

Welcome to the Titan Metal Products' 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. To download an electronic copy, please visit [www.titanmetalproducts.com](http://www.titanmetalproducts.com)

**SPECIFICATION**  
**SECTION 08 8810: STEEL DOORS AND FRAMES**  
**Titan Builders Series 20-90 Minute Doors**

**PART 1 GENERAL**

1.01 SUMMARY

- A. Section Includes: Fire rated non-temperature rise and temperature rise door system.
  - 1. Builders Series 20-90 minute doors for interior and exterior non-temperature rise and temperature rise door applications.
  - 2. Applications of fire rated door system includes:
    - a. Full vision fire rated steel doors.
    - b. Flush fire rated steel doors.
  
- B. Related Sections:
  - 1. Section 01 3323: Shop Drawings, Product Data and Samples.
  - 2. Section 08 1113: Hollow Metal Doors and Frames
  - 3. Section 08 5130: Steel Windows.
  - 4. Section 08 7100: Finish Hardware.
  - 5. Section 08 8000: Glazing.
  - 6. Section 08 8810: Fire Rated Glass and Framing

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM):
  - 1. ASTM E152: Methods of Fire Tests of Door Assemblies.
  - 2. ASTM E2074: Standard Test Method for Fire Tests of Door Assemblies, including Positive Pressure Testing of Side-hinged and Pivoted Swinging Door Assemblies.
  
- B. National Fire Protection Association (NFPA):
  - 1. NFPA 80: Fire Doors and Windows.
  - 2. NFPA 252: Fire Tests of Door Assemblies.
  
- C. Underwriters Laboratories, Inc. (UL):
  - 1. UL 10 B: Standard for Safety of Fire Tests of Door Assemblies.
  - 2. UL 10 C: Standard for Safety of Positive Pressure Fire Tests of Door Assemblies.
  
- D. Standard Council of Canada (ULC):
  - 1. ULC Standard CAN4-S104: Fire Tests of Door Assemblies.
  
- E. Consumer Product Safety Commission (CPSC):
  - 1. CPSC 16 CFR 1201: Safety Standard for Architectural Glazing Materials.
  
- F. American National Standards Institute (ANSI):
  - 1. ANSI Z97.1: Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.

G. Glass Association of North America (GANA)

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

H. [American Recovery and Reinvestment Act

1. Section 1605, Title XVI Buy American Provision]

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

### 1.03 SYSTEM DESCRIPTION

A. Performance Requirements:

1. Fire Rating: must meet 20-90 minutes as specified. Temperature rise doors must meet 250 degrees F/450 degrees F at 30 minutes.
2. Door Certifications: Doors must be tested in accordance with ASTM E2074-00, NFPA 80, NFPA 252, UL 10B, UL 10C or CAN4-S104.
3. Testing Laboratory: Fire test must be conducted by a nationally recognized independent testing laboratory.
4. Glazing: Fire protective and fire resistive glazing up to the maximum size tested. For 60-90 minute temperature rise doors, fire protective glazing must be limited to 100 sq. in. Fire resistive glazing tested to ASTM E-119/UL 263/ULC-S101 up to the max. size tested. All glazing used in doors must meet CPSC Cat. I or II impact safety.
5. Max. Door Opening Sizes: must meet maximum sizes of 54 in. x 120 in. for single doors and 96 in. x 120 in. for pair doors. No intermediate rails required. For max. door sizes, continuous hinges may be required.

B. Listings and Labels:

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

### 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.

### 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.

### **PART 2 PRODUCTS**

#### 2.01 MANUFACTURERS – FIRE RATED [NON-TEMPERATURE RISE] [TEMPERATURE RISE] DOOR

- A. Manufacturer of Door System: Builders Series Doors as manufactured and distributed by Titan Metal Products, a division of SAFTI *FIRST*® Fire Rated Glazing Solutions.
  - 1. Contact: 1891 Wardrobe Avenue Merced, CA 95341-6406; Telephone 866.848.2667; email [info@titanmetalproducts.com](mailto:info@titanmetalproducts.com); Web site [www.titanmetalproducts.com](http://www.titanmetalproducts.com)
- B. Fire rated door system 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.
- D. Substitutions: No substitutions allowed.

#### 2.02 MATERIALS – DOOR

- A. Fire rated doors system from 20-90 minutes.
- B. Properties:
  - 1. Constructed in accordance with the individual manufacturer's listings or in accordance with HMMA 861-06 and HMMA 850.
  - 2. If temperature rise is required, must meets 250 degrees F/450 degrees F at 30 minutes.
  - 3. 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.
  - 4. Standard door profile includes 6 in. rail and 2 in. frame. Narrow door profile includes 3-

- 3/4 in. rail and 1-1/8 in frame.
- 5. 10 in. ADA compliant bottom rail (can be modified with AHJ approval).
- 6. 4 to 5 in. door depth

### 2.03 MATERIALS – GLASS

- A. Assemblies shall be glazed with listed and labeled fire rated glazing products by SAFTI FIRST.
- B. Properties:
  - 1. For non-temperature rise doors, fire protective and fire resistive glazing up to the maximum size tested. For temperature rise doors, fire protective glass will be limited to 100 sq. in. where temperature rise requirements apply. Fire resistive glass tested to ASTM E-119/UL 263 can be used up to the maximum size tested.
  - 2. Individual Lites shall be permanently identified with a listing mark.
  - 3. Glazing material installed in “Hazardous Locations” (subject to human impact) shall be certified to meet the applicable requirements for fire rated assemblies referenced in ANSI Z97.1 Standard for Safety Glazing Materials Used In Buildings and/or CPSC 16 CFR 1201 Safety Standard for Architectural Glazing Materials.
- C. Logo: Each piece of fire rated glazing shall be labeled with a permanent logo.

### 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. Available with high performance Corafion fluoropolymer finishes by PPG or other custom finishes including stainless steel or aluminum clad.

### 2.05 DOOR HARDWARE FOR SINGLE AND PAIR DOORS

- A. Hardware shall be supplied with the fire door. Hardware selection shall be from door manufacturer’s standard recommended hardware groups as specified below.
- B. Provide high traffic areas of areas requiring a door motion force of greater than 15 lbs. with power assisted hardware for use with manufacturer’s frame system.
- C. Standard operating hardware for standard profile single and pair doors. Please call manufacturer for narrow profile door hardware and custom hardware options (including but not limited to concealed rods, concealed closers, electric strike, etc.)

Quantity	Item	Description	Manufacturer	Finish
4	Hinges	Ball Bearing Heavy Duty Butt Hinges	PBB4B81	US26D
1	Panic Device	Heavy Duty Touch Bar Panic with Surface vertical Rods	Monarch F-25-V	US26D
1	Closing Device	Heavy-duty Surface Applied Closer	LCN 4040XP	Aluminum
1	Auto Door Bottoms	420APKL	Pemko	

### **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. Fire door/window 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**

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