

SPECIFICATION

FIREMASTER® PLUS NVS™ HORIZONTAL DUPLEX™ ACTIVE FIRE CURTAIN BARRIER ASSEMBLIES

In accordance with:

BS PAS 121
EN 1634-1
EN 13501-2
BS EN 12605
BS 476-6
BS 476-7

Period of Fire Resistance:

120 minutes (2 hours) integrity

Period of Radiation:

84 minutes <15kW/m²

Maximum Dimensions:

Approved spans 2.5 m (98.425 in) in width, lengths up to 8.318 m (327.480 in)

Certification:

The FireMaster® Plus NVS™ Horizontal Duplex™ active fire curtain barrier assembly shall have test evidence to the applicable standards detailed below. The manufacturer shall operate and be certified to BS EN ISO 9001 for quality management systems, and BS EN ISO 14001 for environmental management systems. The manufacturer shall operate and shall have certification and listing with an independent accredited certification body operating an accredited UKAS installer, commissioning and servicing scheme.

Product Name and Model:

FireMaster® Plus NVS™ Horizontal Duplex™ active fire curtain barrier assemblies

General description:

An electrically operated FireMaster® Plus NVS™ Horizontal Duplex™ active fire curtain barrier assembly used to form a virtually continuous barrier as a fire separating element.

NOTE For ease of reference the FireMaster® Plus NVS™ Horizontal Duplex™ active fire curtain barrier assembly has been referred to the "barrier assembly" throughout the remainder of this specification.

Barrier assemblies shall meet the requirements of BSI PAS 121 (where appropriate) and be tested for controlled speeds in all modes including fail-safe, be tested for mechanical resistance to BS EN 12605, be tested for fire resistance to EN 1634-1 (EN 1363-1 & -2), and be classified to BS EN 13501-2.

Description:

Active fire curtain barrier assemblies shall comprise of a fire resistant fabric which is wound on to a steel roller, with 1:600 deflection performance to BS 6323-5, which is powered by an internal 24Vdc electric motor. At the opposite end is a further steel roller, with 1:600 deflection performance to BS 6323-5, which is powered by an internal 24Vdc electric motor, which has steel bobbins mounted at either end and has a stainless steel cable wound around these which are connected to a tensioned bar at each leading edge. The tensioned bar shall be supported between the lateral side channels and be fixed to a steel carrier bearing system. Where the opposing tensioned bars meet in the centre of opening (when

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closed) they interlock. Distance travel/limit switches are installed within the side channels to determine the closed position of the tensioned bar at the leading edge of the fabric barrier. They are enclosed within a 1.2 mm (0.047 in) galvanized mild steel box.

The motor shall contain the necessary drive mechanisms, a mechanical epicyclic gearbox retarder, electromechanical distance travel/limit switches, linked to an internal 24Vdc electromagnetic brake with regenerative braking system which allows the barrier assemblies to remain in the retracted position with all power removed from the motor unit.

Additionally, the motor shall be tested for operation at temperatures of 300 °C (572 °F) as required by BSI PAS 121.

Operation:

The barrier assemblies shall move to their fire operational position in a controlled manner, and shall be reliant upon a primary and auxiliary Battery Back Up (BBU-ERU) system in the event of a total mains failure. The auxiliary Battery Back Up (BBU-ERU) system shall be connected to an independent and maintain power circuit (provided by others) from the primary unit.

The barrier assemblies must commence movement upon initiation and move to the fire operational position with velocities within the range of 0,06 m/s to 0,3 m/s (2.362 in/s to 11.811 in/s) using the unique VarioSpeed™ function. Speeds may be dictated by those authorities having jurisdiction for 'safety in use' according to the location, nature or function of each unit.

The barrier assemblies must show the ability to operate with the barrier retained in side channels to resist pressure (as standard 20 Pa (0.08m in water) and 'ad-hoc' impact using a 50Kg weight dropped from a height of 1 m at the end of the fire-resistance test.

The barrier assembly shall have fail-safe with controlled braking system and drive mechanisms. All working parts shall be totally enclosed and protected within the steel roller and shall be tested as part of the complete assembly for fire resistance.

Any combination of the alarm/control signal provided by the Electrical Subcontractor, and/or the specified fail-safe functions shall activate the system.

Fabric:

The fabric material shall be tested as part of the complete assembly in the orientation and standard use of the application and installed in accordance with the fire resistance test in accordance with EN 1363-1 and -2 as required by EN 1634-1 in accordance with PAS 121:2007.

The fabric material shall be tested independently for fire propagation to BS 476-6, and for surface spread of flame to BS 476-7.

Fabric type is EFP™ 2/1000/BI a glass fibre, stainless steel wire reinforced, fabric coated with an intumescent graphite silicone elastomer 1900 g/m² (0.389 lbs/ft²) -5% +10%.

Optional Extras:

- Voice warning:
Audio or spoken multi message facility when mains or emergency power is available.

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- Visual alert system:
Light warning system when mains or emergency power is available.

Manufacturers:

Subject to compliance with all requirements set out in this specification, manufacturers offering products may be incorporated into the work are limited to the following:

Coopers Fire Limited, Edward House, Penner Road, Havant Hampshire, PO9 1QZ, United Kingdom. Tel +44 (0)23 9245 4405, Fax: +44 (0)23 9249 2732, Email: sales@coopersfire.com, Web: <http://www.coopersfire.com>

Warranty:

The manufacturer shall submit a written warranty for a period of one (1) year. If any part of the works of this section, including design, fabrication or installation are sublet to any party, such party shall provide a collateral warranty equivalent to the warranty.

Product certification, performance and/ or testing:

- Complete barrier assemblies shall be tested for fire resistance to EN 1634-1 as required by BSI PAS 121
- Complete barrier assemblies shall be tested for mechanical resistance to BS EN 12605
- Complete barrier assemblies shall be tested for fail-safe as required by BSI PAS 121
- Complete barrier assemblies must show tested ability to adjust and control speeds on site to suit specific site requirements as required by BSI PAS 121
- Motor(s) used within barrier assemblies the above tests shall be tested for operation at temperatures of 300 °C as required by BSI PAS 121
- The fabric used within the barrier assemblies shall be tested to BS 476-6
- The fabric used within the barrier assemblies shall be tested to BS 476-7

Approving standards:

The following standards apply to this product:

- BSI PAS 121:2007, Specification for active fire curtain barrier assemblies and active fire barrier assemblies with smoke
- EN 1634-1:2000, Fire resistance tests for door and shutter assemblies. Fire doors and shutters
- EN 1363-1:1999, Fire resistance tests – Part 1: General requirements
- EN 1363-2:1999, Fire resistance tests – Part 2: Alternative and additional procedures
- BS EN 13501-2:2003, Fire classification of construction products and building elements. Classification using data from fire resistance tests, excluding ventilation services rating
- BS EN 12605:2000, Industrial, commercial and garage doors and gates. Mechanical aspects. Test methods.
- BS 476-6:1989, Fire tests on building materials and structures. Method of test for fire propagation for products
- BS 476-7:1997, Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products
- BS 6323-5:1982, Specification for seamless and welded steel tubes for automobile, mechanical and general engineering purposes. Specific requirements for electric resistance welded (including induction welded) steel tubes

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- BS EN ISO 9001:2008, Quality management system
- BS EN ISO 14001:2004, Environmental management system