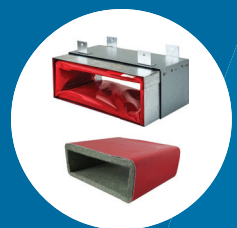
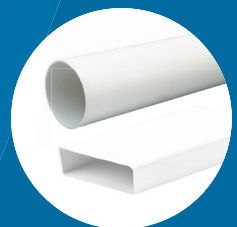


Domestic Ventilation Ducting Systems

RANGE OVERVIEW

The Technology behind the lifestyle





For all your ducting needs



Are you?

Company Overview

Verplas Ltd established in 1986 is one of the UK leading ventilation ducting manufacturers. With its increasing capabilities within extrusion and plastic injection moulding, Verplas' wide range of UK Ventilation products have continued to lead the way within the domestic ventilation market for nearly 30 years.

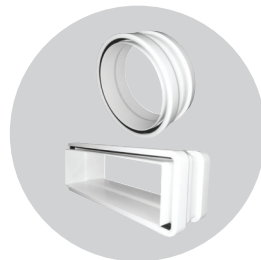


Verplas is part of the Indutrade worldwide group that specialises in high-tech products and solutions with over 200 companies within its portfolio.



Service

Verplas delivers on customer service with a dedicated team of advisors trained and here to help. We understand the demands of today's construction industry requiring a fast response to all customers' needs from technical information, regulation support through to delivery advice.



Innovation

Verplas specialise in supporting the specification market place by providing industry changing solutions. We at Verplas ensure you have the right tools to select the most energy efficient ducting systems. Our patent pending self-seal ducting systems provide specifiers with peace of mind of a leak free system. Our 3D REVIT BIM files with links to technical data provide easily accessible supporting information for today's ventilation designer.



Quality

Verplas' reputation for quality and service has allowed the company to expand into a variety of markets from supplying today's leading fan manufacturers, developers to the retail sector. Verplas achieved BS EN ISO 9001 in 2008 and continues to strive to ensure quality remains at the forefront of our company goals.



With over a million pounds of stock available for next day delivery to UK mainland, Verplas's supporting network of carriers will ensure your project runs smoothly and on schedule.

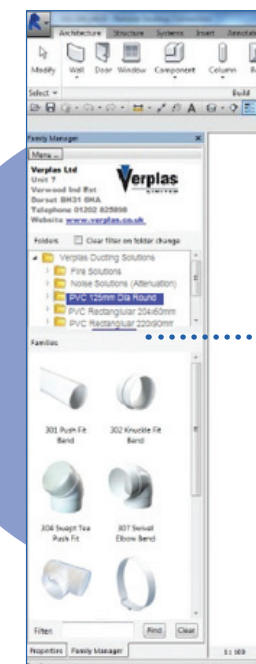
Verplas Ducting Family Manager

The Verplas Ducting Family Manager is a free REVIT software download to help designers and consultants working with residential ventilation systems.

The REVIT software provides you with free pre-populated ducting ancillary 3D models for precision and accuracy within today's building constraints.

- Fire solutions
- Noise solutions
- Circular ducting range
- Rectangular ducting range
- Grilles and terminals
- Indoor air quality range

This Verplas Ducting Family Manager saves you time and effort creating your own 3D PVC REVIT ducting components. Just click download and insert into your project.



Innovation

Each 3D REVIT model is supplied and displayed with colour images for easy recognition, associated part numbers for bill of materials creation, links to Verplas web site and individual product data sheets containing all technical information such as specification details, performance curves, pressure drops and all relevant technical standards.

This gives you the peace of mind with your specification and speeds up the ventilation design process.

For your FREE download visit **www.verplas.co.uk**

Verplas Family Manager is compatible with all REVIT 2014/15 Systems

Regulations

SCOTLAND

Energy Section 6: This refers to the consumption of energy as Scotland drives to meet the Zero Carbon Homes target, which is outlined in the Climate Change Scotland Act 2009. Starting from October 2010 a new requirement of 30% reduction in all CO₂ emissions is required. To see the maximum specific Fan Power for each System Type see Table 6.12, page 47 of the Scottish Building Standards, of which is identical to Part L1A (England). Environment Section 3 details the delivery of appropriate indoor air quality for occupants.

Guidance on Natural Ventilation, intermittent extract and continuous ventilation systems can be found in Section 3.14. Trickle Ventilators are suitable in wet rooms for use with Mechanical Extract and Passive Stack Systems.

When infiltration rates are under 5(m³/h)/m² @ 50Pa it is suggested that a different ventilation solution should be utilised. Mechanical Extract, also known as Intermittent Fans, need to operate at a specific Fan Power, a maximum 0.5 W/(L/s). Extract of each wet room is similar to Part F (England & Wales). Depending on the infiltration rate background ventilators are required. Mechanical Ventilation (Continually Operating Extract System) covers decentralised units known as (dMEV), MEV and MVHR systems complying with BRE Digest 398. With boost facility a continuous air movement should be equal or greater than 0.5 ACH.

NORTHERN IRELAND

Standard Part K 2012, Regulation 65 enforces the requirement for adequate ventilation for all occupied buildings. The regulation states fixed mechanical ventilation systems must be tested and commissioned to ensure the minimum ventilation requirements are met and ensure all appropriate documentation to be provided to the building owner. The minimum levels of ventilation systems are detailed in 'Approved Document Part F'.

REPUBLIC OF IRELAND

The ROI Building Regulations, known as TGD's, (Technical Guidance Documents) are very similar to those used in England & Wales. F1 document details that occupants should experience adequate ventilation and in order to ensure the removal of water vapour is provided. Habitable rooms must include background ventilation as well as wet rooms including mechanical ventilation. These rates are stated in England & Wales regulation, 'Approved Document Part F' apply.

WALES

At present English & Wales regulations are still used even though Building Regulations have been devolved to the Welsh Government, Part L is currently being reviewed.

NOTE Extracts from the relevant Building Regulations and Standards are included for guidance purposes only. Reference should be made to the applicable Regulations and Standards with further information available by following the 'Industry Documents' included on Page 8.

ENGLAND & WALES

Regulations 2010

From October 2010, the regulations enforce a 25% CO₂ reduction from the past levels in 2006. With this in mind they take due consideration of increasingly air tight buildings and research results on the risks from air pollutants and inadequate ventilation. Regulations now make it a mandatory legal requirement for installers to record and report back the commissioning airflow results of all mechanical ventilation systems.

Approved Document Part F (ADF)

The building regulation known as Part F is put into place to ensure that 'adequate means of ventilation' are provided for those living within a building. Ventilation is the process of the removal of current air from a building and replacing it with fresh outside air.

Part F does not include a building or space, within a building of the following:

- Where people do not normally enter
- Where main use is for storage
- Garage used solely in connection with a single dwelling

Part F states mechanical ventilation is required in kitchen, bath/shower rooms, utility and toilets for all recent build and building work on kitchen and bathrooms when in existing buildings.

Approved Document Part F suggests four ventilation system choices:

- System 1 Background ventilators and intermittent extract fans
- System 2 Passive stack ventilation
- System 3 Continuous mechanical extract (MEV)
- System 4 Continuous mechanical supply and extract with heat recovery (MVHR)

If you require more information on the application of each of the above systems along with the required extract ventilation rates for a variety of rooms see page 18 & 10. It is suggested in Clause 4.39 that ventilation systems are installed in accordance with the partner of Domestic Ventilation Compliance Guide 2010.

Approved Document Part L1A (ADL)

Part L 2010 enforces that new housing must be built to the equivalent of code level three however the 2013 edition now asks for a further 6% uplift of efficiency savings together with a new Fabric Energy Efficiency Target, known as Regulation 26A.

Domestic Building Services Compliance Guide 2013 is referred to in Part I 2013 whereby ventilation efficiency levels are highlighted. Included is the maximum Specific Fan Power (SFP) requirement for fan systems used in new build developments and refurbishments.

The document also highlights the maximum Specific Fan Powers (SFP) that are allowed:

- 0.5 W/(L/s) for intermittent extract ventilation systems
- 0.5 W/(L/s) for continuous supply ventilation systems
- 0.7 W/(L/s) for continuous extract ventilation systems
- 1.5 W/(L/s) for continuous supply and extract with heat recovery ventilation systems

Controls

Apart from all intermittent extract systems all other systems should have an manual or automatic control of the boost function. However intermittent extract systems should always be operated locally by manual switches or automatically by presence sensors.

Heat Recovery

All MVHR systems must exceed a minimum of 70% thermal efficiency.

Approved Ventilation Systems

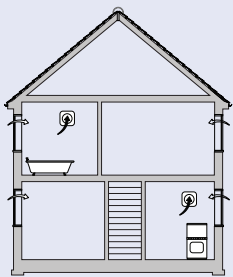
SYSTEM 1: Background Ventilators & Intermittent Extract Fans

Individual extract fans are installed in 'wet' rooms to provide rapid means of ventilation & the extraction of moisture and smells. They can operate intermittently, continuously or automatic control via sensors. Extract fans can be either mounted in a window, ceiling or external wall. All mounting applications should be ducted directly to outside. Replacement dry air is provided via background ventilators (e.g. trickle ventilators) and air leakage through natural gaps within the property. For

sizing of background trickle ventilators please see Approved Document F 2010.

To encourage good transfer of air throughout the dwelling, there should be an undercut of minimum area 7600mm² in all internal doors above the floor finish (10mm) for a standard 760mm width door.

Cooker hoods should be 650mm to 750mm above the hob surface (or follow manufacturer instructions). Intermittent extract fans other than



cooker hoods should be installed as high as is practical and preferably less than 400mm below the ceiling.

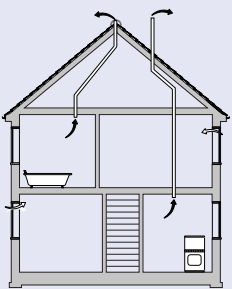
Part L1a Regulations & Domestic Services Compliance Guide 2013 require Intermittent fan to achieve a specific fan power not worse than 0.5 w/(l.s).

SYSTEM 2: Passive Stack Ventilation (PSV)

A PSV system comprises grilles located in 'wet' rooms, connected via near-vertical ducts to ridge or other roof terminals. Warm, moist air is drawn up the ducts by a combination of the stack effect and wind effect. Replacement dry air is drawn into the property via background ventilators (e.g. trickle ventilators) located in the habitable rooms, and by air leakage. Providing a gap at the bottom of the internal doors will allow the free passage of air through the property.

See Approved Document F 2010 for guidance on make up air via background ventilators.

Standard PSV systems have a simple inlet grille to the duct, usually fitted into the ceiling. In addition automatic controls such as humidity-sensitive inlets are available that provide increased flows when humidity is high (e.g. during periods of moisture production). These give enhanced energy performance because air



extraction is minimised when moisture production is low.

PSV duct sizes must be a minimum of 125mm internal duct diameter with an internal cross sectional free area of 12000mm².

SYSTEM 3: Continuous Mechanical Extract (MEV)

A mechanical extract ventilation (MEV) system continually extracts air from 'wet' rooms. It usually consists of a central ventilation unit positioned in a cupboard or loft space ducted throughout the dwelling to extract air from the wet rooms.

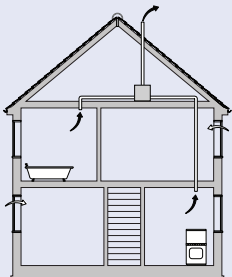
(Other configurations do exist, including the use of continuously running individual room fans, although with latter, care must be taken to minimise the effects of wind pressure on the flow.)

The system is typically dual speed, providing low speed continuous 'trickle'

ventilation, and 'high-speed boost' flow. Replacement clean air is drawn into the property via background ventilators located within the habitable rooms, and via air leakage.

Each wet room shall have the manual facility to boost the system for rapid means of ventilation. Automatic boost facility via sensors or integral to the fan such as humidity are also permitted.

An allowance for air permeability can be made by using background ventilators having a minimum free area of 2500mm² and be installed in each habitable room. However should the property be leakier



than (>)5 m³/(h.m²) at 50pa background ventilators are not necessary.

Part L1a Regulations & Domestic Services Compliance Guide 2013 require MEV systems to achieve a specific fan power not worse than 0.7 w/(l.s).

To qualify as best practice standard for GPG268 the whole system must have a specific fan power of 0.6W/l/s or less when running at each of its settings.

SYSTEM 4: Continuous Mechanical Supply & Extract with Heat Recovery (MVHR)

A whole house mechanical ventilation (MVHR) system combines supply and extract ventilation in one system. Systems considered here incorporate a heat exchanger.

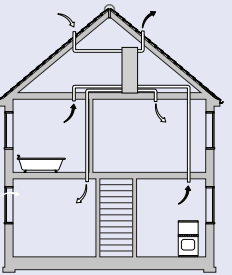
Warm, moist air is extracted from 'wet' rooms via a system and passed through a heat exchanger before being exhausted to outside. Fresh incoming air is preheated via the exchanger and delivered to the living room and other habitable rooms.

These systems can be effective at meeting part of the heating load in energy efficient dwellings, and helping to adequately distribute the heat. The

system is dual speed, providing low-speed continuous 'trickle' ventilation, and 'high-speed boost' extract flow.

These systems can provide the ideal ventilation system, delivering precise ventilation rates to suit each individual property needs. Energy saving benefits are maximised in airtight properties (<5m³/hr/m² at 50Pa) when almost all ventilation air passes through the heat exchanger.

An allowance for air permeability can be made by using background ventilators having a minimum free area of 2500mm² and be installed in each habitable room. However should the



property be leakier than (>)5 m³/(h.m²) at 50pa background ventilators are not necessary.

Systems are normally positioned in a cupboard space, ceiling void or loft space. A series of ducts then connect the heat recovery unit to each of the rooms. Ducting sizes are normally installed in accordance with Sap Appendix Q requirements using 125/150mm round or 204x60mm/220x90mm rectangular.

Approved Document F 2010 Ventilation Rates

The ventilation methods outlined above should be sized and selected in accordance with the flow rates shown in tables 5.1a and 5.1b. In conjunction with the airflow requirements consideration should be made to the selection of background ventilation and make up air. For full guidance on sizing of background ventilation (trickle vents) see Approved Document F 2010.

Table 5.1a Extract ventilation rates

Room	Intermittent extract	Continuous extract	
	Minimum rate	Minimum high rate	Minimum low rate
Kitchen	30 l/s adjacent to hob	13 l/s	Total extract rate should be at least the whole dwelling ventilation rate given in Table 5.1b
	60 l/s elsewhere		
Utility room	30 l/s	8 l/s	
Bathroom	15 l/s	8 l/s	
Sanitary accommodation	6 l/s	6 l/s	



Table 5.1b Whole dwelling ventilation rates

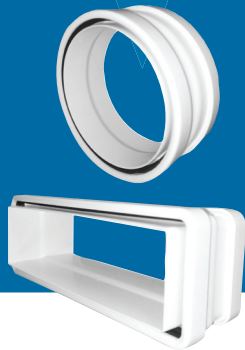
	Number of bedrooms in dwelling				
	1	2	3	4	5
Whole dwelling ventilation rate ^{a b} l/s	13	17	21	25	29

Notes

- In addition, the minimum ventilation rate should not be less than 0.3 l/s per m² on internal floor area. (This includes all floors, e.g. for a two-story building add the ground and first floor areas.)
- This is based on two occupants in the main bedroom and a single occupant in all other bedrooms, this should be used as the default value. If a greater level of occupancy is expected add 4 l/s per occupant.

Industry Documents

Self-Seal



Part L1a 2013

Document outlines maximum power consumptions & minimum acceptable heat exchange efficiencies for ventilation systems installed in residential dwellings.



BRE Digest 398

Guidance on selecting continuous ventilation systems (MV, MEV & MVHR) in dwellings covers design and installation.



Approved Document F 2010

Ventilation standards for England and Wales outlining approved systems and airflow requirements within new and existing dwellings.



GPG268

Guide to help specifiers understand the issues associated with energy efficient ventilation and the types of systems that are available to provide satisfactory ventilation in dwellings.



Scottish Building Standards

Updated ventilation standards for Scotland outlining approved systems and airflow rates within new and existing dwellings.



PPG155

Guide to help landlords & private developers to refurbish and repair existing homes in an energy efficient way. Covers individual fans, passive stack & mechanical heat recovery.



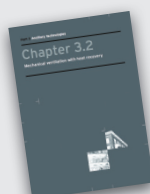
ROI Ventilation Technical Guidance Document F1

Ventilation guidance document for the Republic of Ireland outlining approved systems and airflow rates within new and existing dwellings.



NHBC Guidance Chapter 3.2

This document gives guidance on mechanical ventilation with heat recovery (MVHR) systems, associated ducting & installation guidance acceptable to NHBC.



Northern Ireland Standard K

Ventilation standards for Northern Ireland outlining approved systems and airflow rates within new and existing dwellings.

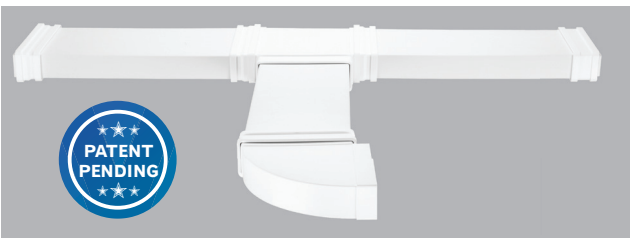


Domestic Ventilation Compliance Guide 2010

Installation, inspection, testing and commissioning guidance for ventilation systems used in existing and new dwellings. Outlines ductwork installation requirements for all approved systems.



- ▶ Minimise air leakage
- ▶ Maximise air flow
- ▶ No tape or sealant
- ▶ Maximises ventilation system performance
- ▶ Independently tested by BRE
- ▶ Reduces installation time by up to 30%

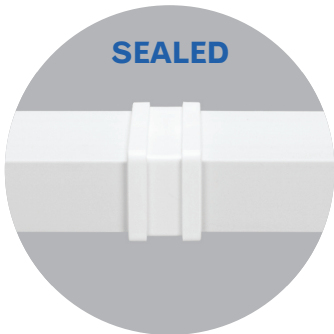
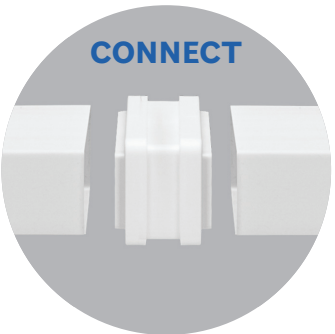
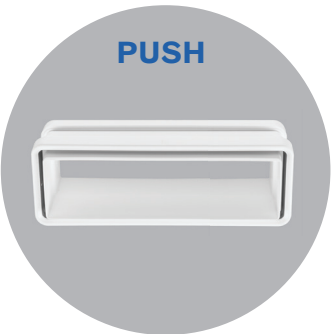


Verplas SELF-SEAL systems offer today's mechanical ventilation designer's peace of mind that your calculations for the delivery and extraction of air will be achieved without the risk of leaking ducts or cross contamination.

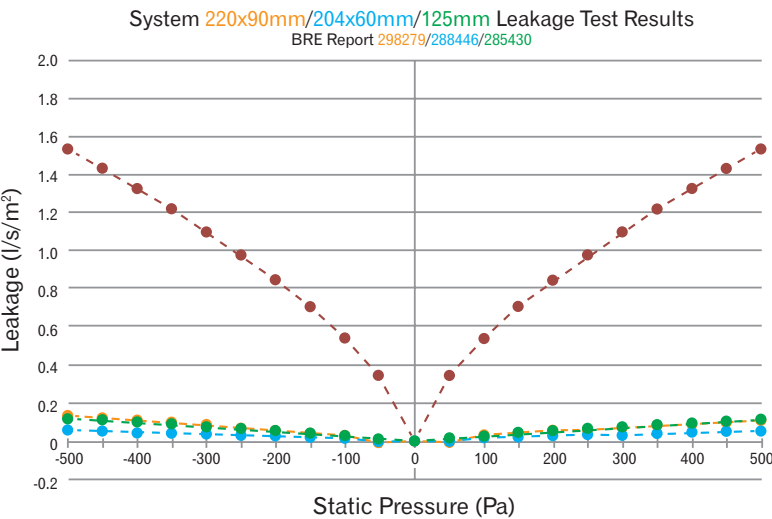
Verplas SELF-SEAL has been independently benchmarked against traditional methods of installing PVC ducting using tape and sealant and can provide up to a 30% labour saving on site.

Verplas SELF-SEAL ducting system is the only leak free product for use with PVC ducting. Independently tested by the BRE and exceeds all requirements of current UK Building Regulations and NHBC Guidance Document for MVHR installations.

The simple push fit connections are as simple as 1-2-3, once fitted the patented gasket system holds the ducting in place to prevent air leakage without the need for a mechanical fixing.



Available in 3 sizes 220x90, 204x60mm Rectangular & 125mm Round to suit all today's residential ventilation applications.



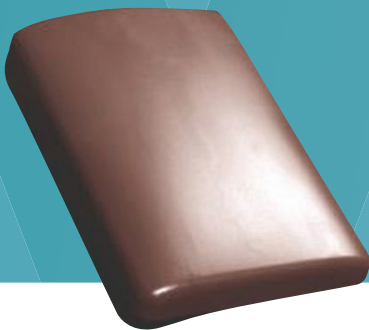
NO MORE TAPE AND SEALANT



Verplas is proud to announce that it has been given a seal of approval by the LABC for the SELF-SEAL ducting range as an innovative (patent pending) system that improves air leakage of domestic ventilation systems.

For more information on the above documents please visit www.verplas.co.uk/downloads

Tile Ventilator Range

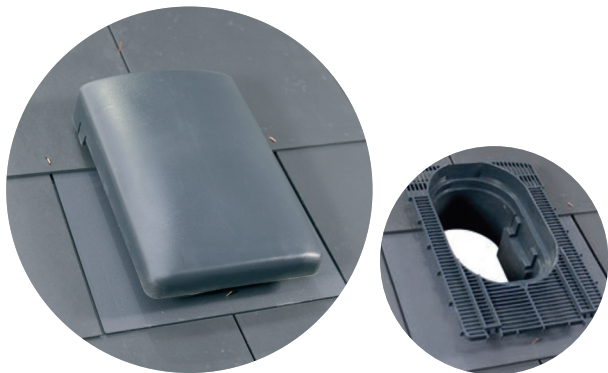


- ▶ Large free area of 20,000mm² for high flow system performance
- ▶ Low profile design makes it unobtrusive on the roof line
- ▶ Easy installation and interlocking with adjacent slates or tiles
- ▶ Blends in with man-made/natural slates and tiles
- ▶ Perfect solution for Heat Recovery Systems to ensure maximum efficiency

SLATE VENT

VERPLAS PART NUMBERS:
SLATEVENT-GRY

Available in Slate Grey



The new Verplas Tile Ventilator range offers designers a high free area to maintain a low ventilation system pressure. This allows greater flexibility when selecting your heat recovery system. Easy installation and fixing save time and effort on site. Supplied complete with a 150mm–100mm duct adapter for quick fit connection within the roof space onto Verplas ducting systems.

The range of roof covering and tile ventilators are designed to fit seamlessly into the roof profile and blend with the chosen covering.

SUITABLE FOR:

- ▶ 600mm x 300mm (24" x 12")
500mm x 250mm (20" x 10")
double lap slates
- ▶ Man-made or natural slates
- ▶ Roofs with a pitch over 20°

DIMENSIONS:

600mm long x 380mm wide x 91mm deep / 15kg

PERFORMANCE/TECHNICAL DATA:

Provides opening ventilation

Vent spacing	5mm opening or 4m centres
	10mm opening or 2m centres
	25mm opening or 800mm centres

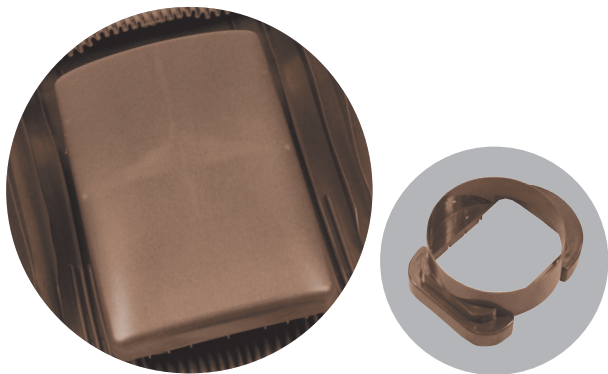
AIRFLOW PERFORMANCE

15 litres/sec	30 litres/sec	60 litres/sec
3 pascals	9 pascals	36 pascals

UNIVERSAL TILE VENT

VERPLAS PART NUMBERS:
TILEVENT-GRY
TILEVENT-BR

Available in Brown and Slate Grey



SUITABLE FOR:

- ▶ Most popular interlocking and plain tile roofs with a pitch of over 17.5°

DIMENSIONS:

445mm long x 440mm wide x 91mm deep / 19kg

PERFORMANCE/TECHNICAL DATA:

Provides 20,000mm² effective ventilation

Vent spacing	5,000mm ² /m install at 4.0m centres
	10,000mm ² /m install at 2.0m centres
	25,000mm ² /m install at 0.8m centres

AIRFLOW PERFORMANCE

15 litres/sec	30 litres/sec	60 litres/sec
3 pascals	11 pascals	43 pascals

Indoor Air Quality

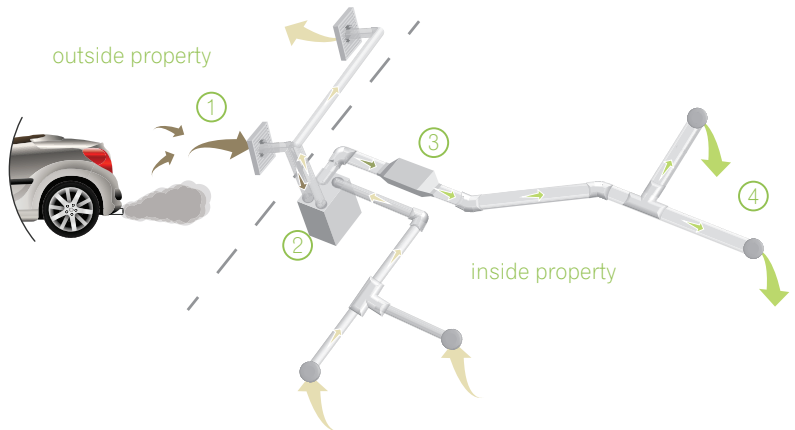


- ▶ Reduces NO₂ and NO_x
- ▶ Improves indoor air quality
- ▶ Long lifespan of filter media up to 5 years
- ▶ Compact and low profile design for flow rates up to 120 l/s
- ▶ Independently airflow tested and verified by the BRE
- ▶ Accepted by planners as an AQMA NO₂ Mitigation Measure

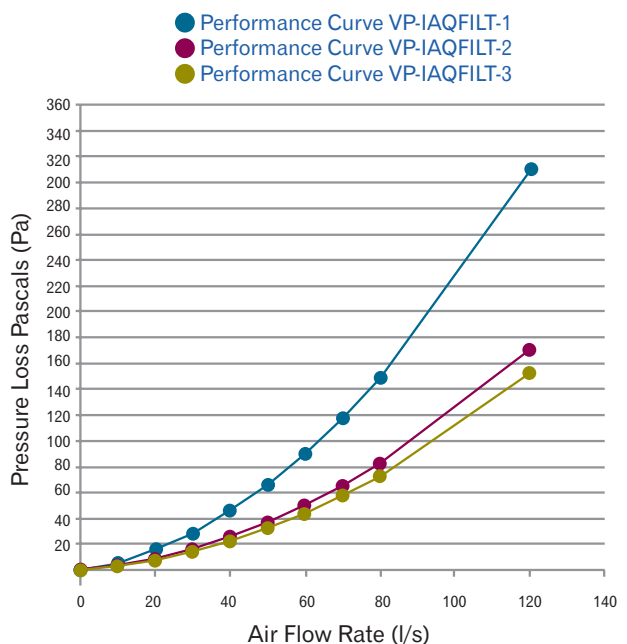
Verplas Indoor Air Quality Range is designed to assist developers working on new build projects in Air Quality Management Areas to comply with the EU Directive 2008/50/EC (the CAFE Directive) European Union Air Quality and Clean Air for Europe 2008.

This low cost compact design comes complete with easy underside access for the removal & renewal of carbon filters which is indicated by a colour change cell contained within the unit.

Verplas's range of NO₂ and NO_x filtration systems help eliminate contaminants entering the property and promote a healthy lifestyle for the occupant.

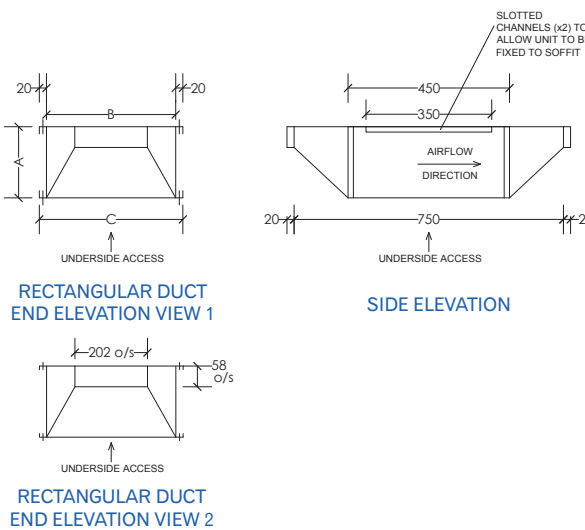


- ① Contaminated air delivered into the property.
- ② Air enters the heat recovery system where large particles are pre-filtered.
- ③ Contaminated air enters the filtration system and NO₂ & NO_x particles are absorbed by the filter media.
- ④ Clean air is delivered to the habitable rooms.



All Airflows Independently tested by the BRE

Code	Depth (A)	Box Width (B)	Fixing Centres (C)	Duct Connection
VP-IAQFILT-1	150	400	440	220 x 90mm
VP-IAQFILT-2	150	600	640	220 x 90mm
VP-IAQFILT-3	150	675	715	220 x 90mm



For all your **ducting needs**

INDOOR AIR QUALITY RANGE

- ▶ Reduces NO₂ and NO_x
- ▶ Improves air quality
- ▶ Long lifespan of filter media
- ▶ Compact and low profile design for flow rates up to 40 l/s
- ▶ Independently tested and verified
- ▶ Accepted by planners as an AQMA N02 Mitigation Measure



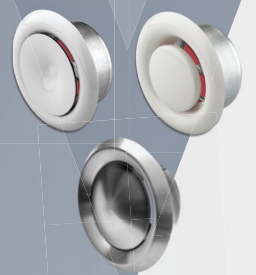
RECTANGULAR DUCT RANGE

- ▶ Low profile providing flexibility for design
- ▶ Fire tested to UL94V0 standard
- ▶ Available in system 110x54mm, 204x60mm & 220x90mm
- ▶ Available in 1mtr, 1.5mtr & 2mtr lengths



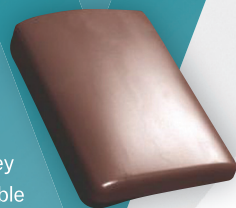
INTERNAL GRILLE RANGE

- ▶ Fully commissionable
- ▶ Tamper proof locking mechanism
- ▶ Aesthetically pleasing
- ▶ Available in 100mm – 200mm diameter
- ▶ Plastic, stainless steel or white powder coated
- ▶ Available in Supply and Extract options



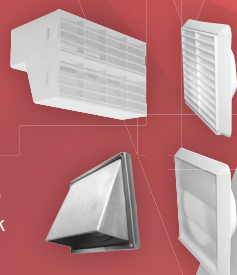
TILE VENTILATOR RANGE

- ▶ Large 20,000mm² free area
- ▶ Low resistance at high flow
- ▶ Complete with 150mm/125mm/100mm duct adapter
- ▶ Easy installation & interlocking with tiles
- ▶ Available in brown & slate grey
- ▶ Tile & slated roof options available
- ▶ Meets all relevant British Standards



EXTERNAL GRILLE RANGE

- ▶ Variety of options to suit all building designs
- ▶ Minimises resistance
- ▶ Variety of styles and colour options available
- ▶ Suits all standard duct sizes
- ▶ Airbrick and Double Airbrick range for rectangular duct



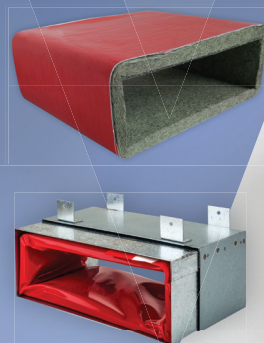
NOISE SOLUTIONS HI-FLOW ATTENUATION

- ▶ High-flow performance and low resistance
- ▶ Reducing in-duct noise
- ▶ Prevents cross talk attenuation
- ▶ Available in 204x60mm and 220x90mm
- ▶ Available in 0.5mtrs to 1.5mtrs
- ▶ Lightweight and easy to install



FIRE SOLUTIONS

- ▶ Independantly tested to British Standards
- ▶ Up to 2hrs fire protection on selected products
- ▶ Wall, floor and inline duct options
- ▶ Range of supply & extract fire rated air valves
- ▶ Solutions to meet all todays applications



CIRCULAR DUCT RANGE

- ▶ Available in System 100mm – 150mm
- ▶ Available in 1mtr, 1.5mtr and 2mtr lengths
- ▶ Fire tested to UL94V0 standard
- ▶ Minimises resistance



SELF-SEAL CONNECTOR RANGE

- ▶ Minimise air leakage
- ▶ Maximise air flow
- ▶ No tape or sealant
- ▶ Maximises ventilation system performance
- ▶ Independantly tested by BRE
- ▶ Reduces installation time on site



The Verplas range of products meets all requirements for today's specification market place. From noise and fire solutions to the unique SELF-SEAL duct system, Verplas are keeping homes healthy and contaminant free.

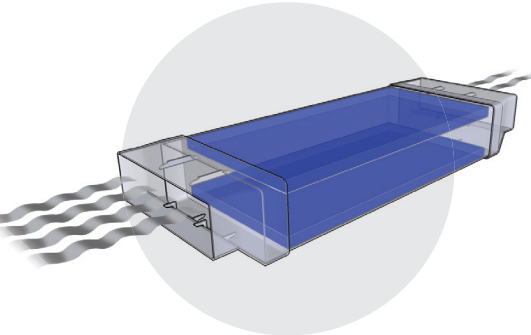
Noise Solutions



- ▶ Building regulation driven
- ▶ Prevent noise transfer between rooms
- ▶ Reduce in-duct noise
- ▶ Lightweight and easy to install
- ▶ Anti-corrosive
- ▶ Available in 0.5mtr, 1mtr and 1.5mtr lengths
- ▶ Encourages occupant acceptability

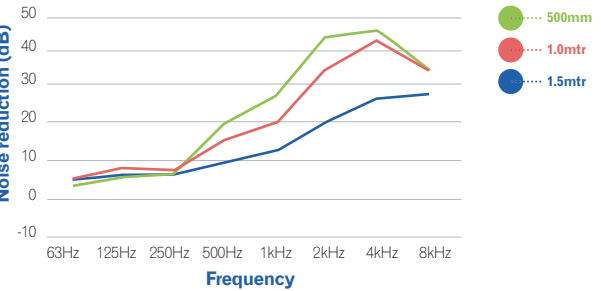
Building Regulations Part F 2010 have driven system designers to take into consideration noise sensitive areas where ducting passes over or through such as bedrooms and living rooms.

Noise sensitive areas (living rooms and bedrooms) should not exceed 30 dBA. Less sensitive areas (kitchens and bathrooms) should not exceed 35dBA.



SYSTEM 220 PRODUCT RANGE

Code	Description	Width	Height	Length
VKC5760	System 220 Duct Silencer x 500mm	225mm	95mm	508mm
VKC5761	System 220 Duct Silencer x 1.0mtr	225mm	95mm	1008mm
VKC5762	System 220 Duct Silencer x 1.5mtr	225mm	95mm	1508mm



LEVEL OF SOUND ABSORPTION

Silencer Length	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
VKC5760	1.9	2.7	3.0	6.5	9.8	18.6	25.4	26.7
VKC5761	1.4	4.6	4.1	13.0	18.2	34.5	43.1	34.0
VKC5762	-1.0	1.8	3.1	18.1	26.6	43.7	46.1	34.3

Planning Assessments PPG 24

Local authorities can impose planning conditions (PPG24) on projects requiring the designer and developer to deal with aspects of the noise. This will normally result in potential noise ingress through the ventilation system if penetrating the external facade.

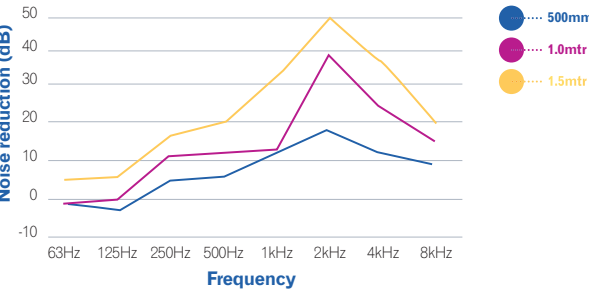


Incorporating attenuation will ensure compliance is achieved. This can assist in preventing external noise ingress transmitting through the duct and limit cross talk between rooms.

Verplas's new high-flow attenuators allow flexibility for designers to choose the right noise solution to suit your application and minimise system resistance.

SYSTEM 204 PRODUCT RANGE

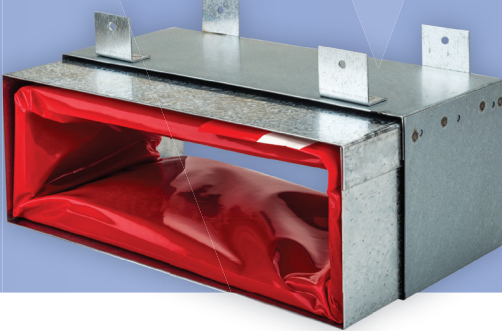
Code	Description	Width	Height	Length
VKC5660	System 204 Duct Silencer x 500mm	204mm	65mm	580mm
VKC5661	System 204 Duct Silencer x 1.0mtr	204mm	65mm	1080mm
VKC5662	System 204 Duct Silencer x 1.5mtr	204mm	65mm	1580mm



LEVEL OF SOUND ABSORPTION

Silencer Length	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
500mm	-1	-3	5	6	12	18	12	9
1.0mtr	-1	0	11	12	13	37	23	15
1.5mtr	5	6	16	20	32	47	35	20

Fire Solutions



With an increase in system ventilation such as Heat Recovery and Mechanical Extract Ventilation the need for fire solutions is ever increasing. Apartment ventilation in particular seeing the highest usage area for Consultants where ducting passes over or through fire barriers such as fire rated central hallways used as a means of escape. Verplas provides a complete range of fire solutions suitable for all applications, meeting the needs of modern building designs.

Our range of fire protection products are manufactured to the highest standard and independently tested by the Chiltern Fire International Ltd.

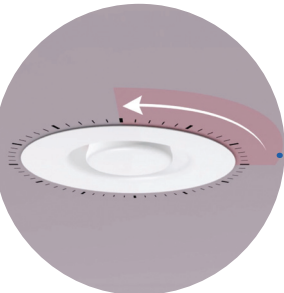
The Verplas Fire Solutions Selector can help you identify the correct product for your fire application. Verplas has a wide range of products available in additional sizes. For further information visit www.verplas.co.uk

	PLASTER BOARD WALLS	MASONRY WALLS	CONCRETE FLOORS	RATED FIRE CEILINGS	FIRE RATING
FireCuffs					
204x60mm 220x90mm	✓	✓	✓		2 hrs
125mm					90 mins
FireWraps					
204x60mm 220x90mm		✓			2 hrs
125mm					1 hr
Wrap & Metal Sleeve					
204x60mm 220x90mm	✓		✓		2 hrs
125mm					1 hr
Fire Rated Air Valves					
100mm 125mm 150mm				✓	1 hr



Verplas Firecuff products are fully compliant & independantly tested to meet todays regulations

FireWrap & Sleeve offers technical solutions for partition wall applications which can be securely fixed in position



Verplas Fire Rated Valves have a simple turn locking mechanism to hold the grille in place



Quick Guide Product Selector

204 X 60MM RECTANGULAR DUCT RANGE		FREE AREA	AIRFLOW PERFORMANCE						MAX/MIN TEMP	APPLICATION
			8L/S	13L/S	21L/S	30L/S	60L/S	120L/S		
	Duct Size: 204x60 x2m VKC5629	11,452	0.40	0.60	2.00	3.94	14.42	52.70	+60 to -15	   
	Duct Size: 204x60 VKC5617	11,452	0.00	0.30	1.20	2.71	13.36	63.00	+60 to -15	
	Duct Size: 204x60 VKC5616	11,452	0.00	0.30	1.20	2.71	13.22	62.00	+60 to -15	
	Duct Size: 204x60 VKC5612	11,452	0.70	1.00	2.70	4.52	17.94	71.24	+60 to -15	
	Duct Size: 204x60 VKC5605	11,452	0.60	1.70	4.30	7.46	30.60	125.61	+60 to -15	
	Duct Size: 204x60 VKC5630	11,452	N/A	N/A	N/A	N/A	N/A	N/A	+60 to -15	
	Duct Size: 204x60 – 125mm VKC5645	11,452-12,273	0.50	1.50	3.40	6.90	27.10	125.00	+60 to -15	
	Duct Size: 204x60 – 150mm VKC5646	11,452-17,673	0.50	1.20	3.00	5.30	19.90	88.90	+60 to -15	
	Duct Size: 204x60 – 125mm VKC5613	11,452-12,273	0.00	0.88	2.40	3.84	15.41	61.86	+60 to -15	
	Duct Size: 204x60 – 100mm VKC5615	11,452-17,855	1.00	4.00	14.05	25.00	84.70	295.00	+60 to -15	

220 X 90MM RECTANGULAR DUCT RANGE		FREE AREA	AIRFLOW PERFORMANCE						MAX/MIN TEMP	APPLICATION
			8L/S	13L/S	21L/S	30L/S	60L/S	120L/S		
	Duct Size: 220x90 x2m VKC5729	18,545	0.04	0.18	0.30	0.70	2.40	7.80	+60 to -15	   
	Duct Size: 220x90 VKC5717	18,545	0.07	0.13	0.22	0.50	1.90	6.50	+60 to -15	
	Duct Size: 220x90 VKC5716	18,545	0.10	0.19	0.33	0.70	2.40	9.00	+60 to -15	
	Duct Size: 220x90 VKC5712	18,545	0.25	0.45	0.76	1.70	6.20	24.10	+60 to -15	
	Duct Size: 220x90 VKC5705	18,545	0.27	0.51	0.90	1.80	7.30	29.50	+60 to -15	
	Duct Size: 220x90 VKC5730	18,545	N/A	N/A	N/A	N/A	N/A	N/A	+60 to -15	
	Duct Size: 220x90 – 125mm VKC5706	18,545-12,273	0.80	1.40	3.50	5.90	23.00	90.20	+60 to -15	
	Duct Size: 220x90 – 150mm VKC5726	18,545-17,673	0.43	0.79	1.37	2.80	10.60	41.80	+60 to -15	
	Duct Size: 220x90 – 150mm VKC5713	18,545-17,673	0.11	0.18	0.25	0.60	1.70	5.40	+60 to -15	

SELF-SEAL CONNECTOR RANGE		FREE AREA	AIRFLOW PERFORMANCE						MAX/MIN TEMP	APPLICATION
			8L/S	13L/S	21L/S	30L/S	60L/S	120L/S		
	Duct Size: 204x60 VSSC204DD	9,750	0.13	0.30	0.60	1.17	3.20	10.42	+60 to -15	   
	Duct Size: 204x60 VSSC204DF	M 9,750 & F 10,832	0.08	0.18	0.40	0.60	2.95	15.70	+60 to -15	
	Duct Size: 220x90 VSSC220DD	16,800	0.013	0.022	0.035	0.05	0.10	0.39	+60 to -15	
	Duct Size: 220x90 VSSC220DF	M 16,800 & F 17,976	0.025	0.046	0.08	0.12	0.30	0.80	+60 to -15	
	Duct Size: 125 VSSC125PP	11,462	0.08	0.15	0.32	0.55	1.65	5.04	+60 to -15	
	Duct Size: 125 VSSC125PF	M 11,462 & F 10,533	0.16	0.28	0.80	1.41	4.36	13.81	+60 to -15	

125MM ROUND DUCT RANGE		FREE AREA	AIRFLOW PERFORMANCE						MAX/MIN TEMP	APPLICATION
			8L/S	13L/S	21L/S	30L/S	60L/S	120L/S		
	Duct Size: 125 x 2m VKC2692	12,273	0	0.17	0.40	0.86	3.80	18.00	+60 to -15	   
	Duct Size: 125 VKC351	12,273	0.20	0.50	1.40	2.90	12.20	51.20	+60 to -15	
	Duct Size: 125 VKC350	12,273	0.50	1.40	4.00	8.40	34.90	148.00	+60 to -15	
	Duct Size: 125 VKC352	12,273	N/A	N/A	N/A	N/A	N/A	N/A	+60 to -15	
	Duct Size: 125 VKC3500	12,273	N/A	N/A	N/A	N/A	N/A	N/A	+60 to -15	
	Duct Size: 125 VKC445	12,273	0.03	1.00	3.00	6.70	28.00	110.00	+60 to -15	

150MM ROUND DUCT RANGE		FREE AREA	AIRFLOW PERFORMANCE						MAX/MIN TEMP	APPLICATION
			8L/S	13L/S	21L/S	30L/S	60L/S	120L/S		
	Duct Size: 150mm x 2m VKC673	17,673	0.12	0.18	0.48	0.80	2.40	8.20	+60 to -15	   
	Duct Size: 150 VKC361	17,673	0.10	0.30	0.70	1.47	6.37	29.75	+60 to -15	
	Duct Size: 150 VKC360	17,673	0.20	0.80	2.10	4.20	18.20	85.00	+60 to -15	
	Duct Size: 150 VKC362	17,673	N/A	N/A	N/A	N/A	N/A	N/A	+60 to -15	
	Duct Size: 150 VKC3600	17,673	N/A	N/A	N/A	N/A	N/A	N/A	+60 to -15	
	Duct Size: 150 VKC619	17,673	0.14	0.30	1.10	2.20	8.80	32.00	+60 to -15	

NOISE SOLUTIONS RANGE	FREE AREA	AIRFLOW PERFORMANCE						MAX/MIN TEMP	APPLICATION
		8L/S	13L/S	21L/S	30L/S	60L/S	120L/S		
High Flow Attenuator 500mm									
 DS: 204x60mm x 500mm VKC5663	11,664	0.80	1.20	4.00	7.80	28.00	102.00	+60 to -15	
DS: 220x90mm x 500mm VKC5760	11,664	0.10	0.40	2.00	3.70	11.70	45.50	+60 to -15	
High Flow Attenuator 1m									
 DS: 204x60mm x 1m VKC5664	11,664	1.00	1.60	4.20	8.00	27.80	104.00	+60 to -15	
DS: 220x90mm x 1m VKC5761	11,664	1.00	1.20	2.10	3.90	13.80	53.40	+60 to -15	
High Flow Attenuator 1.5m									
 DS: 204x60mm x 1.5m VKC5665	11,664	1.20	1.80	4.40	9.30	28.00	102.00	+60 to -15	
DS: 220x90mm x 1.5m VKC5762	11,664	1.00	1.30	3.00	4.80	17.00	64.00	+60 to -15	

TILE VENT RANGE	FREE AREA	AIRFLOW PERFORMANCE						MAX/MIN TEMP	APPLICATION
		8L/S	13L/S	21L/S	30L/S	60L/S	120L/S		
Tile vent									
 DS: 150 TILEVENT-GRY	20,000mm²	0.70	2.00	4.80	11.00	43.00	N/A		
DS: 150 TILEVENT-BR									
Slate vent									
 DS: 150 SLATEVENT-GREY	20,000mm²	1.00	2.00	3.80	9.00	36.00	N/A		

EXTERNAL GRILLE RANGE	FREE AREA	AIRFLOW PERFORMANCE						MAX/MIN TEMP	APPLICATION
		8L/S	13L/S	21L/S	30L/S	60L/S	120L/S		
Louved Grille									
 DS: 125 VKC268	6,123	1.85	3.80	10.00	18.37	73.41	293.37	+60 to -15	
DS: 125 VKC268F/S	6,123	2.04	4.18	11.00	20.21	80.75	322.70	+60 to -15	
DS: 150 VKC275	11,440	0.10	0.50	1.50	3.00	12.33	50.74	+60 to -15	
DS: 150 VKC275F/S	11,440	0.11	0.55	1.65	3.30	13.56	55.82	+60 to -15	
Cowl with Non-Return Flap									
 DS: 125 VKC289	6,560	3.60	5.00	8.00	19.83	74.99	283.64	+60 to -15	
DS: 150 VKC280	17,673	4.00	4.70	6.40	8.00	14.50	33.00	+60 to -15	
Gravity Grille									
 DS: 125 VKC270	11,600	3.60	5.50	8.10	9.91	11.25	23.11	+60 to -15	
DS: 150 VKC292	17,673	6.00	6.70	7.50	8.56	11.10	14.07	+60 to -15	
Airbrick Single									
 DS: 204 x 60mm VKC5635	7,680	2.00	5.50	11.00	18.40	71.90	335.00	+60 to -15	
Airbrick Surround									
 204 x 60mm VKC5631	7,680	2.00	5.50	11.00	18.40	71.90	335.00	+60 to -15	
Double Airbrick Adaptor									
 DS: 204 x 60mm VKC5633G	11,200	0.40	0.88	2.00	3.30	8.40	24.40	+60 to -15	
DS: 220 x 90mm VKC5733G	15,360	0.31	0.60	1.08	2.20	8.50	33.70	+60 to -15	

INTERNAL GRILLE RANGE	FREE AREA	AIRFLOW PERFORMANCE						MAX/MIN TEMP	APPLICATION
		8L/S	13L/S	21L/S	30L/S	60L/S	120L/S		
Ceiling Air Supply Valves									
 DS: 125 MW125	N/A	6.00	10.0	15.00	24.80	96.20	386.90	+60 to -15	
DS: 150 MW155	N/A	2.00	3.00	7.00	14.50	57.40	227.00	+60 to -15	
Ceiling Air Extract Valves									
 DS: 125 MW124	N/A	4.20	6.90	10.70	17.50	71.70	284.00	+60 to -15	
DS: 150 MW154	N/A	1.70	2.60	6.00	12.50	49.60	195.20	+60 to -15	
Multi-Purpose Ceiling Value									
 DS: 125 VKC356F	N/A	6.00	10.00	15.00	24.80	96.20	386.90	+60 to -15	
DS: 150 VKC366F	N/A	2.00	3.00	7.00	14.50	57.40	227.00	+60 to -15	

FIRE SOLUTIONS	PLASTER BOARD WALLS	MASONRY WALLS	CONCRETE FLOORS	RATED FIRE CEILINGS	FIRE RATING	TESTING & STANDARDS	ASSOCIATED FIRE ANCILLARIES	APPLICATION
Fire Cuff								
 DS: 204 x 60mm FC204X60					2 hrs			
DS: 220 x 90mm FC220X90	✓	✓	✓		90 mins			
 DS: 125 FC125TX180					2 hrs			
FireWrap								
 DS: 204 x 60mm FW204X60					2 hrs			
DS: 220 x 90mm FW220X90		✓			1 hr			
DS: 125 FW125					2 hrs			
Firewrap & Metal Sleeve								
 DS: 204 x 60mm FW204X60 + FWS204X60X141					2 hrs			
DS: 220 x 90mm FW220X90 + FWS220X90	✓		✓		1 hr			
DS: 125 FSK125W					1 hr			
Fire Rated Ceiling Exhaust Valves								
 DS: 100 MW104FRE					1 hr			
DS: 125 MW124FRE				✓	1 hr			
DS: 150 MW154FRE					1 hr			
Fire Rated Ceiling Supply Valves								
 DS: 100 MW105FRS					1 hr			
DS: 125 MW125FRS				✓	1 hr			
DS: 150 MW155FRS					1 hr			

INDOOR AIR QUALITY RANGE	FREE AREA	AIRFLOW PERFORMANCE						MAX/MIN TEMP	APPLICATION
		8L/S	13L/S	21L/S	30L/S	60L/S	120L/S		
Indoor Air Quality Units									
 DS: 220 x 90mm VP-IAQFILT-1	16,800	4.5Pa	8.5Pa	16.7Pa	28.6Pa	89.1Pa	307Pa	+60 to -15	
DS: 220 x 90mm VP-IAQFILT-2	16,800	2.3Pa	4.4Pa	8.9Pa	15.6Pa	49.5Pa	170Pa	+60 to -15	
DS: 220 x 90mm VP-IAQFILT-3	16,800	2Pa	4Pa	8Pa	13.9Pa	44Pa	152.8Pa	+60 to -15	



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