Specification clause

Select options required, and insert information where necessary.

Passivent MEV/iMEV/AV ventilation system

Provide a ventilation system complying with Building Regulations (England and Wales) Approved Document F OR Building (Scotland) Regulations Technical Handbook Domestic Section 3 OR Building Regulations (Northern Ireland) Technical Booklet K OR Building Regulations (Republic of Ireland) Technical Guidance Documents Part F, by means of a mechanical extract ventilation system comprising:

Humidity-sensitive wall/window inlet vents operating between 47% and 65% relative humidity, sited in habitable rooms as required.

Ceiling extracts sited in kitchen, bathroom, utility room and WC … , and ducted to a central fan.

Central extract fan ducted a roof terminal.

All ducting in roof spaces and other unheated spaces to be fully insulated with 25mm insulation.

The system to be Passivent MEV/*i*MEV/AV ventilation system supplied by Passivent Limited,
2 Brooklands Road, Sale, Cheshire M33 3SS.
Telephone: 0161 962 7113, fax: 0161 969 5346, email: info@passivent.com.

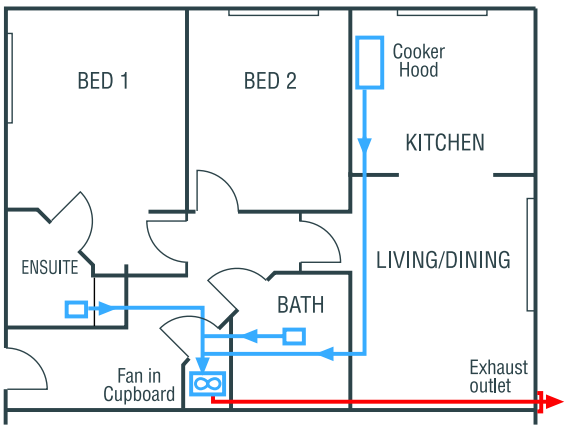
Installation to be in accordance with the manufacturer's instructions, and to be carried out by a Passivent Mastercare trained installer holding a current certificate.

PASSIVENT FLAIR

Description

Passivent Flair is an innovative and extremely quiet extract ventilation system for new-build apartments. Aesthetically pleasing and discreet, it ensures a fresh, clean and healthy internal environment throughout an apartment with low energy consumption.

The system ventilates the kitchen, bathrooms (which may be ensuite) and WCs.



Typical Flair system for an apartment

Elegant kitchen cooker hoods and discreet bathroom extracts are linked to a low-noise, low-energy central extract fan.

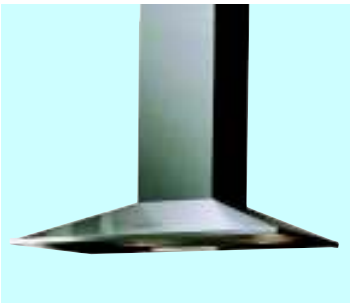
Self-regulating extracts operate constantly to keep the bathroom and ensuite ventilation at its planned level. In the kitchen, increased extraction when cooking is provided by the boost switches on the cooker hood.

Features and benefits

- *Efficient ventilation*
  Provides ventilation where it is most needed - kitchen and bathrooms.
- *Quiet and effective*
  Quieter and more effective than individual room extract fans. Central extract fan can be located discreetly in a cupboard.
- *Aesthetically attractive*
  Elegant Italian-designed cooker hoods in stainless steel, with height-adjustable duct and dishwasher-proof grease filter for easy cleaning. Attractive wall- or ceiling-mounted bathroom extracts.
- *Single outlet*
  Single wall or roof outlet minimises façade disruption.

Cooker hoods

S2 Roma



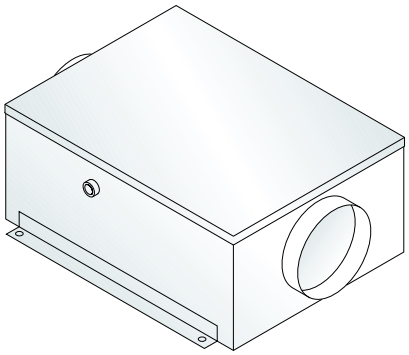
S5 Siena

S7 Napoli

System components

Central extract fan

Low-wattage continuously-running fan.
S125 - spigot diameter 125mm
S150 - spigot diameter 150mm



Extracts

Ceiling-mounted constant volume extracts are self-regulating to maintain a constant extract rate, and are sized to suit the bathroom or ensuite.

Extract code	Airflow at 80Pa
SRE/15	15m³/h (4.2 l/s)
SRE/30	30m³/h (8.4 l/s)
SRE/45	45m³/h (12.6 l/s)
SRE/60	60m³/h (16.8 l/s)
SRE/90	90m³/h (25.2 l/s)

Terminals, Ducting

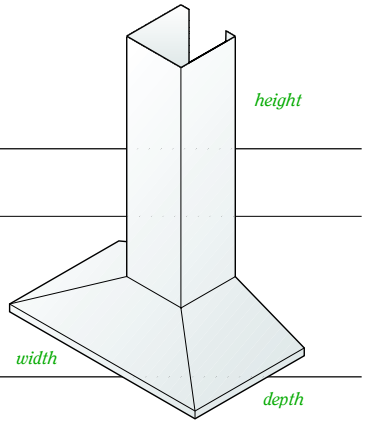
Refer to the Components section page 58.

System installation

A full installation guide is supplied with each system.

Cooker hood dimensions (mm)

Code & description	Height (min - max)	Width	Depth
S2 Roma	710 - 1130	600, 900	500
S5 Siena	780 - 1130	600, 900	500
S7 Napoli	710 - 1130	600, 900, 1000, 1200	500
S10 Ancona	780 - 1130	600, 900	500
S11 Verona	850 - 1270	900	600



S10 Ancona

S11 Verona

Specification clause

Select options required, and insert information where necessary.

Passivent Flair ventilation system

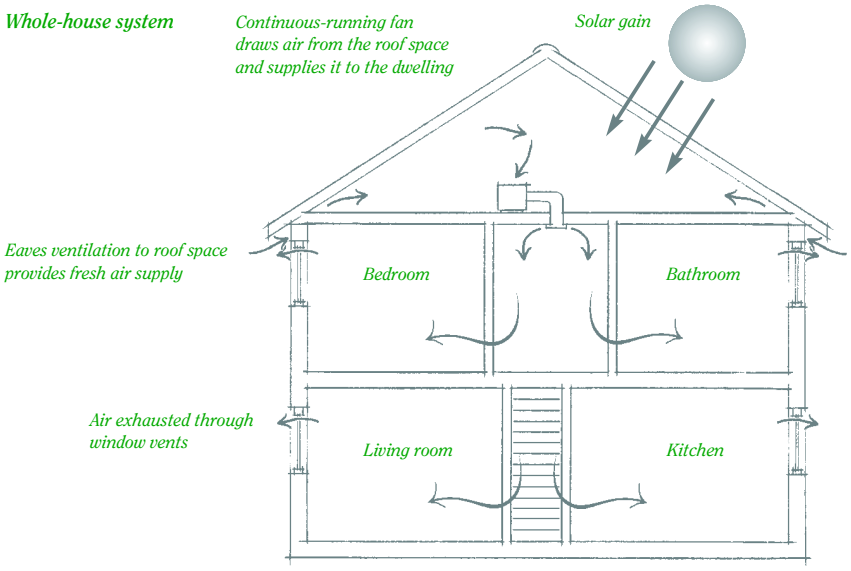
Provide a ventilation system complying with Building Regulations (England and Wales) Approved Document F OR Building (Scotland) Regulations Technical Handbook Domestic Section 3 OR Building Regulations (Northern Ireland) Technical Booklet K OR Building Regulations (Republic of Ireland) Technical Guidance Documents Part F, by means of a mechanical extract ventilation system comprising:
Self-regulating extracts sited in bathroom[s] and WC, ducted to a central fan
Cooker hood ….. [insert code] sited in kitchen and ducted to the fan.
Central extract fan … ducted to a wall/roof terminal.
Continuously running central extract fan sited … and ducted to a wall terminal.
All ducting in unheated spaces to be fully insulated with 25mm insulation.
The system to be Passivent Flair system supplied by
Passivent Limited,
2 Brooklands Road, Sale,
Cheshire M33 3SS.
Telephone: 0161 962 7113,
fax: 0161 969 5346,
email: info@passivent.com.
Installation to be in accordance with the manufacturer's instructions, and to be carried out by a Passivent Mastercare trained installer holding a current certificate.

POSITIVE INPUT VENTILATION (PIV)

Passivent PIV system
Positive Input Ventilation uses air displacement to ventilate a whole dwelling, thereby improving indoor air quality and stopping or preventing condensation problems from occuring. Predominantly designed for installation in existing properties, the PIV units are very easy to install.

A single fan unit mounted in the roof space (or central location for flats) supplies fresh filtered air into the dwelling via a central hallway or landing. This creates a slight positive air pressure which forces stale vapour-laden air out via fortuitous air gaps or through humidity-sensitive window vents.

PIV unit
The PIV unit comprises a fan with connector duct and ceiling diffuser. The fan runs continuously unless the loft temperature exceeds 25ºC, when the unit will switch off. Above this temperature the hot incoming air would be uncomfortable for the occupants and the risks of condensation are somewhat reduced. When the temperature falls below 25ºC the unit will automatically switch itself back on. At temperatures between 19ºC and 25ºC the unit operates in heat recovery mode harnessing the benefits of solar gains, whereby the air in the loft is warmer than outside air.
The ceiling diffuser has been aerodynamically designed to direct incoming air along the ceiling (coanda effect) where it mixes with warm buoyant air before re-circulating downwards, thereby ensuring a more even thermal gradient between the floor and ceiling.



Applications
Due to its ease of installation, PIV is designed primarily for the refurbishment of houses and flats.

Features and benefits

- *Energy savings*
  Supply air taken from the roof space is slightly warmer than outside air, so can provide some energy saving compared with a conventional extract system.
- *Simple and easy installation*
  Requires only a single electrical connection. Does not require ducting through the interior spaces.
- *Low running costs*
  With its DC fan, the PIV system is extremely energy-efficient, costing from as little as a penny a day to run.
- *Elapsed time meter*
  Shows total run time, providing landlords with a foolproof check to prove usage.
- *Minimal maintenance*
  Replacement of the long-life filter is only required every 5 years.
- *Aerodynamically designed diffuser*
  The diffuser is designed to direct incoming air along the ceiling, thereby mixing with, re-using and re-circulating high level warm air.

Quotation
Passivent offer full advice and guidance for PIV systems, and will prepare an estimate and specification.

System installation
A full installation guide is supplied with each system.

The ceiling must be as airtight as possible to minimise recirculation of air from within the dwelling.

Roof space must be ventilated from outside, eg by eaves vents.

Specification clause
PIV Unit
Provide a loft mounted positive input ventilation system (Passivent PIVROOF) comprising a DC fan unit, ducting and ceiling diffuser. The fan unit to have 4 air volume settings, incorporate an elapsed time meter and have a one piece long life filter. System to switch to condensation control mode at loft temperatures below 19ºC, heat recovery mode between 19ºC and 25ºC and comfort mode above 25ºC. PIV system to be supplied by Passivent Ltd,
2 Brooklands Road,
Sale, Cheshire M33 3SS,
Telephone: 0161 962 7113
Fax: 0161 905 2085
Email :info@passivent.com

Energy performance
The Passivent PIV loft unit incorporates an extremely low wattage DC motor minimising energy usage.

Incoming air temp	Ventilation mode	Air volume setting (fan speed)	Airflow (l/s)	Power consumption (W)	Outlet noise dBA at 1 metre
<19ºC	Condensation control	1	24	4.1	21.9
		2	36	6.2	26.3
		3	48	8.6	26.1
		4	60	11.1	28.3
19ºC - 25ºC	Heat recovery	1	36	6.2	-
		2	48	8.6	-
		3	60	11.1	-
		4	72	14.0	-
>25ºC	Comfort	1	0	0	-
		2	0	0	-
		3	0	0	-
		4	0	0	-

BACKGROUND VENTILATION

BACKGROUND VENTILATION

Background ventilation is provided by means of a fixed performance background ventilator providing controllable ventilation to rooms or spaces at a relatively low rate.

Passivent range
Passivent have a comprehensive range of non-mechanical window and wall vents (Tricklevents and Fresh vents) to meet most requirements.

They are purpose designed and offer the advantages of being controllable, secure, and designed to avoid draughts.

A wide range of acoustic models is also available, see pages 45-53.

Applications
Passivent ventilators are suitable for both new-build and refurbishment in domestic applications, both private and public sector.

They can be used as part of a domestic ventilation system comprising background ventilators and intermittent extract fans (Approved Document F System 1), PSV (System 2) and MEV (System 3).

Features and benefits

- *Easily controlled*
  Most models allow occupant control, leading to greater satisfaction with comfort levels. Automatic humidity-controlled models are also available.
- *Efficient in operation*
  Effective ventilation is provided at all times.
- *Protection*
  Vents are specifically designed to provide security, adjustability, avoidance of discomfort due to cold draughts, and prevention of rain ingress.
- *Acoustic range*
  Acoustic range wall vents provide good sound insulation for noisy locations (see next section).
- *Colour service*
  The design requirements of architects and developers are increasing the demand for coloured window frames together with matching coloured window vents, particularly within inner city developments. Passivent are able to offer a service by which many of our plastic and aluminium window vents can be coated in any RAL colour to match windows.

Building regulations requirements
All ventilators can be used to meet the background ventilation requirements of building regulations throughout the UK and the Republic of Ireland, as part of a suitably designed ventilation system or strategy.

For more information see Building Regulations on page 8 (general introduction) see the table opposite.

Ventilation area measurement
For purposes of building regulations, ventilation opening size is defined in terms of 'equivalent area' (England and Wales) or 'free area' (remainder of UK and Ireland). 'Free area' is simply the size of the ventilation aperture, whereas 'Equivalent area' provides a measure of the actual aerodynamic or air flow performance of a given ventilator.

Equivalent area of background ventilator openings is measured by the method of BS EN 13141-1: 2004 'Ventilation for buildings - Performance testing of components/products for residential ventilation - Part 1: Externally and internally mounted air transfer devices'.

Background ventilators for use in conjunction with continuous mechanical extracts (System 3)
The need for background ventilators will depend on the air permeability of the dwelling, and this is not normally known at the design stage. Therefore, as a precaution, it is recommended that controllable background ventilators having a minimum equivalent area of 2,500mm^2 are fitted in each room, except wet rooms from which air is extracted. Where this approach causes difficulties (eg on a noisy site) please contact our technical department for advice.

Replacement windows
Where windows being replaced are fitted with trickle vents, then the replacement windows should also be fitted with them. However, with the reduction in fortuitous ventilation due to improved weatherstripping of new windows, it would be good practice to fit trickle vents on all replacement windows.

System design
Passivent offer guidance and a design service for background ventilation schemes based on the appropriate design process and information provided by the client. The design will achieve regulatory compliance, and will list the ventilation components required.

However it remains the responsibility of the client or his advisor to verify the design's suitability for the project.

PRODUCT RANGE

Passivent window and through-wall ventilators

Vent type	Ventilation opening (mm^2) free area	equivalent area	Features	Page
Window vents (Tricklevents)				
Through-frame				
Delta Vent and Grille	2000, 4000	1310, 2800	BBA Certificated	30
Slimfit Vent and Grille	4000	2500	Very slim, suitable for factory fitting	31
Frame Vent and Canopy Grille	2000, 4000	1400, 3120	BBA Certificated	32-33
Ultra Vent and Grille	4000	3600	Slim profile, integral weatherseal	34
Energy Saver Vent	4000	2760	Humidity-sensitive	35
Over frame and over glass vents				
Streamline Overhead Vent	4000 - 8000*	2500 - 5000*	BBA Certificated	36-37
Overglass Vent Bars	2000 - 8000	1310 - 5930	For double or single glazing	38-39
Superglaze vent	2000 - 8000*	1250 - 4390*	BBA Certificated. For double glazing	40-41
Wall vents (Fresh)				
Fresh 80	4000	2220	Dust and insect filter	42-44
Fresh 90	6000	2630	Dust and insect filter	42-44
Fresh 100	6000	3200	Dust and insect filter	42-44
Fresh 99H	6000	3350	Humidity-sensitive, automatic	42-44
Fresh TLF	5000	2540	Dust and insect filter. Stylish new design	42-44

*depending on window width

Level of background ventilation required for use in conjunction with intermittent extract fans (System 1)

Equivalent ventilator area for dwellings (mm^2)*

	Number of bedrooms**				
Total floor area (m^2)	1	2	3	4	5
≤50	25,000	35,000	45,000	45,000	55,000
51-60	25,000	30,000	40,000	45,000	55,000
61-70	30,000	30,000	35,000	45,000	55,000
71-80	35,000	35,000	35,000	45,000	55,000
81-90	40,000	40,000	40,000	45,000	55,000
91-100	45,000	45,000	45,000	45,000	55,000
>100	Add 5,000mm^2 for every additional 10m^2 floor area				

**The equivalent area should be determined at a 1Pa pressure difference using the appropriate method (BS EN 13141-1). **This is based on two occupants in the main bedroom and one occupant in all other bedrooms. For a greater level of occupancy, assume greater number of bedrooms (ie assume an extra bedroom per additional person). For more than five bedrooms, add an additional 10,000mm^2 per bedroom.*

DELTA VENT AND GRILLE

BBA BRITISH BOARD OF AGREMENT
CERTIFICATE No. 95/3120

Specification clause
Select options required, and insert information where necessary.
Provide background ventilation complying with Building Regulations (England and Wales) Approved Document F OR Building (Scotland) Regulations Technical Handbook Domestic Section 3 OR Building Regulations (Northern Ireland) Technical Booklet K OR Building Regulations (Republic of Ireland) Technical Guidance Documents Part F, by means of internal window ventilators giving *2000 / 4000mm² free area or *1310 / 2800mm² equivalent area of ventilation (Passivent Delta Vent *TVDV2 / TVDV4), and external grille (Passivent Delta Grille *TVDG2 / TVDG4) of injection-moulded plastic. Ventilators to provide upward directional airflow, have slide button control with 'open' and 'closed' indication, and optional trickle facility. Ventilators and grilles to be certified by the British Board of Agrement (BBA) and to meet or exceed the worst case requirements of BS 6375: Part 1: 2000 for resistance to water penetration.
Ventilators and information available from Passivent Ltd, 2 Brooklands Road, Sale, Cheshire M33 3SS, Telephone: 0161 962 7113, Fax: 0161 905 2085. Email: info@passivent.com
*Delete as required.

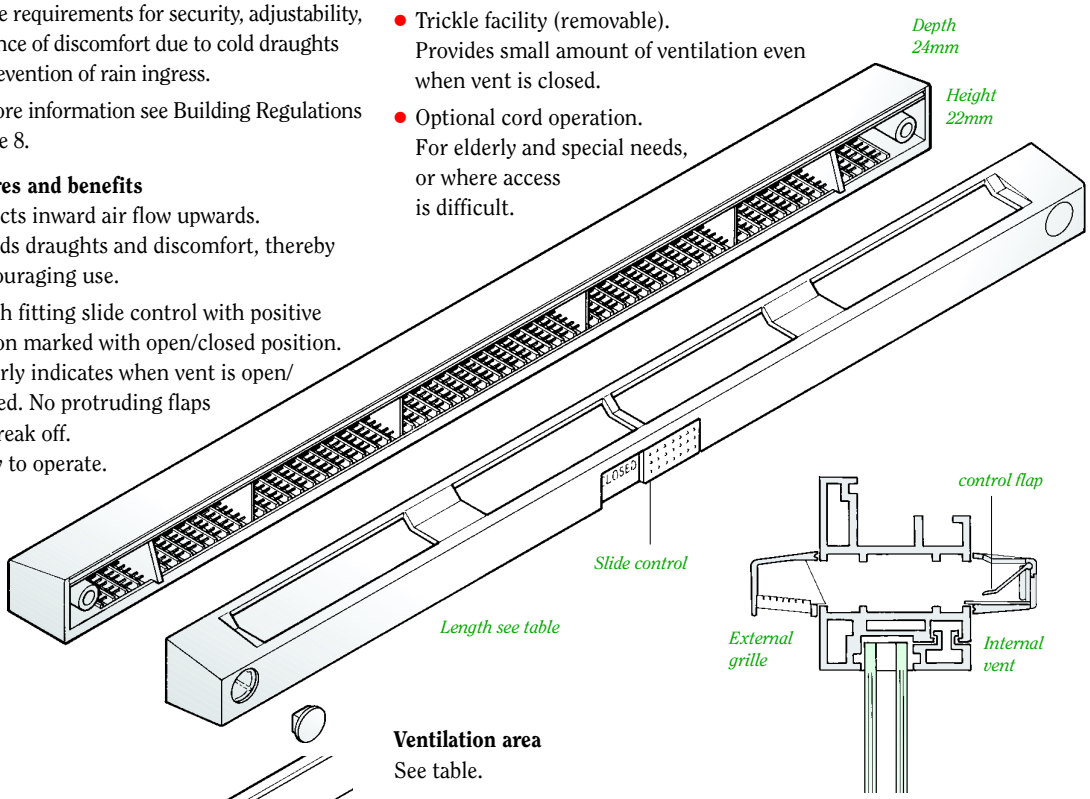
Controllable internal vent, with matching external grille for weather and insect protection.

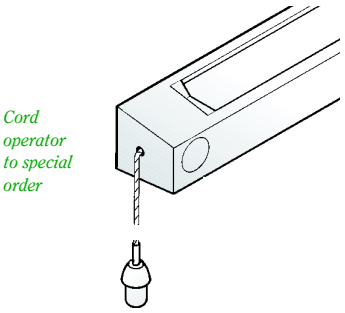
Can be used to meet the background ventilation requirements of building regulations throughout the UK and the Republic of Ireland, as part of a suitably designed ventilation system or strategy, and also the requirements for security, adjustability, avoidance of discomfort due to cold draughts and prevention of rain ingress.

For more information see Building Regulations on page 8.

Features and benefits

- Directs inward air flow upwards.
  Avoids draughts and discomfort, thereby encouraging use.
- Flush fitting slide control with positive action marked with open/closed position.
  Clearly indicates when vent is open/closed. No protruding flaps to break off.
  Easy to operate.
- Meets the worst case requirements of BS 6375: Part 1: 2000 for resistance to water penetration.
  Weather performance of the windows is not impaired by installing vents.
- Location lugs.
  Ensure vents are quickly and easily mounted in the correct position.
- Trickle facility (removable).
  Provides small amount of ventilation even when vent is closed.
- Optional cord operation.
  For elderly and special needs, or where access is difficult.



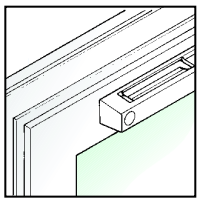


Ventilation area
See table.

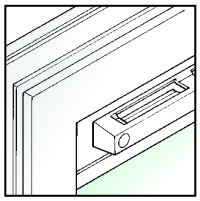
Material
Injection-moulded plastic.
Colours: white or brown.
Other RAL colours to special order subject to minimum quantities.

Fixing
By two screws each for vent and grille, concealed by cover caps.

Installed in window frame



Installed on Overglass Vent Bar



Dimensions

Type code Vent & grille	Ventilation opening free area	equivalent area	Trickle ventilation	Length	Slot size
TVDV2 & TVDG2	2000mm²	1310mm²	250mm²	190mm	148 x 15mm*
TVDV4 & TVDG4	4000mm²	2800mm²	500mm²	350mm	308 x 15mm**

**Alternatives: 160 x 12.5mm square-ended slot with pilot holes drilled for screws; nine holes 17mm diameter.*

***Alternatives: 320 x 12.5mm square-ended slot with pilot holes drilled for screws; eighteen holes 17mm diameter; two slots 137 x 15mm with 40mm central blank.*