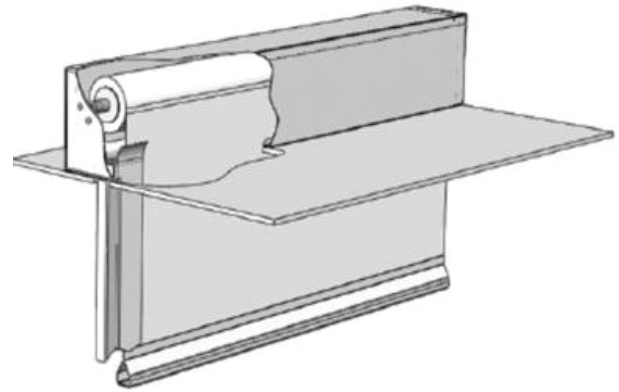




### GENERAL DESCRIPTION:

The SD60GS is a GRAVITY FAIL SAFE (GFS) deployable fire protective smoke curtain system composed of a glass-fiber fabric in a Panama weave rolled on a round steel tube in a fire rated assembly. The curtain remains retracted above the finished ceiling by a low voltage system until activated by fire alarm or smoke alarm at which point it descends at 6 in/sec. and creates a smoke and fire barrier. The curtain can also be non-motorized when activated by a fusible link. The SD60GS system consists of:

- Manufactured from 18ga galvanized steel, curtain head box rated at same temperature as curtain.
- A single or multi roller assembly with a 0.05 in. thick galvanized steel head box with a minimum 6 in. x 6 in. with a maximum span up to 146 ft. and drop height of 45 ft.
- A 24 V motor controller (MC) housed the steel enclosure and mounted onto the motor end of the head box. NFPA 70 compliant tubular DC low voltage motor interfaced with Control Panel (CP) and a suitably weighted bottom bar with a steel bottom bar.
- The fabric curtain manufactured from 660g/m<sup>2</sup> stainless steel, wire reinforced, woven glass fiber fabric coated on each side with silver polyurethane.
- Removable fire rated cover plates incorporated to allow access to curtain rollers.
- Curtain passes through fire rated galvanized steel auxiliary rails (side guides) that can be powder coated or prime coated in finish.
- Optional pass-through slot as secondary mean of manual egress..
- Egress switches on both sides of curtain per ANSI section 3.2.5 of AC 77.



### STANDARDS:

The SD60GS is certified for quality by ISO 9000, meets and exceeds the requirements of:

- IBC 715.4 C Smoke Door Assembly
- NFPA 105 Compliance
- Tested to UL 10D (30 mins)
- Tested to UL 10B (20 mins) - No hose stream
- Tested to UL 10C (20 mins) - No hose stream
- UL 1784 Listed and Certified
- Tested to UL 864
- ASTM E84 Listed and Certified
- ASTM E136 Listed and Certified

### PERFORMANCE:

- 2000 cycles at normal ambient temperatures in the range (32°F - 140°F) and can withstand hot air and smoke at temperatures at UL 10D Time Temperature curves.
- Bottom bar deploys ~6"/second. Heavier bottom bar deploys ~12"/second.
- When tested in accordance with UL 1784, the SD60GS systems have air leakage ratings not exceeding 3.0 cfm per square foot of opening at a pressure differential of .01 w.c. at both ambient and elevated temperatures and are therefore eligible to bear an "S" label in accordance with Section 710.5.2.2.1 of the IBC and NFPA 105.

### FABRIC:

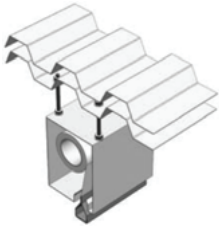
The SD60GS® fabric is fabricated from woven glass fiber fabric coated on each side with silver polyurethane. The curtain fabric is manufactured from a unique “Panama” weave which offers an even surface and allows a tighter interlacing of the fabric edges. The tensile strength of Panama weave fabric is 10% greater than other fabrics due to constant thread tension.



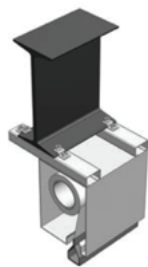
FABRIC		
Style: 30 minutes fabric		Rating for 1832°F for 30 minutes
Test Characteristics	Unit	Data
Weight of fab	g/m <sup>2</sup>	455 ± 5%
Width	in.	39.4 ± 1%
Thickness	in.	0.017 ± 5%
Weave		Panama
Threads /warp	Per cm.	18.0 ± 3%
Fineness /warp	Tex	EC9 - 68x2 ± 5%
Tensile strength /weft	Lbf/ft	6167.0 ± 5%
Threads /warp	Per cm.	10.0 ± 3%
Fineness /weft	Tex	EC9 - 68x2 ± 5%
Tensile strength /weft	Lbf/ft	3426.1 ± 5%
Coating Quantity	G/m <sup>2</sup>	35 ± 5%
One side/ Both sides	1/2	2
Application temp.	°F	932 (Glass)

### HEADBOX INSTALLATION OPTIONS

There are many installation options that suit all types of ceiling configurations and provide a broad array of flexibility.



Unistrut Installation



I Beam

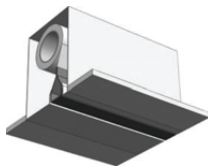


Back Mounted

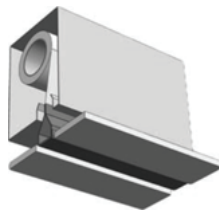


Top Mounted

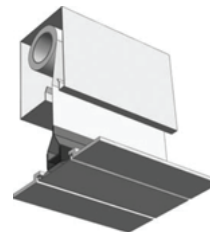
### FINISHED CEILING OPTIONS



Flush



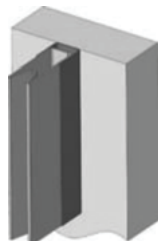
Shadow Gap



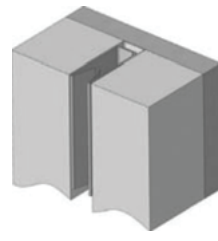
Downstand Neck

### SIDE GUIDE CONFIGURATION

The side guide can either be exposed or recessed flush as shown below:



Exposed



Flush

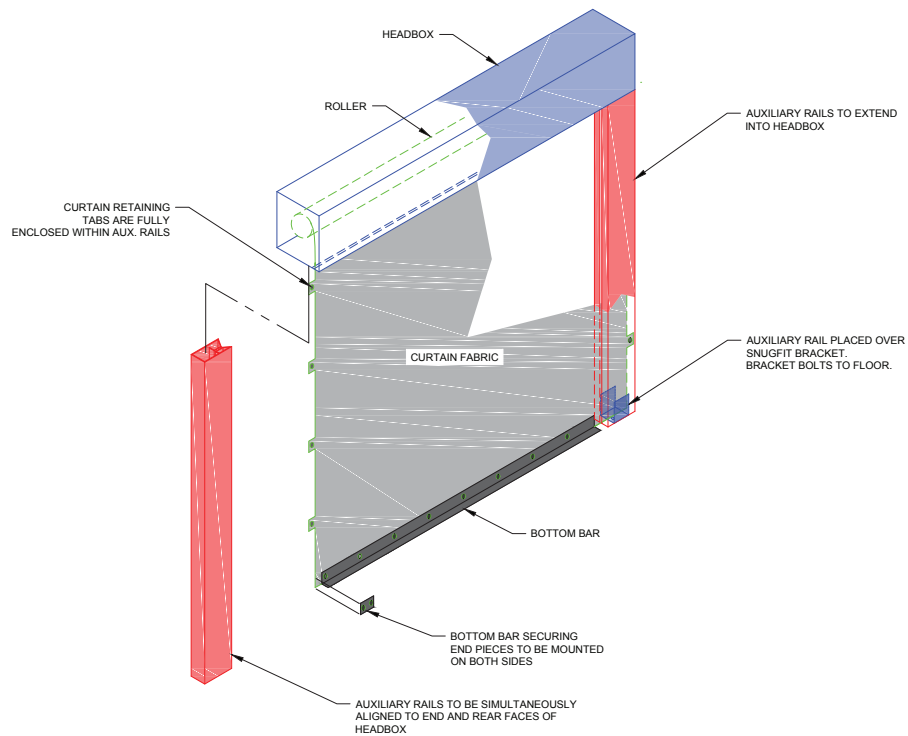
### CONTROL PANEL (CP):

The curtain deployment mechanism is directly synced and integrated in the fire alarm emergency systems. When an alarm signal is detected, the CP will automatically trigger all the curtain systems to deploy in a controlled descent under gravity. Each CP controls a maximum of 4 Motor Controller (MC). In normal operating conditions the CP provide a 24v AC supply the MC to keep the curtains in retracted condition. Should smoke be detected, the fire alarm control system will signal the CP. The latter will open the circuit loop, remove the voltage and the curtains will deploy under gravity at a controlled speed.

### MOTOR CONTROL SPECIFICATION (MC):

- Nominal Voltage= 24 V
- Nominal speed = 3100 rpm
- Dimensions: 145 mm x 250 mm x 50 mm
- Continuous Torque : 1400 Ncm
- Efficiency : 0.70
- Ratio : 100.00
- Shaft Load Capacity – Axial : 150 N
- Shaft Load Capacity – Radial : 250 N
- A dynamic braking system housed in the motor control circuit

### FIRE-PROTECTIVE SMOKE CURTAIN DIAGRAM



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