And
Commercial
Grade
Windows,
Curtain Walls,
Entrances,
And
Storefronts

EFCO CORPORATION
1000 COUNTY RD
MONETT, MO 65708
800.221.4169



Series 510-I Thermal 2 7/16" Heavy Commercial Projected Windows



Performance Data

Projected Architectural Grade

| | |
|-----------------------|------------------------|
| AAMA Rating (A440-05) | AP-AW80 |
| Air Infiltration | <.10 cfm/sf @ 6.24 psf |
| Water | No Leakage @ 12.0 psf |
| Structural | ±120.0 psf |
| CRF-Frame (1503-98) | 59° |
| CRF-Glass (1503-98) | 53° |
| U-Value (1503-98) | .61° |
| U-Value (NFRC-97) | .59° |

A = Estimated values and/or designations
 B = Non-standard size or configuration
 C = Dual glazed
 D = 1" Insulated - 1/4" clear, 1/2" air, 1/4" clear
 E = 1" Insulated - 1/4" clear (Low Emissivity), 1/2" air, 1/4" clear
 F = 1" Insulated - 1/4" clear (Low Emissivity), 1/2" argon, 1/4" clear
 G = 1" Insulated - 1/4" clear, 1/2" air, 1/4" clear (Low Emissivity)

Casement Architectural Grade

| | |
|----------------------|------------------------|
| AAMA Rating (101-97) | C-AW90 |
| Air Infiltration | <.10 cfm/sf @ 6.24 psf |
| Water | No Leakage @ 12.0 psf |
| Structural | ±135.0 psf |
| CRF-Frame (1503-98) | 58° |
| CRF-Glass (1503-98) | 56° |
| U-Value (1503-98) | .60° |
| U-Value NFRC-97) | .60° |

| S-510-I Hardware Chart | Butt Hinges | 4-Bar Arms | Friction Adjuster | Key Release Limit Arm | Rotor Operator* | Cam Handle | Pole Ring Cam Handle | Pole Ring Pull** | Access Controlled Lock | Lift Lock |
|------------------------------------|-------------|------------|-------------------|-----------------------|-----------------|------------|----------------------|------------------|------------------------|-----------|
| Project-In | | S | | | | S | 0 | | 0 | |
| Project-Out | | S | | | | S | 0 | 0 | 0 | |
| Casement Inswing With 4-Bar Arms | | S | | | | S | 0 | | 0 | |
| Casement Outswing With 4-Bar Arms | | S | | | | S | 0 | | 0 | 0 |
| Casement Inswing With Butt Hinges | S | | 0 | 0 | | S | 0 | | 0 | |
| Casement Outswing With Butt Hinges | S | | S | 0 | 0 | S | 0 | | 0 | 0 |

Some size restrictions may apply depending on hardware selected.
 *-Casements requiring rotor operators will be furnished with lift locks, providing vents meet minimum width requirements.
 **-Pole ring pull will be furnished on project-out vents when optional pole ring cam handle is selected.

0 -Optional
 S -Standard
 blank - N/A

| S-510-I Glazing Chart | Polycarbonate | | | Glass or Panel | | | | | | | | | | | | | | | | |
|------------------------------|---------------|-------|------|----------------|--------|-------|--------|------|---------|------|------|------|------|----|--------|--------|--------|--------|----|---|
| | 1/8" | 3/16" | 1/4" | 1/8" | .156"* | 3/16" | .200"* | 1/4" | 1/4"*** | 1/2" | 5/8" | 3/4" | 7/8" | 1" | 1-1/8" | 1-1/4" | 1-1/2" | 1-3/4" | 2" | |
| Monolithic & Insulated Glass | | A | A | | A | A | A | A | | A | | A | A | A | | | | A | A | A |
| Dual Glazing | Exterior Lite | I | I | | I | I | I | I | | I | | I | | | | | | | | |
| | Interior Lite | | A | A | | A | A | A | A | | | | | | | | | | | |

*-Obscure Glass Thickness
 **-Laminated Glass Thickness

A-Available Glazing Option
 I-Internal Blinds Can Be Used With This Type of Dual Glazing
 blank - N/A

Series 510-I Thermal 2 7/16" Heavy Commercial Projected Windows



Main Frame Construction

The frame is constructed from .125" nominal material wall thickness aluminum of 6063-T6 alloy with a depth of 2 7/16". An equal leg frame is standard. Corners are of screw spline construction and back sealed with a small-joint seam sealer. See Illustration 1.

Vent Frame Construction

The 2 7/16" deep vent consists of tubular aluminum members with .125" nominal material wall thickness of 6063-T6 alloy. Vent corners are mitered, angle-reinforced, crimped, cold epoxy welded, and back sealed with a small-joint seam sealer. See Illustration 2.

Weather Stripping

All vents are dual weather-stripped with a dual durometer Santoprene® gasket. The exterior gasket is intentionally omitted at the vent bottom rail for project-out vents and at the vent top rail for project-in vents. This allows the air to pressure equalize the void between the vent and frame. Each vent utilizes the pressure equalization technique for superior water resistance performance. Two holes or slots per vent through the window frame facilitate weepage.

Screens

Screen frames are extruded 6063-T6 aluminum alloy. Full width hinged wickets or fully hinged screens are available. 18 x 16 mesh screens are available in fiberglass and .011" diameter aluminum. 18 x 18 mesh screens are available in .009" diameter stainless steel.

Thermal Barrier

All frames and vents are thermally isolated with two thermal struts consisting of glass reinforced polyamide nylon, mechanically crimped in raceways extruded in the exterior and interior extrusions. See Illustration 3.

Hardware

Locking cam handles, access controlled locks, and keepers are of cast white bronze in a US25D finish. 4-bar arms are fabricated from stainless steel meeting AAMA 904.1 requirements. Butt hinges are fabricated from extruded aluminum of 6063-T6 alloy with stainless steel pins. See Hardware Chart for available hardware types.

Glazing

Windows are inside glazed with an extruded aluminum snap-in glazing bead. Glazing of 3/16" to 2" can be accommodated. Dual glazing is also available in 1/8" and 1/4" glass. Between the glass aluminum blinds are available with dual glazed windows. See the Glazing Chart for the exact size.

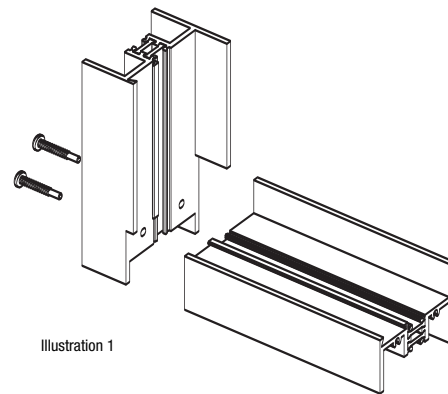


Illustration 1

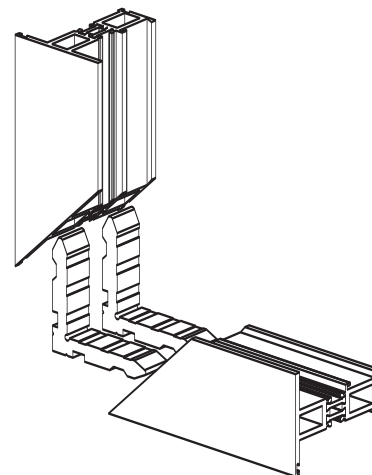


Illustration 2

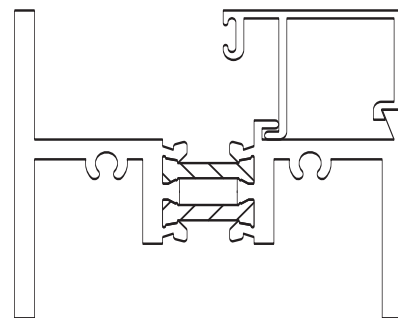
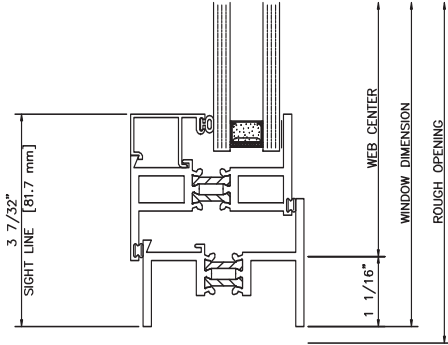
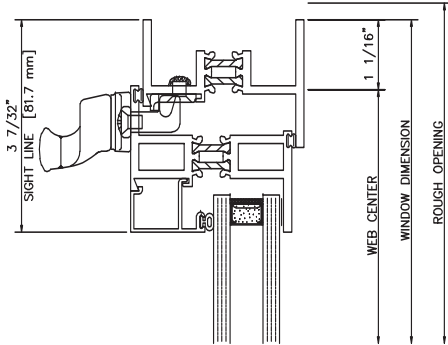


Illustration 3

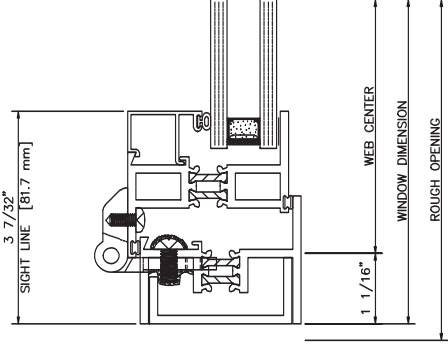
408 JAMB



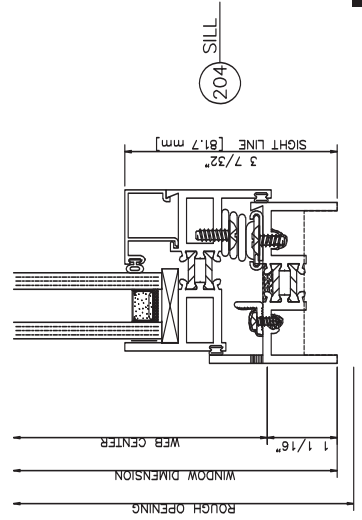
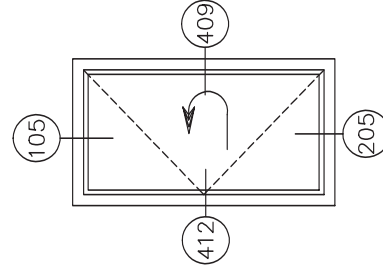
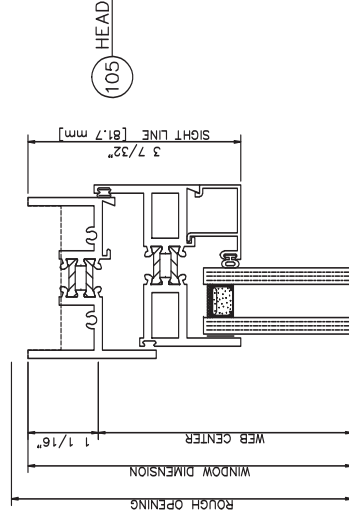
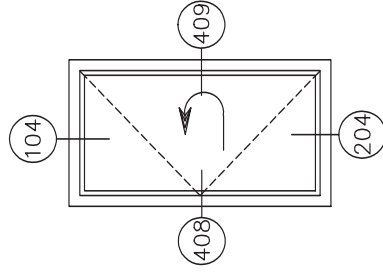
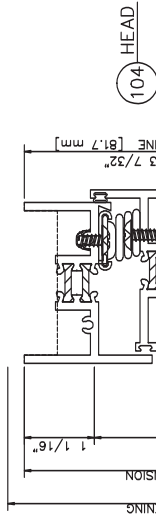
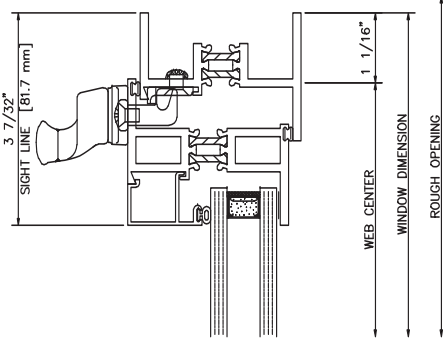
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412 JAMB



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510-I Inside Glazed

Casement In • Left Swing • 4 Bar Arms • Cam Lock

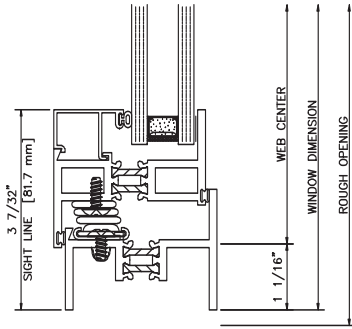
510-I Inside Glazed

Casement In • Left Swing • Butt Hinge • Cam Lock

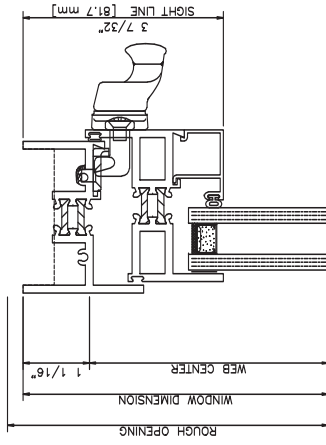
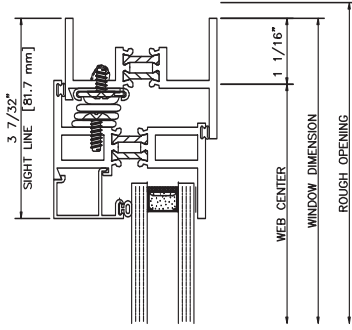
510-I Inside Glazed

Project In

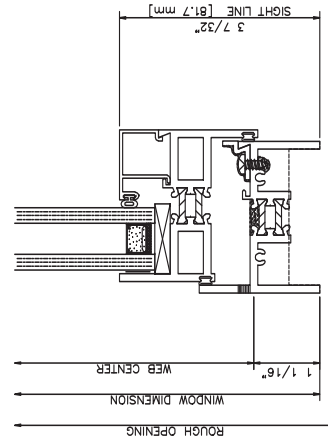
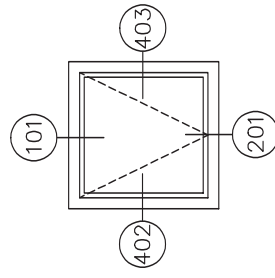
402 JAMB



403 JAMB



101 HEAD

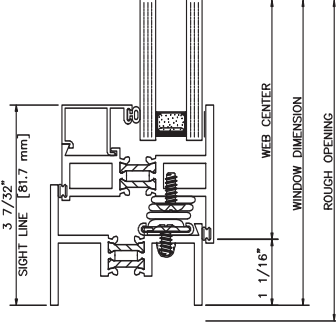


201 SILL

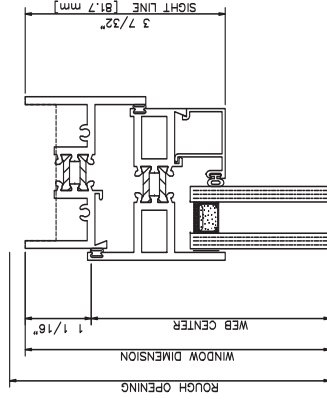
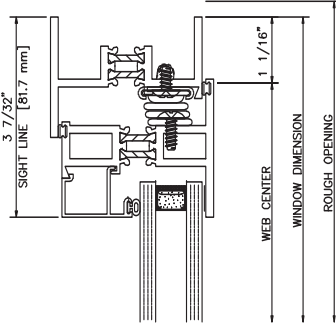
510-I Inside Glazed

Project Out

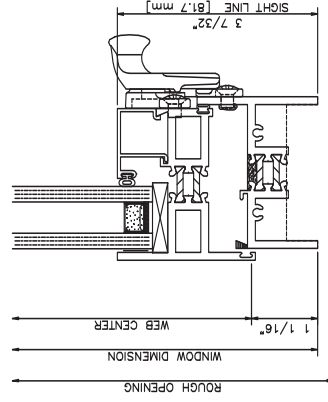
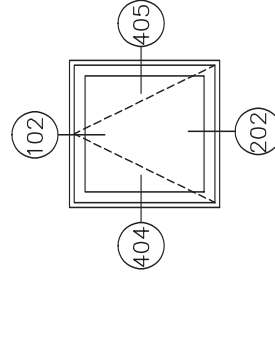
404 JAMB



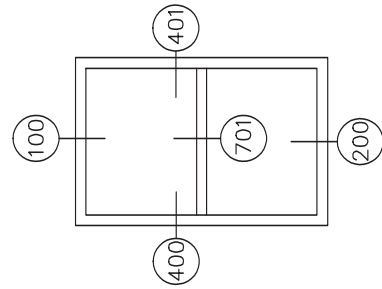
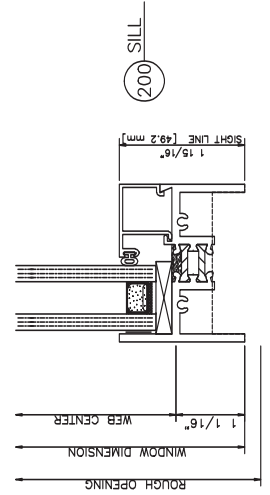
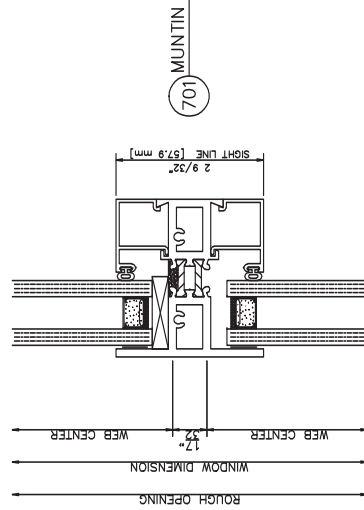
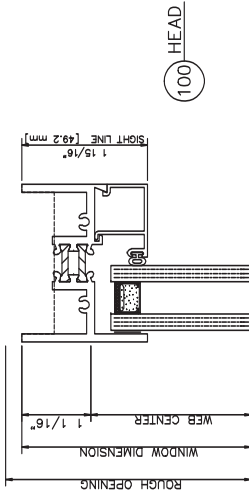
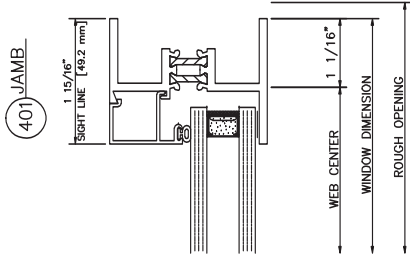
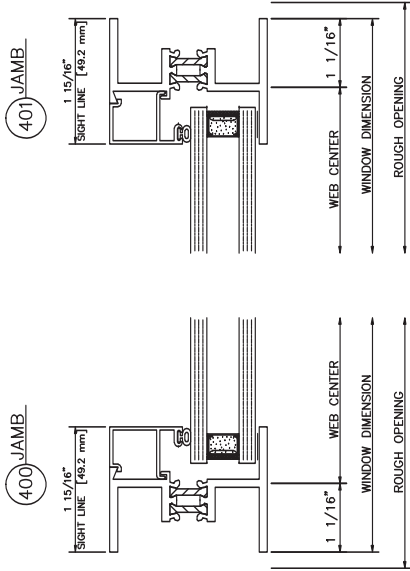
405 JAMB



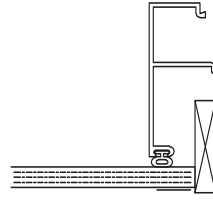
102 HEAD



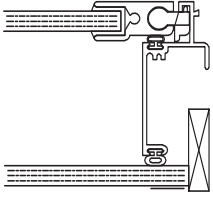
202 SILL



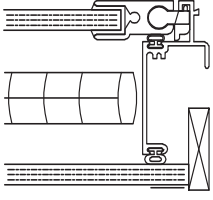
1/4" GLAZE



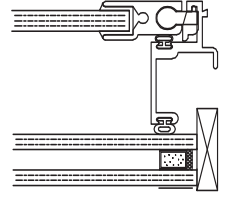
ER65 - 1/4" INTERIOR PANEL
1/4" GLAZE



ER65 - 1/4" INTERIOR PANEL
1/4" GLAZE
5/8" BLINDS



ER65 - 1/4" INTERIOR PANEL
5/8" INSULATED
3/16" - 3/16"



1" INSULATED
1/4" - 1/4"
WITH GRID

