

ARC SMART-CLOSER

Thermal cavity closer for window and door reveals

- » Closes cavity around **window and door reveals**
- » Prevents **cold bridging**
- » Insulated with **expanded polystyrene (EPS)** as standard
- » For cavity widths from **50 to 150mm**
- » **Single flange** available for check reveal details



Suitable for
standard details



Excellent thermal
properties



Tackles damp
& mould

Application

ARC Smart-Closer closes the cavity around window and door openings. The rigid PVCu profile is insulated with expanded polystyrene insulation (EPS). Smart-Closer helps prevent moisture, mould and staining from around windows and doors.

Installation

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

The ARC Smart-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 on the next page.

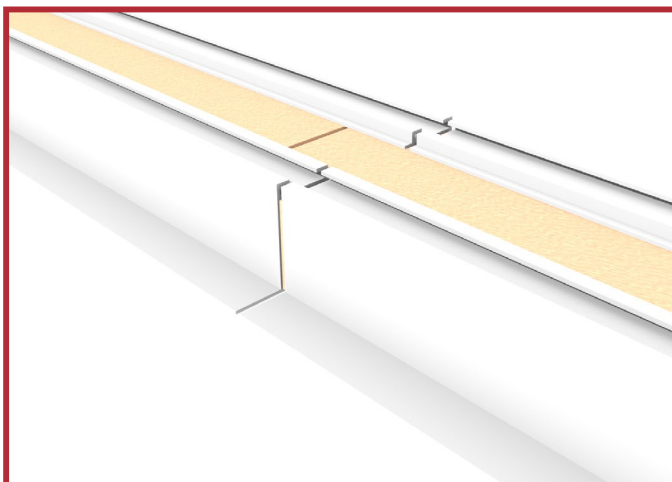
Option 1 (First Fix): As above and build in the jamb sections as the brickwork progresses using ARC Brick Ties* (1 every 225mm). Ties are not required on the sill section, simply hold in place with an adhesive or nail to block. *ARC Brick Ties are sold separately.

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.

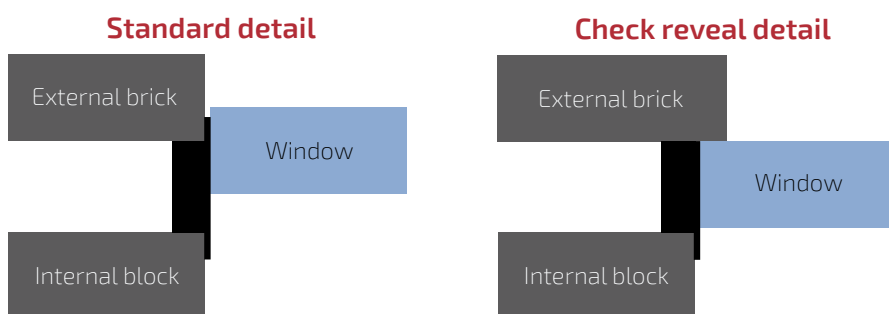


Key Stats

Length supplied	2.4m
Thermal conductivity	0.038W/mK
Smart-Closer insulation	Expanded Polystyrene (EPS)
Mass	Data available on request

Check Reveal

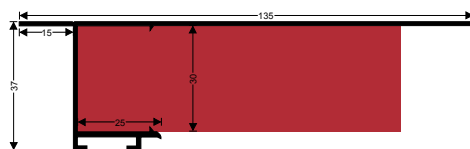
ARC Smart-Closer is available with a single flange to suit check reveal details where the window is set back behind the external brickwork.



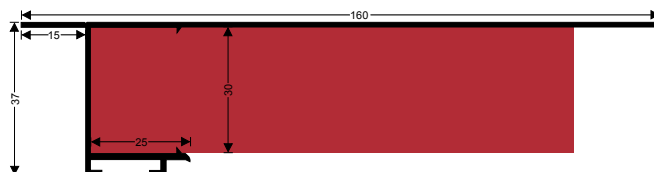
Profile Variations

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

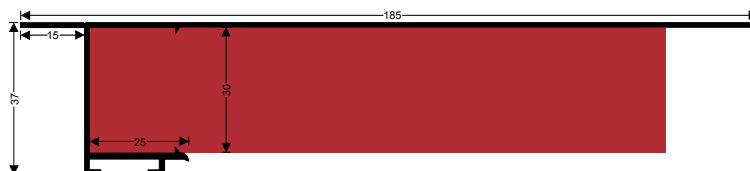
50 - 100mm cavity
135mm profile



105 - 125mm cavity
160mm profile



130 - 150mm cavity
185mm profile



The Solution

ARC Smart-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.

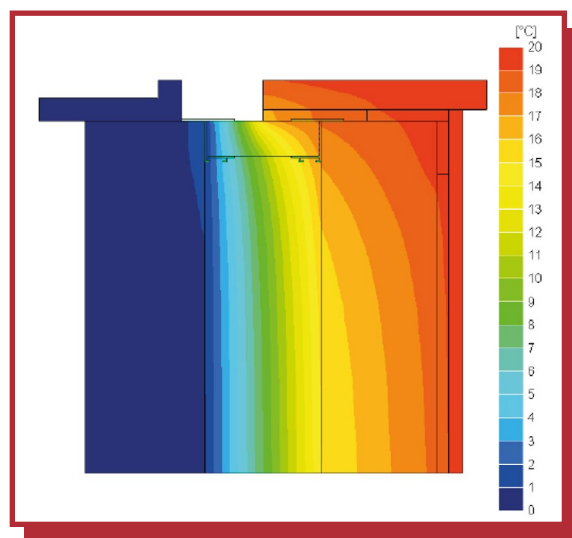
Detail	Default F-value	F-value with ARC Smart-Closer (EPS)	Default Ψ -value	Ψ -value with ARC Smart-Closer (EPS)
Jamb (100mm cavity)	0.75	0.928	0.05	0.014
Sill (100mm cavity)	0.75	0.947	0.04	0.009

Thermal Properties

ARC Smart-Closer with EPS insulation has a thermal conductivity of 0.038W/mK.

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.



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

Product & Packaging Specifications

Product Code	Suitable for Cavity Width	Dimensions	Lengths per pack
SC50	50mm	50 x 2400mm	8
SC65	65mm	65 x 2400mm	8
SC75	75mm	75 x 2400mm	8
SC85	85mm	85 x 2400mm	8
SC90	90mm	90 x 2400mm	8
SC95	95mm	95 x 2400mm	8
SC100	100mm	100 x 2400mm	8
SC110	110mm	110 x 2400mm	6
SC125	125mm	125 x 2400mm	6
SC135	135mm	135 x 2400mm	6
SC150	150mm	150 x 2400mm	6
SC50CR - SC150CR	50 - 150mm	As above but single flange for check reveal	As above

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

For party wall cavities over 150mm, please get in touch with us to discuss your solution.

Can't find your external cavity size? The ARC Smart-Closer can be manufactured to suit any cavity width between 50 and 150mm. Contact us for more information.

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

Standards

ARC Smart-Closer is insulated with expanded polystyrene which conforms to BS EN 13163:2001 Thermal Insulation Products for Buildings, Factory Made Products of Expanded Polystyrene (EPS)..

As required by building regulations, the mineral wool is encapsulated in polythene. This element is not noncombustible.

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.

Storage & Packaging

ARC Smart 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. This means that, in line with UK regulations, our products don't require a safety data sheet.

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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Protecting People.
Protecting Places.