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CI/SfB

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**Agreement
Certificate
No 94/3070**
*Third issue**

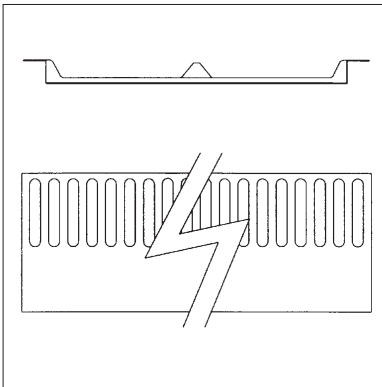
Designated by Government
to issue
European Technical
Approvals

RYTONS ROOF, RAFTER AND SOFFIT SPACE VENTILATORS

Ventilateur par le toit
Dachentlifter


Product

- THIS CERTIFICATE RELATES TO RYTONS ROOF, RAFTER AND SOFFIT SPACE VENTILATORS, FOR USE IN NEW AND EXISTING PROPERTIES.
- The products are used for providing natural ventilation to insulated roof spaces in pitched, low-pitched, mono-pitched or flat roofs.




Regulations

1 The Building Regulations 2000 (England and Wales)

 The Secretary of State has agreed with the British Board of Agrément the aspects of performance to be used by the BBA in assessing the compliance of roof space and soffit ventilation products with the Building Regulations. In the opinion of the BBA, Rytons Roof, Rafter and Soffit Space Ventilators, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements.


Requirement:	F2	Condensation in roofs
Comment:	The products will enable or contribute to enabling a roof to meet this Requirement. See sections 7.1 to 7.6 of this Certificate.	
Requirement:	Regulation 7	Materials and workmanship
Comment:	The products are acceptable. See section 11 of this Certificate.	

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

 In the opinion of the BBA, Rytons Roof, Rafter and Soffit Space Ventilators, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and Technical Standards as listed below.

Regulation:	10	Fitness of materials and workmanship
Standards:	B2.1 and B2.2	Selection and use of materials, fittings, and components, and workmanship
Comment:	The products are acceptable. See section 11 of this Certificate.	
Regulation:	18	Resistance to condensation
Standard:	G4.1	Condensation — Interstitial condensation
Comment:	The products will enable or contribute to enabling roofs to meet this Standard. See sections 7.1 to 7.6 of this Certificate.	

3 The Building Regulations (Northern Ireland) 2000

 In the opinion of the BBA, Rytons Roof, Rafter and Soffit Space Ventilators, 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 section 11 of this Certificate.	
Regulation:	C5	Condensation
Comment:	The products will enable or contribute to enabling a roof to meet this Regulation. See sections 7.1 to 7.6 of this Certificate.	

4 Construction (Design and Management) Regulations 1994 (as amended) Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

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

See section: *5 Delivery to site and storage.*

Technical Specification

5 Description

5.1 Rytons Roof, Rafter and Soffit Space Ventilators are made from thermoplastic and are available in the dimensions and colours given in Table 1 (see also Figure 1).

Table 1 Nominal characteristics and general information

Item/Code	Depth (mm)	Height (mm)	Width (mm)	Colour
<i>Roof Space Ventilators</i>				
TV400	250	40	450	Black
TV450	250	43	495	Black
TV600	250	45	620	Black
TV6005D	500	45	620	Black
TV400F ⁽¹⁾	250	45	440	Black
TV450F ⁽¹⁾	250	45	470	Black
TV600F ⁽¹⁾	250	45	620	Black
TV600F5D ⁽¹⁾	500	45	620	Black
RRV250	320	50	4000	Black
RV600	225 (excl flap)	32	280	Clear
<i>Rafter Space Ventilators</i>				
TS410	24	47	400	Brown
TS510	24	47	450	Brown
TS610	24	47	600	Brown
TS425	24	64	400	Brown
TS525	24	64	450	Brown
TS625	24	64	600	Brown
<i>Soffit Space Ventilators</i>				
CS351	42	24	2440	White, Brown, Black
CS702	76	24	2440	White, Brown
CSG350	44	6	2440	White, Brown
SS240	44	24	2440	White, Brown
AS351	40 (incl flexible strip)	n/a	2440	White, Brown
PL235	n/a	70	70	Brown, White, Black, Light Oak
<i>Fascia and Abutment Ventilators</i>				
OFV890	44	20	1000	Black
OFV300	59	45	297	White
FR250	68	27	897	Brown
<i>Bird/Vermin Guard</i>				
CF900	18 (fixing strip)	54	1000	Black

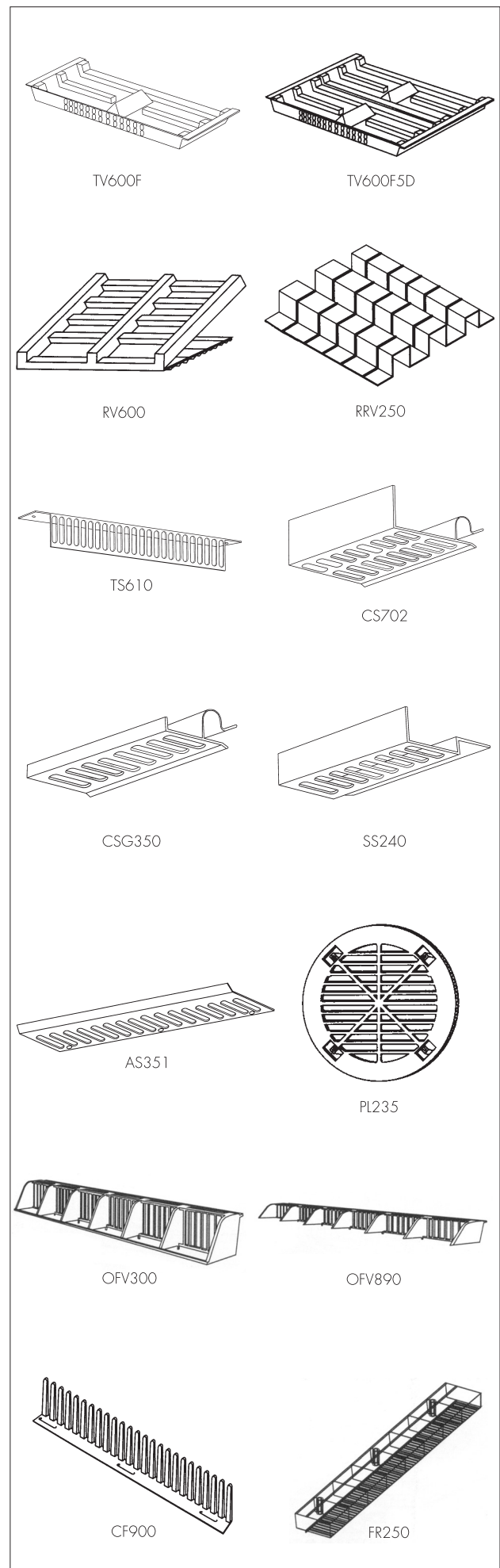
(1) additional integral insect grille.

6 Delivery to site and storage

6.1 Products, with fixing instructions where applicable, are delivered to site in boxes bearing labels incorporating details of the contents.

6.2 Products should be stored in a clean, dry place, out of direct sunlight, until ready for use.

Figure 1 Selection of ventilators



7 General

Roof pitches greater than 15° (see Table 2)



7.1 Rytons Refurbishment Ventilator (RV600), Roof Ventilators (TV), Deep Roof Ventilator (TV6005D), Rafter Roll Ventilator (RRV250) when used in conjunction with the ClipStrip (CS351), Grooved Facia ClipStrip (CSG350) Angled Soffit Strip (AS351), Ventilated Soffit Strip (SS240), 10 mm T-Strip (TS/10), Push and Lock Vent (PL235) or Over Facia Vent (OFV890), will allow adequate ventilation to insulated loft spaces where both the ceiling and insulation are horizontal.

7.2 Rytons Flyscreened Roof Ventilators (TV/F), Deep Flyscreened Roof Ventilator (TV600F5D) and Rytons 10 mm T-Strip (TS/10) when used in conjunction with Rytons Roof Ventilator (TV), Deep Roof Ventilator (TV6005D), Rafter Roll Ventilator (RRV250) or Refurbishment Ventilator (RV600), have integral grilles which allow adequate ventilation to insulated roof spaces for roofs with open eaves where the ceiling and insulation are horizontal.

Table 2 Service performance — pitches greater than 15°

Item/Code	Effective area ⁽¹⁾ for 1 m run of eaves (mm ²)	Equivalent width of continuous slot (mm)
<i>Roof Space Ventilators</i>		
TV400	26500	26.5
TV450	28000	28.0
TV600	31666	31.6
TV6005D	31666	31.6
TV400F	15000	15.0
TV450F	13333	13.3
TV600F	10000	10.0
TV600F5D	10000	10.0
RRV250	25000	25.0
RV600	≥10000	10.0
<i>Rafter Space Ventilators</i>		
TS410	10570	10.5
TS510	10740	10.7
TS610	11075	11.0
<i>Soffit Space Ventilators</i>		
CSG350	10366	10.3
CS351	10366	10.3
SS240	10366	10.3
AS351	10366	10.3
PL235	10252	10.2
<i>Fascia and Abutment Ventilators</i>		
OFV890	11235	11.2
<i>Bird/Vermin Guard</i>		
CF900	n/a	n/a

(1) Effective area is assumed to be equal to the geometric free area.

7.3 Consideration should be given to the use of high-level ventilation openings to increase the ventilation rate⁽¹⁾. The use of high-level ventilation openings is strongly recommended in roofs with a pitch greater than 35° or roof spans in excess of 10 metres.

Roof pitches 15° or less⁽²⁾, or where ceiling follows pitch of roof (see Table 3)

7.4 Rytons Roof Ventilators (TV), Deep Roof Ventilator (TV6005D), Rafter Roll Ventilator (RRV250), when used in conjunction with the Low Pitch ClipStrip (CS702), 25 mm T-Strip (TS/25), Flat Roof/Abutment Ventilator (FR250), or Low Pitch Over Facia Vent (OFV300) will allow adequate ventilation to:

- insulated loft spaces where both the ceiling and the insulation are horizontal
- roof voids⁽³⁾ for roofs where the ceiling follows the pitch of the roof. However, it is essential that an unrestricted air space of at least 50 mm is maintained between the underside of the roofdeck and the top of the insulation. Where there is an obstruction to the ventilation, ie rooflights or a change in pitch of the roof, adequate ventilation, in accordance with the requirements of BS 5250 : 1989(1995), clause 9.4, should be provided above and below the obstruction using suitable ventilators.

(1) As set out in BS 5250 : 1989(1995), clause 9.4, in particular, clause 9.4.7.1.

(2) Flat roofs other than a simple rectangular shape or a roof of span in excess of 10 metres may require more ventilation totalling 0.6% of the roof area.

(3) As set out in BS 5250 : 1989(1995), clause 9.4.

Table 3 Service performance — pitches of 15° or less, or where ceiling follows pitch of roof

Item/Code	Effective area ⁽¹⁾ for 1 m run of eaves (mm ²)	Equivalent width of continuous slot (mm)
<i>Roof Space Ventilators</i>		
TV400	26500	26.5
TV450	28000	28.0
TV600	31666	31.6
TV6005D	31666	31.6
RRV250	25000	25.0
<i>Rafter Space Ventilators</i>		
TS425	27590	27.5
TS525	27588	27.5
TS625	27590	27.5
<i>Soffit Space Ventilators</i>		
CS702	25303	25.3
<i>Fascia and Abutment Ventilators</i>		
OFV300	25252	25.2
FR250	25000	25.0
<i>Bird/Vermin Guard</i>		
CF900	n/a	n/a

(1) Effective area is assumed to be equal to the geometric free area.

Mono-pitched and lean-to roofs (see Table 4)

7.5 Rytons Over Facia Ventilator (OFV890), Rytons Flat Roof/Abutment Ventilator (FR250) or Rytons Abutment Ventilator (OFV300), when used in conjunction with suitable low-level ventilation, according to pitch, will allow adequate ventilation to mono-pitched or lean-to roofs in accordance with BS 5250 : 1989(1995), clause 9.4.

Table 4 Service performance — mono-pitched and lean-to roofs

Product type	Effective area ⁽¹⁾ for 1 m of run of eaves (mm ²)	Equivalent width of continuous slot (mm)
<i>Fascia and Abutment Ventilators</i>		
OFV300	25252	25.2
OFV890	11235	11.2
FR250	25000	25.0

(1) Effective area is assumed to be equal to the geometric free area.

Effective area

7.6 It should be noted that when two ventilators are used in conjunction, the effective area for a 1 m run of that ventilating system will be equal to the effective area of the smaller of the two units. For example, where types TV600 and CS351 are used together, the effective area for a 1 m run will be 10366 mm² (see Table 1).

8 Risk of blockage

Though the risk of blockage is minimal, the slots should be examined occasionally and cleaned if necessary. Blockage (eg by insects and/or debris), should it occur, could impair performance.

9 Strength

Provided installation is carried out in accordance with the manufacturer's instructions, the ventilator units will resist the stresses imposed by installation in the roof.

10 Properties in relation to fire

The area of the ventilation units is small in relation to the total area of the roof space and the increase in fire load is small, therefore, the use of these products will be unlikely to affect the overall fire hazard in the roof structure in which they are installed.

11 Durability



The ventilation units are made of durable materials and will be unaffected by the normal conditions found at eaves, roof/wall abutments, or in a loft space and will have a life comparable to that of other roof components. When preparing soffit and fascia boards or abutment details for maintenance, eg repainting, heat sources, such as gas torches, must not be directed onto or near to the ventilator units.

Installation

12 General

12.1 Rytons Roof Ventilators (TV), Deep Roof Ventilator (TV6005D) and Rafter Roll Ventilator (RRV250) are tacked to the rafters at eaves level prior to laying the roof tile underlay in new roofs with rafter centres spaced at 600 mm, 450 mm or 400 mm. Rytons T-Strips (TS) are spiked through

pre-formed holes to rafter ends. For use in new roofs with open eaves and rafter centres spaced at 600 mm, 450 mm and 400 mm. They can be cut easily to suit any intermediate rafter centre. Rytons Flyscreened Roof Ventilators (TV/F) and Deep Flyscreened Roof Ventilator (TV600F5D) are fixed in a similar manner, except that the insect grille end of the panel should protrude from the brick to ensure maximum possible airflow to the grille. Rytons Roof Ventilators (TV600 and TV6005D, TV450, TV400) are for use in new roofs with rafters spaced at 600 mm, 450 mm and 400 mm centres respectively.

12.2 Rytons Refurbishment Ventilators (RV600) are installed in new or existing roofs by pushing them into position so that the rib mouldings are in contact with the roof tile underlay. A series of ventilation gaps is thus formed and the ventilators are held in place by friction. The ventilators may be stapled in position if required. One size is suitable for all rafter spacings up to 600 mm.

12.3 The loft insulation, if it is of the quilt type, should be tucked well into the space under the panels and, where possible, around the wall plate to avoid cold bridging. Where loose-fill insulation is used, a short piece of insulation quilt should be fitted as required to avoid spillage. Insulation should not be allowed to block the ventilators.

12.4 Rytons Soffit Space Ventilators are attached to the fascia board and are fixed or clipped to the soffit board. Rytons ClipStrip (CS351), Low Pitch ClipStrip (CS702) and Ventilated Soffit Strip (SS240) are fixed with round-headed screws to the fascia board through pre-formed holes in the back upstand of the ventilator. The Grooved Facia ClipStrip (CSG350) locates into a routed groove in the fascia board. The soffit board (up to 9 mm thickness) is then located in the clip, or lip, of the ventilator. The soffit board is then secured to a batten fixed to the brickwork. For soffit boards up to 400 mm deep no other fixing should be required. Rytons Angled Soffit Strip (AS351) is installed in a similar manner but is pinned through the pre-formed holes to the underside of the soffit board.

12.5 Rytons Push and Lock Ventilator (PL235) is installed by push-fitting into a 70 mm diameter hole cut in the soffit board (holes are positioned at 230 mm centres) of any thickness.

12.6 Rytons Over Facia Ventilator (OFV890) and Low Pitch Over Facia Ventilator (OFV300) are tacked to the top of the fascia board through pre-formed slots in the ventilator and overlaid with roof tile underlay and tiles.

12.7 Rytons Abutment Ventilator (OFV300) is tacked through pre-formed slots to a timber batten secured to the roof timbers maintaining a gap of at least 25 mm with the abutting wall. A timber fillet

may be placed on top of the ventilator before dressing with lead.

12.8 Rytons Flat Roof/Abutment Ventilator (FR250) is installed as described in section 12.6 or section 12.7 depending on its intended use.

12.9 Rytons RytComb (CF900) is pinned to top of the fascia board through the pre-formed slots in the fixing strip.

Technical Investigations

The following is a summary of the technical investigations carried out on Rytons Roof, Rafter and Soffit Space Ventilators.

13 Tests

Samples of the ventilator units were obtained from the manufacturer for the purpose of testing. Tests were carried out to include:

- effective area
- density
- ash content
- Vicat softening point
- minimum geometric area.

14 Other investigations

14.1 Assessments were made of the effectiveness of airflow, risk of blockage and risk of damage during installation.

14.2 The methods of quality control were examined and details were obtained of the quality and composition of the materials used.

14.3 A survey of users of the product was carried out to assess performance in use.

Bibliography

BS 5250 : 1989(1995) *Code of practice for control of condensation in buildings*

Conditions of Certification

15 Conditions

15.1 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.

15.2 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.

15.3 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.

15.4 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.

15.5 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, Rytons Roof, Rafter and Soffit Space Ventilators are fit for their intended use provided they are installed, used and maintained as set out in this Certificate. Certificate No 94/3070 is accordingly awarded to Rytons Building Products Ltd.

On behalf of the British Board of Agrément

Date of Third issue: 15th March 2002

Chief Executive

**Original Certificate issued 15th March 1995, this revised version issued to include reference to the revised Building Regulations, additional product and new Conditions of Certification.*