vectaire

ventilation

Apartment Ventilation

"Microbox"

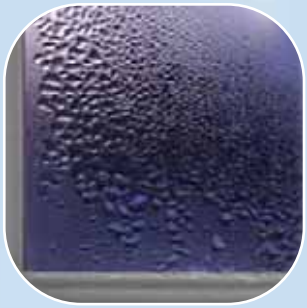
Continuous Mechanical Extract Units

IPX4

Vectaire Ltd is a member of: HEVAC; Fan Manufacturers' Association; Smoke Control Association; Residential Ventilation Association; Manufacture controlled to ISO9001

Mechanical Extract Units - for compliance with Building Regulations

The need to ventilate correctly



It has long been recognised that a good level of air quality inside the home is essential to the health and well-being of the occupants.

Pollution in the home has been identified as a contributory factor in the rise of respiratory and allergy problems.

Too little ventilation causes excessive condensation which leads to dampness, mould growth, a musty smell and a general deterioration of the fabric of the building.

Too much ventilation will lead to increased running costs, physical discomfort for the occupants (as well as harming the environment by the excessive use of energy).

The answer lies in well thought out, efficient ventilation.

Design brief

Space in apartment blocks is at a premium - both within the living area and in the void allowance between floor levels.

The occupants want a non-instrusive system.

The designers want to ensure that the outside of the building is not marred by unnecessary grilles or cowls.

The builders need a reliable product that can be easily installed in the limited space available.

It must comply with the requirements of the Building Regulations.

The correct ventilation method is a continuous mechanical extract system.

What product to choose?

An ultra slim fan that fits easily in the void (or into a cupboard), ventilating effectively and continuously the whole dwelling **and** allowing the user the option of boosting its effectiveness as and when necessary (ie when cooking or bathing).

The designer needs to be able to choose from four trickle speeds to ensure that the fan capacity can be precisely set for each apartment.

The **Microbox** range of continuous mechanical extract units is ideal.

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Mechanical Extract Units - for compliance with Building Regulations

Why a Microbox?

Opening a window to let in "fresh" air is no longer the answer - outside air pollution is at an all-time high (diesel and petrol fumes in towns, pollen in the country and noise pollution everywhere).

A continuous rate of trickle (low) ventilation from kitchen, bathroom, shower-room, utility rooms and toilets is the answer to sensible, efficient ventilation.

The **Microbox** can be installed out of sight (and out of mind) in the void or cupboard space.

The **Microbox** is versatile and easy to install.

It is the slimmest, smallest and most flexible apartment extract unit available.

The range has a variety of duct sizes, and it only needs one duct entering and exiting the unit.

It is easy to install, commission and maintain.

It is quiet and economical to run.

It has a choice of four trickle (low) speeds.

It provides a comfortable environment in which to live.

It complies with all the requirements of the Building Regulations.

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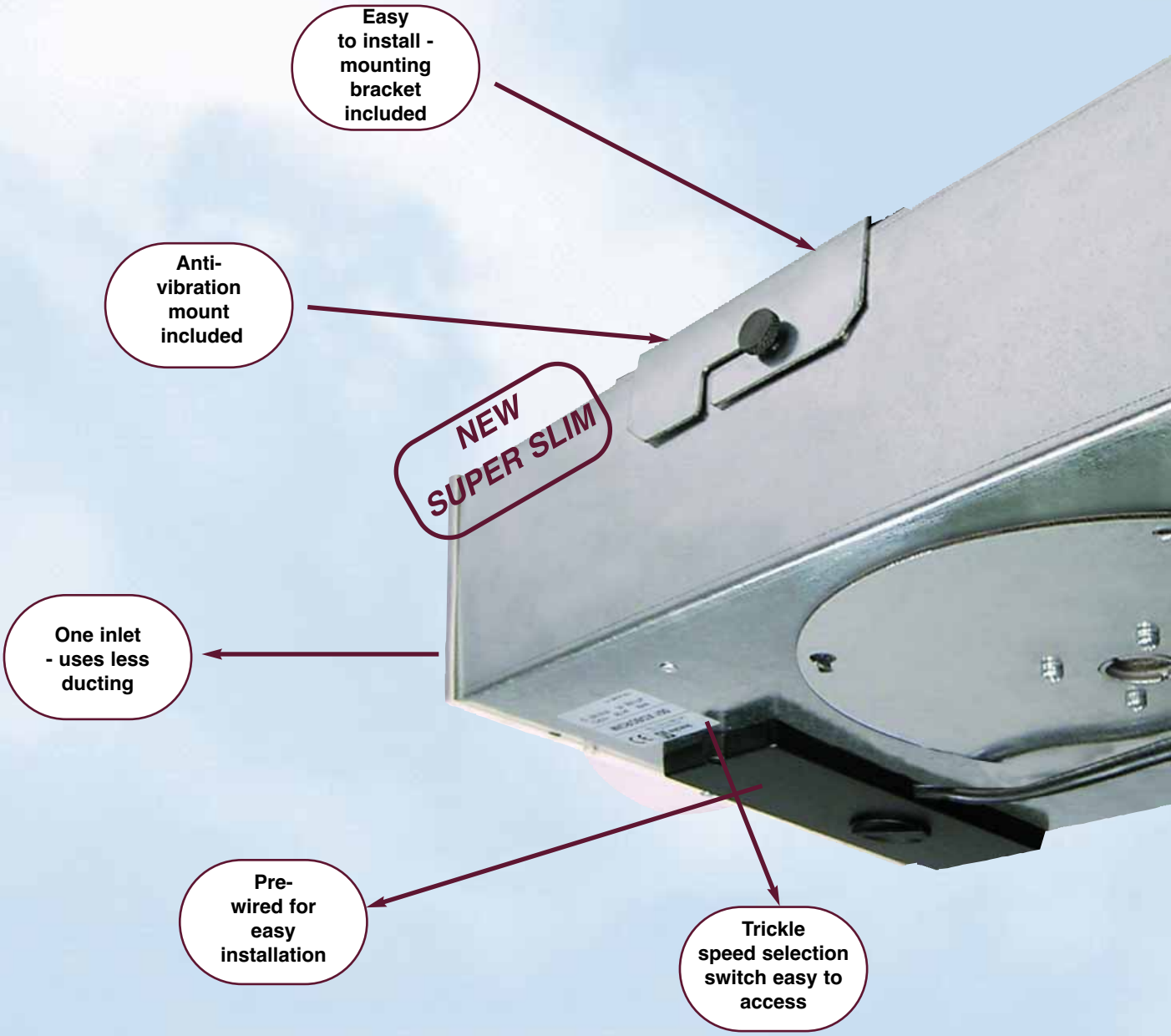
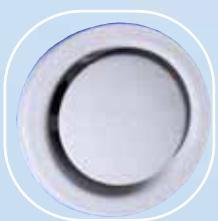
"Microbox" - whole house central extract system

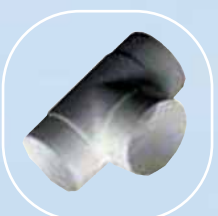


Full range of accessories available - see Pages 14 and 15


P.I.R Sensor


Remote Humidistat


Air Valve


Ducting "T" Piece


Wall Cowl

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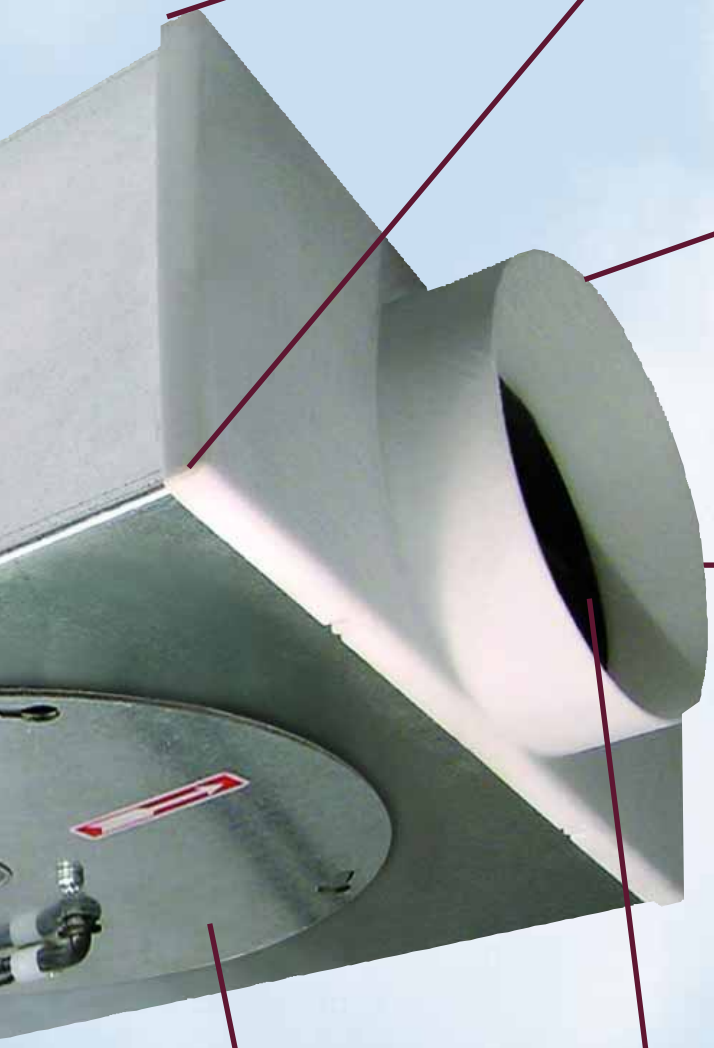

from only 122mm deep

Various spigot configurations

Only one outlet

Easily accessible service and maintenance panel

Acoustic lining for super silent operation

Design

Vectaire's technical support staff can help with the design of any ventilation system to ensure that it is the most cost effective and efficient available

Install

Vectaire can install and commission your Microbox ventilation system.

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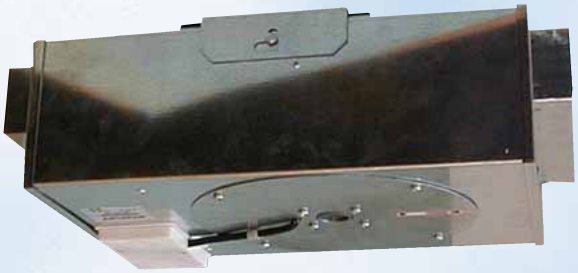
"Microbox" - whole house central extract systems

Features

- **ultra slim - from 122mm deep**
- 6 models
- 4 sizes for dwellings to 400m²
- fitted with 204 x 60mm, 100, 120, 150 or 200mm dia spigots
- 4 trickle speeds options with boost override
- ceiling void, roof or cupboard mounted
- integral overrun timer
- completely silent, suitable for continuous running
- long life operation

Specification

- acoustically lined - sound levels as low as 21db(A)
- steel cabinet
- IPX4 rated
- service and maintenance panel easily accessible
- trickle speed selection switch on cabinet exterior
- thermal overload protection
- complete with mounting bracket and anti-vibration plate
- boost speed can be triggered by:
  - PIR (passive infra red)
  - DRH (Dynamic Remote Humidistat)
  - THM (Thermostat)
  - Remote Switch



Comply with

- EN60335-2-80
- EC Low Voltage Directive 73/23-93/68
- EC Directive EMC89/336
- CE marked
- BRE Digest 398
- Easily meets Building Regulations requirements including new Part F

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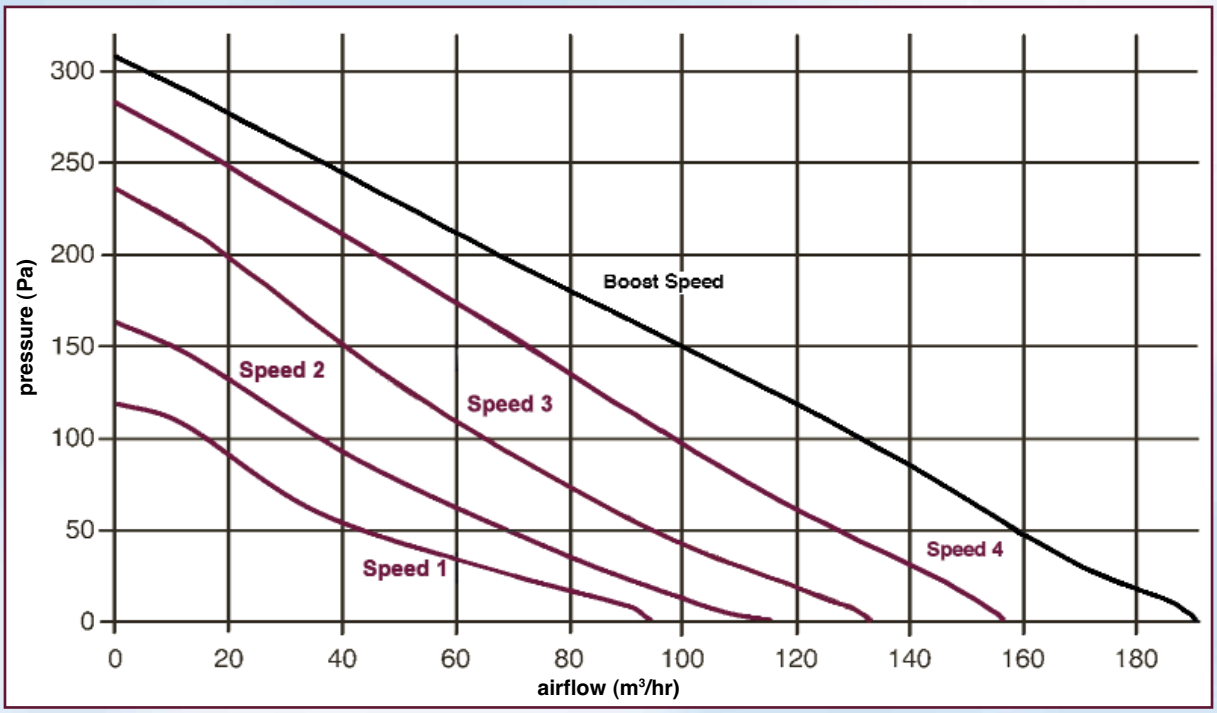
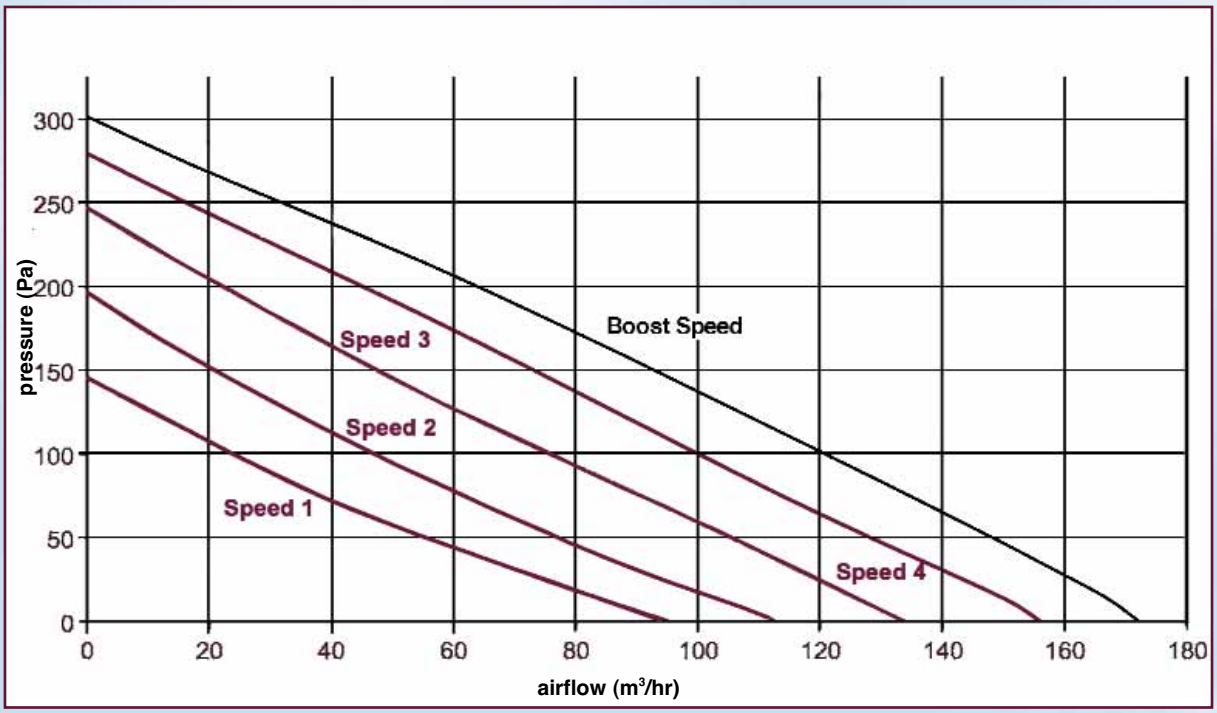
"Microbox" - Performance

Model MBOX 204/2



Model MBOX 100/2



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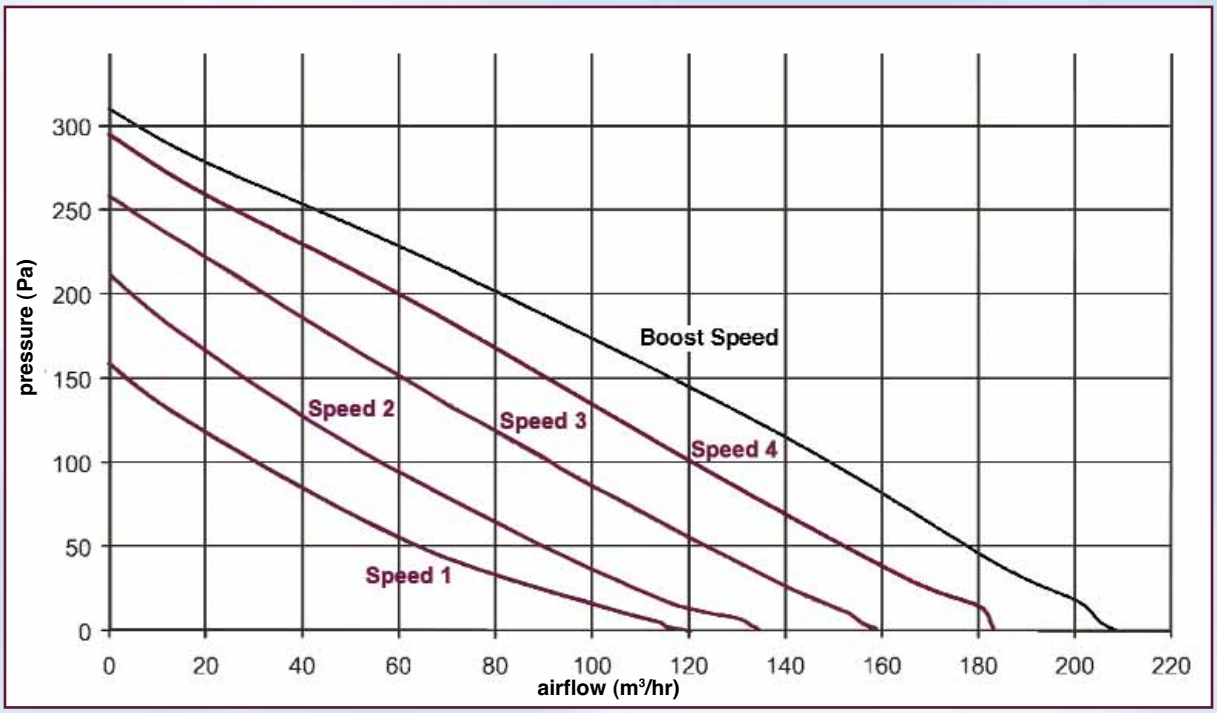
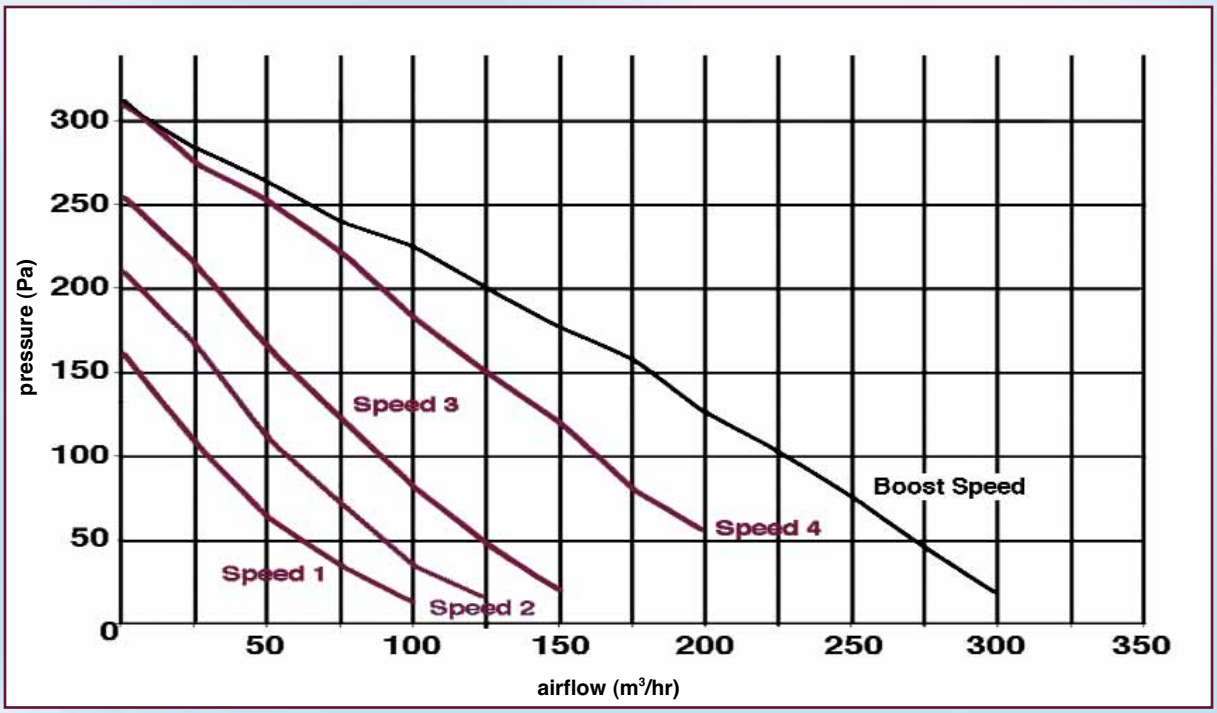
"Microbox" - Performance

Model MBOX 125/2



Model MBOX 125/2 *Plus*



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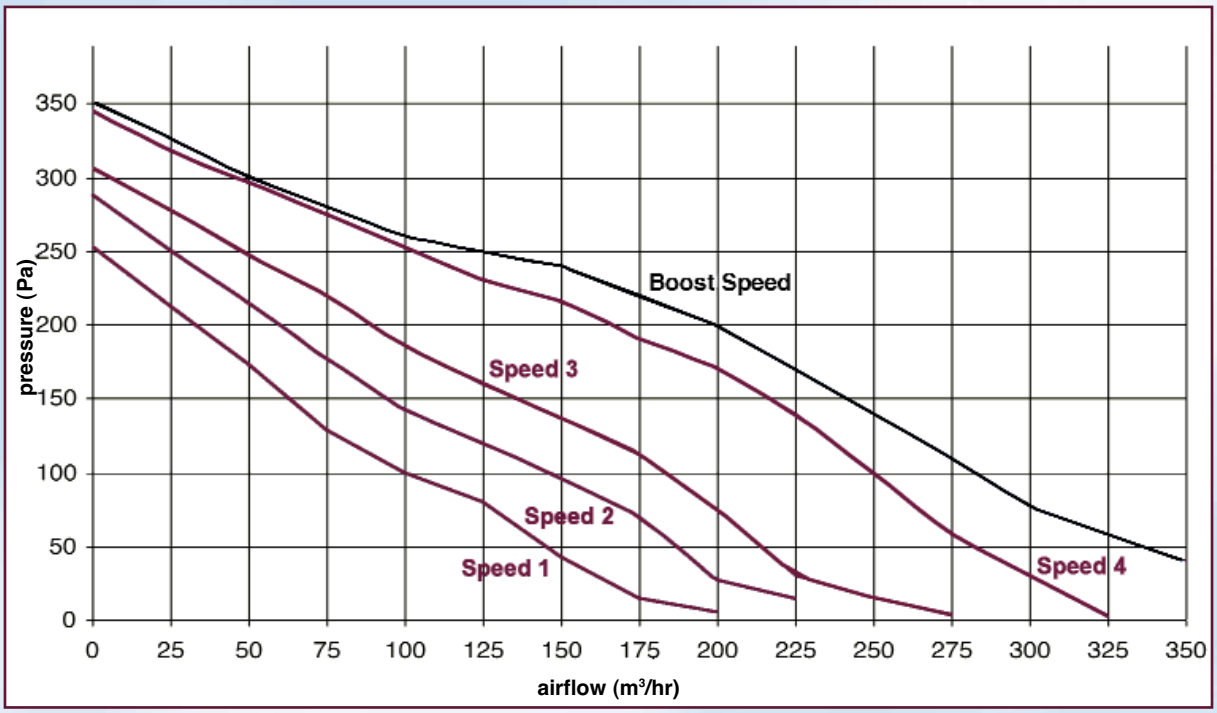
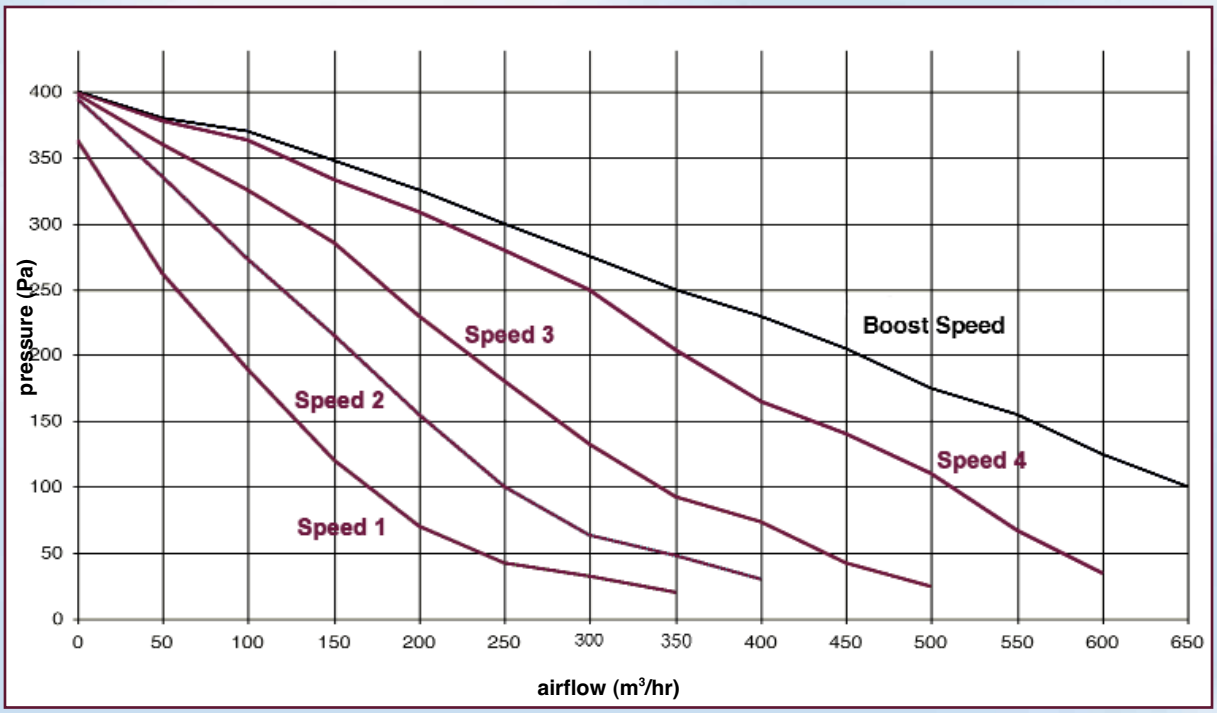
"Microbox" - Performance

Model MBOX 150/2



Model MBOX 200/2



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"Microbox" - for compliance with Building Regulations

Design Concerns

- Are extract grilles fitted into all the "wet" areas of the apartment, ie in the toilets, shower-rooms, bathrooms, utility room and kitchen?
- Has the ducting system been professionally designed, ensuring that fire dampers are incorporated in the correct positions?
- Has the ducting been sized correctly to avoid breakout noise?
- Can the background flow rate be adjusted to ensure the correct extract rate and maximum efficiency?
- Is the central fan unit provided with easily accessible controls to enable this adjustment?
- Is the duct run the shortest or most cost effective possible?
- Are remote controls (eg Humidistat, PIR) incorporated in the system allowing easy switching to boost speed when required?
- Should a timer be incorporated on the boost switches?
- Is the trickle extract rate from the wet rooms adjustable?
- Is the system quiet - it has to operate continuously?
- Has the system been professionally designed to incorporate all the above points?
- Has the product chosen been specifically designed for apartment installation?
- Is the system designed for long life with a good warranty?

Typical Specification

Supply and install an MBOX125/2 two speed whole house ventilation unit as supplied by Vectaire Ltd, Lincoln Road, Cressex Business Park, High Wycombe, Bucks, HP12 3RH.

The fan must be capable of extracting from more than one room within a dwelling of no more than 200m^3, and be for installation into the ceiling void using 5"/12cm ducting to and from the fan spigots. It should be two speed with a choice of four lower speeds on installation (the option switch to be on outside of casing), and run continuously and silently at its lower speed.

The boost speed should have the possibility of being triggered by either a PIR, a remote humidistat, a thermostat, a remote switch (or by a combination of these devices), and be capable of being controlled with an overrun timer.

The fan should be no more than 122mm deep, have a steel cabinet lined with 10mm thick acoustic insulation to ensure quiet running and should have an easily accessible service and maintenance panel and be protected to IPX4.

The trickle speed selection switch should be easily accessible on the outside of the casing and it should be pre-wired for easy electrical connection.

It should have backward curved blades dynamically balanced on external rotor motor provided with thermal cut-out.

The fan should comply with all current IEE, EC and Building Regulations requirements and also be BRE Digest 398 compliant.

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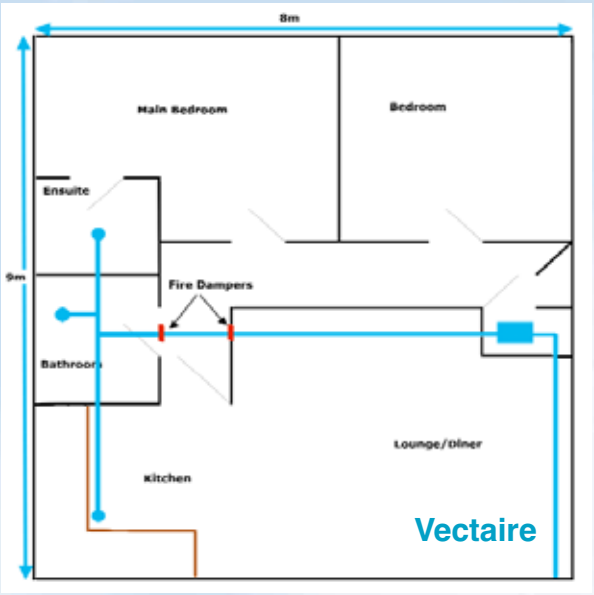
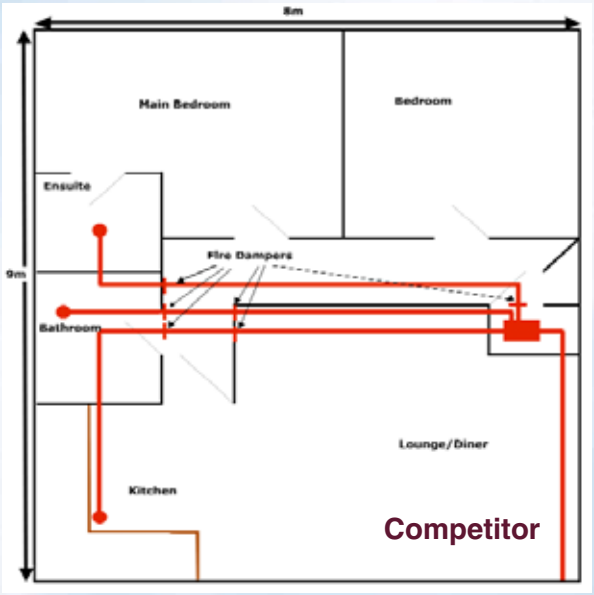
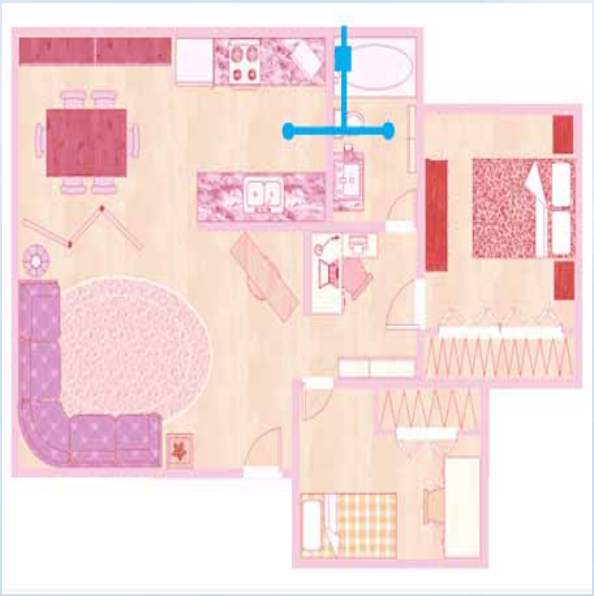
"Microbox" - Installation

Duct Run Comparison





Installation Examples



Savings of up to 40%

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"Microbox" - Technical Data

Range

- **MBOX204/2**
  204mm x 60mm for dwellings up to 66m²
- **MBOX100/2**
  4"/100mm for dwellings up to 66m²
- **MBOX125/2**
  5"/120mm for dwellings up to 66m²
- **MBOX125/2*Plus***
  5"/120mm for dwellings from 40m² to 100m²
- **MBOX150/2**
  6"/150mm for dwellings from 75m² to 140m²
- **MBOX200/2**
  8"/200mm for dwellings from 120m² to 400m²

Performance

Model	FID Max m³/hr	FID Max litres/sec	Volts	Hz	Maximum Watts				
					Speed 1	Speed 2	Speed 3	Speed 4	Max Speed
MBOX 204/2	191	53	230	50	21	28	40	52	65
MBOX 100/2	172	48	230	50	23	30	41	52	61
MBOX 125/2	208	58	230	50	22	30	41	52	62
MBOX 125/2*Plus*	310	86	230	50	26	32	39	58	70
MBOX 150/2	420	117	230	50	33	41	49	70	80
MBOX 200/2	790	220	230	50	61	75	89	117	120

Sound

Model	Sound levels dbA (at 3m)				
	Speed 1	Speed 2	Speed 3	Speed 4	Max Speed
MBOX 204/2	21.9	26.7	30.5	33.9	35.4
MBOX 100/2	20.8	25	29.6	32.7	34.4
MBOX 125/2	22.9	27.9	31.8	35.3	36.9
MBOX 125/2*Plus*	22.4	26.8	31.4	36.2	37.8
MBOX 150/2	28.1	31.3	34.0	38.4	39.7
MBOX 200/2	31.6	36.6	39.3	43.1	44.2

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"Microbox" - Technical Data

Sound Power Spectra

MBOX204/2	Lwa db							
	Mid Octave Bands - Hz							
	63	125	250	500	1000	2000	4000	8000
Speed 1	20	26	33	36	32	28	29	24
Speed 2	22	28	37	44	42	34	31	25
Speed 3	24	29	37	46	43	37	31	25
Speed 4	25	32	41	49	45	39	31	26
Max Speed	28	34	43	51	47	42	32	28

MBOX100/2	Lwa db							
	Mid Octave Bands - Hz							
	63	125	250	500	1000	2000	4000	8000
Speed 1	19	25	32	35	31	27	28	23
Speed 2	20	26	35	42	40	32	29	23
Speed 3	23	28	36	45	42	36	30	24
Speed 4	24	31	40	48	44	38	30	25
Max Speed	27	33	42	50	47	41	31	27

MBOX125/2	Lwa db							
	Mid Octave Bands - Hz							
	63	125	250	500	1000	2000	4000	8000
Speed 1	21	27	34	37	33	29	30	25
Speed 2	23	29	38	45	43	35	32	26
Speed 3	25	30	38	47	44	38	32	26
Speed 4	27	34	43	51	47	41	33	28
Max Speed	30	36	45	53	50	44	34	30

MBOX125/2Plus	Lwa db							
	Mid Octave Bands - Hz							
	63	125	250	500	1000	2000	4000	8000
Speed 1	21	27	34	37	33	29	30	25
Speed 2	22	28	37	44	42	34	31	25
Speed 3	25	30	38	47	44	38	32	26
Speed 4	28	35	44	52	48	42	34	29
Max Speed	30	36	45	53	50	44	34	30

MBOX150/2	Lwa db							
	Mid Octave Bands - Hz							
	63	125	250	500	1000	2000	4000	8000
Speed 1	26	32	39	42	38	34	35	30
Speed 2	26	32	41	48	40	38	35	29
Speed 3	27	32	40	49	46	40	34	28
Speed 4	30	37	46	54	50	44	36	31
Max Speed	32	38	47	55	52	46	36	32

MBOX200/2	Lwa db							
	Mid Octave Bands - Hz							
	63	125	250	500	1000	2000	4000	8000
Speed 1	30	36	43	46	42	38	39	34
Speed 2	32	38	47	54	52	44	41	35
Speed 3	33	38	46	55	52	46	40	34
Speed 4	34	41	50	58	54	48	40	35
Max Speed	37	43	52	60	57	51	41	37

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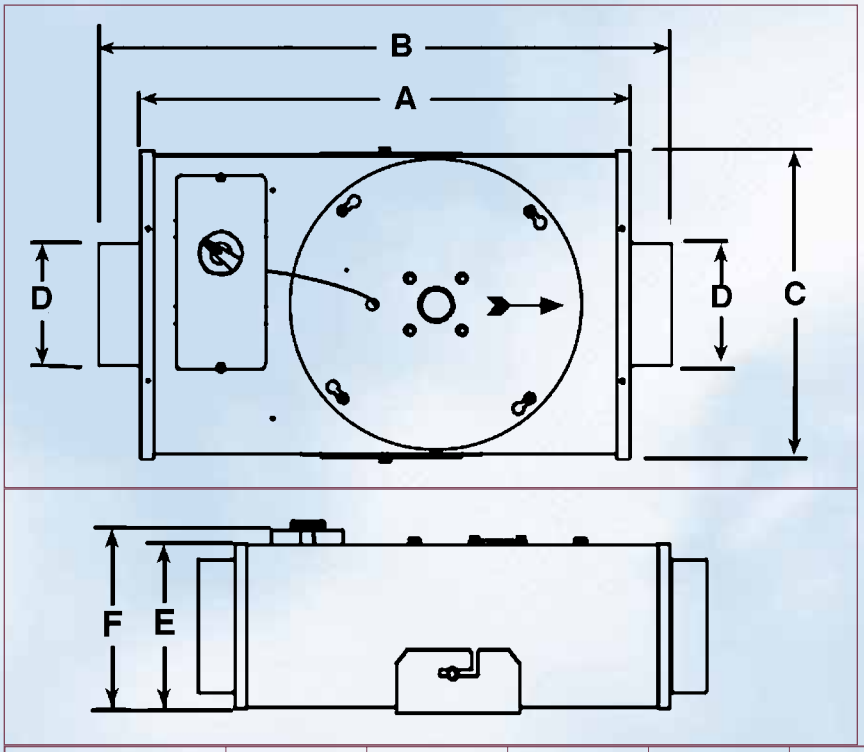
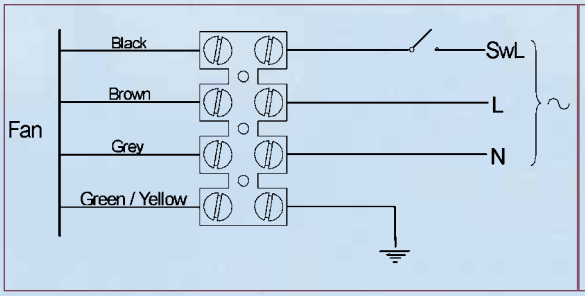
"Microbox" - Technical Data

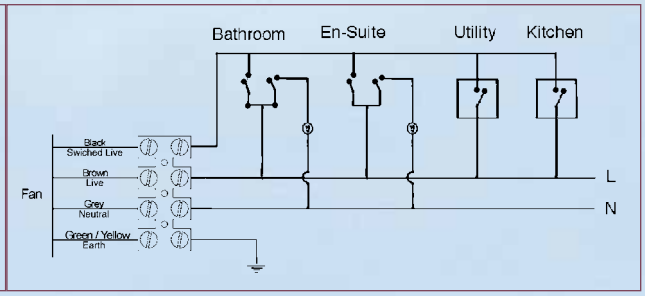
Dimensions



Model	A	B	C	øD	E	F	Weight Kg
MBOX 204/2	384	448	241	204x60	122	134	5.8
MBOX 100/2	384	448	241	96	122	134	5.8
MBOX 125/2	384	448	241	120	122	134	5.8
MBOX 125/2*Plus*	363	463	303	123	163	190	7
MBOX 150/2	363	463	303	148	183	210	7.5
MBOX 200/2	503	603	373	198	233	260	11.5

"Microbox" - Wiring Diagrams





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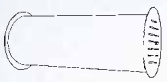
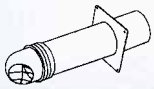
"Microbox" Accessories and Ancillaries

In-Wall Attenuator



VIWA4	4" with Grille
VIWA4C	4" with Cowl
VIWA4QF	4" with Quick Fit Cowl
VIWA5	5" with Grille
VIWA5C	5" with Cowl
VIWA5QF	5" with Quick Fit Cowl

Wall Termination Kits (for installlation from inside)



VWTK4	4"/10cm - 350mm duct
VWTK6	6"/15cm - 350mm duct

Round Wall Cowl (for installation from inside)

VWC 4"/10cm-6"/15cm

Wall Cowl

VWTC4	4"/10cm
VWTC6	6"/15cm

Fixed Grille with Round Spigot (F with Flyscreen)

FG4(F)	4"/10cm
FG5(F)	5"/12cm
FG6(F)	6"/15cm

Gravity Grille with Round Spigot

GG4	4"/10cm
GG5	5"/12cm
GG6	6"/15cm

Air Valves

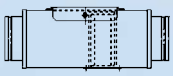
VAV4	4"/10cm
VAV5	5"/12cm
VAV6	6"/15cm
VAV8	8"/20cm

Flexible Ducting

VFD4/3	10cm dia x 3m long
VFD5/3	12cm dia x 3m long
VFD6/3	15cm dia x 3m long
VFD8/3	20cm dia x 3m long

FILTERS

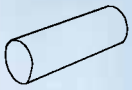
Air Filters



SBFIL125	for MBOX125/2Plus
SBFIL150	for MBOX150/2
SBFIL200	for MBOX200/2

"VRD" PLASTIC ROUND DUCTING

Rigid Duct - 350mm length



VRD4-350	4"/10cm
VRD5-350	5"/12cm
VRD6-350	6"/15cm

Rigid Duct - 1 metre length

VRD4-1M	4"/10cm
VRD5-1M	5"/12cm
VRD6-1M	6"/15cm

Rigid Duct - 2 metre length

VRD4-2M	4"/10cm
VRD5-2M	5"/12cm
VRD6-2M	6"/15cm

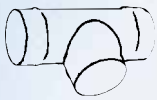
Rigid Duct - Connector

VRD4/C	4"/10cm
VRD5/C	5"/12cm
VRD6/C	6"/15cm

Rigid Duct - Fixing Bracket

VRD4/FB	4"/10cm
VRD5/FB	5"/12cm
VRD6/FB	6"/15cm

Rigid Duct - T Piece



VRD4/T	4"/10cm
VRD5/T	5"/12cm
VRD6/T	6"/15cm

Rigid Duct - 90° Bend

VRDB90/4	4"/10cm
VRDB90/5	5"/12cm
VRDB90/6	6"/15cm

Rigid Duct - 45° Bend

VRDB45/4	4"/10cm
VRDB45/5	5"/12cm

Round Grille with Flyscreen

VRD4-FGWF 4'/10cm

Circular Reducer

RED5/4P	12cm to 10 cm
RED6/4P	15cm to 10cm
RED6/5P	15cm tp 12cm

Round Fire Dampers - Fusible Link

FD4	4"/10cm
FD5	5"/12cm
FD6	6"/15cm

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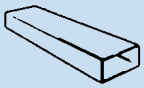
"Microbox" Accessories and Ancillaries

"VPFD/S" PLASTIC FLAT DUCTING

2 Sizes - 110mm x 54mm
- 204mm x 60mm (ending "S")

Flat Ducting



VPFD 1500mm long
VPFDS 1500mm long

Connector

VPC
VPCS

90° Horizontal Bend

VPHB
VPHBS

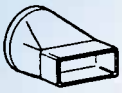
Adjustable Horizontal Bend

VPHB
VPAHBS

90° Vertical Bend

VPVB
VPVBS

Adaptor - Round to Flat

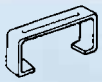


VPA 100mm dia spigot
VPAS 125mm dia spigot

Adaptor Round to Flat - Vertical Bend

VPAB 100mm dia spigot
VPAVBS 100, 125 or 150mm dia spigot

Mounting Bracket



VPMB
VPMBS

Wall Plate - Flat Channel

VPAWP
VPAWPS

Fixed Grille with Rectangular Spigot and Flyscreen

VPFG White or Brown

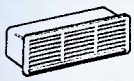
Gravity Grille with Rectangular Spigot

VPGG White or Brown

"VPFD/S" PLASTIC FLAT DUCTING

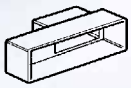
2 Sizes - 110mm x 54mm
- 204mm x 60mm (ending "S")

Airbrick



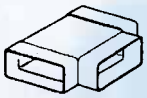
VPAB White, Brown, Beige or Terracotta

Airbrick Adaptor (VPFD only)



VPAB/AD

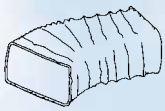
"T" Piece



VPT
VPTS

Flexible Ducting

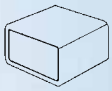
Rectangular Flexible Ducting



VFD110/.5 110 x 54mm x .5m long
VFD110/3 110 x 54mm x 3m long
VFD204/.5 204 x 60mm x .5m long
VFD204/3M 204 x 60mm x 3m long

Fire Dampers

Rectangular Fire Dampers



VPFD
VPFDS

ELECTRICAL ACCESSORIES

Passive Infra Red

PIR

Dynamic Remote Humidistat

DRH

Thermostat

THM

Remote Switch

RS

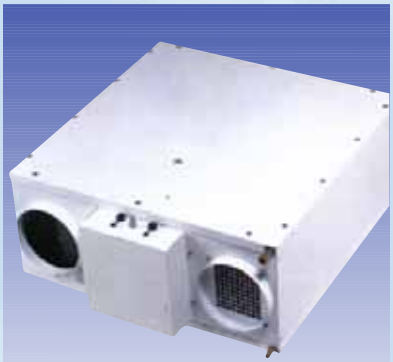
Tel: +44(0)1494 522333
Fax: +44(0)1494 522337

Email: sales@vectaire.co.uk
Web: www.vectaire.co.uk

Other Whole House and In-Line Ventilation Units

PPF9
Positive Pressure Fan for Loft Installation

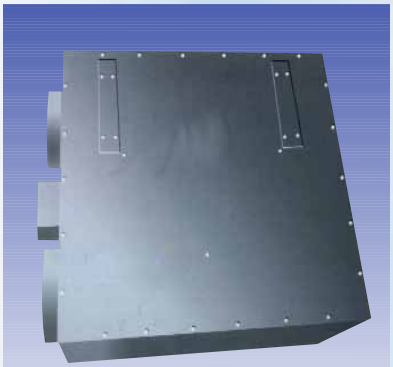
WHHR150 and 250
Whole House Heat Recovery for Wall or Loft Installation



WHHR100 and WHHR200
Whole House Heat Recovery Units for Loft Installation

PPF8
Positive Pressure Fan for Loft Installation

PPF4
Positive Pressure Fan for Wall or Cupboard Installation



WHHR600
Whole House Heat Recovery Unit for Loft Installation

Vectaire Ltd
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High Wycombe
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