

# FIRE & SMOKE CURTAINS

APPLICATIONS FOR FIRE AND SMOKE CURTAINS  
AND THE PRODUCT RANGE AVAILABLE

[WWW.COOPERSFIRE.COM](http://WWW.COOPERSFIRE.COM)



**coopers**

EST. 1983

LEADING THE WAY IN FIRE PROTECTION

## COMPANY PROFILE COOPERS FIRE

Coopers Fire operates from two factories in the UK, the main office and factory on the south coast in Havant and one in the West Yorkshire in Elland. Coopers Fire offer third party certified product design, manufacture, installation, commissioning and on-going servicing of fire and smoke barriers.

With a long established history, Coopers Fire are represented in over 40 overseas territories through a distributor network that spans over 20 years. The Management Team is committed to quality and every product is rigorously inspected to ensure that it meets with the project requirements.

Coopers Fire are the original patentees of the electromechanical fail safe system, which set the benchmark for active smoke and fire barriers worldwide, and help to continue to remain a market leader using patented and proprietary technology.

Coopers Fire offer an unparalleled range of vertical and horizontal fire and smoke curtain barrier systems that are tested extensively in many different countries to many international standards meeting a wide range of regulation.

COOPERS FIRE IS A SPECIALIST MANUFACTURER OF SMOKE AND FIRE CURTAIN BARRIER SYSTEMS

## COMPANY HISTORY

Coopers Fire was originally a family business manufacturing blinds and shutters dating back to 1874.

The automatic fire screen with gravity fail-safe drive system was invented and patented by Coopers Fire in 1983 and sparked a generation of smoke and fire barriers. Now an industry norm, active smoke and fire barriers are available worldwide.

Coopers Fire operate with an ISO 9001 Quality Management System and ISO 14001 Environmental Management System. The product range is quality assured and built for longevity and on-going service and maintenance.

Continuous research and development has resulted in Coopers Fire always being first in their industry to comply with new standards. It was the first to comply with BS 7346-3 and CE Mark to EN 12101-1 for smoke barriers and with BSI PAS 121 and now BS 8524 for fire barriers.

Coopers Fire was bought by the Lowe & Fletcher Group in 2014, who are a fifth generation family owned industrial business which was founded in 1889.

The Engineering Department is fully equipped with 3D and 2D facilities and can provide customised services right from concept and design stage to completion. Coopers Fire offers technical expertise, with a number of its experts extensively involved in developing ISO, GEN and BS product standards.

Unlike other suppliers, Coopers Fire pride themselves on innovation and bespoke solutions which are supported by numerous internationally accredited Independent Third Party Certification Schemes for Product, Installation and Service where applicable.



## COOPERS INTERNATIONAL LANDMARKS

Many prestigious international landmark buildings are protected by Coopers Fire smoke and fire curtains.

Some of the iconic buildings in which Coopers Fire products are installed include the Sydney Opera House; The Louvre in Abu Dhabi; Royal Palaces at Buckingham Windsor, and St. James; London's iconic buildings like The Shard; The British Museum and The Gherkin and large shopping malls like The Mall of the Emirates and the Dubai Mall.

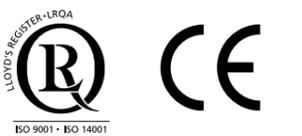
Coopers Fire have curtains in International Airports such as Sydney; Brisbane; Dulles, Heathrow; Gatwick; Stansted; Ataturk; Johannesburg; Düsseldorf; Chek Lap Kok; and Dubai.

Coopers Fire have also installed fire and smoke curtains in commercial buildings, offices and retail stores for brands such as Apple; Adidas; Google; McDonald's; Selfridges; Fortnum and Mason and Facebook.

## TESTING AND STANDARDS

Coopers Fire commitment to life safety is best expressed through dedication to ensuring that the fire and smoke curtains manufactured meet the highest international standards.

Coopers Fire test and manufacture every fire and smoke curtain in accordance with the toughest of internationally recognised accreditations, which are then independently third party certified, instilling clients with confidence in fire protection equipment that they can trust.



Coopers Fire have developed a wide range of fire and smoke curtains to protect every type of building application. From protecting means of escape and boundary protection to providing a building with a system that offers effective fire and smoke compartmentation.

Commitment to life safety has led Coopers Fire to develop a wide range of fire and smoke curtain barrier assemblies fully tested to BS EN and UL standards and approved to protect various applications across a wide spectrum of building types such as retail, hospitals, commercial, airports and domestic.

Fire and Smoke curtains offer various solutions to architects, engineers, consultants and specifiers providing the ability to design complex buildings that adhere to fire regulations and offer protection against fire or smoke. When specifying a fire or smoke curtain system, it is essential to consider the whole package from quality, performance, installation and maintenance to after sales care. Coopers Fire offers third party certificated products as well as third party accredited installation and specialist after care packages, tailored to your specific requirements and application.



**ATRIUM, LOBBIES & RECEPTIONS**

Prevent the spread of smoke and fire from one to floor to another in an atrium with Coopers Fire Horizontal or Concertina curtains or protect lobbies and receptions using Vertical fire and smoke curtains.



**OPENINGS IN WALLS**

Coopers Fire fire curtains can be used to replace non-load bearing walls and fire rated glazing offering open plan designs that still meet fire regulations.



**COMPARTMENTATION**

Coopers Fire full range of fire and smoke curtains can be used to create compartments to contain fire and smoke and prevent it from spreading. The product range is used particularly in this instance in large open spaces in buildings.



**LIFTS AND LIFT LOBBIES**

Coopers Fire knowledge of the regulations protecting lifts and lift lobbies has led to the development of a range of Vertical fire curtains with smoke control approved to protect the spread of fire and smoke through lift shafts.



**EGRESS & CORRIDOR SEPARATION**

Protect escape routes for mass evacuation. The evacu8 smoke curtain allows egress through a compartment that contains smoke. It offers the capability to split deployment to encourage safe evacuation psychology where assemblies cross potential escape routes.



**BOUNDARY PROTECTION**

Coopers Fire fire curtains are an approved alternative to fire shutters, fire rated glazing and firewalls whilst protecting windows from channeling fire and preventing the spread of fire from one building to the next.



**STAIRS AND ESCALATORS**

Open up stairwells or protect escalators by using Vertical or Concertina fire and smoke curtains. The Concertina product has been used to fully encapsulate stairs or escalators to allow open plan designs, replacing fire doors and lobbies.



**PROTECTED MEANS OF ESCAPE**

Coopers Fire commitment to advancing fire fabric technology has led us to develop a range of insulating zone fire curtains that provide architects and fire engineers with a non-invasive, protected means of escape, in accordance with fire regulations.

Coopers Fire manufacture a range of active Vertical fire and smoke curtains that can be installed for various applications.

Vertical fire curtains are used to prevent the spread of fire within a building and can be discreetly installed to be hidden from view until required. All Coopers vertical active fire curtains use the Total Gravity Fail-Safe (TGFS) system which ensures the fire curtains will activate even if there is a total power failure or short circuit.

Vertical smoke curtains are used to prevent the spread of smoke and/or work as part of a smoke control system to channel smoke for extraction from a building. Smoke curtains can also be discreetly installed and activate using the Total Gravity Fail-Safe system.

Coopers Fire active Vertical fire and smoke curtains can use various fire-resistant fabrics, depending on the application, fixed to a roller and housed in a steel headbox. The curtains remain invisibly retracted until activated by an alarm or detector signal, at which time they descend safely to their operational position.

Fire and smoke curtains are available in various widths and drops (see table on next page) and have been tested to BS EN and UL standards.

Coopers Fire manufacture a unique intumescent fabric that can offer protection from radiant heat and therefore can be used where protected means of escape is required.



Coopers Fire range of Active Vertical fire and smoke Curtains. For more information, see our website: [www.coopersfire.com](http://www.coopersfire.com)

Product Name	Maximum Width	Maximum Drop	Tested To	Fire Resistance or Classification			Compliance Certificate
FIREMASTER®†	Unlimited	8 metres	BS EN	E120	-	EW30	IFCC1160 and CF 5459
FIREMASTER®	Unlimited	8 metres	UL	180 minutes Fire Rating			Contact Coopers
FIREMASTER® PLUS² †	30 metres	6 metres	BS EN	E180	-	EW60	IFCC1255
FIREMASTER® SUPERPLUS™	Unlimited	3 metres	BS EN	E120	EI120	EW120	Contact Coopers
FIREMASTER® EGRESS	18 metres	7 metres	UL	180 minutes Fire Rating			Contact Coopers
FIREMASTER® MARINE A-0	2.4 metres	2.6 metres	EN	A-0			Contact Coopers
SMOKESTOP D600A SINGLE	6 metres*	8 metres	BS EN	D600A			1720-CPR-0014A
SMOKESTOP D600A OVERLAPPING	Unlimited**	10.5 metres	BS EN	D600A			1720-CPR-0014A
SMOKESTOP DH60 SINGLE	8 metres	8 metres	BS EN	DH60			1720-CPR-0014B
SMOKESTOP DH60 OVERLAPPING	Unlimited**	10.5 metres	BS EN	DH60			1720-CPR-0014B
SMOKESTOP EVACU8™	Unlimited	6.7 metres	BS EN	D600A			1720-CPD-0038
COOPERS SMOKESTOP® DRAFT CURTAIN	Unlimited	8 metres	UL	n/a			Contact Coopers
COOPERS SMOKESTOP® EGRESS DRAFT CURTAIN	18 metres	7 metres	UL	n/a			Contact Coopers

† Compliant to BS 8524-1:2013 contact Coopers Fire for size limitations and classification

\*Contact Coopers Fire for a bespoke solution and sizes outside of this range

\*\*Overlapping system has the maximum roller width of 5 metres

A TYPICAL VERTICAL FIRE CURTAIN



Single Roller Assembly - used for narrower width curtains where one roller is required

A TYPICAL VERTICAL SMOKE CURTAIN



Overlapping / Multiple Roller Assembly - used for wider curtains (unlimited) where multiple rollers are required



PRODUCT FEATURES

- Fire Curtains compliant to **BS 8524-1: 2013** and **PAS 121:2007** and assessed in accordance with **BS 476-22.8:1987** and **BS EN 1634-1:2008**. Tested to **UL Standards 10B, 10C, 10D,1784** and **NFPA 252**
- Smoke Curtains **CE marked** and classified to **DH60** or **D600A** and assessed in accordance with **BS EN 12101-01:2005+A1:2006**. Certified for smoke and draft rating in accordance to **UL 1784** Standard
- **Unlimited widths** and **bespoke engineered** products available
- **Third Party Approved** by IFC Certification, Warrington Certification and other certification bodies
- **Integrity, Radiance and Insulated** vertical fire curtains available
- Metal work is fully finished in **RAL 9010 White** (30% MATT)

Coopers Fire active FireMaster Horizontal fire curtains offer an alternative way to close off stairwells and atria. Horizontal curtains can be used instead of installing fire rated glazing or non-load bearing ceilings therefore creating open plan areas.

All Coopers Fire Horizontal fire curtains have No Visible Supports (NVS™) which means the unique design allows the curtain to run under tension in a guide down each side, leaving the opening free from any supports for the curtain once installed.

There are three types of the FireMaster Horizontal fire curtain, the Mini Simplex, Simplex and Duplex. Both the Mini Simplex and Simplex close from one end to the other, whereas the Duplex is used for much larger areas and closes from each end of a void to meet and close in the middle.

Active Horizontal fire curtains comprise of technologically advanced fire resistant fabric encased in a compact steel housing. The fire curtain will remain invisibly retracted until activated by an alarm or detector signal, at which time they close safely to their fire operational position. Horizontal fire curtains will stop and control the spread of fire between floors in a building.

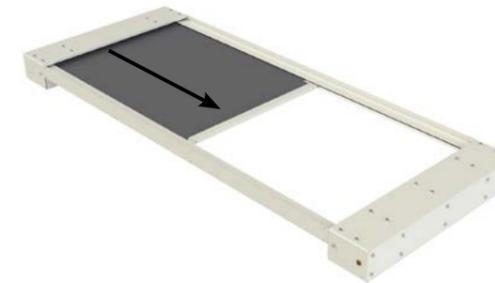
To be compliant, Fire Barriers must have a dual power supply fitted as standard. The curtain closes with mains or emergency power using a low voltage drive system.



Coopers Fire range of Active Horizontal Fire and Smoke Curtains. For more information, see our website: [www.coopersfire.com](http://www.coopersfire.com)

Product Name	Maximum Width	Maximum Length	Tested To	Fire Resistance or Classification		Compliance Certificate
FIREMASTER® NVS™ HORIZONTAL SIMPLEX™	7.5 metres	12 metres	BS EN	E120	EW30	IFCC1016
FIREMASTER® NVS™ HORIZONTAL DUPLEX™	7.5 metres	14 metres	BS EN	E120	EW30	IFCC1016
FIREMASTER® PLUS NVS™ HORIZONTAL SIMPLEX™	5 metres	7 metres	BS EN	E120	EW60	IFCC1017

**MINI SIMPLEX™ (SINGLE BARRIER ASSEMBLY)**



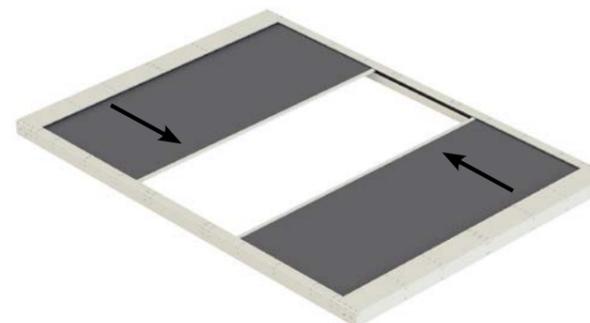
Suitable for smaller, narrower openings in domestic dwellings and for skylights etc.

**SIMPLEX™ (SINGLE BARRIER ASSEMBLY)**



Suitable for smaller openings and skylights etc.

**DUPLEX™ (DOUBLE CURTAIN ASSEMBLY)**



Suitable for large openings including expansive atria. Complete closure in half the time.

**PRODUCT FEATURES**

- Fire Curtains compliant to **PAS 121:2007** and assessed in accordance with **BS EN 1634-1:2008**
- Alternative to fire rated glazing and non-load bearing ceilings
- **Third Party Approved** by IFC Certification, Warrington Certification and other certification bodies
- **Integrity** and **Radiance** fire curtains available
- Metal work is fully finished in **RAL 9010 White** (30% MATT)

The innovative active Concertina fire and smoke curtain offers greater flexibility to designers to create open plan buildings that remove the requirement for columns or corner posts and intrusive ceiling interfaces that may be required for alternative fire and smoke safety products.

The Concertina can be configured in a variety of bespoke sizes and shapes, like a square or circle and an arc or trapezoid. In fact, the Concertina can be configured in most shapes in unlimited spans.

Concertina fire and smoke curtains are installed to prevent the spread of fire and smoke and are often used to close off stairs and escalators providing architects, consultants and specifiers a whole new approach to building design.

Coopers Fire active Concertina fire and smoke curtain can use various fire-resistant fabrics, depending on the application. The fabric is uniquely folded and housed in a steel headbox. The curtain remains invisibly retracted until activated by an alarm or detector signal, at which time they descend safely to their operational position.

The Concertina product benefits from the Total Gravity Fail-Safe system which ensures the curtain will deploy safely even in the event of a total power failure or short circuit.



Coopers Fire range of Active Concertina fire and smoke Curtains. For more information, see our website: [www.coopersfire.com](http://www.coopersfire.com)

Product Name	Maximum Width	Maximum Drop	Tested To	Fire Resistance or Classification		Compliance Certificate
FIREMASTER® CONCERTINA™ OPEN †*	Unlimited	5 metres	BS EN	E180	EW30	IFCC1014
FIREMASTER® CONCERTINA™ CLOSED †*	Unlimited	5 metres	BS EN	E180	EW60	IFCC1014
FIREMASTER® CONCERTINA™ OPEN	Unlimited	8 metres	UL	180 minutes Fire Rating		Contact Coopers
FIREMASTER® CONCERTINA™ CLOSED	Unlimited	8 metres	UL	180 minutes Fire Rating		Contact Coopers
SMOKESTOP DH60/D60 CONCERTINA™ OPEN	Unlimited	6 metres	BS EN	DH60/D60		CF 5477
SMOKESTOP DH60/D60 CONCERTINA™ CLOSED	Unlimited	6 metres	BS EN	DH60/D60		CF 5477

† Compliant to BS 8524-1:2013 contact Coopers Fire for size limitations and classification

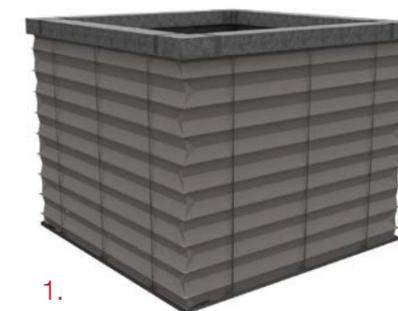
\*Assessed to 240 minutes for heights to 5m and 120 minutes for heights to 8m to BS EN 1634-1:2008.

## BESPOKE PRODUCT CONFIGURATIONS

Developed to provide a bespoke alternative to fixed non-loadbearing walls, partitions and fire shutters, the Concertina can be used as part of a fire engineering solution in commercial and industrial applications such as airports, shopping centres, offices and hotels or where the need for maintaining open areas for access is vital.

### DIFFERENT TYPES

1. Square (Closed)
2. Faceted Curve (Open)
3. L Shaped Corner (Open)
4. Trapezoid (Closed)
5. Multisided (Closed)



### PRODUCT FEATURES

- Concertina fire curtain compliant to **BS 8524-1: 2013** and **PAS 121:2007** and assessed in accordance with **BS EN 1634-1:2008** and **BS EN 13501 2:2007+A1:2009**. Tested to **UL Standards 10B, 10C, 10D,1784 and NFPA 252**
- Concertina smoke curtain is **CE marked** and classified to **DH60** or **D600A** and assessed in accordance with **BS EN 12101-01:2005+A1:2006**
- **Unlimited widths** and **bespoke engineered** products available
- **Third Party Approved** by IFC Certification, Warrington Certification and other certification bodies
- **Bespoke shapes** achievable to allow **open plan designs meet fire regulations**
- Metal work is fully finished in **RAL 9010 White (30% MATT)**

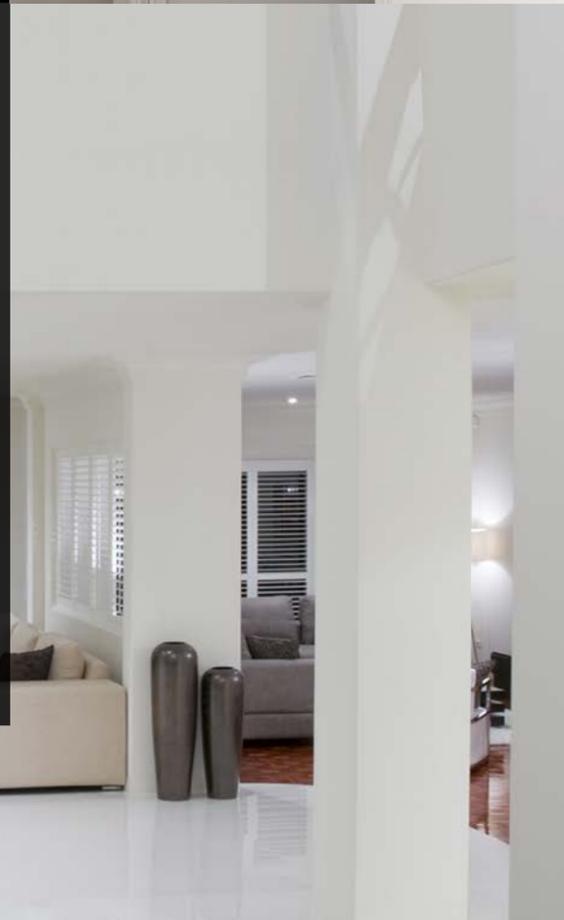
Coopers Fire Vii®Fire compact vertical fire curtain provides the means to help create modern, open plan living environments in domestic homes, which are compliant with stringent fire regulations without compromising design. Sympathetic to interior aesthetics, the Vii®Fire fire curtain barrier will remain hidden until deployed. It is used to replace non-loadbearing walls, fire doors and uninsulated glazing.

The Vii®Fire product range is limited to a maximum width of 4 metres and a maximum drop of 4 metres. This range of products was introduced for use in domestic homes and areas of buildings where a compact headbox is required.

The full Vii®Fire range is easy for a competent person to install and is the first and only 'plug and play' fire curtain system. This product is also aimed at kitchen serveries and portable cabins. Being extremely compact, it remains completely invisible until required.

Vii®Fire active fire curtains can use various fire-resistant fabrics, depending on the application. The fabric is fixed to a roller which is housed in a steel headbox. The curtains remain invisibly retracted until activated by an alarm or detector signal, at which time they descend safely to their operational position. The Vii®Fire uses the Total Gravity Fail-Safe system ensuring the fire curtain will deploy safely even if there is total power failure or a short circuit.

The Vii®Fire iZone utilises a unique intumescent fabric manufactured by Coopers Fire that can offer protection from radiant heat and can be used where protected means of escape is required.



Coopers Fire range of Vii®Fire fire curtain barriers. For more information, see our website: [www.coopersfire.com](http://www.coopersfire.com)

Product Name	Maximum Width	Maximum Drop	Tested To	Fire Resistance or Classification			Compliance Certificate
Vii®FIRE FM † (DOOR, SERVE, CABIN)	4 metres	4 metres	BS EN	E120	-	EW30	IFCC1280
Vii®FIRE iZONE <sup>2</sup> †*	4 metres	4 metres	BS EN	E180	-	EW60	IFCC1219

† Compliant to BS 8524-1:2013 contact Coopers Fire for size limitations and classification

\*Assessed to BS EN 476-22.8:1987 for 120 minutes Integrity.

## ACTIVE FIRE BARRIERS FOR THE DOMESTIC HOME

If protecting a means of escape, an insulating zone is required to protect passing occupants from radiating heat. Coopers Vii®Fire i-Zone<sup>2</sup> is approved to provide an insulating zone in accordance with BS 8524-1:2013 and will achieve radiated heat as low as 6kW/m<sup>2</sup> after 60 minutes.



## PRODUCT FEATURES

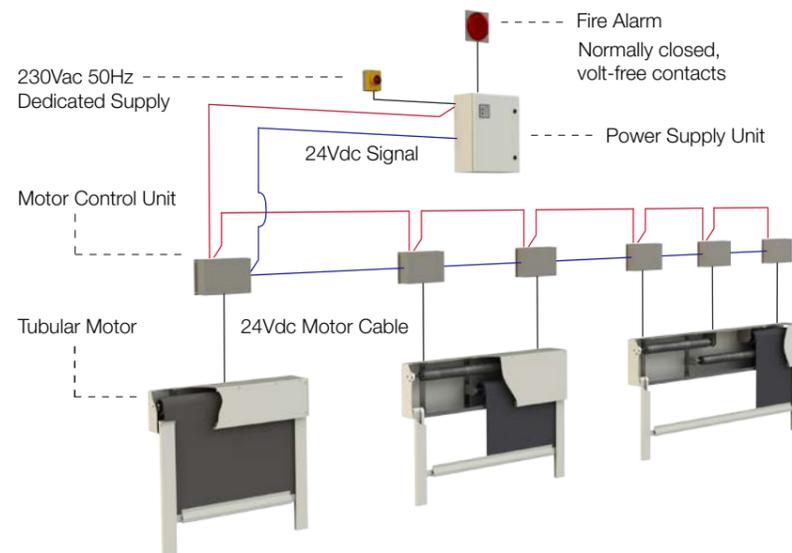
- Fire Curtains compliant to **BS 8524-1: 2013** and **PAS 121:2007** and assessed in accordance with **BS 476-22.8:1987** and **BS EN 1634-1:2008**
- **Maximum width of 4m and maximum drop of 4m**
- **Third Party Approved** by IFC Certification, Warrington Certification and other certification bodies
- **Integrity and Radiance** vertical fire curtains available
- Metal work is fully finished in **RAL 9010 White** (30% MATT)

## CONTROL OPTIONS VARIOSPEED®6 CONTROLS

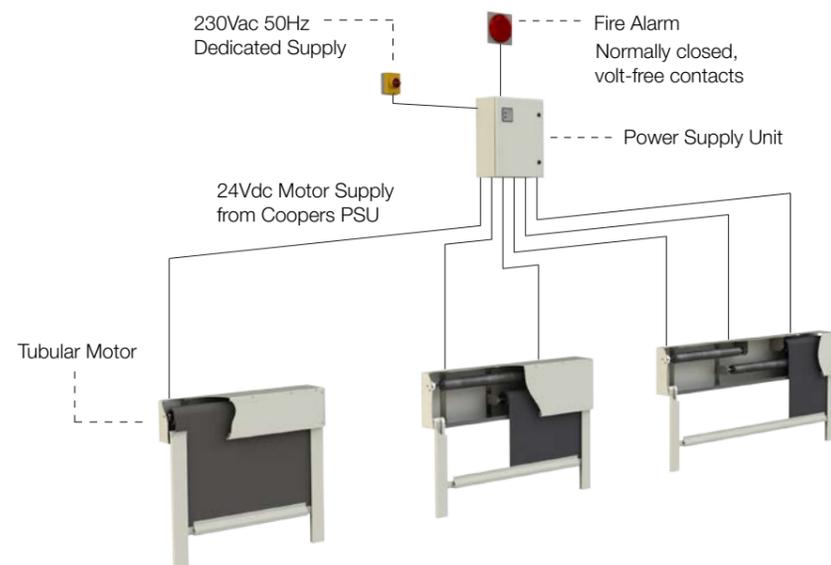
The Variospeed®6 system is used for Smoke and Fire Curtains. It uses 24Vdc permanent magnet electrical motors with an internal 24Vdc electromagnetic brake, as standard. When the Smoke or Fire curtain(s) are fully retracted, the internal electromagnetic brake is powered, keeping the Smoke or Fire curtain(s) in their retracted position. Power to the motor is completely isolated, prolonging the life of the motor and maintaining the manufacturers supply warranty.

The motors include built in short circuit and open circuit protection, meaning the curtains will deploy under Total Controlled Gravity Fail-Safe at a descent rate compliant with standards BS EN 12101 and BS 8524 even if the motor wires are severed, i.e. shorted together or disconnected from the Motor Control Card (MCC). In the event of an alarm activation the electromagnetic brake will de-energise and the Smoke or Fire curtain(s) will immediately deploy to their Fire Operational Position under Gravity Fail-Safe.

### VARIOSPEED®6 CONTROLS AT MOTOR (CAM)



### VARIOSPEED®6 CONTROLS GROUPED (CG)



### GRAVITY FAIL-SAFE

If there is a mains power failure the Smoke or Fire curtain(s) will be held in the retracted position for 30 minutes (adjustable) under Battery Backup (BBU) before deploying to their Fire Operational Position (FOP). If an alarm activation is received during a mains power failure, the curtain(s) will immediately deploy to their FOP. The Smoke or Fire curtain(s) will descend under total and controlled Gravity Fail-Safe.

### PRODUCT BENEFITS

Can be connected to BMS for monitoring of system

Up to 20 fire or smoke curtain rollers from one Power Supply Unit (PSU)

Adjustable electronic descent speeds

Motor protected from short circuits or open circuits

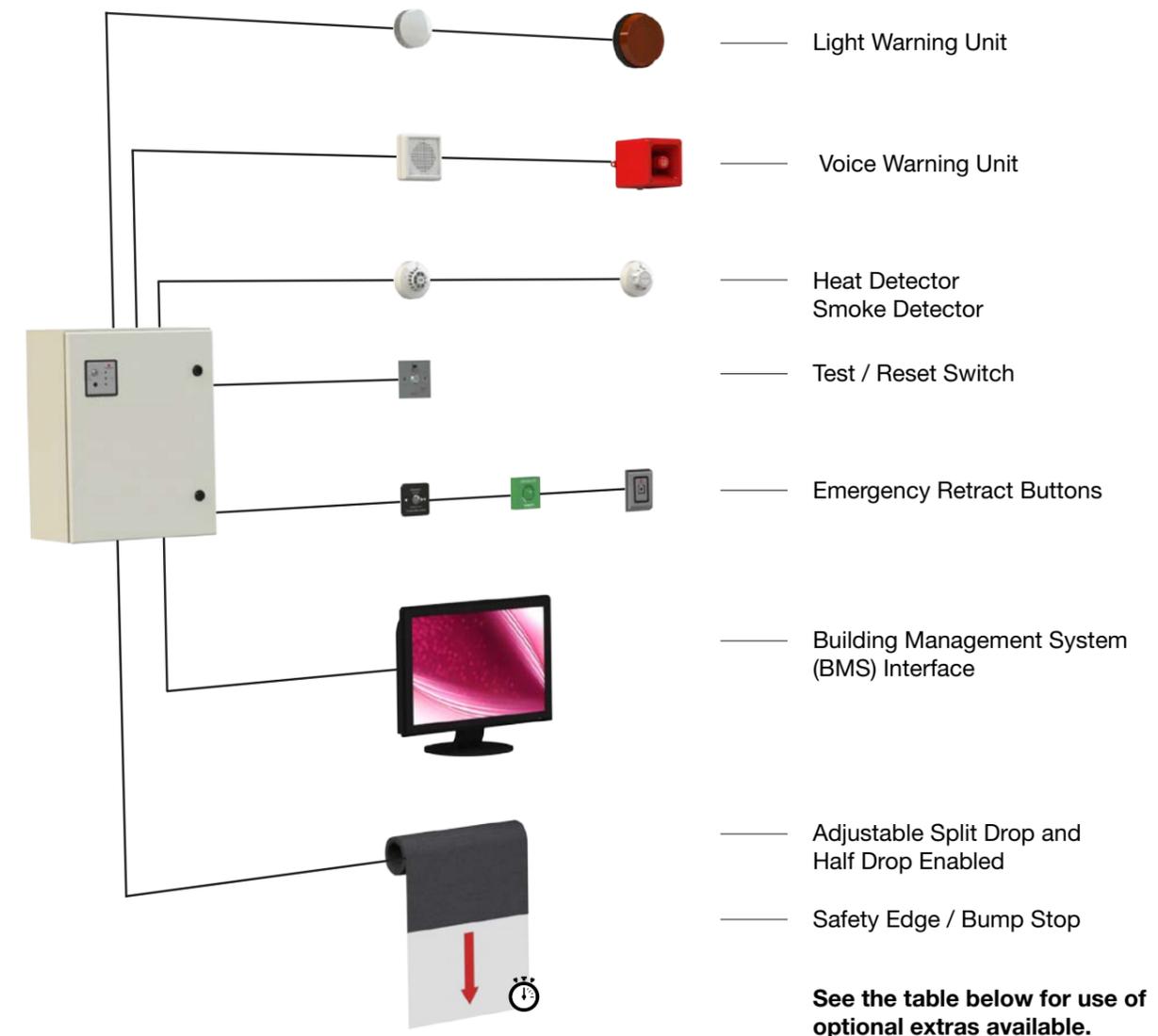
24Vdc motors with internal electromagnetic brakes as standard

Adjustable battery backup

Multiple alarm inputs and outputs

Low power consumption

## OPTIONAL EXTRAS VARIOSPEED®6 CONTROLS



See the table below for use of optional extras available.

### OPTIONAL EXTRAS MATRIX

Optional Extras	Control Panel Type		Datasheet Reference
	MONO / ERU	BBU	
Light Warning Units	✓	✓	Visit Coopers Fire website at <a href="http://www.coopersfire.com">www.coopersfire.com</a>
Voice Warning Units	✓	✓	
Heat Detector / Smoke Detector	✓	✗	
Test / Reset Switch	✓	✓	
Emergency Retract Push Buttons	✓	✗	
BMS Interface	✓	✓	
Adjustable Split Drop and Half Drop Enabled	✓	✓	
Safety Edge / Bump Stop	✓	✓	

MONO - Control Panel for single curtain i.e. one roller  
 ERU - Emergency Retract Unit  
 BBU - Battery Backup Unit

For information, to get a quote  
or to book a CPD workshop

Please call:

**+44 (0)2392 454 405**

or E-mail: [info@coopersfire.com](mailto:info@coopersfire.com)  
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Coopers Fire Ltd has a policy of  
continuous product improvement.

As such we reserve the right to  
change design and specifications  
without prior notice.

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Multiple patents granted and pending.



Series 2 v04 March 2017



LEADING THE WAY IN FIRE PROTECTION