

FLAMESHIELD 8524 FIRE CURTAIN 24 VOLT TUBE MOTOR (1HR, 2HR) BS 8524

APPROVED STANDARDS

BS 8524-1
BS 8524-2
BS EN 1634-1:2014
BS 476 : Part 6
BS 476 : Part 7
BS EN 12605
BS EN 14600
BS EN 13501-2
BS EN 16034 (New European Standard)
BS 8524-1 Reliability and Durability
BS 8524-1 Response Time and Velocity
BS 8524-1 Fire Resistance to EN BS 1634-1
Reaction to Fire (BS 476-6/ 476-7 or 13501-1)
BS 8524-1 Deflection Zone
BS 8524-1 Motor Test Pass BS 5234-2 Impact Test Pass
BS 8524-1 Annex H For all ancillary products – smoke alarm, heat alarm, egress switch, key switch, access switch, single beam obstruction warning, light curtain obstruction warning light curtain obstruction warning
BS 8524-1 Annex D

(PAS 121 is no longer current, it was withdrawn by the British Standards Institute on the 31st July 2013, please see above relevant standards).

FIRE & SMOKE CURTAINS

Product Construction all A1S Group fire / smoke control curtains are manufactured and produced in accordance with the parameters and technical requirements indicated within the specification, which was submitted to the Warrington Fire Research Establishment. The curtains constructed to Warrington Fire Research Centre, the test is in accordance with BS EN 1634-1 for Fire and Radiation (Radiation replaces the insulation zone), as part of EN13501 the fabric has been successfully tested to BS EN 13823 SMOGRA (Smoke Growth Rate), and the results were well within “O” and the S1 desired criteria.

Manufactured in accordance with Warrington test WF 341175 and the new European Standard BS EN 16034.

RADIATION PERFORMANCE

INTEGRITY 120 minutes 2 Hour integrity

RADIATION 85 minutes @ 15KW/m²

This product is 3rd party accredited to BS 8524-1 and 2 by IFC and can be interdependently verified on their website, IFCC 1542 for manufacture, IFCC 3425 for installation, commission and servicing.
<http://www.ifccertification.com/>

Basic description The automatic curtains comprise of a mild steel barrel and motor incorporating an attached fabric curtain, the barrel deflection conforms to the necessary British Standard BS 6323-5, the fabric can withstand temperatures in excess of 1000 °C the unique 2 section bottom rail allows smooth operation of the curtain. The fire barrier shall be powered by an internal 24V DC electric motor that has all of the applicable safety standards.

Fabric Fire curtains are formed from a fire rated fabric 0.54mm thick stainless steel wire reinforced, with a specially formulated Aluminum pigmented and fire retardant polymer which provides a heat reflecting surface as well as other properties for smoke and fire.

The fabric has been independently tested for fire propagation in accordance with BS 476-6 in addition to this it also conforms to BS 476-7 which relates to surface spread of flame and in accordance with approved document B 2006. As a requirement of BS EN 1634-1, the fabric and curtain are tested as a complete assembly in compliance with BS EN 1363-1 and BS EN 1363-2.

Radiation (fire curtains are now measured by radiation not insulation zone), this is tested in accordance with BS EN 1363-2 : 1999, at 1000mm from the fire curtain (the nearest tested point to the curtain), the maximum radiation should be no greater than 13.7kW/m², the A1 curtain recorded 5.331 KW/m² well within the permissible levels under BS 8524-2 2013 (5.3.2).

Sampling a representative of Warrington Certification Ltd conducted the sampling and selection of the tested specimen, this was to cover a requirement of EN 16034 the new European Standard.

Reliability, Response Time and Durability tests performed in accordance with BS 8524-1, Warrington Fire Report 340986.

Barrel Fire curtain barrels are manufactured from mild steel tube, tube size dependent on the overall size of the unit and deflection calculated to conform to British Standards.

Operation / Control System The fire curtain barrier shall meet the requirements of BS 8524-1 and BS 8524-2 (where appropriate). Tested to controlled speeds in all circumstances including gravity, closing to the operational position on total power failure with the no need for a secondary supply for regenerative absorption.

When the barrier is retracted the armature shall be isolated from the supply and the barrier shall be locked in position with the electromagnetic brake. Thus ensuring the motor armature not damaged and the retracted position is maintained without drift. The barrier shall operate with the back up of secure gravity fail safe in accordance with BS 8524-1.

The barrier shall move to the operational position, via controlled descent, when all primary and secondary power is exhausted. In the event of a mains power failure backup power shall be

provided by the in-built secondary power source, the barrier shall remain in the retracted position and continue to monitor the alarm and system inputs.

If signaled to operate during this period the barrier shall operate as normal. All barriers shall have a current limit stall option in the retracted position to negate damage to ceilings and fascias.

The secondary supply voltage source is continually monitored. If the voltage becomes critically low the barrier shall be signaled to close to the operational position (normally between 30 and 120 minutes).

The barrier shall move to the fire operational position with a velocity within the range of 0.06m/s to 0.15m/s in accordance with BS 8524-1.

Optional Extras :

Partial Drop

- Partial drop the barrier shall have the facility to deploy to a pre-determined position to allow escape and initial smoke containment. The partial close position shall be site adjustable with an adjustable wait time in the partial close position of up to 10 minutes.

Emergency Retract :

- The barrier can have an emergency retract interface for escape and emergency access. The interface shall be volt free, normally open (close on operation). The signal required shall be momentary with a site adjustable retract time. The emergency retract facility shall be operational as long as there is primary / secondary power available.

Audio / Visual / Spoken Warning Unit

- The barrier has a volt free c/o contact which indicates an active c/o (change over) contact which indicates an active alarm signal. An Audio / Visual / Spoken warning unit can be interfaced with this using power supplied by the primary / secondary source or via an external source.

BMS Interface

- The barrier has volt free c/o contacts to indicate whether the barrier is fully open or fully closed.

Obstruction Devices

- 4) Single Photo Cell Tested and Passed by Exova to BS 8524-1 Annex H
- 5) Light Curtain Tested and Passed by Exova BS 8524-1 Annex H
- 6) Light Curtain (Stand alone system) EN 12978:2003 +A1 2009

