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Agrément Certificate

17/5462

Product Sheet 1 Issue 2

VISTA WALL PRODUCTS

VISTA RANGE OF CAVITY WALL TIES

This Agrément Certificate Product Sheet⁽¹⁾ relates to the Vista Range of Cavity Wall Ties, for use in new-build or retrofit constructions. The ties comprise austenitic stainless steel, and are for use in tying conventional masonry cavity walls, with cavities up to 150 mm (nominal) in width. The ties are for use in securing insulation boards, slabs or batts.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

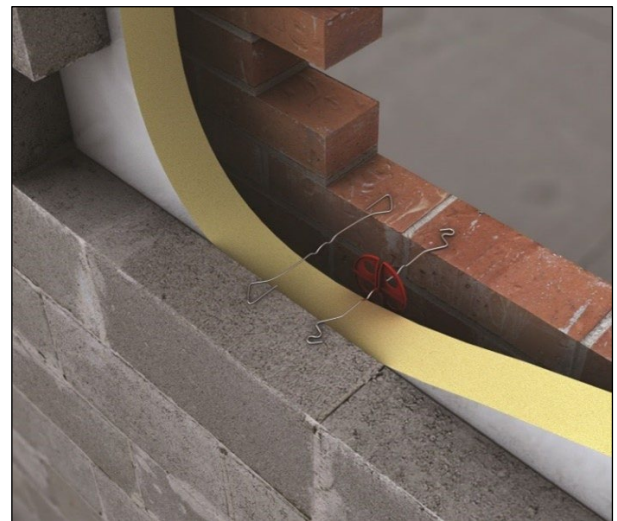
- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review



KEY FACTORS ASSESSED

- Section 1. Mechanical resistance and stability
- Section 2. Safety in case of fire
- Section 3. Hygiene, health and the environment
- Section 4. Safety and accessibility in use
- Section 5. Protection against noise
- Section 6. Energy economy and heat retention
- Section 7. Sustainable use of natural resources
- Section 8. Durability

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 the Second issue: 10 October 2023

Certificate amended on 23 October 2023 to correct

mean load capacity in tension.

Originally certificated on 5 October 2017

Hardy Giesler
Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that the Vista Range of Cavity Wall Ties, 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 Building Regulations 2010 (England and Wales) (as amended)

Requirement:	A1	Loading
Comment:		The products can contribute to the strength and stability of cavity walls. See sections 1 and 9 of this Certificate.
Requirement:	B3(1)	Internal fire spread (structure)
Comment:		The products will not adversely affect the fire resistance of the wall. See section 2 of this Certificate.
Requirement:	C2(b)(c)	Resistance to moisture
Comment:		The products will not adversely affect the resistance of the wall to the passage of moisture. See section 3 of this Certificate.
Requirement:	L1(a)(i)	Conservation of fuel and power
Comment:		The products can contribute to satisfying this Requirement. See section 9 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The products are acceptable. See section 9 of this Certificate.
Regulation:	26	CO2 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 satisfying these Regulations. See section 9 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The products can contribute to a construction satisfying this Regulation. See sections 8 and 9 of this Certificate.
Regulation:	9	Building standards - construction
Standard:	1.1(a)(b)	Structure
Comment:		The products can contribute to satisfying this Standard in relation to clauses 1.1.1 ⁽¹⁾⁽²⁾ , 1.1.2 ⁽¹⁾⁽²⁾ and 1.1.3 ⁽¹⁾⁽²⁾ . See sections 1 and 9 of this Certificate.
Standard:	2.3	Structural protection
Standard:	2.4	Cavities
Standard:	2.6	Spread to neighbouring buildings
Comment:		The products can contribute to a construction satisfying these Standards, with reference to clauses 2.3.1 ⁽¹⁾⁽²⁾ , 2.3.2 ⁽¹⁾⁽²⁾ , 2.6.1 ⁽¹⁾⁽²⁾ , 2.6.5 ⁽¹⁾ and 2.6.6 ⁽²⁾ . See section 2 of this Certificate.

Standard:	3.10	Precipitation
Comment:		The products will not adversely affect the resistance of the wall to the passage of moisture, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ , 3.10.3 ⁽¹⁾⁽²⁾ and 3.10.6 ⁽¹⁾⁽²⁾ of this Standard. See section 3 of this Certificate.
Standard:	6.2	Building insulation envelope
Comment:		The products can contribute to satisfying this Standard. See section 2 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.
Regulation:	12	Building standards - conversion
Comment:		All comments given for the products under Regulation 9, Standards 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(1)(a)(i)	Fitness of materials and workmanship
Comment:	(iii)(b)	The products are acceptable. See section 9 of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		The products will not adversely affect the resistance of the wall to the passage of moisture. See section 3 of this Certificate.
Regulation:	30	Stability
Comment:		The products can contribute to the strength and stability of cavity walls. See section 1 of this Certificate.
Regulation:	35(1)	Internal fire spread — Structure
Regulation:	36(a)	External fire spread
Comment:		The products can contribute to satisfying these Regulations. See section 2 of this Certificate.
Regulation:	39(a)(i)	Conservation measures
Regulation:	40(2)	Target carbon dioxide emission rate
Comment:		The products can contribute to satisfying these Regulations. See section 9 of this Certificate.

Additional Information

NHBC Standards 2023

In the opinion of the BBA, the Vista Range of Cavity Wall Ties, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Part 6 *Superstructure (excluding roofs)*, Chapter 6.1 *External masonry walls*.

Fulfilment of Requirements

The BBA has judged the Vista Range of Cavity Wall Ties to be satisfactory for use as described in this Certificate. The products have been assessed as cavity wall ties for use in tying conventional masonry cavity walls, with cavities up to 150 mm (nominal) in width, and for securing insulation boards, slabs or batts, in new-build or retrofit constructions.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the products under assessment. The Vista Range of Cavity Wall Ties comprise austenitic stainless steel and are for use in tying conventional masonry cavity walls with cavities of up to 150 mm (nominal) in width and for securing insulation boards, slabs or batts for new-build or retrofit constructions (see Figure 1).

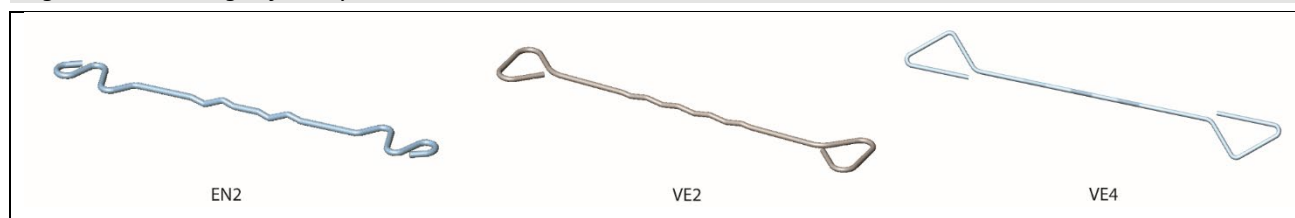
The cavity wall tie dimensions are given in Table 1.

Table 1 Cavity wall tie dimensions

Tie name	Wall tie Type ⁽¹⁾	Tie length (mm)	Tie diameter (mm)	Max cavity widths (mm)
EN2-200	2	200	3.0	75
EN2-225	2	225	3.0	100
EN2-250	2	250	3.3	125
VE2-275	2	275	3.6	150
VE4-200	4	200	2.3	75
VE4-225	4	225	2.3	100
VE4-250	4	250	2.7	125
VE4-275	4	275	2.7	150

(1) Type classification as defined in PD 6697 : 2019.

Figure 1 Vista Range of Cavity Wall Ties



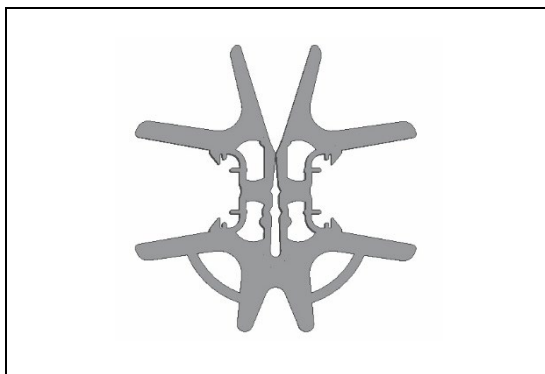
Ancillary items

The Certificate holder recommends the following ancillary items for use with the product, but these materials have not been assessed by the BBA and are outside the scope of this Certificate:

- insulation retaining clips
- insulation boards, slabs or batts.

The insulation retaining clips, made from polypropylene, are 75 mm in diameter (see Figure 2) and are available from the Certificate holder for retaining insulation boards, slabs or batts in partially filled cavities. Quality control includes a check that the clip fits securely to the ties.

Figure 2 Polypropylene insulation-retaining clip



Product assessment – key factors

The products were assessed for the following key factors, and the outcomes of the assessments are shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Data were assessed for the following characteristic.

1.1 Properties in relation to loading

1.1.1 The Cavity Wall Ties were tested for compressive strength and tensile load capacity in accordance with BS EN 845-1 : 2013, and the results are given in Table 2 of this Certificate.

Table 2 Compressive strength and tensile load capacity tested to BS EN 846-5 : 2012

Product assessed	Assessment method	Requirement	Result
EN2-200	Mean load capacity in compression	Declared value	1321N
	Mean load capacity in tension		2149N
EN2-225	Mean load capacity in compression	Declared value	1321N
	Mean load capacity in tension		2149N
EN2-250	Mean load capacity in compression	Declared value	1398N
	Mean load capacity in tension		1818N
VE2-275	Mean load capacity in compression	Declared value	1410N
	Mean load capacity in tension		2200N
VE4-200	Mean load capacity in compression	Declared value	557N
	Mean load capacity in tension		1256N
VE4-225	Mean load capacity in compression	Declared value	557N
	Mean load capacity in tension		1256N
VE4-250	Mean load capacity in compression	Declared value	480N
	Mean load capacity in tension		1580N
VE4-275	Mean load capacity in compression	Declared value	380N
	Mean load capacity in tension		1640N

1.1.2 The Cavity Wall Ties when tested for compressive strength and tensile load capacity were found to be suitable for the following applications, as defined in PD 6697 : 2019.

- EN2 and VE2 — Type 2 (general purpose)
- VE4 — Type 4 (light duty).

2 Safety in case of fire

2.1 Reaction to fire

2.1.1 The Cavity Wall Ties have a reaction to the fire classification of A1 in accordance with BS EN 13501-1 : 2018.

2.1.2 On the basis of data assessed, the use of the products is unrestricted by the documents supporting the national Building Regulations.

2.1.3 Guidance on the fire resistance of cavity walls incorporating conventional wire ties is given in BS EN 1996-1-2 : 2005 and its UK National Annexes.

3 Hygiene, health and the environment

3.1 Weathertightness

The water-shedding details of the ties are effective in preventing the transfer of water across the ties to the inner leaf. The drip is located in the centre of the cavity wall or residual cavity between the insulation and the external leaf of the wall.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Not applicable.

7 Sustainable use of natural resources

Not applicable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in the products were assessed.

8.2 Service life

Under normal service conditions, the products will have a life of at least 60 years, provided they are designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA, and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 The Vista Range of Cavity Wall Ties are satisfactory for use across unfilled cavities or those partially filled with insulation boards, slabs or batts (in conjunction with polypropylene insulation-retaining clips). The ties are also suitable for use in cavities fully filled with insulation approved by the BBA, subject to the conditions specified in the relevant BBA Certificate relating to the insulation.

9.1.3 Masonry walls incorporating the ties must be constructed in accordance with the following technical specifications:

- PD 6697 : 2019
- BS EN 1996-1-1 : 2005, BS EN 1996-1-2 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006 and their UK National Annexes, the national Building Regulations and their supporting documents.

9.1.4 The ties must be specified in accordance with the requirements of BS EN 1996-1-1 : 2005, BS EN 1996-1-2 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006 and their UK National Annexes, PD 6697 : 2019 and BS EN 845-1 : 2013.

9.1.5 The minimum nominal embedment of the ties in the mortar joint is 62.5 mm. The minimum embedment, allowing for site tolerances in cavity widths and centring of ties, is 50 mm.

9.1.6 The ties are suitable for use in the cavity widths shown in Table 1.

9.1.7 When used in clear or partially filled cavities, a drip must lie at, or close to, the centre of the cavity or residual cavity.

9.1.8 Ties must be evenly distributed over the wall, and for walls in which both leaves are at least 90 mm thick, at a minimum density of 2.5 ties per square metre. To achieve this tie density, it is normal practice to install the product at 900 mm centres horizontally and 450 mm centres vertically, with successive rows staggered. In partially filled applications, alternative spacing may be appropriate to suit the size of board and to ensure that the boards are adequately restrained. However, the density of ties must not fall below 2.5 ties per square metre. At the vertical edges of openings and at vertical unreturned or unbonded edges (for example, at movement joints and up the sloping verge of gable walls), additional wall ties must be used at a rate of one tie per 300 mm height or equivalent, placed not more than 225 mm from the edge.

9.1.9 The ties can be readily built into brickwork or blockwork during construction.

9.1.10 Where 1200 mm insulation boards are used with partial fill cavities, the wall ties should:

- be spaced closer to provide adequate support and restraint.
- be spaced at 600 mm centres in rows, ie not staggered.

9.1.11 The ties are sufficiently flexible to allow in-plane differential movement of the two connected leaves of masonry in the vertical direction of up to 12 mm and also to allow site adjustment for differences in height between inner and outer leaves of up to 25 mm.

Thermal performance

9.1.12 In England, Wales and Scotland, thermal losses through wall ties in insulated cavities need to be taken into account if, in conjunction with thermal losses through air gaps in the insulation, they amount to 3% or more of the uncorrected thermal loss through the wall. Calculations of thermal transmittance (U value), including correction for wall ties if required, must be carried out in accordance with BS EN ISO 6946 : 2017 and BRE Report BR 443 : 2019, taking into account tie density, tie diameter and the thermal conductivity of $0.71 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$ for the wall tie .

9.1.13 In Northern Ireland, the ties can be disregarded when calculating the thermal transmittance of masonry cavity walls.

9.1.14 The walls must be designed to limit the risk of interstitial and surface condensation. Guidance may be obtained from BS 5250 : 2021 and BRE Report BR 262 : 2002.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 It is not normal practice for the ties to be installed across cavities (or residual cavities) less than 50 mm wide. Where this does occur, it is important to ensure that the requirements relating to weathertightness are satisfied.

9.2.3 The ties must be installed in accordance with the requirements of PD 6697 : 2019, BS EN 1996-1-1 : 2005, BS EN 1996-1-2 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006.

9.2.4 At the time the ties are laid, they must be sandwiched between mortar in a 10 mm (nominal) horizontal bed joint, to a minimum embedment length of 50 mm (design embedment, 62.5 mm). Care must be taken to ensure the drip is at, or close to, the centre of the cavity (or residual cavity) and that the ties are placed horizontally or with a slight fall to the outer leaf of the wall, and at right angles to the walls.

9.2.5 The first run of ties must be laid as near as possible to, though not directly on, the damp-proof course.

9.2.6 Normal precautions must be taken to prevent mortar droppings and protrusions impairing the functioning of the drips.

9.3 Workmanship

Practicability of installation was assessed by the BBA on the basis of the Certificate holder's information and site visits to witness installation in progress. To achieve the performance described in this Certificate, installation of the products must be carried out by a competent general builder, or a contractor, experienced with these types of products.

9.4 Maintenance and repair

As the products are confined wholly within the wall cavity for their entire service life, and have suitable durability (see section 8), maintenance is not required.

10 Manufacture

10.1 The production processes for the products have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The ties are manufactured from austenitic stainless steel conforming to steel number 1.4301 in accordance with BS EN 10088-3 : 2014.

10.1.2 The manufacturer has provided documented information on the materials, processes, testing, and control factors.

10.1.3 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.4 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.5 The process for management of non-conformities has been assessed and deemed appropriate and adequate. An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review 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.

11 Delivery and site handling

11.1 The Certificate holder stated that the ties are delivered packed in bundles or boxes of 250, and the clips in polythene bags of 250 or cardboard cartons (each with eight bags of 50).

11.2 All containers bear the Certificate holder's name, the product identification and the BBA logo incorporating the number of this Certificate.

Supporting information in this Annex is relevant to the products but has not formed part of the material assessed for the Certificate.

Construction (Design and Management) Regulations 2015

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

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

CE marking

The Certificate holder has taken the responsibility of CE marking the products in accordance with harmonised European Standard EN 845-1 : 2013.

Management Systems Certification for production

The management system of Vista Engineering Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by Alcumus ISOQAR (Certificate 14733-QMS-001).

Bibliography

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

BRE Report BR 443 : 2006 *Conventions for U-value calculations*

BS 5250 : 2021 *Management of moisture in buildings — Code of practice*

BS EN 845-1 : 2013 + A1 : 2016 *Specification for ancillary components for masonry — Wall ties, tension straps, hangers and brackets*

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 + A1 : 2014 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 10088-3 : 2014 *Stainless steels — Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general purposes*

BS EN ISO 6946 : 2017 *Building components and building elements — Thermal resistance and thermal transmittance — Calculation method*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

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

Conditions of Certificate

Conditions

1 This Certificate:

- relates only to the product 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.

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.

3 This Certificate will be displayed on the BBA website, and the Certificate Holder is entitled to use the Certificate and Certificate logo, provided that the product 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.

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

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

6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product which is contained or referred to in this Certificate is the minimum required to be met when the product 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.

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