

# MODEL BMF – Motor Operated (Gear Head) Fire Door Galvanized Finish – Between Jamb Mount



Innovative door products

## 1.0 GENERAL

### 1.1 Summary

- A. All Rolling Fire Doors shall be as manufactured by Service Door Industries, Mississauga, Ontario, Canada. Furnished materials shall include all curtains, bottom bars, guides, brackets, hoods, operating mechanisms and any special features.
- B. Work not to be included by **SDI** includes design of, material for and preparation of door openings but not limited to structural or miscellaneous iron work, access panels, finish painting, electrical wiring, conduit and disconnect switches.

### 1.2 Quality Assurance

- A. All rolling fire doors shall be constructed in accordance with Warnock-Hersey testing agency requirements and shall bear a [3/4 hour] [1-1/2 hour] [3 and 4 hours] rating label.
- B. All rolling steel fire doors shall be designed to a standard maximum of 25 cycles per day and an overall maximum of 50,000 operating cycles for the life of the fire door.

## 2.0 PRODUCTS

### 2.1 Materials

- A. The door curtain shall be constructed of interconnected strip steel slats conforming to ASTM A-526. The curtain slat shall be a [(2-1/4" high by 3/4" deep) curved] [(2-1/4" high by 5/8" deep) flat] slat as designated by **SDI**.
- B. The finish on the door curtain shall be:
  - 1. Hot dipped galvanized G-90 coating consistent with ASTM A-525
- C. The bottom bar shall consist of two 1/8" steel angles mechanically joined together. The finish on the bottom bar shall be one (1) coat of black paint.
- D. The guides shall consist of 4 steel angles bolted together with 3/8" fasteners to form a channel for the curtain to travel. The wall angle portion shall be continuous and fastened to the surrounding structure with minimum 1/2" fasteners. The finish on the guide angles shall be one (1) coat of black paint.
- E. The brackets shall be constructed of steel not less than 1/4" thick and shall be bolted to the wall angle with minimum 1/2" fasteners. The finish on the brackets shall be one (1) coat of black paint.
- F. The barrel shall be steel tubing of not less than 4" in diameter. Oil tempered torsion springs shall be capable of correctly counter balancing the weight of the curtain and shall have both a main and an auxiliary spring. The barrel shall be designed to limit the maximum deflection to .03" per foot of opening width. The springs shall be adjusted by means of an exterior wheel.
- G. The hood shall be fabricated from 24-gauge galvanized steel and shall be formed to fit the curvature of the brackets. The finish on the hood shall be galvanized finish.
- H. The fascia shall be fabricated from 24-gauge galvanized steel and shall be formed to fit the back side of the brackets. The finish on the fascia shall be galvanized finish.

### 2.2 Operation

- A. All motor operated fire doors shall have an automatic closing device and Whisper Governor to control the downward speed of the door which shall become operational upon the fusing of a 160-degree fusible link. The door

shall have an average closing speed of not less than six (6) inches per second and not more than twenty-four (24) inches per second as indicated in NFPA Bulletin 80. The Whisper Governor shall be fail-safe, maintenance-free, fully enclosed and warranted for the life time of the door. Once the door has closed, it should be able to be reset by one person on one side of the door only.

- B. The door shall be operated at a speed of 2/3 foot per second by an open drip-proof electric motor with gear reducer in oil bath. The motor operator shall include a geared limit switch, and an electrically interlocked emergency chain operator. The motor starter shall be housed in a NEMA 1 housing and include a magnetic reversing starter size 0, a 24-volt control transformer, and complete terminal strip to facilitate field wiring. The motor operator shall be activated by [a 3-button push-button station] [other controls as selected] in a NEMA 1 enclosure. The motor shall be size as required by the door [115 volts single phase] [230 volts single phase] [208 / 230 volts three phase] [460 volts three phase] [575 volts three phase]. The motor operator shall be mounted to the door bracket as shown on drawings. All motor operators shall be U.L. listed with UL325 monitored photo eyes.
- C. The service door shall include the "Air Wave Technology" rolling door safety edge system as manufactured by **SDI** and shall include the following features:
1. The safety edge shall be installed on the bottom bar of the door and shall automatically reverse the door if the device detects an obstruction in the downward travel of the door.
  2. The safety edge shall consist of a rubber boot attached below the bottom bar with an electrical switch secured to the back of the bottom bar. The safety edge shall operate with air wave technology and shall not rely on pneumatic pressure or electrical strip contacts to operate properly. The safety edge shall create an air wave that shall be detected and reverse the direction of the rolling door.
  3. The operation of the safety edge shall not be subject to interferences by temperature, barometric pressure, water infiltration, or cuts in the rubber boot.
  4. Safety edge to be connected to the operator via wireless technology using transmitter and receiver.

### **3.0 EXECUTION**

#### **3.1 Installation**

- A. All **SDI** Rolling Fire Doors shall be installed in accordance with NFPA Bulletin 80 by an authorized **SDI** Distributor.

#### **3.2 Warranty**

- A. All **SDI** Rolling Fire Doors shall be warranted for a period of twenty-four (24) months against defects in workmanship and materials.