



135i / 150i Series Aluminum Thermally Broken Storefront Swing Doors

GUIDE SPECIFICATIONS – SECTION 084113 ALUMINUM FRAMED ENTRANCES AND STOREFRONTS Manko Window Systems, Inc. 135i / 150i Series Medium and Wide Stile Thermally Broken Entrance Doors

SECTION 084113 ALUMINUM FRAMED ENTRANCES AND STOREFRONTS (Thermally Broken)

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes

1. Furnish all necessary materials, labor and equipment for the complete installation of aluminum entrance systems as shown on the drawings and herein specified. Structural support of the framing system is not included.
2. Types of Manko Aluminum Entrances include
 - a. 135i Series; Medium stile Isobar, 3 11/16" nominal vertical face dimension, 2" depth, moderate to high traffic applications.
 - b. 150i Series; Wide stile Isobar, 5" nominal vertical face dimension, 2" depth, high traffic

1.02 SYSTEM PERFORMANCE REQUIREMENTS

A. Test Units

1. Air test unit shall be minimum size of 36" (914 mm) x 84" (2134 mm).

B. Test Procedures and Performances

1. Air Infiltration Test
 - a. With door sash closed and locked, test unit in accordance with ASTM E 283 at a static air pressure difference of 1.57 psf (75 Pa).
 - b. Air infiltration shall not exceed .50 cfm/SF (2.54 l/s·m²) of unit, for single doors.

1.03 SUBMITTALS

A. General Requirements

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

1.04 QUALITY ASSURANCE

- A. Submit certified independent laboratory test reports verifying compliance with all test requirements of 1.02 System Performance Requirements as requested by architect.
- B. Test reports shall be accompanied by the entrance door manufacturer's letter of certification stating that the tested door meets or exceeds the referenced criteria for the appropriate AAMA door type.
- C. Qualifications: Upon request, the manufacturer will provide written confirmation that the installer is authorized to install aluminum entrance products to be used on this project.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Packing, Shipping, Handling, and Unloading

1. Materials will be packed, loaded, shipped, unloaded, stored and protected in accordance with AAMA CW-10.

1.06 WARRANTY

A. Aluminum Entrance Warranty

1. Products: Submit a written warranty, executed by the aluminum entrance manufacturer, for a period of 2 years (10 years for insulated glass seal failure) from the date of manufacture, against defective materials or workmanship, including substantial non-compliance with applicable specification requirements and industry standards, which results in premature failure of the aluminum entrance, finish, factory-glazed glass, or parts, outside of normal wear.
 - a. In the event that the aluminum entrances or components are found defective, manufacturer will repair or provide replacements without charge at manufacturer's option.
 - b. Warranty for all components must be direct from the manufacturer (non-pass through) and non-prorated for the entire term. Warranty must be assignable to the non-residential owner, and transferable to subsequent owners through its length.
2. Installation: Submit a written warranty, executed by the aluminum entrance installer, for a period of 2 years from the date of substantial completion, against defective materials or workmanship, including substantial non-compliance with applicable specification requirements, which result in premature failure.
 - a. In the event that installation of aluminum entrances or components is found to be defective, installer will repair or provide replacements without charge at the installer's option.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturer
1. Drawings and specifications are based on:
 - a. Manko Window Systems, Inc. 135i Series Medium Stile Isobar Thermally Broken Aluminum Storefront Swing Door
 - b. Manko Window Systems, Inc. 150i Series Wide Stile Isobar Thermally Broken Aluminum Storefront Swing Door
 2. Base bid will be Manko Window Systems, Inc.
- B. Substitutions
1. Other manufacturers' products that meet or exceed specified design requirements may be considered. Submit the following information with request for substitutions at least ten (10) working days prior to bid date.
 - a. Test reports specified in 1.02 SYSTEM PERFORMANCE REQUIREMENTS
 - b. Full proposal details and samples specified in 1.03 SUBMITTALS
 - c. Copy of manufacturer's warranty specified in 1.06 WARRANTY
 - d. Other information as requested for evaluation
 2. Substitute products not pre-approved by the Architect via addendum will not be considered.

2.02 MATERIALS

- A. Aluminum (Entrances and Components)
1. Material Standard: ASTM B221; 6063-T5 or 6063-T6 alloy and temper.
 2. The door stile and rail face dimensions entrance door will be as follows:

Door	Vertical Stile	Top Rail	Bottom Rail	Bottom Rail Option
135i	3 11/16"	3 5/8"	7 1/2"	10"
150i	5"	5"	7 1/2"	10"
 3. Major door portions shall have a minimum wall thickness of .125"; glazing bead shall have .055".
 4. Thermal barrier consist of a revolutionary insulation thermal barrier of polyimide 6/6 nylon reinforced glass fibers.
 5. Frame portions shall be complete with head and jamb weatherstripping, threshold, and door sweep. Framing shall be 2 1/4" x 4 1/2"; 5450 series "Isobar" thermally broken storefront framing.
 6. 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. Fasteners, where exposed, shall be aluminum, stainless steel or zinc plated steel in accordance with ASTM A164. Perimeter anchors shall be aluminum or steel, providing the steel is properly isolated from the aluminum.

2.03 COMPONENTS

- A. Hardware
1. Hinging [Editor's note: Select from options as noted]
 - a. Continuous hinge
 - d. Provide hardware as specified in Section 08700 (Continuous hinge only)
 2. Locking [Editor's note: Select from options as noted]
 - a. Concealed vertical rod exit device; First Choice 3600 Series, ANSI Grade 1 and UL listed
 - b. Rim latching exit device; First Choice 3700 Series, ANSI Grade 1 and UL listed
 - c. Midrail recess mounted concealed vertical rod exit device; First Choice 3100 Series
 - d. Provide hardware as specified in Section 08700
 3. Push / Pull Handles [Editor's note: Select from options as noted]
 - a. 1" round offset 10" pull handle and push bar
 - b. 1" round offset 10" panic pull handle
 - c. Provide hardware as specified in Section 08700
 4. Closures [Editor's note: Select from options as noted]
 - a. Surface mounted closer
 - b. Overhead concealed closer
 - c. Provide hardware as specified in Section 08700

2.04 FABRICATION

- A. General
1. Major portions of the door sections shall have .125" (3 mm) wall thickness. Glazing stop sections shall have .055" (1.2 mm) wall thickness.
- B. Entrance Doors
1. Door stiles shall be no less than 3 11/16" (135 series); 5" (150 series) wide (not including glass stops).
 2. Door stiles and rails shall have overlap hairline joints at corners. Heavy concealed reinforcement brackets shall be secured with screws and tie rod.
 3. All doors shall have an adjusting mechanism in the top rail to provide for minor clearance adjustments.
 4. Thermal barrier consist of a revolutionary insulation thermal barrier of polyimide 6/6 nylon reinforced glass fibers.
 5. Weather stripping shall be dual textile skirting weatherseals and shall be installed in one stile of pairs of doors and in jamb stiles of center pivoted doors.
- C. Door stops shall include a bulb weather-strip that complies with ASTM E 2203 specification.
- D. Glazing
1. All units shall be dry glazed with extruded pressure fitting aluminum glazing stops, and a gasket that complies with ASTM E 2203 specification. See Section 08800 for glazing types.

2.05 FINISHES

A. Finish of Aluminum Components

1. Finish of all exposed areas of aluminum windows and components shall be done in accordance with the appropriate AAMA Voluntary Guide Specification shown (select from below).

Designation	Description	Standard	Color
AAM12C21A31	Clear - Class II	AAMA 611	Clear
AAM12C21A41	Clear - Class I	AAMA 611	Clear
AAM12C21A44	Electrolytically Deposited – Class I	AAMA 611	Champagne, Light Bronze, Medium Bronze, Dark Bronze, Black
	Organic Paint	AAMA 2603	As selected by Architect from manufacturer's standard colors - Suitable for INTERIOR Finishes
	Organic Paint	AAMA 2605	As selected by Architect from manufacturer's (Specify) standard or custom colors - suitable for INTERIOR or EXTERIOR finishes

PART 3 EXECUTION

3.01 EXAMINATION

A. Site Verification of Conditions

1. Verify that building substrates permit installation of entrances according to the manufacturer's instructions, approved shop drawings, calculations and contract documents.
2. Do not install entrances until unsatisfactory conditions are corrected.

3.02 INSTALLATION

A. Erection of Aluminum Framed Entrances

1. Install entrances with skilled tradesman in exact accordance with approved shop drawings, installation instructions, specifications, and AAMA 101 and 101/I.S.-2.
2. Entrances must be installed **plumb, square, and level** for proper weathering and operation.
3. All joints between framing and the building structure shall be sealed in order to secure a water tight installation.
4. Aluminum that is not organically coated shall be insulated from direct contact with steel, masonry, concrete, or dissimilar metals by bituminous paint, zinc chromate primer, non-conductive shims or other suitable insulating material.

3.03 PROTECTION AND CLEANING

- A. After completion of entrance installation, the General Contractor shall adequately protect exposed portions of aluminum surfaces from damage by grinding and polishing compounds, plaster, lime, acid, cement, or other contaminants. The General Contractor shall be responsible for the final cleaning. Manko Windows Systems, Inc. recommends mild soap and water to clean the aluminum surface of the doors.

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