BACKGROUND VENTILATION SOLUTIONS FOR DOMESTIC BUILDINGS
When people talk about ventilation they think of the extract unit, taking the air out of the building. A ventilation system is more than just extracting air, it also relies on the replacement of the stale air with fresh, clean air.

Whether you’re using a Passive Stack system, a Mechanical Extract system or even intermittent extract units, the building regulations call for a set amount of background ventilation for each ventilation strategy.

To avoid condensation extraction of warm, moist air is not enough, it has to be in conjunction with input of fresh air, yet this is often over looked for a number of different reasons. The fresh air not only creates a fresh atmosphere, it also promotes air movement to ensure that air is circulated around the property.

There are many cases where people have a sufficiently working extract system yet still experience condensation within properties, and the main reason is because of insufficient fresh air.

Passivent offer a range of background ventilators to enable fresh air to be input into a building to ensure a healthy atmosphere and reduce the potential for condensation and mould.

**Standard and acoustic window and wall vents**

Passivent standard window and wall vents are designed to allow air to enter the building to provide the stated levels of background ventilation to meet the requirements of Building Regulations. Geometric free areas are shown for Scottish Building Regulations.

Passivent acoustic window and wall vents not only provide the stated levels of background ventilation, but also noise attenuation for buildings which may be situated where external noise could pose a disturbance to the occupant.

| Window vents | Window vents are incorporated through the head of the window frame and available with manual or automatic openings (humidity sensitive). |
| Wall vents | Wall vents are fitted through the wall and ducted to an outside grille. Available with various manual control mechanisms or automatic openings (humidity sensitive). |

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<td></td>
</tr>
<tr>
<td>Ultra Vent</td>
<td>2500 / 4000 / 5000mm²</td>
<td>2742 / 4465 / 5400mm²</td>
<td>-</td>
</tr>
<tr>
<td>Delta Vent and Grille</td>
<td>1537 / 3074mm²</td>
<td>2000 / 4000mm²</td>
<td>-</td>
</tr>
<tr>
<td>Energy Saver Humidity Sensitive</td>
<td>3815mm²</td>
<td>4000mm²</td>
<td>-</td>
</tr>
<tr>
<td><strong>ACOUSTIC WINDOW VENTS</strong></td>
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<tr>
<td>Acoustic Energy Saver Humidity Sensitive</td>
<td>3815mm²</td>
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<td>Acoustic Low Profile</td>
<td>1777 / 1600mm²</td>
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<td><strong>STANDARD WALL VENTS</strong></td>
<td></td>
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</tr>
<tr>
<td>Fresh 80</td>
<td>2220mm²</td>
<td>4000mm²</td>
<td>-</td>
</tr>
<tr>
<td>Fresh 90</td>
<td>2630mm²</td>
<td>6000mm²</td>
<td>-</td>
</tr>
<tr>
<td>Fresh 100</td>
<td>3200mm²</td>
<td>6000mm²</td>
<td>-</td>
</tr>
<tr>
<td>Fresh TLF</td>
<td>2540mm²</td>
<td>5000mm²</td>
<td>-</td>
</tr>
<tr>
<td>Fresh 99H</td>
<td>3350mm²</td>
<td>6000mm²</td>
<td>-</td>
</tr>
<tr>
<td><strong>ACOUSTIC WALL VENTS</strong></td>
<td></td>
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</tr>
<tr>
<td>Fresh 80dB</td>
<td>2220mm²</td>
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</tr>
<tr>
<td>Fresh 90dB</td>
<td>2630mm²</td>
<td>6000mm²</td>
<td>45dB</td>
</tr>
<tr>
<td>Fresh 100dB</td>
<td>3200mm²</td>
<td>6000mm²</td>
<td>42dB</td>
</tr>
<tr>
<td>Fresh TLF-dB</td>
<td>2540mm²</td>
<td>5000mm²</td>
<td>46dB</td>
</tr>
<tr>
<td>Fresh 99HdB</td>
<td>3350mm²</td>
<td>6000mm²</td>
<td>45dB</td>
</tr>
</tbody>
</table>
Ultra Vent and Grille

Through frame window ventilator available in three sizes comprises a controllable internal ventilator and matching external canopy grille. Controlled flow of fresh air via two stage opening. External canopy grille provides weather protection and insect ingress grille.

Features

- 3 sizes available providing 2500mm², 4000mm² and 5000mm² equivalent areas and can be used to meet background ventilation requirements of Building Regulations throughout the UK and Ireland.
- One of the smallest window ventilators on the market providing up to 5000mm² equivalent area.
- Slim profile of 10mm for the vent.
- Suitable for a range of slot sizes from 13mm to 17mm.
- Incoming air is directed upwards to avoid draughts and discomfort.
- Suitable for PVCu, aluminium and timber windows.
- Meets worst case requirements of BS 6375-1 for resistance to water penetration.

Material

*Internal vent:* Polyester powder coated aluminium with polymer end caps.
*External grille:* Injection moulded polymer with integral fly screen and fixing holes.

Colour

Bright White RAL 9016 as standard with alternative colours available upon request.

Performance and Dimensions

### Equivalent area

<table>
<thead>
<tr>
<th>Product</th>
<th>Equivalent area</th>
<th>Slot size required (height x width)</th>
<th>Dimensions (length x height x width)</th>
<th>Internal Vent</th>
<th>External Canopy Grille</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra Vent 2500</td>
<td>2500mm²</td>
<td>1no x 13-17 x 165mm</td>
<td>235 x 25 x 10mm (TVUV25)</td>
<td>203 x 26.5 x 36mm (TVUG25)</td>
<td></td>
</tr>
<tr>
<td>Ultra Vent 4000</td>
<td>4000mm²</td>
<td>2no x 13-17 x 135mm</td>
<td>350 x 25 x 10mm (TVUV4)</td>
<td>373 x 26.5 x 36mm (TVUG5)</td>
<td></td>
</tr>
<tr>
<td>Ultra Vent 5000</td>
<td>5000mm²</td>
<td>2no x 13-17 x 162.5mm</td>
<td>405 x 25 x 10mm (TVUV5)</td>
<td>373 x 26.5 x 36mm (TVUG5)</td>
<td></td>
</tr>
</tbody>
</table>

### Scottish Building Regulations: Geometric free area

<table>
<thead>
<tr>
<th>Product</th>
<th>Geometric free area</th>
<th>Slot size required (height x width)</th>
<th>Dimensions (length x height x width)</th>
<th>Internal Vent</th>
<th>External Canopy Grille</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra Vent 2500</td>
<td>2742mm²</td>
<td>1no x 17 x 165mm</td>
<td>235 x 25 x 10mm</td>
<td>203 x 26.5 x 36mm</td>
<td></td>
</tr>
<tr>
<td>Ultra Vent 4000</td>
<td>4465mm²</td>
<td>2no x 17 x 135mm</td>
<td>350 x 25 x 10mm</td>
<td>373 x 26.5 x 36mm</td>
<td></td>
</tr>
<tr>
<td>Ultra Vent 5000</td>
<td>5400mm²</td>
<td>2no x 17 x 162.5mm</td>
<td>405 x 25 x 10mm</td>
<td>373 x 26.5 x 36mm</td>
<td></td>
</tr>
</tbody>
</table>

### Specification clause

Provide background ventilation to meet Building Regulations by means of window ventilators giving a minimum of *2500/4000/5000mm²* of either *equivalent or *geometric free area of ventilation* (Passivent Ultra Vent TVUV *25/4/5 and Passivent Ultra Grille TVUG *25/5*).

Ventilators to provide upward directional airflow and to meet worst case requirements of BS 6375: Part 1 for resistance to water penetration.

Ventilators available from Passivent Ltd, North Frith Oast, Hadlow, Kent, TN11 9QU, Tel: 01732 850770, Fax: 01732 850949, Email: projects@passivent.com.

*delete as required
Delta Vent and Grille

Controllable internal vent with matching external grille. Can be used to meet background ventilation requirements of Building Regulations throughout the UK and Republic of Ireland. Allows controlled ingress of fresh air to aid healthy indoor environment and reduce potential for condensation.

Features
- Directs air upwards avoiding draughts and discomfort.
- Clearly marked, flush fitting slide control for simple operation.
- Easy fitting due to location lugs.
- Optional pull cord operation where required.

Performance and Dimensions

<table>
<thead>
<tr>
<th>Product</th>
<th>Ventilation Equivalent area</th>
<th>Trickle ventilation</th>
<th>Slot size (height x width)</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVDV2 &amp; TVDG2</td>
<td>1537mm²</td>
<td>250mm²</td>
<td>1no x 13 x 165mm</td>
<td>190mm</td>
</tr>
<tr>
<td>TVDV4 &amp; TVDG4</td>
<td>3074mm²</td>
<td>500mm²</td>
<td>2no x 13 x 162.5mm</td>
<td>350mm</td>
</tr>
</tbody>
</table>

Material
- Body: Injection moulded plastic
- Colour: White or brown as standard
- Other RAL colours to order

Contact us for pricing.

Energy Saver Humidity Sensitive

Automatic function dependent upon humidity levels in the room. Can be used to meet background ventilation requirements of Building Regs throughout the UK and Republic of Ireland. Minimises unnecessary ingress of cold air. No user input is required, and can help to reduce potential for condensation. Designed for use with Ultra Grille (TVUG5) external canopy grille (see page 3).

Features
- Automatic, no user input.
- Uses no electricity or mechanical power.
- Directs airflow upwards avoiding draughts and discomfort.
- Energy efficient, minimise heat loss.

Performance and Dimensions

<table>
<thead>
<tr>
<th>Product</th>
<th>Ventilation Equivalent area</th>
<th>Slot size (height x width)</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVES4</td>
<td>3815mm²</td>
<td>2no x 13 x 162.5mm</td>
<td>400mm</td>
</tr>
</tbody>
</table>
Acoustic Energy Saver Humidity Sensitive

Humidity sensitive, acoustic through frame window vent. Provides automatic ventilation and sound insulation for use near noise sources. Designed for use with Ultra Grille (TVUG5) external canopy grille (see page 3).

Features
- Substantial sound reduction.
- Energy saving, reduces over ventilating.
- No user input required to control.
- No mechanical or electrical components.

Material
Body: Injection moulded polystyrene
Colour: White, brown or black.
Colour matched to RAL available. Contact us for pricing.

Performance and Dimensions

<table>
<thead>
<tr>
<th>Product</th>
<th>Ventilation Equivalent area</th>
<th>Slot size (height x width)</th>
<th>Length</th>
<th>Sound reduction up to</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVES4dB</td>
<td>3815mm²</td>
<td>2no x 13 x 162.5mm</td>
<td>420mm</td>
<td>39dB Dn,e,w</td>
</tr>
</tbody>
</table>

Acoustic Low Profile

Acoustic through frame window vent. Low profile design with manual operation. Available in either 450mm or 800mm widths and provides up to 42dB attenuation. Designed for use with Ultra Grille (TVUG5) external canopy grille (see page 3).

Features
- Substantial sound reduction.
- Internal filter prevents insect and dust ingress.
- Simple and easy operation.
- Internal vent easily removed for cleaning.

Material
Body: Aluminium with polyester paint finish
Colour: White or Grey.
Colour matched to RAL available. Contact us for pricing.

Performance and Dimensions

<table>
<thead>
<tr>
<th>Product</th>
<th>Ventilation Equivalent area</th>
<th>Slot size (height x width)</th>
<th>Length</th>
<th>Sound reduction up to</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVALdB450</td>
<td>1777mm²</td>
<td>1no x 13 x 350mm</td>
<td>456mm</td>
<td>40dB Dn,e,w</td>
</tr>
<tr>
<td>TVALdB800</td>
<td>1600mm²</td>
<td>1no x 13 x 350mm</td>
<td>806mm</td>
<td>42dB Dn,e,w</td>
</tr>
</tbody>
</table>

Contact us for pricing.
Fresh 80
Non-electric through wall vent provides controllable background ventilation. Supplied as controllable internal vent, ducting and external grille.

Features
- Manual pull cord operation.
- Trickle facility possible even when ‘closed’ to ensure fresh air ingress.
- Filter and condensation protection incorporated.
- Ventilation levels can be controlled to set levels.

Performance and Dimensions

<table>
<thead>
<tr>
<th>Product</th>
<th>Standard operation</th>
<th>Trickle facility</th>
<th>Ventilation Equivalent area</th>
<th>Airflow rate @10Pa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh 80</td>
<td>Manual control via pull cord</td>
<td>Yes, 0-2000mm²</td>
<td>2220mm²</td>
<td>5.2 l/s</td>
</tr>
<tr>
<td>Fresh 90</td>
<td>Manual control via slider at bottom of vent</td>
<td>Yes, 0-1200mm²</td>
<td>2630mm²</td>
<td>9.0 l/s</td>
</tr>
<tr>
<td>Fresh 100</td>
<td>Manual control via pull cord</td>
<td>Yes, 0-2800mm²</td>
<td>3200mm²</td>
<td>9.0 l/s</td>
</tr>
<tr>
<td>Fresh TLF</td>
<td>Manual control via slider at bottom of vent</td>
<td>No</td>
<td>2540mm²</td>
<td>8.1 l/s</td>
</tr>
<tr>
<td>Fresh 99H</td>
<td>Humidity control</td>
<td>Yes, 0-1200mm²</td>
<td>3350mm²</td>
<td>8.1 l/s</td>
</tr>
</tbody>
</table>
Fresh TLF
Non-electric through wall vent provides controllable background ventilation. Supplied as controllable internal vent, ducting and external grille.

Features
● Manual slider operation controls internal iris to regulate airflow.
● Filter and condensation protection incorporated.
● Enhanced aesthetic appearance.
● Design enhances airflow pattern locations.

Wall sleeve outside diameter 102mm. Suitable for any wall thickness up to 350mm as standard (or more to special order).

External grille 150 x 150mm
Internal controller 168 x 156mm x 46mm depth

Fresh 99H Humidity Sensitive
Non-electrical, non-mechanical humidity sensitive through wall vent to provide controllable background ventilation. Ventilation increases/decreases as levels of relative humidity increase/decrease. Supplied as controllable internal vent, ducting and external grille.

Features
● Automatic opening and closing dependent upon Relative Humidity (RH) levels.
● Filter and condensation protection incorporated.
● Incorporates manual override if required.
● Energy saving through reduced heat loss.

With manual controlled vents there is the reliance on the user to open and close the vent as required. If they do not use the product as is required, it is possible that dwellings are over or under ventilated. Over ventilating will mean that excess heat is lost, thus requiring more energy from the house heating to warm the space, costing more money. Under ventilating can lead to issues of condensation and possible mould growth.

An automatic unit, such as the Fresh 99H opens and closes dependent upon relative humidity, thus reducing the potential for condensation and reducing the amount of heat loss.

The product does not require any manual interaction to operate, making ideal for social housing, care homes, hotels and student accommodation.

Material for all models
Body: Recyclable ABS.
Colour: Internal controller – white
External grille – terracotta
Colour matched to RAL available.
Contact us for pricing.

Optional extras for all models
Pollen filter
Acoustic cowl
Storm shield to prevent draughts in windy locations
Fresh 80dB
Non-electric acoustic though wall vent, provides controlled background ventilation and noise attenuation up to 50dB Dn,e,w. Supplied as controllable internal vent, acoustic ducting and external grille.

**Features**
- Substantial sound reduction up to 50dB Dn,e,w.
- Trickle facility to allow air ingress even when closed.
- Filter and condensation protection incorporated.
- For 300mm wall thickness as standard, longer length available.

Fresh 90dB
Non-electric acoustic though wall vent, provides controlled background ventilation and noise attenuation up to 45dB Dn,e,w. Supplied as controllable internal vent, acoustic ducting and external grille.

**Features**
- Sound reduction up to 45dB Dn,e,w.
- Manual slider operation, controls internal iris to modulate airflow.
- Trickle facility possible even when ‘closed’ to ensure fresh air ingress.
- Filter and condensation protection incorporated.
- Ventilation levels can be controlled to set levels.

Fresh 100dB
Non-electric, acoustic through wall vent provides controllable background ventilation and noise reduction up to 42dB Dn,e,w. Supplied as controllable internal vent, acoustic ducting and external grille.

**Features**
- Sound reduction up to 42dB Dn,e,w.
- Manual pull cord operation.
- Trickle facility possible even when ‘closed’ to ensure fresh air ingress.
- Filter and condensation protection incorporated.

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**Performance and Dimensions**

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<tr>
<th>Product</th>
<th>Standard operation</th>
<th>Trickle facility</th>
<th>Ventilation Equivalent area</th>
<th>Airflow rate @10Pa</th>
<th>Sound reduction up to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh 80dB</td>
<td>Manual control via pull cord</td>
<td>Yes, 0-2000mm²</td>
<td>2220mm²</td>
<td>5.2 l/s</td>
<td>50dB Dn,e,w</td>
</tr>
<tr>
<td>Fresh 90dB</td>
<td>Manual control via slider at bottom of vent</td>
<td>Yes, 0-1200mm²</td>
<td>2630mm²</td>
<td>9.0 l/s</td>
<td>45dB Dn,e,w</td>
</tr>
<tr>
<td>Fresh 100dB</td>
<td>Manual control via pull cord</td>
<td>Yes, 0-2800mm²</td>
<td>3200mm²</td>
<td>9.0 l/s</td>
<td>42dB Dn,e,w</td>
</tr>
<tr>
<td>Fresh TLF-dB</td>
<td>Manual control via slider at bottom of vent</td>
<td>No</td>
<td>2540mm²</td>
<td>8.1 l/s</td>
<td>46dB Dn,e,w</td>
</tr>
<tr>
<td>Fresh 99HdB</td>
<td>Humidity control, 45-80%</td>
<td>Yes, 0-1200mm²</td>
<td>3350mm²</td>
<td>8.1 l/s</td>
<td>45dB Dn,e,w</td>
</tr>
</tbody>
</table>
Fresh TLF-dB
Non-mechanical acoustic through-wall vent provides controllable background ventilation and noise reduction to 46dB Dn,e,w. Supplied as controllable internal vent, acoustiv ducting and external grille.

Features
- Sound reduction up to 46dB Dn,e,w
- Manual slider operation controls internal iris to regulate airflow.
- Filter and condensation protection incorporated.
- Enhanced aesthetic appearance.

Fresh 99HdB Humidity Sensitive
Non-electric acoustic, humidity sensitive vent provides background ventilation and noise reduction to 45dB Dn,e,w. Supplied as automatic humidity sensitive internal vent, acoustic ducting and external grille.

Features
- Sound reduction up to 45dB Dn,e,w
- Automatic opening and closing dependent upon Relative Humidity (RH) levels.
- Incorporates manual override if required/desired.
- Filter and condensation protection incorporated.

The acoustic wall vents reduce the amount of noise ingress from outside, making them suitable for use in applications where there are high levels of external noise such as near main roads, airports or railway lines.

Material for all acoustic models
Body: Recyclable ABS
Duct: Glass fibre with PVC skin
Colour: Internal controller – white
External grille – terracotta
Colour matched to RAL available.
Contact us for pricing.
The Passivent range of background ventilation can be used to help achieve the background ventilation requirements specified within the necessary building regulations.

The range can be used as part of a full house ventilation strategy using our natural and mechanical ventilation systems including:

- **iPSV**: Passive Stack ventilation requiring no energy use and no moving parts
- **iMEV**: intelligent mechanical extract ventilation utilising humidity sensitive components to ensure optimal performance
- **Intellivent**: decentralised mechanical extract ventilation

**Mastercare™ Installer scheme**

We recommend that installation is carried out by a specialist Passivent Mastercare Installer. The Mastercare scheme, operated by Passivent Limited, comprises well-established and reputable companies who have been fully trained and assessed by Passivent Limited to install any Passivent system in both new build and refurbishment projects.

**Mastercare provides:**

- Assurance that work is carried out by trained and experienced installers who are familiar with the systems.
- Quality installations.
- Compliance with relevant codes of practice.
- Competitive cost.

All Passivent Mastercare Installers hold a certificate from Passivent Limited. They are regularly monitored to ensure standards of work are maintained, and also receive full technical support from Passivent Limited.

**Quality assurance**

Passivent products are designed, developed and manufactured under a BS EN ISO 9001 quality management system, giving an independently audited assurance that the products will fulfil their intended purpose.

**Environment**

Passivent conducts all business processes under a BS EN ISO 14001 environmental management system, giving an assurance that all activities are carried out having minimal impact on the environment.