

National Building Specification

Specification for the BLE Smoke & Fire Curtains FC60 Fire Curtain

Manufacturer:

BLE Smoke & Fire Curtains
Unit 3, Holbrook Commerce Park
Holbrook Rise
Sheffield
S20 3FJ

Product reference:

FC60 – Automatic Fire Curtain

Description:

FC60 is an electrically operated automatic fire barrier, to be used to form a continuous barrier against fire.

Approved Standards:

BS 7346: Part 3: 1990
BS 476: Part 6: 1989
BS 476: Part 22: 1987
AS 1530: Part 4
BS EN 1634 – 1: 2008
UL 10 C
UL 10 D
UL 555
UL 864

Product Performance:

Complete product tested to BS476: Part 20/22, and achieved a rating of DA (1000°C, above 60 minutes). The fabric has a fire propagation index $I = 3.2$ when tested to BS 476: Part 6. It is therefore rated Class 0 to the UK Building Regulations Approved Document B 1991.

General Description:

The automatic fire curtain consists of a X32K woven glass fibre fabric. The fabric is tested to withstand temperatures of up to 1000°C for a period of 60 minutes minimum, this is wound onto a steel tube, each of which will incorporate a 24volt d.c. motor, a sealed heavy duty ball bearing assembly, and an electronic control circuit. The automatic roller assembly, incorporating the fabric, is housed in galvanised mild-steel head box which is normally bolted to the fabric of the building. Standard head box sizes are 180mm x 180mm. Larger head boxes may be required where the curtain drop is in excess of three metres.

The lower edge of the curtains incorporates a twin inverted mild steel angle which acts as a weight bar to enable the curtain to unwind upon receipt of a signal from the fire alarm panel or total mains and battery failure.

Metal side guides with a fabric retaining system shall be installed to provide a seal between the curtain fabric and the building construction.

Control system:

Operation of the curtains is via the Group Control Panel which can either be mounted adjacent to the fire curtain head box within the ceiling void, allowing access for maintenance, or mounted in a remote position from the curtain. The panel requires a local 240v ac supply rated at 3 amps via an unswitched fused spur on a maintained supply installed by others. For operational purposes the G.C.P. must be connected to a normally-closed volt-free contact within the fire alarm control panel configured to open on fire and fail safe.

Each control panel is capable of operating up to six rollers and includes battery back-up which will maintain the curtains in their retracted position for a period of three hours during a mains failure. It is also possible to manually operate the curtains for twenty cycles during this period. Should the battery voltage fall below a pre determined limit, a low voltage cut off circuit will activate the curtain, which will descend in a controlled manner under the power of gravity. The roller motors, which are 24 volt d.c., must be wired from the G.C.P. in a ring main using suitably sized cable to ensure a voltage of 24v d.c -10%.

The curtains automatically descend upon receipt of a signal from the fire-alarm panel and automatically retract when the signal is removed. During ascent the motors are controlled via a synchronised speed circuit to ensure all curtains are raised at similar rates. The curtains descend under the power of gravity at all times, including total mains and battery back up failure.

Limit switches are not to be used to control the upper and lower positions of the curtain.

Optional Extras:**Split drop delay:**

An optional braking system is available to allow a two stage descent during gravity deployment. Partial descent to a predetermined level to permit preliminary escape and initial smoke containment, after delay the barrier descends to full operational position.

Voice warning:

Audio or spoken multi message facility.

Beam protection and obstruction warning:

A beam detector, with delay timer which will sound in the event of any obstruction being placed in the barrier drop line.

Visual alert system:

Standard localized light or strobe light.

Emergency retract:

Hold on retract facility for multi escape and emergency service access.

Walk through escape:

Passage through the barrier.

Manufacturing:

All equipment will be manufactured and pre-assembled to approved drawings.