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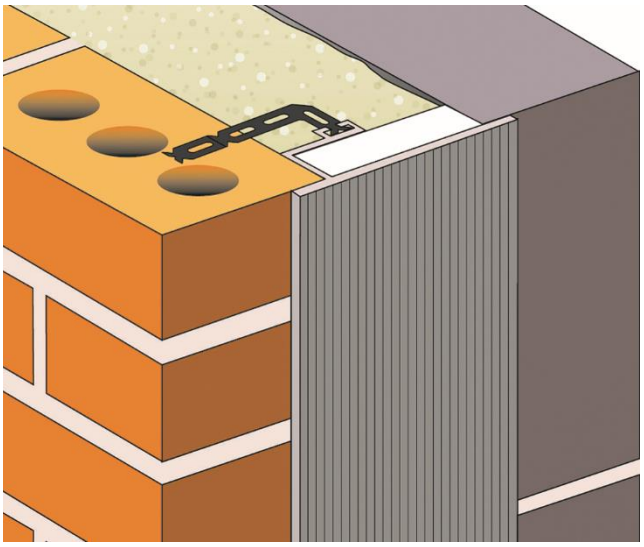
Agrément Certificate
98/3474
Product Sheet 2

DACATIE INSULATED PVC-U CAVITY CLOSERS

DACATIE TF1000, TFR1000 FIRE RATED, TF2000, TFR2000 FIRE RATED AND TF MULTI INSULATED PVC-U CAVITY CLOSERS

This Agrément Certificate Product Sheet(1) relates to Dacatie TF1000, TFR1000 Fire Rated, TF2000, TFR2000 Fire Rated and TF Multi Insulated PVC-U Cavity Closers, for use as cavity closers (TF1000 cavity width 50 to 100 mm, TF2000 cavity width 110 to 160 mm and TF Multi cavity width 100 to 160 mm) and to form an opening in masonry cavity walls.

(1) Hereinafter referred to as 'Certificate'.



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 products meet and exceed the minimum thermal resistance path of 0.45 $m^2 \cdot K \cdot W^{-1}$ as required by the Accredited Construction Details. Default c-values (psi) in BRE Information Paper IP 1/06 may, therefore, be used for jamb and sill junctions in SAP or SBEM calculations (see section 6).

Weather resistance — the products are 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 7).

Structural stability — in terms of wind loading resistance, the products can be used in all areas of the UK. The products must not be used to support loads from the masonry (see section 8).

Properties in relation to fire — Dacatie TFR1000 and TFR2000 cavity closers can contribute to a construction satisfying the requirements of the national Building Regulations (see section 9).

Durability — the cavity closer profiles, protected within the cavity, will continue to function for the normal expected life of the building in which they are installed (see section 11).

The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Third issue: 14 September 2020

Originally certificated on 12 February 2007

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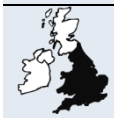
Regulations

In the opinion of the BBA, Dacatie TF1000, TFR1000 Fire Rated, TF2000, TFR2000 Fire Rated and Multi Insulated PVC-U Cavity Closers, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	**B3(4)**	**Internal fire spread (structure)**
Comment:		Dacatie TFR1000 Fire Rated and TFR2000 Fire Rated closers can contribute to a construction satisfying this Requirement. See section 9.2 of this Certificate.
Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The products have adequate resistance to the ingress of rain and wind-driven spray and so can contribute towards the wall satisfying this Requirement. See section 7 of this Certificate.
Requirement:	**C2(c)**	**Resistance to moisture**
Comment:		The products will not constitute a significant condensation risk and so can contribute towards the wall satisfying this Requirement. See sections 6.2 and 6.3 of this Certificate.
Requirement:	**L1(a)(i)**	**Conservation of fuel and power**
Comment:		The products can contribute to minimising heat loss at jambs and sills. See section 6.1 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The products are acceptable. See section 11 and the *Installation* part of this Certificate.
Regulation:	**26**	**CO_2 emission rates for new buildings**
Regulation:	**26A**	**Fabric energy efficiency rates for new dwellings (applicable to England only)**
Regulation:	**26A**	**Primary energy consumption rates for new buildings (applicable to Wales only)**
Regulation:	**26B**	**Fabric performance values for new dwellings (applicable to Wales only)**
Comment:		The products can contribute to minimising heat loss at jambs and sills. See sections 6.1 and 6.2 of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)**	**Durability, workmanship and fitness of materials**
Comment:		The products can contribute to a construction satisfying this Regulation. See section 11 and the *Installation* part of this Certificate.
Regulation:	**9**	**Building standards applicable to construction**
Standard:	2.4	Cavities
Comment:		TFR1000 Fire Rated and TFR2000 Fire Rated closers can contribute to a construction satisfying this Standard, with reference to clause 2.4.1[(1)(2)] and Annex 2.B[(1)] or 2.D[(2)]. See section 9.2 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The products have adequate resistance to the ingress of rain and wind-driven spray and so can contribute towards the wall satisfying this Standard, with reference to clauses 3.10.1[(1)(2)] and 3.10.3[(1)(2)]. See section 7 of this Certificate.
Standard:	3.15	Condensation
Comment:		The products will not constitute a significant condensation risk and so can contribute towards the wall satisfying this Standard, with reference to clauses 3.15.1[(1)], 3.15.4[(1)] and 3.15.5[(1)]. See sections 6.2 and 6.3 of this Certificate.

Standard:	6.1(b)	Carbon dioxide emissions
Standard:	6.2	Building insulation envelope
Comment:		The products can contribute to minimising heat loss at jambs and sills, with reference to clauses 6.2.3(1), 6.2.4(1)(2) and 6.2.5(2). See section 6.1 of this Certificate.
Standard:	7.1(a)(b)	Statement of sustainability
Comment:		The products can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard. In addition, the products can contribute to a construction meeting a higher level of sustainability as defined in this Standard, with reference to clauses 7.1.4(1)(2) [Aspects 1(1)(2) and 2(1)], 7.1.6(1)(2) [Aspects 1(1)(2) and 2(1)] and 7.1.7(1)(2) [Aspect 1(1)(2)]. See section 6.1 of this Certificate.
Regulation:	**12**	**Building standards applicable to conversions**
Comment:		Comments in relation to the products under Regulation 9, Standard 1 to 6, 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) 2012 (as amended)

Regulation:	**23**	**Fitness of materials and workmanship**
Comment:		The products are acceptable. See section 11 and the *Installation* part of this Certificate.
Regulation:	**28(b)**	**Resistance to moisture and weather**
Comment:		The products have adequate resistance to the ingress of rain and wind-driven spray and so can contribute towards the wall satisfying this Regulation. See section 7 of this Certificate.
Regulation:	**29**	**Condensation**
Comment:		The products will not constitute a significant condensation risk and so can contribute towards the wall satisfying this Regulation. See section 6.3 of this Certificate.
Regulation:	**35(4)**	**Internal fire spread — Structure**
Comment:		TFR1000 Fire Rated and TFR2000 Fire Rated closers can be used in a construction satisfying this Regulation. See section 9.2 of this Certificate.
Regulation:	**39(a)(i)**	**Conservation measures**
Regulation:	**40(2)**	**Target carbon dioxide emission rate**
Comment:		The products can contribute to minimising heat loss at jambs and sills. See sections 6.1 and 6.3 of this Certificate.

Construction (Design and Management) Regulations 2015
Construction (Design and Management) Regulations (Northern Ireland) 2016

In the opinion of the BBA, this Certificate does not include any content which relates to the obligations of the client, designer (including Principal Designer) and contractor (including Principal Contractor) under these Regulations.

Additional Information

NHBC Standards 2020

In the opinion of the BBA, Dacatie TF1000, TFR1000 Fire Rated, TF2000, TFR2000 Fire Rated and TF Multi Insulated PVC-U Cavity Closers, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 6.1 *External masonry walls.*

1 Description

1.1 The TF1000, TF2000 and TF Multi closers comprise a PVC-U outer profile enclosing a closed-cell extruded polystyrene (XPS) core, a closed cell expanded polystyrene (EPS) core or foil-faced polyisocyanurate (PIR).

1.2 The TFR1000 Fire Rated and TFR2000 Fire Rated closers comprise a PVC-U outer profile enclosing polythene-encapsulated mineral wool insulation.

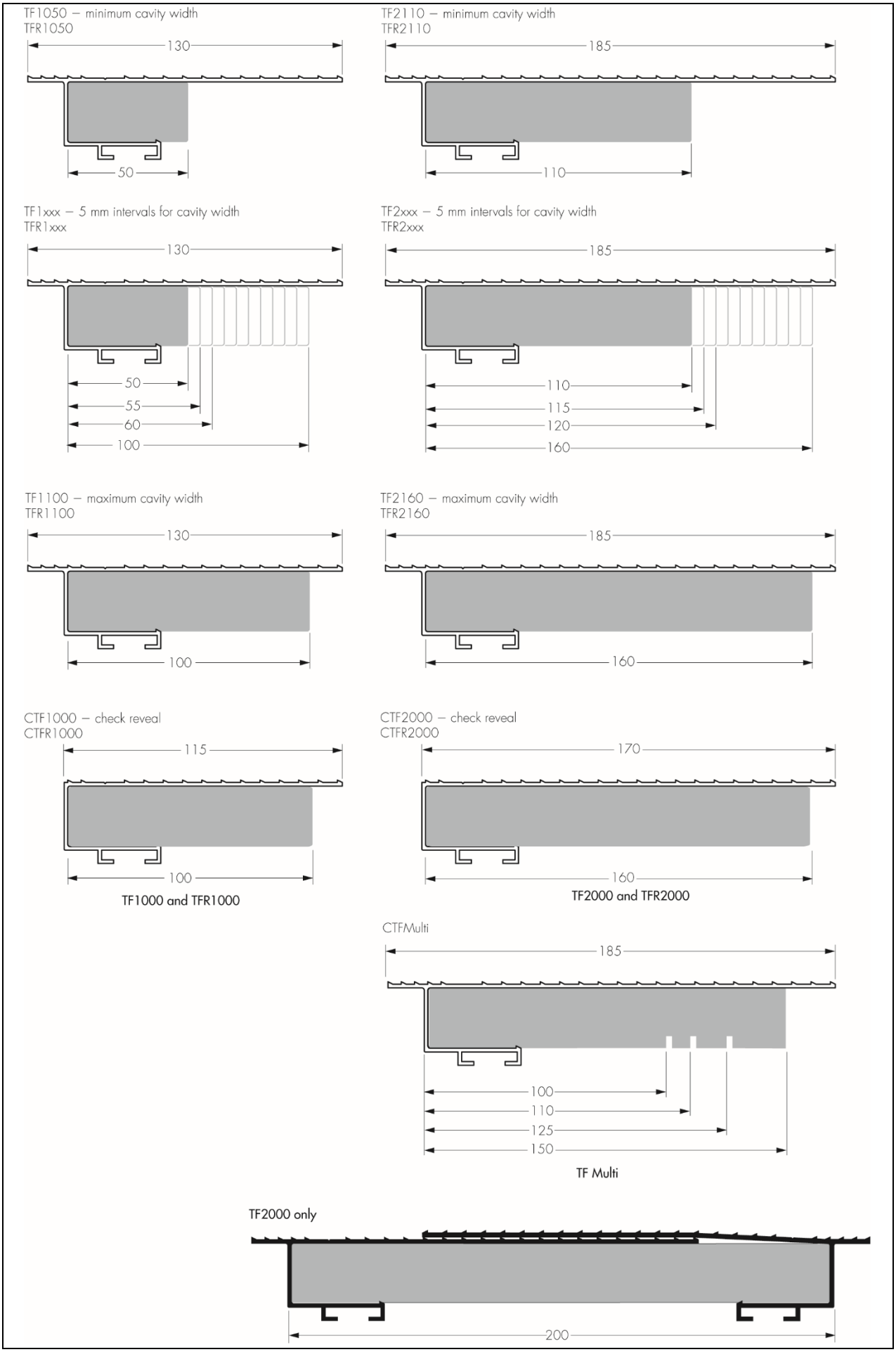
1.3 Dacatie TF1000, TFR1000 Fire Rated, TF2000, TFR2000 Fire Rated and TF Multi Insulated PVC-U Cavity Closers are available in the sizes to suit the cavity widths shown in Table 1 and Figure 1. With the small flange removed, CTF1000, CTFR1000, CTF2000 and CTFR2000 closers can be used in check reveals.

Table 1 Sizes(1) and cavity widths

Closer type	Length (m)	Cavity width (mm)
TF1000	2.1 and 3	50, 65, 75, 85, 90 and 100
TFR1000	2.4	50, 65, 75, 85, 90 and 100
TF2000	2.1 and 3	110, 120, 130, 140, 150 and 160
TFR2000	2.4	110, 120, 130, 140, 150 and 160
TF Multi	2.4	100, 110, 125 and 160

(1) Intermediate sizes in 5 mm intervals are available on request.

Figure 1 TF1000, TFR1000 Fire Rated and TF2000, TFR2000 Fire Rated closers (all dimensions in mm) (example sizes)

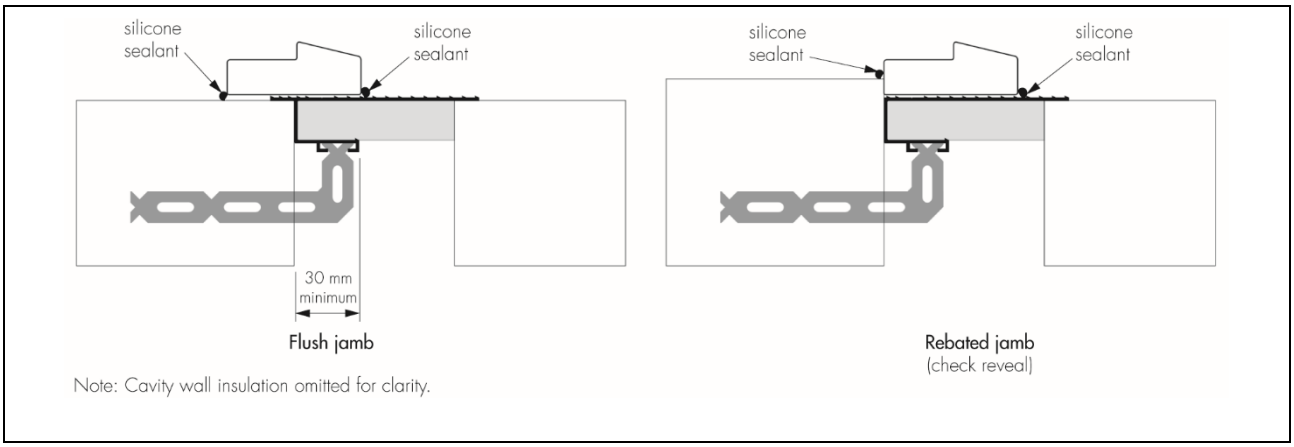


1.4 The PVC-U profiles include the following features:

- flanges that fit over both leaves of masonry
- flanges with nibs to aid plaster adhesion
- channels for locating fixing ties.

1.5 Polypropylene ties, manufactured by standard injection-moulded techniques, are available for fixing the TF/TFR1000, TF/TFR2000 and TF Multi closers to the surrounding masonry (see Figure 2).

Figure 2 Typical jamb details



2 Manufacture

2.1 The cavity closer profiles are manufactured from unplasticised polyvinyl chloride (PVC-U) and are produced by conventional extrusion techniques. Insulation is cut to size and fitted manually in the factory, where necessary with the aid of an acrylic sealant.

2.2 As part of the assessment and ongoing surveillance of system quality, the BBA has:

- agreed with the manufacturer the quality control procedures and system testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 The management system of Quantum Profile Systems Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by SGS (Certificate GB92/1247) and BS EN ISO 14001 : 2015 by SGS (Certificate GB13/8840).

3 Delivery and site handling

3.1 Cavity closer profiles are delivered to site packed in polythene sleeves. Each pack carries an instruction leaflet bearing the marketing company's name and the BBA logo incorporating the number of this Certificate.

3.2 Ties, required for use with Dacatie profiles TF/TFR1000, TF/TFR2000 and TF Multi, are delivered in bags of 100.

3.3 Packs of cavity closer profiles should be stored flat, under cover in a clean area away from direct sunlight and excessive heat, and supported along their length to prevent distortion or damage.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Dacatie TF1000, TFR1000 Fire Rated, TF2000, TFR2000 Fire Rated and TF Multi Insulated PVC-U Cavity Closers.

Design Considerations

4 General

4.1 Dacatie TF1000, TFR1000 Fire Rated, TF2000, TFR2000 Fire Rated and TF Multi Insulated PVC-U Cavity Closers are for use in masonry walls with nominal cavity widths in the range of 50 to 160 mm. The products close the cavity at openings without forming a thermal bridge and provide a damp-proof barrier between inner and outer wall leaves at the point of closure. The products can be used to establish the cavity width and to form an opening, and avoid the need for cutting bricks and blocks. They can be used in check reveal installations.

4.2 Masonry walls into which cavity closers are incorporated must be constructed in accordance with the national Building Regulations and one or more of the following technical specifications:

- BS 8000-0 : 2014
- BS 8000-3 : 2001
- BS EN 1996-1-1 : 2005 and its UK National Annex
- BS EN 1996-1-2 : 2005 and its UK National Annex
- BS EN 1996-2 : 2006 and its UK National Annex
- BS EN 1996-3 : 2006 and its UK National Annex
- PD 6697 : 2019.

4.3 The products are suitable for use with timber, PVC-U, aluminium or steel window and door frames. The closers are non-loadbearing, and window and door frames must be fixed independently to the masonry. Proprietary window and door frame fixings, which may be recommended by the Certificate holder for this purpose, are outside the scope of this Certificate.

4.4 The TF1000, TFR1000, TF2000, TFR2000 and TF Multi closers are for use in a flush jamb opening, with a flange located over both inner and outer leaves.

4.5 The CTF1000, CTFR1000, CTF2000, CTFR2000 and CTF Multi are for use in a check reveal detail in which the frame is positioned in a jamb rebate behind the outer leaf (see Figure 2) and to fit the window after completion of the masonry, as is conventional practice in some areas.

4.6 By virtue of the nibs down the length of the PVC-U flange, the products can provide a key for traditional plaster finishes (see also section 14.8).

5 Practicability of installation

The products are designed to be installed by a competent general builder, or a contractor, experienced with these types of products.

6 Hygrothermal behaviour

6.1 The products can contribute to maintaining continuity of thermal insulation at jambs and sills in wall openings. The path of minimum thermal resistance through the closers, calculated to BRE Information Paper IP 8/08 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 or more into the wall cavity (see Figure 2). Example junction details shown in Figure 2 are acceptable. For Accredited Construction Details, the corresponding heat loss rates ψ-values (psi) in BRE Information Paper IP 1/06, 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 infiltration can be found in the documents supporting the national Building Regulations.

6.2 Jambs and sills incorporating the products, in accordance with section 6.1, will adequately limit the risk of local surface condensation.

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

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

6.5 The junctions between the wall and the front and back of the window/door frame must be sealed effectively.

7 Weather resistance

7.1 The products are effective as a vertical damp-proof barrier at jambs of window and door openings in masonry constructions, where a brick/block closer and damp-proof course (dpc) detail would normally be used. The closers are also effective as a horizontal damp-proof barrier at the sill or threshold.

7.2 Installations with a flush (in-line) wall opening and a minimum window setback of 30 mm (see section 6.1 and Figure 2) are suitable for use in the exposure zones 1 (sheltered), 2 (moderate) and 3 (severe), as depicted in the map shown in section 3.1 of BRE Report BR 262 : 2002. The closers may also be considered suitable for use in other locations where a conventional return brick/block closer detail with dpc has been found to provide adequate resistance to the penetration of wind-driven rain.

7.3 The CTF1000, CTFR1000, CTF2000, CTFR2000 and CTF Multi (see section 4.5) closers may also be used to construct a check reveal (see Figure 2). In this construction, in which the frame is positioned in a rebate behind the outer leaf of the jamb, the products are suitable for use in exposure zones up to and including zone 4 (very severe), as depicted in the map shown in section 3.1 of BRE Report BR 262 : 2002, which covers all exposure zones in the United Kingdom.

8 Structural stability

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

8.2 The products 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 4.2 of this Certificate. Use of the products does not obviate the need for conventional wall ties around the openings.

8.3 Window and door frames should be fixed to the masonry by conventional means in addition to any fixings to the closers(1).

(1) Outside the scope of this Certificate.

9 Properties in relation to fire

Dacatie TF1000, TF2000 and TF Multi

9.1 The products do not constitute a cavity barrier against the penetration of smoke and flame; therefore, they should be used in conjunction with cavity barriers, where required and in accordance with the requirements defined in the documents supporting the national Building Regulations.

Dacatie TFR1000 Fire Rated and TFR2000 Fire Rated

9.2 The Dacatie TFR2160 Fire Rated cavity closer was tested for fire resistance in accordance with BS 476-20 : 1987 and achieved the fire resistance ratings given in Table 2 of this Certificate, with respect to both integrity and insulation. It can therefore act as a cavity barrier for the specific constructions tested, where required by the documents supporting the national Building Regulations. Full details of the constructions tested and referenced in Table 2 are available from the Certificate holder.

Table 2 Integrity and insulation ratings for Dacatie TFR2160 Fire Rated cavity closer

Maximum cavity width (mm)	Cavity closer details	Test Report[1]	Position of cavity closer[3]	Integrity rating[2] (minutes)	Insulation rating[2] (minutes)
160	Dacatie TFR2160 Fire Rated cavity closer (overall size 160 mm wide by 900 mm long by 25 mm thick, mineral wool uncompressed encapsulated in polythene sleeve, density 140 kg m^{-3})	Test Report WF No 157351, dated 17 November 2006	Vertically mounted[4] from the face exposed to the heating conditions of the test	60	60
			Vertically mounted[5] from the face unexposed to the heating conditions of the test	30	30
			Horizontally mounted[5] from the face unexposed to the heating conditions of the test	60	60

(1) Further details can be provided by the Certificate holder.
(2) Test was discontinued after a period of 90 minutes.
(3) The cavity closer was not tested horizontally mounted from the face exposed to the heating conditions of the test.
(4) Simulating fire in the cavity (fire break into compartment).
(5) Simulating fire in the compartment (fire break out into cavity).

9.3 Other versions of the products or constructions required to act as cavity barriers, as specified by the relevant national Building Regulations, must be assessed/tested in accordance with the requirements of the documents supporting the Regulations .

Dacatie TF1000, TFR1000 Fire Rated, TF2000, TFR2000 Fire Rated and TF Multi

9.4 The use of the products does not exclude the need to provide suitable fire protection to steel lintels where this is necessary to satisfy the requirements of the national Building Regulations.

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 products are durable and when installed in accordance with this Certificate and will not suffer significant degradation when protected within the cavity. The products will continue to function for the normal expected life of the building in which they are installed.

12 Reuse and recyclability

The PVC-U profiles of the products can be recycled.

Installation

13 General

13.1 Installation of the Dacatie TF1000, TFR1000 Fire Rated, TF2000, TFR2000 Fire Rated and TF Multi Insulated PVC-U Cavity Closers must be carried out in accordance with the Certificate holder's instructions.

13.2 A cavity barrier may be required (see sections 9.1 and 9.3).

13.3 The appropriate closer is selected for the job (see sections 4.1, 4.3 and 4.4).

13.4 Reference should be made to the typical installation details shown in Figure 2 when reading the installation details given in section 14. The windows in this Figure are shown for information only and do not form part of this assessment.

13.5 When installing the products, the exposed insulation should always be positioned against the inner leaf (see Figure 2).

13.6 In cutting the products to length, care should be taken to achieve clean, flat, square ends.

13.7 Window/door frames must be set back at least 30 mm behind the inner face of the outer leaf to meet thermal requirements (see section 6.1 and Figure 2).

14 Procedure

Closer built-in during construction of wall and prior to installation of window or door

14.1 The cavity wall is built to one course above sill/threshold level either side of the opening, ensuring that the course work is level and flat and that all excess mortar is removed.

14.2 A section of closer is cut to length and pushed into the sill cavity.

14.3 The jamb closers are cut 50 mm longer than the sill closer. The PVC-U flanges are cut away at the base of the closer, which is subsequently pushed into the cavity, propped in a vertical position and butted against the sill closer, with the cut flanges seated on the masonry at sill level.

14.4 As the wall is built up around the jamb closers, ties are inserted into the closer channels, rotated through 90°, with one of these ties embedded in every third mortar course of brickwork, and every course of blockwork tying the closers into both the inner and outer courses.

14.5 The procedures for flush and rebated jambs are essentially the same as described in sections 14.1 to 14.4. However, for the rebated jambs application the following should be noted:

- there is no flange at the base of the outer PVC-U jamb section to be removed
- the sill section should be cut to sill length plus twice the rebated length
- where a timber window frame is used, a dpc strip should be positioned between the frame and outer leaf.

14.6 Appropriate insulated lintels and ancillary damp-proof protection are butted onto (but not supported by) the jamb closers at the head, and window/door frames are fixed to the outer leaf with proprietary fixings(1).

(1) Outside the scope of this Certificate.

14.7 An effective sealant is applied over a back-up strip between the front and back of the window/door frame and the inner and outer leaf.

14.8 Either wet plaster or a dry lining on plaster dabs is applied to the internal reveal. In locations where the plaster may be subject to repeated impact (eg at door reveals from door slamming), it is recommended that wet plaster is reinforced by hessian scrim or, preferably, replaced by dry lining.

Closer built-in after construction of wall, and prior to installation of window or door (second fix)

14.9 The closers may be incorporated into the wall after construction and prior to the installation of the window or door frame.

14.10 A section of closer is cut to length and pushed into the sill cavity.

14.11 The jamb closers are cut 50 mm longer than the sill closer. The PVC-U flanges are cut away at the base of the closer, which is subsequently pushed into the cavity, propped in a vertical position and butted against the sill closer, with the cut flanges seated on the masonry at sill level. The closer is secured (jamb section only) to the masonry through the flange, using galvanized or non-ferrous clout nails(1) through the overlapping flange(s).

(1) Outside the scope of this Certificate.

Closer built-in with window or door frame

14.12 The closers may be incorporated into the wall after pre-fixing to the window or door frame.

14.13 The closer lengths are cut as described in sections 14.2, 14.3 and 14.5 and the closer secured to the window or door frame through the PVC-U flange (or body of the closer), using galvanized or non-ferrous clout nails(1) (timber frame), or self-tapping screws(1) (PVC-U or metal frame).

(1) Outside the scope of this Certificate.

14.14 The window or door frame with closers attached is positioned with the sill closer in the cavity. The masonry is built up around the window/door frame and jamb closer assembly and the installation completed as described in sections 14.4 to 14.8.

Closer built-in with timber template

14.15 A section of closer is cut to length and pushed into the sill cavity.

14.16 The jamb closers are cut as described in section 14.3, and tacked to the top of the sides of a timber template cut to the size of the opening.

14.17 The template is positioned on the sill, with the jamb closers extending into the cavity and the wall built up around the jamb closers as detailed in section 14.4.

14.18 As the wall approaches head height, the tacks and their timber template are removed.

14.19 The wall is completed around the opening, as described in sections 14.6 and 14.7.

Refurbishment

14.20 The closers are suitable for use in refurbishment work. For this application, the opening must first be 'cleaned' ready to take the new closer.

14.21 The closer lengths are cut as described in sections 14.2, 14.3 and 14.5, inserted into the cavity (jamb sections before sill) and secured (jamb section only) to the masonry through the flange using galvanized or non-ferrous clout nails (outside the scope of this Certificate).

14.22 The window or door frame is then fixed to masonry (fixings outside the scope of this Certificate) and the installation completed as described in sections 14.7 and 14.8.

Technical Investigations

15 Tests

Tests were carried out on the PVC-U extrusions to determine:

- shrinkage on heating
- gelation by immersion in acetone.

16 Investigations

16.1 An assessment was made of:

- heat loss and condensation risk
- weather resistance of the products
- the practicability of the installation
- fire resistance and structural stability of walls incorporating the products
- durability of the components used in the construction of the products.

16.2 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and compositions of material used.

Bibliography

BRE Information Paper IP 1/06 *Assessing the effects of thermal bridging at junctions and around openings*
BRE Information Paper IP 8/08 *Determining the minimum thermal resistance of cavity closers*

BRE Report BR 262 : 2002 *Thermal insulation : avoiding risks*

BS 476-20 : 1987 *Fire tests on building materials and structures — Method for determination of the fire resistance of elements of construction (general principles)*

BS 8000-0 : 2014 *Workmanship on construction sites — Introduction and general principles*
BS 8000-3 : 2001 *Workmanship on sites — Code of practice for masonry*

BS EN 1996-1-1 : 2005 + A1 : 2012 *Eurocode 6 : Design of masonry structures — General rules for reinforced and unreinforced masonry structures*
NA to BS EN 1996-1-1 : 2005 + A1 : 2012 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 ISO 9001 : 2015 *Quality management systems — Requirements*

BS EN ISO 14001 : 2015 *Environmental management systems — Requirements with guidance for use*

PD 6697 : 2019 *Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2*

17 Conditions

17.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- 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.

17.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

17.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and 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.

17.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

17.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- 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
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

17.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal 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, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue 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.