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Agrément Certificate
11/4866
Product Sheet 3

RYTONS VENTILATORS

RYTONS BACKGROUND VENTILATORS

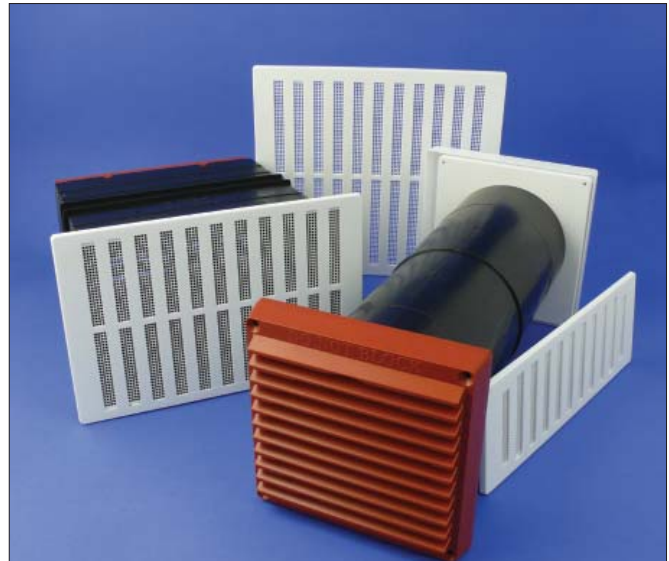
PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Rytons Background Ventilators⁽¹⁾ used for the provision of background ventilation for occupants of a room. They may also be used to provide fresh air inlets for lobbies or similar areas.

(1) Rytons Multifix, AirCore and AirLiner are registered trademarks of Rytons Building Products Ltd.

AGRÉMENT CERTIFICATION INCLUDES:

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



KEY FACTORS ASSESSED

Ventilation — the products can contribute to satisfying the requirements for background trickle ventilation. Products are available with an equivalent area in the range of 3 248 mm² and 5 717 mm² and a geometric area in the range of 2 180 mm² to 23 900 mm² (see section 5).

Condensation — the products will contribute to limiting the risk of condensation (see section 6).

Sound reduction — acoustic ventilators achieve a reduction in airborne sound transmission when compared to the non-acoustic liners and cores (see section 7).

Weather-tightness — the products have adequate resistance to water ingress (see section 8).

Durability — the products are made from durable materials and will have a life comparable to that of the building in which they are installed. (see section 11).

The BBA has awarded this Agrément 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 First issue: 19 September 2011

Sean Moriarty

Greg Cooper

Originally certificated on 21 June 1995

Head of Approvals — Physics

Chief Executive

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

Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

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Regulations

In the opinion of the BBA, Rytons Background Ventilators, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations:



The Building Regulations 2010 (England and Wales)

Requirement: B2	Internal fire spread (linings)
Comment:	Wall-mounted products need not be considered as subject to this Requirement. See section 9.1 of this Certificate.
Requirement: B4(1)	External fire spread
Comment:	Wall-mounted products constitute unprotected areas and may be used within otherwise protected areas. See section 9.2 of this Certificate.
Requirement: C2(b)	Resistance to moisture
Comment:	The products have adequate resistance to water ingress. See section 8 of this Certificate.
Requirement: C2(c)	Resistance to moisture
Comment:	The products can contribute to minimising the risk of condensation. See section 6 of this Certificate.
Requirement: F1	Means of ventilation
Comment:	The products can contribute to meeting this Requirement. See sections 5.1 and 5.3 of this Certificate.
Requirement: Regulation 7	Materials and workmanship
Comment:	The products are acceptable. See section 11 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation: 8(1)(2)	Fitness and durability of materials and workmanship
Comment:	The products satisfy the requirements of this Regulation. See sections 10.1, 10.2 and 11 and the <i>Installation</i> part of this Certificate.
Regulation: 9	Building standards – construction
Standard: 2.5	Internal linings
Comment:	The products mounted on internal wall surfaces are of limited area and will not significantly affect fire spread with reference to clause 2.5.1 ⁽¹⁾⁽²⁾ . See section 9.1 of this Certificate.
Standard: 2.6	Spread to neighbouring buildings
Comment:	Wall-mounted products should be sited to satisfy this Standard, with reference to clauses 2.6.1 ⁽¹⁾⁽²⁾ and 2.6.2 ⁽¹⁾⁽²⁾ . See section 9.3 of this Certificate.
Standard: 3.10	Precipitation
Comment:	The products have adequate resistance to water ingress, with reference to clause 3.10.1 ⁽¹⁾⁽²⁾ . See section 8 of this Certificate.
Standard: 3.14	Ventilation
Comment:	The products can contribute to satisfying this Standard, with reference to clauses 3.14.1 ⁽¹⁾⁽²⁾ , 3.14.2 ⁽¹⁾⁽²⁾ , 3.14.4 ⁽²⁾ , 3.14.5 ⁽¹⁾⁽²⁾ , and 3.14.7 ⁽¹⁾⁽²⁾ . See sections 5.2 and 5.3 of this Certificate.
Standard: 3.15	Condensation
Comment:	The products can contribute to minimising the risk of condensation with reference to clauses 3.15.1 ⁽¹⁾⁽²⁾ , 3.15.2 ⁽¹⁾⁽²⁾ and 3.15.5 ⁽¹⁾⁽²⁾ . See section 6 of this Certificate.
Regulation: 12	Building standards – conversions
Comment:	All comments given for the products under Regulation 9, also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



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

Regulation: B2	Fitness of materials and workmanship
Comment:	The products are acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation: B3(2)	Suitability of certain materials
Comment:	The products are acceptable. See sections 10.1 and 10.2 of this Certificate.
Regulation: C4(b)	Resistance to ground moisture and weather
Comment:	The products have adequate resistance to water ingress. See section 8 of this Certificate.
Regulation: C5	Condensation
Comment:	The products can contribute to satisfying this Regulation. See section 6 of this Certificate.
Regulation: E3	Internal fire spread – Linings
Comment:	The products mounted on internal wall surface will not significantly affect a linings resistance to fire spread. See section 9.1 of this Certificate.
Regulation: E5(a)	External fire spread
Comment:	The products can satisfy this Regulation. See section 9.2 of this Certificate.
Regulation: K2	Means of ventilation
Comment:	The products can contribute to satisfying this Regulation. See sections 5.2 and 5.3 of this Certificate.

Construction (Design and Management) Regulations 2007

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

In the opinion of the BBA, there is no information in this Certificate which relates to the obligations of the client, CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

Non-regulatory Information

NHBC Standards 2011

The use of the Rytons Background Ventilators, in relation to this Certificate, is not subject to the requirements of these Standards.

Technical Specification

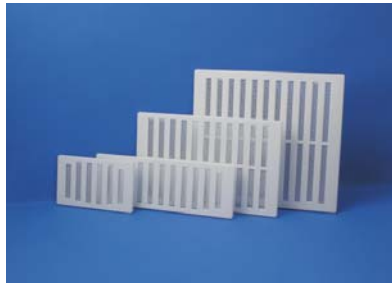
1 Description

1.1 Rytons Background Ventilators (see Figure 1) are manufactured from suitable grades of thermoplastic to the nominal dimensions and colours given in Table 1 (see also Figure 1).

Figure 1 Product details



ABC3/ABC6/ABC9/ABC8



HM22F/HM43F/HM85F/HM123F



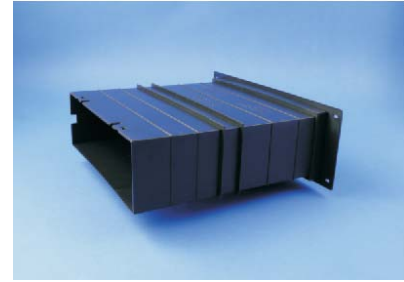
HM51F



MFAB



MFAB96



TCL8000/TAL4000



TCL18000/TAL8000



TCL20000/TAL9900



AC10HM/AC7HM/AAC5HM



ACH75HM/AAH5HM



AC11HM/AC9HM/AAC625HM/AAC635HM



TC8H&M/TAL4H&M



TC18HM/TALH&M



TC20HM/TAL9H&M

Table 1 Product range and nominal dimensions (see Figure 1)

Item/code	Depth	Height (mm)	Length (mm)	Colour
<i>Components</i>				
Rytons Cowl '9 x 3' (ABC3)	44	96	255	buff/sand, terracotta
Rytons Cowl '9 x 6' (ABC6)	74	154	255	white, buff/sand, terracotta
Rytons Cowl '9 x 9' (ABC9)	103	235	274	white, buff/sand, terracotta
Rytons Air Core Cowl '8 x 8½' (ABC8)	93	210	217	white, buff/sand, terracotta
Rytons Hit & Miss Ventilator '6 x 3' (HM22F)	5.5	95	155	white with white flyscreen
Rytons Hit & Miss Ventilator '7 x 7' (HM51F)	23	173	177	white with white flyscreen
Rytons Hit & Miss Ventilator '9 x 3' (HM43F)	5.5	95	271	white with white flyscreen
Rytons Hit & Miss Ventilator '9 x 6' (HM85F)	5	171	271	white with white flyscreen
Rytons Hit & Miss Ventilator '9 x 9' (HM123F)	5	247	271	white with white flyscreen
Rytons Multifix Air Brick (MFAB)	58	66	215	grey, black, white, terracotta, blue/black, brown, buff/sand
Rytons '9 x 6' Multifix Air Brick (MFAB96)	59	134	215	buff/sand, terracotta
Rytons '9 x 3' Telescopic AirLiner (TCL8000)	230 – 348 ⁽¹⁾	71 ⁽²⁾	220 ⁽²⁾	black
Rytons '9 x 9' Telescopic AirLiner (TCL20000)	230 – 384 ⁽¹⁾	207 ⁽²⁾	220 ⁽²⁾	black
Rytons '9 x 6' Telescopic AirLiner (TCL18000)	230 – 384 ⁽¹⁾	140 ⁽²⁾	220 ⁽²⁾	black
Rytons '9 x 3' Acoustic AirLiner (TAL4000)	230 – 348 ⁽¹⁾	71 ⁽²⁾	220 ⁽²⁾	black
Rytons '9 x 6' Acoustic AirLiner (TAL8000)	230 – 384 ⁽¹⁾	140 ⁽²⁾	220 ⁽²⁾	black
Rytons '9 x 9' Acoustic AirLiner (TAL9900)	230 – 384 ⁽¹⁾	207 ⁽²⁾	220 ⁽²⁾	black
<i>Whole Ventilator assemblies</i>				
Rytons 125 mm AirCore with Hit & Miss Ventilator (AC10HM)	358	External louvre 160 Internal Hit & Miss 173	External louvre 166 Internal Hit & Miss 177	buff/sand, terracotta, white for external louvre ⁽⁴⁾
Rytons 125 mm High Rise AirCore with Hit & Miss Ventilator (ACH75HM)	358	External tube 127 diameter Internal Hit & Miss 173	External tube 127 diameter Internal Hit & Miss 177	buff/sand, terracotta, white for external louvre ⁽⁴⁾
Rytons 125 mm Baffled AirCore with Hit & Miss Ventilator (AC7HM)	358	External louvre 160 Internal Hit & Miss 173	External louvre 166 Internal Hit & Miss 177	buff/sand, terracotta, white for external louvre ⁽⁴⁾
Rytons 125 mm Acoustic AirCore with Hit & Miss Ventilator (AAC5HM)	358	External louvre 160 Internal Hit & Miss 173	External louvre 166 Internal Hit & Miss 177	buff/sand, terracotta, white for external louvre ⁽⁴⁾
Rytons 125 mm Acoustic High Rise AirCore with Hit & Miss Ventilator (AAH5HM)	358	External tube 127 diameter Internal Hit & Miss 173	External tube 127 diameter Internal Hit & Miss 177	buff/sand, terracotta, white for external louvre ⁽⁴⁾
Rytons 150 mm AirCore with Hit & Miss Ventilator (AC11HM)	358	External louvre 173 Internal Hit & Miss 173	External louvre 177 Internal Hit & Miss 177	buff/sand, terracotta, white for external louvre ⁽⁴⁾
Rytons 150 mm Baffled AirCore with Hit & Miss Ventilator (AC9HM)	358	External louvre 173 Internal Hit & Miss 173	External louvre 177 Internal Hit & Miss 177	buff/sand, terracotta, white for external louvre ⁽⁴⁾

Table 1 Product range and nominal dimensions (see Figure 1) (continued)

Item/code	Depth	Height (mm)	Length (mm)	Colour
Rytons 150 mm Acoustic AirCore with Hit & Miss Ventilator (AAC625HM)	358	External louvre 173 Internal Hit & Miss 173	External louvre 177 Internal Hit & Miss 177	buff/sand, terracotta, white for external louvre ⁽⁴⁾
Rytons 150 mm Acoustic AirCore with Hit & Miss Ventilator (AAC635HM)	358	External louvre 173 Internal Hit & Miss 173	External louvre 177 Internal Hit & Miss 177	buff/sand, terracotta, white for external louvre ⁽⁴⁾
Rytons '9 x 3' Ventilation Set with Hit & Miss Ventilator (TC8H&M) [Set contains Multifix Air Brick (MFAB), '9 x 3' Airliner (TCL8000) and Hit & Miss Ventilator '9 x 3' (HM43F)]	230 – 348 ⁽¹⁾	71 ⁽²⁾ External Air Brick 66 Internal Hit & Miss 95	220 External Air Brick 215 Internal Hit & Miss 271	grey, black, buff/sand, terracotta, white, brown, blue/black for external air brick ⁽⁴⁾
Rytons '9 x 3' Acoustic Airliner Set with Hit & Miss Ventilator (TAL4H&M) [Set contains Multifix Air Brick (MFAB), '9 x 3' Acoustic Airliner (TAL4000) and Hit & Miss Ventilator '9 x 3' (HM43F)]	230 – 348 ⁽¹⁾	71 ⁽²⁾ External Air Brick 66 Internal Hit & Miss 95	220 External Air Brick 215 Internal Hit & Miss 271	grey, black, buff/sand, terracotta, white, brown, blue/black for external air brick ⁽⁴⁾
Rytons '9 x 6' Ventilation Set with Hit & Miss Ventilator (TC18HM) [Set contains Multifix Air Bricks (MFAB), '9 x 6' Telescopic Airliner (TCL18000) and Hit & Miss Ventilator '9 x 6' (HM85F)]	230 – 384 ⁽¹⁾	71 ⁽²⁾ External Air Bricks 66 Internal Hit & Miss 95	220 External Air Bricks 215 Internal Hit & Miss 271	grey, black, buff/sand, terracotta, white, brown, blue/black for external air brick ⁽⁴⁾
Rytons '9 x 6' Acoustic Airliner Set with Hit & Miss Ventilator (TALH&M) [Set contains Multifix Air Bricks (MFAB), '9 x 6' Acoustic Airliner (TAL8000) and Hit & Miss Ventilator '9 x 6' (HM85F)]	230 – 384 ⁽¹⁾	140 ⁽²⁾ External Air Bricks 132 Internal Hit & Miss 171	220 External Air Bricks 215 Internal Hit & Miss 271	grey, black, buff/sand, terracotta, white, brown, blue/black for external air brick ⁽⁴⁾
Rytons '9 x 9' Ventilation Set with Hit & Miss Ventilator (TC20HM) [Set contains Multifix Air Bricks (MFAB), '9 x 9' Telescopic Airliner (TCL20000) and Hit & Miss Ventilator '9 x 9' (HM123F)]	230 – 384 ⁽¹⁾	207 ⁽²⁾ External Air Bricks 198 Internal Hit & Miss 247	220 External Air Bricks 215 Internal Hit & Miss 271	grey, black, buff/sand, terracotta, white, brown, blue/black for external air brick ⁽⁴⁾
Rytons '9 x 9' Acoustic Airliner Set with Hit & Miss Ventilator (TAL9H&M) [Set contains Multifix Air Bricks (MFAB), '9 x 9' Acoustic Airliner (TAL9900) and Hit & Miss Ventilator '9 x 9' (HM123F)]	230 – 384 ⁽¹⁾	207 ⁽²⁾ External Air Bricks 198 Internal Hit & Miss 247	220 External Air Bricks 215 Internal Hit & Miss 271	grey, black, buff/sand, terracotta, white, brown, blue/black for external air brick ⁽⁴⁾

(1) Excluding MFAB.

(2) Excluding flange.

(3) Tube can be plain or with internal baffles.

(4) White for internal grille.

1.2 Quality control is exercised over raw materials, during production and on the final products.

2 Delivery and site handling

2.1 The products are delivered in cardboard boxes bearing labels incorporating details of the contents.

2.2 The products should be stored in clean, dry surroundings out of direct sunlight until ready for use, and protected from mechanical damage.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Rytons Background Ventilators.

3 Use

- 3.1 Rytons Background Ventilators are suitable for use as through-wall ventilators in cavity walls. They must not be used for the provision of combustion and cooling air for combustion appliances.
- 3.2 The products provide background ventilation (see section 5.2).
- 3.3 To avoid discomfort from cold draughts, ventilators should be sited not less than 1.75 m above floor level. All Rytons AirLiners incorporate internal baffles to damp down sudden changes in air pressure.
- 3.4 The ventilators should also be sited to minimise the risk of wind-driven rain or snow.
- 3.5 Rytons Acoustic AirCores achieve a reduction in airborne sound transmission when compared to the non-acoustic cores.
- 3.6 Multifix Air Bricks are suitable for use in conjunction with all Rytons AirLiners and internally mounted Hit & Miss Ventilators. They can be installed in brick and blockwork during construction. For NHBC constructions a cavity tray will normally be required, unless otherwise protected, eg by overhanging eaves.
- 3.7 All Rytons AirCores can be installed in brickwork or blockwork constructions after a 127 mm or 151 mm diameter hole has been drilled. Rytons High Rise AirCores can be fitted from inside the building in high rise applications.

4 Practicability of installation

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

5 Ventilation



5.1 The requirement for background ventilation will be met, notwithstanding other requirements, if the average equivalent area in Table 2 is not less than that given in Building Regulations document:

England and Wales — Approved Document F, clauses 1.13 and 1.14 and Tables 1.2a to 1.2c.

Table 2 Equivalent area

Vent	Equivalent area (mm ²) to BS EN 13141-1 : 2004 (at 1 Pa)
Rytons 125 mm AirCore with Hit & Miss Ventilator (AC10HM)	5417 ⁽¹⁾
Rytons 125 mm Baffled AirCore with Hit & Miss Ventilator (AC7HM)	5044 ⁽¹⁾
Rytons 125 mm High Rise AirCore with Hit & Miss Ventilator (ACH75HM)	4371 ⁽¹⁾
Rytons 150 mm AirCore with Hit & Miss Ventilator (AC11HM)	5717 ⁽¹⁾
Rytons 150 mm Baffled AirCore with Hit & Miss Ventilator (AC9HM)	5219 ⁽¹⁾
Rytons 125 mm Acoustic AirCore with Hit & Miss Ventilator (AAC5HM)	3633 ⁽¹⁾
Rytons 125 mm Acoustic High Rise AirCore with Hit & Miss Ventilator (AAH5HM)	3248 ⁽¹⁾
Rytons 150 mm Acoustic AirCore with Hit & Miss Ventilator (AAC625HM)	5187 ⁽¹⁾
Rytons 150 mm Acoustic AirCore with Hit & Miss Ventilator (AAC635HM)	4350 ⁽¹⁾
Rytons '9 x 3' Ventilation Set with Hit & Miss Ventilator (TC8H&M) [Set contains Multifix Air Brick (MFAB), '9 x 3' Telescopic AirLiner (TCL8000) and Hit & Miss Ventilator '9 x 3' (HM43F)]	4213 ⁽¹⁾
Rytons '9 x 3' Acoustic AirLiner Set with Hit & Miss Ventilator (TAL4H&M) [Set contains Multifix Air Brick (MFAB), '9 x 3' Acoustic AirLiner (TAL4000) and Hit & Miss Ventilator '9 x 3' (HM43F)]	2305 ⁽¹⁾
Rytons '9 x 6' Ventilation Set with Hit & Miss Ventilator (TC18HM) [Set contains Multifix Air Bricks (MFAB), '9 x 6' Telescopic AirLiner (TCL18000) and Hit & Miss Ventilator '9 x 6' (HM85F)]	8220 ⁽¹⁾
Rytons '9 x 6' Acoustic AirLiner Set with Hit & Miss Ventilator (TALH&M) [Set contains Multifix Air Bricks (MFAB), '9 x 6' Acoustic AirLiner (TAL8000) and Hit & Miss Ventilator '9 x 6' (HM85F)]	3749 ⁽¹⁾
Rytons '9 x 9' Ventilation Set with Hit & Miss Ventilator (TC20HM) [Set contains Multifix Air Bricks (MFAB), '9 x 9' Telescopic AirLiner (TCL20000) and Hit & Miss Ventilator '9 x 9' (HM123F)]	11196 ⁽¹⁾
Rytons '9 x 9' Acoustic AirLiner Set with Hit & Miss Ventilator (TAL9H&M) [Set contains Multifix Air Bricks (MFAB), '9 x 9' Acoustic AirLiner (TAL9900) and Hit & Miss Ventilator '9 x 9' (HM123F)]	5580 ⁽¹⁾

(1) Vent open.



5.2 The requirement for trickle/background ventilation will be met, notwithstanding other requirements, if the total free area in Table 3 is not less than that given in Building Regulations documents:

Scotland — Mandatory Standard 3.14, clause 3.14.2⁽¹⁾⁽²⁾

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland — Technical Booklet K, clauses 2.4 and 2.5 and Tables 2.1 and 3.1.

Table 3 Free (minimum open) areas⁽¹⁾ of ventilator components

Item	Area (mm ²)
Rytons Cowl '9 x 3' (ABC3)	8700
Rytons Cowl '9 x 6' (ABC6)	16000
Rytons Cowl '9 x 9' (ABC9)	23900
Rytons AirCore Cowl (ABC8)	16000
Rytons Round Louvre Ventilator (LVR75)	8000
Rytons Hit & Miss Ventilator '6 x 3' (HM22F)	2180
Rytons Hit & Miss Ventilator '7 x 7' (HM51F)	5170
Rytons Hit & Miss Ventilator '9 x 3' (HM43F)	4400
Rytons Hit & Miss Ventilator '9 x 6' (HM85F)	8600
Rytons Hit & Miss Ventilator '9 x 9' (HM123F)	13000
Rytons Multifix Air Brick (MFAB)	7750
Rytons '9 x 6' Multifix Air Brick (MFAB96)	15190
Rytons '9 x 3' Telescopic AirLiner (TCL8000)	8000 ⁽²⁾
Rytons '9 x 6' Telescopic AirLiner (TCL18000)	13000 ⁽³⁾
Rytons '9 x 9' Telescopic AirLiner (TCL20000)	19800 ⁽⁴⁾
Rytons '9 x 3' Acoustic AirLiner (TAL4000)	4000 ⁽²⁾
Rytons '9 x 6' Acoustic AirLiner (TAL8000)	8100 ⁽³⁾
Rytons '9 x 9' Acoustic AirLiner (TAL9900)	6500 ⁽⁴⁾
Rytons 125 mm AirCore tube (AC10TUBE)	11600
Rytons 125 mm Baffled AirCore tube (AC7TUBE)	10300
Rytons 150 mm AirCore tube (AC11TUBE)	16500
Rytons 150 mm Baffled AirCore tube (AC9TUBE)	13100

(1) Where two or more components are to be used to provide an assembly, the assembly should be taken to have a free area equal to that of the component with the smallest free area in the assembly.

(2) Excludes baffle area, approximately 4200 mm².

(3) Excludes baffle area, approximately 1023 mm².

(4) Excludes baffle area, approximately 1637 mm².



5.3 The location of ventilators must comply with:

England and Wales — Approved Document F, Tables 5.2a, 5.2b and 5.2c

Scotland — Mandatory Standard 3.14, clauses 3.14.2⁽¹⁾⁽²⁾, 3.14.3⁽²⁾ and 3.14.5⁽¹⁾⁽²⁾

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland — Technical Booklet K, clause 1.2 and Tables 2.1 and 3.1.

5.4 Buildings must include appropriate provision for rapid and mechanical extract ventilation.

6 Condensation



The products can reduce the risk of condensation and contribute to satisfying the requirements of the national Building Regulations.

England and Wales — Approved Document C

Scotland — Mandatory Standard 3.15, clause 3.15.1⁽¹⁾⁽²⁾

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland — Approved Document L2.

7 Sound reduction

Rytons Acoustic AirCores when tested to BS EN 20140-10 : 1992 and rated to BS EN ISO 717-1 : 1997 achieved the values shown in Table 4.

Table 4 Airborne Sound Insulation

Vent	$D_{n,e,w}$ (C;C _{tr}) (dB)
Rytons 150 mm Acoustic AirCore with Hit & Miss Ventilator (AAC625HM)	
open	36 (-1;-3)
closed	37 (0;-2)
Rytons 150 mm Acoustic AirCore with Hit & Miss Ventilator (AAC635HM)	
open	41 (-1;-3)
Rytons 125 mm Acoustic AirCore with Hit & Miss Ventilator (AAC5HM)	
open	39 (-1;-2)
closed	40 (0;-2)
Rytons 125 mm Acoustic High Rise AirCore with Hit & Miss Ventilator (AAH5HM)	
open	39 (-1;-2)
closed	40 (0;-2)
Rytons '9 x 3' Acoustic AirLiner Set with Hit & Miss Ventilator (TAL4H&M) [Set contains Multifix Air Brick (MFAB), '9 x 3' Acoustic AirLiner (TAL4000) and Hit & Miss Ventilator '9 x 3' (HM43F)]	
open	38 (0;-1)
closed	39 (0;-1)
Rytons '9 x 6' Acoustic AirLiner Set with Hit & Miss Ventilator (TALH&M) [Set contains Multifix Air Bricks (MFAB), '9 x 6' Acoustic AirLiner (TAL8000) and Hit & Miss Ventilator '9 x 6' (HM85F)]	
open	39 (0;-2)
closed	40 (-1;-3)
Rytons '9 x 9' Acoustic AirLiner Set with Hit & Miss Ventilator (TAL9H&M) [Set contains Multifix Air Bricks (MFAB), '9 x 9' Acoustic AirLiner (TAL9900) and Hit & Miss Ventilator '9 x 9' (HM123F)]	
open	38 (-1;-3)
closed	38 (-1;-3)

8 Weathertightness



The products have adequate resistance to water ingress.

9 Properties in relation to fire



9.1 Ventilation grilles mounted on an internal wall are of limited area and need not be taken into account when considering the classification of the lining's resistance to fire spread.



9.2 The use of wall-mounted air bricks or grilles in an otherwise protected area is unrestricted provided the minimum distances from other unprotected areas are maintained as given in:

England and Wales — Approved Document B, Diagram 20, Volume 1 — *Dwellinghouses* and Diagram 44, Volume 2 — *Buildings other than Dwellinghouses*.

Northern Ireland — Technical Booklet E, Diagram 4.4.



9.3 In Scotland, ventilators mounted on an external wall that is on a boundary or within 500 mm of a boundary must not project beyond the boundary.

9.4 Consideration should be given to firestopping around ducts passing through cavities unless adequate measures are taken to ensure that fire, or the hot gases from a fire, cannot penetrate the cavity through the duct.

10 Maintenance



10.1 The products should not require any maintenance in normal use. There is little risk of blockage but, should the ducting become blocked, access may be gained by the removal of the internal grille.

10.2 The design of the external grille limits the risk of blockage, but should this occur the performance of the products would be impaired. The grille should be inspected occasionally and cleaned if necessary; if damaged it should be replaced.

10.3 Paint should not be applied.

11 Durability



The components are made of durable materials and, should have a life equal to that of the building in which they are installed.

Installation

12 General

12.1 Rytons AirLiners, Acoustic AirLiners, Multifix Air Bricks, Louvre Ventilators, Hit & Miss Ventilators do not require special fixings. They are incorporated in the brickwork or blockwork during the normal course of laying (see also section 3.6). Cowls are always fitted separately.

12.2 If necessary the ventilators can be cut easily with a fine-tooth saw.

12.3 The front face of the Air Bricks should be aligned with the brickwork face.

12.4 All Rytons AirCores are incorporated in the brickwork or blockwork by a 127 mm (if the 125 mm tube is used) or 151 mm (if the 150 mm tube is used) hole being drilled and the tube cut to length. Rytons AirCore and Acoustic AirCore are inserted into the hole and the internal and external grilles push fitted to finish. The Rytons High Rise AirCore and Acoustic High Rise AirCore are inserted into the hole as one unit from inside the building and the internal grille push fitted to finish.

Technical Investigations

13 Tests

Tests were carried out to determine:

- ash content
- density
- stress relief
- Vicat softening point
- impact
- effect of UV and heat ageing
- minimum open geometric area.

14 Investigations

An assessment was made of:

- the data on which the previous Certificate was based. This included an assessment of the practicability of installation and reports of visits to sites to assess performance in use. The conclusions drawn remain valid
- the fabrication process and assembly procedure, including the methods adopted for factory production control
- test reports relating to acoustic data
- test reports relating to the equivalent areas
- the durability of the ventilators.

Bibliography

BS EN 13141-1 : 2004 *Ventilation for buildings — Performance testing of components/products for residential ventilation — Externally and internally mounted air transfer devices*

BS EN 20140-10 : 1992 *Acoustics — Measurement of sound insulation in buildings and of building elements — Laboratory measurement of airborne sound insulation of small building elements*

BS EN ISO 717-1 : 1997 *Acoustics — Rating of sound insulation in buildings and of building elements — Airborne sound insulation*

Conditions of Certification

15 Conditions

15.1 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.

15.2 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.

15.3 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.

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

15.5 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
- individual 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.

15.6 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.

