

BILCO Type FR Fire Rated Floor Door Maintains the fire rating of a 2-hour floor ceiling assembly where access is required between building floors. Fire rated floor doors feature an automatic closing system, intumescent fire resistant coating, and a pan cover designed to accept architectural flooring materials for concealed access. Type FR doors are available in a number of UL-Listed standard sizes. For more information, please visit our website [www.BILCO.com](http://www.BILCO.com) or call 1-800-366-6530.

## SECTION 083100

### FLOOR ACCESS DOORS

#### (BILCO TYPE FR)

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Work Included: Provide factory-fabricated floor access doors.

##### 1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data.
- B. Shop Drawings: Submit shop drawings including profiles, accessories, location, adjacent construction interface, and dimensions.
- C. Warranty: Submit executed copy of manufacturer's standard warranty.

##### 1.3 QUALITY ASSURANCE

- A. Manufacturer: A minimum of 5 years experience manufacturing similar products.
- B. Installer: A minimum of 2 years experience installing similar products.
- C. Manufacturer's Quality System: Registered to ISO 9001 Quality Standards including in-house engineering for product design activities.

##### 1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in manufacturer's original packaging. Store materials in a dry, protected, well-vented area. Inspect product upon receipt and report damaged material immediately to delivering carrier and note such damage on the carrier's freight bill of lading.

##### 1.5 WARRANTY

- A. 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. Should a part fail to function in normal use within this period, manufacturer shall furnish a new part at no charge.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURER

- A. Basis-of-Design Manufacturer: Type FR Fire Rated Floor Door by The BILCO Company, P.O. Box 1203, New Haven, CT 06505, 1-800-366-6530, Fax: 1-203-535-1582, Web: www.BILCO.com.

### 2.2 ACCESS DOOR

- A. Furnish and install where indicated on plans vault access door Type FR, size [insert: width (\_\_\_\_\_) x length (\_\_\_\_\_) ]. Length denotes hinge side. The vault access door shall be single leaf. The vault access door shall be pre-assembled from the manufacturer.
- B. Performance characteristics:
1. Cover: shall be reinforced to support a minimum live load of 150 psf (732 kg/m<sup>2</sup>) with a maximum deflection of 1/150th of the span.
  2. Operation of the cover shall be smooth and easy with controlled operation throughout the entire arc of opening and closing. Operation of the cover shall not be affected by temperature.
  3. Door and frame assembly shall be tested in accordance with ASTM E119 and NFPA 251 and UL Listed as having a 2-hour fire rating when exposed to fire from the underside. In the closed position, the temperature on the unexposed surface of the door shall not exceed 325°F (162°C) above ambient for the duration of the 2-hour period. Manufacturer shall submit a test report certifying this performance.
  4. Door shall be equipped with a fusible link activated closing system that will automatically close and latch the door leaf in the event of fire when heat parts the UL Listed 165° (74°C) fusible link. [Fire rated door may be specified to omit the automatic closing system when not required by the local authority having jurisdiction].
- C. Cover: Shall have a 1" (25mm) fillable pan to receive concrete or a combination of concrete and [insert specified flooring material, including type, thickness, and weight \_\_\_\_\_.]. All fill material to be furnished (Note: Finish flooring material up to 1/2" (13mm) thick can be installed in the 1" (25mm) pan. The remaining depth must be filled with concrete to maintain the fire rating of the door assembly. If finish flooring is not desired, the pan must be filled with 1" (25mm) of concrete).
- D. Frame: Shall be extruded aluminum with full anchor flange around the perimeter.
- E. Lifting mechanisms: Manufacturer shall provide the required number and size of compression spring operators enclosed in telescopic tubes to provide, smooth, easy, and controlled cover operation throughout the entire arc of opening and to act as a check in retarding downward motion of the cover when closing. The upper tube shall be the outer tube to prevent accumulation of moisture, grit, and debris inside the lower tube assembly. The lower tube shall interlock with a flanged support shoe fastened to a formed 1/4" (6mm) gusset support plate.
- F. A removable exterior turn/lift handle with a spring loaded ball detent shall be provided to open the and the latch release shall be protected by a flush, gasketed, removable screw plug].
- G. Automatic closing system: Shall be a self-contained, pneumatic, fusible link activated, closing system that will automatically close and latch the door in the event of fire when heat parts the UL Listed 165° (74°C) fusible link. (Note: Fire rated door may be specified without the automatic closing system when not required by the local authority having jurisdiction).

- H. Hold-open system: Door shall be equipped with a pneumatic hold-open system to automatically hold the door in the open position (85°). A release button for the hold-open system shall be provided and shall reset itself when the cover is closed. (Note: When door is specified without automatic closing system, a mechanical aluminum hold-open arm is provided).
- I. Hardware:
  - 1. Hinges: Shall be a continuous heavy duty Type 316 stainless steel hinge that is accessible only when the cover is in the open position.
  - 2. Cover shall be fitted with the required number and size of compression spring operators.
  - 3. A Type 316 stainless steel snap lock with fixed handle shall be mounted on the underside of the cover and a cable release handle shall be provided to open the cover from the underside.
  - 4. Hardware: All other hardware shall be zinc plated and chromate sealed with type 316 stainless steel fasteners. [For installation in highly corrosive environments or when prolonged exposure to hot water or steam is anticipated, specify Type 316 stainless steel hardware].
- J. Finishes: Factory finish shall be mill finish aluminum with bituminous coating applied to the exterior of the frame.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and openings for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Install products in strict accordance with manufacturer's instructions and approved submittals. Locate units level, plumb, and in proper alignment with adjacent work.
  - 1. Test units for proper function and adjust until proper operation is achieved.
  - 2. Repair finishes damaged during installation.
  - 3. Restore finishes so no evidence remains of corrective work.

### 3.3 ADJUSTING AND CLEANING

- A. Clean exposed surfaces using methods acceptable to the manufacturer which will not damage finish.

END OF SECTION