

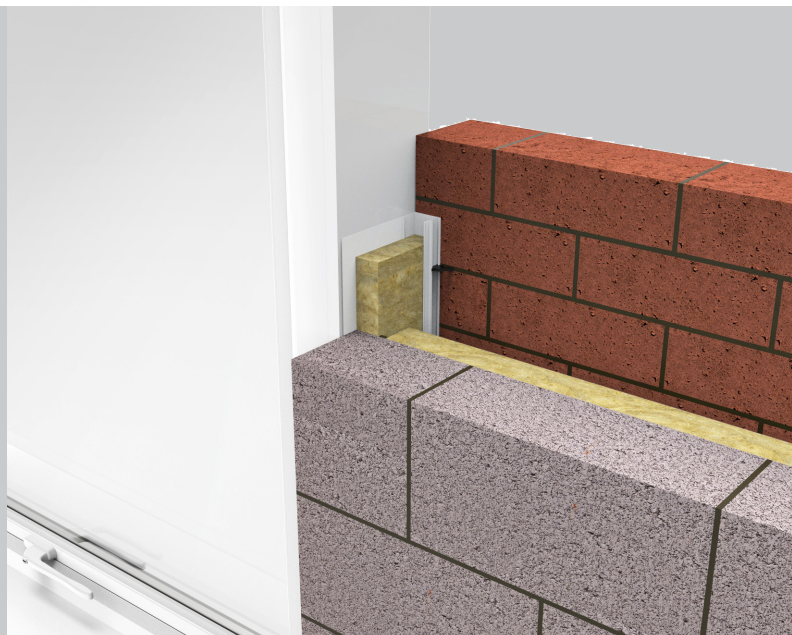
# Eco-Closer

 fire rated cavity closer  
for window and door reveals



## key features

- » Up to one hour fire integrity
- » Closes cavity around window and door reveals
- » Prevents cold bridging
- » Helps eliminate moisture, mould and staining from around windows and doors
- » Insulated with non-combustible rockfibre
- » For cavity widths from 50 to 150mm (see Eco-Closer Plus for up to 300mm)
- » Single flange available for check reveal details



## Application

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

## Fire Properties

ARC Eco-Closer has been fire tested at Warrington Fire Research, achieving up to one hour fire integrity with traditional masonry brick and block construction. These tests comply with BS 476: Part 20: 1987. *Certifire scope: CF5410.*

Where usage falls outside of this 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 any part of the construction that makes up the internal or external leaf of the wall, including support systems, are suitable for use with a 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 material and a fire barrier.

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.

Don't take our word for it, see our certification



Assessed to ISO 9001 & ISO 14001  
BRE Certificate No. 1227



## Cold Bridging

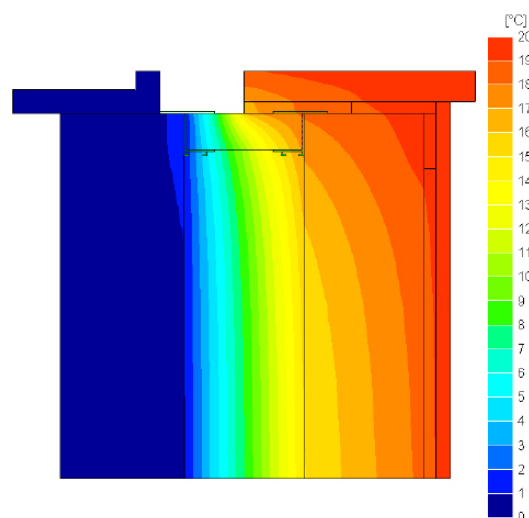
Cold bridges are sections through the fabric of significantly lower thermal resistance than the rest of the construction. It is most commonly found around window and door openings and usually shows itself through so called pattern staining. A cold bridge through an external frame attracts moisture in 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-Closers 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 $\Psi$ -value	$\Psi$ -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



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

## Installation

The ARC Eco-Closer is easily installed. 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.

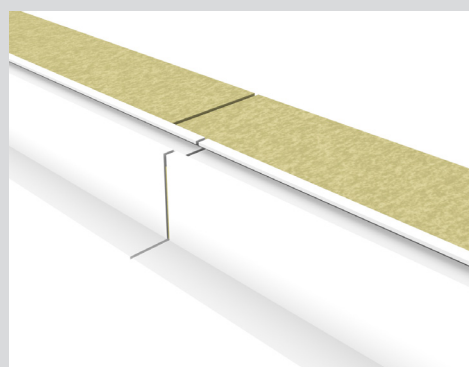
**Option 1 (First Fix):** As above and build in the jamb sections as the brickwork progresses using ARC Brick Ties\* (1 every 225mm). Ties are not required on the sill section, simply hold in place with an adhesive or nail to block. \*ARC Brick Ties are sold separately.

**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.



## 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.



## Standards

ARC Eco-Closer is insulated with rockfibre mineral wool which conforms to the BS EN 13162: 2001 Thermal Insulation Products for Buildings, Factory Made Mineral Wool Products specification, and has a thermal conductivity of 0.035W/mK.

## Storage and Packaging

ARC Eco-Closers are supplied in branded polythene packs which offer protection during transport as well as providing ease of identification on-site.

## Environment

No CFCs or HCFCs are involved in the manufacturing process of ARC's rockfibre mineral wool insulation. The material presents no known threat to the environment and is classed as ODP and GWP zero.

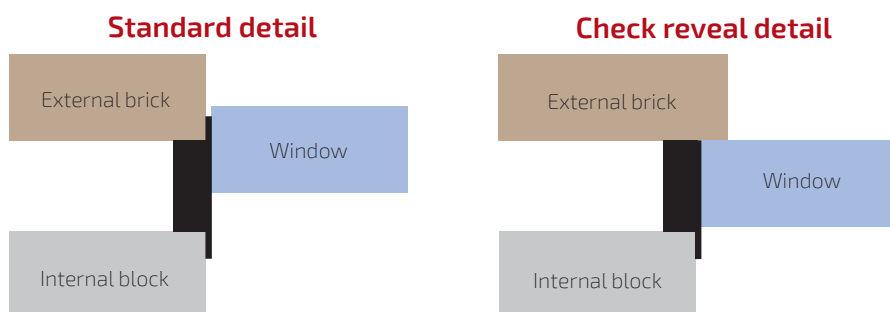
ARC Eco-Closers have a Green Guide rating of A+.

## Health and Safety

ARC Building Solutions has an approved Health and Safety Policy and is committed to working and supplying products safely. We have assessed products as required by Substances Hazardous to Health Regulations (COSHH). An ARC COSHH data sheet is available and can be downloaded from ARC's website.

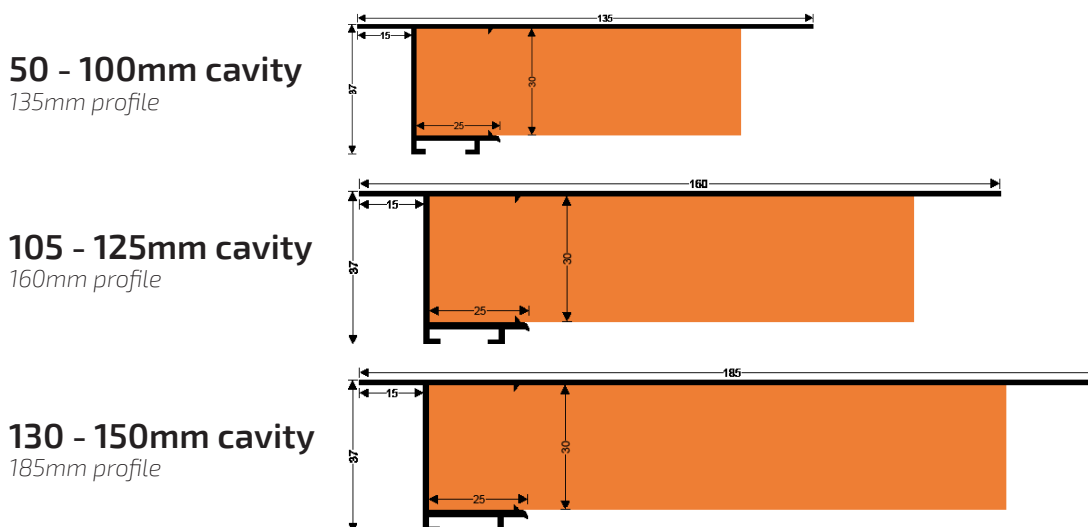
## Check Reveal

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.



## Standard Dimensions

Product Code	Suitable for Cavity Width	Dimensions	Fire Integrity (masonry)	Insulation	Lengths Per Pack
EC50	50mm	50 x 2400mm	1 hr	15 mins	8
EC65	65mm	65 x 2400mm	1 hr	15 mins	8
EC75	75mm	75 x 2400mm	1 hr	15 mins	8
EC85	85mm	85 x 2400mm	1 hr	15 mins	8
EC90	90mm	90 x 2400mm	1 hr	15 mins	8
EC95	95mm	95 x 2400mm	1 hr	15 mins	8
EC100	100mm	100 x 2400mm	1 hr	15 mins	8
EC110	110mm	110 x 2400mm	1 hr	15 mins	6
EC125	125mm	125 x 2400mm	1 hr	15 mins	6
EC135	135mm	135 x 2400mm	1 hr	15 mins	6
EC150	150mm	150 x 2400mm	1 hr	15 mins	6
EC50CR - EC150CR	50 - 150mm	As above but single flange for check reveal	As above	As above	As above

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

### Can't find your size?

ARC Eco-Closer can be manufactured to suit any cavity width between 50 and 150mm. Contact us for more information.

### 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.