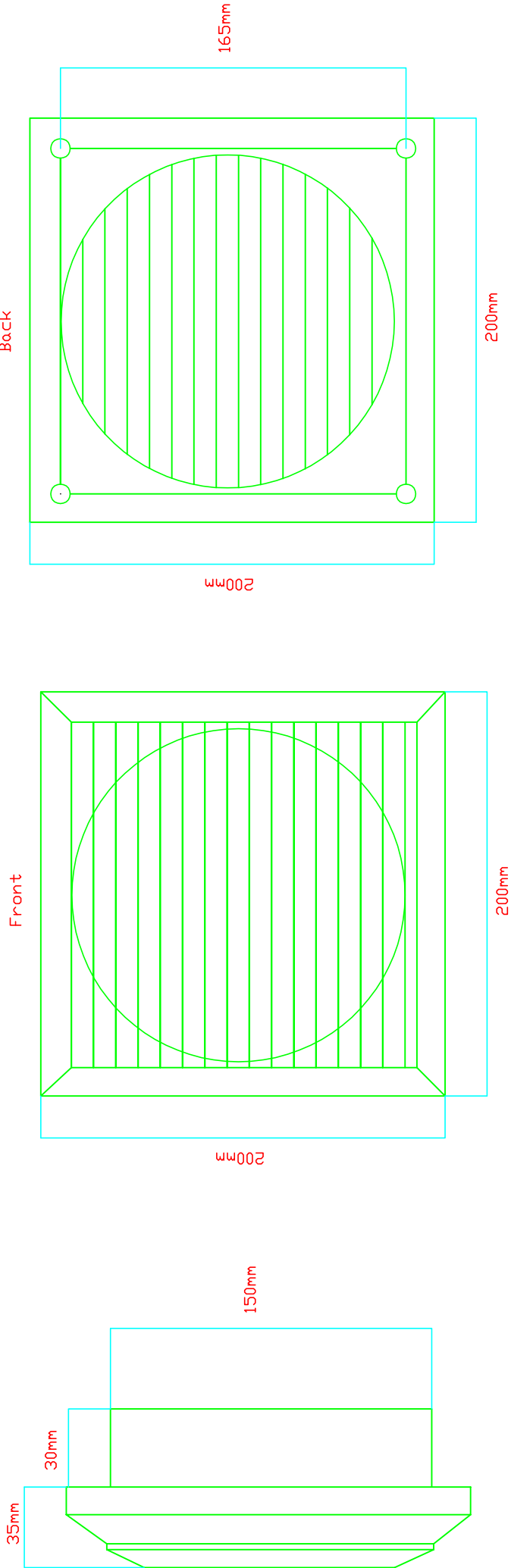




TITLE: PWT150

Notes:

Schematics are indicative and to be used in conjunction with Drawings & Quotation

Sales Rep:	---
Drawn By:	SL
Date:	10/03/2011
Quote Number:	-----
Project:	



Passivent Limited
2 Brooklands Road, Sale Cheshire M33 3SS
Telephone **0161 905 5700**
Fax **0161 969 5346**
Email **technical@passivent.com**
Website **www.passivent.com**

All Designs and Drawings are the copyright of Passivent Ltd.

Flat Channel Ducting

Flat channel ducting is suitable for use with all Passvent *i*PSV, and iMEV systems depending on system flow rate.

It is manufactured from self-extinguishing flame retardant materials. Its low profile means the ducting can be concealed when installed along the top of wall units or in ceiling voids, cavity walls and other confined spaces.

Outer Dimensions 204x60mm
Minimum space required for installation 210x65mm²
Fixing supplied by others on site.

Adjustable horizontal bend (FCA15)



Vertical 90 degree Bend (FCA18)



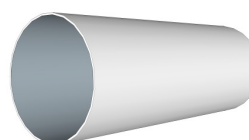
Horizontal Equal T Piece (FCA13)



Round to rectangular adapter (FCA6)



125mm round pipe 350mm long (FCA11)



Single duct 1.5m (FCD1)



Flat channel connector (FCA3)



Elbow bend with 125mm offset Spigot (FCA10)



Horizontal 90 degree bend (FCA12)



Passivent Wall Terminal

Passivent wall terminals are constructed from durable ABS plastic and are used to exhaust air from mechanical ventilation systems.

They come in with two male spigot sizes, 125mm and 150mm.

They can be ordered in a variety of standard colours including white, brown and terracotta.



PWT125

Free Area mm ²	Pressure Loss, Pa		
	@15 l/s	@30 l/s	60 l/s
11,500	0.6	2.1	7.7

PWT150 (200x200mm face)

Free Area mm ²	Pressure Loss, Pa		
	@15 l/s	@30 l/s	60 l/s
16,500	0.5	1.8	6.3

PASSIVENT LIMITED

North Frith Oasts, Ashes Lane, Hadlow, Kent, TN11 9QU Tel: 01732 850 770 Fax: 01732 850 949

Email: technical@passivent.com Web: www.passivent.com

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Flat channel ducting
DATA SHEET PAGE 2 of 2
Last updated 15/08/13

The Passivent A151DCE

Power Usage

The A151DCE uses a high efficiency DC motor consuming less energy than AC alternatives. The less energy consumed, the less it costs to run. As the A151DCE is one of the most efficient, low energy motors on the market, it is one of the most economical to run for the building owner or occupant

Controls

Control of a mechanical extract system is of great importance as it requires the user to select required extraction rate depending upon the moisture production levels within the dwelling. A simple to use controller will make the choice of rate easy to understand and will reduce the potential for over or under ventilation through misuse. The Passivent A151DCE is available with either a hard wired or RFT, each with 3 positions; low, medium and boost. In addition the RFT switch also has a timer function.

Usage

The Passivent A151DCE unit is designed to be used as part of a whole house mechanical extract ventilation (MEV) system, providing continuous ventilation throughout the property. It can be used in conjunction with either standard rigid circular or flat channel ducting, or with Passivent SRD75 semi-rigid ducting.

Occupant Comfort

In order to reduce noise and so any disruption or inconvenience to the occupant, the already quiet Passivent A151DCE includes a silencer. This reduces mechanical noise caused by the moving parts of the fan motor and so make it suitable for use within cupboards or where the fan is located within the habitable areas of the dwelling.

Guarantee

The A151DCE is supplied with a manufacturers 3-year guarantee from the date of installation. This provides peace of mind that the system will perform as designed.

Installation

It is recommended that the A151DCE is installed by a trained competent person. The Passivent Mastercare scheme provides fully trained and competent installers to ensure that systems are installed correctly for user safety and performance efficiency.



All mechanical systems are required to be commissioned before use to ensure that the correct air flow is achieved to meet building regulations. This should be completed by a qualified technician and a copy of the certificate should be sent to the Building Control Body (BCB). Any electrical work must be undertaken by a suitably trained and qualified person.

Quality Assurance

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

Installation Instructions

The Passivent A151DCE is designed to be used in various property types, for both new build and refurbishment projects.

The fan can be installed in all positions including against a wall, on the ceiling or on sloping surfaces. The unit has mounting eyes to suspend the fan within loft spaces.

The Passivent A151DCE

Specification

- A151DCE is designed for use with 230V 50HZ mains voltage.
- A multipolar switch must be fitted with a minimum contact gap of 3mm.
- Supplied with 1m length 5 core cable.
- Fans and ducting in or passing through unheated voids or loft spaces should be insulated.

Setting the PCB

Potentiometer Settings

The PCB has two potentiometers to adjust the ventilation speed. They are used to adjust the minimum and/or maximum capacity of the unit. The configuration of the potentiometers must be made within one hour of installation.

Potentiometer 1

Adjusts the low speed setting. There is a factory minimum set rate of 75m³/h to ensure there can not be minimum installation. Potentiometer 1 should be adjusted to achieve the minimum rate as defined within Approved Document F of the Building Regulations.

Potentiometer 2

Adjusts the high speed of the unit. The factory setting of the high speed is 225m³/h. The maximum range is between 175m³/h to 325m³/h

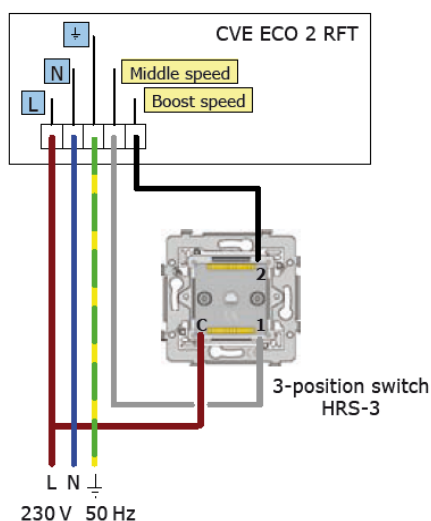
Medium Speed

This is automatically calculated as the mid point between the low and high speed setting.

Performance

	Capacity [m ³ /h]		Pressure [Pa]	Power [W]	Current [A] *
	Standard value	Range			
Setting 1 – Low	75	75-150	8	3.2	0.015
Setting 2 – Medium	150*	150	27	7.5	0.054
Setting 3 – High	225	175-325	100	22.0	0.165
Setting 3 – High	225	175-325	150	28.0	0.210
Setting 3 – Maximum	325	175-325	150	44	0.330

Wiring

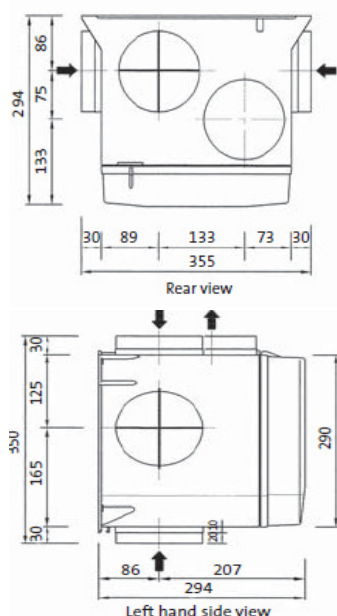


The Passivent A151DCE

Energy Performance

Exhaust terminal configuration	Fan speed setting	Specific fan power (W/l/s)	Energy Saving Trust Best Practice Performance Compliant
Kitchen + 1 additional wet room	100% Variable	0.18	Yes
Kitchen + 2 additional wet room	100% Variable	0.17	Yes
Kitchen + 3 additional wet room	100% Variable	0.18	Yes
Kitchen + 4 additional wet room	100% Variable	0.20	Yes
Kitchen + 5 additional wet room	100% Variable	0.22	Yes
Kitchen + 6 additional wet room	100% Variable	0.27	Yes

Dimensions



Specifications

Material

Body: Polypropylene (recyclable)

Silencer: Acoustic Foam of mixed

Polyurethane/Polyester

Connection

4x 125mmø spigot to connect via ducting to extracts located within wet rooms

1x 125mmø spigot to connect via ducting to exhaust terminal

Maximum Dimensions

355mm width x 294mm depth x 290mm height

PASSIVENT LIMITED

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A121 HUMIDITY CONTROLLED EXTRACT GRILLE



The Passivent A121 Humidity Controlled Extract Grille is designed for 'wet rooms' and responds automatically to changes in relative humidity, opening and closing to meet demand, working in harmony with a central mechanical extract fan to boost individual room extraction.

OPERATION

The A121 extract grille incorporates a number of nylon strands which expand and contract in line with relative humidity, releasing tension within a set of springs inside the extract, varying the size of the opening of the extract.

When relative humidity is below 20%, the extract allows a low level of ventilation (15m³/hr). When relative humidity increases, the A121 opens gradually to increase ventilation in line with relative humidity. When relative humidity is above 80%, the extract is fully open and allows a ventilation rate of 75m³/hr.

The extract forms part of a whole house mechanical ventilation solution, and are located in 'wet rooms' such as kitchens, utility rooms, bathrooms, en-suites and WC's.

Extracts are ducted to a centrally located, continuously running DC extract fan which drives the ventilation system.

The A121 is particularly suited to applications in which occupant control is not desired - e.g. Special needs, care homes, social housing etc.



FEATURES

Fully automatic

Being controlled by the relative humidity of the room, the occupant does not need to worry about the level of ventilation

Energy Efficiency

Being non-electrical, the A121 extract is ideal as part of an energy efficient ventilation system

Visually Unobtrusive

The attractive design ensures that the extract is aesthetically pleasing to the occupant

Flexibility

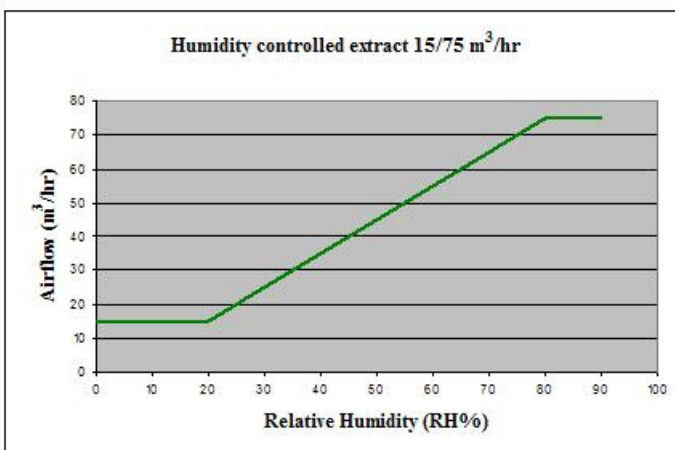
The A121 Extract Grille can be either wall or ceiling mounted

Ease of Installation

As there are no electrical connections to be made, installation is made as simple as possible

Simple Maintenance

With no electrical parts to malfunction, the A121 requires minimal maintenance



Relationship between relative humidity and ventilation rate	
RH (%)	Airflow (m ³ /hr)
0	15
20	15
80	75
90	75

Results shown @80Pa

A121 HUMIDITY CONTROLLED EXTRACT GRILLE

Airflow @ 80Pa Minimum: 15m³/hr (4l/s)
Maximum: 75m³/hr (21l/s)

Opening Area: Minimum: 170mm²
Maximum: 840mm²

Control Method: Humidity Controlled

Specification

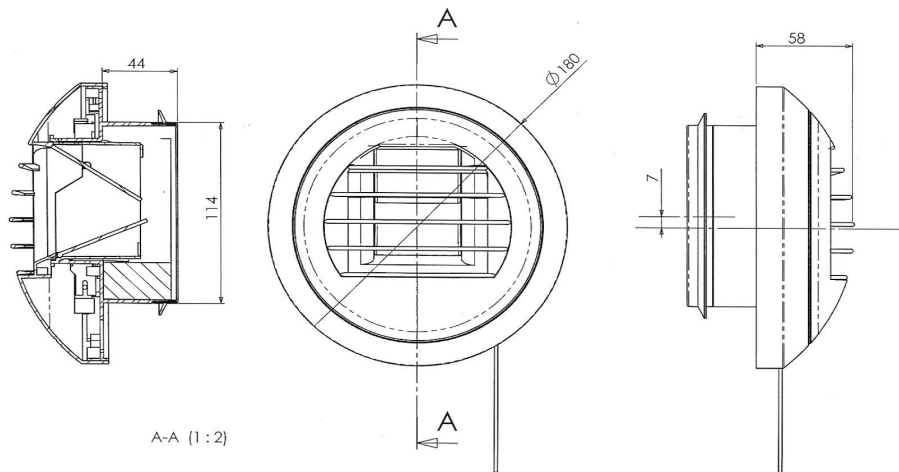
A121 ~ Automatic Humidity Sensitive extract providing 15m³/hr (min) to 75 m³/hr (max) @ 80Pa when operating between 20-80% relative humidity. Extract Diameter: 160mm. Spigot size: Ø 125mm

To be supplied by Passivent Limited, 2 Brooklands Road, Sale, Cheshire, M33 3SS.

Telephone: 0161 905 5700, fax: 0161 969 5346, email: technical@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.

Layout and installation must comply with any design recommendations supplied. By Passivent Limited



DIMENSIONS

External Diameter: 180mm

Thickness: 58mm

Spigot Diameter: 125mm

Extract Grille	Standard Operation	Additional Boost	Use with Boost Switch	Power Supply	
				Mains	Battery
A121	Humidity controlled 15m ³ /hr-75m ³ /hr 4l/s-21l/s	-	-	No power required	

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2 Brooklands Road, Sale, Cheshire, M33 3SS Tel: 0161 905 5700 Fax: 0161 905 2085

Email: technical@passivent.com Web: www.passivent.com

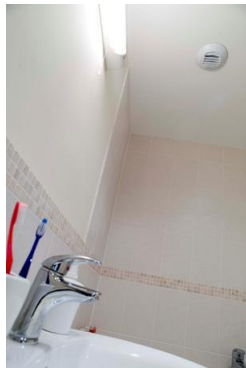
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A141E CONSTANT VOLUME EXTRACT GRILLE WITH TIMED BOOST



The **Passivent A141E constant volume extract grille with timed boost** is designed for 'wet rooms', allowing a low level of continuous ventilation ($25\text{m}^3/\text{hr}$), with an added boost facility to increase ventilation to $90\text{m}^3/\text{hr}$, when required, for a timed period of 30 minutes.

OPERATION

The A141E extract grille incorporates a specially designed flexible rudder which allows the extract to self regulate and ensure that ventilation does not increase above the desired level. In addition, the extract is electrically connected to a remote boost switch, which allows occupants to boost ventilation for a period of 30 minutes.

The extract forms part of a whole house mechanical ventilation solution, and are located in 'wet rooms' such as kitchens, utility rooms, bathrooms, en-suites and WC's.

Extracts are ducted to a centrally located, continuously running DC extract fan which drives the ventilation system.

The A141E is particularly suited as part of a whole house ventilation solution whereby a constant level of ventilation is wanted for the majority of the time, whilst still offering occupants the option to boost ventilation.

The timed facility ensures that ventilation does not remain at the high rate when it is not wanted, but instead returns to the desired constant level.



FEATURES

Occupant Control

The extract allows occupants an element of control to increase ventilation as and when required

Occupant Comfort

Ensures that the room in which it is situated is not over ventilated for long periods of time by returning to constant level after 30 minutes

Energy Efficiency

The timed element ensures that ventilation does not remain at a high rate for unwanted prolonged periods

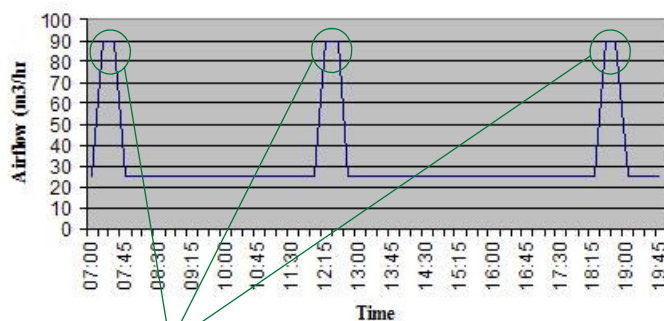
Visually Unobtrusive

The attractive design ensures that the extract is aesthetically pleasing to the occupant

Flexibility

The A141E Extract Grille can be either wall or ceiling mounted

Example of Boost Function



Boost switch pressed here and increases ventilation to the high rate of $90\text{m}^3/\text{hr}$ for a period of 30 minutes

When the boost switch is not pressed the ventilation rate remains at a constant rate of $25\text{m}^3/\text{hr}$



The diagram on the left illustrates how the timed boost function allows the occupant to increase ventilation rate as and when required for a period of 30 minutes

A141E CONSTANT VOLUME EXTRACT GRILLE WITH TIMED BOOST

Airflow @ 80Pa

Constant: 25m³/hr (7l/s)
Boost: 90m³/hr (25l/s)

Opening Area :

Constant: 280mm²
Boost: 1010mm²

Control Method:

Self Regulating + A132 Boost Switch (*sold separately*)

Specification

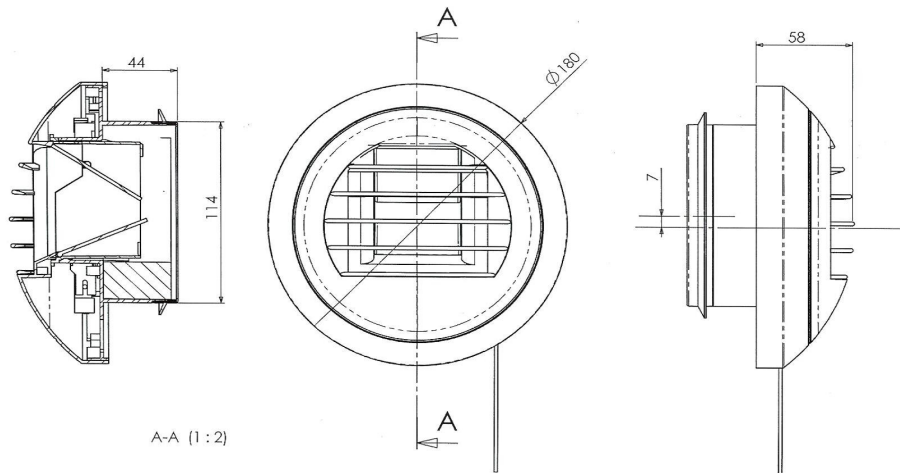
A141E ~ Constant Volume extract with electrical boost (230v AC) providing 20m³/hr @ 80Pa boostable to 90m³/hr for 30 minutes. Extract Diameter: 180mm. Spigot size: Ø 125mm. Requires A132 boost switch

To be supplied by Passivent Limited, 2 Brooklands Road, Sale, Cheshire, M33 3SS.

Telephone: 0161 905 5700,
Fax: 0161 969 5346,
Email: technical@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.

Layout and installation must comply with any design recommendations supplied. By Passivent Limited

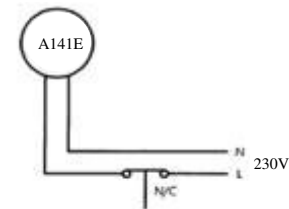


A-A (1:2)

DIMENSIONS

External Diameter: 180mm
Thickness: 58mm
Spigot Diameter: 125mm

WIRING



A132 Timed Boost Switch
(Spring Return)



A132 boost switch

Extract Grille	Standard Operation	Additional Boost	Use with Boost Switch	Power Supply	
				Mains	Battery
A141E	Constant volume 25m ³ /hr 7l/s	30min timed boost @ 90m ³ /hr 25l/s	A132	230v AC	

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ULTRA VENT

The Passivent Ultra Vent range of through frame tricklevents are available in three sizes and comprise of a controllable internal ventilator and a matching external canopy grille. They provide ventilation combined with weather protection and security.

Avoidance of condensation that often manifests itself on windows can be achieved by the use of background ventilation using tricklevents. As well as the removal of moisture, it is necessary to replace this with an input of fresh air which in turn can promote air movement to ensure air is circulated around a building.

BENEFITS

- Allows controlled flow of fresh air to promote a healthy indoor environment and reduce potential for condensation.
- One of the smallest window ventilators on the market providing 5000mm² equivalent area.
- Suitable for a range of slot heights from 13mm to 17mm.
- Slimline internal vent with two stage opening.
- External canopy grille provides weather protection and 4mm insect ingress grille.
- Slim profile of 10mm for the vent gives an unobtrusive and aesthetic appearance.
- Incoming fresh air is directed upwards to avoid draughts and discomfort.
- Suitable for PVCU, aluminium and timber windows.
- Exceeds the worst case requirements of BS 6375-1 for resistance to water penetration.

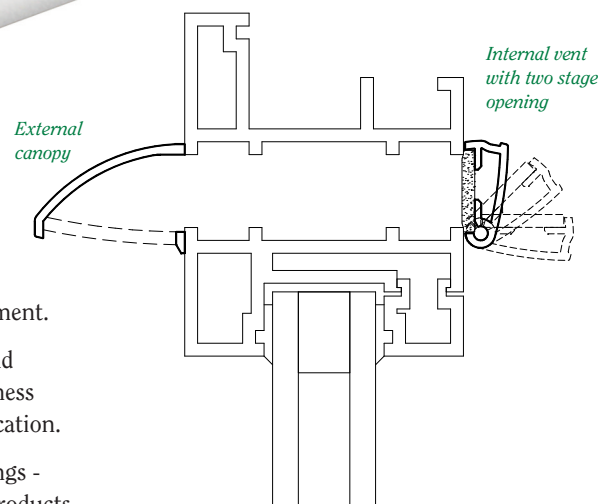


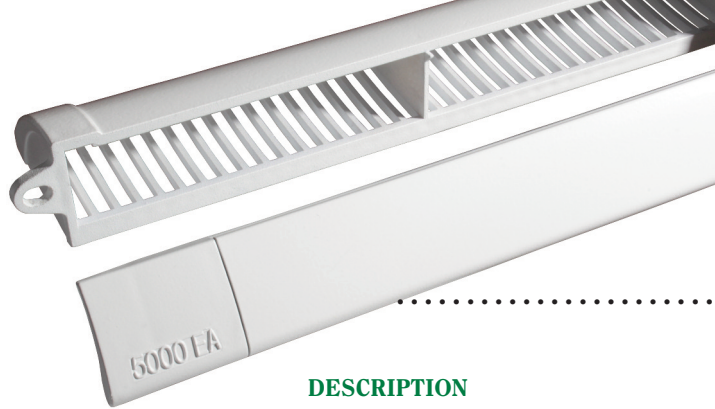
The Ultra Vent range of slim stylish window vents provide equivalent areas of 2500mm², 4000mm² and 5000mm² and can be used to meet background ventilation requirements of Building Regulations throughout the UK and Republic of Ireland.

Complies with:
Building Regulations Approved Document.

BS6375-1 Performance of windows and doors. Classification for weathertightness and guidance on selection and specification.

BS EN 13141-1 Ventilation for Buildings - performance testing of components/products for residential ventilation. Part 1 Externally and Internally mounted air transfer devices.





passivent

ULTRA VENT

DESCRIPTION

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.

Air permeability

Ultra Vent 5000 achieves 0.25m³/hr at 50Pa in the closed position when tested to BS EN 1026: 2000.

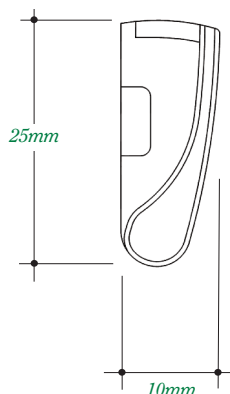
Water tightness

Ultra Vent 5000 achieves 1000Pa pressure with no leakage in the closed position when tested to BS EN 1027: 2000.

Dimensions

Ultra Vent

Product code	Dimensions (L x H x W)
TVUV25	235 x 25 x 10mm
TVUV4	350 x 25 x 10mm
TVUV5	405 x 25 x 10mm



PERFORMANCE

Equivalent free area

Product	Equivalent free area	Slot size required (H x W)
Ultra Vent 2500	2500mm ²	1 x 13mm x 165mm
Ultra Vent 4000	4000mm ²	2 x 13mm x 135mm
Ultra Vent 5000	5000mm ²	2 x 13mm x 162.5mm

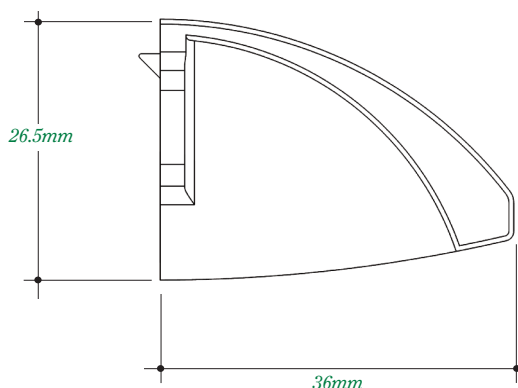
*Ultra Vent range can be used on slot sizes up to 17mm height

Scottish Building Regulations: Geometric free area

Product	Geometric free area	Slot size required (H x W)
Ultra Vent 2500	2742mm ²	1 x 17mm x 165mm
Ultra Vent 4000	4465mm ²	2 x 17mm x 135mm
Ultra Vent 5000	5400mm ²	2 x 17mm x 162.5mm

Ultra Grille

Product code	Dimensions (L x H x W)
TVUG25	203 x 26.5 x 36mm
TVUG5 for use with TVUV4 and TVUV5	373 x 26.5 x 36mm



Stockist's stamp

PASSIVENT LIMITED

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Tel: 01732 850770 Fax: 01732 850949

Email: info@passivent.com Web: www.passivent.com

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