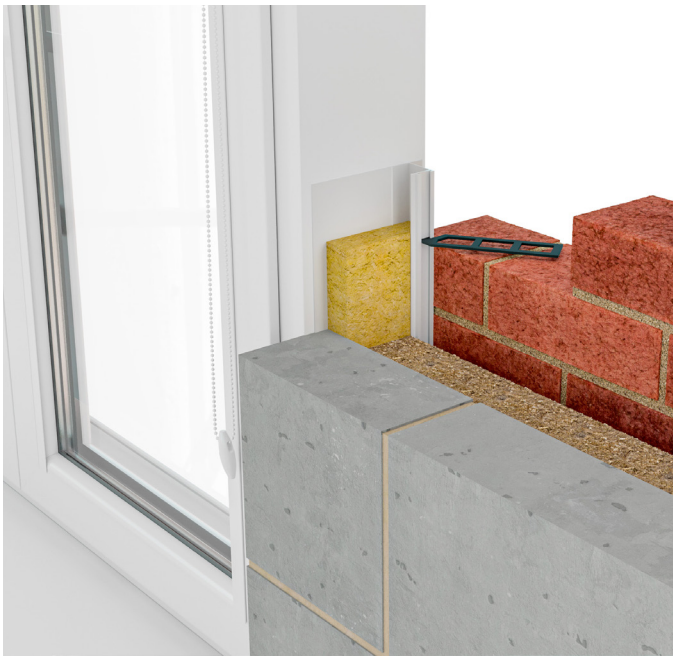
V5.7 21.03.2025

ECO-CLOSER

Fire rated cavity closer for window and door reveals

- Up to 60 minutes fire integrity
- Closes cavity around window and door reveals
- Prevents cold bridging
- Integral DPC helps eliminate moisture, mould and staining from around windows and doors
- Insulated with non-combustible rockfibre
- Eco-Closer cavity widths: 50 - 150mm (see Eco-Closer Plus cavity widths: 151 - 300mm)
- Single flange available for check reveal details
- Third-party certificated by IFC



NBS Source PARTNER

IFC Certification

ECO-CLOSER

Application

ARC Eco-Closer closes the cavity around window and door openings in masonry walls, providing up to 60 minutes fire integrity. The rigid PVCu profile is insulated with non-combustible rockfibre mineral wool which provides fire and thermal properties.

Cold Bridging

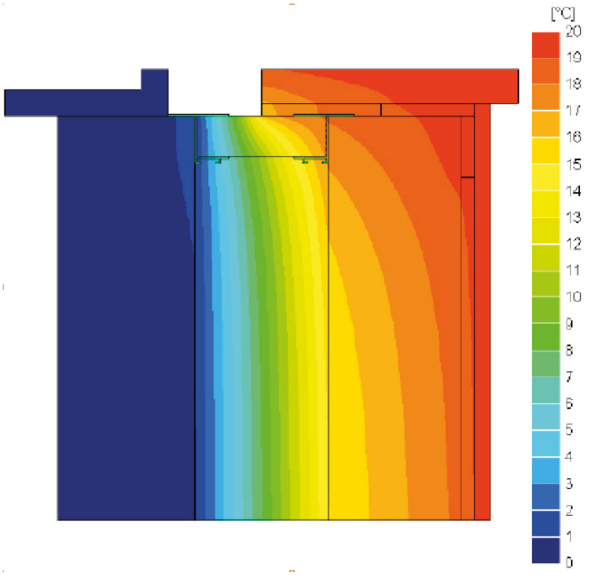
Cold bridges are sections through the fabric of significantly lower thermal resistance than the rest of the construction. It is most commonly found around window and door openings and usually shows itself through so called pattern staining. A cold bridge through an external frame attracts moisture in the form of surface condensation which attracts dirt and dust. This surface condensation can also lead to mould growth and damage to internal plaster and paint work.

The Solution

ARC Eco-Closer will significantly reduce the risk of cold bridging around window and door openings when fitted in accordance with the manufacturer's recommendations.

ARC cavity closers have been assessed using software that complies with the Standard for Thermal Bridge Calculations BS EN ISO 10211-2007. The conventions for calculations specified in the BRE document BR497 were also followed. The results are compared with the criteria set in the BRE Information Paper IP1/06 'Assessing the Effects of Thermal Bridging at Junctions and Around Openings' which is referenced in Building Regulations as shown below.

Detail	Default F-value	F-value with ARC Eco-Closer	Default Ψ-value	Ψ-value with ARC Eco-Closer
Jamb (100mm cavity)	0.75	0.924	0.05	0.016
Sill (100mm cavity)	0.75	0.944	0.04	0.011



Left: Temperature distribution illustrating heat loss at a window opening where ARC Eco-Closer is fitted.

Installation

The person installing the ARC Eco-Closer should first familiar themselves with this datasheet, ensuring the correct product is being fitted into the cavity.

The ARC Eco-Closer is easily installed, either as the brick and block work progresses, or in to pre-formed openings.

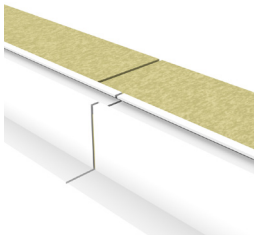
Simply cut the jamb profile to the height of the window or door opening plus 75mm to allow the bottom edges to drop into the cavity below the sill. Once the jamb sections are installed, measure the required width for the sill section and cut a length to butt tightly to the jamb sections. If a longer length than 2.4m is required, see jointing method to the right.

Option 1 (First Fix): As above and build in the jamb sections as the brickwork progresses using ARC Brick Ties* (1 every 225mm). Ties are not required on the sill section, simply hold in place with an adhesive or nail to block. *ARC Brick Ties are optional and are sold separately.

Option 2 (Second Fix): Cut sections to required size as above and simply push fit once the openings are formed. Sections can be secured by nailing to block or using a suitable adhesive.

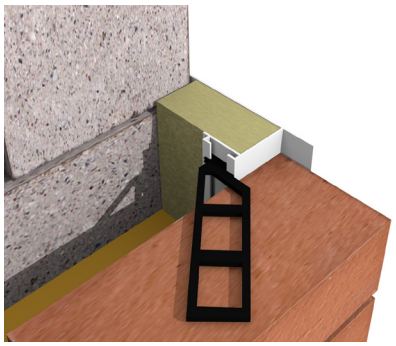
- No gaps should exist either between the cavity closer and construction, or between jointed sections
- The cavity closer must fill the cavity between brick and block, with cavity insulation cut back
- The PVC up-stand should be fitted against the external leaf to deflect any moisture penetration through the brick
- A plasterboard sill should be mechanically fitted over the cavity closer
- Care should be taken when handling the product to ensure that the mineral wool isn't damaged.

Jointing Method



Where a longer length than the supplied 2.4m is required, the following jointing method should be used. Using an appropriate saw, remove 150mm of the plastic profile only, then push the exposed insulation into the next length of plastic profile.

Right: ARC Eco-Closer installed using ARC Brick Ties



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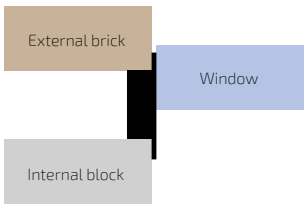
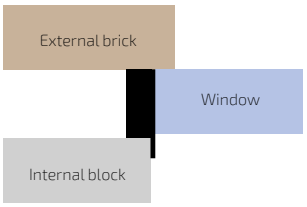
Check Reveal

ARC Eco-Closer is available with a single flange to suit check reveal details where the window is set back behind the external brickwork.

Standard detail



Check reveal detail



Key Stats

Length supplied	2.4m
Third-party certification	IFC certificate number: IFCC 1729
Insulation	Non-combustible rockfibre mineral wool
Thermal conductivity	0.035W/mK
Fire Resistance	Up to 60 minutes
Insulation performance	15 minutes
Test standard	EN1366-4
Construction type	Masonry
Orientation	Vertical or horizontal
Integral DPC	Yes
Mass	Data available on request

Product & Packaging Specification

Product Code	Maximum Cavity Width	Dimensions	Masonry Fire Performance		Lengths Per Pack	Packs Per Pallet
			Integrity	Insulation		
EC50	Up to 50mm	50 x 2400mm	60 mins	15 mins	8	30
EC65	Up to 65mm	65 x 2400mm	60 mins	15 mins	8	30
EC75	Up to 75mm	75 x 2400mm	60 mins	15 mins	8	30
EC85	Up to 85mm	85 x 2400mm	60 mins	15 mins	8	30
EC90	Up to 90mm	90 x 2400mm	60 mins	15 mins	8	30
EC95	Up to 95mm	95 x 2400mm	60 mins	15 mins	8	30
EC100	Up to 100mm	100 x 2400mm	60 mins	15 mins	8	30
EC110	Up to 110mm	110 x 2400mm	60 mins	15 mins	6	30
EC125	Up to 125mm	125 x 2400mm	60 mins	15 mins	6	30
EC135	Up to 135mm	135 x 2400mm	60 mins	15 mins	6	30
EC150	Up to 150mm	150 x 2400mm	60 mins	15 mins	6	30
EC50CR - EC150CR	50 - 150mm	As above but single flange for check reveal	As above	As above	As above	As above

Product Code	Description	Pack Quantity
BRICKTIES	ARC Brick Ties to suit ARC Eco-Closer	100

All performance claims can be evidenced on IFC certificate IFCC 1729.

Can't find your size?

ARC Eco-Closer can be manufactured to suit any cavity width between 50 and 150mm. **Call our technical experts on 0113 252 9428 to discuss your requirements.**

Larger cavity?

ARC Eco-Closer Plus is a fire rated cavity closer available to fit cavities up to 300mm. Visit our website for more details.

Storage and Packaging

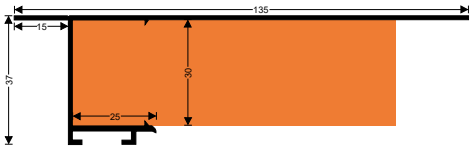
ARC Eco-Closer is supplied in polythene packs which are designed for transporting and protecting the products. It is not recommended that the packs are stored in direct sunlight. When storing the barriers for longer periods of time it is recommended that the product should be stored indoors, or under cover especially during inclement weather or overnight.

ECO-CLOSER

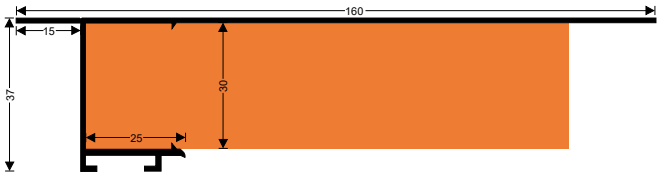
Profile Variations

ARC Eco-Closer is supplied with different plastic profiles to suit various cavity widths as illustrated below.

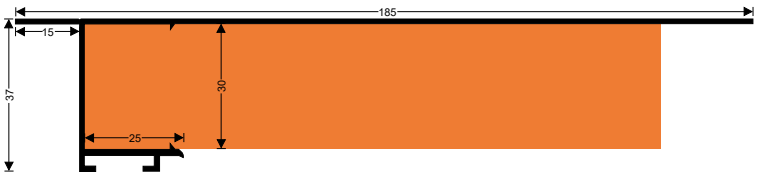
50 - 100mm cavity
135mm profile



105 - 125mm cavity
160mm profile



130 - 150mm cavity
185mm profile



Fire Properties

ARC Eco-Closer has been fire tested in accordance with the principles given in EN1366-4, achieving up to 60 minutes fire integrity within a masonry construction.

Eco-Closer is certificated by IFC Certification, a third-party accreditation scheme. IFC's product certifications are designed to give confidence to architects, specifiers, contractors, users, occupiers and owners that products have been thoroughly and independently evaluated and will continue to be manufactured to the same specification as originally tested.

IFC certificate number: IFCC 1729

Standards

ARC Eco-Closer is manufactured using rockfibre mineral wool which achieves a fire classification of Euroclass A1 as defined in BS EN 13501-1, and conforms to BS EN 13162.

ARC's rockfibre mineral wool insulation has a thermal conductivity of 0.035W/mK.

Environment

No CFCs or HCFCs are involved in the manufacturing process of ARC's rockfibre mineral wool insulation.

ARC Eco-Closer has a Green Guide rating of A+.

This product can be disposed of via landfill; preferably, the product should be returned to ARC Building Solutions so that the waste can be separated and recycled accordingly.

Non-Standard Applications

Where usage falls outside of the certificated scope, for example when used with external cladding, or with an internal metal frame system, performance of the fire barrier will depend heavily upon the structural integrity and fire performance of the surrounding construction.

Specifiers must ensure all construction elements that make up part of the internal or external leaf of the wall, including support systems, are suitable for use with a cavity fire barrier for the length of fire integrity and insulation required. Particular attention must be paid to any possible deflection or distortion which could cause gaps to form between the construction and any fire barrier installed.

In the event of a fire, ARC Building Solutions Ltd cannot accept liability for failure where usage is outside of the standard application, including but not limited to, where deflection or distortion has allowed gaps to form around the barrier, or where the barrier is not fitted in accordance with the manufacturer's guidelines.

Health and Safety

ARC Building Solutions has an approved Health and Safety Policy and is committed to working and supplying products safely. ARC's rockfibre mineral wool is not classed as a possible human carcinogen. We have assessed products as required by Substances Hazardous to Health Regulations (COSHH). An ARC Material Safety Datasheet (MSDS) is available upon request.

Certificate Number 19310
ISO 9001, ISO 14001
ISO 45001