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| This guide specification was prepared utilizing 3-part format recommended by the Construction Specifications Institute (CSI), and generally incorporates recommendations from their SectionFormat™/Page Format™, and MasterFormat™, latest Editions, insofar as practicable.Carefully review and edit the text to meet the Project requirements and coordinate this Section with the remainder of the Specifications and the Drawings. Where bracketed text is indicated, e.g. [text], make appropriate selection and delete the remainder of text within additional brackets, highlighting, and bold face type, if any.Consult the manufacturer for assistance in editing this guide specification for specific Project applications where necessary.This Specification was current at the time of publication but is subject to change. Please confirm the accuracy of these specifications with the manufacturer prior to use. A black background with a black square  Description automatically generated with medium confidence |

 Section: 08 31 00

 Floor Doors

PART 1 - GENERAL

* 1. SUMMARY
1. Section Includes:
2. Fire-rated floor doors for access between building floors.
3. Related Requirements:
4. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 ALLOWANCES**

*SPECIFIER: Delete Section 01 21 00 - Allowances if locations are clearly shown on the Drawings and sizes are either indicated alongside the locations or specified herein.*

1. Section 01 21 00 - Allowances: For cash or quantity allowances covering access panels and frames.
2. Section 01 33 00 - Submittal Procedures: For administrative and procedural requirements for processing of submittals during the construction phase.
3. Section 01 77 00 - Closeout Procedures: For administrative and procedural requirements for completion of the Work.

**1.03 REFERENCES**

*SPECIFIER: Use care when indicating the edition date of the referenced standards; these standards are subject to regular review and updated accordingly; review list carefully for inclusion.*

A. Reference Standards:

1. ASTM International (ASTM):

a. ASTM A36/A36M-12, Standard Specification for Carbon Structural Steel

b. ASTM A153/A153M-09, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

c. ASTM A653/A653M-11, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process

d. ASTM A666-10, Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.

e. ASTM A879/A879M-12, Standard Specification for Steel Sheet, Zinc Coated by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface

f. ASTM A1008/A1008M-12a, Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable

g. ASTM F2329-11, Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded Fasteners

*SPECIFIER: Indicate date of current Edition in affect in the Project location if known, to avoid problems with interpretation.*

2. International Code Council (ICC):

a. International Building Code (IBC) - [C**urrent**] Edition.

*SPECIFIER: Select applicable NFPA Standard in subparagraph below;*

3. National Fire Protection Association (NFPA):

a. NFPA 80 Standard for Fire Doors and Other Opening Protectives

b. NFPA 288, Fire Tests of Horizontal Door Assemblies installed in horizontal fire-resistance-rated assemblies.

1.04 ACTION SUBMITTALS

1. Product Data: For each type of floor door indicated. Include manufacturer’s model number and accessories and requirements for rough-in dimensions.
2. Shop Drawings: Submit shop drawings including profiles, accessories, location, adjacent construction and dimensions.
3. Manufacturer’s Installation Instructions and Operations and Maintenance: Indicate installation, operation and maintenance requirements and rough-in dimensions.
	1. **QUALITY ASSURANCE**
4. Comply with standards referenced in Article 1.03 REFERENCES
5. Manufacturer: A minimum of 5 years’ experience manufacturing similar products.
6. Regulatory Requirements:
	1. Horizontal fire door assemblies shall be tested in accordance with NFPA 288 and labeled by approved agency; (QAI Laboratories)

1.06 Delivery, Storage and handling

1. Packing, Shipping, Handling, Unloading: Deliver floor door as a factory assembled unit in manufacturer’s original packaging.
2. Store materials in a dry, protected, well-vented area. The contractor shall thoroughly inspect product upon receipt and report damaged material immediately to delivery carrier and note such damage on the carrier’s freight bill of lading.

1.07 WARRANTY

1. Manufacturer’s Warranty: Provide manufacturer’s standard warranty. Materials shall be free of defects in material and workmanship for a period of five years from the date of purchase.

PART 2 - PRODUCTS

1. ACCEPTABLE MANUFACTURERS
2. Acceptable Manufacturers:

Maxam Metal Products Ltd.

7978 N Fraser Way Unit 5

Burnaby, BC V5J 0C7

800-554-6077

www.maxammetal.com

sales@maxammetal.com

1. Substitutions: Manufacturers seeking approval of their products are required to comply with the Owner's Instructions to Bidders, generally contained in the Project Manual.
2. FHD SERIES FIRE-RATED Floor door

*Specifier to select one below and delete others*

1. One Hour Fire-Rated Floor Door – Model FHD1R
	1. Model number **FHD1R:** Minimum size 26 inches width by 24 inches length (660 mm by 610 mm), maximum size 64 inches width by 60 inches length (1626 mm by 1524 mm) Order size is inside frame dimension: **[Insert Dimensions]**
	2. Exterior frame constructed of 12 gauge (2.75 mm) galvannealed steel.
	3. Door frame constructed of 14 gauge (1.99 mm) galvannealed steel with 12 gauge (2.75 mm) stiffener panels, ash gray prime on exterior frame.
	4. Door**:** 1/4 inch (6.35 mm) aluminum tread plate mill finish, gasketed on all 4 sides on the upper section of the frame only.
	5. Finish: Ash gray primer.
	6. Insulation: Door filled with high temperature ceramic fiber insulation
	7. Live Load: 150 pounds per square foot (700 kilograms per square meter)
	8. Hardware:
		1. Hinge: Continuous stainless steel hinge.
		2. Opener: Type 316 stainless steel nitrogen cylinders.
		3. Latch: Type 316 stainless steel slam latch operated by a stainless steel recessed turn handle topside.
		4. Self-Closing Mechanism: 165 degrees Fahrenheit (74 degrees Celsius) fusible link.
		5. Installation kit: Includes anchor straps for installing into concrete and screws for wood frame installations.
	9. Fire Rating: 1 Hour listed and labeled in accordance with NFPA 288 by an approved agency; QAI (QAI Laboratories)
	10. Options:

*SPECIFIER: Select applicable options below and delete all others.*

* + 1. Door Materials: [3/16-inch (4.78 mm) steel tread plate, prime coated] [1/4-inch (6.35 mm) smooth aluminum plate], [Recessed Door Panel: door panel of smooth aluminum, recessed 3/16-inch for tile or carpet.]
		2. Latch Operator: [type 316 stainless steel slam latch with removable cover plug, operable from the inside by a spoon handle and the outside by a removable tool] [detention slam lock # Brinks 7066-KRH topside with operable knob underside].
		3. [Padlock hasp on underside in addition to topside operator].
		4. [Door panel painted yellow with instructions painted in black: “Fire Door - Do Not Store Materials/Equipment on Surface”]
		5. [Bituminous coating on frame exterior for concrete exposure]
1. Two Hour Fire-Rated Floor Door – Model FHD2R
	1. Model number **FHD2R:** Minimum size 26 inches width by 24 inches length (660 mm by 610 mm), maximum size 64 inches width by 60 inches length (1626 mm by 1524 mm) Order size is inside frame dimension: **[Insert Dimensions]**
	2. Exterior frame constructed of 12 gauge (2.75 mm) galvannealed steel.
	3. Door frame constructed of 14 gauge (1.99 mm) galvannealed steel with 12 gauge (2.75 mm) stiffener panels, ash gray prime on exterior frame.
	4. Door**:** 1/4 inch (6.35 mm) aluminum tread plate mill finish, gasketed on all 4 sides on the upper section of the frame only.
	5. Finish: Ash gray primer.
	6. Insulation: Door filled with high temperature ceramic fiber insulation
	7. Live Load: 150 pounds per square foot (700 kilograms per square meter)
	8. Hardware:
		1. Hinge: Continuous stainless steel hinge.
		2. Opener: Type 316 stainless steel nitrogen cylinders.
		3. Latch: Type 316 stainless steel slam latch operated by a stainless steel recessed turn handle topside.
		4. Self-Closing Mechanism: 165 degrees Fahrenheit (74 degrees Celsius) fusible link.
		5. Installation kit: Includes anchor straps for installing into concrete and screws for wood frame installations.
	9. Fire Rating: 2 Hour listed and labeled in accordance with NFPA 288 by an approved agency; QAI (QAI Laboratories)
	10. Options:

*SPECIFIER: Select applicable options below and delete all others.*

* + 1. Door Materials: [3/16-inch (4.78 mm) steel tread plate, prime coated] [1/4-inch (6.35 mm) smooth aluminum plate], [Recessed Door Panel: door panel of smooth aluminum, recessed 3/16-inch for tile or carpet.]
		2. Latch Operator: [type 316 stainless steel slam latch with removable cover plug, operable from the inside by a spoon handle and the outside by a removable tool] [detention slam lock # Brinks 7066-KRH topside with operable knob underside].
		3. [Padlock hasp on underside in addition to topside operator].
		4. [Door panel painted yellow with instructions painted in black: “Fire Door - Do Not Store Materials/Equipment on Surface”]
		5. [Bituminous coating on frame exterior for concrete exposure]
1. Three Hour Fire-Rated Floor Door – Model FHD3R
	1. Model number **FHD3R:** Minimum size 26 inches width by 24 inches length (660 mm by 610 mm), maximum size 42 inches width by 60 inches length (1067 mm by 1524 mm) or 48 inches width by 48 inches length (1219 mm by 1229 mm) Order size is inside frame dimension: **[Insert Dimensions]**
	2. Exterior frame constructed of 12 gauge (2.75 mm) galvannealed steel.
	3. Door frame constructed of 14 gauge (1.99 mm) galvannealed steel with 12 gauge (2.75 mm) stiffener panels, ash gray prime on exterior frame.
	4. Door**:** 1/4 inch (6.35 mm) aluminum tread plate mill finish, gasketed on all 4 sides on the upper section of the frame only.
	5. Finish: Ash gray primer.
	6. Insulation: Door filled with high temperature ceramic fiber insulation
	7. Live Load: 150 pounds per square foot (700 kilograms per square meter)
	8. Hardware:
		1. Hinge: Continuous stainless steel hinge.
		2. Opener: Type 316 stainless steel nitrogen cylinders.
		3. Latch: Type 316 stainless steel slam latch operated by a stainless steel recessed turn handle topside.
		4. Self-Closing Mechanism: 165 degrees Fahrenheit (74 degrees Celsius) fusible link.
		5. Installation kit: Includes anchor straps for installing into concrete and screws for wood frame installations.
	9. Fire Rating: 3 Hour listed and labeled in accordance with NFPA 288 by an approved agency; QAI (QAI Laboratories)
	10. Options:

*SPECIFIER: Select applicable options below and delete all others.*

* + 1. Door Materials: [3/16-inch (4.78 mm) steel tread plate, prime coated] [1/4-inch (6.35 mm) smooth aluminum plate], [Recessed Door Panel: door panel of smooth aluminum, recessed 3/16-inch for tile or carpet.]
		2. Latch Operator: [type 316 stainless steel slam latch with removable cover plug, operable from the inside by a spoon handle and the outside by a removable tool] [detention slam lock # Brinks 7066-KRH topside with operable knob underside].
		3. [Padlock hasp on underside in addition to topside operator].
		4. [Door panel painted yellow with instructions painted in black: “Fire Door - Do Not Store Materials/Equipment on Surface”]
		5. [Bituminous coating on frame exterior for concrete exposure]

**PART 3: EXECUTION**

1. EXAMINATION
2. Examine areas and conditions affecting installation. Do not proceed with installation until unsatisfactory conditions have been corrected.
3. INSTALLATION
4. Manufacturer provides detailed installation instructions for cast-in-place, retrofit back-pour and wood framing conditions.
5. Install system level and plumb, and in accord with manufacturers written instruction, original design, and reference standards.
6. Adjusting
7. Adjust system for proper operation. Replace any parts that prevent floor door from operating properly.
8. CLEANING
9. Remove all debris caused by installation of the floor door. Clean all exposed surfaces to as fabricated condition and appearance.

**3.05 SCHEDULES**

If more than one type of floor door is required, provide a schedule similar to the following example below. Use the corresponding type designations here and on the drawings.

1. Type 1: [Describe by model]
2. Type 2: [Describe by model]

END OF SECTION