Smoke Guard M400/M600 Smoke Curtain Specification

Single Coil | Smoke Containment Screen | Small Span

Performance Requirement

The Smoke Guard M400/M600 Vertical Lift Smoke Containment Screen shall be supplied and installed over a lift opening in accordance leakage data and test prototype except that the primary means of activation is to be from an AS1670.1:2018 smoke detection system (no fire rating required).

The system shall include proprietary flexible magnetic strips which adhere to the full length ferrous stainless steel elevator frame or auxiliary stainless rails, sealing the system from passage of smoke whilst still permitting failsafe occupant egress. The system shall also include a screen mounted rewind switch to permit temporary screen retraction to facilitate occupant egress.

Product Specified

Smoke Guard M400/M600 Vertical Lift Smoke Containment Screen by Smoke Control T: 1300 665 471; info@smokecontrol.com.au or approved equivalent.

System Parameters

1) Fire performance – N/A
2) Air leakage performance (AS1530.7:2007) – ≤ 0.159m^3/min/m^2 @ 200°C, 25Pa

Exposure Temperature	Leakage Rate Q (m^3/h) at pressure differential of:		
	10Pa	25Pa	50Pa
Ambient (20°C)	<32	32	52
Medium (200°C)	<31	31	69

3) Maximum size:
   a) M400 – 1520mm(W) x 3000mm(H)
   b) M600 – 2300mm(W) x 3000mm(H)

Note: Heights up to 3.3m may be possible on a project specific basis.

4) Component dimensions:
   a) Headbox:
      i) M400 – 267mm(H) x 230mm(D)
      ii) M600 – 230mm(H) x 280mm(D)
   b) Side Guides – 51mm(W) x 13, 19 or 25mm(D)

Note: The required side guide depth is dependent on projection needed to clear lift surround or buttons.

5) Deployment speed – nominally 200mm/s
6) Power requirements – 240V 10amp GPO, peak current draw 2amps
7) Alarm input – 0V nominally closed contacts
8) Maximum pressure resistance:
   a) Deploying – 0Pa
   b) Deployed – 50Pa
9) System weight:

a) System sizes up to 1000mm(W) – 45kg
b) System sizes up to 2000mm(W) – 60kg
c) System sizes up to 2300mm(W) – 75kg

10) Approved supporting construction:
    a) Masonry
    b) Concrete
    c) Non-combustible lining over steel or timber stud
11) Approved installation configurations:
    a) Headbox:
        i) Fixed under the wall
    b) Side Guides:
        i) Face fixed to the wall

Required Ancillary Items

1) Control system: Shall allow fail safe operation on receipt of a general building alarm signal and automatic rewind on reset of the alarm from the Fire Indicator Panel (FIP) without the assistance of a technician.
2) Battery back-up: Shall be installed to reduce the likelihood of nuisance deployments and allow 5 complete open-close cycles.
3) Rewind switches (operating ΔPa = 0): Shall be installed on both sides of the nominated smoke containment screens. They shall allow the system to rewind top the top position before deploying automatically after nominally 10 seconds.
4) Third-Party Product Listing: The product shall be manufactured under the Third-Party Product Listing scheme known as the Warnock Hersey Mark and shall bear the Warnock Hersey Certification Mark.
5) Maintenance: All smoke curtains shall be listed on the Essential Services Register and shall be maintained by competent technicians in accordance with AS1851 and the manufacturer's recommendations.

Applications

- Removal of smoke lobbies for lifts in accordance with NCC2022 D2D12 & D3D7 (NCC2019 D1.7 & D2.6)
- Openings in smoke proof walls healthcare, residential care buildings in accordance with NCC2022 Specification 11(NCC2019 Spec C2.5)

Note: Some applications listed above may require a Performance Solution to be compliant. Please check with your Certifier prior to specifying this product.

Installation

Smoke Curtains

The Smoke curtains shall be installed, certified, commissioned and tagged in accordance with AS1905.2:2005 by an ISO9001 Quality, ISO18001 WHS and ISO14001 Environment Accredited manufacturer.

When installed the system shall consist of a single overhead barrel for the full width of the opening. Experience shows that some manufacturer designs of smoke curtains do not operate reliably once installed and attract extraordinarily high maintenance costs. For this reason, multiple barrel, overlapped smoke curtains are deemed not equivalent to this specification on this project and shall not be substituted for a single barrel continuous span system.

Threshold

The curtain must deploy onto a non-combustible as per requirements of AS1905.2:2005. The maximum gap permitted at the threshold is 25mm.

Smoke Resistant Bulkheads

The smoke resistant bulkhead shall be installed using smoke wall construction as defined by the NCC or by utilising the same fabric material utilised in the smoke curtains. Any service penetrations shall be treated so that there are no gaps between the services and the baffle.

Commissioning

Once installed it shall be demonstrated that the system shall fail safe close on loss of power using mains power in combination with battery backup and on the receipt of an alarm signal. On reset of power and the alarm signal the system shall automatically rewind to its standby position without the assistance of an occupant or technician.

The smoke curtains shall also be commissioned in conjunction with the building's smoke management system. The smoke management system shall be balanced to operate without adverse effects to the smoke curtain. The smoke curtains must be tested a minimum of 3 consecutive times on general building alarm without failure.

The building's smoke management system shall not impede the operation of the smoke curtain. A time delay of 60 seconds shall be incorporated into the smoke management system before it operates to allow the smoke curtain to deploy to its fire mode position without interference. This shall be programmed within the Fire Indicator Panel. Consideration shall be made for the staged deployment of the smoke curtain.

Similarly, a time delay of 60 seconds shall be incorporated into the reset of the alarm signal to smoke curtain to ensure the smoke management system has ceased operation and the effects of pressure differentials have been dispersed prior to rewind of the curtain.

Certificates of Compliance shall be issued by the sub-contractor in accordance with NCC2022 A5G3 & A5G4 (NCC2019 A5.2 & A5.3) and AS1905.2:2005 *Clause 7 Certification*.

All details and approvals are current as of the date displayed. This document supersedes all previous versions.