



GUARDIANDOORS.COM

0800 783 6602

ROLLER SHUTTERS - SECTIONAL OVERHEAD DOORS - INSULATED DOORS - FOLDING DOORS
STEEL DOORS - FIRE RATED DOORS - SECURITY DOORS - SLIDING GATES - HIGH SPEED DOORS

Fire Shutters & Curtains Fire Products Structural Recommendation

The structure supporting the rolling door-set must be a fire resistant separating element (to B.S. 476: part 20,21,22: 1987), having a fire resistance greater or equal to that required of the door-set itself. It must be capable of supporting the door-set for the required fire resistance period without compromising the fire performance of the door-set.

In addition, consideration must be given to the loads imposed by the various door-set components, i.e. endplates and barrel support brackets.

It is recommended, that a critical temperature of 400 0C and steel sections with an Hp/A value below 230m -1 are used for designing fire resistant steel supporting sections.

Where rolling shutters are fixed to masonry supporting elements, the masonry elements must be capable of providing a fire resistance in terms of the insulation, integrity and load bearing capacity criteria of B.S. 476: Part 21: 1987 equal to or greater than the fire resistance rating (integrity) of the rolling shutter assembly.

Shutters fitted to a timber stud partition / steel framed partitions are acceptable for up to 60 minutes fire resistance, to a tested opening size of 2750mm wide X 3250 high. The opening must be capable of carrying the weight of the shutter and be equal or greater than the fire resistance of the roller shutter assembly.

Safety Bearings (Fire Shutters) – Risk Assessment Effectively if the sole intended use of the shutter is as a “fire shutter” i.e. the shutter will be in the closed position, or, it will remain in the open position and close only under fire conditions then a safety bearing would not be required. If however the shutter is also to be used in a conventional manner, then there must be a consideration that under safe working practises and Health & Safety in the work place “all upward moving doors must be provided with an effective means of protecting them from falling back and causing injury”.



Fire Alarm Requirements



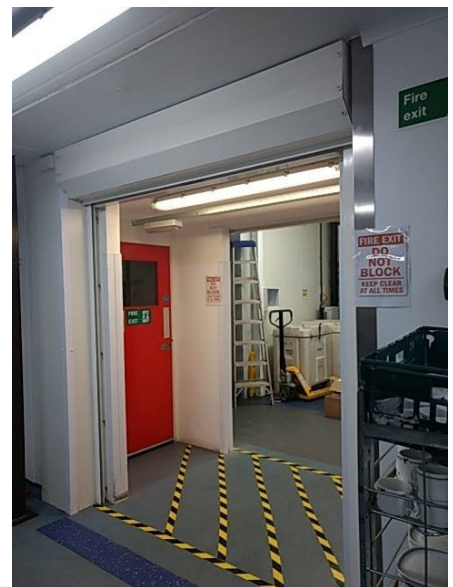
E60-240 Tube motor fire shutters

The relay provided by Guardian requires a normally open volt free signal going closed on fire.

E240 Fire shutters

The solenoid unit requires a 24volt D.C. signal (0.5 amps on activation) Audio Visual unit requires a normally open volt free signal going closed on fire.

If you have any queries, please do not hesitate to contact our technical department.



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E240 Specification

L20 DOORS/ SHUTTERS/ HATCHES

610 ROLLER SHUTTER DOORS REFERENCE:

GUARDIAN E240 INDUSTRIAL FIRE SHUTTER

Dimensions

Maximum recommended dimensions 7000mm x 7000mm

Shutter weight: 35 kg/m² of door opening.

Size Parameters: The shutter test relates to 4HR fire resistance. The shutters are generally intended for protection of a range of openings in masonry / concrete, steel, steel.

The maximum clear openings are for 7000mm wide x 7000mm high, the opening must be fire rated to suit and be capable of carrying the weight of the shutter.

Performance

Fire performance: 4-hour fire resistance BS 476: Part 22 (1987).

BS EN 12604 (2000) Mechanical aspects - Requirements.

BS EN 12453 (2001) Safety in use of power operated doors - Requirements.

Release Mechanisms:

Fire relay and key switch (requires maintained supply, battery back up needed if no maintained supply. Fire relay, key switch and fusible link if no fire alarm.

Fire Relay: Principally the commonly used means of release, the characteristics mimic the use of the solenoid on the conventional fire shutter, again linked to the fire alarm, the shutter rather than closing manually through the gearbox will of course be powered down. A volt free signal is required from the fire alarm.

Fusible Link Release: On activation, the link which is a soldered link, separates and releases at 64 degrees centigrade, in effect the

temperature release of the link creates a signal to the relay which in turn powers the door down.

Audio Visual Warning (FDI): Principally this unit is designed to delay the closing of the fire shutter: generally the fire alarm is linked to the audio visual unit and from the audio visual unit straight into the key switch. There is no need for a separate relay: there is already a relay in the FDI. On activation from the fire alarm the unit starts to "flash & sound", this unit contains a programmable timer which effectively delays the signal to the relay in the panel to close the door. 230mm wide x 240mm long x 120mm deep.





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Arrangement

Vertical roller shutter for face/reveal fixing.

Barrel Mild steel tube finished with one coat rust inhibitive primer.

End Plates 6mm mild steel plates finished with one coat rust inhibitive primer.

Curtain Interlocking galvanised steel laths, 75mm in depth, with solid curved profile restrained laterally by endlocks riveted to both ends on alternate laths.

Guides

Constructed from 50mm, 65mm, 75mm or 100mm galvanised guide mounted on 75mm x 50mm x 6mm, or 100 x 65 x 8mm steel angles.

Slotted guides and punched bottom hole to allow for expansion requirements.

Nylon washers will be required for fixing detail.

Bottom Rail

Steel angle reinforcing rail of adequate size forming an inverted 'T'.

Coil Casing

BS EN 12453 0.9mm galvanised sheet steel coil casing as standard.

Finish

Standard finish is galvanised steel curtain and guides with non-galvanised components lacquered. Door curtain, guides and coil casing can be supplied BS EN 12206-1 polyester powder coated (PPC) to our standard range of BS and RAL colours. Normal powder coverage of 40 microns. Non-standard colours are available on request - this may increase lead times.

Operation

Electric Operation A totally enclosed reduction geared motor to suit the size of the shutter. Standard voltage: 415V, 3 phase, 50 Hz. 240V single phase is also available. The motor is equipped with an electromagnetic brake and limit switches. The motor position can be handed to suit the site conditions. An emergency hand chain is provided for use in the event of a power failure.

Accessories

Control Accessories Controlled through the Guardian (FDI) Control Panel linked to the fire alarm system, allowing the shutter to open/close through an auxiliary signal, with the option of an essential supply or battery backup package.

Colour Range Any BS or RAL reference

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