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arc[®]
Protecting People.
Protecting Places.

ARC 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



Third Party
Certificated



Excellent thermal
properties



Exceeds Performance
Requirements



Tackles Damp
and Mould



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.

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.

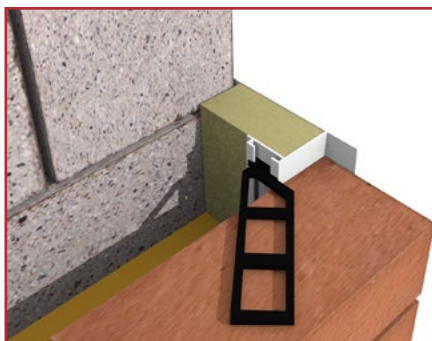
The ARC Eco-Closer is easily installed, either as the brick and block work progresses, or in to pre-formed openings.

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.

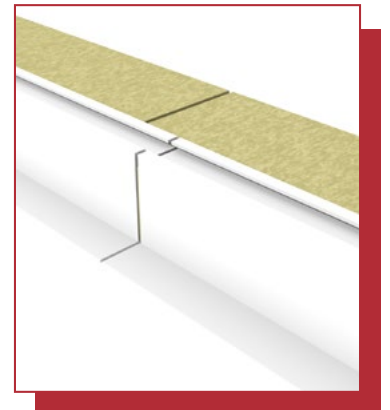
ARC Eco-Closer installed using ARC Brick Ties



- » 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.



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 rating	Up to 60 minutes
Insulation performance	15 minutes
Test standard	EN 1366-4:2006+A1:2010
Cavity widths available	Masonry
Integral DPC	Yes
Mass	Data available on request

Fire Properties

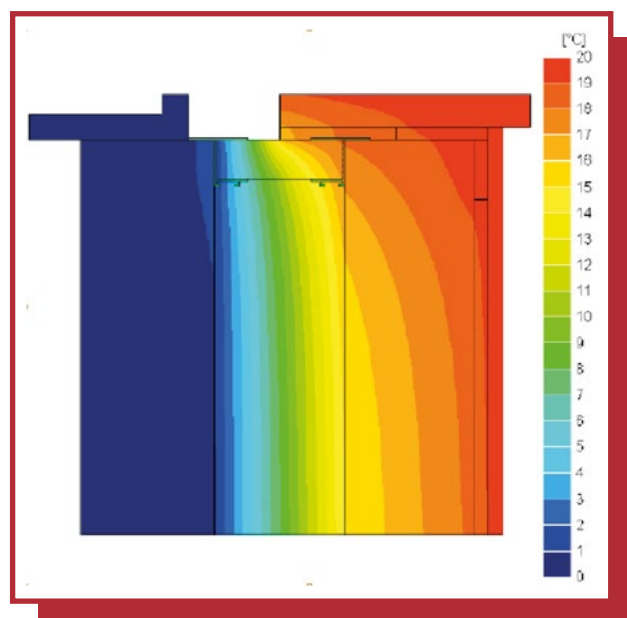
ARC Eco-Closer has been fire tested in accordance with the principles given in EN1366-4, achieving up to 60 minutes fire integrity within a masonry construction.

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

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.



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

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

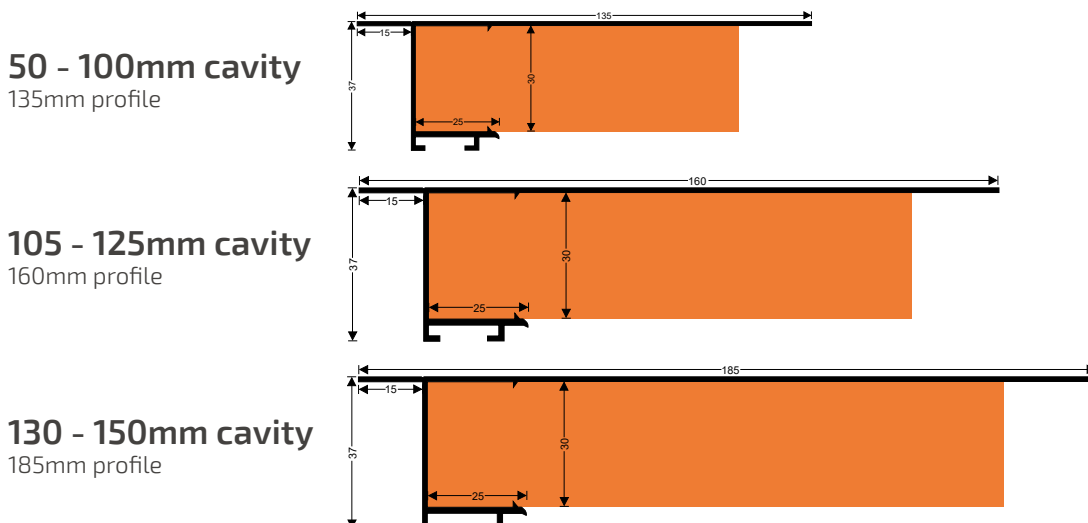
Check Reveal

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



Profile Variations

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



Product & Packaging Specifications

Product Code	Standard 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	60 mins	15 mins	6	30

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

All performance claims can be evidenced on IFC certificates IFCC 17279.

Can't find your size? ARC Eco-Closer can be manufactured to suit any cavity width between 50 and 150mm.

Larger cavity? ARC Eco-Closer Plus is a fire rated cavity closer available to fit cavities up to 300mm.

Call our technical experts on 0113 252 9428 to discuss your requirements.

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.

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 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.

Storage & 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.

Health & Safety

At ARC Building Solutions, safety is a top priority, both in how we work and the products we supply.

We've carefully assessed the materials we use, and we're pleased to say our rockfibre mineral wool isn't classed as a possible carcinogen.

Our products have no hazardous classifications under UK REACH and GB CLP regulations when it comes to physical, health, or environmental risks.

As always, we recommend following the product instructions when handling and installing ARC products. If you'd like more information on our approach to health and safety as a whole, just ask us for a Safety Data Sheet (SDS).

Environment

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

Any information provided within this document is intended for guidance only. Expert technical advice should be sought before specification or installation of any product. It is of particular importance to ensure that any fire barrier or fire stopping product is tested for use with the exact application intended. 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. Due to the protective polythene, the product as a whole cannot be classified as A1 non-combustible.

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