Cavity Fire Closers

A barrier that prevents fire escaping from or entering into the external wall cavity around openings.

AIM ACOUSTIC AND INSULATION MANUFACTURING

Technical Guide

PRODUCT

The AIM Cavity Fire Closers have been designed to close cavities for fire, thermal and acoustic purposes; it reduces cold bridging when closing cavities at door and window frames.

APPLICATIONS

The primary use of a cavity fire closer is to stop fire escaping from or entering into the external wall cavity around openings in the building envelope. This helps ensure that the detailing around the opening provides a protected means of escape from the building in the event of a fire.

AIM Cavity Fire Closers can be used around openings such as a window or door. They can also be used as a cavity barrier within extensive cavities where the cavity, within the wall structure, is in excess of 20m long.

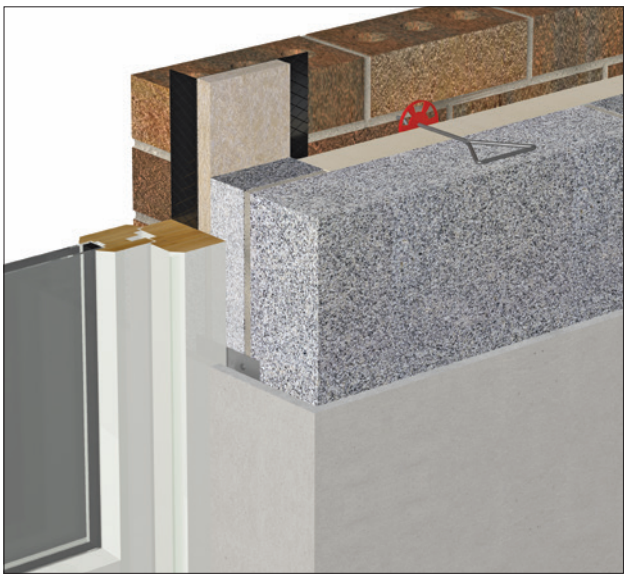
FEATURES

- A strip of Rockwool Stone Wool insulation laminated to a Polythene DPC
- DPC Polythene conforming to BS 6515

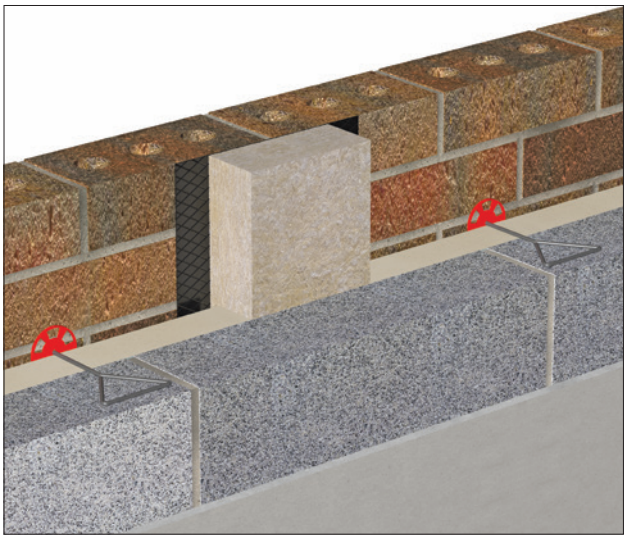
BENEFITS

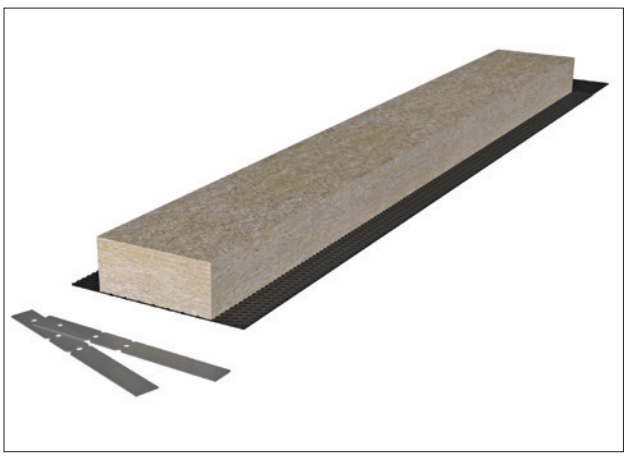
- Closes cavities up to 100mm thick*
- Prevents cold bridging
- Close cavities for fire, thermal and acoustic purposes
- Helps ensure that openings in cavity walls do not encourage the spread of fire into or out of the cavity (for up to two hours)
- Reduces cold bridging when closing cavities at door and window frames
- Test evidence supports the use within a wider range of substrates compared to other products (masonry, timber frame and through wall constructions).

* For cavities in excess of 100mm, please use the AIM Wall Cavity Barrier complete with Polythene DPC.



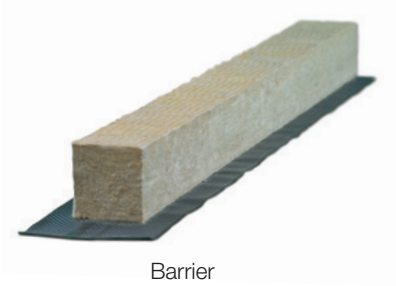
Example product installation schematic using materials by others





Contact the AIM Technical Sales team: 01293 582400

COMPONENTS available from AIM



Barrier

Fixing Clip
Two fixing clips per length of barrier

Acrylic fire rated intumescent mastic
(optional extra)

PHYSICAL INFORMATION

- Thermal Conductivity: λ = 0.034W/mK
- Rockwool stone wool insulation
- Length: 1200mm
- Common widths: 100, 150, 190mm
- Thickness: 20, 50, 65, 75, 100mm – bespoke sizes available on request.
- DPC Length: 1300mm
- DPC Side Overlap: 40mm
- DPC End Overlap: 100mm
- Non-standard sizes and DPC offsets are available.
- Cavity Closers are for use in cavities up to 100mm (for 100mm+ use the AIM Wall Cavity Barrier with a DPC)
- AIM Cavity Fire Closers are installed under compression (5% compression required) and with fixing clips

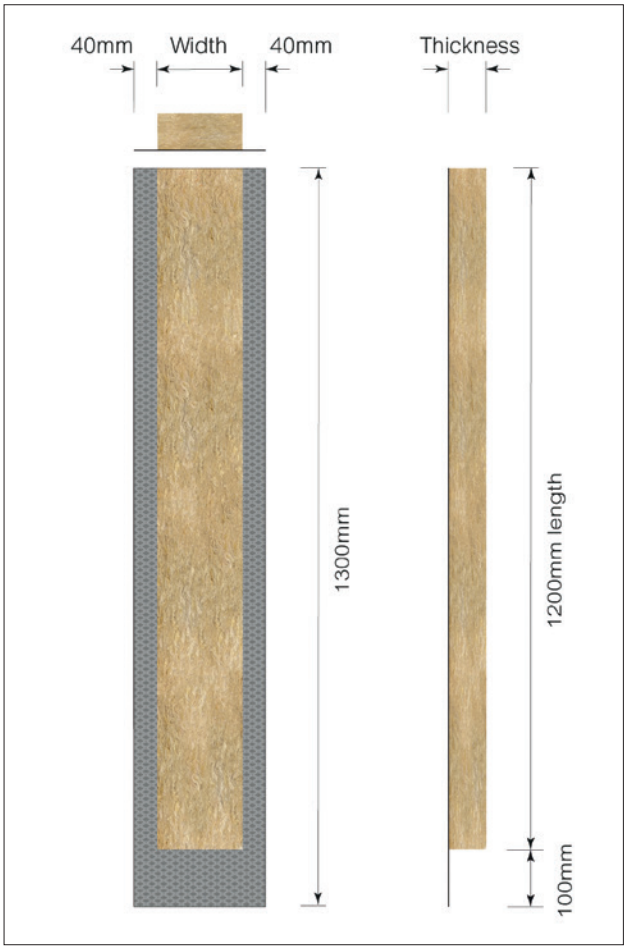
PACKAGING

AIM Cavity Fire Closers are generally packed into cartons and stretch wrapped onto wooden pallets with a showerproof polythene pallet cover and high quality edge protectors

AS STANDARD

AIM Cavity Fire Closer is supplied pre-cut in 1200mm lengths, widths and thicknesses vary depending on the fire rating required. The product supplied is as required to fill the void.

The product is supplied pre-cut to suit the cavity size and complete with the required fixing clips.



TECHNICAL INFORMATION

The AIM Cavity Closer system has been designed to close a variety of cavities for fire, thermal and acoustic purposes; it reduces cold bridging when closing cavities at door and window frames. The AIM Cavity Closer will accommodate movement in the building and allow for any irregularities in the cavity.

Approved Document B, which states, “A cavity barrier should, wherever possible, be tightly fitted to a rigid construction and mechanically fixed into position” (Clause 5.22 Volume 1: Dwellings and clause 9.14 Volume 2: Buildings other than dwellings).

Fire Performance

The product has been tested to BS EN 1366-4 to provide up to 120 minutes integrity and insulation.

The AIM Cavity Fire Closer has been tested vertically and horizontally to BS EN 1366-4

Fire Rating

Cavity width 100mm

Application	Integrity / Insulation
Masonry to Masonry	120/120 minutes
Masonry to Softwood	60/30 minutes
Masonry to OSB	60/60 minutes
Masonry to CP Board / SFS	60/60 minutes

Fire rating (integrity / insulation) - all horizontal and vertical use.

DPC

The DPC conforms to BS 6515

Acoustic Performance

AIM Cavity Closer may be used to prevent the passage of flanking sound within masonry cavities. It complies with Approved Document E to the Building Regulations and provides at least 14db R_W (75mm wide) 18db R_W (100mm) 23db R_W (140mm). It also helps in achieving requirements of Robust Details. Test conducted in accordance with BS EN ISO 10140-2.

TEST REPORTS

WF 432745 = Masonry

WF 399452 = Timber & SFS

WF 414885 = Timber & SFS

Z11012 – Acoustic Performance – Testing on mineral fibre insulation. To BS EN ISO 10140-2.

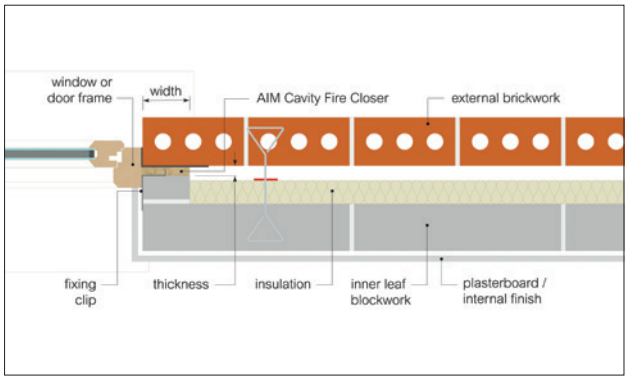
NBS Source PARTNER

AIM are partners with NBS. Our products can be found on NBS Source and have been authored to NBS specification standards and have both CAWS and Uniclass 2015 classifications.

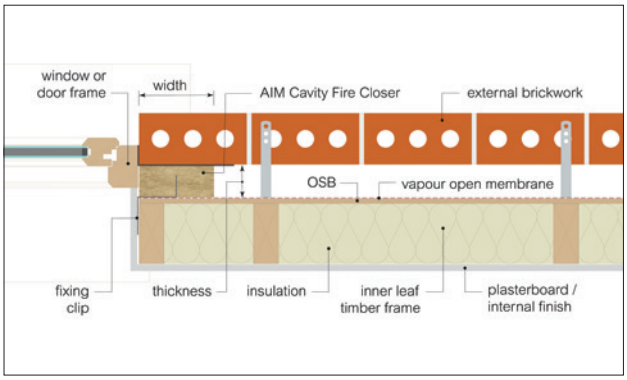
APPLICATION DETAILS

AIM CAVITY FIRE CLOSER - CLOSING AN OPENING IN A CAVITY WALL

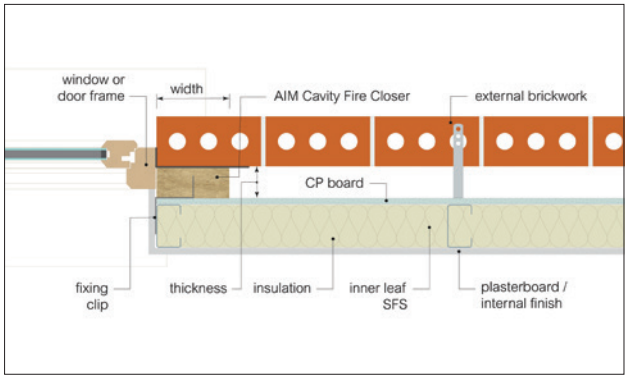
Masonry construction



Timber Frame to Masonry outer leaf

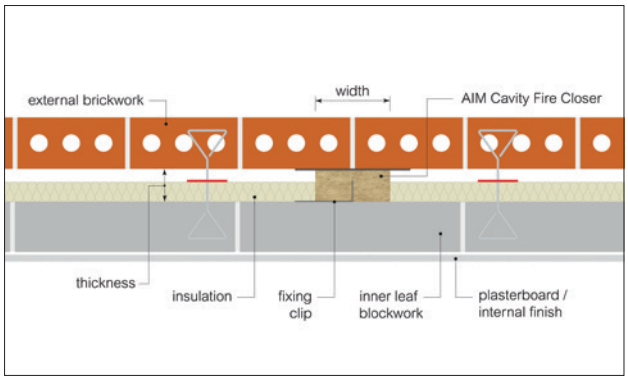


SFS to Masonry outer leaf

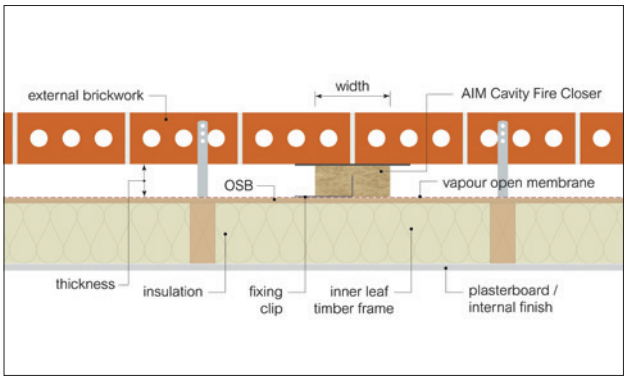


AIM CAVITY FIRE CLOSER - FULLY CLOSING A CAVITY WALL

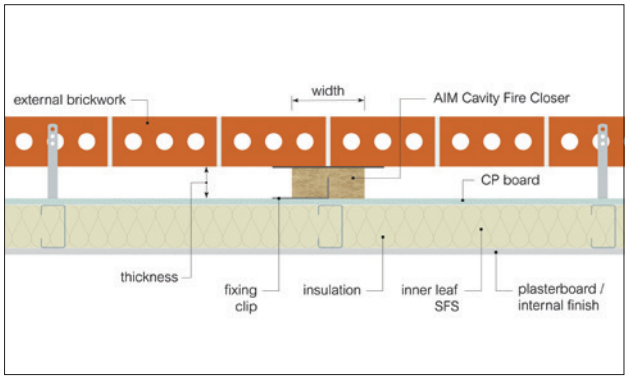
Masonry construction



Timber Frame to Masonry outer leaf



SFS to Masonry outer leaf



INSTALLATION GUIDELINES

The AIM Cavity Closer should be fitted under compression, in conjunction with fixing clips and with the DPC against the inside face of the outer wall, one 40mm DPC overlap extending into the cavity, and the other overlap protruding from the cavity. This protruding lap should be folded against the side of the outer brickwork behind the window or door frame.

Where more than one AIM Cavity Closer is required, the Closers should be fitted with 100mm DPC overlap at the base. The next Closer should be installed to give a tight butt joint of the mineral wool insulation. The top of vertical cavity closers should be protected by a cavity tray or sealed to the underside of the lintel.

Items required for installation

PPE abrasion resistant gloves

PPE impact resistant goggles

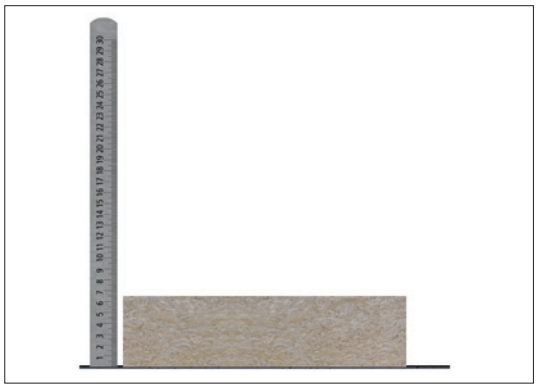
RPE dust mask

Drill

Screwdriver

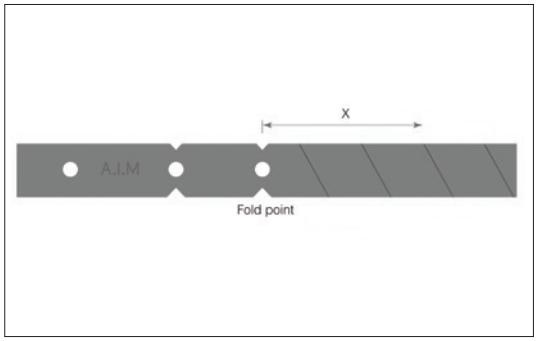
Tape measure

1 Check that the Cavity Closer is the correct size for the cavity. The Closer should be 5% larger than the cavity.

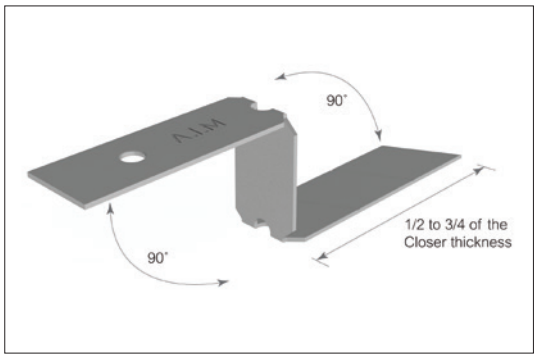


2 Snap the fixing clips to the correct length.

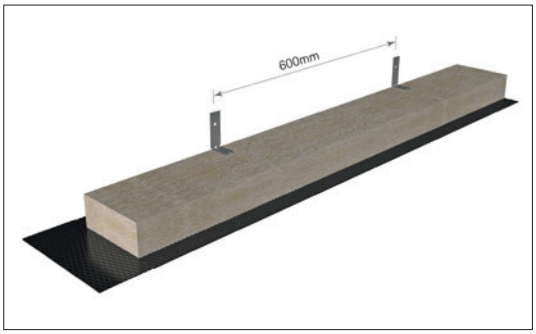
Dimension ‘X’ should be 50% to 75% of the Closer’s thickness



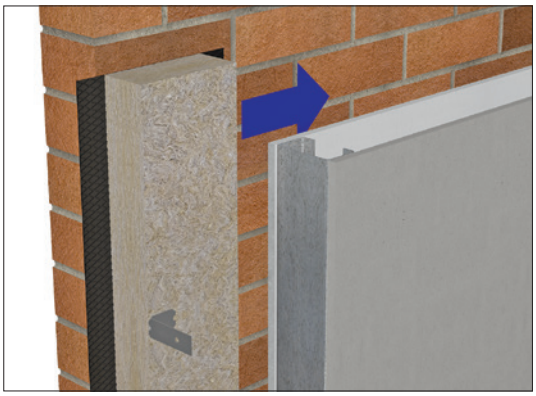
3 Typical installations will require the clips to be formed to a Z shape.



4 Insert the fixing clips into the barrier approximately 300mm from each end at maximum 600mm centres.



5 Fit the Cavity Closer into the cavity. Ensure the DPC tail points downwards.



6 Secure the fixing clips to the internal substrate using a non-combustible and corrosion resistant fixing.

7 When installing more than one Closer, please ensure that the DPC tail overlaps the lower closer to ensure no moisture can reach the Closer.

Always ensure joints are tight and secure.

8 Check for any gaps between the Closer and substrates.

All gaps should be fully sealed with the fire rated intumescent mastic.

STORAGE

Products are supplied in cartons on wooden pallets with edge protection and a shower proof hood. Orders can be supplied without cartons on request.

Products should be stored away from the elements until ready for installation.

MAINTENANCE

This product does not contain moving parts and, if undisturbed in the cavity, requires no routine inspections or maintenance.

It is recommended that the integrity of the barrier is rechecked if further works are carried out that may have involved disturbing the product.

DURABILITY

AIM fire barriers are chemically inert, will not sustain vermin and do not encourage the growth of rot, fungi, moulds or bacteria. They are compatible with all normal building materials. Rockwool stone wool has been proven in service for over 60 years, in a wide range of climates and degrees of exposure. It will generally perform effectively for the lifetime of the building, plant or structure.

HEALTH & SAFETY

Insulation products supplied by AIM are considered to be inert articles and as such are exempt from requirements to provide a Safety Data Sheet.

A Product Safety and Handling Information Sheet is available upon request.

ENVIRONMENT

Global warming potential = zero

For product recycling please contact: Rockwool
T: 01656 868400 E: recycling@rockwool.co.uk

ORDERING

To order this product the following information will be required:

- Cavity depth in mm
- Approximate quantity
- Delivery location

All AIM fire barriers are made to order. Products are typically supplied in seven to ten working days but lead times may vary depending on existing factory commitments.

There is no minimum order quantity or value although small orders may attract transport surcharges.

TECHNICAL SUPPORT

Technical Support is available from our experienced sales team on 01293 582 400 or sales@aimlimited.co.uk

ABOUT AIM

AIM are a quality insulation convertor with over 30 years experience in the design, testing & manufacturing of high quality fire barriers for customers worldwide.

AIM are members of

AIM working in partnership with

AIM
ACOUSTIC AND INSULATION MANUFACTURING

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