CI/SfB reference by RIBA SfB Agency					
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September 2020



# **Rytons Boiler, Stove & Fire Ventilators**

# Interactive guide with links to technical information



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# **General Guidance**

A brief definition of some of the terminology used in this guide.

A **combustion appliance** (or **appliance**) is typically a boiler, warm air heater, fire, stove or cooker which burns fuel to generate heat for the home or for cooking purposes. These appliances require adequate ventilation to ensure safe combustion and efficient operation.

A  $D_{n,e,w}$  sound reduction figure reflects testing at every frequency and it is the only result recommended by the BRE for products such as vents. As there is no industry standard for presenting acoustic test results, beware of unspecified dB figures which can simply be the highest dB achieved at an individual frequency bearing no relation to the type of noise you are aiming to reduce. Only a  $D_{n,e,w}$  figure gives you peace of mind that the result reflects the true performance of the product.

**Equivalent area** is the required air flow calculation measurement for combustion appliance ventilators. This robust measurement should be carried out to the method contained in BS EN 13141-1:2004, usually by an independent testing authority.

A **flue draught stabiliser** is an apparatus fitted within the chimney to reduce negative draughts.

A **flueless appliance** is designed not to be connected to a flue. Its combustion gases mix with the air in the room and are dispersed with air exchange.

**Free area** is a simple geometric calculation of air flow which is achieved by measuring the smallest apertures of a grille or vent. This method of calculating air flow is deemed unreliable for modern combustion air vents which often have cowls and complex draught reducing systems.

**HETAS** is the official approval body for solid fuel and biomass appliances. Rytons has an extensive range of ventilators with HETAS approval which are recommended by HETAS to their registered engineers.

An **open-flued appliance** draws its combustion air from the room or space into which it is installed. A flue is required to discharge its products of combustion to the outside.

A **room-sealed appliance** has an air in/fumes out combustion system completely sealed from the room into which it is installed.

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# Rytons Mini LookRyt® AirCore®

- Stove ventilation set with mini internal panel barely bigger than a light switch.
- Paint or wallpaper the mini LookRyt panel to match room décor for an appearance that's virtually unnoticeable.



Rytons Mini LookRyt AirCore (AC3LP) - Stove Output Compatibility Chart				
	Stove without flue draught stabiliser	Stove with flue draught stabiliser		
House built prior to 2008* Up to 10kW (2,750mm <sup>2</sup> requirement)		Up to 6kW (2,350mm <sup>2</sup> requirement)		
House built in or after 2008	Up to 5kW (2,750mm <sup>2</sup> requirement)	Up to 3kW (2,550mm <sup>2</sup> requirement)		

\* If the house has been extensively upgraded for increased airtightness use post 2008 calculations.

Refer to Appendix F of the Building Regulations Part J for measures that constitute significantly improving airtightness.



# Rytons Unsilenced LookRyt® AirCore® Range

- All sets include a draught reducing LookRyt panel which disperses air evenly for maximum comfort.
- Paint or wallpaper the LookRyt panel to match room décor for an appearance that's virtually unnoticeable.

### AC10LP - Rytons LookRyt AirCore



- 5" dia. retro-fitted combustion air vent.
- 10,400mm<sup>2</sup> (104cm<sup>2</sup>) equivalent area.
- Terracotta, buff/sand, white external grille.
- HETAS approved.

### AC10LPCWL - Rytons Cowled LookRyt AirCore



- 5" dia. retro-fitted combustion air vent, with external cowl.
- 11,100mm<sup>2</sup> (111cm<sup>2</sup>) equivalent area.
- Terracotta, buff/sand, white external cowl/grille.
- HETAS approved.



HETAS

# AC7LP - Rytons Baffled LookRyt AirCore



- 5" dia. retro-fitted combustion air vent, with internal baffles.
- 7,900mm<sup>2</sup> (79cm<sup>2</sup>) equivalent area.
- Terracotta, buff/sand, white external grille.
- HETAS approved.



### AC7LPCWL - Rytons Cowled Baffled LookRyt AirCore



- 5" dia. retro-fitted combustion air vent, with internal baffles and external cowl.
- 8,100mm<sup>2</sup> (81cm<sup>2</sup>) equivalent area.
- Terracotta, buff/sand, white external cowl/grille.
- HETAS approved.



### ACH75LP - Rytons Internal Fit LookRyt AirCore

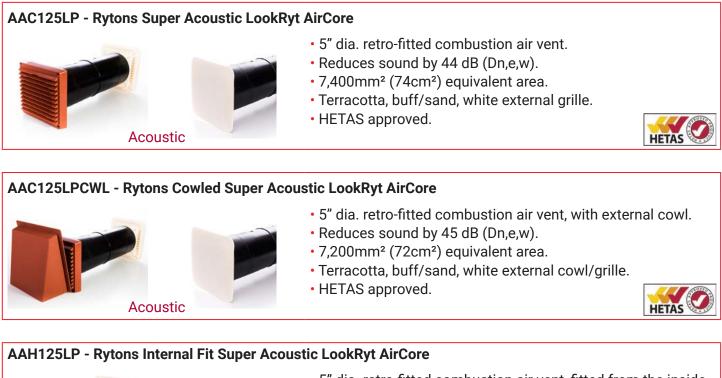


- 5" dia. retro-fitted combustion air vent, fitted from the inside, with internal baffles.
- 6,800mm<sup>2</sup> (68cm<sup>2</sup>) equivalent area.
- Terracotta, buff/sand, white external grille.
- HETAS approved.



# Rytons Super Acoustic LookRyt® AirCore® Range

- All sets include a draught reducing LookRyt panel which disperses air evenly for maximum comfort.
- Paint or wallpaper the LookRyt panel to match room décor for an appearance that's virtually unnoticeable.





- 5" dia. retro-fitted combustion air vent, fitted from the inside.
- Reduces sound by 44 dB (Dn,e,w).
- 6,600mm<sup>2</sup> (66cm<sup>2</sup>) equivalent area.
- Terracotta, buff/sand, white external grille.
- HETAS approved.



# **Tailor-made by Rytons**

# **Bespoke ventilation service**

- Plastic ventilators in custom colours (including RAL and NCS).
- Metal ventilators powder coated in a range of colours and finishes.
- Metal air bricks and adaptors in a range of finishes including Class 0 Flame Retardant paint.

dol

- Specialists in bespoke ventilation for high-rise buildings over 18m high.
- Complete service from design and tooling to manufacture and supply.

For more information call 01536 511874. And the second sec

















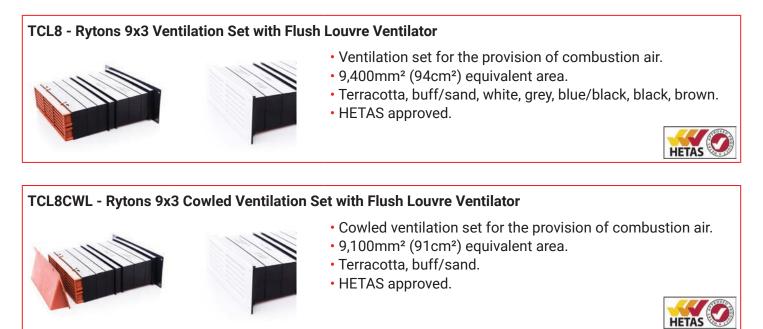






# **Rytons Ventilation Sets '9x3'**

- '9x3' through-wall AirLiner<sup>®</sup> sets for the provision of combustion air to stoves and fires.
- Telescopic liner extends from 250mm-368mm L including air brick.
- Internal baffle reduces transmission of light and draughts.



# TAL4SET - Rytons 9x3 Acoustic AirLiner Set with Flush Louvre Ventilator



- Ventilation set for the provision of combustion air.
- Reduces sound by 38 dB (Dn,e,w).
- 5,800mm<sup>2</sup> (58cm<sup>2</sup>) equivalent area.
- Terracotta, buff/sand, white, grey, blue/black, black, brown.
- HETAS approved.



### TAL4CWL - Rytons 9x3 Cowled Acoustic AirLiner Set with Flush Louvre Ventilator



- · Cowled ventilation set for the provision of combustion air.
- Reduces sound by 39 dB (Dn,e,w).
- 5,800mm<sup>2</sup> (58cm<sup>2</sup>) equivalent area.
- Terracotta, buff/sand.
- HETAS approved.

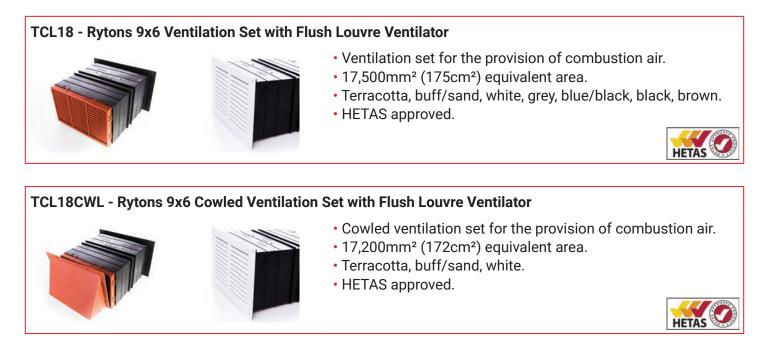




Make quick and easy ventilation calculations anytime with our free stove and open fire calculators at www.vents.co.uk.

# **Rytons Ventilation Sets '9x6'**

- '9x6' through-wall AirLiner<sup>®</sup> sets for the provision of combustion air to stoves and fires.
- Telescopic liner extends from 250mm-404mm L including air brick.
- Internal baffles reduce transmission of light and draughts.



### TALSET - Rytons 9x6 Acoustic AirLiner Set with Flush Louvre Ventilator



- th Flush Louvre ventilator
- Ventilation set for the provision of combustion air.
- Reduces sound by 39 dB (Dn,e,w).
- 6,300mm<sup>2</sup> (63cm<sup>2</sup>) equivalent area.
- Terracotta, buff/sand, white, grey, blue/black, black, brown.
- HETAS approved.



### TALCWL – Rytons 9x6 Cowled Acoustic AirLiner Set with Flush Louvre Ventilator



- Cowled ventilation set for the provision of combustion air.
- Reduces sound by 42 dB (Dn,e,w).
- 5,500mm<sup>2</sup> (55cm<sup>2</sup>) equivalent area.
- Terracotta, buff/sand, white.
- HETAS approved.

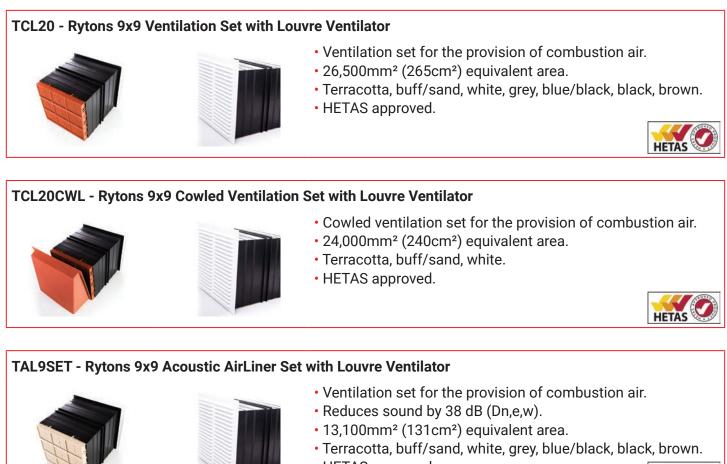




Make quick and easy ventilation calculations anytime with our free <u>stove</u>, <u>open fire</u> and <u>gas appliance</u> calculators at **www.vents.co.uk**.

# **Rytons Ventilation Sets '9x9'**

- '9x9' through-wall AirLiner<sup>®</sup> sets for the provision of combustion air to stoves and fires.
- Telescopic liner extends from 250mm-404mm L including air brick.
- Internal baffles reduce transmission of light and draughts.



Acoustic

• HETAS approved.





### TAL9CWL - Rytons 9x9 Cowled Acoustic AirLiner Set with Louvre Ventilator



- · Cowled ventilation set for the provision of combustion air.
- Reduces sound by 40 dB (Dn,e,w).
- 12,200mm<sup>2</sup> (122cm<sup>2</sup>) equivalent area.
- Terracotta, buff/sand, white.
- HETAS approved.





Make quick and easy ventilation calculations anytime with our free stove, open fire and gas appliance calculators at www.vents.co.uk.

# **Rytons Direct Ventilation Kits**

- Direct ventilation kits for the provision of combustion air to stoves fitted with an attachment for an external air supply.
- Note: Direct ventilation is not suitable for all stoves. Always refer to the stove manufacturer's instructions regarding venting requirements.

### DVKIT100 - Rytons 100mm Direct Ventilation Kit with 6x6 Louvre Grille

• Direct ventilation kit for stoves with 100mm diameter outlets.



- Terracotta, buff/sand, white, black, brown grille.
  Kit contains: Rytons 6x6 Louvre Ventilator, Backplate with 97mm Dia. Spigot,
- 102mm Dia. x 1.5m L Semi-rigid Aluminium RytHose, x2 Jubilee Clips.

### DVKIT100MG - Rytons 100mm Direct Ventilation Kit with Stainless Steel Meshed Grille



- Direct ventilation kit for stoves with 100mm diameter outlets.
- Durable and stylish stainless steel grille.
- Kit contains: Rytons Stainless Steel Cowled Meshed Grille, 102mm Dia. x 1.5m L Semi-rigid Aluminium RytHose, x2 Jubilee Clips.

### DVKIT125 - Rytons 125mm Direct Ventilation Kit with 6x6 Louvre Grille



- Direct ventilation kit for stoves with 125mm diameter outlets.
- Terracotta, buff/sand, white, black, brown grille.
- Kit contains: Rytons 6x6 Louvre Ventilator, Backplate with 122mm Dia. Spigot, 127mm Dia. x 1.5m L Semi-rigid Aluminium RytHose, x2 Jubilee Clips.

### DVKIT125MG - Rytons 125mm Direct Ventilation Kit with Stainless Steel Meshed Grille



- Direct ventilation kit for stoves with 125mm diameter outlets.
- Durable and stylish stainless steel grille.
- Kit contains: Rytons Stainless Steel Cowled Meshed Grille, 102mm Dia. x 1.5m L Semi-rigid Aluminium RytHose, x2 Jubilee Clips.

Bespoke venting kits may be ordered with any size ducting from 63mm - 550mm diameter. 3m long ducting also available in selected sizes. Room ventilator utilising air from a ventilated sub-floor void.

# FV10BRASS - Rytons Floor Ventilator with Brass Louvre • Floor vent with mirror polished solid brass louvre grille for a stylish appearance. • 11,000mm² (110cm²) free area. • Inverted louvres provide a neat flush finish. • Fixing screws included.

- Floor vent with mirror stainless steel louvre grille for a stylish appearance.
- 11,000mm<sup>2</sup> (110cm<sup>2</sup>) free area.



- Inverted louvres provide a neat flush finish.
- Fixing screws included.

# **Rytons Intumescent RytBlocks**

- Gives 3 hours protection preventing the passage of smoke and gases.
- In the event of a fire slats fuse together and seal within 2 minutes.
- Temperature increase insulated for 22 minutes.

### TL8FIRE - Rytons 9x3 Intumescent RytBlock

• Heavy duty intumescent grille for walls, ducts and doors.



- 5,330mm<sup>2</sup> (53.3cm<sup>2</sup>) free area
  206mm L x 58mm H x 44mm D.
- Compatible with Rytons 9x3 AirLiner cavity liners.

### TL18FIRE - Rytons 9x6 Intumescent RytBlock

· Heavy duty intumescent grille for walls, ducts and doors.



- 13,390mm² (133.9cm²) free area.
- 206mm L x 124mm H x 44mm D.
- Compatible with Rytons 9x6 AirLiner cavity liners.

### TL20FIRE - Rytons 9x9 Intumescent RytBlock

- · Heavy duty intumescent grille for walls, ducts and doors.
- 22,520mm<sup>2</sup> (225.2cm<sup>2</sup>) free area.
- 192mm L x 207mm H x 43mm D.
- · Compatible with Rytons 9x9 AirLiner cavity liners.

### ACFIRE125 - Rytons 125mm AirCore® Intumescent RytBlock



- Heavy duty intumescent grille for walls and ducts.
- 5,150mm<sup>2</sup> (51.5cm<sup>2</sup>) free area.
- 118mm Dia. x 43cm D.
- Compatible with Rytons 125mm Dia. AirCore range.

# A step by step guide to calculating the ventilation requirements of gas appliances

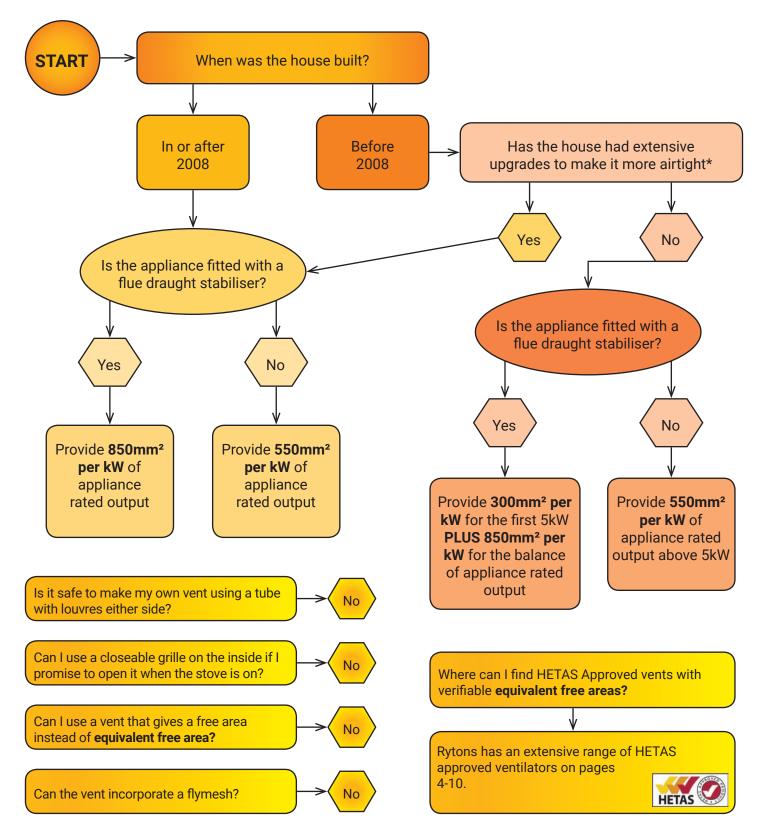
Appliance type **Open-flued** gas Room-sealed gas Decorative fuel effect 10,000mm<sup>2</sup> min. burning appliance burning appliance gas appliance of heat Also refer to with a rated input up with a rated input up input not exceeding manufacturers' 20kW (BS 5871-3:2005) to 70kW (net) to 70kW (net) instructions Appliance in a room or space Flueless space heater Flueless space heater not in a hallway, in an internal space landing or other such as a House built House built in internal space hallway or landing or after 2008 before 2008\* Max appliance rated Max appliance rated heat input 0.045kW (net) heat input 0.090kW (net) Provide per m<sup>3</sup> volume per m<sup>3</sup> volume Provide of internal space 500mm<sup>2</sup> per of room 500mm<sup>2</sup> per **kW** Input above **kW** Input (net) 7kW (net) 10,000mm<sup>2</sup> PLUS 10,000mm<sup>2</sup> PLUS 5,500mm<sup>2</sup> per kW 2,750mm<sup>2</sup> per kW input (net) in excess input (net) in excess of 2.7kW (net) of 5.4kW (net) Open-flued appliance in an appliance compartment ventilated via an adjoining No permanently room or space Refer to Building open vent is needed if **Regulations Part J** the room or space has Open-flued appliance in an a door direct to outside appliance compartment ventilated direct to outside Can I use a vent that gives a free area instead of equivalent free area? Can I use a closeable grille on the inside? No Can the vent incorporate a flymesh? Is it safe to make my own vent using a tube See our range of through-wall vents for gas appliances No with louvres either side? on pages 5-10 and floor vents on page 12.

Quick reference extracts from the Building Regulations Part J. For detailed guidance with examples please refer to the full document.

\* If the house has been extensively upgraded for increased airtightness provide 500mm<sup>2</sup> per kW Input (net). Refer to Appendix F of the Building Regulations Part J for measures that constitute significantly improving airtightness.

# A step by step guide to calculating the ventilation requirements of solid fuel appliances

Extracts from the Building Regulations Part J. Information applies only to stoves, cookers and boilers burning solid fuel (including solid biofuel) with a rated output up to 50kW.



\* Refer to Appendix F of the Building Regulations Part J for measures that constitute significantly improving airtightness.

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