Metashield L Lateral Fire Shutter Specification

Integrity Only (-/120/- or -/240/-) | Steel Slat System | Large Span

Performance Requirement

The Metashield L -/120/- or -/240/- Lateral Rigid Steel Slat Fire Shutter shall be supplied and installed in accordance with AS1905.2:2005 except that the primary means of activation is to be from an AS1670.1:2018 smoke detection system.

When fire tested in accordance with AS1905.2:2005 *Clause 3 Determination of Fire Resistance* it shall provide a minimum Fire Resistance Level (FRL) of -/120/ or -/240/- (application dependant).

Product Specified

Metashield L -/120/- or -/240/- Lateral Rigid Steel Slat Fire Shutter by Smoke Control T: 1300 665 471; info@smokecontrol.com.au or approved equivalent.

System Parameters

1) Fire performance (AS1530.4:2014) – -/120/- (or E120), -/240/- (or E240)
2) Air leakage performance – N/A
3) Maximum size – 18000mm(W) x 3800mm(H) (larger heights may be possible on a project specific basis)
4) Component dimensions:
    a) Shutter Box:
        i) Systems up to 6000mm(W) – 850mm(W) x 700mm(D)
        ii) Systems up to 12000mm(W) – 1100mm(W) x 850mm(D)
        iii) Systems up to 18000mm(W) – 1350mm(W) x 850mm(D)
    b) Top Track – 150mm(H) x 55mm welded steel section. (note: total hanger width larger than this to encompasses required partition bulkhead, nominally 170mm(W))
    c) Receiving Track – 120mm(W) x 90 mm metal receiving track must be rebated into fire-rated structure or clad with fire-rated board
    d) Slats – 75mm(L) x 0.7-1.2mm(T) profile with metal clips
5) Deployment speed – nominally 100mm/s
6) Power requirements – 415V 3 phase 16 Amps (240V single phase available on request for small sizes)
7) Alarm Input – 0V nominally closed contacts
8) Duty – maximum 3 cycles per hour.
9) Maximum pressure resistance:
    a) 0Pa when deploying
    b) 50Pa when deployed

Note: Higher pressure resistances may be available depending upon the application – please contact technical@smokecontrol.com.au

10) System weight – Due to variations in system size and pressure this information is available on specific project request.

Note: For applications where pressure differentials are expected consideration should be given to the induced loading on the surrounding structure of this pressure to ensure appropriate restraint of the system.

11) Approved supporting construction:
    a) Masonry
    b) Concrete

Required Ancillary Items

1) Control system: Shall allow fail safe operation on receipt of a general building alarm signal.
2) Battery back-up: Shall be installed to reduce the likelihood of nuisance deployments and allow 5 complete open-close cycles.
3) Exclusion zone sensors: IRS36 shall be installed in accordance with Smoke Control's recommendations to protect each fire shutter asset during normal building use and significantly increase the likelihood of full deployment when in fire mode.
4) Sounders and strobes: Shall be installed on both sides/on the same side as the egress path and operate on a signal from the FIP.
5) Fire-rated bulkhead: Shall be installed to provide an FRL of -/120/120 or -/240/240 when fire tested in accordance with AS1530.4 and shall facilitate any service penetrations to be installed and certified in accordance with AS4072.1:2005.
6) Maintenance: All fire shutters 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

- Protection of openings in external walls in accordance with NCC2022 C4D5 (NCC2019 C3.4)
- Protection of openings in fire compartment walls in accordance with NCC2022 C4D6 (NCC2019 C3.5)
- Separation of fire compartment where it exceeds maximum size or volume NCC2022 C3 (NCC2019 C2)
- Security separation between two areas

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

Installation

Fire Shutter

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

The fire shutter headbox must be rebated 70mm into floor to permit normally 20mm running tolerance at threshold.

Threshold

Unless addressed as part of an appropriate performance solution the curtain must deploy onto a fire-rated or non-combustible threshold as per requirements of AS1905.2:2005 and AS1530.4:2014. The maximum gap permitted at the threshold is 25mm. The metal receiving track at the end of the shutter deployment must be rebated into fire-rated structure or clad with fire-rated board.

Fire-rated Bulkheads

A fire-rated partition above the top track assembly is required to be installed and certified as per Smoke Control Pty Ltd published data. Penetrations through the partition should be appropriately fire sealed in accordance with fire-rated board published data and AS4072.1:2005.

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 fire alarm and pushing of retraction button, shutter should retract to its retracted position. The fire shutter must be tested a minimum of 3 consecutive times on general building alarm without failure.

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.