

Welcome to the Titan Metal Products, Inc. Guide Specification System prepared as an aid to specifiers in preparing written construction documents. For specification assistance with specific product applications, please contact Titan Metal Products, Inc. To download an electronic copy, please visit www.titanmetalinc.com.

SPECIFICATION
SECTION 08 3460: DETENTION DOORS AND FRAMES
Titan Detention Rated Doors and Door Frames

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Detention rated doors and door frames
1. Titan Detention Rated Doors and Door Frames meeting ASTM F1450 Grades 1-4
 2. Applications includes:
 - a. Detention rated doors and door frames with detention requirement as specified.
 - b. Fire ratings for doors, door frames and glazing available.
 - c. Ballistic ratings for doors, door frames and glazing available.
- B. Related Sections:
1. Section 01 3323: Shop Drawings, Product Data and Samples.
 2. Section 08 1110: Steel Doors & Frames.
 3. Section 08 3453: Security Doors & Frames
 4. Section 08 5130: Steel Windows.
 5. Section 08 7100: Finish Hardware.
 6. Section 08 8000: Glazing.
 7. Section 08 7163: Detention Door Hardware.

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM):
1. ASTM F1450: Standard Test Methods for Hollow Metal Swinging Door Assemblies for Detention and Correctional Facilities.
 2. ASTM F1915: Standard Test Methods for Glazing for Detention Facilities.
 3. ASTM 1577: Standard Test Methods for Detention Locks for Swinging Doors.
- If fire ratings are required, add:*
4. *ASTM E119 Methods for Fire Tests of Building Construction and Materials.*
- B. Hollow Metal Manufacturers Association (HMMA):
1. NAAM/HMMA 863: Guide Specifications for Detention Security Hollow Metal Doors and Frames
- If fire and ballistic ratings are required, add:*
- C. Underwriters Laboratories, Inc. (UL):
1. *UL 752: Standard for Bullet-Resisting Equipment*
 2. *UL 10B: Standard for Safety of Fire Tests of Door Assemblies.*
 3. *UL 10C: Standard for Safety of Positive Pressure Fire Tests of Door Assemblies.*
 4. *UL 263: Fire Tests of Building Construction and Materials.*

If fire ratings are required, add:

D. National Fire Protection Association (NFPA):

1. NFPA 80: Fire Doors and Windows.
2. NFPA 251: Fire Tests of Building Construction and Materials.
3. NFPA 252: Fire Tests of Door Assemblies.

E. Standard Council of Canada (ULC):

1. ULC Standard CAN4-S101: Fire Tests of Building Construction and Materials.
2. ULC Standard CAN4-S104: Fire Tests of Door Assemblies.

F. Consumer Product Safety Commission (CPSC):

1. CPSC 16 CFR 1201: Safety Standard for Architectural Glazing Materials.

G. American National Standards Institute (ANSI):

1. ANSI Z97.1: Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.

H. Glass Association of North America (GANA)

1. GANA – Glazing Manual.
2. FGMA – Sealant Manual.

I. [American Recovery and Reinvestment Act

1. Section 1605, Title XVI Buy American Provision]

J. [Insert building code used by Authority Having Jurisdiction]

1.03 SYSTEM DESCRIPTION

A. Performance Requirements:

1. Detention Rating: Must meet ASTM F1450 Grades 1-4 and ASTM F1577 as specified. Detention rating of glazing must meet ASTM F1915 Grades 1-4 as specified.

If fire ratings are required:

2. Fire Rating: must meet 20, 45, 60, 90 or 120 minutes as specified.
3. Fire Resistive, Temperature Rise Door Assembly Certifications: must meet 60-90 minute fire resistive temperature rise door assemblies tested in accordance with NFPA 252, UL 10B, UL 10C and CAN4 S104. Must meet [250 degrees F] [450 degrees F] temperature rise door requirements.
4. Fire Protective Door Assembly Certifications: must meet 20-45 minute fire protective door assemblies shall be tested in accordance with NFPA 80, NFPA 252, UL 10B, UL 10C and CAN4-S104.

If ballistic ratings are required:

5. Ballistic Rating and Certifications: Meets UL 752 Levels 1-3 as specified.
6. Testing Laboratory: Test must be conducted by a nationally recognized independent testing laboratory.

If fire ratings are required:

7. Max. Door Opening Sizes: must meet up to 54” wide x 120” high for single doors. Continuous hinges required for max. door sizes.

B. Listings and Labels:

1. Detention rated doors and framing system shall be under current follow-up service by a nationally recognized independent laboratory approved by OSHA and maintain a current listing or certification. Assemblies shall be labeled in accordance with limits of listings.

C. Appearance:

1. Detention door and door frame assembly shall have a neat finished appearance with minimum joints at decorative cover intersections.

1.04 SUBMITTALS

A. Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedure Section.

1. Shop Drawings: Submit shop drawings showing layout, profiles and product components.
2. Samples: Submit samples for finishes, colors and textures.
3. Technical Information: Submit latest edition of manufacturer's product data providing product descriptions, technical data and installation instructions.

1.05 DELIVERY, STORAGE AND HANDLING

A. General: Comply with Division 1 Product Requirements Sections.

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

C. Delivery: Deliver materials to specified destinations in manufacturer's or distributor's packaging undamaged, complete with installation instructions.

D. Storage and Protection: Store off ground, under cover, protected from weather and construction activities and at temperature conditions recommended by manufacturer.

1.06 FABRICATION DIMENSIONS

A. Field Measurements: Verify actual measurements for openings by field measurements before fabrication. Show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1.07 WARRANTY

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

B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document. Manufacturer's warranty is not intended to limit other rights that the Owner may have under the Contract Documents.

1. Warranty Period: 5 years from date of shipping.

PART 2 PRODUCTS

2.01 MANUFACTURER – DETENTION RATED DOORS AND DOOR FRAMES

A. Manufacturer: Titan Detention Rated Doors and Door Frames as manufactured and distributed by Titan Metal Products, Inc.

1. Contact: 1891 Wardrobe Avenue Merced, CA 95341-6406; Telephone 209.386.1613; Fax 209.626.3285; email info@titanmetalinc.com; Web site www.titanmetalinc.com

B. Detention rated doors and door frames must be provided by a single-source, US manufacturer. Distributors of fire rated glass and framing are not to be considered as manufacturers. Materials for the project should be shipped together in the same shipment on the same truck.

C. Substitutions: No substitutions allowed.

2.02 MATERIALS – DOORS AND DOOR FRAMES

A. Detention rated doors and door frames meeting ASTM F1450 Grades 1-4 and ASTM F1577 as specified. Detention rating of glazing must meet ASTM F1915 Grades 1-4 as specified.

Properties:

1. Door profile: 5" rail and 2" frame standard. 10" ADA compliant bottom rail (can be modified with AHJ approval).
2. Maximum Sizes. Can be modified with AHJ approval:
 - a. Door: Nominal 3'0" wide x 7'0" high x 2" thick door.
 - b. Door Frame: 42" wide x 86" high. Minimum 2" faced door frame (fully welded corners); jamb width prepared for 2" door. Overall door frame prepared for installation in a concrete block wall or masonry assembly. 4" minimum throat opening. Fabrication must comply with UL-63.
3. Door Vision Panel: Glazing must meet ASTM F1915 Grades 1-4 as specified. Individual lites shall be permanently identified with a listing mark.
4. Internal framing: Internal tube steel framing shall conform to ASTM A501. Formed steel retainers shall be galvanized conforming to ASTM A527.
5. Fasteners: Type recommended by manufacturer.
6. Door constructed in accordance with the individual manufacturer's listings or in accordance with HMMA 861-06 and HMMA 850.

If fire ratings are required:

7. *Insulation: The framing system shall insulate against the effects of fire, smoke and heat transfer from either side. The perimeter of the framing system to the rough opening shall be firmly packed with mineral wool fire stop insulation or appropriately rated intumescent sealant.*
8. *Fire Rated Glazing: Must be supplied by SAFTI FIRST Fire Rated Glazing Solutions.*
9. *Glazing accessories: The glazing material perimeter shall be separated from the perimeter framing system with approved flame retardant glazing tape. The SuperLite™ glazing panel shall be caulked continuously around the edge to the tube steel frame*

utilizing neutral cure silicone. Silicone setting blocks recommended.

10. 60-90 minute doors meet 250 degrees F/450 degrees F at 30 minutes.

11. Maximum door opening sizes are 54 in. x 120 in. for single doors and 108 in. x 120 in. for pair doors. No intermediate rails required. For max. door sizes, continuous hinges may be required.

If ballistic ratings are required:

12. Ballistic ratings: Must meet UL 752 Levels 1-3.

2.03 FABRICATION

- A. Assemblies shall be furnished [knocked down for field assembly and will be glazed in the field] [assembled (should configurations and job site conditions allow)].
- B. Door assemblies shall be factory prepared for field mounting of hardware.
- C. Fabrication Dimensions: Fabricate to approved dimensions. The general contractor shall guarantee dimensions within required tolerance. Obtain approved shop drawings prior to fabrication.

2.04 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designing finishes.
- B. Covers shall be chemically cleaned and pretreated; then, finished with (choose one):
 - 1. High Performance Corafion Fluoropolymer Finish by PPG. Solid color to be selected from Titan's Standard Color Chart. Mica, XL, Gloss & Exotics are available at an additional charge.
 - 2. Stainless steel or aluminum clad.
 - 3. Clear, Bronze or Black Anodized.
 - 4. Acrylic urethane custom color.
 - 5. Other
- C. Protect finishes on exposed surfaces from damage by applying strippable, temporary protective covering before shipping.
- D. Variations in appearance of abutting or adjacent pieces are acceptable. Noticeable variations in the same piece are not acceptable.

2.05 DOOR HARDWARE

- A. Allowed Hardware: All hardware must be listed and certified to Grade 1 ASTM F1450 and ASTM F1577.
 - 1. Latches/Locks: Remote manual or electro-mechanical rotary latch/manual or key operated latches.
 - 2. Door (edge) Guards: Minimum 16 ga steel
 - 3. Institutional Hinges: Min. 4-1/2" x 4-1/2" x 0.180" thick; steel; ball bearing type.
 - 4. Door Closers: No security rating needed; must be covered with 16 ga steel cover

- 5. Food Pass Drawer: Max. depth is 2.5"; Must be fully welded, 16 ga steel, with frame edges welded in place overlapping the door surfaces by 1" on all sides, must be lockable from corridor side of the door.
- B. Contact manufacturer for questions on additional or custom hardware.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data including product technical bulletins and installation instructions.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions, have been previously installed under other sections, and are acceptable for product installation in accordance with manufacturer's instructions. Openings shall be plumb, square and within allowable tolerances. The Architect/Engineer shall be notified of any conditions that jeopardize the integrity of the proposed fire wall/door framing system. Do not proceed until such conditions are corrected.

3.03 INSTALLATION

- A. Installation shall be by a licensed contractor and in strict accordance with the approved shop drawings.

3.04 CLEANING AND PROTECTION

- A. Protect glass from contact with contaminating substances resulting from construction operations. Remove such substances by method approved by manufacturer.
- B. Wash glass on both faces not more than four days prior to date schedule for inspections intended to establish date of Substantial Completion. Wash glass by method recommended by glass manufacturer.
- C. Remove temporary coverings and protection of adjacent work areas.
- D. Remove construction debris from project site and legally dispose of debris.

END OF SECTION

In the interest of continuous improvement of its product line, Titan Metal Products, Inc. reserves the right to modify its products' composition, colors, textures, sizes, and other physical and performance attributes and these guide specifications at any time. Titan Metal Products, Inc. makes no expressed or implied warranties regarding content, errors, or omissions in the information presented. Specifications modified or rewritten not in conformance with manufacturer's standard processes, products, and procedures may void warranties and related remedies.