# ire Shutter



10m wide fire shutter at Seng Kang MRT Station, Singapore



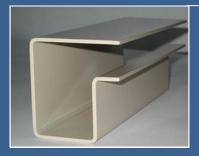
Fire alarm signal conversion panel



Fusible Link



Solenoid Brake Releaser



Heavy Duty Guide

# Features:



- 2 Hour / 4 hours fire rated
- Complies with EN 1634-1:2014
- Approved by UAE Civil Defense
- Sizes up to
  12m (w) x 6.5m (h) for 2 hours
  12m (w) x 4.6m (h) for 4 hours

- Larger sizes with special assessment
- Superior galvanized steel curtain
- 3mm thick heavy duty guide
- Fusible link / fire alarm signal / heat or smoke detector activation
- Range of powder coat finishes

# **Specification**

The specifications shall cover the design, manufacture, installation and operation to the required fire rating as specified in BS 476 Part 22

# **CURTAIN SLAT**

The shutter curtain is made of 80mm,0.8mm+0.8mm superior galvanized steel slat. These slats are manufactured by roll forming process . Slats shall have reinforced interlocking profile with edges cut off for (end) locking the axial movements.

### SHUTTER BOX

Shutter box is made out of two heavy duty steel endplates of thickness 4-7mm according to the size of the shutter; joined together by using 5 nos. of 50mm ' 25mm steel hollow sections and in black color primer finish. Two nos. of 50mm x 50mm x 4.5mm thick steel angles with slotted fixing holes to be welded with end plates for fixing the shutter box to structure.

### BARREL

Barrel is made out of heavy duty seamless steel pipe, welded with axle of sizes f35-f50mm according to the sizes of shutters. This barrel is fixed to the right and left endplates with heavy duty sealed roller bearings.

### SIDE RAILS

For exposed, face fixing applications, 'G' shaped guides made of heavy duty 75mm wide by 75mm deep by 3mm thick galvanized steel is used. For concealed guide application, 75mm wide by 75mm deep by 1.5mm thick 'U' shaped galvanized guides are used.

### BOTTOM BAR

Leading slat is roll formed from galvanized steel with thickness equivalent to that of the slat. Two 38mm x 38mm x 4.7mm thick galvanized steel angle bars are bolted to the leading slat to form the bottom bar.

### **BOX COVER**

Shutter box covers are made out of 0.8mm thick galvanized steel sheets, with folded edges for rigidity.

### SHUTTER OPERATOR

A suitably sized, fully enclosed design motor with high starting torque, built-in gear box, built-in thermal protector is used. Shutter operators are provided with "endless hand chain" for manual operation from ground level. An "emergency-release lever" shall be provided for emergency closing operation.

### **AUTO-CLOSING MECHANISM**

All fire shutters are equipped with fusible link mechanism. Upon sensing the heat of 74°c, the fusible link mechanism releases the brake of the motor and allows it to descend by gravity. Where fire shutters are needed to be activated by fire alarm signal, a dual fusible link (electric solenoid releaser) is used, which releases the brake of the motor upon receipt of 24V DC, 400mA fire alarm signal. A reset pull is provided to reapply the brake on the motor.

### PUSH BUTTON CONTROL

Push button control with 'up', 'down', 'stop' buttons are housed in a lockable push button box. Outer cover of the push button box is in stainless steel.

### **M&E REQUIREMENTS**

- A. 1 phase, 230V, 50Hz, 13A / 3 phase, 415V, 50Hz, 20A power supply at shutter box location.
- B. 24V DC, 400mA, normally open fire alarm signal at fire shutter's shutter box location.

### MAX SIZES

12m (w) x 6.5m (h) for 2 hours, 12m (w) x 4.6m (h) for 4 hours

Shutters with sizes larger than the above mentioned sizes can be fabricated and installed with special assessment and approval from relevant authorities.

# **OPTIONAL DEVICES / SERVICES**

- A. Delay Timer
- B. Warning Flash and Audio Alarm
- C. Powder Coating Standard RAL colours
- D. Connection to Heat / Smoke detector.
- E. Fire alarm signal conversion panel with battery back up to convert voltage free signal to the required 24V DC, 400mA, normally open signal and allows the shutters to descend by gravity when the fire alarm signal is activated under complete power failure.

CLEAR WIDTH (W) MOTOR INTERIOR PLAN ISOLATOP (SIDE ROOM),200 мото SHUTTER BOX 8 FUSIBLE LINK PUSH BUTTON Ê £ HEIGH 분명 CLEAR CLEAR ß CLEAR WIDTH (W) 75 75 ELEVATION SECTION 3mm THICH GALV. STEEL SIDE GUID 3mm THK GALV. STEEL GUIDE RAIL POWDER COATED FINISH ON VISIBLE FACES 0.8mm THK DOUBLE WALLED INSULATED S GALVANIZED STEEL POWDER COATED FINISH MINERAL WOOL INFILL 38 X 38 X 4.7mmTHK \_STEEL ANGLE \_POWDER COATED FINISH 75 SAFETY EDGE WITH GUIDE RAIL DETAILS ALUMINUM RETAINER 38 (BEHIND WALLS) EXTERIOR 1.5mm THICH GALV. STEEL SIDE GUIDE WALL/COLUMN 75 WALL/COLUMI ĸ 8 2 đ 10

EXTERIOR

E

200 (SIDE ROOM)

200, (SIDE ROOM)

# ABU DHABI

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GUIDE RAIL DETAILS

(BEHIND WALLS)

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(SIDE ROOM)

GUIDE RAIL DETAILS

(CONCEALED TYPE)

ferco Shutters & Seating Systems

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# We reserve the right to upgrade any specifications without prior notice