

SIDERISE®

RH Horizontal Open State Cavity Barrier

Siderise® RH range provides a high performance intumescent cavity barrier system for use behind rainscreen cladding. Their use ensures the cladding system will drain any moisture within the cavity whilst maintaining airflow, and in the event of fire will provide an effective hot smoke and fire seal.



KEY FEATURES

- Engineered factory made composite consisting of stonewool, intumescent and aluminium foil
- Over 200 full scale façade tests to BS8414 and NFPA285 with many cladding types
- Market leading fire resistance and smoke sealing properties
- Unique systems providing ability to accommodate façade ventilation
- Simple and quick installation using small mounting brackets (no continuous shelf angles)
- Backed by Trafalgar technical support
- Non-combustible fire testing



APPLICATIONS

- Re-cladding
- New cladding projects
- Horizontal cavity barriers
- Vertical cavity barriers
- Window/door openings in façades
- Fire compartmentation behind façades



POINTS OF DIFFERENCE

- **All components supplied by Trafalgar**
- **Tested** - full scale façade tests in varying cladding types
- **Quick reacting** - Rapidly expanding Intumescent
- **High Performance** - No continuous angle or steel flashing
- **Practicality** - Fast, clean and easy
- **Identification** - Clear labeling



TRADES



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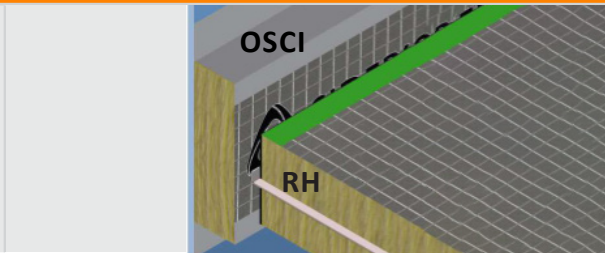
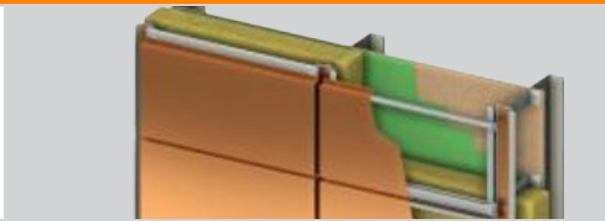


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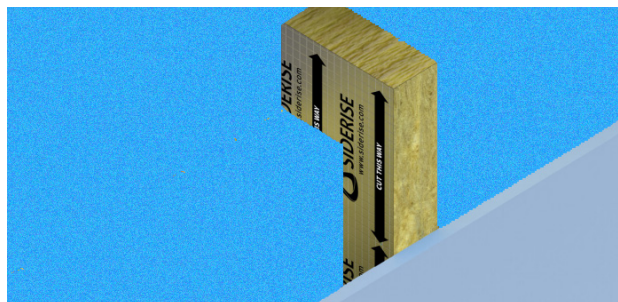
TERMINOLOGY



Below you can find a table of terms that will be used throughout this manual. Please, refer to this table if you need clarification while reading this manual. If you require further information on these terms or products, click the image on the right-hand column to redirect you to the specific product's page on our website.

Siderise® - RV	
Vertical Cavity Barrier	
Siderise® - RH - OSCB	
Horizontal Cavity Barrier incorporating intumescent technology for rainscreen cladding also known as Open State Cavity Barrier (OSCB)	
Siderise® - CWFS	
Curtain Wall Fire Stop- often called slab edge fire stop or fire safing. NOTE: CWFS is used for vertical cavity barriers in rainscreen designs.	
Siderise®- OSCI	
Siderise® Open State Cavity Inserts (OSCI) are designed for the use in cassette panel cladding systems. Siderise® OSCI can be used horizontally or vertically as part of a cladding system. It is applied directly to the internal surface of the cassette panel to simplify the detailing and installation of adjacent cavity barriers and/or to ensure that the ventilation air gap is dimensioned within permissible limits	
Rainscreen Cladding	
A rainscreen is an exterior wall detail where the siding (wall cladding) stands off from the moisture-resistant surface of an air/water barrier applied to the sheathing to create a capillary and to allow drainage and evaporation. The rainscreen is the cladding or siding itself but the term rainscreen implies a system of building.	

BENEFITS



WHAT IS THE PRODUCT?

The [Siderise® RH range](#) of cavity barrier systems brings the world's best and independently proven protection against horizontal and vertical spread of fire behind rainscreen cladding for new buildings and recladding of existing buildings.

Siderise® RH is a factory manufactured foiled stone wool cavity barrier system including a strip of high performance intumescent material which has been engineered specifically to allow ventilation and drainage within the rainscreen cladding construction. In the event of a fire, the intumescent material rapidly expands and seals the ventilation and drainage gap, maintaining the fire and smoke seals in the event of a fire.

The RH range covers all cavity sizes and building configurations including:

- Very thin cavities encountered in remedial cladding upgrades, where the Siderise® RH Strip only can cater for 25mm and 50mm top hat sizes.
- Medium and large cavities up to 425mm wide

The correctly sized cavity barrier should be selected to maintain a ventilation and drainage gap of 25mm or 50mm between the edge of the RH25 where the intumescent material is and the exterior cladding or building envelope.

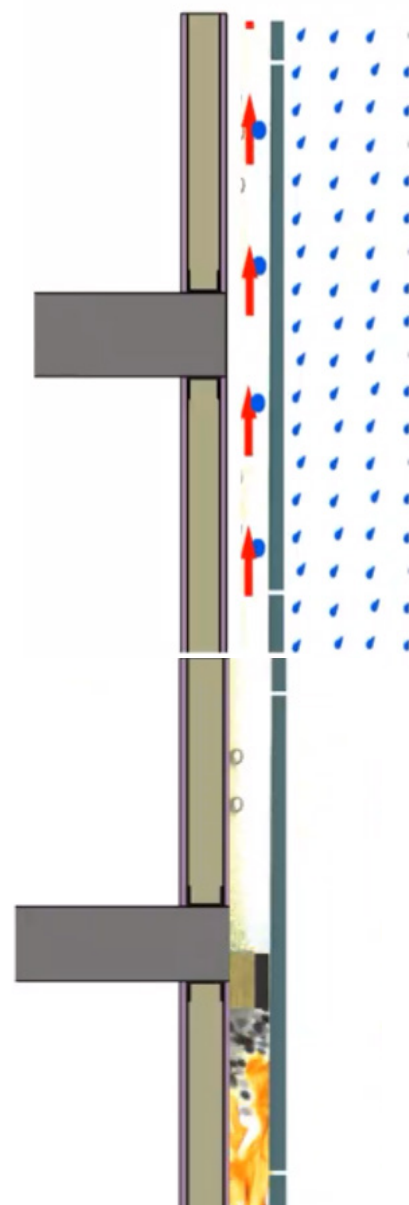
APPLICATIONS EXPANDED

The primary function of Siderise® RH systems are to provide an open state fire rated cavity in normal building operational conditions, providing fire safety whilst allowing ventilation and drainage behind external cladding. Through an open state system, it prevents significant amounts of water or moisture from building up inside the building envelope.

The RH open state cavity barriers incorporate a high performance and proven intumescent material which rapidly expands in the event of a fire, effectively closing or sealing the ventilation and drainage gap previously available in the cavity, thereby limiting fire spread within cavities behind cladding. This clever intumescent technology provides an innovative and vital means to prevent the spread of the fire in an open state which would otherwise increase the potential of catastrophic consequences of a chimney fire effect if there were no cavity barriers.

Good cavity compartmentation against fire will use both horizontal open state cavity barriers and conventional vertical closed stated or friction fit cavity barriers. This design philosophy prevents both vertical spread up the building and horizontal fire spread around the building.

The horizontal open state cavity barriers are designated as [RH](#) whilst the vertical closed state or friction fit cavity barriers are designated as [RV](#) and the latter are the same composition as the Siderise® [CWFS](#) systems.



SYSTEM SELECTOR

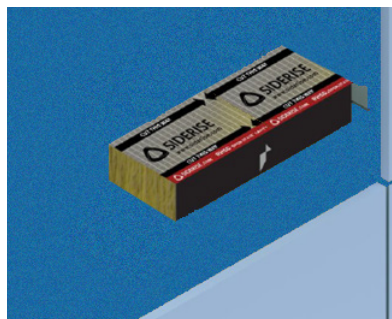
CAVITY BARRIER

ALL CURTAIN WALLS AND/OR RAINSCREEN CLADDING:

Glazing & glass, fiber cement, Hebel®/Walsc AAC panels, brick veneer, solid aluminium, Alpolic etc

HORIZONTAL JOINT

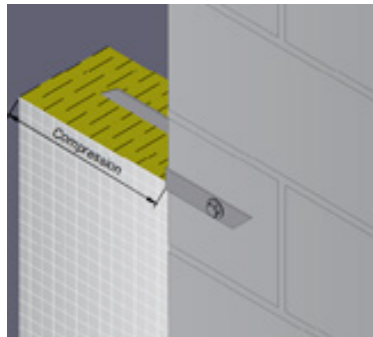
(Cavity between floor and façade)



- Concrete floors: NCC C2.6a
- CLT (timber): NCC C1.13

VERTICAL JOINT

(Cavity between vertical wall and façade)



- Maintain the FRL of the fire compartment walls at the external wall/envelope

NEEDS DRAINAGE AND VENTILATION?

YES - OPEN STATE

Siderise® RH intumescent Cavity Barriers

[LEARN MORE](#)

NO - CLOSED STATE

Siderise® CWFS Cavity Barriers for horizontal or vertical applications. See applications below.

[LEARN MORE](#)



WHY DO WE NEED CAVITY BARRIERS?



The NCC has recently introduced the term cavity barrier for fire protective timber construction (CLT) but there is no current NCC definition for the term cavity barrier elsewhere. For façade systems the NCC requirements are still ambiguous and not in line with international best practice. In Australia both full scale fire tests and **actual fires** have shown that effective cavity barriers make a HUGE difference.

Fire most commonly spreads through cladding in two particular ways including leap frog and the chimney effect. The leap frog effect occurs where fire passes through windows and subsequently spreading to multiple (if not all) levels of the building rapidly. The chimney effect occurs when there is fire in the cavity behind the cladding. If there is not system put in place to seal the cavity when a fire is present, it will rise and spread to the subsequent compartments above. Both scenarios present devastating consequences and hence the need to implement barriers to prevent these situations from occurring.

If the external cladding contributes to the flame spread there is a risk of secondary fire spread to all levels.

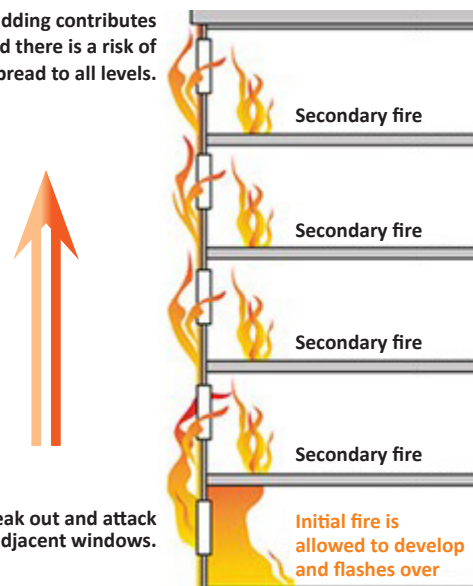


Image: Leap frog effect

OPEN STATE CAVITY BARRIER TESTING

Unfortunately in Australia, the NCC doesn't have any prescriptive DtS pathways for cavity barriers in façade systems but there is Verification code CV3, which calls up AS5113 classification and utilises BS8414 (full scale) system fire testing to help determine a so called 'EW' fire performance criteria for cladding systems. The EW ratings are extremely difficult for the façade system to achieve in the first place and still require fire engineering to comply with the NCC.

Whilst we wait for the codes to mature, we can give confidence to the façade and fire engineering specialists with access to over 200x full scale BS8414 fire tests completed with Siderise® cavity barriers, covering virtually every type of façade system in the Australian market (Solid Al, Fibre Cement, Mitsubishi's Alpolc NC etc.). There is also third-party certification available for Siderise® cavity barriers.

"Chimney effect" of exterior cladding

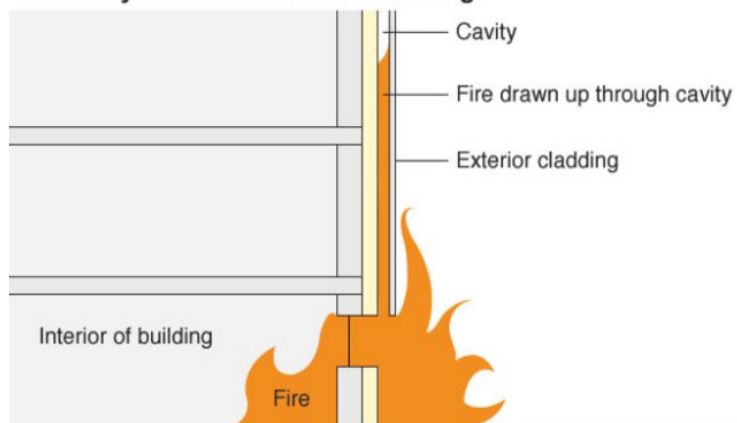


Image: the chimney effect



SPECIFICATIONS



SIDERISE RH 'OPEN STATE' HORIZONTAL CAVITY BARRIERS

Form Supplied	1200mm long, supplied discrete widths to suit cavity size
Colour	Black leading edge with coloured tapes to indicate performance
Finish	Aluminum foil taped to top and bottom surfaces
Density	75 kg/m ³
Thermal Conductivity	$\Lambda_{10} = 0.038 \text{ W/m.K}$ (tested foil to foil)
Air Gap	Up to 25mm maximum air gap
Non-Combustibility	Confirmed via AS 1530.1
Reaction to fire	AS1530 part 3, Rated with 0 ignitability and spread of flame. Heat evolved & smoke developed index of 1
3 rd Party Certification	Yes- Warringtonfire ewcl5 Certificate Number ME 5101
System Testing	Façade system dependent- contact Trafalgar for more information



SIDERISE RV 'CLOSED STATE' VERTICAL CAVITY BARRIERS

Form Supplied	Sheets of 1200 x 1150mm thickness or Pre-cut strips of 1200mm x (cavity + 10% compression) x thickness
Colour	Silver, with Siderise® identification
Finish	Aluminum foil taped to top and bottom surfaces
Density	75 kg/m ³
Thermal Conductivity	$\Lambda_{10} = 0.038 \text{ W/m.K}$ (tested foil to foil)
Air Gap	Nil (vertical cavity barriers do not need to ventilate)
Cavities	20mm to 600mm
Non-Combustibility	Confirmed via AS 1530.1
Reaction to fire	AS1530 part 3, Rated with 0 ignitability and spread of flame. Heat evolved & smoke developed index of 1
3 rd Party Certification	Yes- Warringtonfire ewcl5 Certificate Number CF 563
FRL	AS1530.4:2014-/120/120
System Testing	Façade system dependent- contact Trafalgar for more information
Acoustic Rating	Rw25

Note – Vertical cavity barriers should always be used in conjunction with horizontal cavity barriers. Please refer to [CWFS technical manual](#) for more information on this product skew.



INSTALLATION

SIDERISE[®] RH


1

ENSURE CORRECT GAP



Check the width of the barrier is installed to leave required air gap between the horizontal barrier and the cladding panel. Product is ordered to suit project requirements. Also, it can be trimmed on site along the back edge to suit site dimensions.


2

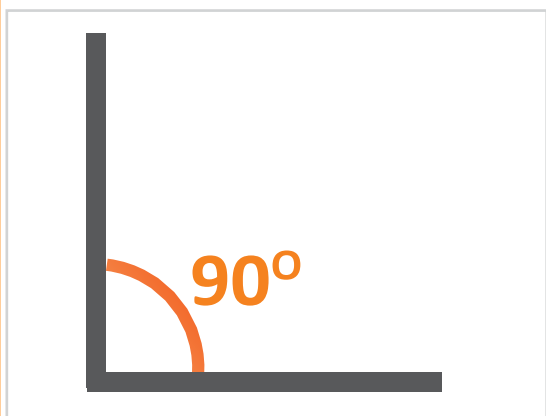
PREPARING CAVITY BARRIER



Slit the barrier with 3 horizontal incisions at max. 400mm centres where 3 brackets will be inserted. This will make it easier to push the bracket through the RH barrier's intumescent layer. Three brackets per 1200mm strip are needed for each RH barrier, manually fold brackets to form L angle. Note that cavities under 75mm, stainless steel screws can be used in lieu of brackets


3

MOUNTING BRACKETS



3 brackets are needed for each RH barrier. Manually fold brackets to 90°. Horizontal RH and vertical CWFS should be ordered to suit the cavity size as measured on site.


4

PREPARING CAVITY BARRIER FOR BRACKETS



With a sharp knife make 3 horizontal incisions in the reverse of the barrier at max. 400mm centres so that they are aligned with the slits made on the front face. Slit the cavity barrier with three horizontal incisions at max. 400mm centres where three brackets will be inserted. This will make it easier to push the bracket through the RH Barrier's intumescent later.

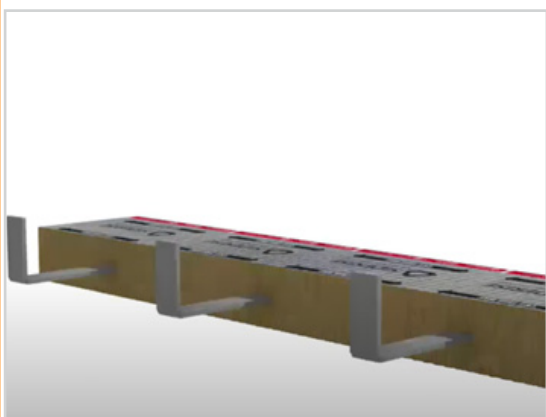
INSTALLATION

SIDERISE[®] RH



5

INSERT & TRIM

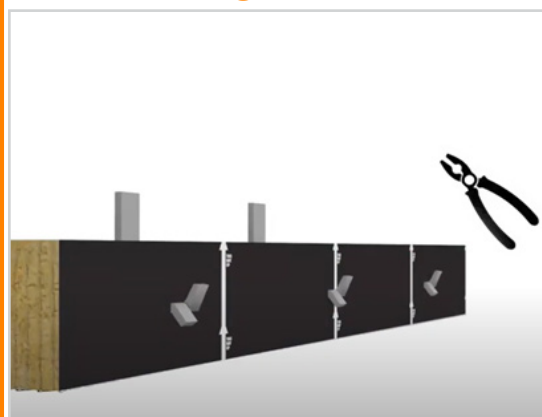


Insert brackets into the RH barrier, and if needed trim the excess to 10-20mm.



6

BEND BRACKET



Fold the split end of the bracket half upwards and half downwards using the pliers.



7

AIR GAP



Check that the width of the barrier is installed to leave required air gap between the horizontal barrier and the cladding panel.



8

MECHANICALLY FIX BRACKET



Mechanically fix brackets to the wall using Min 7.5 x 50mm steel masonry anchor. Ensure the barrier is tightly abutted to the barriers next to it.

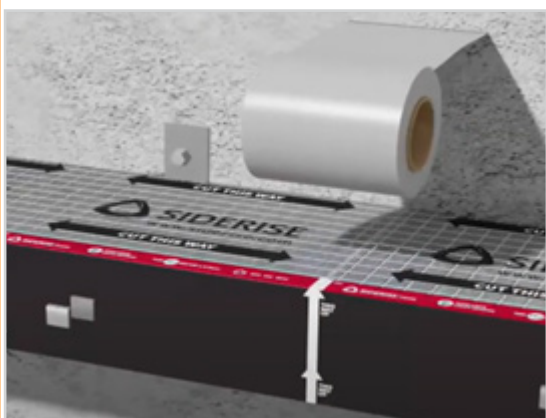
INSTALLATION

SIDERISE® RH



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SEAL BUTT JOINTS

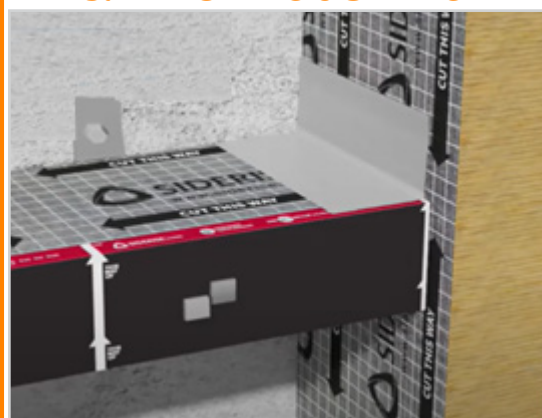


Seal butt joints between adjacent 1200mm lengths with foil tape.



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RH & RV CWFS JOINTS

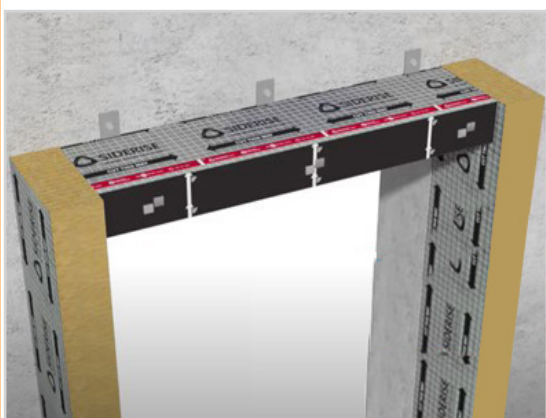


Where horizontal RH & vertical CWFS barriers meet, ensure they are tightly abutted. Seal joints with foil tape.



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CORNER JOINTS

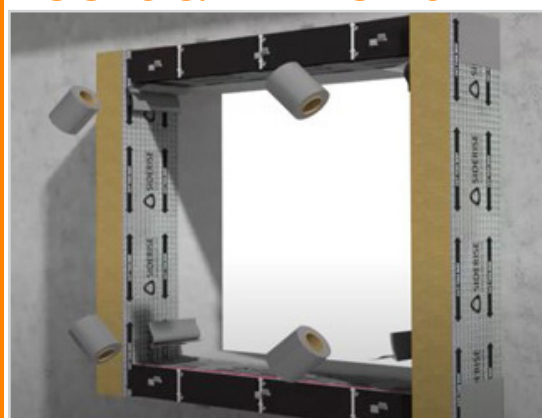


Carefully cut barrier to ensure mitred edges and tightly abutted and ensuring the continuity of intumescent on leading edge.



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DOORS & WINDOWS

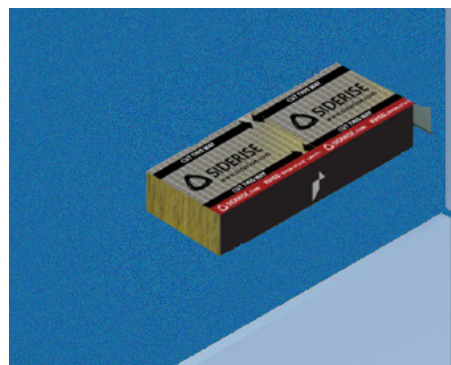


Set the horizontal RH above apertures, tightly abutted to the vertical CWFS barriers. Every internal and external joint where the vertical and horizontal barriers meet, must be sealed with foil tape.



SYSTEM RANGE

SIDERISE® RH



HORIZONTAL OPEN STATE CAVITY BARRIERS- RH 25

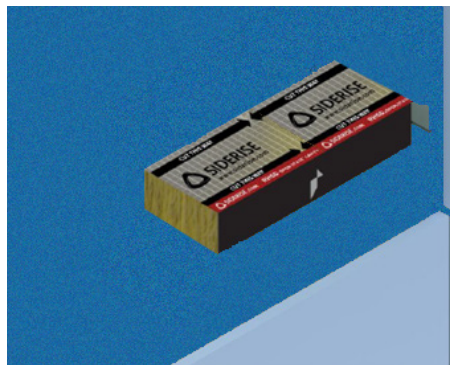
Item Number	Bracket Code	Cavity (void) Size	Siderise® RH System	Product Dimensions	Length
SIDERISE-RH25-STRIP	Screw & washer Fixings	0-25mm	Intumescent strip only	75x1.6mm	1200mm
SIDERISE-RH25-50		25-50mm	Foiled stonewool + intumescent strip	75x25mm	1200mm
SIDERISE-RH25-80	SIDERISE-BRACKET-RH25-SS-124-132 (350mm stainless steel to suit RH25 up to 132mm)	55-80mm		75x55mm	1200mm
SIDERISE-RH25-102		50-102mm		75x77mm	1200mm
SIDERISE-RH25-132		107-132mm		75x107mm	1200mm
SIDERISE-RH25-263	SIDERISE-BRACKET-RH25-SS-124-132 (450mm stainless steel to suit RH25 up to 132mm)	238-263mm		75x238mm	1200mm

HORIZONTAL OPEN STATE CAVITY BARRIERS- RH 50

Item Number	Bracket Code	Cavity (void) Size	Siderise® RH System	Product Dimensions	Length
SIDERISE-RH50-STRIP	Screw & washer Fixings	0-50mm	Intumescent strip only	40x4mm	1200mm
SIDERISE-RH50-102	SIDERISE-BRACKET-RH25-SS-124-132 (350mm stainless steel to suit RH25 up to 132mm)	52-102mm	Foiled stonewool + intumescent strip	90x52mm	1200mm
SIDERISE-RH50-132		82-132mm		90x82mm	1200mm
SIDERISE-RH50-220	SIDERISE-BRACKET-RH25-SS-124-132 (450mm stainless steel to suit RH25 up to 132mm)	170-220mm		90x170mm	1200mm

SYSTEM RANGE

SIDERISE® RV



VERTICAL CLOSED STATE CAVITY BARRIERS



Item Number	Description
SIDERISE-RV-120	Siderise® Curtain Wall FireStop (CWFS) full board to be cut down on site - 1200 length x 1150 width x 120mm thickness
SIDERISE-RV-90	Siderise® Curtain Wall FireStop (CWFS) full board to be cut down on site - 1200 length x 1150 width x 90mm thickness
SIDERISE-RV-75	Siderise® Curtain Wall FireStop (CWFS) - full board to be cut down on site - 1200 length x 1150 width x 75mm thickness
SIDERISE-BRACKET-0-150-RV	Siderise® CWFS/RV metal bracket to suit openings 0-150mm
SIDERISE-BRACKET-151-240-RV	Siderise® CWFS/RV metal bracket to suit openings 151-240mm

FAQ

Q What are so called “cavity barriers” why are they needed?

A Cavity barriers are a fire and smoke containment system used to stop the spread of fire and smoke through cavities that are formed behind non-combustible façade panels.

Q Are your cavity barriers tested locally to Australian standards?

A For reaction to fire yes, the RH has testing to AS 1530.1 & AS1530.3. Full scale system testing is façade dependent. Contact Trafalgar Fire for more information.

Q What size are your cavity barriers

A The RH comes in discrete sizes to suit a range of cavities, supplied in lengths of 1200mm. Refer to system range page.

Q How is RH installed?

A Simple mounting brackets at 400mm centres, and foil tape at all joints.

Q Why do I need to install vertical cavity barriers?

A To prevent spread of fire horizontally around the building, and should always be used in conjunction with horizontal cavity barriers.

SOCIAL MEDIA



Linked 

 YouTube