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BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

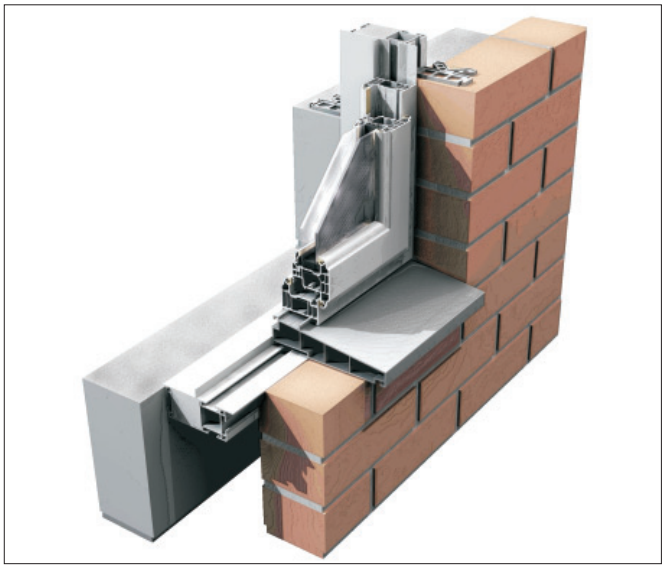
Agrément Certificate
10/4752
Product Sheet 1

SYNSEAL CAVITY CLOSER SYSTEMS

CAVSEAL CAVITY CLOSER SYSTEM

PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to the Cavseal Cavity Closer System, for use as a cavity closer and to form an opening in masonry cavity walls and can provide ventilation via the vented head section.



AGRÉMENT CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

KEY FACTORS ASSESSED

Hygrothermal behaviour — the cavity closers meet the minimum thermal resistance path of 0.45 $m^2 \cdot K \cdot W^{-1}$ as required by the Accredited Construction Details (version 1.0) (see section 5).

Weather resistance — the system is effective as a damp-proof barrier and when used in a suitable wall construction will resist the passage of water into the interior of the building in flush and check reveal installations (see section 6).

Structural stability — in terms of wind loading resistance, the system can be used in all areas of the UK. The system must not be used to support loads from masonry (see section 7).

Properties in relation to fire — the installed system will not contribute significantly to the growth of a fire. The system does not constitute a cavity barrier (see section 8).

Durability — the system, protected within the cavity, will last the normal expected life of a building; visible components will have an expected life similar to a PVC-U window (see section 11).

The BBA has awarded this Agrément Certificate to the company named above for the system described herein. This system has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Second issue: 11 January 2011

Originally Certificated on 28 April 2010

Simon Wroe
Head of Approvals — Physics

Greg Cooper
Chief Executive

The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

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Regulations

In the opinion of the BBA, the Cavseal Cavity Closer System, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations:



The Building Regulations 2010 (England and Wales)

Requirement:	**B3(4)**	**Internal fire spread (structure)**
Comment:		The system can be used in constructions that meet this Requirement. See section 8.3 of this Certificate.
Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The system prevents the passage of moisture from the outer leaf to the inner leaf of a cavity wall at window or door openings. See sections 6.1 to 6.3 of this Certificate.
Requirement:	**C2(c)**	**Resistance to moisture**
Comment:		The system can contribute to minimising the risk of condensation. See sections 5.2 and 5.3 of this Certificate.
Requirement:	**L1(a)(i)**	**Conservation of fuel and power**
Comment:		The system contributes to minimising heat loss at jambs and sill. See sections 5.1 and 5.2 of this Certificate.
Requirement:	**Regulation 7**	**Materials and workmanship**
Comment:		The system is acceptable. See section 11 and the *Installation* part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)(2)**	**Fitness and durability of materials and workmanship**
Comment:		The system can contribute to a construction satisfying this Regulation. See sections 10 and 11 and the *Installation* part of this Certificate.
Regulation:	**9**	**Building standards — construction**
Standard:	3.10	Precipitation
Comment:		Walls incorporating the system can satisfy this Standard, with reference to clauses 3.10.1[1][2] and 3.10.3[1][2]. See sections 6.1 to 6.3 of this Certificate.
Standard:	3.15	Condensation
Comment:		The system can contribute to minimising the risk of condensation, with reference to clauses 3.15.1[1], 3.15.4[1] and 3.15.5[1]. See sections 5.2 and 5.3 of this Certificate.
Standard:	6.1(b)	Carbon dioxide emissions
Standard:	6.2	Building insulation envelope
Comment:		The system can contribute to minimising heat loss at jambs and sill. See section 5.1 of this Certificate.
Regulation:	**12**	**Building standards — conversions**
Comment:		All comments given for this system under Regulation 9 also apply to this Regulation, with reference to clause 0.12.1[1][2] and Schedule 6[1][2].

(1) Technical Handbook (Domestic).
(2) Technical Handbook (Non-Domestic).



The Building Regulations (Northern Ireland) 2000 (as amended)

Regulation:	**B2**	**Fitness of materials and workmanship**
Comment:		The system is acceptable. See section 11 and the *Installation* part of this Certificate.
Regulation:	**B3(2)**	**Suitability of certain materials**
Comment:		The system is acceptable. See section 10 of this Certificate.
Regulation:	**C4(b)**	**Resistance to ground moisture and weather**
Comment:		Walls incorporating the system can contribute to meeting this Regulation. The sub-frame can be used where checked reveals are required. See sections 6.1 to 6.3 of this Certificate.
Regulation:	**C5**	**Condensation**
Comment:		The system can contribute to minimising the risk of condensation. See section 5.3 of this Certificate.
Regulation:	**F2(a)(i)**	**Conservation measures**
Regulation:	**F3(2)**	**Target carbon dioxide Emissions Rate**
Comment:		The system contributes to minimising heat loss at jambs and sill. See sections 5.1 and 5.3 of this Certificate.

Construction (Design and Management) Regulations 2007

Construction (Design and Management) Regulations (Northern Ireland) 2007

Information in this Certificate may assist the client, CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See section: 3 *General* (3.6) of this Certificate.

Non-regulatory Information

NHBC Standards 2011

NHBC accepts the use of the Cavseal Cavity Closer System, when installed and used in accordance with this Certificate in relation to *NHBC Standards*, Chapter 6.1 *External masonry walls*.

Technical Specification

1 Description

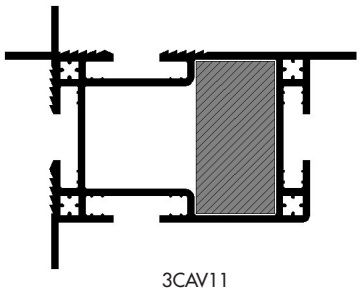
1.1 The Cavseal Cavity Closer System (see Figure 1) is an insulated, grey, unplasticised polyvinyl chloride (PVC-U) cavity closer and window or door sub-frame, used to form an opening in masonry cavity walls during construction. It is made from extruded profiles formed into a U-shape template, with welded or mechanically joined (using moulded corner blocks) corners at the sill or threshold and a temporary fixing batten (typically timber, 50 mm by 12 mm thick) fixed at the head. The cavity closer profile sections are fitted with insulation (EPS, declared thermal conductivity $\lambda_{90/90}$ 0.038 $W \cdot m^{-1} \cdot K^{-1}$). The head batten must be removed prior to the installation of the window/door frames. Alternatively, a vented head profile is mechanically joined to form the head section using 4.8 by 60 mm screws (see Figure 2). This acts as a direct replacement to the top fixing batten, with other bracing rules remaining the same.

1.2 The cavity frame components and accessories are listed in Table 1 and shown in Figure 1.

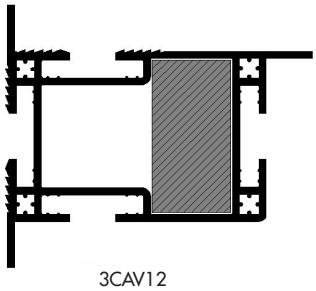
Table 1 List of components

Manufacturer's designation	Components	Application
3CAV11	Cavity closer	External fit 50 mm jamb/sill Internal fit 50 mm jamb Internal fit 75 mm jamb
3CAV12	Cavity closer	Internal fit/check reveal 50 mm sill Check reveal 75 mm jamb Flush fit, no upstand 50 mm jamb/sill
3CAV13	Cavity closer	External fit 75 mm jamb/sill
3CAV14	Cavity closer	Check reveal 50 mm jamb Internal fit/check reveal 75 mm sill Flush fit, no upstand 75 mm jamb/sill
3CAV21	Cavity closer	External fit 100 mm jamb/sill
3CAV22	Cavity closer	Internal fit/check reveal 100 mm sill Flush fit, no upstand 100 mm jamb/sill
3CAV23	Cavity closer	Check reveal 100 mm jamb
3CAV24	Cavity closer	Internal fit 100 mm jamb
3CAV150	Cavity closer	Flush fit, no upstand 150 mm jamb/sill
3CAV175	Cavity closer	Flush fit, no upstand 175 mm jamb/sill
3CAV200	Cavity closer	Flush fit, no upstand 200 mm jamb/sill
3HV1	Vented head	Head section profile, all sizes
3CAV3	Corner block	For mechanically joining cavity closer sub-frame (50 mm)
3CAV4	Corner block	For mechanically joining cavity closer sub-frame (75 mm)
3CAV5	Corner block	For mechanically joining cavity closer sub-frame (100 mm)
3BT1	Tie	Cavity closer tie
3SN1	Fixing clips	For securing window outer frame jambs to cavity closer sub-frame and head to vented head
SH09	4.0 x 16 mm zinc-plated, self drill screws	Fixing clip fixing screws
SH53	4.8 x 60 mm, zinc-plated, flange head, Phillips recess with V fluted self-tapping thread and self-drill point screws	For fixing vented head onto head of window outer frame

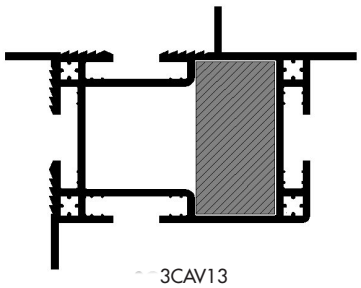
Figure 1 Components



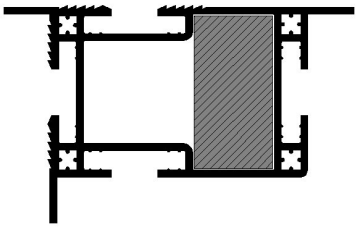
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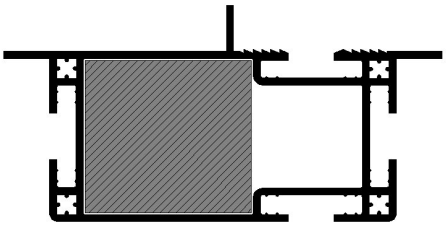
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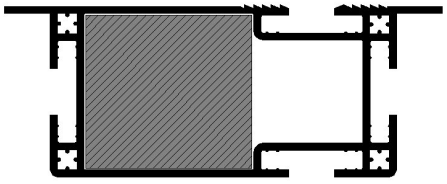
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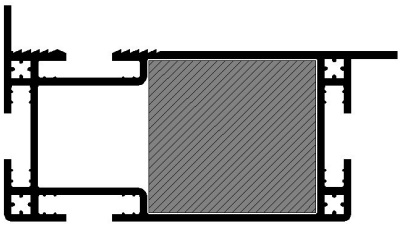
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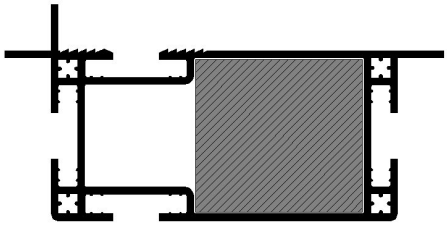
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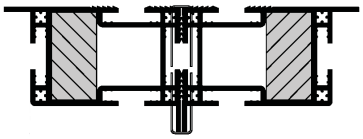
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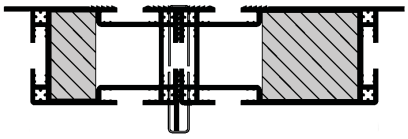
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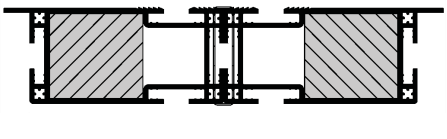
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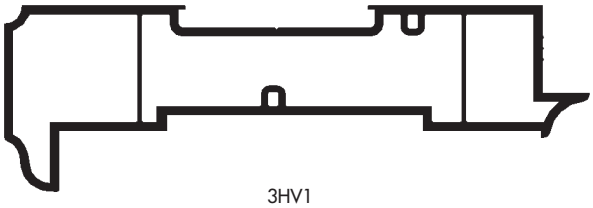
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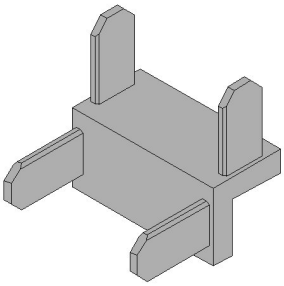
3CAV175



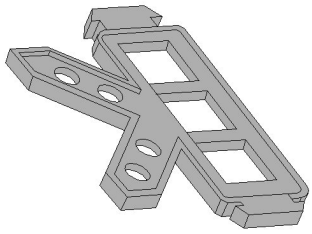
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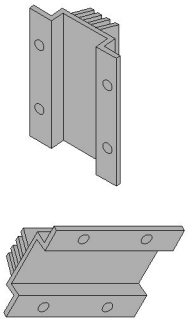
3HV1



3CAV3
3CAV4
3CAV5



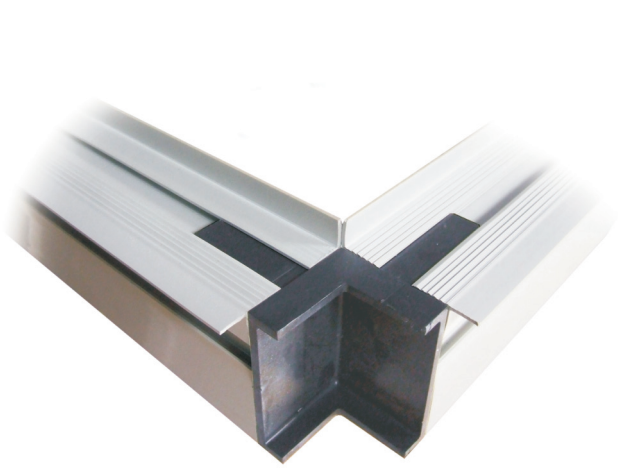
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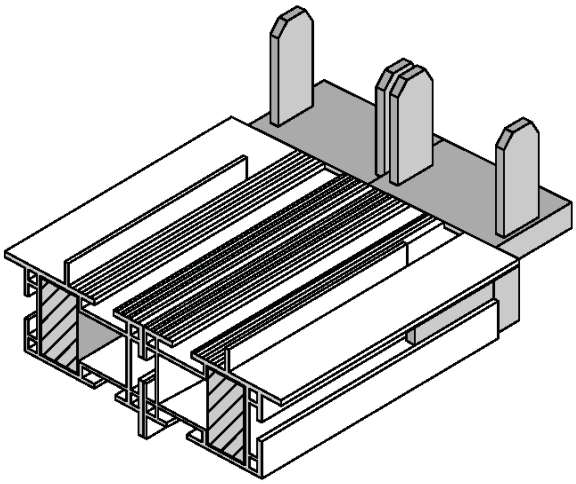


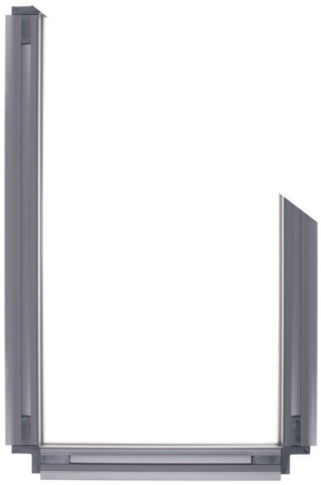
3SN1

1.3 The jamb, sill and vented head (if used) profiles are cut to size. Slots are routed in the vented head to suit the proprietary ventilator to be used. The corner blocks, if used, are fixed to the sill and the jamb sections. The vented head, if used, is located between the jambs and the jamb sections are screw fixed onto it using 4.8 by 60 mm screws (see Figure 2).

Figure 2 Sub-frame fabrication

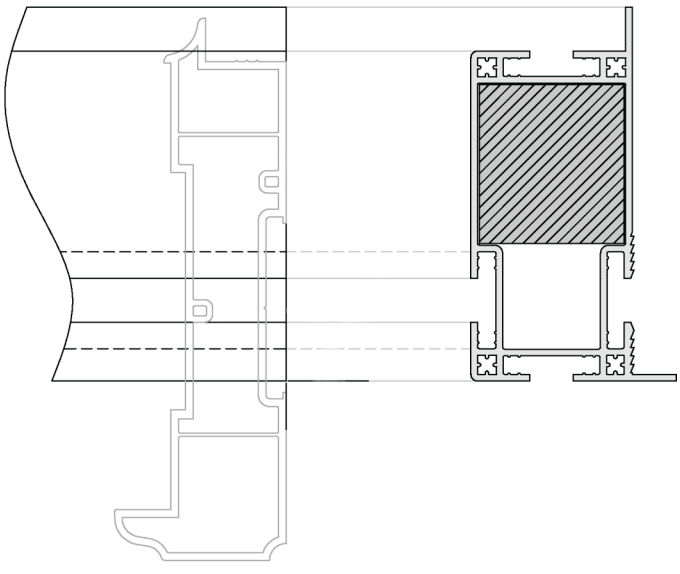


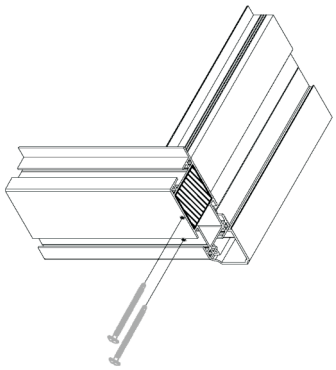




50, 75 and 100 mm cavity closers

mechanically jointed sub-frames





mechanically fixed vented head

1.4 The main PVC-U profile incorporates a box section to fit into the recess of the wall cavity.

1.5 The cavity closer profiles are produced by conventional extrusion techniques from reground PVC-U material. The vented head profile visible faces are co-extruded white PVC-U virgin material. The virgin material has previously been assessed by the BBA and complies with Case B (PVC-U with additional polymers) as defined in MOAT No 17 : 1990.

1.6 Polypropylene ties, manufactured by standard injection moulding techniques, are used to build the cavity closer frame into the surrounding mortar joints (see Figures 2, 3 and 4).

1.7 Checks are carried out to monitor the quality of the extrusions.

Figure 3 Typical head with window detail

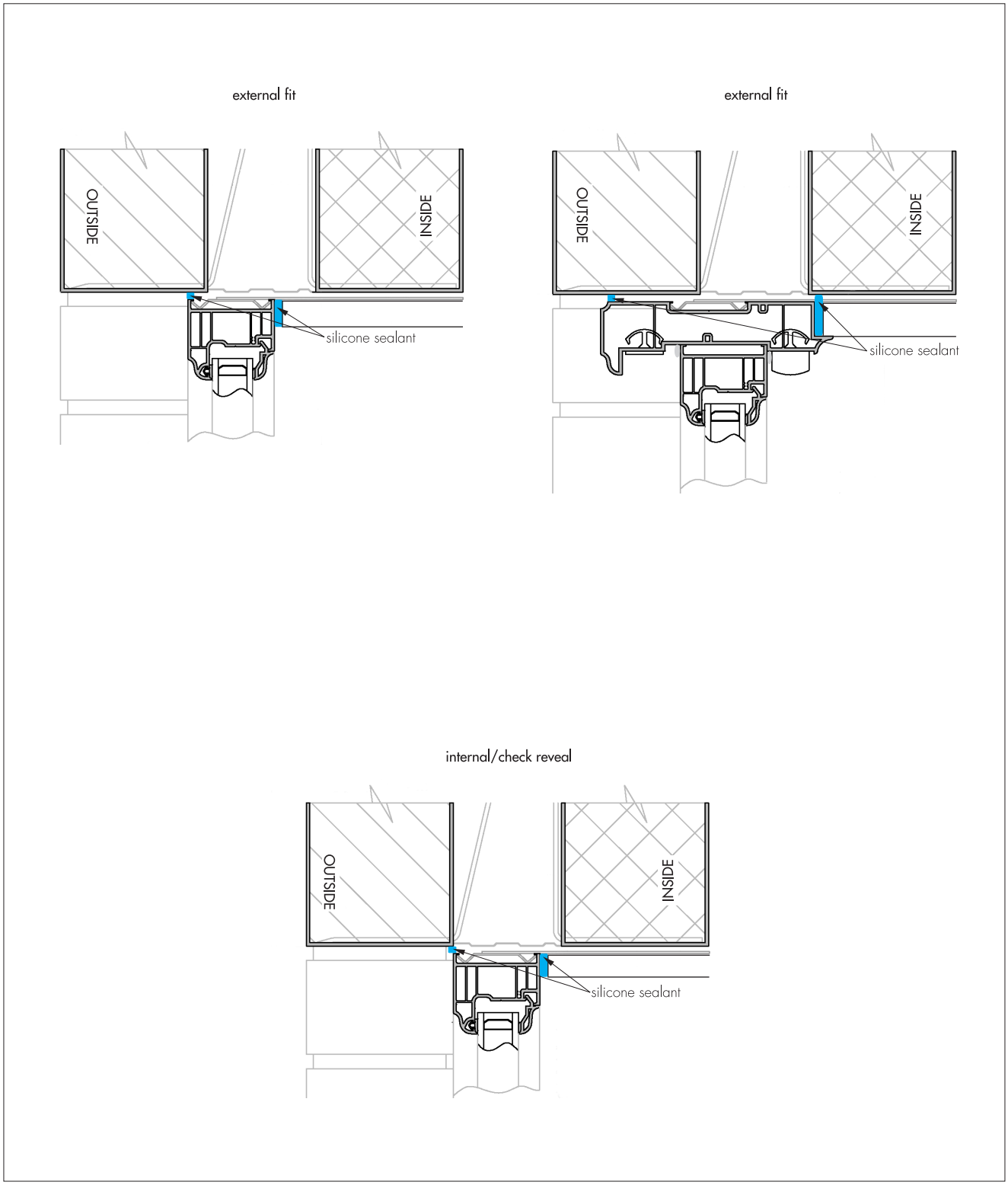
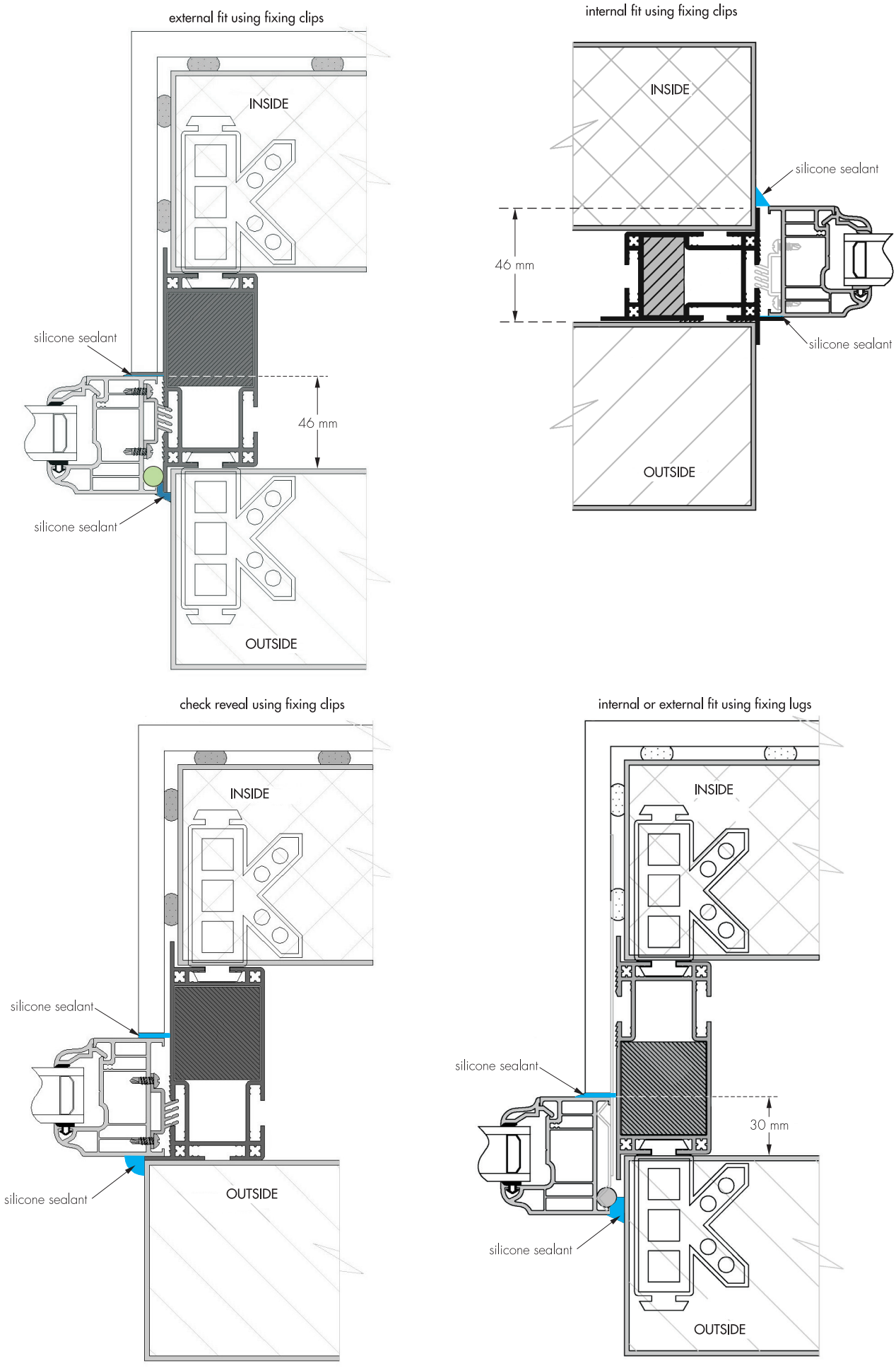


Figure 4 Typical jamb with window detail



Note: An additional cavity barrier is required in Scotland and Northern Ireland

2 Delivery and site handling

2.1 Assembled sub-frames are labelled with system identification. They are dispatched, along with the requisite number of ties, plus any additional ancillary items and installation instructions.

2.2 Assembled sub-frames are stacked vertically and delivered as individual items, taking care to avoid distortion in transit. The sub-frames or profiles should be stored under cover in a clean area, on edge in the case of sub-frames, and suitably supported to avoid distortion or damage. The sub-frames and profiles should be protected from vehicular and pedestrian traffic.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on the Cavseal Cavity Closer System.

Design Considerations

3 General

3.1 The Cavseal Cavity Closer System is suitable for use in masonry walls with nominal cavity widths in the range 50 mm to 200 mm. It can be used as a template to form an opening, around which a wall can be constructed and to establish the cavity width during construction, allowing PVC-U windows and doors to be fixed in the reveal. Windows must have an outer frame design suitable for correct fitting of the fixing clips, or alternatively conventional fixing lugs or through fixings can be used. The Certificate holder should be consulted on the suitability of outer frame profiles.

3.2 The system provides a damp-proof barrier between the inner and outer leaves at the point of closure, acts as a cavity closer without forming a thermal bridge, and avoids the need for cutting bricks and blocks. The window/door is fitted after completion of the masonry. It can also be used to form a checked reveal where required and to fit the window after completion of the masonry, as is conventional practice in Scotland and Northern Ireland.

3.3 Masonry walls into which cavity closers are incorporated must be constructed in accordance with one or more of the following technical specifications:

- BS EN 1996-1-1 : 2005, BS EN 1996-1-2 : 2005, BS EN 1996-2 : 2006, BS EN 1996-3 : 2006 and the relevant National Annexes
- the National Building Regulations:

England and Wales — Approved document A1/2, section 1C

Scotland — Mandatory Standard 1.1[(1)(2)], *Small Buildings Guide*

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland — Technical Booklet D.

3.4 When the system is used with the vented head section and suitably-sized trickle ventilator, outside the scope of this Certificate, it can contribute to satisfying the background ventilation requirements of the relevant building regulations. Details of ventilators covered by an Agrément Certificate can be found on the BBA website.

3.5 Windows and doors are fitted into the sub-frame from the outside or inside of the building.

3.6 Sub-frames are manufactured to suit the exact brickwork opening. A 7 mm clearance per side is allowed between the sub-frame and window or door, in accordance with the *Cavseal Cavity Closer Manual*.

3.7 The maximum sub-frame cavity closer size is 2400 mm wide by 1350 mm high, maximum perimeter 7500 mm for windows installed using fixing clips. There is no size restriction when windows are tied back to the masonry using conventional fixing cleats. Door frames must be fixed independently to the masonry. Proprietary fixings which may be recommended by the manufacturer for this purpose are outside the scope of this Certificate.

4 Practicability of installation

The product is designed to be installed by a competent general builder, or a contractor, experienced with this type of system.

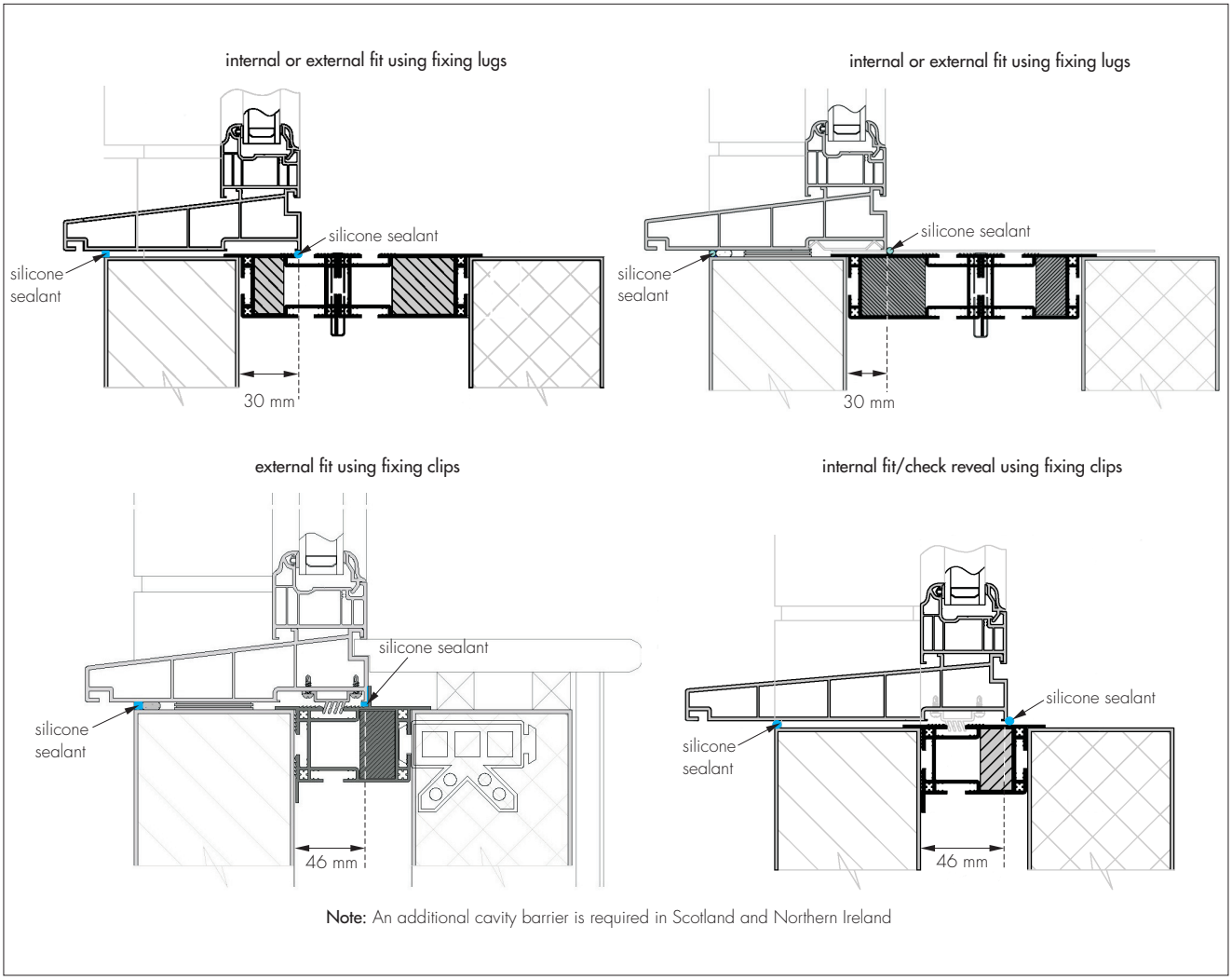
5 Hygrothermal behaviour



5.1 The cavity closer can contribute to maintaining continuity of thermal insulation at jambs and sills in wall openings. The path of minimum thermal resistance through the product calculated to BRE Information Paper IP8/08 *Determining the minimum thermal resistance of cavity closers*, is at least 0.45 $m^2 \cdot K \cdot W^{-1}$ when used in jambs and sills with the window/door frame set-back 30 mm (75 mm, 100 mm, 150 mm, 175 mm and 200 mm cavity closer profiles with insulation adjacent to the external wall, installed using fixing lugs) or 46 mm or more into the wall cavity (all other installations) (see Figures 4 and 5). Example junction details shown in Figures 4 and 5 are acceptable and the corresponding heat loss rates (ψ values) in BRE Information Paper IP1/06 *Assessing the effects of thermal bridging at junctions and around openings*, Table 3 may be used in carbon emission calculations in Scotland and Northern Ireland. Attention must be given to the correct setback in order to ensure compliance with these requirements. Detailed guidance on limiting heat loss and air filtration can be found in:

England and Wales — Approved Documents to Part L and, for new thermal elements to existing buildings, Accredited Construction Details (version 1.0) See also SAP 2009 Appendix K and the *iSBEM User Manual* for new-build

Figure 5 Typical sill with window detail



Note: An additional cavity barrier is required in Scotland and Northern Ireland

5.2 Jambs and sills incorporating the system in accordance with section 5.1 will adequately limit the risk of local surface condensation.

5.3 Under normal domestic conditions the level of interstitial condensation associated with the system will be low and the risk of any resultant damage minimal.

5.4 Door frames installed with proprietary fixings which cannot be set back into the wall cavity by 30 mm or 46 mm (see section 5.1) may require additional thermal insulation, for example dry lining, to minimise excessive heat loss and the risk of excessive surface condensation.

6 Weather resistance

6.1 The system is effective as a vertical damp-proof barrier at jambs of window and door openings in masonry constructions, where a brick/block closer and dpc detail would normally be used. The system is also effective as a horizontal damp-proof barrier at the sill or threshold.

6.2 Installations with a flush (in-line) wall opening and a minimum setback of 30 mm or 46 mm (see section 5.1) (see Figures 3, 4 and 5) are suitable for use in exposure zones 1 (sheltered) and 2 (moderate) as depicted in the map contained in section 3.1 of BRE Report (BR 262 : 2002) *Thermal insulation : avoiding risks*. The sub-frame may also be considered for use in other areas where a conventional return brick/block closer detail with dpc has been found to provide adequate resistance to the penetration of wind-driven rain.

6.3 The system may also be used to construct a check reveal (see Figures 3, 4 and 5). In this construction, in which the frame is positioned in a rebate behind the outer leaf of the jamb, the system is suitable for use in exposure zones up to and including 'very severe' as depicted in the map contained in section 3.1 of BRE Report (BR 262 : 2002) which covers all exposure zones in the United Kingdom.

7 Structural stability

7.1 The system is non-loadbearing and must not be used to support loads from the masonry. Lintels are required above window or door openings.

7.2 The system will not have an adverse effect on the structural stability of brickwork or blockwork walls, constructed in the conventional manner in accordance with normal good practice as defined in the Standards listed in section 3.4 of this Certificate. Use of the system does not obviate the need for conventional wall ties around the openings.

7.3 A window fitted correctly into a cavity frame, using fixing clips or conventional fixing lugs at the jambs and sill and conventional fixing lugs at the head or fixing screws if a vented head is used, will satisfactorily transfer to the structure wind loads likely to be encountered in the UK. In terms of wind loading resistance the cavity frame can be used in all areas of the UK.

7.4 Door frames for use with the cavity frame require additional proprietary fixings at the jambs and sill/threshold to ensure that the frame remains firmly fixed when the door is slammed. Head fixings may be required for larger doorsets. Reference should be made to the relevant installation procedures described in the *Cavseal Cavity Closer Manual*.

8 Properties in relation to fire

8.1 The installed system will not contribute significantly to the growth of a fire.

8.2 The system does not constitute a cavity barrier against the penetration of smoke and flame in the context of the Building Regulations.



8.3 The use of the system is not prevented in England and Wales where generally cavity barriers are not required around openings in masonry wall construction.

8.4 In Scotland and Northern Ireland the system is only suitable for use in conjunction with a cavity barrier meeting the performance requirements defined in:

Scotland — Mandatory Standard 2.4, clause 2.4.1[1][2] and Annex 2.B[1] or 2.D[2]

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland — Technical Booklet E, paragraph 3.37.

8.5 The use of the system does not preclude the need to provide suitable fire protection to steel lintels where this is necessary to satisfy the Building Regulations.

9 Security against intrusion

Removal of a window from the cavity frame from the outside is extremely difficult as the shape of the outer frame prevents access to the locating tangs. If required, for any reason, supplementary through fixing of the window frame is possible. The position of individual fixing cleats, if used, is not evident and even if the fixing position is identified the cleat is not readily accessible. The door frames are secured by lugs or through fixings around the perimeter outside the scope of this Certificate.

10 Maintenance



To ensure the maximum weathertightness, the silicone seal between window or door frames and masonry must be checked regularly and repairs or renewal carried out promptly.

11 Durability



The system is durable when installed in accordance with this Certificate and will not suffer significant degradation when protected within the cavity. The system will last the normal expected life of a building. Visible components will have an expected life similar to a PVC-U window.

Installation

12 General

12.1 Installation of the Cavseal Cavity Closer System must be carried out in accordance with the *Cavseal Cavity Closer Manual*.

12.2 A cavity barrier may be required (see section 8.2).

12.3 Reference should be made to the typical installation details shown in Figures 3, 4 and 5 when reading the installation details given in section 13. The windows in these Figures are shown for information only and do not form part of this assessment.

12.4 At the build-in stage it must be ensured that the sub-frame remains plumb, level, square, and with parallel sides.

13 Procedure

13.1 The assembled sub-frame, including head batten or vented head, is ready for building into the construction of cavity walls using traditional building methods.

13.2 The cavity wall is built to the sill level, ensuring that the course work is level, flat, and that all excess mortar is removed.

13.3 The sub-frame is positioned in the cavity, ensuring that it is facing the correct way, so that the inner surface of the window frame is set in at least 30 mm (75 mm, 100 mm, 150 mm, 175 mm and 200 mm cavity closer profiles with insulation adjacent to the external wall, installed using fixing lugs) or 46 mm or more (all other installations) from the inner surface of the outer leaf and temporary timber supports are attached to the closer, if required. The closer frame is aligned with a spirit level and the timber supports are secured so that they are rigid and they will keep the frame square and plumb. The course work is built up by one course and butted to one side of the sub-frame.

13.4 The position of the sub-frame is checked and the course work on the opposite side of the sub-frame is built up by one level.

13.5 Ties are inserted into the channel of the sub-frame jambs, rotated through 90° and built into the mortar bed joints. These ties should be fitted after the first brick course and then at every five brick intervals (300 mm centres). The ties should be inserted alternately, tying the sub-frame into both inner and outer courses ensuring that the sub-frame is tight against the outer brick (see Figure 4). A minimum of three ties per vertical member is required.

13.6 When the masonry reaches head level the head batten and any bracing support, if used, are removed and a lintel, with associated dpc, is fitted across the masonry just clear of the top of subframe. Where the vented head is used the sub-frame is tied to the building structure with fixing lugs 100 mm to 200 mm from corners and at 600 mm centres. The wall construction is continued to complete the aperture.

13.7 In all installations the top brick course should be arranged to ensure that, when bedded in, the lintel does not exert a load on the window or door frame/sub-frame.

13.8 The sub-frame is cleaned to ensure that it is free from mortar. The brickwork must be allowed to set before attempting to fit the window/door.

13.9 The fitting of windows or doors to the sub-frame must be carried out in accordance with the *Cavseal Cavity Closer Manual*.

Window preparation and fitting

13.10 The correct window is selected to suit the sub-frame. All protective wrapping is removed.

13.11 For installations using the 50 mm, 75 mm and 100 mm cavity closer profiles, fixing clips are screw fixed to the outer frame jambs, sill and head section (if vented head is fitted to sub-frame) (see Figures 3 and 4) 100 mm from each corner and at centres not exceeding 300 mm. A minimum of two clips per vertical member is required. Alternatively, windows used with the system can be secured using conventional lugs or through fixing back to the masonry. For installations using the 150 mm, 175 mm and 200 mm cavity closer profiles, windows used with the system are secured using conventional lugs or through fixing back to the masonry.

13.12 A bead of silicone sealant is applied to the upstand of the sub-frame and the vented head section, if the latter is used.

13.13 For windows fitted from outside the building the window is offered up to the sub-frame, positioning it squarely in the aperture by applying even pressure to position the window ensuring a 30 mm or 46 mm setback (see section 13.3). Where a vented head section is not fitted, the head member of the window is secured using lugs or screw fixings positioned not less than 150 mm to 250 mm from the corners and at centres not exceeding 600 mm.

13.14 For windows fitted from the inside of the building the window is offered up to the sub-frame from the inside of the building and installed as described in section 13.13.

Finishing

13.15 An effective sealant is applied around the perimeter of the window/door internally prior to applying internal finishes.

13.16 In locations where the plaster may be subject to repeated impact (eg at door reveals from door slamming) it is recommended that wet plaster be reinforced by hessian scrim or, preferably, replaced by dry lining.

13.17 Finishing trims are fitted after completion of the window installation, where required.

13.18 The window is weather-proofed externally, using a suitable low modulus silicone sealant.

14 Tests

Confirmatory tests were carried out in accordance with BS EN 12608 : 2003 on the PVC-U extrusions made from reground material and on the vented head to determine:

- heat reversion
- behaviour after heating at 150°C.

15 Investigations

An assessment was made of:

- tests carried out in accordance with the methods defined in MOAT No 1 : 1974, on a combined sub-frame and PVC-U window, installed in a test rig, to determine:
  - air permeability
  - watertightness
  - effect of cyclic wind loads to ±1250 Pa
  - effect of temperature variation (–5°C to 55°C)
  - safety test, wind loading using increased pressure of 3000 Pa and reduced pressure of 3000 Pa(1)
- heat loss and condensation risk in accordance with the Accredited Construction Details (version 1.0) and the Accredited Construction Details (Scotland)
- weather resistance of the system when installed in accordance with the manufacturer's instructions
- fire resistance and structural stability of walls incorporating the cavity closer sub-frame
- durability of the components used in the construction of the system
- the manufacture and quality control of the extruded profiles.

(1) The test was performed at reduced temperature to ensure that the contraction of the window under such conditions would not render the system unsafe.

Bibliography

BS EN 1996-1-1 : 2005 *Eurocode 6 : Design of masonry structures — General rules for reinforced and unreinforced masonry structures*
NA to BS EN 1996-1-1 : 2005 *UK National Annex to Eurocode 6 : Design of masonry structures — General rules for reinforced and unreinforced masonry structures*

BS EN 1996-1-2 : 2005 *Eurocode 6 : Design of masonry structures — General rules — Structural fire design*
NA to BS EN 1996-1-2 : 2005 *UK National Annex to Eurocode 6 : Design of masonry structures — General rules — Structural fire design*
BS EN 1996-2 : 2006 *Eurocode 6 : Design of masonry structures — Design considerations, selection of materials and execution of masonry*
NA to BS EN 1996-2 : 2006 *UK National Annex to Eurocode 6 : Design of masonry structures — Design considerations, selection of materials and execution of masonry*
BS EN 1996-3 : 2006 *Eurocode 6 : Design of masonry structures : Simplified calculation methods for unreinforced masonry structures*
NA to BS EN 1996-3 : 2006 *UK National Annex to Eurocode 6 : Design of masonry structures : Simplified calculation methods for unreinforced masonry structures*

BS EN 12608 : 2003 *Unplasticized polyvinylchloride (PVC-U) profiles for the fabrication of windows and doors — Classification, requirements and test methods*

MOAT No 1 : 1974 *Directive for the Assessment of Windows*

MOAT No 17 : 1990 *UEAtc Technical Guide for the Agrément of windows in PVC-U*

16 Conditions

16.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is granted only to the company, firm or person named on the front page — no other company, firm or person may hold or claim any entitlement to this Certificate
- is valid only within the UK
- has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English law.

16.2 Publications and documents referred to in this Certificate are those that the BBA deems to be relevant at the date of issue or re-issue of this Certificate and include any: Act of Parliament; Statutory Instrument; Directive; Regulation; British, European or International Standard; Code of Practice; manufacturers' instructions; or any other publication or document similar or related to the aforementioned.

16.3 This Certificate will remain valid for an unlimited period provided that the product/system and the manufacture and/or fabrication including all related and relevant processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

16.4 In granting this Certificate, the BBA is not responsible for:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- individual installations of the product/system, including the nature, design, methods and workmanship of or related to the installation
- the actual works in which the product/system is installed, used and maintained, including the nature, design, methods and workmanship of such works.

16.5 Any information relating to the manufacture, supply, installation, use and maintenance of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used and maintained. It does not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the manufacture, supply, installation, use and maintenance of this product/system.

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