

Smart-Closer

thermal cavity closer
for window and door reveals



key features

- » Closes cavity around window and door reveals
- » Prevents cold bridging
- » Insulated with expanded polystyrene (EPS) as standard
- » Smart-Closer Plus insulated with extruded polystyrene (XPS) available for enhanced thermal properties
- » For cavity widths from 50 to 150mm
- » Single flange available for check reveal details



Application

ARC Smart-Closer closes the cavity around window and door openings. The rigid PVCu profile is insulated with expanded polystyrene insulation (EPS) as standard, or extruded polystyrene (XPS) where enhanced thermal properties are required. Smart-Closer helps prevent moisture, mould and staining from around windows and doors.

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).

ARC Smart-Closer Plus is insulated with extruded polystyrene which conforms to BS EN 13164:2008 Thermal Insulation Products for Buildings, Factory Made Products of Extruded Polystyrene Foam (XPS).

Thermal Properties

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

ARC Smart-Closer Plus with XPS insulation has a thermal conductivity of 0.034W/mK.

Storage and Packaging

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

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



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



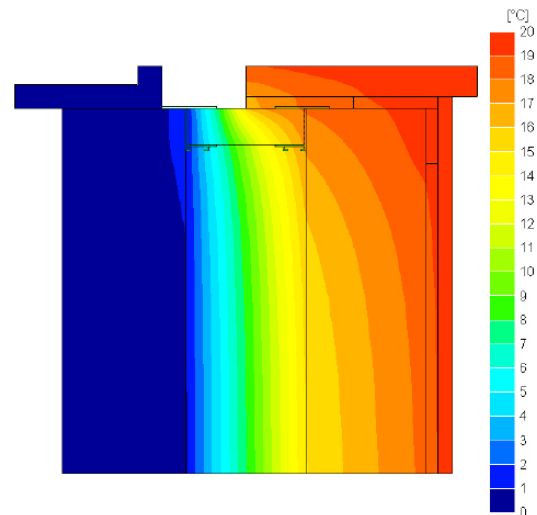
Cold Bridging

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 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.



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

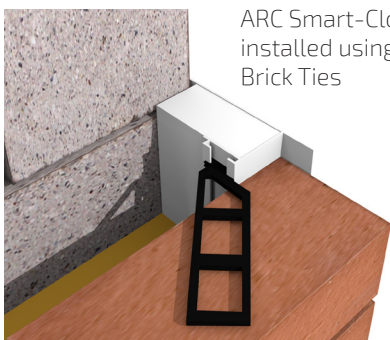
Detail	Default F-value	F-value with ARC Smart-Closer (EPS)	F-value with ARC Smart-Closer Plus (XPS)	Default Ψ -value	Ψ -value with ARC Smart-Closer (EPS)	Ψ -value with ARC Smart-Closer Plus (XPS)
Jamb (100mm cavity)	0.75	0.928	0.933	0.05	0.014	0.012
Sill (100mm cavity)	0.75	0.947	0.950	0.04	0.009	0.009

Installation

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.

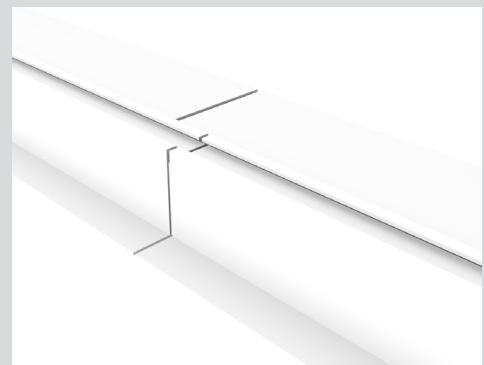
Option 2 (Second Fix): Cut sections to required size as above and simply push fit once the openings are formed. Sections can be secured by nailing to block or using a suitable adhesive.



ARC Smart-Closer installed using ARC Brick Ties

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.



Environment

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

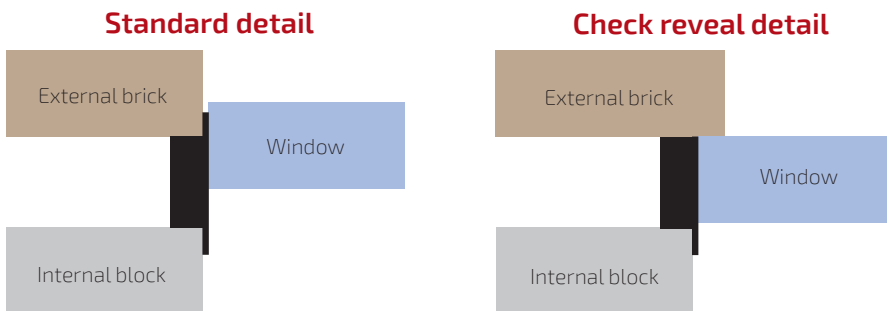
ARC Smart-Closers have a Green Guide rating of A+.

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.

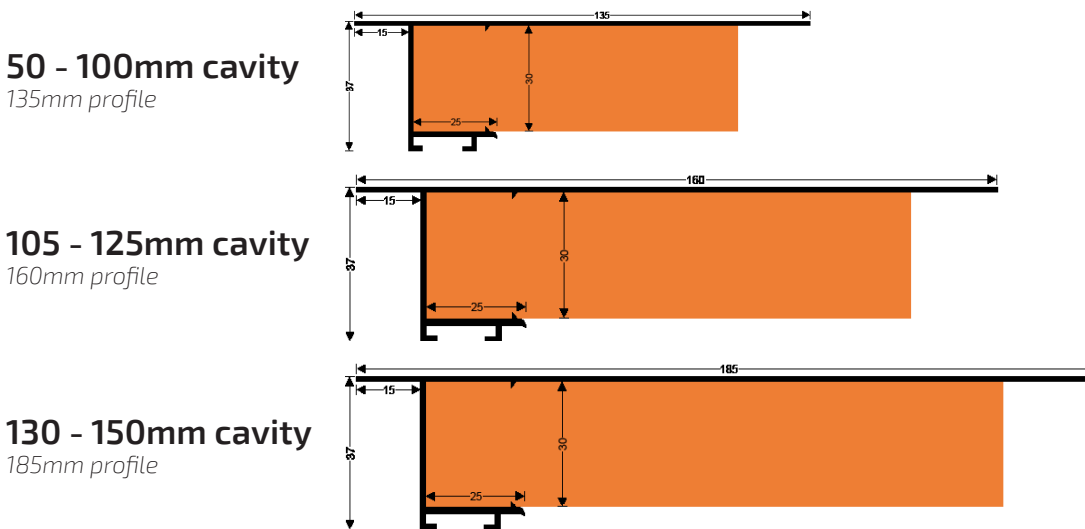
Check Reveal

ARC 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.



Standard Dimensions

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
SC50PLUS - SC150PLUS	50 - 150mm	As above but insulated with XPS for enhanced thermal properties	As above

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

Can't find your size?

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