

FIRE CURTAINS

(COMPACT FLEXIBLE AUTOMATIC FIRE BARRIERS)



GENERAL

Fibershield automatic fire curtains are synonymous with quality and reliability. They are compact and light weight and ideal for protecting both small and large horizontal and vertical openings. Fire ratings up to two hours can be achieved. Extensive testing has also been conducted on partially insulated systems when used in conjunction with various sprinkler systems.

Fibershield fire curtains have been engineered to complement the building design, allowing Architects and Building Designers to maximise and open up internal space. The compact design means Fibershield is easily integrated into existing buildings.

Fibershield overcomes the space and aesthetic restrictions of other types of barriers such as roller shutters and sliding fire doors. The system is virtually invisible and can be colour coded to suit the interior (or exterior) design. It also requires much less space and structural support.

The Fibershield system has approvals in accordance with AS1530.4 for fire resistance. A patented smoke containment sealing system is also available to provide combined fire and smoke protection (refer to Fiberseal product data).

Approved for use for 30m wide x 10m drop in accordance with AS1530.4 and AS1905.2

KEY FEATURES

- Fire tested in accordance with AS1530.4 (Up to 2 hours)
- Refer to Fibershield 4 product data for 4 hour system
- Achieves 'smoke curtain (600 °C for 30 minutes) performance by default
- Integrity and partial insulation ratings
- Virtually invisible when in non-fire mode
- Vertical and horizontal applications
- Ideal for large openings/windows
- Ideal for upgrading non-rated glass doors and side lights
- Easily retrofit
- Lightweight
- Low head room requirements
- Cost effective
- Simple, reliable and easily maintained
- Suitable for external use

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Description

Fibershield automatic fire curtains consist of a compact header box and flexible curtain connected to a control system. Fibershield contains a unique tensioning system to prevent potential binding of the curtain inside the header box, thus significantly reducing the potential for motor burnout and increasing the reliability of the system. The compact header box dimensions means this system can be easily integrated into existing buildings.

The specially reinforced and coated glass fibre fabric (curtain) offers superior radiation shielding properties and has been impacted tested with a 200kg weight subsequent to a 120 minute fire test.

The system is available with various types of guide rails to complement the various mounting positions and space limitations.

Operation

The system is designed to activate on receipt of an alarm signal from the master fire control panel or our stand alone control system that allows up to 40 smoke detectors to be connected.

As with all of our curtain and screen systems deployment is by gravity (gravity fail safe). The rate of descent is controlled mechanically to approximately 4.5m/min to significantly reduce the likelihood of injury to occupants that may be passing through.

Fire and/or smoke curtain systems that do not have this gravity fail safe function do NOT comply with the Building Code of Australia requirements for fail safe in the event of power failure. (Refer to BCA Clause C3.6 for example). Power failure can mean either a blackout type event or disconnection/damage of the electrical cable.

A 240 volt tubular motor which incorporates an electro-magnetic brake, adjustable mechanical upper and lower limits is used only to rewind the system on reset of an alarm or power.

Battery back up is available as an option to reduce the likelihood of nuisance deploys in the event of a power failure but NOT essential to the effective operation of the system in fire mode.

There is a complete range of control options and combinations to suit specific project functionality requirements including a basic trigger unit, preprogrammed master control and battery back up.

Our office can assist with selection of the most cost effective control system to suit your needs.

Each barrier can be individually operated from a low-level surface mounted key switch, push button or break glass.

Other features include Safety Edge (system stops deployment if it hits an obstruction), audible and visual warning system and staged deployment.



Fibershield protecting an 8.2m wide opening in a shopping centre on the Gold Coast, Queensland

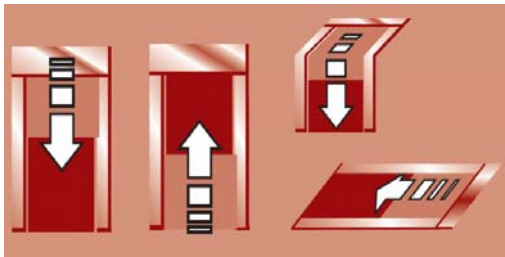
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Application

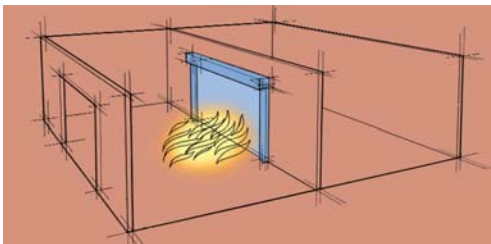
The Fibershield system is suitable for multiple applications. As shown in the diagram below the system can operate horizontally or vertically or on an incline and can be installed above or below the aperture, creating the option of a downwards or upwards operating system: The versatility and large approved spans, as well as its superior radiant heat shielding qualities, low weight and minimal space requirements, make Fibershield the most economical and flexible fire protection closure available.



Compartmentation

Non-insulated compartmentation

Fibershield provides effective protection against the spread of fire as seen in the diagram below:

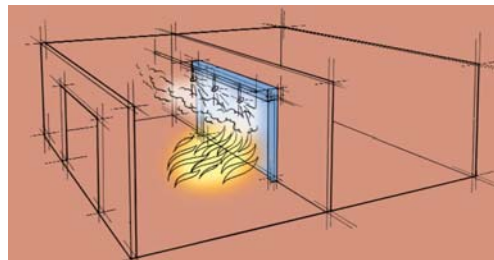


System advantages:

- Large area fireproof-sealing compartmentation
- Fire compartmentation/ segregation for sensitive areas within large compartments
- Optimal for flooding with gaseous suppression systems within segregated compartments in fire mode
- Minimum space requirements
- Easy installation
- Eliminates the need for large door systems

Partially insulated compartmentation

Fibershield can be equipped if required with a sprinkler system based on full scale fire test data. The combination of specific sprinkler system design and the fire curtain achieves fire and the equivalent to an insulation rating of up to 90 and 120 minutes.



System advantages:

- Significantly reduces heat transmission
- Equivalent FRL's up to -/120/120 possible under Alternative Solutions
- Economical due to its small space requirements

Note: Refer to Fibershield EW system for partial insulation up to 2 hours without the use of sprinklers.



Basement car park fire separation possible even with limited space

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Facades:

Façade distances

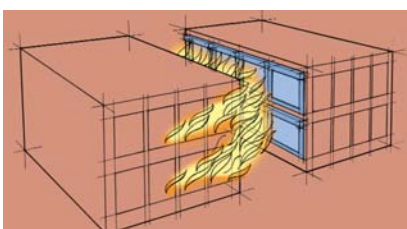
Mandatory Building Code requirements set out a minimum distance of 6 metres between buildings, and a distance of 3 metres between the side and rear boundaries of an allotment. If the distances are less than this, adjacent walls must be designed as fire walls. Windows and other openings must be closed off or fire-rated to provide appropriate fire resistance so as to avoid fire spread. Fibershield fire curtains can be used to protect windows in lieu of fire rated glazing either internally or externally as a BCA deemed to satisfy solution.



Elizabeth Bay Apartments, NSW

System advantages:

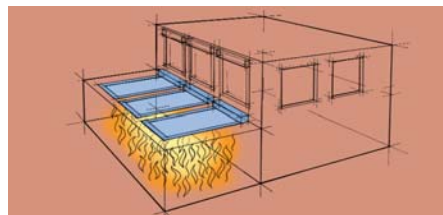
- No fire rated glazing required
- Can be integrated well in a façade
- Ideal for building renovations
- No restriction in room occupancy
- Suitable for internal and external applications



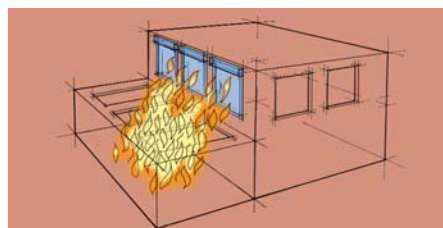
Canopies:

Canopies

Fire protection can also be provided for canopies when fire-rating is required—where roofs of annexes adjoin walls with openings:



Installation in the ceiling, horizontal closing direction



Installation to the wall, vertical closing direction

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System advantages:

- Fire protection of ceiling openings
- No fireproof glazing required
- Wall and ceiling installation possible



4x Fibershield H horizontal fire curtains installed in an office building in Brisbane, Qld. These curtains are each 10m long x 4.5m across.

Building inside corner

Another instance in which Fibershield can provide a simple solution for an often complex problem is the situation where buildings converge at corners. If buildings converge at corners and are separated by a firewall, the distance between the firewall and the inside corner must be 2-6 metres depending on the angle the walls make with each other. Fibershield allows standard glazed panels to be used:



System advantages:

- No fireproof glazing required
- Can be integrated well in facades
- Maximum design freedom
- Aesthetically pleasing
- Low-cost solution
- Additional benefit: the system can be used as sun shading



Other fire curtain systems;

Refer to the other relevant sections of our catalogue and our web site for other fire curtain options including;

1. Fibershield H horizontal fire curtains
2. Fibershield EW partially insulated fire curtains
3. Ecoshield budget model vertical fire curtain system for widths up to 7m wide x 8m drop
4. Windowshield fire curtains (fusible link operated) for protection windows close to boundaries
5. SmokeHalt and SmokeHalt FS static/ fixed fire and smoke baffle systems and ceiling cavities

Verification of performance

The fire test protocol for fire curtains is AS1530.4 and depending on the application AS1905.2.

Australian Standard requirements and the Building Code of Australia are quite clear on the performance requirements for building products used to provide fire compartmentation.

Two of the important attributes the system must meet under AS1530.4 are;

1. The fire curtain system shall be installed and fire tested representative of the system for use in practice. This means that the whole system including head box, side guides, motors, fabric, bottom bars etc and the various configurations that it can be installed are tested as a complete system. It is not uncommon for labs outside of Australian and New Zealand to write fire test reports designating a fire rating on the fabric

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alone. This is NOT acceptable under our local market norms unless it is intended that the fabric be installed as per the tested prototype.

2. The barrier system shall NOT allow gaps or fissures to be larger than 6 x 150mm. While overseas laboratories allow fire curtain overlaps, in practice this overlap can potentially create gaps 150mm x 3000mm in size large enough to allow people to walk through the barrier ! It is sometimes argued that pressure across the face of the fire curtain will keep the overlap closed. It is of course not possible to guarantee that the pressurisation system in the building is 100% reliable and/or that debris caused by a fully developed fire will not fall and push the curtain split open.

Specifications for fire curtains should always include a reference to AS1530.4 as a minimum performance requirement, unless of course the specifier is happy to take on the liability for the design of the system.

If our clients are unsure of the complexity of this issue and require more information, please do not hesitate to contact our offices.

Reliability

The Fibershield system has been cycle tested well in excess of its expected use without failure. Verification of system performance is easily verified at installation.

Installation

In line with Smoke Controls mission to provide customers with reliable solutions, the Fibershield system is installed by our fully trained and approved installer network.

Maintenance

Annual maintenance and verification of system operation should be conducted by trained personnel in strict accordance

with our documented procedures. Contact us for details.

Maximum Sizes

30m wide x 10m drop
(standard approval in accordance with AS1530.4)

Operating Speed

Approximately 4.5m per minute.

Technical support

Please do not hesitate to contact us for a no-obligation discussion on the various options for your project requirements.

Copies of test reports available on request.



Information given in this publication is given to the best of our knowledge and in good faith. Smoke Control is not responsible if recipients of test reports, assessments or literature misinterpret the contents and wrongly use products based on those misinterpretations. No liability is accepted for error omissions in this document. Smoke Control reserves the right to change specification without notice.

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Design Drawings

DWG #	Description
FSG-FSHL-001	Fibershield - Typical elevation
FSG-FSHL-002	Fibershield - Head box mounting options
FSG-FSHL-003	Fibershield - Side guide mounting options
FSG-FSHL-004	Fibershield - Head box dimensions
FSG-FSHL-005	Fibershield - Side guide finish options
FSG-FSHL-006	Fibershield - Head box finish options
FSG-FSHL-007	Fibershield - Bottom bar finish options

Note:

Combined high speed door and Fibershield fire curtain also available.

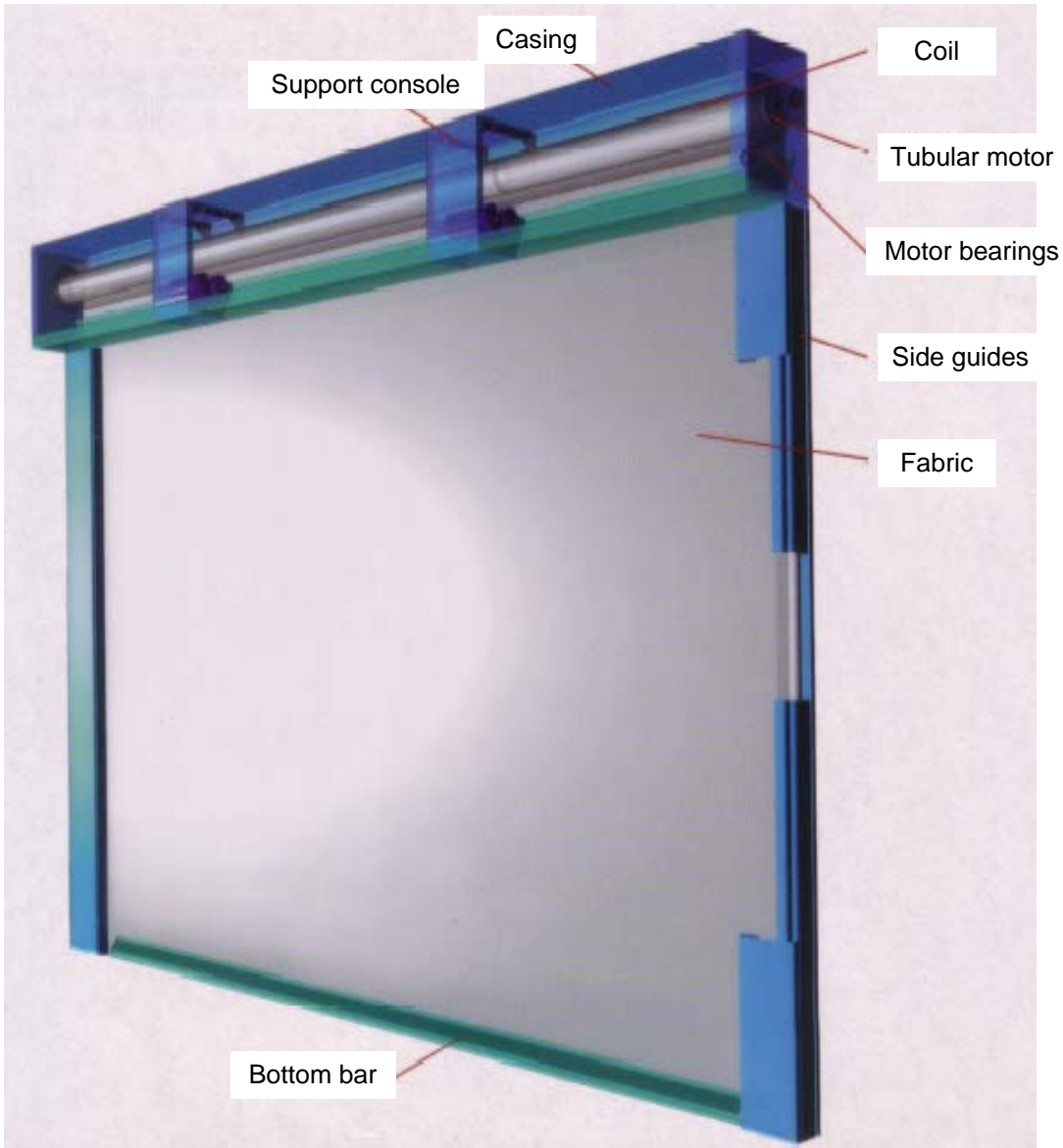
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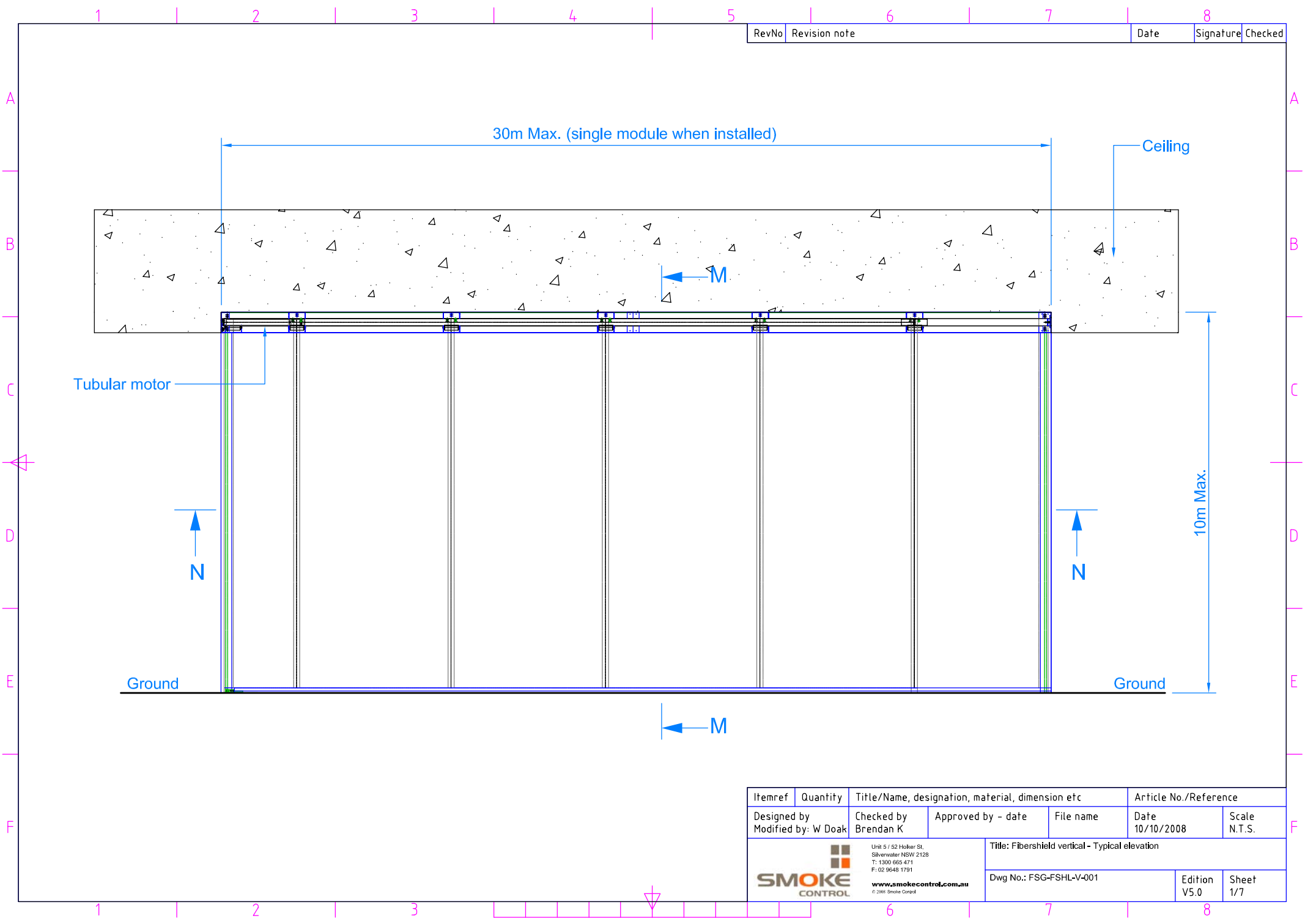
Fibershield System Components




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Drawing # SCD-SFC-001

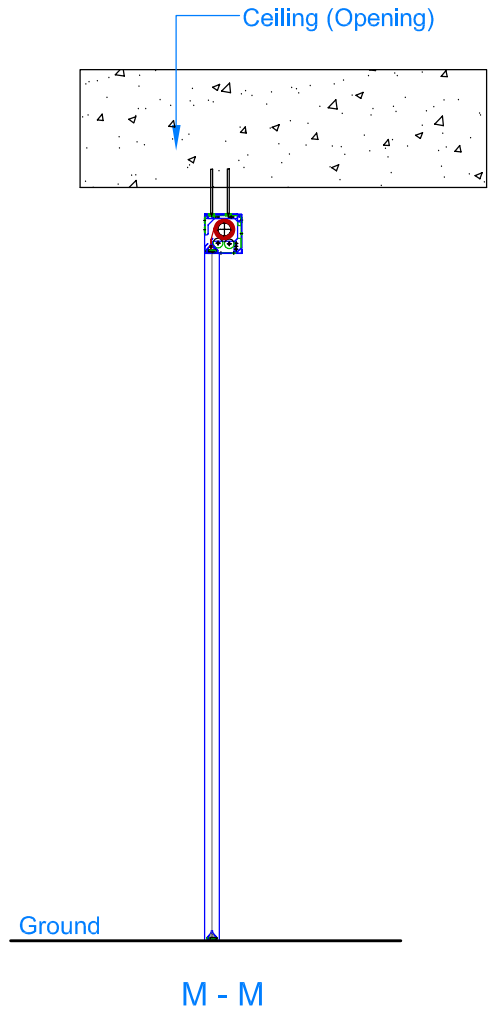
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Itemref	Quantity	Title/Name, designation, material, dimension etc			Article No./Reference	
Designed by Modified by: W Doak	Checked by Brendan K	Approved by - date	File name	Date 10/10/2008	Scale N.T.S.	
 Unit 5 / 52 Hoker St, Silverwater NSW 2128 T: 1300 665 471 F: 02 9548 1791 www.smokecontrol.com.au © 2008 Smoke Control			Title: Fibershield vertical - Typical elevation			
			Dwg No.: FSG-FSHL-V-001	Edition V5.0	Sheet 1/7	

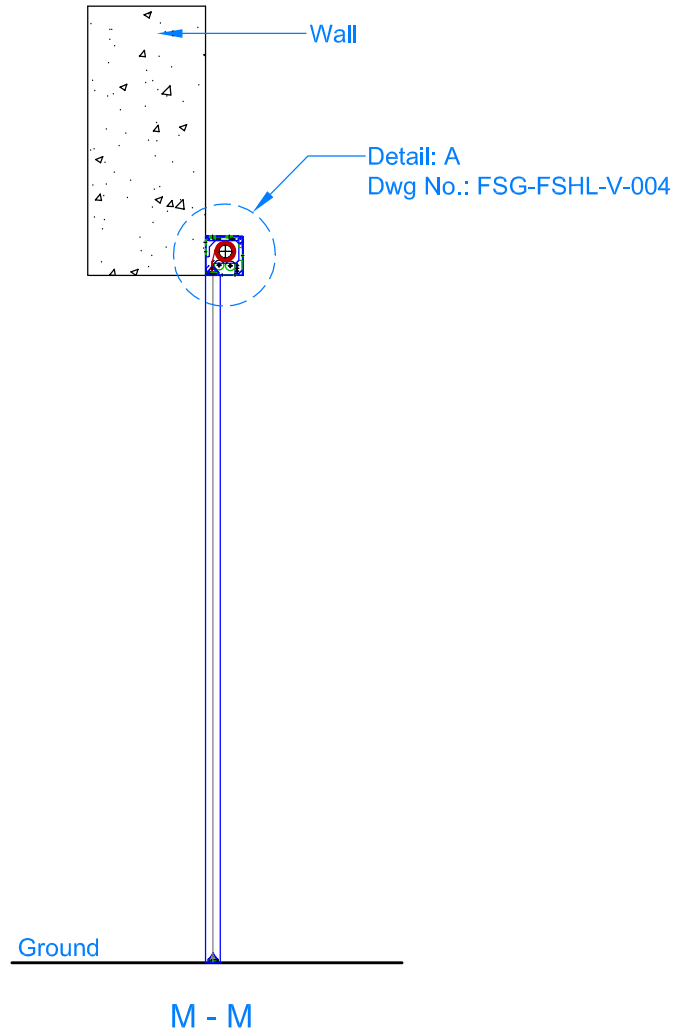
Head box mounting option:


Mounting into the opening



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Mounting to the wall

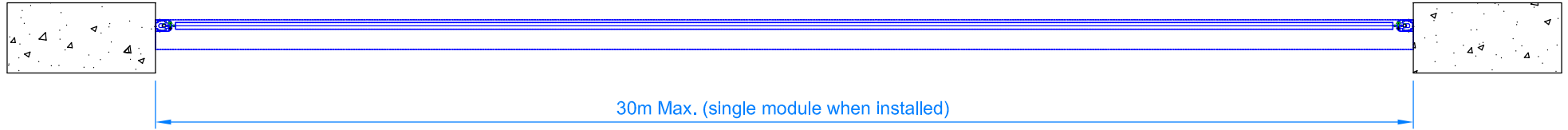


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Designed by	Checked by	Approved by - date	File name	Date	Scale	
Modified by: W Doak	Brendan K			10/10/2008	N.T.S.	
 Unit 5 / 52 Hoker St, Silverwater NSW 2128 T: 1300 665 471 F: 02 9548 1791 www.smokecontrol.com.au			Title: Fibershield vertical - Head box mounted options			
			Dwg No.: FSG-FSHL-V-002		Edition	Sheet
		V5.0	2/7			

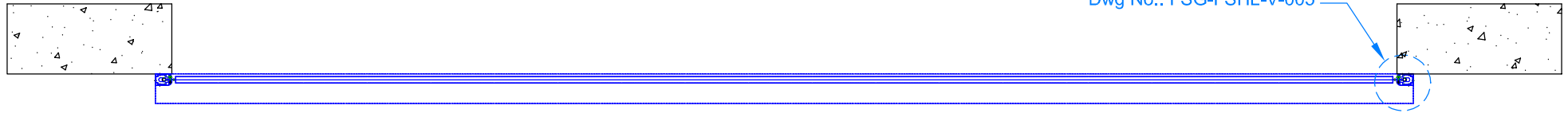
Installation configurations: (side guides)

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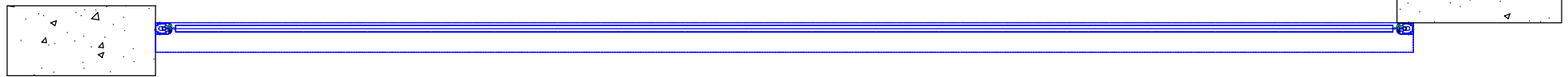
Mounting into the opening



Mounting to the wall




Combination of opening (LHS) & wall (RHS)



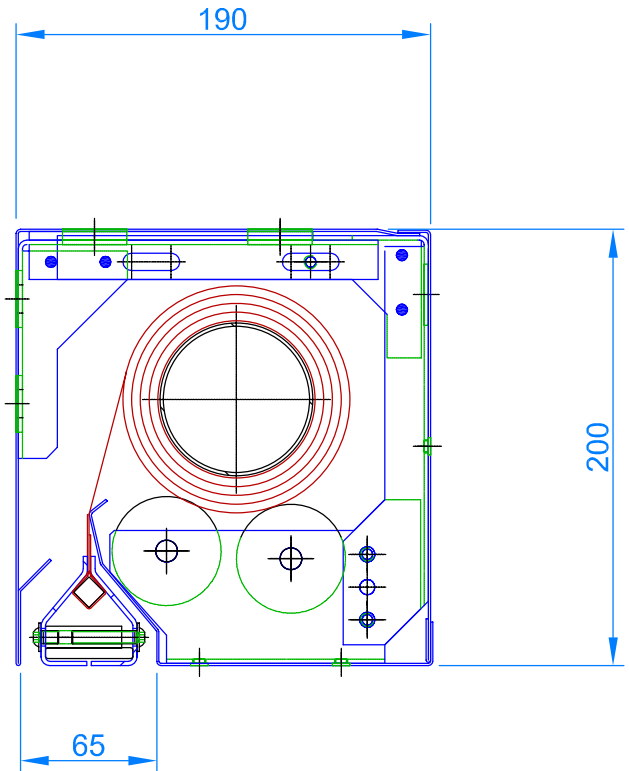
Combination of wall (LHS) & opening (RHS)



N - N

Itemref	Quantity	Title/Name, designation, material, dimension etc			Article No./Reference	
Designed by Modified by: W Doak	Checked by Brendan K	Approved by - date	File name	Date 10/10/2008	Scale N.T.S.	
 Unit 5 / 62 Harker St, Berrwater NSW 2128 T: 0000 666 471 F: 02 9748 4387 M: 0400 047 046 www.smokecontrol.com.au © 2008 Smoke Control			Title: Fibershield vertical - Side guide mounting options			
			Dwg No.: FSG-FSHL-V-003	Edition V5.0	Sheet 3/7	


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Detail: A

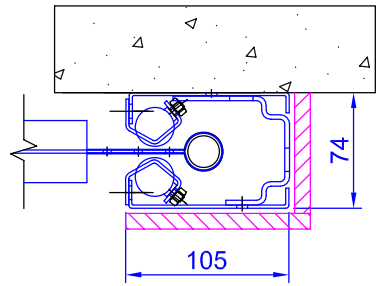
Notes:

- (i)- Typical head box dimensions shown, this may increase with drop heights over 4m.
- (ii)- System is a single module when installed up to 30m wide. No multiple modules with overlaps required.
- (iii)- Optional bottom bars available (refer to Dwg No.: FSG-FSHL-V-007)
- (iv)- Optional head mounting details (refer to Dwg No.: FSG-FSHL-V-006)

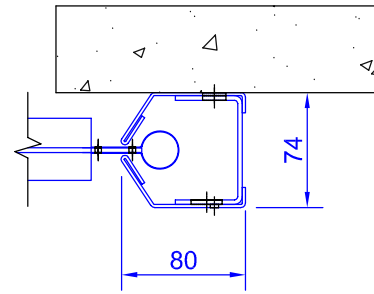
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Designed by Modified by: W Doak	Checked by Brendan K	Approved by - date	File name	Date 10/10/2008	Scale N.T.S.	
 Unit 5 / 52 Hoker St, Silverwater NSW 2128 T: 1300 665 471 F: 02 9548 1791 www.smokecontrol.com.au © 2008 Smoke Control			Title: Fibershield vertical - Head box dimensions			
			Dwg No.: FSG-FSHL-V-004		Edition V5.0	Sheet 4/7

Mounting side guides:

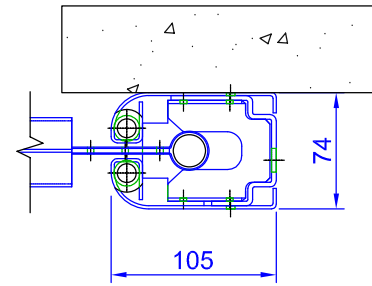
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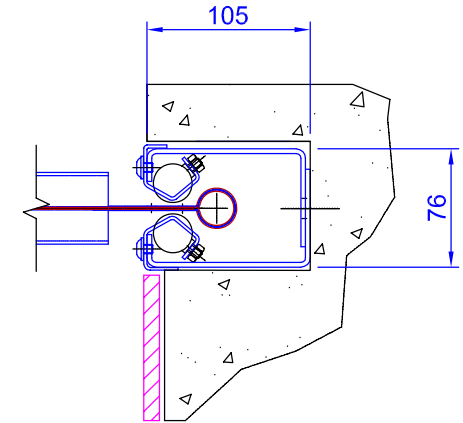
Option 1A: Concealed



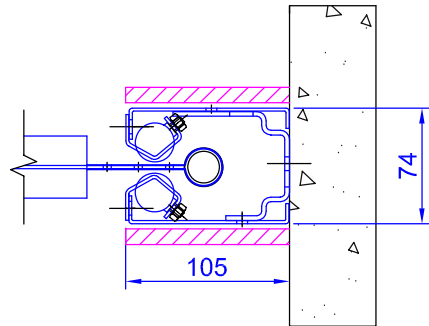
Option 2A: Slim line



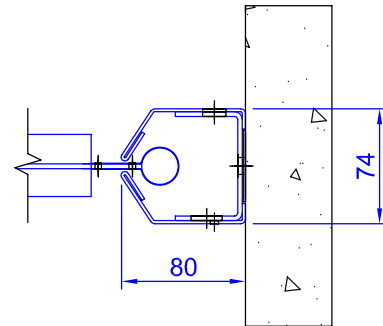
Option 3A: Standard



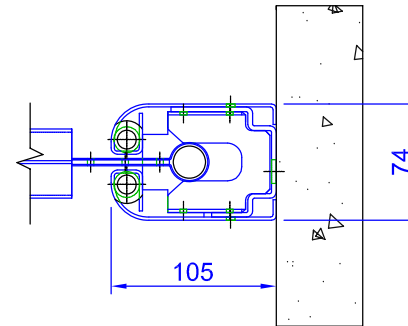
Option 4: Fully concealed



Option 1B: Concealed



Option 2B: Slim line




Option 3B: Standard

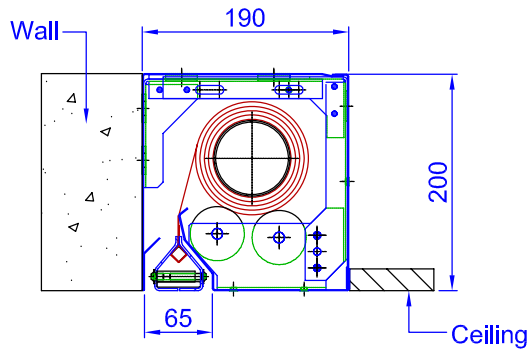
Detail: B

Note:

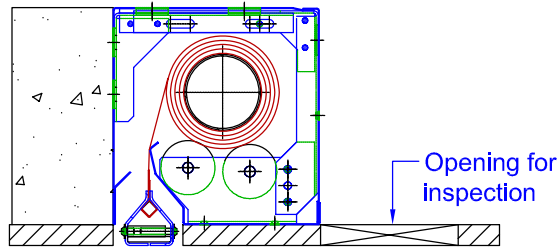
- 1- Suitable for small curtain widths and drop only, check with us for size limitation.
- 2- Conceal Side Guides with cladding as per Architects detail (optional).
MUST BE REMOVEABLE FOR MAINTENANCE

Itemref	Quantity	Title/Name, designation, material, dimension etc			Article No./Reference	
Designed by	Checked by	Approved by - date	File name	Date	Scale	
Modified by: W Doak	Brendan K			10/10/2008	N.T.S.	
 Unit 5 / 52 Hoker St, Silverwater NSW 2128 T: 1300 665 471 F: 02 9548 1791 www.smokecontrol.com.au © 2008 Smoke Control			Title: Fibershield vertical - Side guide finish option			
			Dwg No.: FSG-FSHL-V-005	Edition V5.0	Sheet 5 of 7	

Wall mounted:

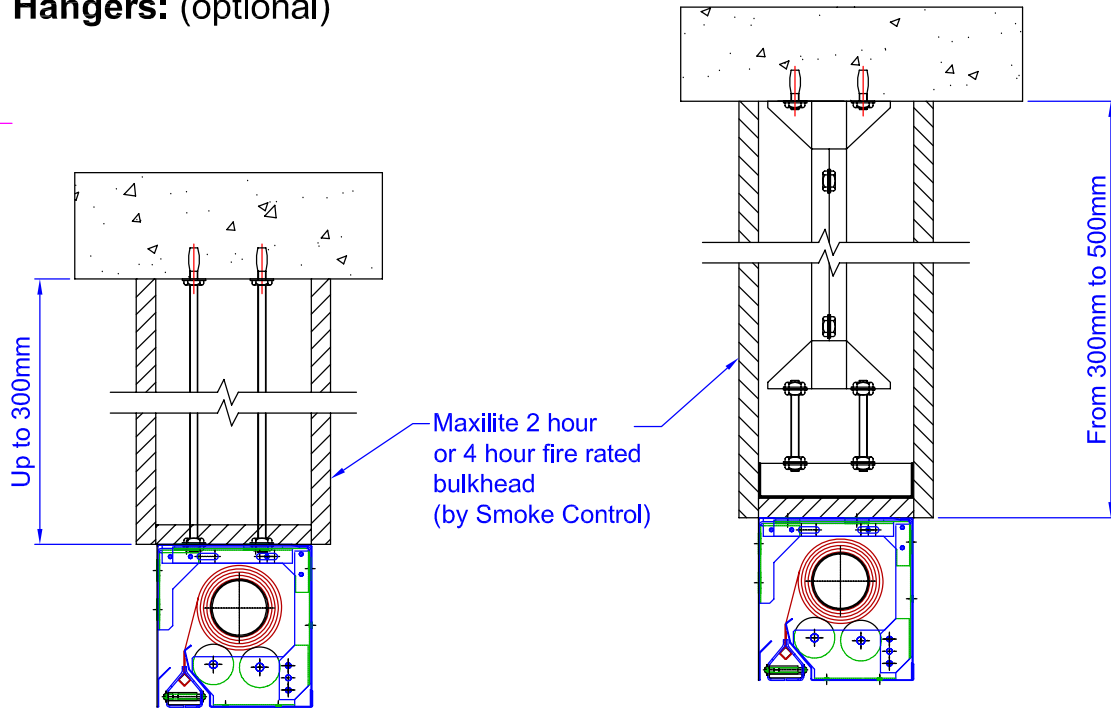


Option 1A: Mounted to the wall (semi-concealed)



Option 1B: Mounted to the wall (semi-concealed)

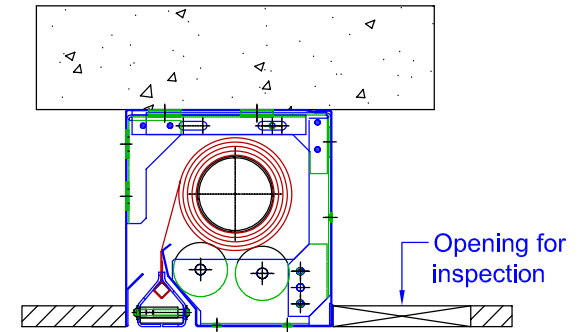
Hangers: (optional)



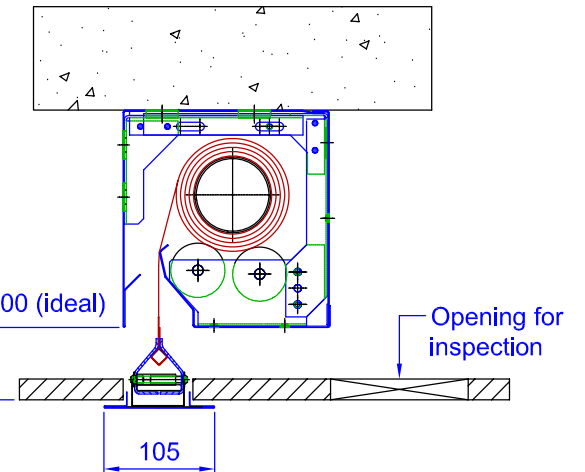
Option 3A: Extension up to 300mm (From the slab above)

Option 3B: Extension from 300mm to 500mm. (From the slab above)

Ceiling mounted:




Option 2A: Mounted to the ceiling (semi-concealed)

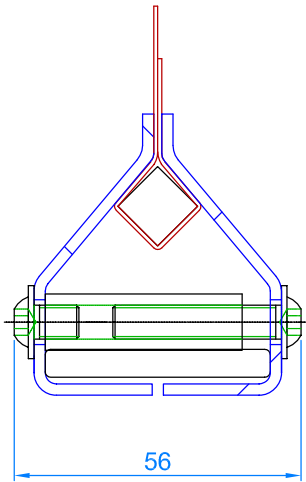


Option 2B: Mounted to the ceiling (fully-concealed)

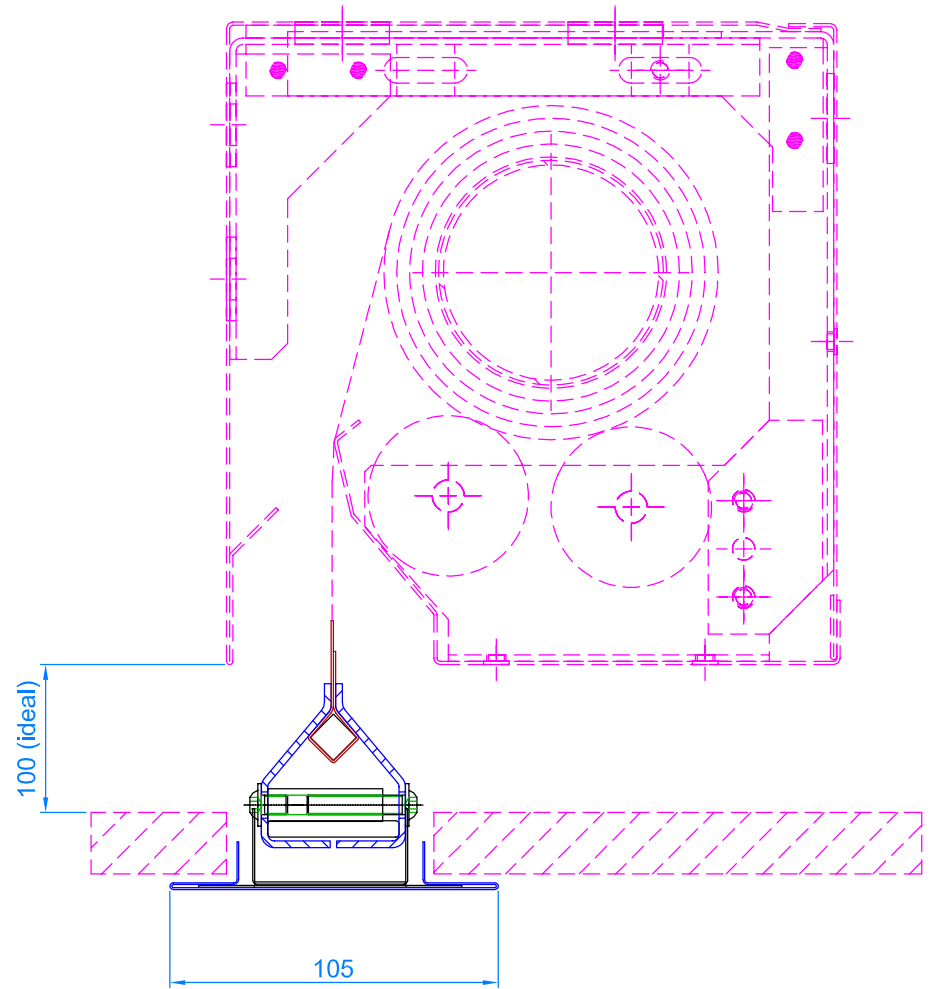
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 Unit 5 / 52 Hokker St, Silverwater NSW 2128 T: 1300 665 471 F: 02 9648 1791 www.smokecontrol.com.au © 2008 Smoke Control			Title: Fibershield vertical - Header Box finish options			
			Dwg No.: FSG-FSHL-V-006	Edition V5.0	Sheet 6 of 7	


Bottom bars:



Option 1: Standard bottom bar
(visible from below)



Option 2: Self levelling bottom bar
(fully concealed system)

Itemref	Quantity	Title/Name, designation, material, dimension etc			Article No./Reference	
Designed by Modified by: W Doak	Checked by Brendan K	Approved by - date	File name	Date 10/10/2008	Scale N.T.S.	
 Unit 5 / 52 Hoker St, Silverwater NSW 2128 T: 1300 665 471 F: 02 9548 1791 www.smokecontrol.com.au <small>© 2008 Smoke Control</small>			Title: Fibershield vertical - Bottom bar finish options			
			Dwg No.: FSG-FSHL-V-007	Edition V5.0	Sheet 7 of 7	