Fibershield –/120/120 Fire Shutter Specification

Integrity & Insulation (without sprinklers) | Single Coil | Small Span

Performance Requirement

The Fibershield -/120/120 Fire Shutter system shall be supplied and installed in accordance with the deem-to-satisfy building code requirements under NCC2022 S12C5 (NCC2019 Spec C3.4: 4) and 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 -/120/120.

Product Specified

Fibershield -/120/120 Fire Shutter by Smoke Control T: 1300 665 471; info@smokecontrol.com.au or approved equivalent.

System Parameters

1) Fire performance (AS1530.4:2014) – -/120/120 (or EI120)
2) Air leakage performance (EN12101-1) – ≤25m^3/hr (fabric permeability only)
3) Maximum size - 6000mm(W) x 4400mm(H)
4) Component dimensions:
    a) Headbox – 460mm(H) x 430mm(D)
    b) Side Guides - 230mm(W) x 110mm(D)
5) Deployment speed – nominally 90mm/s
6) Power requirements:
    a) System sizes up to 4000mm(W) – 1 of 240V 10amp GPO, peak current draw 2.1A
    b) System sizes up to 6000mm(W) – 2 of 240V 10amp GPO, peak current draw 2.1A per controller
7) Alarm input – 0V nominally closed contacts
8) Maximum pressure resistance:
    a) Deploying – 10Pa
    b) Deployed – 50Pa
9) System weight:
    a) System sizes up to 3000mm(H) – 125kg per metre width
    b) System sizes up to 4000mm(H) – 150kg per metre width
    c) System sizes >4000mm(H) – please contact technical@smokecontrol.com.au

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.

10) Approved supporting construction:
    a) Masonry – minimum 150mm(T)
    b) Concrete – minimum 150mm(T)
11) Approved installation configurations:
    a) Headbox:
        i) Face fixed to 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) Staged deployment: Staged deployment shall allow the fire curtain to deploy to 2m above the finished floor level, pause for 30 seconds and then deploy to the floor (other configurations available on request).
3) Battery back-up: Shall be installed to reduce the likelihood of nuisance deployments and allow 5 complete open-close cycles.
4) Rewind switches (operating ΔPa = 10Pa): Shall be installed on both sides/one side of the nominated smoke containment screens. They shall allow the system to rewind no more than 2.1m and redeploy within 20 seconds. (other configurations available on request).
5) Exclusion zone sensors: IRS36 shall be installed in accordance with Smoke Control's recommendations to protect each fire curtain asset during normal building use and significantly increase the likelihood of full deployment when in fire mode.
6) Sounders and strobes: Shall be installed on both sides/on the same side as the egress path.
7) Maintenance: All fire curtains shall be listed on the Essential Services Register and shall be maintained by competent technicians in accordance with AS1851:2012 and the manufacturer's recommendations.

Applications

- Protection of openings in fire compartment walls in accordance with NCC2022 C4D6 (NCC2019 C3.5)
- Replacement of fire-rated walls in accordance with NCC2022 C2D2 & Specification 5 (NCC2019 C1.1 & Spec C1.1)
- Separation of fire compartment where it exceeds maximum size or volume in accordance with NCC2022 C3 (NCC2019 C2)

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 Shutters

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.

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.

Fire-rated Bulkheads

The system as tested is directly fixed to a fire-rated masonry or concrete wall structure. Top fixing the shutter is not possible and a minimum wall thickness of 150mm is required.

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 fire 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 fire curtain. The fire 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 fire curtain. A time delay of 60 seconds shall be incorporated into the smoke management system before it operates to allow the fire 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 fire curtain.

Similarly, a time delay of 60 seconds shall be incorporated into the reset of the alarm signal to fire 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.