

# Fire Resisting Roller Shutter UL

NFPA 80

# 601

V5

## Introduction:

### NFPA80 Fire door standard:

### Underwriters laboratory listed USA

Fire roller shutters are manufactured by HART up to 4 hour fire resistance specifically to customer requirements. The recommended method of operation for all sizes is by electric motor, designed specifically for the purpose. These motor units provide ease of use, the necessary safe controlled automatic operation in the event of fire and satisfy health and safety recommendations.

## Size availability:

Doors can be constructed to any size up to 7.3 meters or 24 feet width or height. Above these sizes special assessments will be required.

## System Design Supporting Structure:

The supporting structure must be adequate for the purpose within building regulations and fire protected to the same fire time-resistance as the door unless constructed in concrete and including a concrete lintel.

## Door Curtain:

Constructed from single skin, 75mm convex interlocking galvanised roller shutter lath section. This section is available in three thicknesses 18G, 20G and 22G dependant on size and fire resistance requirement.

## Casing support brackets:

Are required on doors over 4.115 meters or 13.5 feet wide.

## Finish:

Galvanised steel finish or powder coated in TGIC-free polyester in all BS and RAL colours. Plastisol finish available for shutters up to 2.5m<sup>2</sup> in a range of colours. Paint finish tested and approved to BS476:Part22.

## Duty cycle:

Limited duty cycle is provided only providing one– six operations per hour dependant on size of shutter and motor being either single or three phase. Should it be the intention that more frequent operation is required this should be stated in the initial enquiry and will need higher duty cycle equipment.

## Approvals and certification:

HDS fire roller shutter doors are tested in addition to British & European standards to NFPA 80 2007 edition and listed by Underwriters Laboratory, Chicago, USA. Up to 4 hours fire resistance. Doors are constructed within ISO 9001-2008 quality system.

## Operation in normal condition:

Electric systems provide ease of use with press button operation or, should the door be used for security or general purposes, a key operated option to prevent unauthorised use. For safety reasons the position that the door is operated from must be able to enjoy a full view of the entire door. 'Constant pressure must be maintained on the button by the operator' until the door is fully closed. Additional safety must be provided for pedestrians if this is not the case.



## Automatic activation in fire condition:

Least cost option is that the door be activated by a sacrificial fusible link. This will activate the door independently when the heat around the link reaches approximately 75°C (other temperatures available). It will not be triggered by smoke & will require replacement before the door can operate normally again. Alternatively most frequently, a fire roller shutter will be part of an overall fire (and smoke) control system. The electrically operated fire roller shutter system's solenoid when initiated by a 24 volt DC 3amp supply, provided by the fire control system, will immediately commence the shutter to close at a controlled rate until it is fully closed. In the event of a fire test or false alarm the main fire control panel when reset, will allow the optional manual or auto re-set of the fire shutter to engage & return the system to normal operation after pressing the reset button. Various degrees of improving sophistication are available on request.

## Pedestrian safety:

Will take precedence, when pedestrians commonly use the door.

**Audio-visual alarms** coupled with delayed operation and or pedestrian photocells can be fitted. Safety brakes are fitted to all electric unsprung pedestrian fire roller shutters to prevent uncontrolled closure in the event of mechanical failure.

## Service and maintenance and testing:

Fire roller shutters must be regularly tested to ensure that they operate i.e. close on activation by the fire control system. Power operated doors must be maintained to manufacturer's requirements to comply with the machinery safety in use legislation and with the HSE recommendations. This requires minimum test and inspection once per year as a minimum.



Speedor Super



Speedor Mini



Speedor Maxi



Speedor Combi



Roller Shutters Fire and/or Security



Automatic Conveyor Door



Machine Guard Automated



High Speed Fire Resistant Conveyor



Fire Shutter to UK or US Standards



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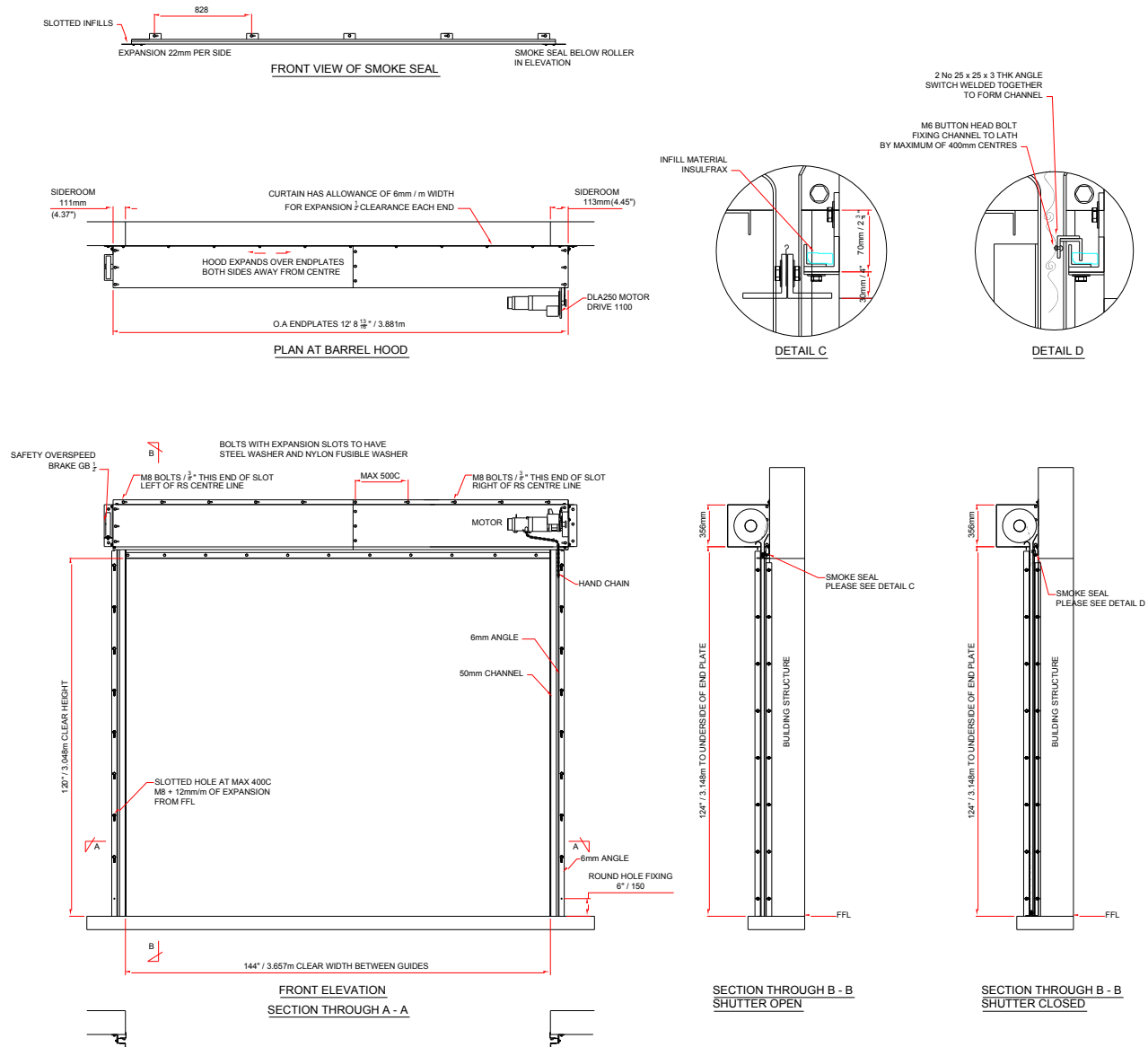
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#### Architects Shortform:

Electrically operated fire roller shutter to.....minutes fire resistance and NFPA 80 standard. To include motor drive with manual hand chain over-ride and 'controlled speed of closure' (controlled fall), and safety brake over-ride operated by (press button or .....). Fire activation by fusible link or solenoid push button reset 24VDC power supply activation by others. To include hood to enclose roller and brackets as required. Finish standard galvanised/powdercoat. Further options: Audio visual alarms and delayed operation.

#### Roller Shutter Data & Specification:

##### Fire resistance:

As required up to 4 Hours resistance

##### Size availability:

Up to 7 meters wide and 7 meters high clear opening, there after to special design.

##### Power supply:

Single phase or three phase as specified on the quotation.

##### Motor:

Geared electric in line motor unit with limit switch override. Unit capable of brake release via fusible link or solenoid to provide safe controlled rate of door closure under gravity.

##### Manual override:

By hand chain through motor (very slow and not suitable for frequent operation)

##### Shutter curtain:

Single skin 22g, 20g and 18g.

2 hour (120 mins) and 4 hour (240 mins): A minimum of 20g for doors up to 5m or 25 square meters and thereafter 18g.

1/2 hour (30 mins) and 1 hour (60 mins): A minimum of 20g discretionary above 5m or 25 square meters.

##### Insulation: none

##### Finish:

Galvanised most exposed parts or powder coat to requirements. Primer finish on all other parts.

##### Safety:

An over speed safety brake is fitted to the roller so that in the event of a drive failure the shutter will be stopped from falling by the safety brake. As required by the machinery directive and other impending EEC regulations enforced by the HSE. Photo cells and audio visual alarms can be provided to protect pedestrians and to provide delayed operation.

##### Fire activation:

Fusible link or solenoid. Solenoid options for manual or electrically reset. Solenoid is operated by a 24V.DC power supply. This is available as an optional extra although more normally supplied and wired by the main fire system installer.

##### Normal operation:

Press buttons or key switch. Single phase options include 13 amp fittings with electric reset and isolator facilities likewise industrial versions.

