



VENTILATED FIRE BARRIERS



TENMAT VFB Plus fitted behind cladding



Many rainscreen and cladding systems are designed with an open cavity to provide back ventilation. The cavity acts like an open chimney to allow for moisture dissipation and to create a back pressure to repel rain ingress.

However, in a fire situation this chimney effect creates an open path for the hidden spread of fire both vertically and horizontally behind the cladding system.

Building Regulations require that Fire Barriers be installed within the cavity to prevent fire spread.

TENMAT's range of Ventilated Fire Barriers maintain the ventilated cavity, but, in the event of fire, the intumescent Ventilated Fire Barriers quickly expand to seal off the cavity to prevent fire spread.



(Image courtesy of BRE)

Evidence of Rapid Fire Spread behind a cladding

KEY FEATURES

• CONTINUOUS FREE AIR SPACE OF 40MM+

Meets CWCT 38mm Requirements

Simplifies cladding panel installation

Can more easily accept building tolerances

¹ Continuous free air space of 40mm+ only possible in cavities greater than 50mm

• FIRE TESTED BY CHILTERN INT. FIRE

Tested to general principles of BS476, Part 20

Fire Ratings of 30, 60, 90 & 120 Minutes

Tested in Timber & Non-Combustible Systems

Up to 1 hour insulation rating

• QUICK & EASY INSTALLATION

Supplied in easy to cut metre lengths

Only 2 - 4 fixings per length

• SATISFIES BUILDING REGULATIONS

Building Regulations, Approved Document B (2006 Edition), Appendix A, Table A1

Building (Scotland) Regulations, Domestic and Non-Domestic - Section 2.4

• PEACE OF MIND

TENMAT materials are age tested

Compatible with Zinc Cladding Panels

TENMAT "FF102/50"

The FF102/50 Ventilated Fire Barrier is a high expansion intumescent seal offering industry leading performance as a ventilated cavity fire barrier. The product has undergone extensive fire testing and is suitable for use within the majority of construction types, enabling the versatile system to be specified with confidence and provide the installer with a simple, time saving and site friendly solution.

Product Description

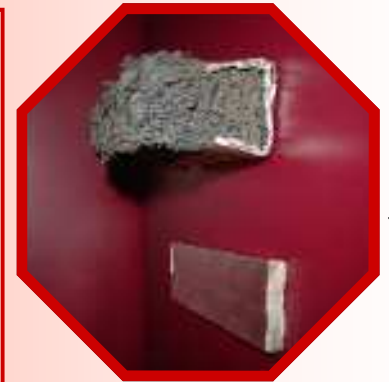
The FF102/50 Ventilated Fire Barrier is a rigid, high expansion intumescent strip encased in aluminium foil. The FF102/50 can be mechanically fixed both horizontally and vertically within ventilated cavities behind rainscreen or cladding systems to act as a cavity fire barrier.

Product Dimensions

6.0 mm x 75 mm x 1000 mm

Max. Cavity

50mm (this dimension does not include cavity insulation thickness)

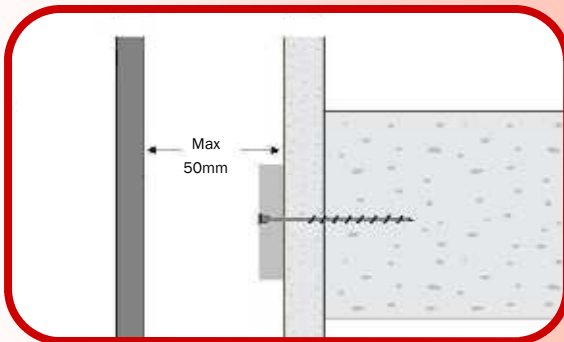


FF102 Ventilated Fire Barrier
Before & After Exposure to Fire

Approved Applications

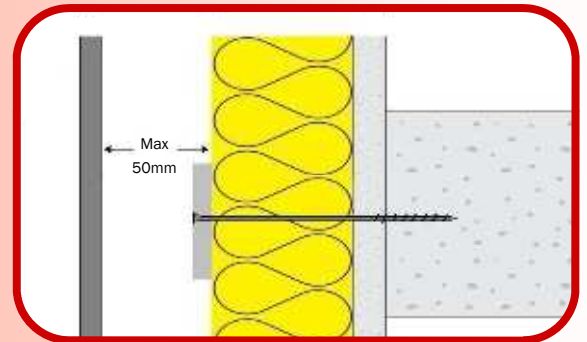
The FF102/50 Ventilated Fire Barrier has been independently fire tested and assessed by Chiltern International Fire for the applications listed below, for more specific details please contact TENMAT:

FF102/50 Fixed to Non-Combustible Constructions



VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
FF102/50	Brick, Block, Masonry	120	120
FF102/50	Aerated Concrete Block	120	120

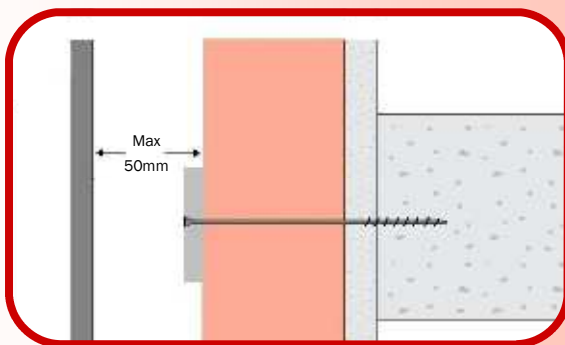
FF102/50 Fixed onto Mineral Fibre Insulation



VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
FF102/50	Min. Fibre on Concrete	90	90
FF102/50	Min. Fibre on Timber Frame	30	60

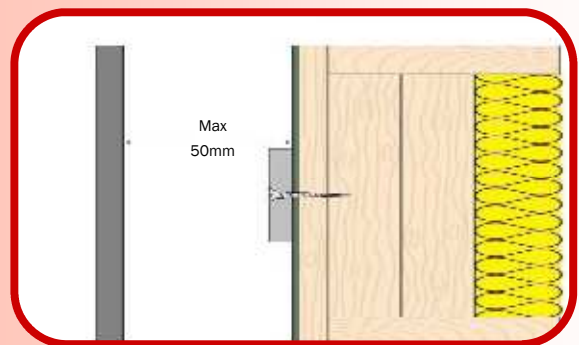
For details on approved Mineral Fibre Insulation types please consult TENMAT

FF102/50 Fixed to Kingspan K15 Rigid Insulation



VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
FF102/50	Kingspan K15 on Concrete	120	120
FF102/50	Kingspan K15 on Timber	30	60

FF102/50 Fixed to Combustible Timber Constructions



VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
FF102/50	Timber Frame	30	60

Cavities greater than 50mm can be reduced to 50mm by the installation of a suitable OSB, Timber or Non-Combustible packer (consult TENMAT for details)

TENMAT "FF102/50"

FITTING INSTRUCTIONS

The FF102/50 is a particularly versatile Ventilated Fire Barrier which can be installed in a wide range of construction types. The product is simply mechanically fixed in position to leave up to a maximum 44mm air gap.

Fix FF102/50 with non-combustible nails or screws

Maximum Screw Head Diameter is 11.5mm (Trumpet / Countersunk type head only)

Product must be fixed at maximum 250mm centres

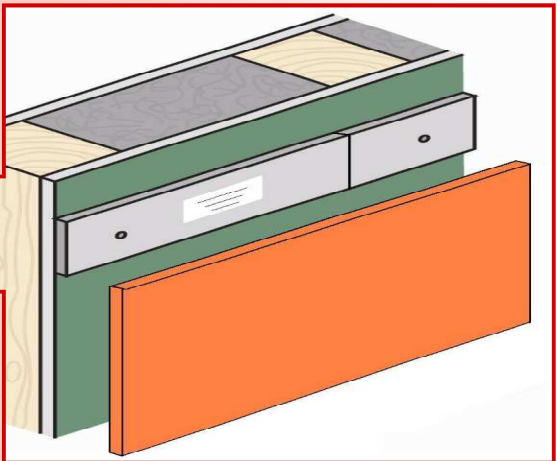
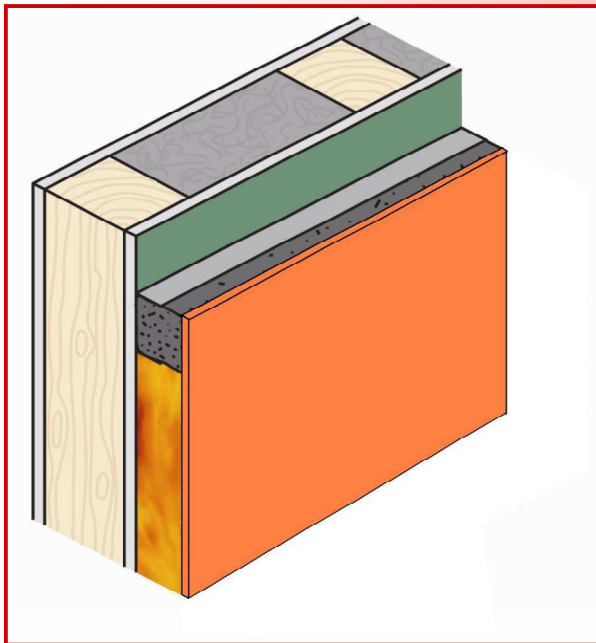
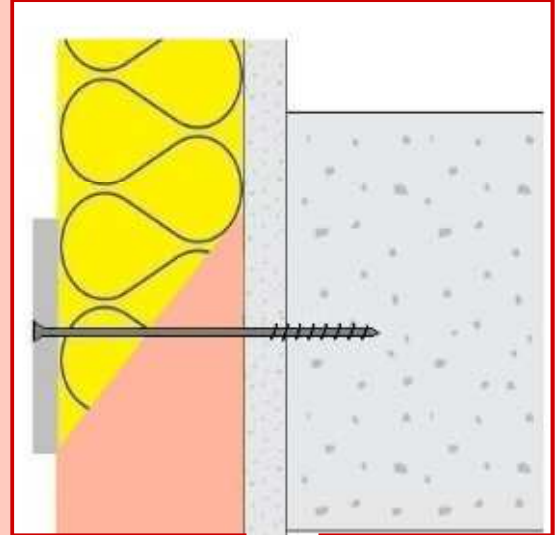
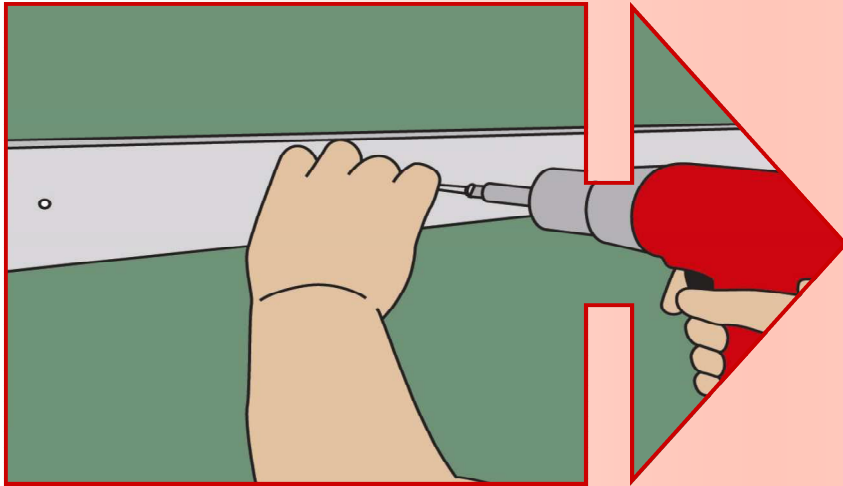
When fixing FF102/50 through Mineral Fibre or Kingspan K15 Insulation, ensure fixing embeds into solid substrate.

Recommended Fixing Type:

EJOT FPS-E 8.0 for aerated block

EJOT FBS-E 6.3 for concrete

Contact TENMAT for specific fixing details



Maximum remaining air gap to the back of the cladding panel is 44mm
Ensure Fire Barrier free to expand in a fire situation

Fixings must be along centre line of the Fire Barrier
Ensure label side is facing out into cavity
Adjacent lengths can be tightly butted

Project Examples:

Mastmaker Road - Multi Storey Apartment - Canary Wharf

Royal Botanic Garden - Edinburgh, Scotland

Cranfield University - Student Accommodation

Queen Alexandra Hospital - Portsmouth

University of Kent - Student Accommodation - Canterbury

TENMAT "VFB Plus"

The VFB Plus Ventilated Fire Barrier is a cavity fire barrier system for ventilated cavities of up to 500mm which employs a high expansion intumescent seal fixed to TENMAT High Density Mineral Wool. The product has undergone extensive fire testing and is suitable for use within the majority of construction types, enabling the versatile system to be specified with confidence and provide the installer with a simple, time saving and site friendly solution.

Product Description

The VFB Plus Ventilated Fire Barrier consists of a high expansion intumescent strip fixed to TENMAT High Density Mineral Wool and encased in polythene. The VFB Plus can be mechanically fixed both horizontally and vertically within ventilated cavities behind rainscreen or cladding systems to act as a cavity fire barrier.

Product Dimensions

Thickness (Total Cavity less 44mm Air Gap) x 75 mm x 1000 mm
Product is supplied to suit cavity size, no cutting on site required

Max. Cavity

500mm

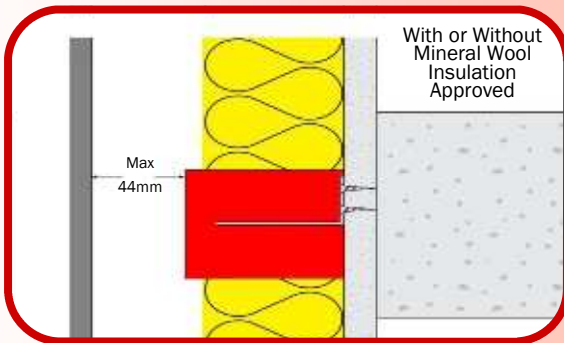


VFB Plus Ventilated Fire Barrier
Installed between Insulation Panels

Approved Applications

The VFB Plus Ventilated Fire Barrier has been independently fire tested and assessed by Chiltern International Fire for the applications below, for details on Fire Ratings for specific cavity and construction types please contact TENMAT:

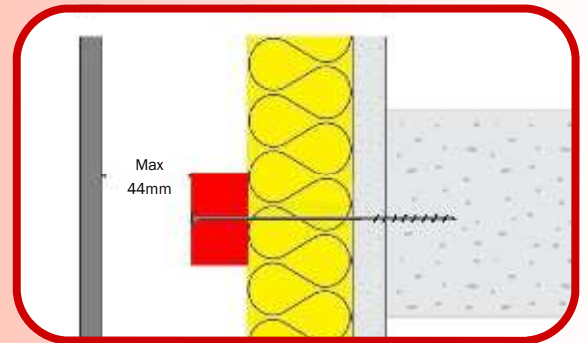
VFB Plus Fixed to Non-Combustible Constructions



VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
VFB Plus	Brick, Block, Masonry	30, 60, 90	30, 60, 90
VFB Plus	Aerated Concrete Block	30, 60, 90	30, 60, 90

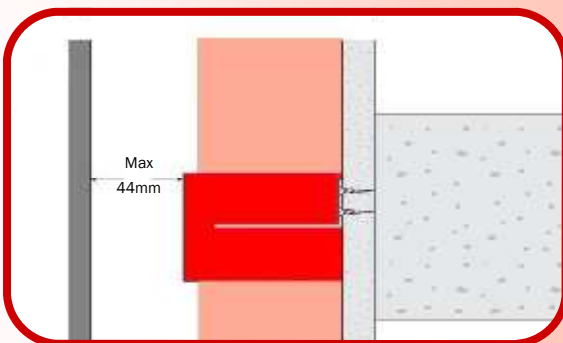
Fire Rating will vary depending upon Cavity Size - please check with TENMAT

VFB Plus Fixed onto Mineral Fibre Insulation



VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
VFB Plus	Min. Fibre on Concrete	90	90
VFB Plus	Min. Fibre on Timber Frame	30	30

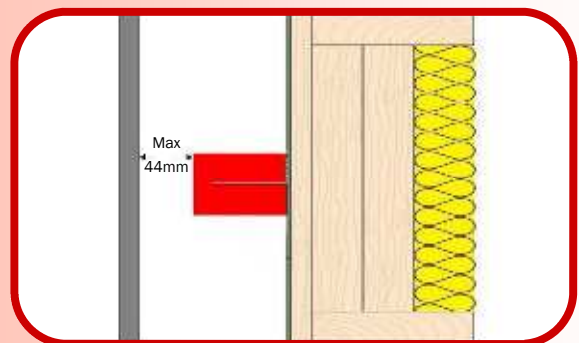
VFB Plus Fixed between Kingspan K15 Rigid Insulation



VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
VFB Plus	Fitted within Kingspan K15	30, 60, 90, 120	60, 90, 120

For clarification on Fire Ratings for different Cavity Sizes please consult TENMAT

VFB Plus Fixed to Combustible Timber Constructions



VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
VFB Plus	Timber Frame	30	30

TENMAT "VFB Plus"

FITTING INSTRUCTIONS

The VFB Plus is a particularly versatile Ventilated Fire Barrier which can be installed in a wide range of construction types. The product is simply mechanically fixed in position to leave up to a maximum 44mm air gap.

Fix VFB Plus with steel fixing brackets supplied using suitable non-combustible fixings

Product must be fixed at max. 500mm centres (max. 250mm centres if being directly screw fixed in position)

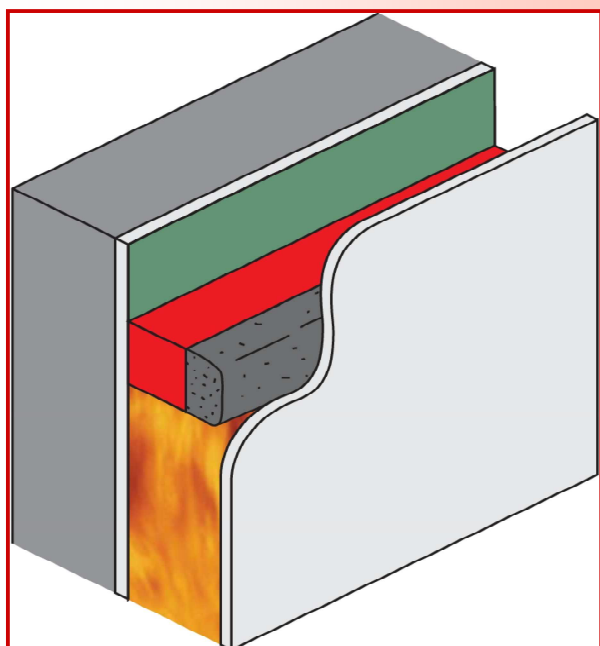
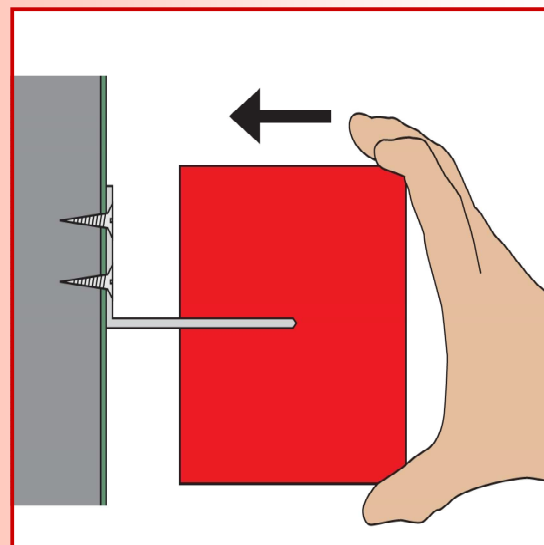
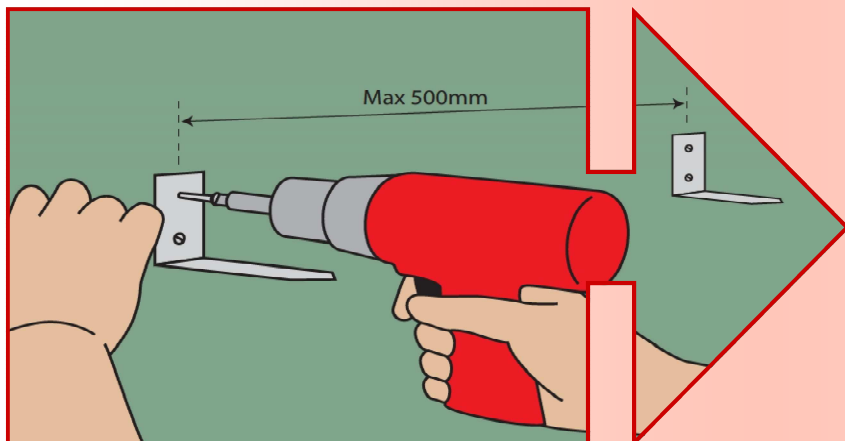
Each section of VFB Plus must be mechanically fixed

The brackets should be fitted at the centre point of the product

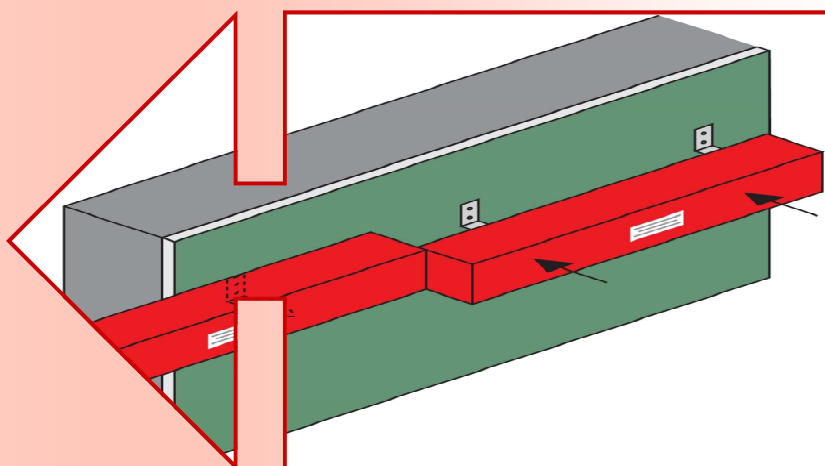
The bracket should not protrude through the rigid intumescent element

Cut the bracket down to size if required

If fixing with screws, see FF102/50 Installation Instructions



Maximum remaining air gap to the back of the cladding panel is 44mm
Ensure Fire Barrier free to expand in a fire situation



Ensure label side is facing out so that intumescent element faces into cavity in case of fire
Adjacent lengths can be tightly butted together

Project Examples:

The Picture Works - Apartment & Penthouses - Nottingham

BBC Media City - Salford Quays - Manchester

Downing Plaza - Mixed Use Development - Newcastle Upon Tyne

Cannington Primary School - Dagenham

Advent 5 - Apartments - Manchester

TENMAT "FF109/125"

The FF109/125 Ventilated Fire Barrier is a cavity fire barrier system for ventilated cavities of up to 125mm which is a fully intumescent component. The product is fire rated for up to 30 minutes and is suitable for use within timber and masonry construction types, enabling the versatile system to be specified with confidence and provide the installer with a simple, time saving and site friendly solution.

Product Description

The FF109/125 Ventilated Fire Barrier is a fully intumescent component encased in red polythene. The FF109/125 can be mechanically fixed both horizontally and vertically within ventilated cavities behind rainscreen or cladding systems to act as a cavity fire barrier.

Product Dimensions

50mm x 50 mm x 1000 mm

Max. Cavity

125mm (this dimension does not include cavity insulation thickness)

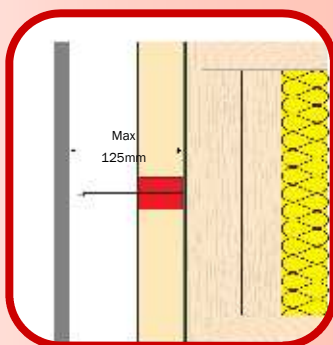
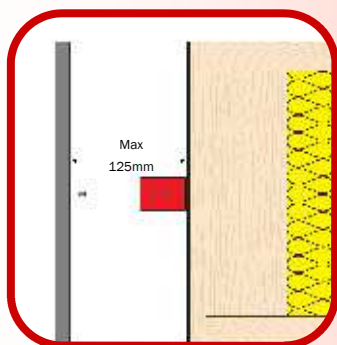


FF109/125 Ventilated Fire Barrier
Installed prior to cladding panels

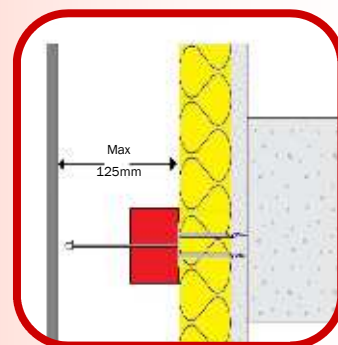
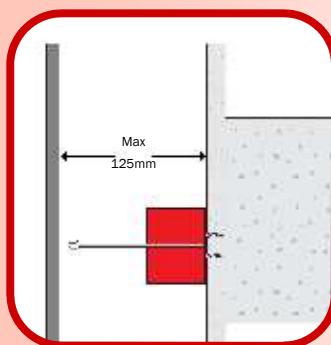
Approved Applications

The FF109/125 Ventilated Fire Barrier has been independently fire tested and assessed by Chiltern International Fire for the applications below, for details on Fire Ratings for specific cavity and construction types please contact TENMAT:

FF109/125 Fixed to Combustible Timber Constructions



FF109/125 Fixed to Non-Combustible Constructions



VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
FF109/125	Timber Frame	30	30

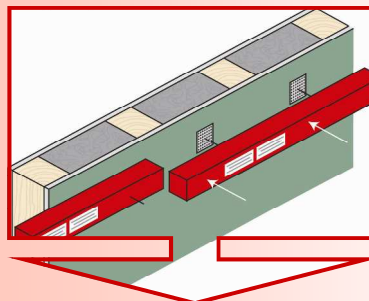
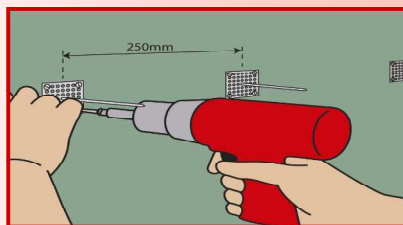
VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
FF109/125	Masonry / Concrete	30	30

FITTING INSTRUCTIONS

Fix FF109/125 with steel fixing spikes supplied using suitable non-combustible fixings

Product must be fixed at max. 250mm centres

Each section of FF109/125 must be



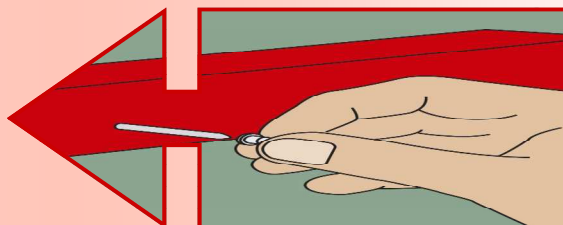
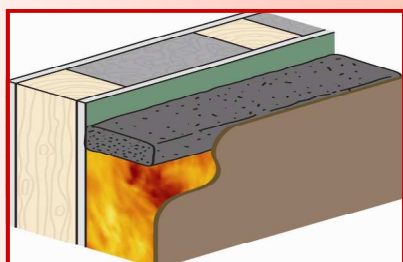
Push the FF109/125 onto fixing spikes centrally through the product

The spikes should be left to protrude into the cavity

Label side MUST face

Maximum remaining air gap to the back of the cladding is 75mm

Ensure Fire Barrier free to expand in a fire situation



Adjacent lengths can be tightly butted together

Do not fold or bend the spikes

Use Plastic End Caps supplied to cover

TENMAT "FF102/25"

The FF102/25 Ventilated Fire Barrier is a high expansion intumescent seal offering industry leading performance as a ventilated cavity fire barrier. The product has undergone extensive fire testing and is suitable for use within the majority of construction types, enabling the versatile system to be specified with confidence and provide the installer with a simple, time saving and site friendly solution.

Product Description

The FF102/25 Ventilated Fire Barrier is a rigid, high expansion intumescent strip encased in aluminium foil. The FF102/25 can be mechanically fixed both horizontally and vertically within ventilated cavities behind rainscreen or cladding systems to act as a cavity fire barrier.

Product Dimensions

4.0 mm x 35 mm x 1000 mm

Max. Cavity

25mm

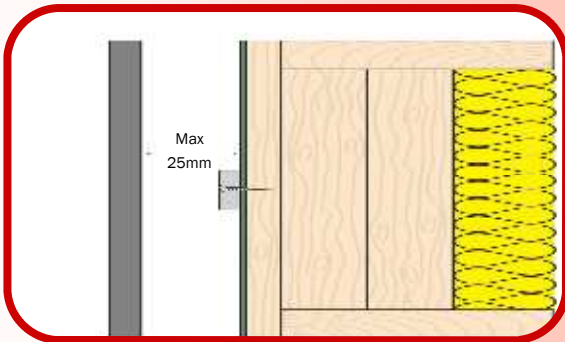


FF102/25 Ventilated Fire Barrier
Installed behind cladding system

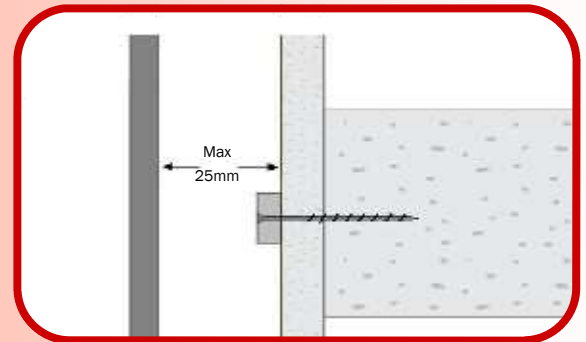
Approved Applications

The FF102/25 Ventilated Fire Barrier has been independently fire tested and assessed by Chiltern International Fire for the applications below, for details on Fire Ratings for specific cavity and construction types please contact TENMAT:

FF102/25 Fixed to Combustible Timber Constructions



FF102/25 Fixed to Non-Combustible Constructions



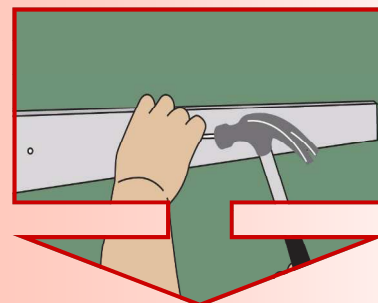
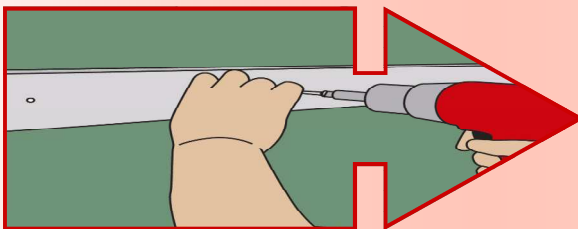
VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
FF102/25	Timber Frame	30	60

VFB Ref.	Assessed Construction Type	Fire Rating Horizontal	Fire Rating Vertical
FF102/25	Masonry / Concrete	120	120

FITTING INSTRUCTIONS

Fix FF102/25 with non-combustible screws (Trumpet / Countersunk type head only)

Product must be fixed at maximum 250mm centres

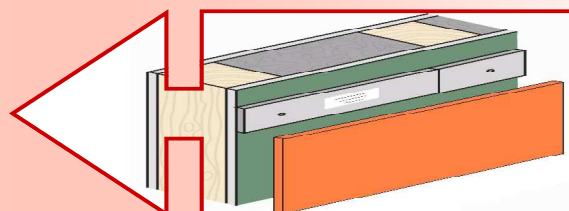
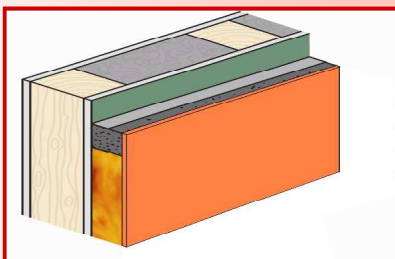


Alternatively the product can be nailed in position with suitable non-combustible nails.

Product must be fixed at maximum 250mm centres

Maximum remaining air gap to the back of the cladding is 21mm

Ensure Fire Barrier free to expand in a fire situation



Fixings must be along centre line of the FF102/25

Ensure label side is facing out into cavity

Adjacent lengths can be tightly butted

TENMAT VENTILATED FIRE BARRIERS

FIRE TEST DATA

TENMAT Ventilated Fire Barriers have been extensively fire for periods ranging from 30 to 120 Minutes.

The products have been tested in Concrete, Blockwork, Timber & Cement Board structures as well as in conjunction with both Mineral Fibre & Rigid Insulation.

Building regulations require an insulation rating as well as integrity, TENMAT's Ventilated Fire Barriers offer up to 1 hour insulation.

A full scale Timber Frame Building with Timber External Cladding has also been fire tested where TENMAT Ventilated Fire Barriers successfully limited fire spread between floor levels.

For specific Fire Ratings, Cavity Sizes and Application type please review the following product specific pages or contact TENMAT.

The performance of the TENMAT Ventilated Fire Barriers has been proven through the following fire tests and assessments.

Independent Fire Testing Body	Test Report Number	Fire Test Duration
Chiltern International Fire	IF04065	30 - 60 Minutes
Chiltern International Fire	IF06005	30 Minutes
Chiltern International Fire	IF06013	30 - 60 Minutes
Chiltern International Fire	IF06040	120 Minutes
Chiltern International Fire	IF08038	90 - 120 Minutes
Chiltern International Fire	IF08052	30 Minutes
Chiltern International Fire	IF09011	30 - 90 Minutes
Chiltern International Fire	IF09032	30 - 90 Minutes
Chiltern International Fire	IF09093	30 -60 Minutes
Chiltern International Fire	IF10048	120 Minutes
Chiltern International Fire	IF10060	120 Minutes
BRE	243-505	30 Minutes
Chiltern International Fire	A06037	Assessment Report 30 Minutes
Chiltern International Fire	A10030	Assessment Report 30 - 120 Minutes

HEALTH & SAFETY

All TENMAT Intumescent and associated Mineral Fibre Materials are not classified as possible carcinogens.

A Material Safety Data Sheet is available upon request.

For additional questions please contact TENMAT using the contact information given below.

ACCELERATED AGEING

TENMAT have carried out In-House and Independent age testing on a range of TENMAT Intumescent Materials where various environmental conditions have shown no significant detrimental effect on material performance.

SHELF LIFE

The shelf life of TENMAT Intumescent Materials is likely to be indefinite in normal storage conditions.

ORDERING

To order or specify TENMAT Ventilated Fire Barriers please:

Specify Overall Cavity Size

Construction Type

Type & Thickness of Insulation within the Cavity (if any)

Fire Rating Required

Linear Metres Required

For more information on the range of
TENMAT Fire & Thermal Protection Products



Issue 09/10