Trulite
GLASS & ALUMINUM SOLUTIONS

# ALUMINUM ENTRANCES
# SERIES MS300XT ULTRA-THERMAL DOOR
# GUIDE SPECIFICATIONS

## SECTION 08 41 13 ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

**This suggested guide specification has been developed using the current edition of the Construction Specifications Institute (CSI) "Manual of Practice," including the recommendations for the CSI 3 Part Section Format and the CSI Page Format. Additionally, the development concept and organizational arrangement of the American Institute of Architects (AIA) MASTERSPEC Program was recognized in the preparation of this guide specification. Neither CSI nor AIA endorse specific manufacturers and products. The preparation of the guide specification assumes the use of standard contract documents and forms, including the "Conditions of the Contract," published by the AIA.**

## PART 1 – GENERAL

### 1.01 Summary

A. Section Includes: Entrances by Trulite Glass & Aluminum Solutions, including glass and glazing, door hardware and components.

1. Types of Trulite Glass & Aluminum Solutions Entrances:

a. MS300XT Ultra-Thermal Swing Door; 3-3/4" vertical face dimension, 3-1/2" top rail dimension, 6-1/2" bottom rail dimension and 2-3/8" depth.

EDITOR NOTE: BELOW RELATED SECTIONS ARE SPECIFIED ELSEWHERE. HOWEVER, **TRULITE GLASS & ALUMINUM SOLUTIONS** RECOMMENDS SINGLE SOURCE RESPONSIBILITY FOR ALL OF THESE SECTIONS AS INDICATED IN 2.07: SOURCE QUALITY CONTROL.

B. Related Sections:

1. Section 08450 – All Glass Entrances
2. Section 08491 – Sliding Doors
3. Section 08491 – Aluminum Mall Sliding Doors
4. Section 08520 – Aluminum Framed Window Wall
5. Section 08700 – Finish Hardware
6. Section 08900 – Curtain Wall Systems

### 1.02 References (Industry Standards)

EDITOR NOTE: REFER TO INDEX FOR ANY AND ALL APPLICABLE STANDARDS.

### 1.03 System Description

A. Entrance Performance Requirements:

1. Air Infiltration: For single acting offset pivot or butt hung entrances in the closed and locked position, the test specimen shall be tested in accordance with ASTM E 283 at a pressure differential of 1.57 PSF. Infiltration shall not exceed 1.0 CFM/ $FT^2$.
2. Structural Uniform Load Test:
   a. Pair of Doors: +- 55psf
3. Thermal Performance: When tested in accordance with AAMA 1503 and NFRC 102 based on 1" clear high performance insulating glass composed of 1/4" Clear SB70 Low-E (e=0.018*, #2), 0.50" Gap (Air), Aluminum Spacer (A1-D)
   a. Condensation Resistance Factor (CRF): A minimum of 50 (frame) and 61 (glass).
   b. Thermal Transmittance U-Value: 0.50 BTU/hr-$FT^2$-°F.
4. Acoustical Performance: When tested to ASTM E90 it shall not be less than:
   a. Sound Transmission Class (STC) - 30
   b. Outdoor–Indoor Transmission Class (OITC) - 27

5. Door Corner Construction: Manufacturer shall provide a limited lifetime warranty for the life of the door under normal use.

### 1.04 Submittals

A. General: Prepare, review, approve, and submit specified submittals in accordance with "Conditions of the Contract" and Division 1 Submittals Sections. Product data, shop drawings, samples, and similar submittals are defined in "Conditions of the Contract."

B. Quality Assurance/Control Submittals

1. Test Reports: Submit certified test reports showing compliance with specified performance characteristics.

### 1.05 Warranty

A. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.

B. Manufacturer's Product Warranty: Submit, for Owner's acceptance, manufacturer's warranty for entrance system as follows:

1. Warranty Period: Two (2) years from Date of Substantial Completion of the project provided however that the Limited Warranty shall begin in no event later than six months from date of shipment by Trulite Glass. In addition, door corner construction shall be supported with a limited lifetime warranty for the life of the door under normal use.

### 1.06 Quality Assurance

A. Qualifications:

1. Installer Qualifications: Installer experienced (as determined by contractor) to perform work of this section who has specialized in the installation of work similar to that required for this project and who is acceptable to product manufacturer.
2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction, approving acceptable installer and approving application method.

B. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements.

### 1.07 Delivery, Storage, and Handling

A. Ordering: Comply with manufacturer's ordering instructions and lead- time requirements to avoid construction delays.

B. Packing, Shipping, Handling, and Unloading: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Storage and Protection: Store materials protected from exposure to harmful weather conditions. Handle entrance doors and components to avoid damage. Protect entrance doors against damage from elements, construction activities, and other hazards before, during and after entrance installation.

## PART 2 – PRODUCTS

EDITOR NOTE: RETAIN BELOW ARTICLE FOR PROPRIETARY METHOD SPECIFICATION; ADD PRODUCT ATTRIBUTES, PERFORMANCE CHARACTERISTICS, MATERIAL STANDARDS, AND DESCRIPTIONS AS APPLICABLE. DO NOT USE THE PHRASE "OR EQUAL" / "OR APPROVED EQUAL," OR SIMILAR PHRASES. USE OF SUCH PHRASES MAY CAUSE AMBIGUITY IN THE SPECIFICATIONS DUE TO OF DIFFERENT INTERPRETATIONS AMONG THE DIVERGENT PARTIES OF THE CONSTRUCTION PROCESS AND READERS OF THE SPECIFICATIONS. SUCH PHRASES REQUIRE EXTENSIVE AND COMPLETE REQUIREMENTS (PROCEDURAL, LEGAL, REGULATORY, AND RESPONSIBILITY) FOR DETERMINING "OR EQUAL."

### 2.01 Manufacturers (Acceptable Manufacturers/Products)

A. Acceptable Manufacturers:

1. Address: Trulite Glass & Aluminum Solutions

403 West Park Court Suite #201
Peachtree City, GA 30269

Contact info:

a. Telephone: 678-593-9200
b. Email: info@trulite.com
c. Web Address: www.trulite.com

2. Proprietary Product(s)/System(s) Trulite Glass & Aluminum Solutions
   a. Series: MS300XT Ultra-Thermal Swing Door
   b. Finish/Color: (See 2.06 Finishes)

EDITOR NOTE: RETAIN BELOW FOR ALTERNATE MANUFACTURERS/PRODUCTS AS SPECIFIED IN THE CONTRACT DOCUMENTS. COORDINATE BELOW WITH BID DOCUMENTS (IF ANY), AND DIVISION 1 ALTERNATES SECTION. CONSULT WITH **TRULITE GLASS & ALUMINUM SOLUTIONS** FOR RECOMMENDATIONS ON ALTERNATE MANUFACTURERS AND PRODUCTS MEETING THE DESIGN CRITERIA AND PROJECT REQUIREMENTS. **TRULITE GLASS & ALUMINUM SOLUTIONS** RECOMMENDS OTHER MANUFACTURERS REQUESTING APPROVAL TO BID THEIR PRODUCT AS AN EQUAL, MUST SUBMIT THEIR REQUEST IN WRITING (10) DAYS PRIOR TO CLOSE.

B. Alternate (Manufacturers/Products): In lieu of providing below specified base bid/contract manufacturer, provide below specified alternate manufacturers. Refer to Division 1 Alternates Section.
   1. Base Bid/Contract Manufacturer/Product: Trulite Glass & Aluminum Solutions
      a. Product: Aluminum Entrances
      b. Series: MS300XT Ultra-Thermal Swing Door
      c. Product Attributes:
   2. Entrance Member Profiles
   3. Alternate #____ Manufacturer/Product:
      a. Product:
      b. Series:
      c. Product Attributes:
   4. Alternate # ___ Manufacturer/Product:
      a. Product:
      b. Series:
      c. Product Attributes:

C. Substitutions:
   1. General: Refer to Division 1 Substitutions for procedures and submission requirements.
      a. Pre-Contract (Bidding Period) Substitutions: Submit written requests ten (10) days prior to bid date.
      b. Post-Contract (Construction Period) Substitutions: Submit written request in order to avoid entrance installation and construction delays.
   2. Substitution Documentation:
      a. Product Literature and Drawings: Submit product literature and drawings modified to suit specific project requirements and job conditions.
      b. Certificates: Submit certificate(s) certifying substitute manufacturer (1) attesting to adherence to specification requirements for entrance system performance criteria.
      c. Test Reports: Submit test reports verifying compliance with each test requirement required by the project.
      d. Product Sample and Finish: Submit product sample, with specified finish and color.
   3. Substitution Acceptance: Acceptance will be in written form, either as an addendum or modification, and documented by a formal change order signed by the Owner and Contractor.

## 2.02 Materials

A. Aluminum (Entrances and Components):
   1. Material Standard: ASTM B 221; 6063-T6 alloy and temper
   2. Tolerances: Reference to tolerances for wall thickness and other cross-sectional dimensions of entrance members are nominal and in compliance with Aluminum Standards and Data, published by The Aluminum Association.

B. Glazing gaskets shall be EPDM elastomeric extrusions

C. Provide adjustable glass jack to help center the glass in the door opening.

## 2.03 Accessories

A. Fasteners: Where exposed, shall be aluminum, stainless steel or plated steel.
Perimeter Anchors: Aluminum. When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action.

EDITOR NOTE: REVISE BELOW FOR SPECIFIC HARDWARE FOR EACH SPECIFIC ENTRANCE TYPE. TO INSURE SINGLE SOURCE RESPONSIBILITY

AND TIMELY COORDINATION, **TRULITE GLASS & ALUMINUM SOLUTIONS** RECOMMENDS THAT YOUR FINISH HARDWARE REQUIREMENTS BE INCLUDED IN THIS SECTION. IF THESE REQUIREMENTS MUST BE FURNISHED UNDER THE "FINISH HARDWARE" SECTION OF THE SPECIFICATIONS, THE FOLLOWING STATEMENT SHOULD BE INCLUDED. "THE FINISH HARDWARE SUPPLIER SHALL BE RESPONSIBLE FOR FURNISHING PHYSICAL HARDWARE TO THE ENTRANCE MANUFACTURER PRIOR TO FABRICATION, AND FOR COORDINATING HARDWARE DELIVERY REQUIREMENTS WITH THE HARDWARE MANUFACTURER, THE GENERAL CONTRACTOR AND THE ENTRANCE MANUFACTURER TO INSURE THE BUILDING PROJECT IS NOT DELAYED." IF LOCK CYLINDERS FOR ALUMINUM DOORS ARE TO BE MASTER-KEYED, IT IS SUGGESTED THAT CYLINDERS BE INCLUDED UNDER THE "FINISH HARDWARE" SECTION OF THE SPECIFICATIONS.

B. Standard Entrance Hardware
   1. Weather-stripping:
      a. Meeting stiles on pairs of doors shall be equipped with a double row of wool pile weather-stripping. Gaps in weathering at lock location of meeting stile on door pair shall not be allowed.
      b. The door weathering on a single acting offset pivot or butt hung frame (single or pairs) shall have wool pile or EPDM bulb gasket (Necessary to meet specified performance tests.)
   2. Bottom Door Sweep: EPDM blade gasket sweep strip in an aluminum extrusion applied to the interior exposed surface of the bottom rail with concealed fasteners. (Note: Bottom Door Sweeps are required to meet specified performance for air infiltration)
   3. Threshold: Extruded aluminum, one piece per door opening, with ribbed surface.
   4. Center Pivots: [_____].
   5. Offset Pivots: [_____].
   6. Butt Hinge: [_____].
   7. Continuous Gear Hinge: [_____].
   8. Push/Pull: [_____] style.
   9. Panic Device: [_____].
   10. Closer: [_____].
   11. Security Lock/Dead Lock: Active Leaf [_____]; Inactive Leaf [_____].
   12. Latch Handle: [_____].
   13. Cylinder(s)/Thumb-turn: [_____].
   14. Electric Strike/Strike Keeper: [_____].

## 2.04 Related Materials

A. Sealants: Refer to Joint Treatment (Sealants) Section.
B. Glass: Refer to Glass and Glazing Section.

## 2.05 Fabrication

A. Entrance System Fabrication:
   1. Door Corner Construction: Inter-locking corner design conceals raw edges of the top and bottom rails, preventing daylight from showing through and twisting from occurring. Tie-rod construction allows for simple modifications of the doors without compromising the limited lifetime warranty.
   2. Accurately fit and secure joints and corners. Make joints hairline in appearance.
   3. Prepare components with internal reinforcement for door hardware.
   4. Arrange fasteners and attachments to conceal from view.

## 2.06 Finishes

EDITOR NOTE: SELECT BELOW FINISH AND COLOR FROM **TRULITE GLASS & ALUMINUM SOLUTIONS** STANDARD COLORS. POWDER COATINGS ARE AN EPA RECOMMENDED FINISHING METHOD FOR ARCHITECTURAL ALUMINUM AND FURTHER CONTRIBUTES TOWARDS THE "GREEN BUILDING INITIATIVE" OF THE U.S. GOVERNMENT. CUSTOM COLORS ARE AVAILABLE UPON REQUEST FROM **TRULITE GLASS & ALUMINUM SOLUTIONS**. OTHER POLYESTER POWDER COATINGS CONFORMING TO AAMA 2604 ARE AVAILABLE. CONSULT WITH YOUR **TRULITE GLASS & ALUMINUM SOLUTIONS** REPRESENTATIVE FOR OTHER SURFACE TREATMENTS AND FINISHES.

A. Shop Finishing:
   1. Color Anodizing Conforming to AA-M12C22A44, AAMA 6011, Color Anodic Coating (Color: # 21 Dark Bronze). (Standard)
   2. Clear Anodizing Coating Conforming to AA-M12C22A31, AAMA 611, Clear Anodic Coating (Clear #12) (Standard)
   3. AAMA 2605, Fluoropolymer Powder Coating (Color: _____).
   4. AAMA 2604, Polyester Powder Coating. (Color: _____).
   5. Other: Manufacturer _____ Type _____ (Color _____).

### 2.07 Source Quality Control

A. Source Quality: Provide aluminum entrances specified herein from a single source.
   1. Building Enclosure System: When aluminum entrances are part of a building enclosure system, including storefront framing, window wall systems, curtain wall system and related products, provide building enclosure system products from a single source manufacturer.
B. Fabrication Tolerances: Fabricate aluminum entrances in accordance with entrance manufacturer's prescribed tolerances.

## PART 3 – EXECUTION

### 3.01 Examination

A. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions. Verify openings are sized to receive entrance system and sill is level in accordance with manufacturer's acceptable tolerances.

EDITOR NOTE: COORDINATE BELOW ARTICLE WITH MANUFACTURER'S RECOMMENDED INSTALLATION DETAILS AND INSTRUCTIONS.

   1. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements, fabrication schedule with construction progress to avoid construction delays.

### 3.02 Installation

A. General: Install entrance system in accordance with manufacturer's instructions and AAMA storefront and entrance guide specifications manual.
   1. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
   2. Provide alignment attachments and shims to permanently fasten system to building structure.
   3. Align assembly plumb and level, free of warp and twist. Maintain assembly dimensional tolerances aligning with adjacent work.
   4. Set thresholds in bed of mastic and secure.
   5. Adjusting: Adjust operating hardware for smooth operation.
B. Related Products Installation Requirements:
   1. Sealants (Perimeter): Refer to Section 7 Joint Treatment (Sealants).
   2. Glass: Refer to Section 8 Glass and Glazing.
      a. Reference: ANSI Z97.1, CPSC 16 CFR 1201 and GANA Glazing Manual.

### 3.03 Cleaning and Protection

A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Installed products must be cleaned in accordance with manufacturer's instructions prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.
B. Protection: Protect installed product's finish surfaces from damage during construction. Protect aluminum entrances from damage from grinding and polishing compounds, plaster, lime, acid, cement, or other harmful contaminants. Remove and replace damaged aluminum entrances at no extra cost.



**END OF SECTION 08 41 13**