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**Agrément
Certificate
No 01/3790**

Designated by Government
to issue
European Technical
Approvals

KEYBEMO SECRET FIX ROOF SYSTEMS

Système de couverture
Dacheindeckungen

Product

• THIS CERTIFICATE RELATES TO KEYBEMO SECRET FIX ROOF SYSTEMS, COMPRISING PROFILED ALUMINIUM ALLOY (UNCOATED OR COATED) SHEETS AND ACCESSORIES FOR FIXING TO STEEL OR TIMBER SUBSTRUCTURES.

• The systems are for use as fully finished structural roofs with slopes from 1.5° to 60° where access is available for maintenance and repair only.

• The products are weathertight and structurally stable within the limits set out in this Certificate, and is intended to be fixed to steel or timber purlins and rafters.

These Front Sheets must be read in conjunction with the accompanying Detail Sheets, which provide information specific to particular systems.

Regulations — Detail Sheet 1**1 The Building Regulations 2000 (England and Wales)**

The Secretary of State has agreed with the British Board of Agrément aspects of performance to be used by the BBA in assessing the compliance of roof decks and waterproofing with the Building Regulations. In the opinion of the BBA, KeyBEMO Secret Fix Roof Systems, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements.

Requirement: **A1**

Comment:

Loading

KeyBEMO Secret Fix Roof Systems have sufficient strength and stiffness to sustain and transmit the design load in accordance with sections 2.1 to 2.4 of the relevant Detail Sheet.

Requirement: **B4(2)**

Comment:

External fire spread

The external surface of KeyBEMO sheets can be taken to have a notional AA designation as defined by BS 476-3 : 1958 and therefore is not subject to the limitations of a minimum distance from any point on a boundary. See section 6 of the relevant Detail Sheet.

Requirement: **C4**

Comment:

Resistance to weather and ground moisture

When subjected to the maximum design load given in sections 2.1 to 2.4 of the relevant Detail Sheet and installed in accordance with this Certificate the systems will resist passage of moisture to the inside of the building.

continued

Requirement:	F2	Condensation in roofs
Comment:		A roof construction incorporating a system can be designed to satisfy this Requirement. See sections 3.1 to 3.3 of the relevant Detail Sheet.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The systems are acceptable. See sections 8.1 to 8.6 of the relevant Detail Sheet.

2 The Building Standards (Scotland) Regulations 1990 (as amended)



In the opinion of the BBA, KeyBEMO Secret Fix Roof Systems, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Technical Standards as listed below.

Regulation:	10	Fitness of materials
Standard:	B2.1	Selection and use of materials and components
Comment:		The products are acceptable. See sections 8.1 to 8.6 of the relevant Detail Sheet.
Regulation:	11	Structure
Standard:	C2.1	Construction
Comment:		The systems have sufficient strength and stiffness to transmit the design load in accordance with sections 2.1 to 2.4 of the relevant Detail Sheet.
Regulation:	12	Structural fire precautions
Standard:	D2.5	Separation of roofs and rooflights from boundaries
Comment:		The KeyBEMO sheets have an AA designation and when installed in accordance with this Certificate can satisfy this Standard. See section 6 of the relevant Detail Sheet.
Regulation:	17	Resistance to moisture
Regulation:	18	Resistance to condensation
Standard:	G3.1	Resistance to precipitation
Comment:		When subjected to the maximum design load given in sections 2.1 to 2.4 of the relevant Detail Sheet and installed in accordance with this Certificate, the systems will resist the passage of moisture to the inside of the building.
Standard:	G4.1	Interstitial condensation
Standard:	G4.2	Surface condensation
Comment:		Roof constructions incorporating the systems can be designed to satisfy the requirements of these Standards. See sections 3.1 to 3.3 of the relevant Detail Sheet.

3 The Building Regulations (Northern Ireland) 1994 (as amended)



In the opinion of the BBA, KeyBEMO Secret Fix Roof Systems, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Building Regulations as listed below.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The products are acceptable. See sections 8.1 to 8.6 of the relevant Detail Sheet.
Regulation:	C5	Resistance to ground moisture and weather
Comment:		When subjected to the maximum design load given in sections 2.1 to 2.4 of the relevant Detail Sheet and installed in accordance with this Certificate, the systems will resist the passage of moisture to the inside of the building.
Regulation:	C7	Condensation
Comment:		Roof constructions incorporating the systems can be designed to satisfy the requirements of these Regulations. See sections 3.1 to 3.3 of the relevant Detail Sheet.
Regulation:	D1	Stability
Comment:		The systems have sufficient strength and stiffness to sustain and transmit the design load in accordance with sections 2.1 to 2.4 of the relevant Detail Sheet.
Regulation:	E8	External fire spread
Comment:		The external surface of the KeyBEMO sheets can be taken to have a notional AA designation as defined by BS 476-3 : 1958 and therefore is not subject to the limitation of a minimum distance from any point on a boundary. See section 6 of the relevant Detail Sheet.

4 Construction (Design and Management) Regulations 1994

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See section: *6 Delivery and handling.*

Technical Specification

5 Description

5.1 KeyBEMO Secret Fix Roof Systems are coverings of interlocking profiled aluminium alloy sheets attached to the roof substructure by special halters fixed by mechanical fasteners to the roof purlins or decking profile. No visible through fixing of the roof sheeting is required.

5.2 The halters are fixed using fasteners bought to the Certificate holder's specification and are supplied with the system. They are available in various lengths to suit the insulation depth used (see section 5.3).

5.3 Accessories used with the systems include:
 fixing halters — extruded aluminium alloy to BS EN 755-1 : 1997 and are available in various heights to accommodate different thicknesses of insulation (see Figure 1)
 thermal break pads — grey, high-density polyethylene (HDPE) attached to the base of the halter (see Figure 1).

fixings for halters:

- to steel purlins — two 6.3 mm diameter austenitic stainless steel (AISI Grade 304), self-tapping, self-drilling fasteners complete with stainless steel or aluminium/EPDM bonded washers
- to timber purlins (minimum width 75 mm) — two 6.3 mm diameter austenitic stainless steel (AISI Grade 304), self-tapping, fasteners complete with 16 mm diameter stainless steel or aluminium/EPDM bonded washers. Four fixings are required

per halter with length dependent upon pull-out strength required and grade of timber used

- to mild steel profiled decking (minimum thickness 0.75 mm) — four 5.2 mm diameter Bulb-Tite rivets with EPDM washers or four 6.0 mm diameter austenitic stainless steel (AISI Grade 304), self-tapping, self-drilling fasteners

Figure 1 Halter and thermal break pad

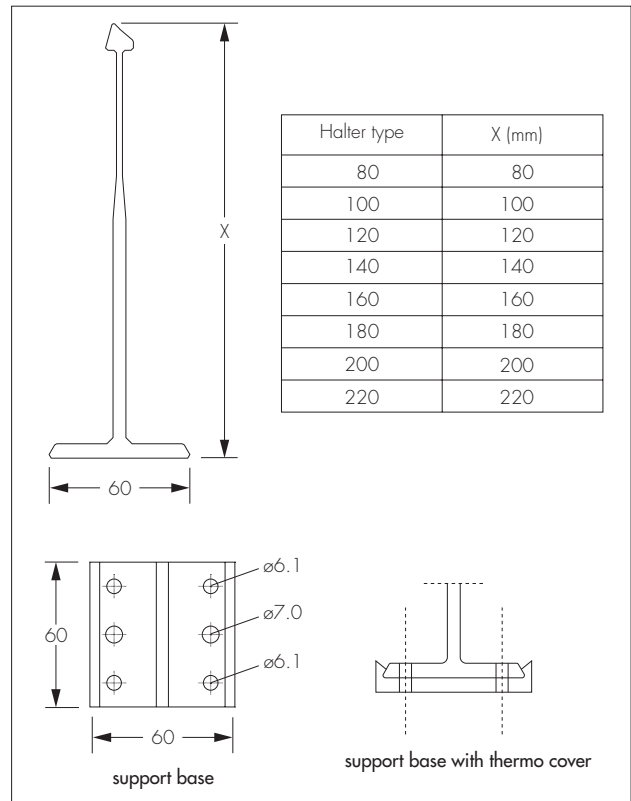
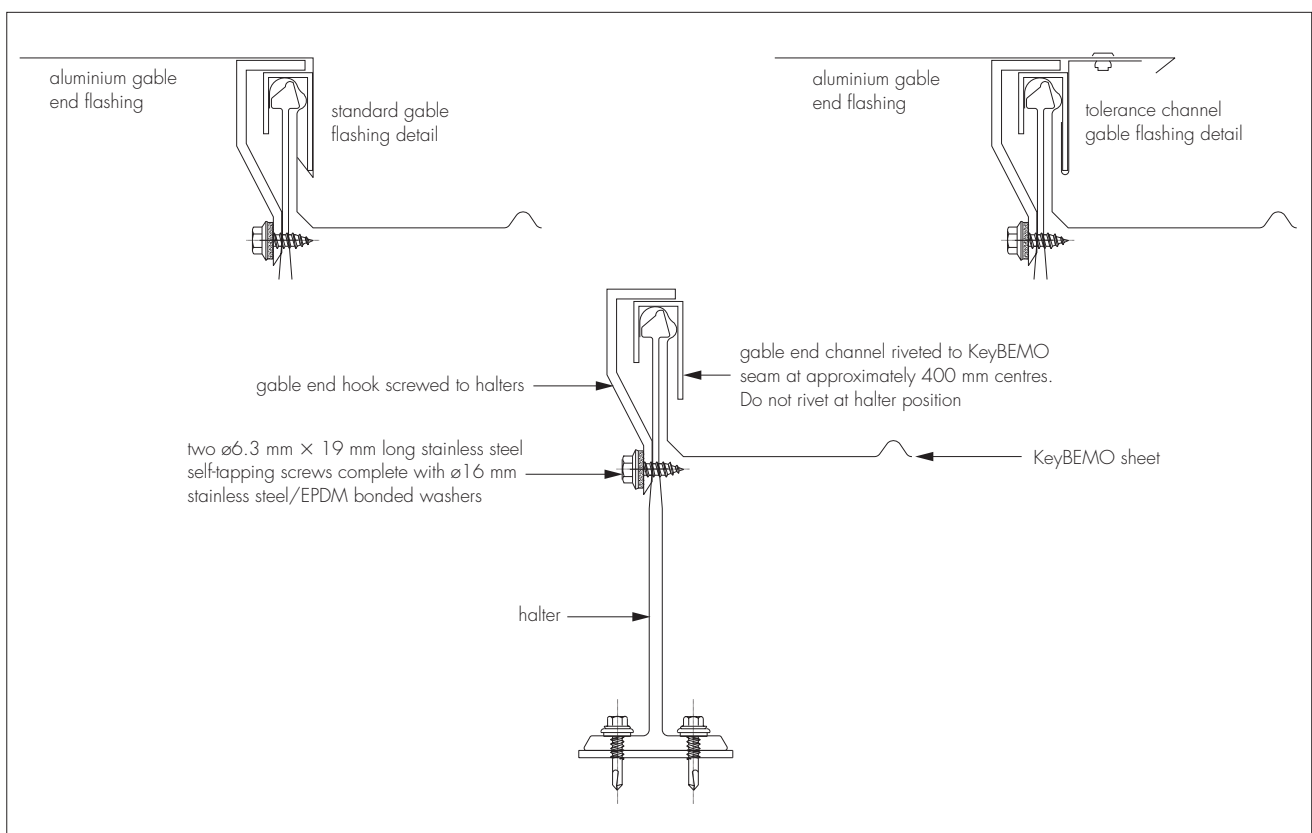


Figure 2 Gable end hook and channel



gable end hooks — extruded aluminium alloy to the same specification as the halters. The 60 mm long component is secured to the gable end halter by two 6.3 mm diameter austenitic stainless steel (AISI Grade 304), self-tapping, self-drilling fasteners complete with stainless steel or aluminium/EPDM bonded washers (see Figure 2)

gable end channel — extruded aluminium alloy supplied in 3000 mm lengths fixed to the end seam of the KeyBEMO profile using 4.8 mm diameter aluminium blind sealed rivets with stainless steel mandrels at 400 centres.

5.4 Other accessories outside the scope of this Certificate, and used with the system, include:

eaves and ridge closure pieces

flashings — made to the same material finish as the KeyBEMO sheets and fastened generally with aluminium rivets with stainless steel mandrel, used in such places as verge, ridge and eaves details

liner sheets

filler blocks

mineral wool

vapour control layer.

5.5 Openings to details, such as vents, PVC or GRP rooflights, can be incorporated in the KeyBEMO roof system but are outside the scope of this Certificate.

5.6 Quality control includes checks on:

aluminium components

dimensions

chemical composition

mechanical properties

coating thicknesses

finished panel dimensions.

6 Delivery and handling

6.1 KeyBEMO sheets of the required length may be manufactured at the construction site or may be

delivered to site on pallets, each carrying a label bearing the BBA identification mark incorporating the number of this Certificate. Loads must not project more than 4 m at each end. When lifting pallets, the braces or ropes must have edge protection. If the sheets are not required immediately, the pallets should be stored on firm, level ground, preferably under cover in dry, dust-free conditions with adequate ventilation. Pallets must not be stacked.

6.2 The component items of the system should be adequately protected and handled and stored in accordance with the recommendations given in section 6.1 to avoid damage before or during installation.

Design Data

7 General

7.1 KeyBEMO Secret Fix Roof Systems are satisfactory for use as a structural roof system, with slopes from 1.5° to 60°, where access is available for maintenance and repair only.

7.2 If architectural features, through fittings or rooflights are required on the roof, special care and attention is necessary, in common with all metal roofs, to ensure that these features have been correctly detailed and fitted.

Bibliography

BS 476 *Fire tests on building materials and structures*

BS 476-3 : 1958 *External fire exposure roof test*

BS EN 755 *Aluminium and aluminium alloys.*

Extruded rod/bar, tube and profiles

BS EN 755-1 : 1997 *Technical conditions for inspection and delivery*

Conditions of Certification

8 Conditions

8.1 This Certificate:

- (a) relates only to the product that is described, installed, used and maintained as set out in this Certificate;
- (b) is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;
- (c) has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;
- (d) is copyright of the BBA.

8.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, shall be construed as references to such publication in the form in which it was current at the date of this Certificate.

8.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabricating process(es) thereof:

- (a) are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA;

(b) continue to be checked by the BBA or its agents; and

(c) are reviewed by the BBA as and when it considers appropriate.

8.4 In granting this Certificate, the BBA makes no representation as to:

- (a) the presence or absence of any patent or similar rights subsisting in the product or any other product;
- (b) the right of the Certificate holder to market, supply, install or maintain the product; and
- (c) the nature of individual installations of the product, including methods and workmanship.

8.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do 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 or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future 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 installation and use of this product.



In the opinion of the British Board of Agrément, KeyBEMO Secret Fix Roof Systems are fit for their intended use provided they are installed, used and maintained as set out in this Certificate. Certificate No 01/3790 is accordingly awarded to KeyBEMO Ltd.

On behalf of the British Board of Agrément

Date of issue: 30th March 2001

A handwritten signature in black ink, appearing to read 'P. C. Newson', is written over a light grey background.

Chief Executive

