

FIREMASTER® CONCERTINA™

CONCERTINA™ THE INVISIBLE ACTIVE
FIRE CURTAIN BARRIER ASSEMBLY

WWW.COOPERSFIRE.COM



coopers

EST. 1983

LEADING THE WAY IN FIRE PROTECTION

DESIGN SOLUTIONS THAT WORK FOR YOU

The revolutionary FireMaster® Concertina™ provides the same protection as a steel fire shutter but at a fraction of the size and weight, with no need for columns, corner posts, side guides and intrusive ceiling interfaces, giving architects, consultants, specifiers and owner/occupiers a whole new way to approach building design, maximising floor space and increasing rental income.

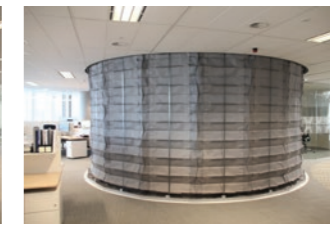
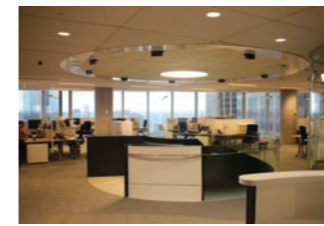
Active Fire Curtain Barrier Assemblies comprise technologically advanced fire-resistant fabric barriers encased in a compact steel housing. Barriers remain invisibly retracted until activated by an alarm or detector signal, at which time they descend safely to their operational position.

To be compliant, Fire Barriers must be protected from a short circuit and or total power failure, this is achieved with our patented Total Gravity Fail-Safe (TGFS) system.



PRODUCT ADVANTAGES

- **NO MORE COLUMNS AND CORNER POSTS**
With no visible support posts required, the Concertina™ offers open plan environments.
- **NO MORE INTRUSIVE SIDE GUIDES**
No corner posts and columns mean that there is no longer the need for side guides to compromise design.
- **NO MORE INTRUSIVE CEILING INTERFACES**
Our ceiling interfaces are designed to blend with your existing ceiling, resulting in a discrete and aesthetically pleasing finish.
- **INCREASE FLOOR SPACE**
Free up space that's usually occupied by rated glass or non-loadbearing compartment walls.



OPEN SPACE

- Virtual compartments with unlimited width for maximum design flexibility

ESCALATORS

- No need for non-loadbearing fire-rated walls

ATRIA

- Allows multi-floor concourse openings for large atria

STAIRWELLS

- No need for non-loadbearing fire-rated walls

LOBBIES

- No need for non-loadbearing fire-rated walls and doors



- **INCREASE INCOME**
Maximising floor space by opening up spaces will increase square meter yield and rental income.
- **ANY SHAPE**
Every Concertina™ is bespoke and is manufactured to meet your specific requirements.
- **TOTAL GRAVITY FAIL-SAFE (TGFS)**
operation ensures safe rates of descent even following total power loss, wiring, short circuit or system

CASE STUDY: OIL SEARCH

SYDNEY AUSTRALIA

Ensuring you remain protected from fire without compromising the intended architectural open plan design can be problematic, especially when you're protecting stairwells and atria.

Such a situation led Oil Search Australia to employ Coopers Fire to develop and manufacture a unique circular 18-sided Concertina™ that ensures the office complies with stringent Building Code requirements whilst permitting an imposing and more efficient office space overlooking Sydney Harbour.

The revolutionary Concertina™ design arrangement protects the open plan spiral staircase whilst removing the need for side guides and columns to provide the full fire rating. The end product provided a uniform look across all 3 levels, mirroring the spiral staircase opening.

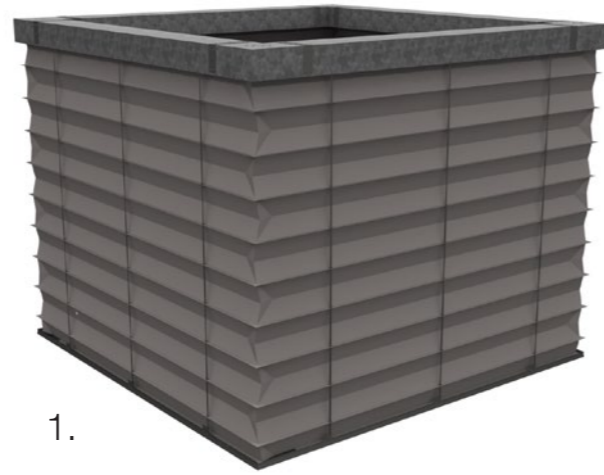
We have also installed L shaped and four/sided configurations of the Concertina™ into Selfridges, Oxford St and Bovis Lend Lease, London.

BENEFITS

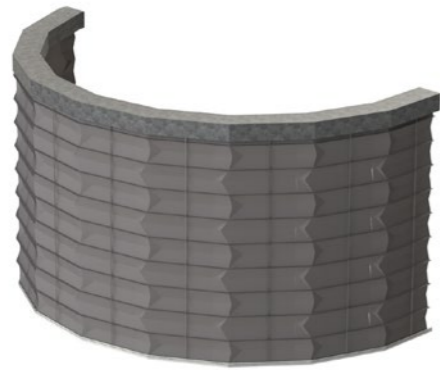
- Only one product/system is required to achieve the required fire rating.
- No side guides, no columns and no posts.
- A curved ceiling interface panel fits in with the look and feel of the building.
- No compromise on the fire performance.
- Interfaces with the zone smoke control system.
- Modular construction that's quick to install.
- No secondary steelwork required.
- Multi-functional operation.

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.



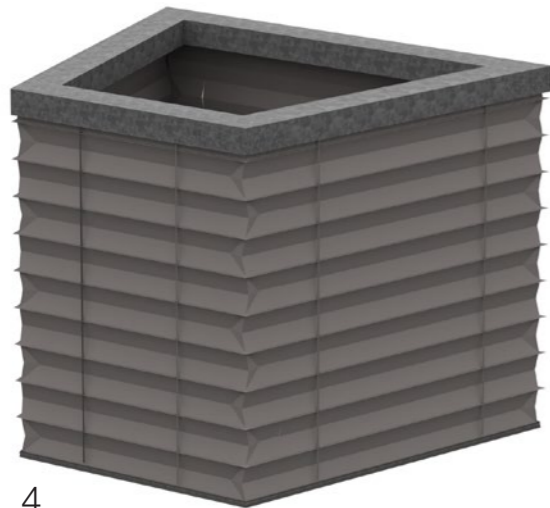
1.



2.



3.



4.



5.

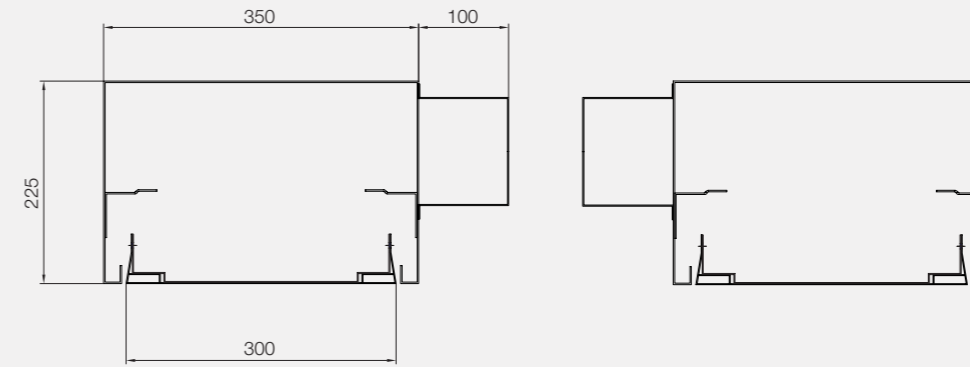
- 1. Square (Closed)
- 2. Faceted Curve (Open)
- 3. L Shaped Corner (Open)
- 4. Trapezoid (Closed)
- 5. Multisided (Closed)

Barriers up to 5m in height have been approved for 4 hours (240 mins) fire-resistance integrity. For barriers up to 8m high, are approved for 2 hours (120 mins).

STANDARD HEADBOX SIZES

Coopers has a design solution for any size requirement. For queries about special size requirements, please contact our technical department.

Model No.	Maximum Barrier Width	Maximum Barrier Drop
FM Concertina 45/22	Unlimited	Up to 8 metres



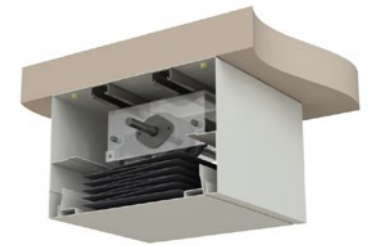
Headbox Section (motor on RH)

Headbox Section (motor on LH)

(Based on a 4m drop. Larger headboxes are available upon request.)

HOW ARE THE HEADBOXES INSTALLED?

There are many fixing options to suit all types of ceiling configurations. Barriers can be integrated with both solid and suspended ceilings, enabling total project design flexibility.



Soffit



Suspended with unistrut fit



I beam



HOW ARE THE BARRIERS CONCEALED?

We can provide a range of ceiling interfaces developed to conceal the barrier in the ceiling whilst still allowing access for service and maintenance. All our systems remain totally concealed when non-operational. With suspended ceilings, our unique patented Coopers' system SLAT™ (Self Levelling Access Trim) can be utilised.

Remember, regular service and maintenance is a legal mandatory requirement.

ALTERNATIVE CEILING INTERFACE

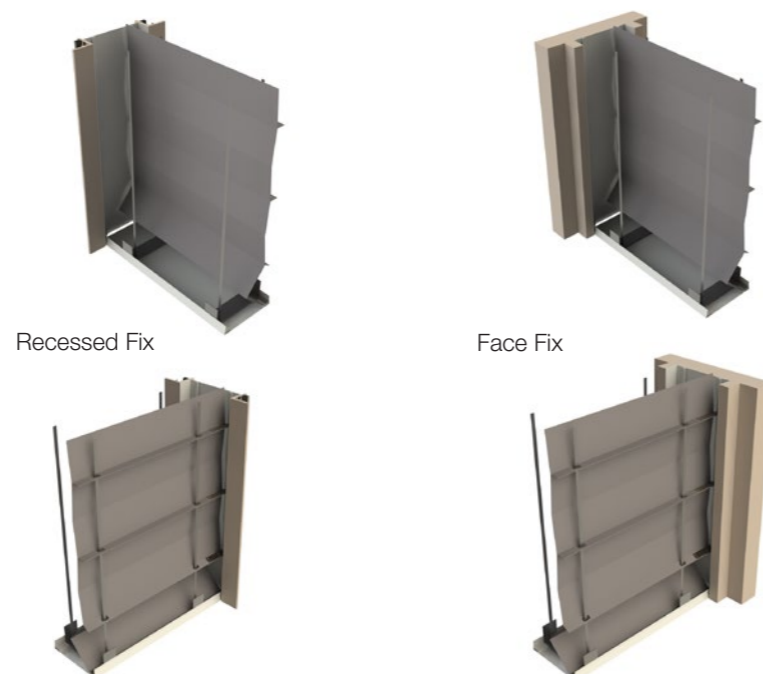


WHAT IF I NEED SIDE CHANNELS

With open shapes it's also possible to install the Concertina™ to work with traditional side retention systems whereby the barrier is fixed to the building and can be either surface mounted or recessed into the wall structure to give a flush finish.

The diagrams to the right illustrate both Recessed and Face Fix options.

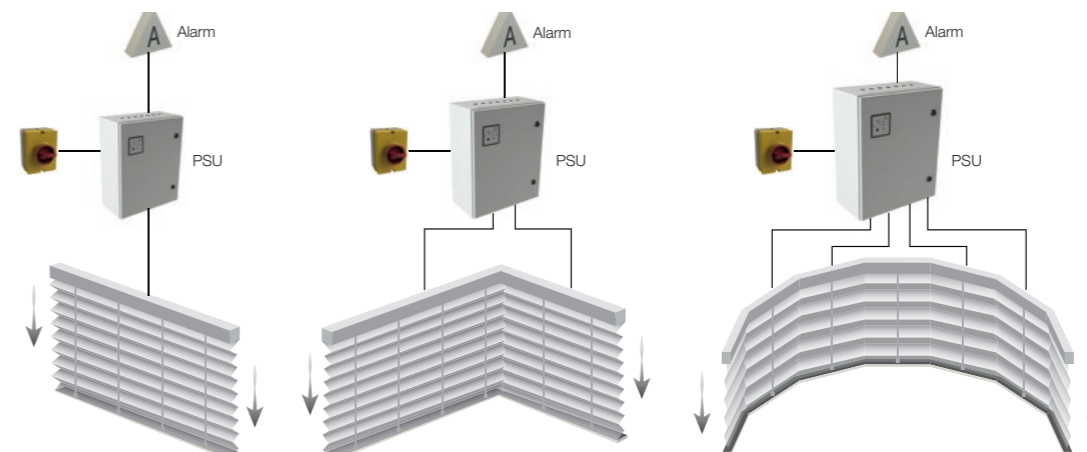
Coopers' unique fabric locking system has been developed and proven over many years.



CONTROL OPTIONS

Controls are custom made to be fully compatible with both existing alarm systems and the number of barrier units installed, whether single or multiple roller assemblies.

When an alarm signal is detected, the control panel will automatically trigger all the Barrier systems to deploy by controlled descent using our unique Total Gravity Fail-Safe (TGFS) system.



PRODUCT SPECIFICATION

The complete system is assessed for 240 minutes (4 hrs) and 120 minutes (2hrs) in accordance with BS EN 1634-1:2008 and is classified as E180 EW60 C1 in accordance with BS EN 13501 2:2007+A1:2009. It also meets the requirement of BSI PAS 121:2007 (where applicable).

The fabric is additionally tested for fire propagation to BS 476 6:1989+A1:2009 and surface spread of flame to BS 476-7:1997 to achieve National Class '0' in accordance with A13(b) of Approved Document B (Volumes 1 & 2) 2006 Edition 'Fire Safety' to England & Wales Building Regulations 2000.

EFP™ 4/1000 is a long established, high performance fire textile composite material of woven glass fibre with a high performance coating, containing a micronised aluminium enriched polymer, which when exposed to fire, is absorbed into the surface of

the curtain to provide high temperature performance. This coating was developed and used first by Coopers Fire.

DON'T BE LIABLE

Fire Curtain Barriers MUST have a 'Total' Fail-Safe by Gravity* in the event of total mains, wiring, short circuit and/or system corruption.

Coopers Fire, with their unique patented Total Gravity Fail-Safe (TGFS) system, are the only supplier with Independent Third Party Certification by a UKAS approved certification body to BSI PAS 121:2007 and now meets essential requirements of BS 8524-1:2013.

CONTROLS SPECIFICATION

POWER SUPPLY
230V AC 50Hz dedicated supply via all pole isolator

BATTERIES
2 x 12V 12A/h lead acid batteries

ALARM SIGNAL
Normally closed volt-free contacts. Open on activation

TEST FACILITY
Zone Control Panel (ZCP) located on front of Power Supply Unit (PSU)

DISPLAY
Power ON, Alarm ACTIVE and Alarm OFF status LED's on ZCP

POWER SUPPLY SIZE
400mm(w) x 500mm(h) x 210mm(d)

MOTOR CONTROL UNIT SIZE
300mm(w) x 200mm(h) x 80mm(d)



FM 22356

LQR 4007272



CPD ACCREDITATIONS



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

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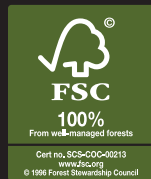
Coopers Fire Ltd has a policy of
continuous product improvement.

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

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*Multiple patents granted and pending.



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