**3-Part CSI MasterFormat Specification**

**SECTION 08 3123**

**Floor DOORs AND FRAMES**

Rev 12/22

1. GENERAL
   * + 1. SUMMARY
          1. Section includes:

Floor Doors for access between building floors as indicated on drawings and specified herein

* + - 1. references
         1. Aluminum Diamond Tread Plate: ASTM B632-02, 1/4 inch 6061-T6 aluminum with mill finish.
         2. Aluminum Extrusion: 6061-T6 aluminum.
         3. Steel Diamond Tread Plate: ASTM A786.
         4. Steel Angle: ASTM A36-94 steel frame, structural.
         5. Stainless Steel Diamond Tread Plate: ASTM A793 stainless steel, No. 304 finish.
         6. Stainless Steel Angle: ASTM A276 stainless steel, No. 304 finish.
         7. Stainless Steel Smooth Plate: ASTM A240 smooth plate stainless steel, type No. 316.
         8. Fasteners: Type No. 316 stainless steel. ASTM F593 for bolts and ASTM F594 for nuts.
         9. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
      2. Action SUBMITTALS
         1. Shop Drawings: Indicate configuration and dimensions, show components, adjacent construction, required clearances and tolerance and other affected work.
         2. Product Data: Manufacturer’s technical data for each type of floor door, including setting drawings and finish requirements
      3. informational submittals
         1. Provide manufacturer's standard warranty.
         2. Sustainable Design Submittals:

Building Product Disclosure Requirements: To encourage the use of building products that are working to minimize their environmental and health impacts, provide the following information when available:

Material Ingredients Documentation demonstrating the chemical inventory of the product

* + - 1. Closeout submittals
         1. Manufacturer's Installation Instructions and Operation & Maintenance: Indicate installation, operation and maintenance requirements and rough-in dimensions.
      2. Quality Assurance
         1. Qualifications:

Manufacturer/Installer: Company specializing in manufacturing and installation of components specified in this Section with minimum of 5 years documented experience.

* + - * 1. Regulatory Requirements:

International Building Code for fire resistance rated construction

IBC Section 712 for Floor Fire Doors- tested in accordance with NFPA 288 and labeled by approved agency; Warnock Hersey or Underwriters Laboratory.

1. PRODUCTS
   * + 1. MANUFACTURER
          1. Nystrom

9300 73rd Ave N

Minneapolis, MN 55428

PH: 800-547-2635

[www.Nystrom.com](http://www.Nystrom.com)

* + - 1. FIRE-RATED ALUMINUM FLOOR DOORS
         1. Fire-Rated Aluminum Floor Door. Model FDF

Manufacturers' offerings for loading capacity and fire rating vary by size; confirm availability.

Clear Unobstructed Opening Size: **<Insert dimensions>**

Door: Single leaf; 1/4-inch-thick (6.4-mm-thick) aluminum diamond tread plate with **[3 layers of Nutec SMG-HI; 2 hour fire rating] [4 layers of Nutec SMG-HI; 3 hour fire rating].**

Loading Capacity:

Units less than or equal to 48 inches by 60 inches (122 cm by 152 cm) width by length: 250-lbf/sq. ft. (11.97-kN/sq. m)live load and maximum deflection of L/150.

Units greater than 48 inches by 60 inches (122 cm by 152 cm) width by length: 150-lbf/sq. ft. (7.2-kN/sq. m) live load and a maximum deflection of L/150

Fire Rating:

Units 24 inches by 24 inches (61 cm by 61cm) up to 52 inches by 96 inches (122 cm by 244 cm) width by length maintains a 2-hourfire ratingfor floor/ceiling assembly as tested and labeled by Warnock Hersey according to NFPA 28

Units 24 inches by 24 inches (61 cm by 61cm) up to 48 inches by 60 inches (132 cm by 153 cm) width by length maintains a 3-hourfire ratingfor floor/ceiling assembly as tested and labeled by Warnock Hersey according to NFPA 28

Hardware:

Material and Finish: Type 316 stainless steel, including lifting mechanism assemblies, hold-open arms, and brackets, hinges, pins, and fasteners. Zinc plated steel fasteners and latch.

Hinges: 3 inch by 3 inch (76 mm by 76 mm) type 3/16 heavy-duty butt hinge with stainless-steel pin fastened to door with stainless steel carriage bolts.

Operating Mechanism: Adjustable Type 17-7 stainless steel counterbalancing heavy-duty hold-open arm that automatically locks door open at 90 degrees, release handle that allows for one-handed closure, and recessed lift handle.

Latch: Zinc plated steel slam latch with internal release handle and outside removable square L handle.

Anchor 4 inch (102 mm) concrete anchor straps provided

Options:

Self-Closing Mechanism; Automatically closes door at 165 deg F (74 deg C) in event of fire.

Locks: **[Recessed padlock hasp with cover] [Mortise deadbolt with thumb turn access from above] [Mortise deadbolt with thumb turn access from below]**

* + - * 1. Fire-Rated Aluminum Floor Door with 1/8th Inch Recessed Cover

**Manufacturers' offerings for loading capacity and fire rating vary by size; confirm availability.**

Clear Unobstructed Opening Size: <**Insert dimensions**>.

Frame: 1/4 inch (6.4 mm) mill finish aluminum recessed for 1/8 inch (3.2 mm) flooring infill. **[Frame with 3/8 inch (9.5 mm) holes for bolt in] [Frame with integral masonry anchors for cast-in-place].**

Door: Single leaf; 1/4-inch-thick (6.4-mm-thick) aluminum plate. **[3 layers of Nutec SMG-HI Blank; 2 hour fire rating] [4 layers of Nutec SMG-HI; 3 hour fire rating].**

Loading Capacity:

Units less than or equal to 48 inches by 60 inches (122 cm by 152 cm) width by length: 250-lbf/sq. ft. (11.97-kN/sq. m)live load and maximum deflection of L/150.

Units greater than 48 inches by 60 inches (122 cm by 152 cm) width by length: 150-lbf/sq. ft. (7.2-kN/sq. m) live load and a maximum deflection of L/150

Fire Rating:

Units 24 inches by 24 inches (61 cm by 61cm) up to 52 inches by 96 inches (122 cm by 244 cm) width by length maintains a 2 hourfire ratingfor floor/ceiling assembly as tested and labeled by Warnock Hersey according to NFPA 28

Units 24 inches by 24 inches (61 cm by 61cm) up to 48 inches by 60 inches (132 cm by 153 cm) width by length maintains a 3 hourfire ratingfor floor/ceiling assembly as tested and labeled by Warnock Hersey according to NFPA 28

Hardware:

Material and Finish: Type 316 stainless steel, including lifting mechanism assemblies, hold-open arms, and brackets, hinges, pins, and fasteners. Zinc plated steel fasteners and latch.

Hinges: 3 inch by 3 inch (76 mm by 76 mm) type 3/16 heavy-duty butt hinge with stainless-steel pin fastened to door with stainless steel carriage bolts.

Operating Mechanism: Adjustable Type 17-7 stainless steel counterbalancing spring, heavy-duty hold-open arm that automatically locks door open at 90 degrees, release handle with grip that allows for one-handed closure, and recessed lift handle.

Latch: Zinc plated steel slam latch with release handle and outside removable square L handle.

Options:

Self-Closing Mechanism; Automatically closes door at 165 deg F (74 deg C) in event of fire.

Locks: **[Recessed padlock hasp with cover] [Mortise deadbolt with thumb turn access from above] [Mortise deadbolt with thumb turn access from below]**

* + - * 1. Fire-Rated Aluminum Floor Door with 1 Inch Recessed Cover: Allows for flooring infill.

**Maximum size for Fire-Rated Aluminum Floor door with 1 inch recess is 48 by 48 inches**

Clear Unobstructed Opening Size: <**Insert dimensions**>.

Frame: 1/4 inch (6.4 mm) mill finish aluminum recessed for 1/8 inch (3.2 mm) flooring infill. **[Frame with 3/8 inch (9.5 mm) holes for bolt in] [Frame with integral masonry anchors for cast-in-place].**

Door: Single leaf; 1/4-inch-thick (6.4-mm-thick) aluminum plate with 3 layers of Nutec SMG-HI Blanket

Loading capacity: 250-lbf/sq. ft. (11.97-kN/sq. m) live load and maximum deflection of L/150.

Fire Rating: Maintains a 2-hour fire rating for floor/ceiling assembly as tested and labeled by Warnock Hersey according to NFPA 288.

Hardware:

Material and Finish: Type 316 stainless steel, including latch and lifting mechanism assemblies, hold-open arms, and brackets, hinges, pins, and fasteners.

Hinges: 3 inch by 3 inch (76 mm by 76 mm) type 3/16 heavy-duty butt hinge with stainless-steel pin fastened to door with stainless steel carriage bolts.

Operating Mechanism: Adjustable Type 17-7 stainless steel counterbalancing spring, heavy-duty hold-open arm that automatically locks door open at 90 degrees, release handle with grip that allows for one-handed closure, and recessed lift handle.

Latch: Zinc plated steel slam latch with internal pull release cable and outside removable square L handle.

Option: Self-Closing Mechanism: Automatically closes door at 165 deg F (74 deg C) in event of fire.

1. EXECUTION
   * + 1. EXAMINATION
          1. Verify that preparation and affected dimensions are acceptable.
          2. Verify tolerances and correct improper conditions.
       2. PREPARATION
          1. Advise installers of details relating to floor hatch installation, including rough opening dimensions, locations of supports, and anchoring methods.
       3. INSTALLATION
          1. Follow manufacturer’s instructions for installing floor doors and hatches.
          2. Install frames plumb and level in opening, in proper alignment with floor surface for flush installation. Secure rigidly in place.
          3. Position units to provide convenient access to concealed Work requiring access.
       4. ADJUSTING
          1. Operational Units: Test-operate units with operable components.
          2. Clean and lubricate joints and hardware.
          3. Adjust for proper operation.
       5. CLEANing
          1. Clean adjacent surfaces and remove unused product and debris from site.
          2. Adjust doors for smooth operation.

END OF SECTION