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RYTONS
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Background Ventilation Made Simple
A Mini Guide for Specifiers and Installers

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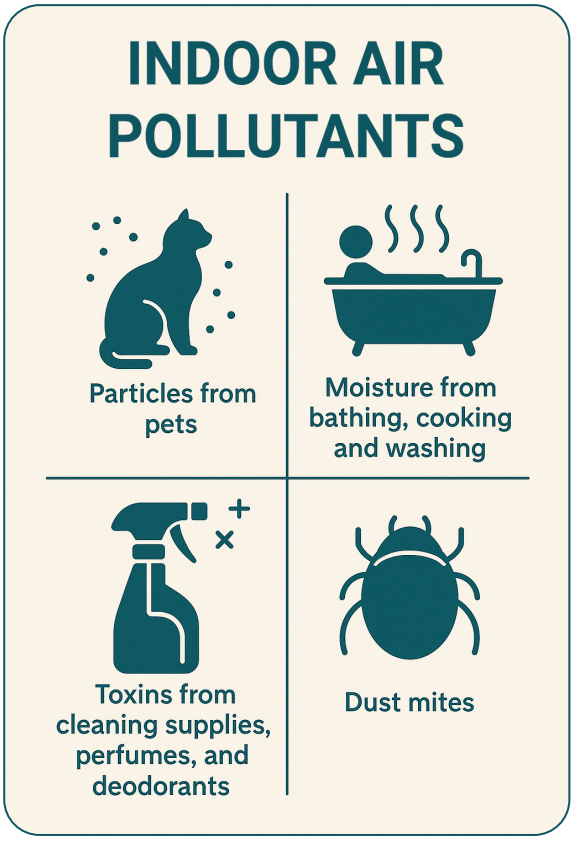
Why Background Ventilation Matters

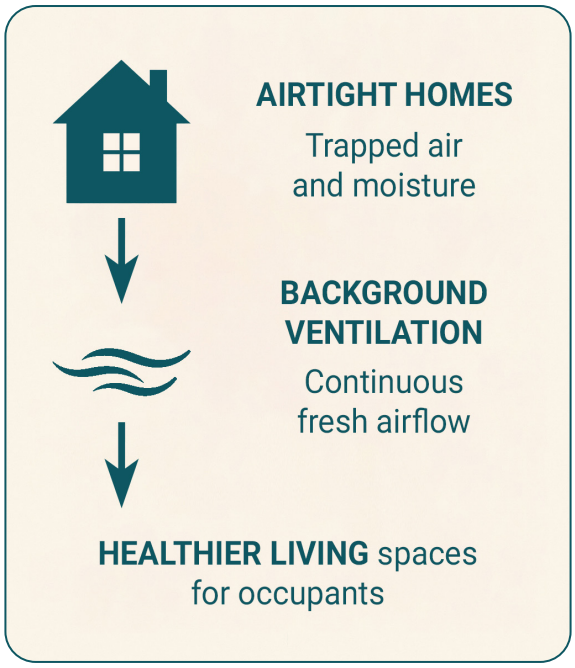
Normal household activities generate a wide range of indoor air pollutants.

- **MOISTURE**
  Bathing, cooking and washing release significant amounts of water vapour.
- **PARTICULATES**
  Indoor sources include hair, fabric fibres, and particles shed from pets. Outdoor sources include pollen, dirt and air pollution.
- **CHEMICAL POLLUTANTS (VOCS)**
  Cleaning products, perfumes, deodorants, paints, and furnishings release volatile organic compounds.
- **BIOLOGICAL POLLUTANTS**
  Dust mites, mould spores, and bacteria thrive in poorly ventilated environments.

Without adequate ventilation, pollutants can build up, resulting in poor indoor air quality. Excess moisture can condense on cold surfaces, causing mould growth and fabrics to deteriorate. Other airborne pollutants make the air stale and harmful.

Prolonged exposure to poor indoor air quality has been shown to lead to serious health issues, including asthma, stroke, ischaemic heart disease and chronic obstructive pulmonary disease (COPD).





Today's building standards require airtight construction to minimise heat loss and reduce carbon emissions. Under Building Regulations, new dwellings must be designed to provide continuous and controllable background ventilation in all habitable rooms. This ensures that fresh air is introduced and that excess moisture and pollutants (including odours) are removed and diluted, promoting occupant comfort and wellbeing.

Ventilation may be provided via natural ventilation, mechanical ventilation or a combination of both.

Natural Ventilation

Background ventilation, provided by through-wall and window trickle ventilators, is a cost-effective, non-mechanical means of bringing fresh air into habitable rooms.

Approved Document F1: Means of Ventilation

Natural ventilation with background ventilators and intermittent extract fans

Quick Checklist

- ✓ Refer to Table 1.7 for equivalent area requirements.
- ✓ Install ventilators in all rooms with external walls.
- ✓ Place ventilators at least 1.7m above floor level to reduce draughts.
- ✓ Ensure similar ventilation areas across façades for cross-ventilation.
- ✓ Use sound-attenuating ventilators in noisy areas e.g. near a main road.
- ✓ Provide the minimum number of background ventilators required.
- ✓ See Approved Document F1 for full guidance.

Table 1.7 Minimum equivalent area of background ventilators for natural ventilation[1]

Room	Minimum equivalent area of background ventilators for dwellings with multiple floors	Minimum equivalent area of background ventilators for single-storey dwellings
Habitable rooms[2][3]	8000mm²	10,000mm²
Kitchen[2][3]	8000mm²	10,000mm²
Utility room	No minimum	No minimum
Bathroom[4]	4000mm²	4000mm²
Sanitary accommodation	No minimum	No minimum

NOTES:

1. The use of this table is not appropriate in any of the following situations and expert advice should be sought.
   - If the dwelling has only one exposed façade.
   - If the dwelling has at least 70% of its openings on the same façade.
   - If a kitchen has no windows or external façade through which a ventilator can be installed.
2. Where a kitchen and living room accommodation are not separate rooms (i.e. open plan), no fewer than three ventilators of the same equivalent area as for other habitable rooms should be provided within the open-plan space.
3. The total number of ventilators installed in a dwelling's habitable rooms and kitchens should be no fewer than five, except in one-bedroom properties, where there should be no fewer than four.
4. If a bathroom has no window or external façade through which a ventilator can be installed, the minimum equivalent area specified should be added to the ventilator sizes specified in other rooms.

Note: The guidance is only for less airtight dwellings i.e. dwellings with a design air permeability higher than 5m³/(h·m2) at 50 Pa or dwellings with an as-built air permeability higher than 3m³/(h·m2) at 50 Pa.

Choosing the Right Ventilator

- **CHECK REGULATIONS**
  Ensure ventilation meets the required standards to avoid under-ventilating.

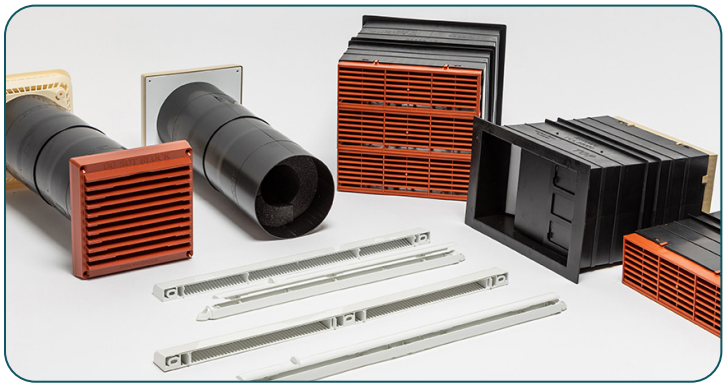
- **CALCULATE VENTILATION OPENINGS**
  Combine the equivalent area of window and through-wall ventilators to meet minimum airflow requirements.

- **CONSIDER NOISE CONTROL**
  Select acoustic ventilation sets to enhance comfort and reduce sound transmission.

Rytons Background Room Ventilators

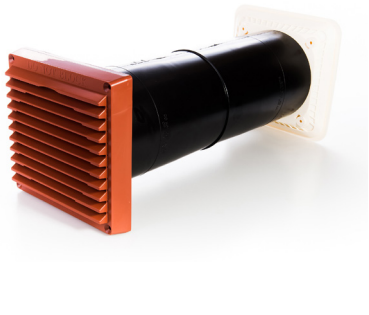
Rytons offer a comprehensive range of background room ventilators to meet the minimum equivalent area requirements of Approved Document F. Options include window trickle ventilators and through-wall sets.

Find a choice of *Super Acoustic* and unsilenced ventilators at www.vents.co.uk.



Product Spotlight

Rytons Controllable Super Acoustic LookRyt® AirCore®



Product Code:	AAC125HP
Type:	*Super Acoustic* controllable through-wall ventilator
Equivalent Area:	8,500mm² (tested to BS EN 13141-1:2004)
Sound Reduction:	43 dB (Dn,e,w) open and 50 dB (Dn,e,w) closed
Colours:	Terracotta, buff/sand, white external grille
Features and Benefits:	• High airflow for efficient ventilation • Acoustic lining to reduce noise transmission • Draught-reducing LookRyt® panel • Adjustable panel for controllable airflow • Easy to install and maintain • Natural airflow - no energy use

For technical advice or product selection support, call our technical sales team on **01536 511874**, email **admin@rytons.com** or visit **www.vents.co.uk**

Note: This mini guide is intended as a general overview. For full requirements, refer to the current Building Regulations and relevant statutory guidance.