

PASSIVENT SYSTEMS

Passivent PSV and MEV systems with acoustic treatment are an effective, energy-efficient means of providing ventilation and meeting planning guidance for noisy areas (see table of Noise exposure categories). Continuously-operating whole-building systems are recommended by PPG24, and BRE Digest 338 suggests that they may be more economical.

Sound insulation is provided primarily by the use of acoustic inlets, and if necessary acoustic ducting. Systems can be terminated on the roof or on a façade away from noise sources, so improving effectiveness. An MEV system requires far less background ventilation than an intermittent fan system, so reducing window/wall penetrations and lessening the need for acoustic treatment.

With fan-assisted ventilation systems it is important that the fan itself does not add to noise. In Passivent MEV systems the fan is located in the roof space or a cupboard rather than in a room.

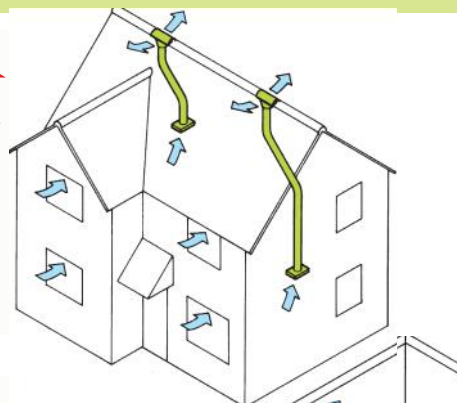
Extract ducts may need to be acoustically treated to prevent noise entering habitable rooms, and to control noise transfer between separate dwellings served by common ductwork.

For more information on Passivent systems see page 10.

Passivent Solutions

Passivent PSV system for Categories A-B

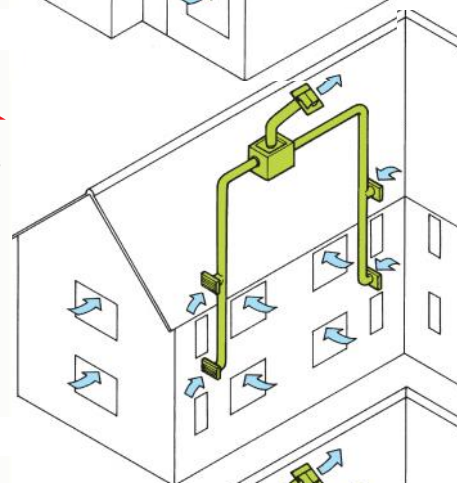
Passivent PSV provides continuous gentle extraction from kitchens and bathrooms. It is preferable to wall fans because ducted extraction through roof terminals means no noise from outside and no fan noise. Acoustically treated window or wall vents in habitable rooms replace the extracted air. Automatic control according to room humidity is possible.



Passivent MEV system for Categories B-C

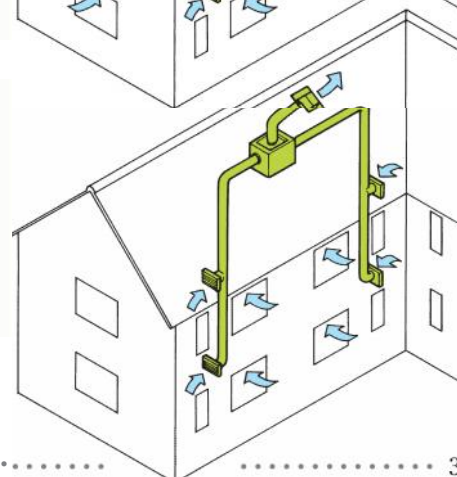
Passivent MEV whole-house systems provide a discreet alternative to acoustic boxes; in many cases there is no visible acoustic treatment.

MEV fan-assisted systems include acoustically treated wall or window inlets in habitable rooms, and ducted extraction from kitchen and bathroom to a roof (or wall) terminal, via a single low-energy continuously-running fan in the roof space or cupboard.



Passivent MEV+ system for Category C

Passivent MEV+ systems are similar to MEV with additional sound insulation such as acoustically treated ductwork.



Passivent Limited offer a free comprehensive design service

ACOUSTIC SOLUTIONS: BACKGROUND VENTILATION

PRODUCT RANGE

Passivent acoustic vents: window and through-wall

Vent type	Ventilation opening (mm ²)		Sound insulation (up to) D _{n,e,w}	Page
	free area	equivalent area		
Window vents				41-42
TVALdB	4200	2012-2500	40-42dB	
TVES4dB	4000	2760	39dB	
Wall vents				43-45
Fresh 80dB	4000	2220	50dB	
Fresh 90dB	6000	2630	45dB	
Fresh 100dB	6000	3200	42dB	
Fresh 99HdB	6000	3350	45dB	
Fresh TLF-dB	5000	2540	44dB	
STM Acoustic wall vent	4000	3380	50dB	
Combustion air				46-48
CA5 (window)	5000	-	} Permanent air supply for } fuel-burning appliances	
Fresh 16 & 18 (wall)	5750, 10 000	-		

ACOUSTIC WINDOW VENT TVALdB



Internally mounted acoustic through frame vent providing substantial sound insulation. Ideal for use in buildings situated in noisy environments such as near main roads, railways or airports. For use with external Canopy Grille TVCG390, see page 28.

Building Regulations

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.

Also meets 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

- **Sound insulation**
Provides substantial sound reduction.
Ideal for noisy environments.
- **Very robust**
Durable, and suitable for areas with high risk of abuse.
- **Clean**
Internal filter prevents insect and dust ingress, helping to keep rooms clean.
- **Easy to operate**
Airflow can be easily regulated by the user.

Ventilation area

See table.

Material

Aluminium with polyester paint finish, injection-moulded ABS end caps.
Colour: white or grey. Other colours to special order.

Sound insulation

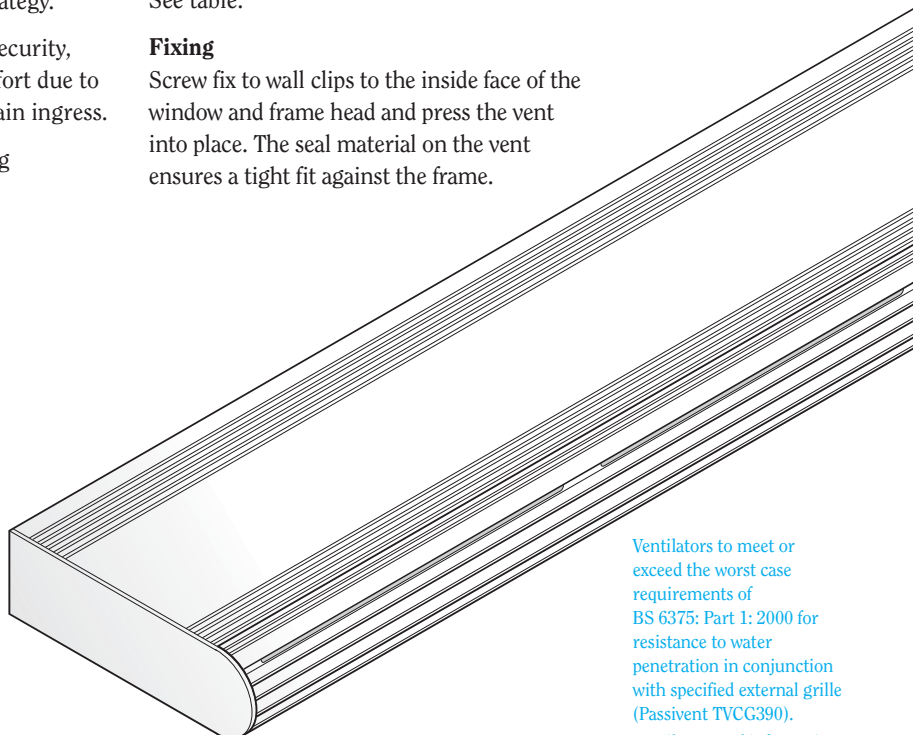
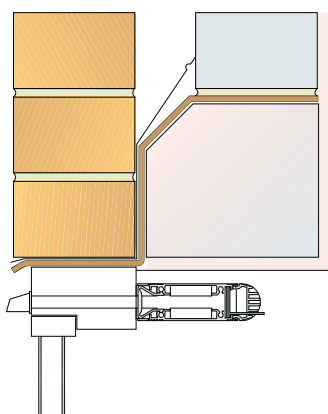
See table.

Fixing

Screw fix to wall clips to the inside face of the window and frame head and press the vent into place. The seal material on the vent ensures a tight fit against the frame.

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 4000mm² free area or *2495/2012mm² equivalent area of ventilation (Fresh AL-dB) to achieve up to *40/42dB D_{n,e,w} sound reduction. Made of aluminium with ABS end caps. Supplied with dust and insect filter as standard.



Ventilators to meet or exceed the worst case requirements of BS 6375: Part 1: 2000 for resistance to water penetration in conjunction with specified external grille (Passivent TVCG390).

Ventilators and information available from Passivent Ltd, 2 Brooklands Road, Sale, Cheshire M33 3SS, Telephone: 0161 905 5700 Fax: 0161 905 2085 Email: info@passivent.com *Delete as required

Dimensions and performance

Type code	Overall length	Ventilation opening		Sound reduction	Slot size
		free area	equivalent area	up to	
TVALdB 450/40	456mm	4200mm ²	2500mm ²	40dB D _{n,e,w}	350 x 12mm
TVALdB 800/42	806mm	4200mm ²	2012mm ²	42dB D _{n,e,w}	350 x 12mm
TVALdB 450/40 WS*	456mm	4200mm ²	2500mm ²	40dB D _{n,e,w}	350 x 12mm

*Including storm shield

HUMIDITY SENSITIVE ACOUSTIC WINDOW VENT



TVES4dB is a through-frame humidity-sensitive acoustic window vent providing effective ventilation and sound insulation, for use near noise sources such as main roads, railways or airports. For use with external Canopy Grille TVCG390, see page 28.

Building regulations

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.

Also meets 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

- **Sound insulation**
Provides substantial sound reduction. Ideal for noisy environments.
- **Energy saving**
The vent automatically opens and closes according to humidity level, ensuring the correct level of ventilation whilst minimising loss of warm air and so saving energy.
- **Ease of operation**
Does not require manual control.

Ventilation area

See table.

Material

Injection-moulded polystyrene.

Colour: white, brown or black. Other colours to special order.

Sound insulation

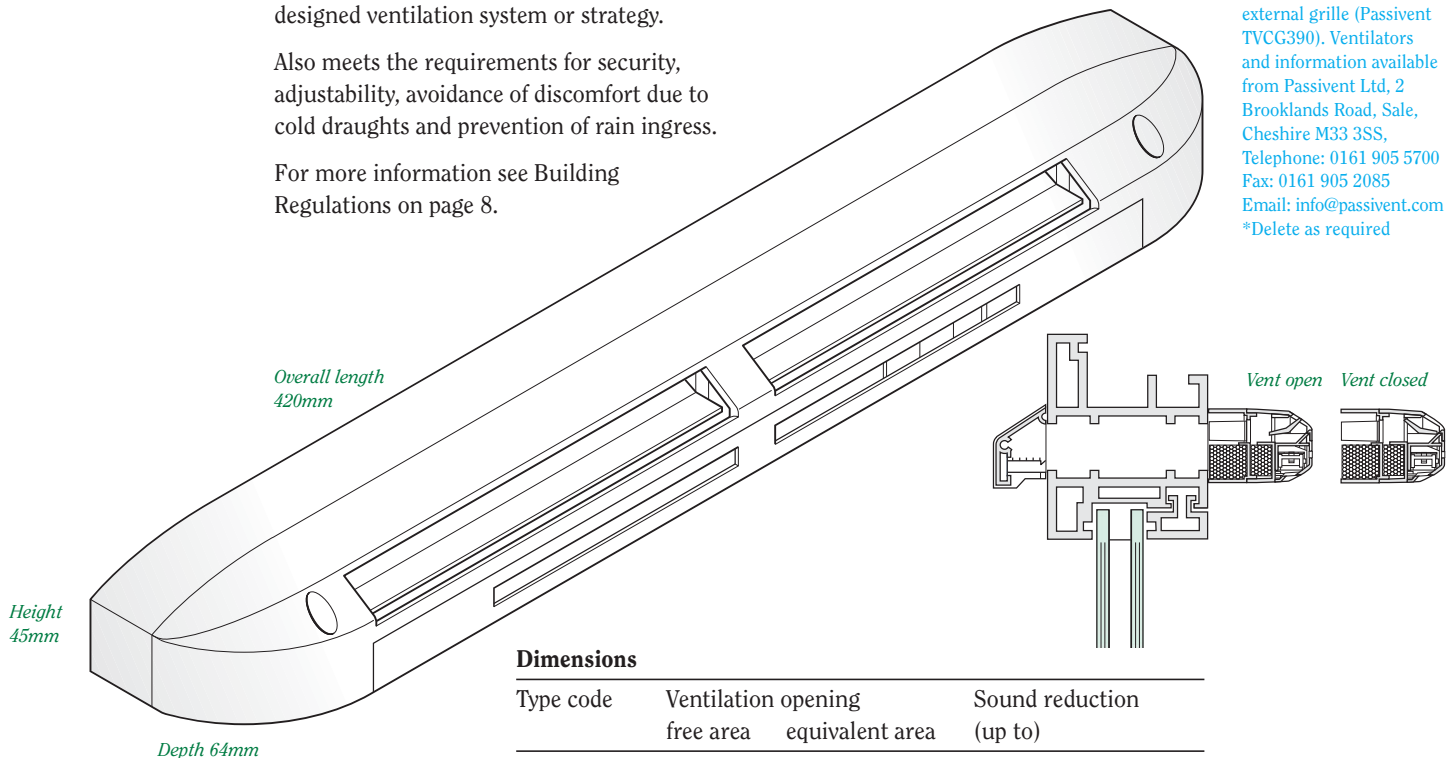
See table.

Fixing

Rout two slots in the window frame head, 160 x 12mm with 10mm blank between. Remove the vent cover, fix the vent to the frame by two screws and refit the cover.

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 automatic humidity controlled window ventilators giving 4000mm² free area or 2760mm² equivalent area of ventilation (Passivent TVES4dB), to operate between 47% and 65% relative humidity and achieve up to 39dB D_{n,e,w} sound reduction. Ventilators to meet or exceed the worst case requirements of BS6375: Part 1: 2000 for resistance to water penetration in conjunction with specified external grille (Passivent TVCG390). Ventilators and information available from Passivent Ltd, 2 Brooklands Road, Sale, Cheshire M33 3SS, Telephone: 0161 905 5700 Fax: 0161 905 2085 Email: info@passivent.com *Delete as required



Dimensions

Type code	Ventilation opening		Sound reduction
	free area	equivalent area	(up to)
TVES4dB	4000mm ²	2760mm ²	39dB

Slot sizes: 2 slots 160 x 12mm with 10mm blank between

FRESH ACOUSTIC WALL VENTS



Fresh 80dB



Fresh 90dB



Fresh 99HdB



Fresh 100dB



Fresh TLFdB



STM

FRESH ACOUSTIC WALL VENT RANGE

Fresh acoustic wall vents provide effective ventilation and sound insulation, for use near noise sources such as main roads, railways or airports.

Fresh 80dB, 90dB, 100dB and TLF-dB are non-mechanical, controllable through-wall vents. Ideal for newbuild or refurbishment in domestic and small commercial applications.

Fresh 99HdB is a demand-controlled non-mechanical through-wall vent which responds automatically to changes in room humidity. Designed specifically to combat condensation problems, particularly in existing buildings, especially local authority and housing association dwellings.

STM is an acoustic wall ventilator providing options of either self-regulating or humidity-

controlled background ventilation combined with excellent acoustic properties. Specifically designed for newbuild applications, with the sound absorption box being built into the wall internally and terminating in a double airbrick externally.

Building Regulations

All vents 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.

Also meets 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

Feature	Fresh type					
	80dB	90dB	100dB	99HdB	TLF-dB	STM
Easily controlled by pull cord	●	-	●	*	-	-
Easily controlled by slider control	-	●	-	-	●	-
Optional pre-settable trickle ventilation facility	●	●	●	●	-	-
Designed to prevent draughts and provide efficient air distribution	●	●	●	●	●	●
Condensation protection by insulation within internal controller unit	●	●	●	●	●	-
Dust and insect filter	●	●	●	●	●	-

*see special features below

Special features

Fresh 99HdB

- Energy saving: provides ventilation only when needed, minimising loss of warm air.
- Not dependent on occupier operation, and can be made tamper-proof.
- Needs no electrical connection or power supply, and has no running costs.
- No maintenance required.
- Manual on/off override cord control.

Fresh TLF-dB

- Stylish new design.
- Easily controlled by slider-operated precision damper.
- Colour matched internal cover to special order.

STM

- Vent is set into the wall with only a narrow projecting air outlet.
- Self-regulating version prevents over-ventilation in windy conditions.
- Humidity-controlled version automatically provides ventilation to meet demand, minimising loss of warm air and thereby saving energy.

FRESH ACOUSTIC WALL VENTS

Ventilation area

Type code	Ventilation opening free area	equivalent area	trickle ⁽¹⁾
Fresh 80dB	4000mm ²	2220mm ²	0-2000mm ²
Fresh 90dB	6000mm ²	2630mm ²	0-1200mm ²
Fresh 100dB	6000mm ²	3200mm ²	0-2800mm ²
Fresh 99HdB	6000mm ²	3350mm ²	-
Fresh TLF-dB	5000mm ²	2540mm ²	-
STM-SR ⁽²⁾	4000mm ²	3380mm ²	-
STM-HC ⁽³⁾	4000mm ²	3380mm ²	-

⁽¹⁾ Can be preset to free area shown when closed. ⁽²⁾ Self-regulating ⁽³⁾ Humidity-controlled

Material

All Fresh vents: ABS (recyclable) with sound insulating wall sleeve (glass fibre with PVC skin).

Colour: internal controller white, external grille terracotta.

Colour matched external grilles to special order.

STM: polystyrene. Colour white.

Sound insulation

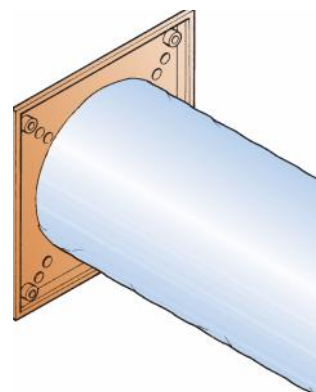
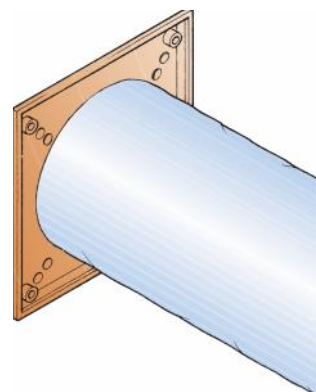
The vents provide sound reduction across 300mm wall thickness of up to the values shown in the table below. These can be increased by approximately 2dB $D_{n,e,w}$ when fitted with Fresh Acoustic Cowl (except for STM).

Test reports are available on request.

Type	Sound reduction up to
80dB	50dB $D_{n,e,w}$
90dB	45dB $D_{n,e,w}$
100dB	42dB $D_{n,e,w}$
99dBH	45dB $D_{n,e,w}$
TLF-dB	44dB $D_{n,e,w}$
STM	50dB $D_{n,e,w}$

Installation

Locate in a high position, typically 1.7m above floor level.



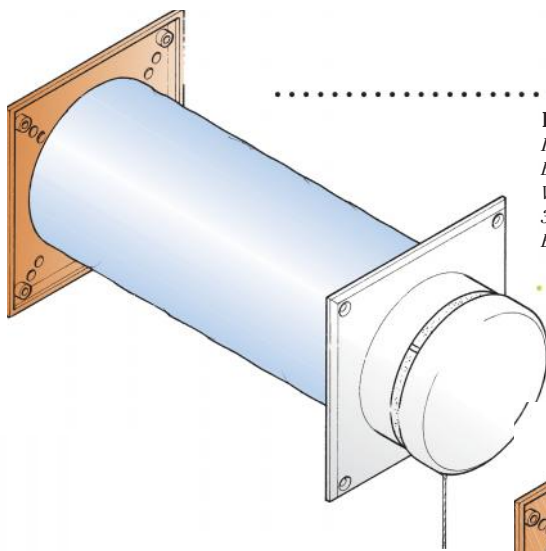
Fresh 99HdB

Internal controller 140 x 140mm x 60mm

Backplate 165 x 165mm

Wall sleeve outside diameter 140mm. Suitable for any wall thickness up to 300mm as standard (or more to special order).

External grille 165 x 165mm



Fresh 80dB

Internal controller 138mm diameter x 60mm depth

Backplate 165 x 165mm

Wall sleeve outside diameter 140mm. Suitable for any wall thickness up to 300mm as standard (or more to special order).

External grille 165 x 165mm

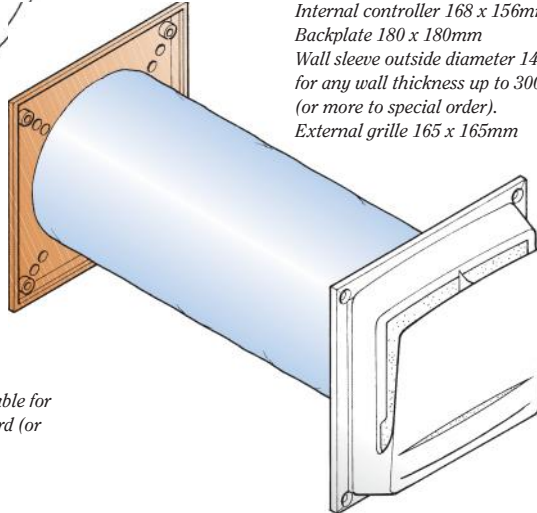
Fresh TLF-dB

Internal controller 168 x 156mm x 46mm

Backplate 180 x 180mm

Wall sleeve outside diameter 140mm. Suitable for any wall thickness up to 300mm as standard (or more to special order).

External grille 165 x 165mm



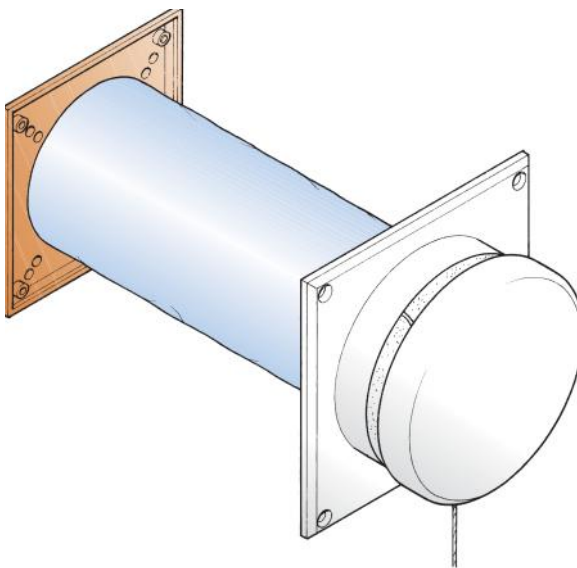
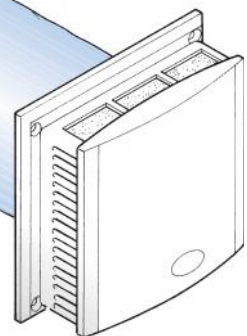
Fresh 90dB

Internal controller 150 x 150mm x 48mm

Backplate 165 x 165mm

Wall sleeve outside diameter 140mm. Suitable for any wall thickness up to 300mm as standard (or more to special order).

External grille 165 x 165mm



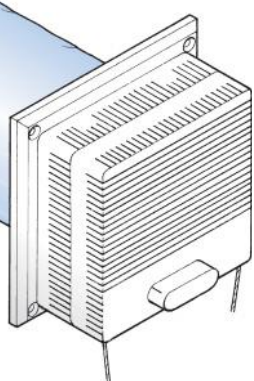
Fresh 100dB

Internal controller 184mm diameter x 65mm depth

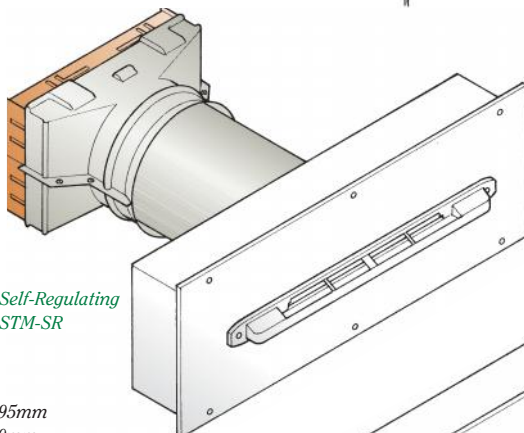
Backplate 210 x 210mm

Wall sleeve outside diameter 140mm. Suitable for any wall thickness up to 300mm as standard (or more to special order).

External grille 165 x 165mm



*Double
airbrick*



*Self-Regulating
STM-SR*

STM

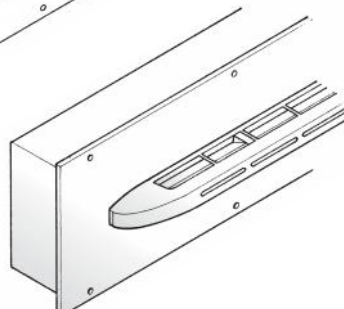
Wall plate 535 x 195mm

Wall box 500 x 160mm

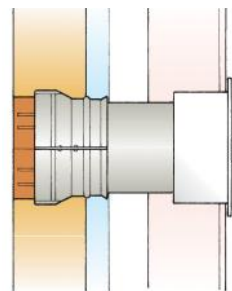
Wall sleeve outside diameter 125mm

Suitable for any wall thickness up to 300mm as standard (or more to special order)

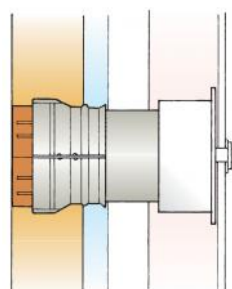
*Humidity-Controlled
STM-HC*



*Section through wall:
surface mounting*



concealed mounting



Specification clause

Select options required, and insert information where necessary.

Provide background ventilation with sound insulation 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 acoustic wall ventilators (Passivent Fresh 80dB / 90dB / 100dB / 99HdB / TLF-dB / STM). Each vent to provide up to mm² ventilation free area or mm² equivalent area, and to achieve sound reduction of dB D_{n,e,w} for 300mm wall thickness under test.

Vent controllable by pull cord / slider, with optional pre-settable trickle ventilation facility when closed.

99HdB: ventilation rate demand-controlled automatically according to room humidity, with no electrical connection required.

STM: self-regulating humidity controlled ventilator of polystyrene. All Fresh vents: ABS (recyclable) with sound insulating wall sleeve (glass fibre with PVC skin).

Ventilators to meet or exceed the worst case requirements of BS 6375: Part 1: 2000 for resistance to water penetration.

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