

A modern office hallway with wood slat walls and a geometric overlay. The overlay consists of large, overlapping triangles in shades of orange, white, and grey. The hallway features a patterned carpet and recessed ceiling lights. A sign on the wall reads "ROOM" and an elevator panel on the right shows an upward arrow and the number "2".

# ADEXON<sup>®</sup>

Adexon-FC120E  
**Technical Information**

**20  
23**



# Adexon-FC120E

## Vertical fire curtain certified to 120 minutes integrity rating

### Description

The Adexon-FC120E is the most popular fire curtain because of its versatility and performance. Designed to limit and control the spread of fire for 120 minutes at over 1000°C. It achieves the product rating of 120 minutes integrity (E). Smoke sealing is also available to control the spread of smoke created by a fire.

The system is tested and certified to BS EN 16034:2014, with smoke control tested to BS EN 1634-3:2004. Operation is via 24V DC tubular motors controlled by an electronic control board. The system is available in sizes up to 10 meters high and unlimited width to suit multiple site requirements. It has gravity fail-safe to ensure that the system will deploy to its fire-operational position so that you have protection irrespective of whether power is maintained or not.

Our standard lead time is between 6 to 10 weeks from approval of drawings. Optional extras such as Emergency Retract Buttons and Obstruction Warning are available upon request.

### Applications

The Adexon-FC120E is suited to many different applications; some of the most common are to:

- Compartmentalise open-plan sections in a room or space
- Cover openings in walls e.g. serving hatches
- Cover non-fire-rated doors or glazing
- Cover lifts and lift shafts that can act as fire or smoke chutes
- Provide boundary protection

### Certifications and ratings

#### Certification:

BS EN 16034:2014

BS EN 13241:2003+A2:2016

CE Certification

Certificate of Constancy of Performance No. 0370-CPR-6374, and Certificate of Constancy of Performance No. 0370-CPR-6419 (Notified Body Nr.0370)

#### Ratings:

Integrity, e, rating: 120 Minutes

Radiation, w, rating: N/A

Insulation, i, rating: N/A

Smoke Performance: recommended option

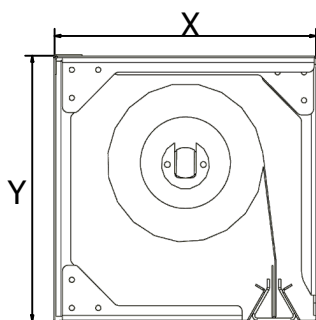
### Maximum certified sizes

Unlimited Width x 10m

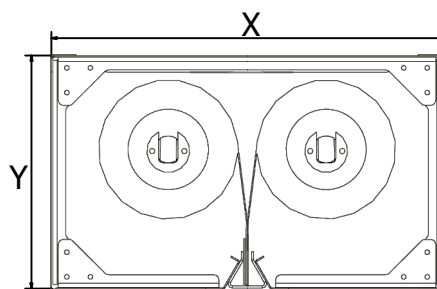
## Headbox sizes

Manufactured from 1.2mm thick galvanised steel, the headbox is designed to have the smallest form factor possible to fit discretely into ceilings. Headbox sizes change based on the fire curtain size requirements. Headboxes are available in all standard and non-standard PPC colours. For any technical drawings, please contact [admin@adexon-uk.com](mailto:admin@adexon-uk.com).

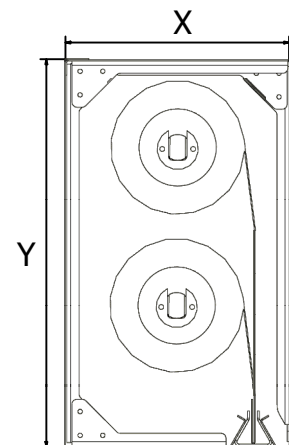
Headbox type	Fire Curtain Width	Fire Curtain Height	Headbox Dims	
			X	Y
Standard	3,500mm	8,000mm	220mm	220mm
Standard	12,000mm	6,500mm	220mm	220mm
Standard	12,000mm	8,000mm	240mm	260mm
Side by side	∞	6,000mm	250mm	170mm
Side by side	∞	>6,000mm	270mm	200mm
Over and under	∞	6,000mm	170mm	280mm
Over and under	∞	>6,000mm	200mm	360mm



STANDARD



SIDE BY SIDE

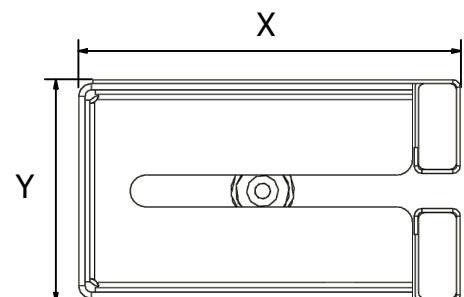


OVER AND UNDER

## Side guides

Manufactured from the same galvanised steel as the headbox, the side guides are designed to withstand the pressures caused by a fire. The side guides are available in all standard and non-standard RAL colours.

Fire Curtain Width	Fire Curtain Height	Side Guide Dims	
		X	Y
12,000mm	4,500mm	120mm	70mm
12,000mm	>4,500mm	130mm	70mm



## Headbox width

Adexon can provide smoke control to significantly larger sizes than competitors, up to 8.9m wide, because of our unique headbox design. Our headbox incorporates a support roller system that allows us to manufacture single roller curtains to sizes up to 12 meters wide.



## Smoke control sizes

Adexon's proprietary smoke control design utilises fire-tested materials to control the spread of smoke compliant with BS EN 1634-3:2004. Smoke control can be provided for the sizes shown in the table below.

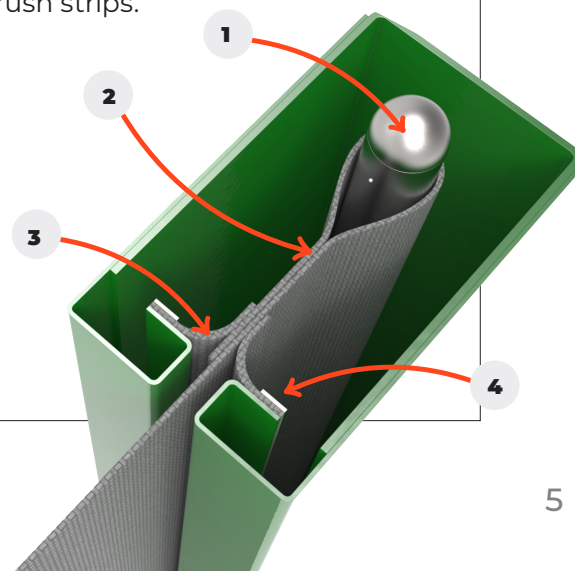
		Width (m)											
		3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	
Height (m)	3.0												
	3.5												
	4.0												
	4.5												
	5.0												
	5.5												

## How smoke control works

Fires create extreme negative and positive pressures. Adexon proprietary galvanised steel side guide retention rods stop the curtain fabric from being blown out of the guides under this pressure. We utilise the same fabric as the curtain, and steel components for our smoke sealing rather than plastic brush strips.

1. Steel rod – melting point 1370°C – 1530°C
2. Fire resistant fabric – tested to over 1000°C
3. Fire resistant fabric – tested to over 1000°C
4. Steel retainer & rivets – melting point 1370°C - 1530°C

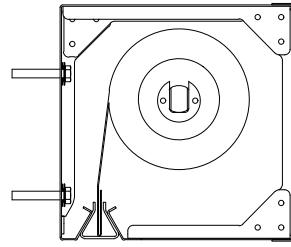
Read more on our website:  
[www.adexon-uk.com/cold-smoke-seals-in-a-fire/](http://www.adexon-uk.com/cold-smoke-seals-in-a-fire/)



# Fixing types

## Face fixed

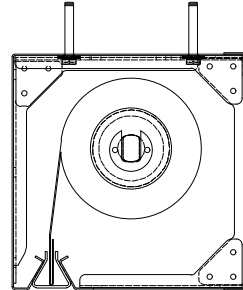
Face fixing is commonly used to install fire curtains around doorways. With this fixing method, you do not lose any of your opening.



FACE FIXED

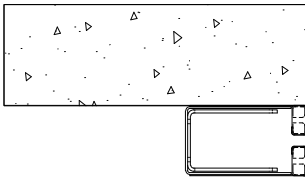
## Reveal fixed

Reveal fixing allows for a completely hidden fire curtain, commonly used in offices. With this fixing method, you will lose the width of the guides from your clear opening (max 260mm, 130mm from each side) unless concealed in the wall make-up.

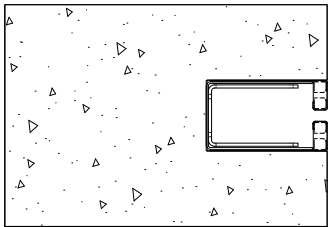


REVEAL FIXED

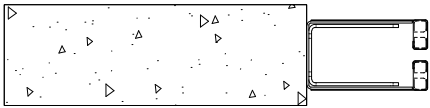
FACE FIXED



EMBEDDED



REVEAL FIXED



## Fabric retention

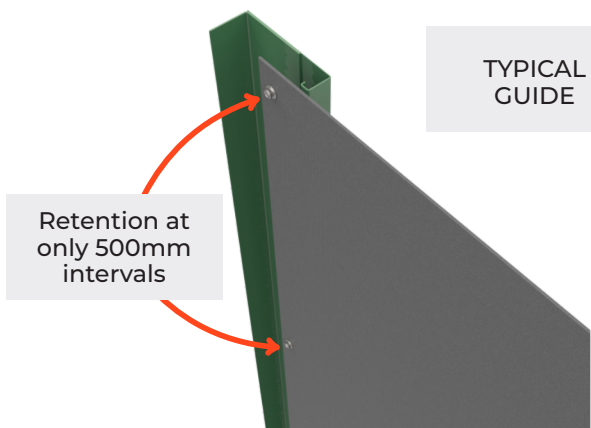
Adexon's guides have a unique fabric retention system that differs from all other UK manufacturers, utilising a full length retention design, instead of poppers/bolts retention every 500mm or so, that is used by others.

The Adexon design ensures the curtain doesn't;

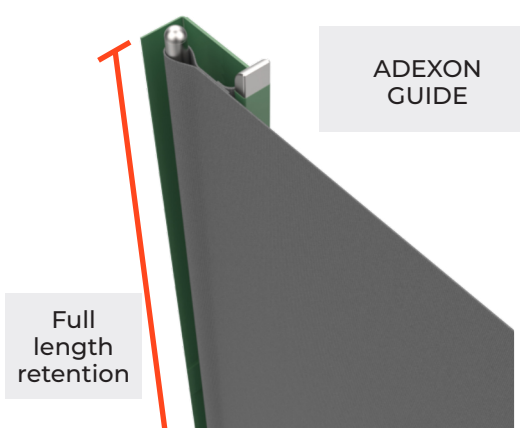
- snag and fail to descend
- blow out of the guides due to high pressure
- tear and rip

Read more on our website:

[www.adexon-uk.com/why-fabric-retention-design-on-fire-smoke-curtains-matters-a-lot/](http://www.adexon-uk.com/why-fabric-retention-design-on-fire-smoke-curtains-matters-a-lot/)

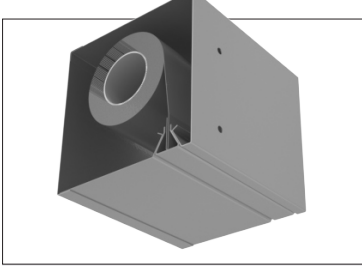
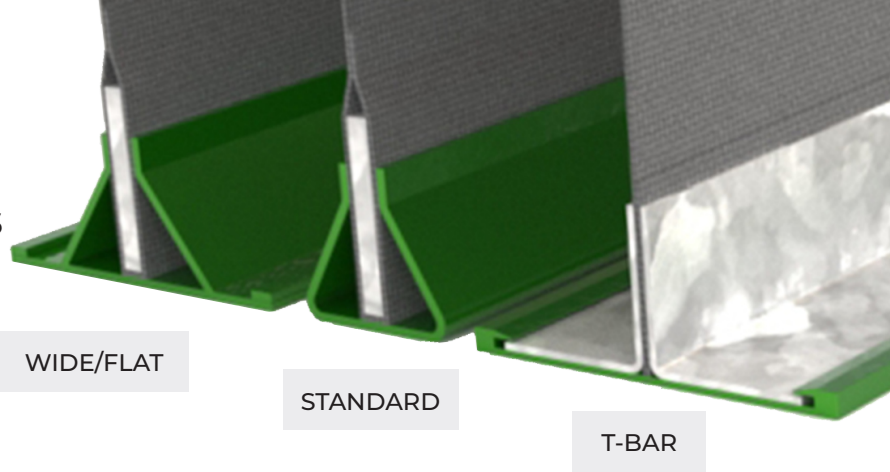


TYPICAL GUIDE

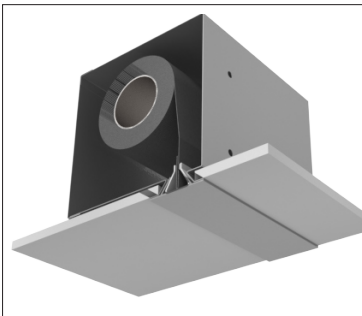


ADEXON GUIDE

# Headbox and bottom bar positioning options



VISIBLE HEADBOX/  
STANDARD BAR



UP AGAINST CEILING/  
WIDE BAR



WITH DROP CEILING/  
T-BAR

## Bottom bar types

### Standard bar

Description – The standard bar fits snugly inside the headbox, creating a completely flat surface, and giving a more aesthetically pleasing finish when the headbox is visible.

Notes – Variations of the standard bar are also available that are suitable for installations on angled surfaces like ramps.

### Wide/flat bottom bar

Description – The wide bottom bar is best if you wish to plasterboard under the headbox, as it will sit flush with the ceiling.

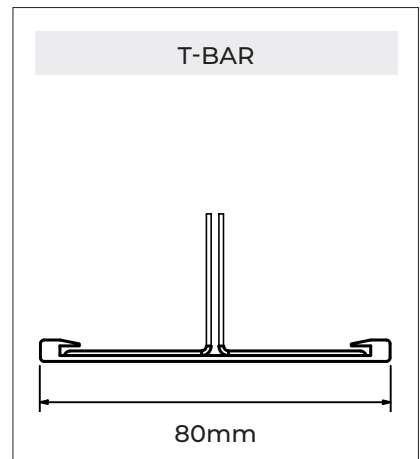
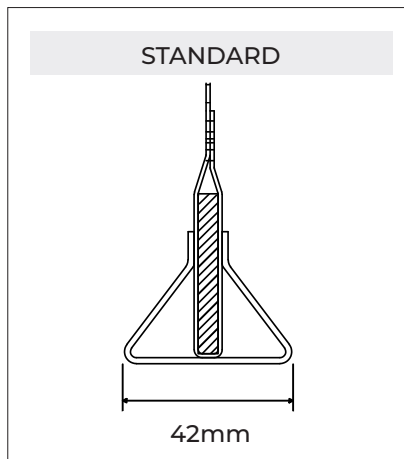
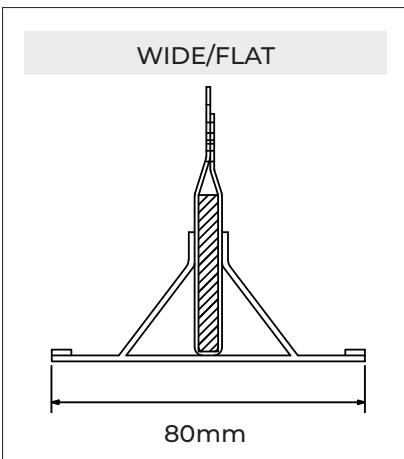
Notes – The plasterboard ceiling is installed after the headbox.

### T-Bar

Description – The T-bar is best for drop/false ceilings where the headbox is not immediately above the ceiling.

Notes – Additional support is required for the ceiling, where the bottom bar contacts the ceiling to withstand the force applied by the bottom bar .applied by the bottom bar.

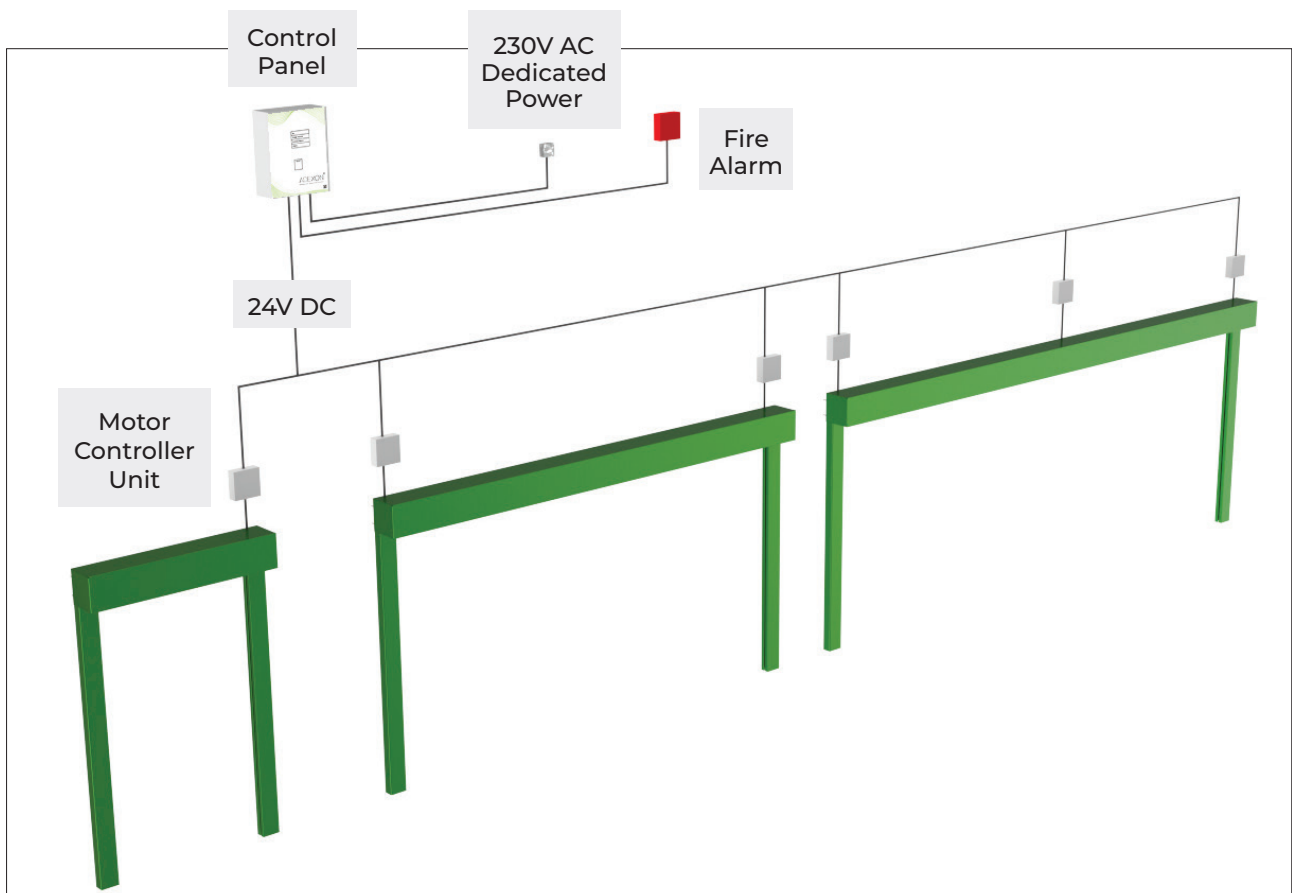
## Bottom bar sizes



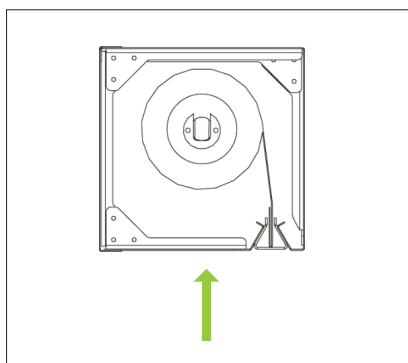
## Site wiring

The Adexon control panel and motor controllers can be used to wire multiple curtains together. Standard single curtains require a 230V AC, 6-amp fused spur. If multiple curtains are controlled by one control panel, the power supply required varies. The curtain is activated via a normally closed volt-free signal, which can be supplied by several source types, for example, a smoke alarm, fire alarm, BMS.

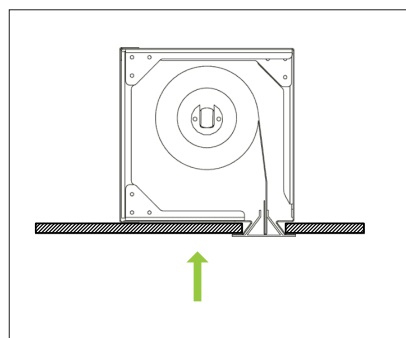
When the smoke or fire curtain is fully retracted, our proprietary 24V DC tubular motor holds the curtain in its fire-ready position. The motor unit does not feature a physical brake to hold the curtain in its fire-ready position. This ensures that the curtain will always have gravity fail-safe descent in situations where power is removed e.g. wires or control panels are damaged etc. Adexon's motors and control panels include built-in technology that control the speed of descent at a rate between 0.03 - 0.3 m/s, on both power and gravity fail-safe.



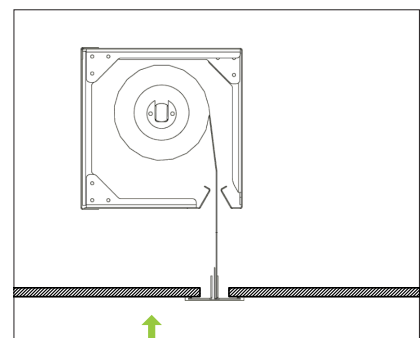
## How is the headbox accessed after installation



Remove Headbox Section



Destructive Access or Access Hatch



Destructive Access or Access Hatch

# Product specification

Under BS EN 16034:2014, our Adexon-FC120E fire curtains obtained a fire rating of 120 minutes (2 hours) integrity (E) when tested to BS EN 1634-1:2014. Therefore the Adexon-FC120E is classified as E120 in accordance with the classifications of BS EN 13501 2:2007+A1:2009.

The system can have smoke protection in accordance with BS EN 1634-3:2004.

## Tenable area

Protected escape routes must be of a minimum width to allow for safe emergency egress of the building occupants and must include space for the deployment zone, deflection zone and tenable zone.

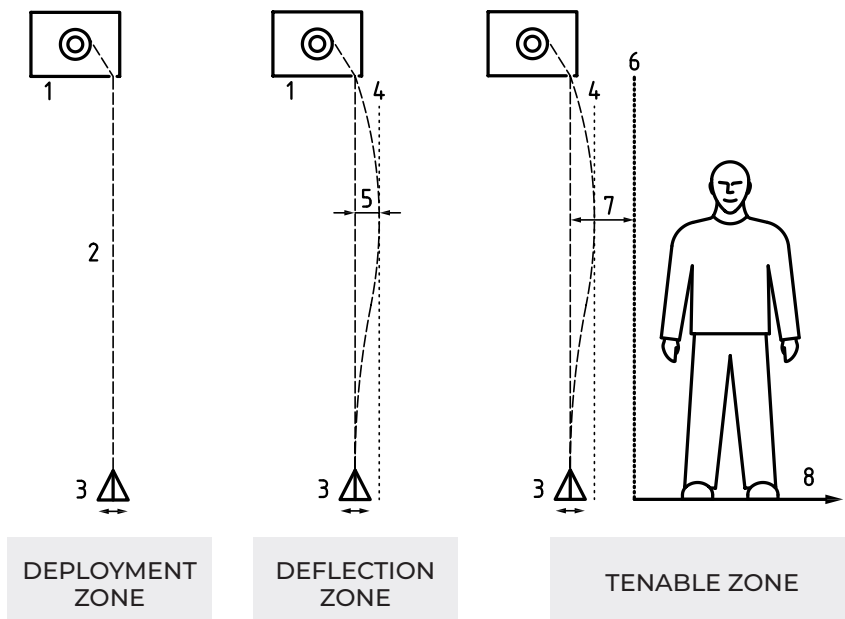
The size of your tenable area (deflection zone and tenable zone) will dictate the specification of the fire curtain that you must install to ensure sufficient protection.

## Cycle test

The Adexon-FC120E is cycle tested to class 1 (between 500 and 10,000 cycles) in accordance with BS EN 16034:2014.

## Curtain fabric

Our fabric is manufactured from fibreglass strands woven between reinforcing stainless steel wires. The fabric is covered with a flame-retardant polyurethane compound on both sides. This provides a high level of fire resistance tested to above 1000°C and the pressure and temperature associated with a fire.



## Case study: LDP

Plumtree Court, also known as The London Development Project 'LDP', situated next to Holborn Viaduct in Farringdon Street, is the new European headquarters for global investment bank Goldman Sachs. This huge and prestigious scheme, nine storeys high, has 78,000m<sup>2</sup> of state-of-the-art, low-energy office space that is sufficient for nearly 10,000 workers.

We installed our FC120E fire curtains within various areas of the building. The curtain, bottom bar, side guides and headbox were all powder coated in RAL 9010 white to ensure it did not hinder the aesthetics of the room or building. As the product is designed to be discreet, the open-plan layout and high-spec design of the building remains uninterrupted, and ensured that the spaces within the building were given the necessary compartmentation required and ensured the protected routes for safe egress were maintained.



# Uniclass Specification

## Adexon-FC120E Vertical Fire Curtain (Integrity)

Pr\_25\_80\_79\_94 Vertical active fire curtain barriers (Adexon Vertical FC120E)

1. Description: The FC120E is the standard, most-popular performance type that has in-built integrity (E) rating, that limits and controls the spread of fire, with the maximum classification of 120 minutes.
2. Manufacturer:  
Adexon Fire & Smoke Curtains  
Prospect House  
Huyton Church Road  
Liverpool L36 5SH  
  
t: 0151 422 9111  
e: admin@adexon-uk.com  
w: www.adexon-uk.com
3. Product reference: Adexon-FC120E Vertical Fire Curtain (Integrity)
4. Operation: Automatic, using 24V DC tubular motors, controlled by an electronic control board. Standard single curtains require dedicated 230V AC, in a 6-amp fuse spur.
5. Standards:
  - 5.1. Barrier assemblies: CE Marked to BS EN 16034
  - 5.2. Test standards: Safety & performance to BS EN 16034, Fire resistance to BS EN 1634-1, in accordance with BS EN 13501-2 Smoke control to BS EN 1634-3
6. Third-party certification: Applus+ Certificate 0370-CPR-6374
7. Size: Curtain max. dimensions - Unlimited x 10 m (width x height)  
  
Determine project requirements on a curtain-by-curtain basis through detailed design and scheduling. Refer to drawings for locations
8. Performance:
  - 8.1. Durability class: C1
  - 8.3. Fire resistance: E 120
10. Deployment: Determine requirements on a curtain-by-curtain basis
11. Activation: As advised by the Client's Designers, may vary on a location-by-location basis
12. Finish: All headbox and rail components shall be made from galvanised steel as standard. Powder coating available (C1-5) to RAL colour to be advised by the Client's Architect.
13. Accessories: Determine requirements on a curtain-by-curtain basis

# ADEXON<sup>®</sup>

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E&OE

