

# VENTILATION FOR THE BUILT ENVIRONMENT

low energy  
environmentally friendly  
economical



Uniclass L7534	CI/SfB (57.7)
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Residential



Hotels



Student  
Accommodation



Apartments



Care Homes



MVHR



MEV



Building  
Regulations  
Compliant



Silent  
Operation

Issue 17  
Oct 2024

# Whole House Mechanical Ventilation

## MVHR, MEV, dMEV



### Midi & Midi BY-AT (MVHR) - Pages 8 & 12

- For wall or loft installation in homes and offices
- **Midi BY-AT with integral acoustic attenuation - very low noise levels**
- Summer bypass and frost-stat
- Up to 94% heat exchange efficiency - sfp from 0.50 W/l/s
- Up to 95 l/s at 50Pa - max 101 l/s capacity
- Models with integral humidistat
- Commissioned via integral LCD or remote LCD commissioning unit

### Maxi & Maxi BY-AT (MVHR) - Pages 16 & 20

- For wall or loft installation in homes and offices
- **Maxi BY-AT with integral acoustic attenuation - very low noise levels**
- Summer bypass and frost-stat
- Up to 92% heat exchange efficiency - sfp from 0.40 W/l/s
- **Up to 163 l/s at 50Pa - max 177 l/s capacity**
- Models with integral humidistat
- Commissioned via integral LCD or remote LCD commissioning unit

### MaxiPlus-BY & MaxiPlus-BY/AT (MVHR) - Pages 24 & 28

- For wall or loft installation in homes and offices
- **MaxiPlus-BY/AT with integral acoustic attenuation - very low noise levels**
- Summer bypass and frost-stat
- Up to 89% heat exchange efficiency - sfp from 0.46 W/l/s
- **Up to 230 l/s at 50Pa - max 238 l/s capacity**
- Models with integral humidistat
- Commissioned via integral LCD or remote LCD commissioning unit

### EVO250 (MVHR) - Pages 34

- For in-line installation in homes and offices
- Summer bypass and frost-stat
- Up to 88% heat exchange efficiency
- Up to 80 litre/sec at 50Pa - max 85 l/s capacity
- Specific Fan Power from 0.70 W/l/s
- Models with integral humidistat
- Commissioned via remote LCD commissioning unit

### -EVO220 (MVHR) - Page 38

- For in-line installation in homes and offices
- Summer bypass and frost-stat
- Up to 87% heat exchange efficiency - sfp from 0.55 W/l/s
- Up to 70 l/s at 50Pa - max 75 l/s capacity
- Models with integral humidistat
- Commissioned via remote LCD commissioning unit

### EVO350 (MVHR) - Page 42

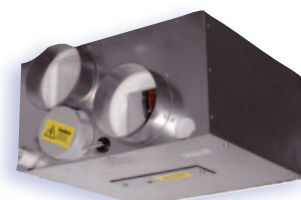
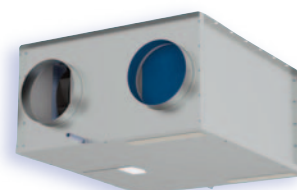
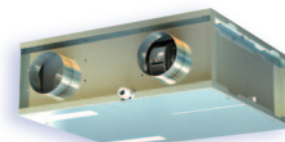
- For in-line installation in homes and offices
- Summer bypass and frost-stat
- Up to 88% heat exchange efficiency - sfp from 0.65 W/l/s
- Up to 107 l/s at 50Pa - max 116 l/s capacity
- Models with integral humidistat
- Commissioned via remote LCD commissioning unit

### Studio (MVHR) - Page 46

- For in-line installation in multi-occupancy establishments
- With and without summer bypass and frost-stat
- Up to 80% heat exchange efficiency - sfp from 0.87 W/l/s
- Up to 55 l/s at 50Pa - max 59 l/s capacity
- Models with integral humidistat
- Commissioned via remote LCD commissioning unit

### Mini (MVHR) - Page 50

- For in-line installation in multi-occupancy establishments
- With and without summer bypass and frost-stat
- Up to 83% heat exchange efficiency - sfp from 1.11 W/l/s
- Up to 30 l/s at 50Pa - max 34 l/s capacity
- Commissioned via remote LCD commissioning unit





### Purge Ventilation - Page 54

- 2 capacities for in-line installation in residential dwellings
- For rapid purge ventilation and tackling overheating issues
- Purge Box 100 up to 100 l/s at 50Pa - max 200 l/s capacity sfp from 0.20 W/l/s
- Purge Box 200 up to 233 l/s at 50Pa - max 250 l/s capacity sfp from 0.27 W/l/s
- Use as stand alone units or with MVHR and MEV systems

### MBOX125/2DC-B//MBOX200/2DC (MEVs) -Pages 58 & 62

- For in-line installation in homes and offices
- MBOX125/2DC-B - ultra low profile - 184mm deep
- Up to 97 l/s at 50Pa - max 108 l/s capacity//Up to 233 l/s at 50Pa - max 251 l/s capacity
- sfp from 0.20 W/l/s//sfp from 0.27 W/l/s
- Optional purge cable factory set
- Available with 204mm x 60mm spigot//Available with 220mm x 90mm spigot
- Continuous running - choice of trickle and boost speeds

### Elegance (dMEV) EL1003 & EL1203 - Pages 66 & 70

- EL1003 - 4"/10cm, EL1203 - 5"/12cm
- Continuous running 3 speed (2 trickle speeds and boost) axial fans
- For installation in any domestic wet room
- Up to 26.9 litre/sec - 44 litre/sec capacity - sfp from 0.09 W/l/s
- **AC motor versions in 100mm dia and 150mm dia available - Page 86**

### Elix (dMEV) - Page 74

- Continuous running 3 speed (2 trickle speeds and boost) centrifugal fan
- EC motor for high efficiency low energy usage
- For installation in any domestic wet room
- Up to 27.8 litre/sec capacity - sfp from 0.14 W/l/s

### ELPREX (dMEV) - Page 78

- Continuous running 4 speed (1 trickle and choice of 3 boost speeds) centrifugal fan
- Energy efficient motor
- For installation in walls and ceilings in all kitchens
- Up to 60 litre/sec capacity - sfp from 0.35 W/l/s

### E-Smile (dMEV) - Page 82

- Continuous running 3 speed (2 trickle speeds and boost) axial fan
- For installation in any domestic wet room
- Up to 21 litre/sec capacity, sfp from 0.37 W/l/s

### Heatrec 1003 - Page 89

- **Single room heat recovery unit**
- EC motors for high efficiency low energy usage
- Recovers up to 75% of heat from extracted, polluted air
- 3 speed for any domestic wet room
- Continuous running - choice of trickle and boost speeds
- Heat exchange tube available in 3 lengths
- **With summer bypass and frost-stat**

### Fire Rated Air Bricks - Page 92

- High performance no-combustible terminals (Approved Document B (fire safety) Volume 1: Dwellings, 2019 Edition)
- Manufactured from 0.9mm electro-galvanised sheet steel, fire class A1
- Corrosion resistant-salt spray tested to ISO9227:2022, ASTM B117-19
- Polyester powder coating meeting EN13501-1 classification A2-s1,d0
- Complies with Approved Document F Volume1, 2021 edition



## Vertical Models - features and overview

	Midi			Maxi			Maxi Plus		
	S*	H*	AT*	S*	H*	AT*	S*	H*	AT*
Automatic Summer Bypass	✓	✓	✓	✓	✓	✓	✓	✓	✓
Automatic Frost Protection	✓	✓	✓	✓	✓	✓	✓	✓	✓
Filters	✓	✓	✓	✓	✓	✓	✓	✓	✓
Delay Timer	✓	✓	✓	✓	✓	✓	✓	✓	✓
Purge Speed (factory set)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Purge Speed Timer	✓	✓	✓	✓	✓	✓	✓	✓	✓
Built-in Humidistat	✗	✓	on request	✗	✓	on request	✗	✓	on request
Universal Handling (non-humidistat models)	✓	✗	✓	✓	✗	✓	✓	✗	✓
Very low noise levels	✓	✓	✓	✓	✓	✓	✓	✓	✓
Max Airflow at 50Pa - l/s	95	95	95	163	163	163	230	230	230
Max Wet Rooms - Kitchen + SAP2009/2012/10	K+6/4/4	K+6/4/4	K+6/4/4	K+7/7/7	K+7/7/7	K+7/7/7	K+7/7/7	K+7/7/7	K+7/7/7
SFP w/l/s SAP2009/2012/10	50/51/51	50/51/51	50/51/51	40/45/45	40/45/45	40/45/45	46/47/47	46/47/47	46/47/47
% Heat Recovery SAP2009/2012/10	94/93/93	94/93/93	94/93/93	92/92/92	92/92/92	92/92/92	89/89/89	89/89/89	89/89/89
Duct Size - Ømm	125	125	125	150	150	150	150	150	150
Wired Remote Control (optional)	✓	✓	✓	✓	✓	✓	✓	✓	✓
External Condensate	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size mm W x H x D	600 x 564 x 382		648 x 595 x 395	754 x 654 x 535		802 x 703 x 560	754 x 654 x 535		802 x 703 x 560
Weight kg	24		29	37		42	37		42
Approximate Mass kg	24		29	37		42	37		42
Enhanced Acoustic Attenuation	✗	✗	✓	✗	✗	✓	✗	✗	✓

S\* - standard models

H\* - models with integral humidistat

AT\* - models with integral acoustic attenuation





## Horizontal Models - features and overview

	EVO250		EVO220		EVO350		Studio		Mini	
	S*	H*	S*	H*	S*	H*	S*	H*	S*	H*
Automatic Summer Bypass	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Automatic Frost Protection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Filters	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Delay Timer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Purge Speed (factory set)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Purge Speed Timer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Built-in Humidistat	✗	✓	✗	✓	✗	✓	✗	✓	✗	✓
Universal Handling (non-humidistat models)	✓	✗	✗	✗	✓	✗	✗	✗	✗	✗
Very low noise levels	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Max Airflow at 50Pa - l/s	80	80	75	75	107	107	55	55	30	30
Max Wet Rooms - Kitchen+ SAP2009/2012/10	K+6/4/4	K+6/4/4	K+/-/5	K+/-/5	K+7/5/5	K+7/5/5	K+5/3/3	K+5/3/3	K+2/1/1	K+2/1/1
SFP w/l/s SAP2009/2012/10	0.70/ 0.75/0.75	0.70/ 0.75/0.75	-/0.55/-	-/0.55/-	.65/ .72/.72	.65/ .72/.72	.87/ .93/.93	.87/ .93/.93	1.11/ 1.4/1.4	1.11/ 1.4/1.4
% Heat Recovery SAP2009/2012/10	88/87/ 87	88/87/ 87	-/87/-	-/87/-	88/87/ 87	88/87/ 87	80/79/ 79	80/79/ 79	83/82/ /82	83/82/ /82
Duct Size - Ømm or mm x mm	-		125		200		125		125	
	204 x 60		-		-		-		-	
Wired Remote Control (optional)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
External Condensate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size mm W x H x D	750 x 650 x 250		634 x 554 x 220		795 x 654 x 355		552 x 534 x 220		400 x 400 x 220	
Weight kg	21		22		25		17		9	
Approximate Mass kg	21		22		25		17		9	

S\* - standard models

H\* - models with integral humidistat

## Vertical MVHR

### Midi, Maxi and Maxi Plus

Vectaire's range of vertical MVHRs include the Midi, the Maxi and the Maxi Plus. These models provide optimum ventilation by continuously and quietly supplying fresh air. The energy efficient motors automatically remove excess moisture helping to maintain a healthy atmosphere.

They tackle condensation in areas from 60m<sup>2</sup> to 400m<sup>2</sup> making them ideal for all residential dwellings, whether houses, apartments or student accommodation with the most powerful models also being suitable for hotels, care homes, multi-occupancy establishments and other commercial properties.

These models meet the latest requirements of the Building Regulations for whole house ventilation systems with heat recovery (System 4).

#### How They Work

They incorporate two fans - one extracts stale, damp air from the wet rooms in a building, and the other replaces it with warmed fresh air from outside. The two airflows pass through a heat exchanger which recovers the heat from the outgoing air. This is filtered and tempered before being transferred to the incoming fresh air supply and ducted to the living areas. Thus the dwelling is permanently well ventilated and comfortable with good indoor air quality.

Vectaire MVHRs can recover up to 94% of the heat which might otherwise be lost.

The speed of the two fans can be adjusted independently with a choice of variable trickle, boost and purge speeds at installation.

All models have universal handing apart from 'H' humidistat models (see below).

#### Summer Bypass

All models incorporate a summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.

#### Frost Protection

The integral frost-stat proportionally reduces intake motor speed as the temperature falls. This stops the ingress of cold air and consequently the removal of warm air making sure that the ambient remains comfortable. It is activated when the outside temperature is between +3°C and -8°C.

#### Humidity Control

Models with an integral humidity sensor (H) increase the speed of the motors proportionally as the humidity rises. It responds to increases in relative humidity ensuring a comfortable ambience throughout the day and night. The speed of the motors will fall back to normal levels once the excess humidity has been cleared making sure the minimum amount of energy is used.

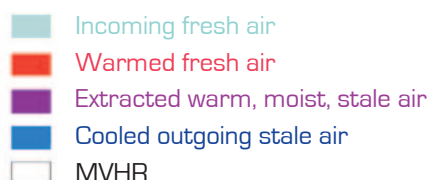
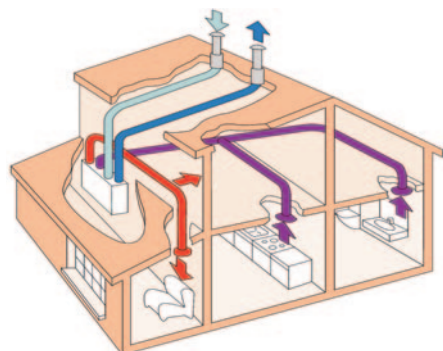
#### "Super Silent"

The Midi, Maxi and Maxi Plus AT models incorporate additional acoustic attenuation making them ultra quiet - the quietest in the market place.

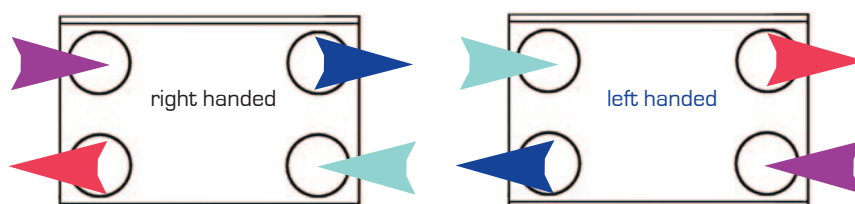
#### LCD Control

All models can have an integral or remote commissioning state-of-the-art touch screen LCD controller. It is one of the most technologically advanced available giving both installer and user a range of options to ensure that the MVHR is set to provide quiet and efficient ventilation at all times whilst recovering the heat that would otherwise be lost.

#### TYPICAL INSTALLATION



#### TOP VIEW OF HANDING FOR HUMIDISTAT MODELS





## MVHR LCD Controller



- For use with all Vectaire Heat Recovery Units
- Option of Integral LCD screen with upright MVHRs (Midis and Maxis)
- Remote units can be mounted wherever is convenient to the user (Model No: LCD-DISPLAY)

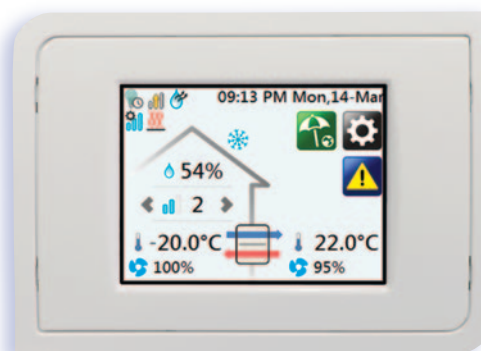
### LCD Touch Screen Functions

Display shows:

- > motor speeds - for both supply and extract fans. They can be set independently and are variable
- > inside and outside temperatures
- > status icons - show which functions are currently controlling fan speeds
- > date and time
- > relative humidity level
- > bypass status
- > error and service notifications
- > filter saturation level - shows when filters need replacing











### LCD Touch Screen Functions for USER

- > screen allows USER to set and control:
  - time
  - date
  - reset the filter saturation level after filters have been changed
  - holiday mode - sets system to minimum running, saving energy whilst maintaining air quality
  - operating speed
  - language



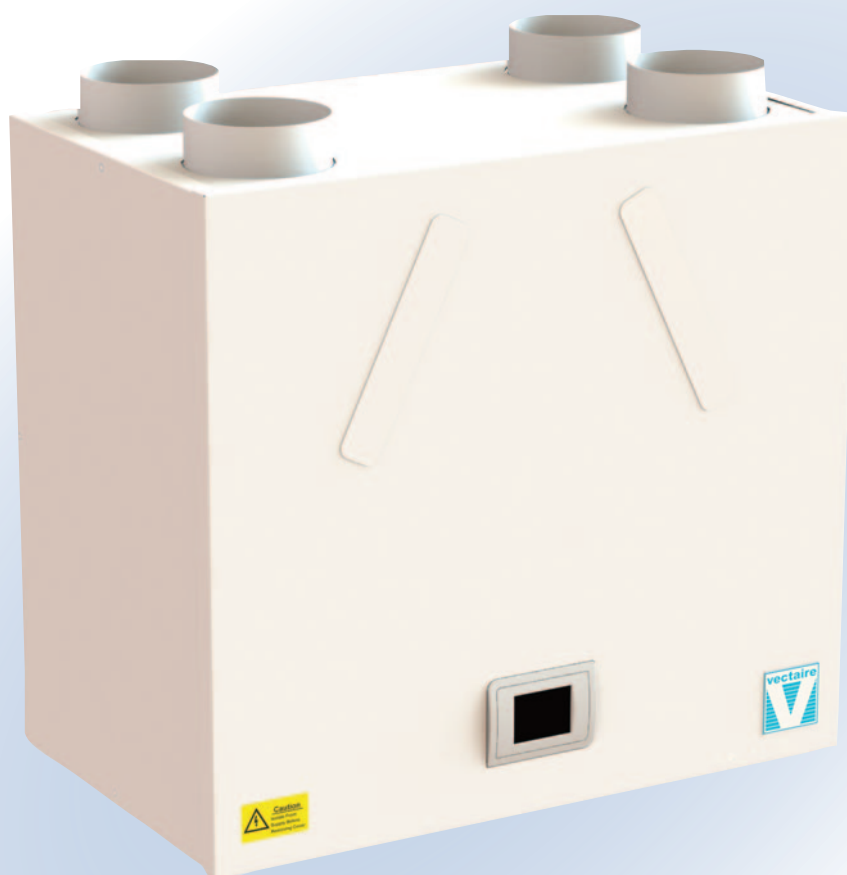
Commissioning Options - these options are ONLY for use by the installer, and can only be used with a Commissioning Access Code.

If an incorrect passcode is entered 5 times consecutively the system will automatically lock for one hour. Access permissions are lost every time the option screen is exited.

	Setting Time: sets up 12 or 24hr format, DST (daylight saving time) and time zone.		Language Selection
	Setting Date: sets date format		Touch Screen Calibration
	Holiday Mode: sets system to minimum running when required (factory set to maintain air quality)		Commissioning Screen
	Boost Speed Time Delay		Night Time Boost Inhibitor
	Boost Speed Over-run Timer		Screen Cleaning: wipe screen safely without deleting settings
	Run Time Counter and Filter Saturation		Exit to main screen



## Midi



### Midi

- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 170m<sup>2</sup>
- up to 94% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for wall, cupboard or loft installation
- universal handing for models without humidistat
- very quiet
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via optional integral LCD or remote LCD commissioning unit





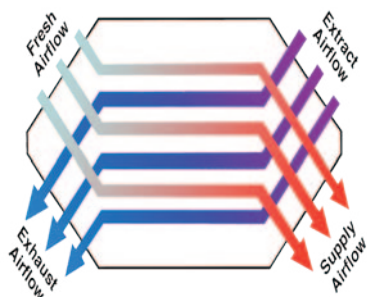
## Midi

### GENERAL FEATURES

- up to 95 litre/sec at 50Pa - max 101 litre/sec capacity
- sfp down to 0.50 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-stat - proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C.
- run-time and power outage counters
- easy to install and maintain
- easy to access G3 filters
- universal handing for models without humidistat - left or right (see separate diagram on page 6 for handing on humidistat models)
- for fitting vertically into lofts, or cupboards - wall fixing bracket supplied
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- ultra quiet
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- compact unit - casing from steel sheet - epoxy paint finish
- thermo-acoustic lining
- low energy EC brushless motor with single width, single inlet, direct drive, forward curved impellers
- operates in temperature up to 60°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger



### MODELS AVAILABLE:

- WHHR-Midi/BY - bypass, universal
- WHHR-Midi/LBYH - bypass, left drain, humidistat
- WHHR-Midi/RBYH - bypass, right drain, humidistat
- Midi-BY+LCD - bypass, universal, integral LCD
- Midi-BY+LCDLH - bypass, integral LCD, left drain, humidistat
- Midi-BY+LCDRH - bypass, integral LCD, right drain, humidistat

### CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 90 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat - proportionally reduces intake motor speed as temperature falls
- automatic summer bypass

### CONTROL FEATURES - FACTORY SET

- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat - proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- relay for external pre-heater
- 3 speed selector switch
- optional remote purge cable - factory connected - adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option) - default setting is 50% of trickle speed
- run-time and power outage counters downloadable via QR code.

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- For installation in any domestic wet room
- CE marked
- SAP PCDB Listed

TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowl. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products



## Midi

## TECHNICAL CHARACTERISTICS

Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	
Midi	101	79	58	36	14	120	69	31	11	2.2	1.21

Midi		Sound Power Levels, $L_w$ [dB] - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% (101 l/sec)	Extract	65	61	58	48	41	34	26	23	33.9
	Supply	70	74	69	60	57	50	44	43	
	Breakout	56	50	55	49	44	42	37	32	
80% (79 l/sec)	Extract	61	56	53	45	37	29	21	16	29.9
	Supply	66	70	65	55	53	44	39	36	
	Breakout	52	51	50	46	41	34	32	28	
60% (58 l/sec)	Extract	55	49	45	39	29	19	10	7	26.6
	Supply	60	62	56	47	45	34	27	21	
	Breakout	47	51	46	43	38	27	25	24	
40% (36 l/sec)	Extract	47	38	38	32	17	8	3	6	24.6
	Supply	52	51	47	38	31	22	13	8	
	Breakout	43	52	43	41	35	23	18	21	
20% (14 l/sec)	Extract	33	31	20	10	4	0	2	6	19.7
	Supply	38	32	27	13	8	1	2	6	
	Breakout	36	50	37	35	27	12	9	14	

The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit

Extract and Supply values are in-duct sound power levels

All the above data has been independently tested to BS EN ISO 3743-1:2010

## RESULTS for SAP CALCULATIONS

ENERGY LEVEL PERFORMANCE - using rigid ducting only

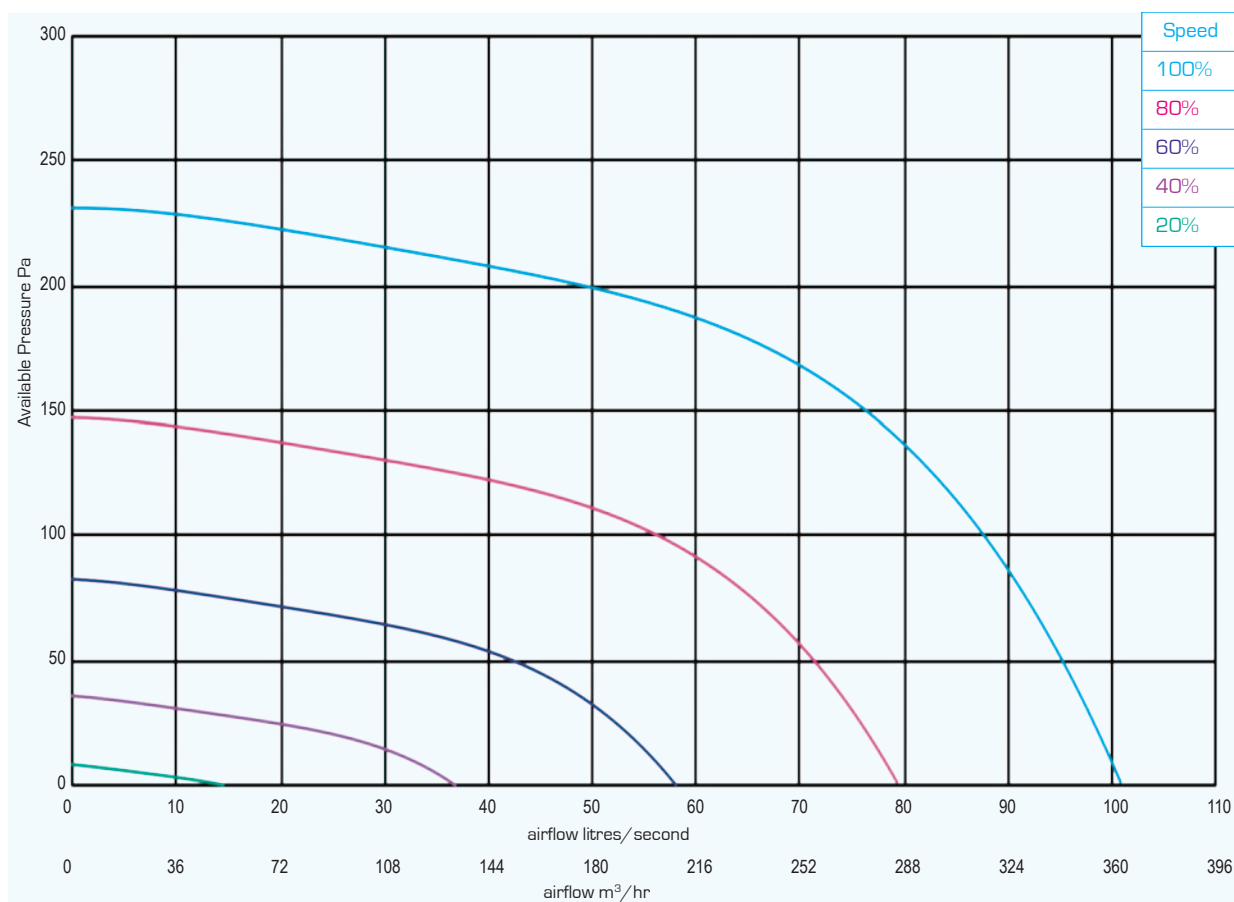
Exhaust Terminal Configuration	2009 Data		2012 Data		SAP 10 Data	
	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.50	94%	0.51	93%	0.51	93%
Kitchen + 2 additional wet rooms	0.50	93%	0.61	91%	0.61	91%
Kitchen + 3 additional wet rooms	0.55	92%	0.75	90%	0.75	90%
Kitchen + 4 additional wet rooms	0.65	91%	0.92	89%	0.92	89%
Kitchen + 5 additional wet rooms	0.76	89%	-	-	-	-
Kitchen + 6 additional wet rooms	0.88	89%	-	-	-	-

Figures at minimum flow rate conditions

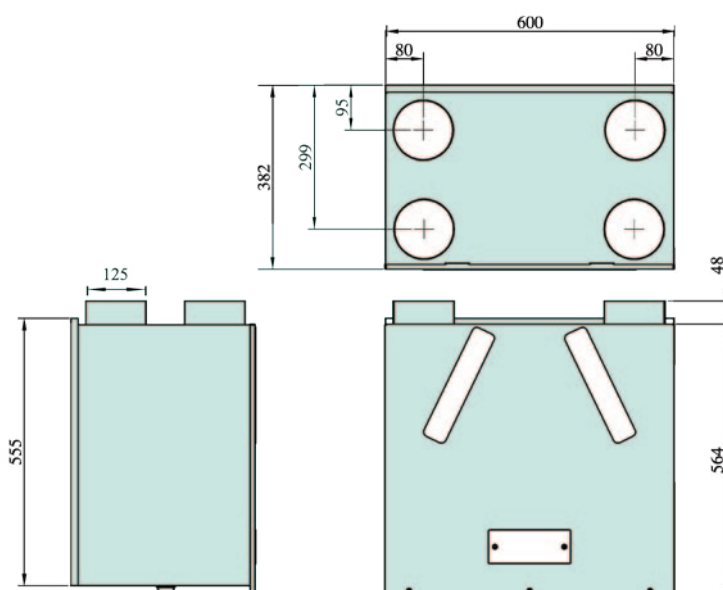


## Midi

### PERFORMANCE (curves are for guidance only)



### DIMENSIONS - mm



Weight - 24 kg

**N.B** sufficient access for safe maintenance or removal following installation, **MUST** be provided for this product.

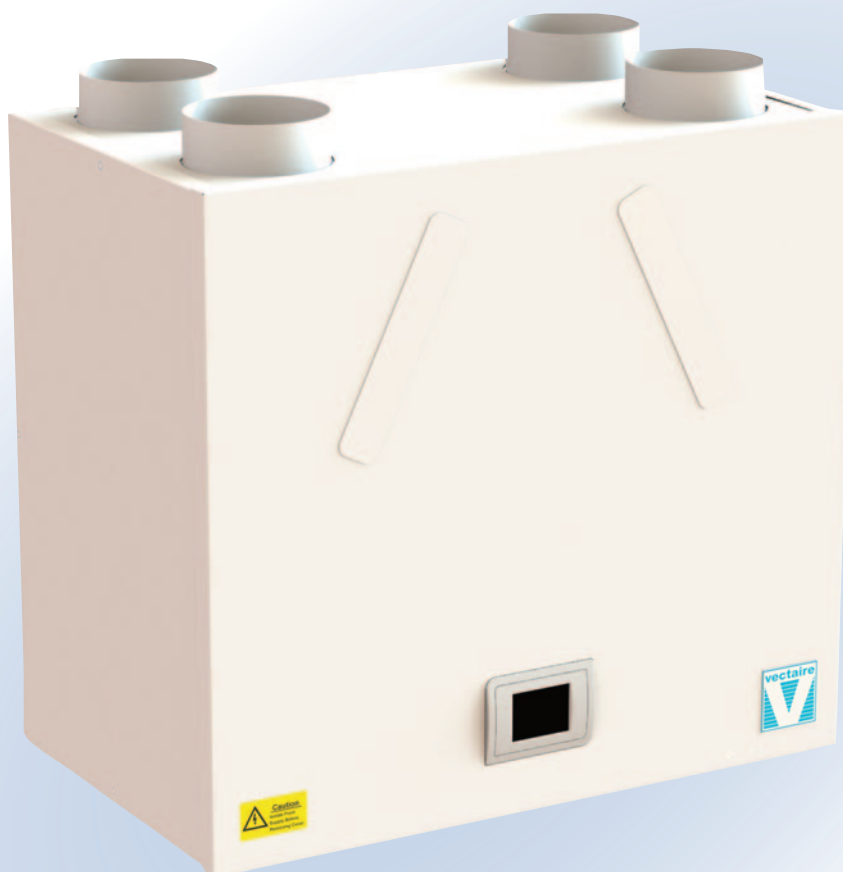


## Midi BY-AT

with integral acoustic attenuation



**NEW**



### Midi BY-AT

- very low noise levels - lined with Class "O" fire resistant acoustic foam
- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 170m<sup>2</sup>
- up to 94% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for wall, cupboard or loft installation - no extra cabinet required
- universal handing for models without humidistat
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via integral touch screen LCD





## Midi BY-AT

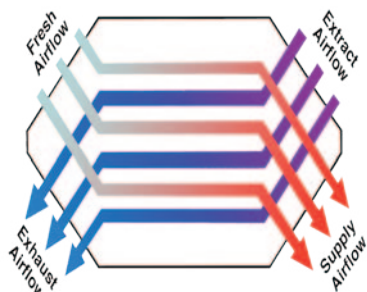
### with integral acoustic attenuation

#### GENERAL FEATURES

- extremely low noise levels
- up to 95 litre/sec at 50Pa - max 101 litre/sec capacity
- sfp down to 0.50 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-stat - proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C.
- run-time and power outage counters
- easy to install and maintain - no extra cabinet required
- easy to access G3 filters
- universal handing for models without humidistat - left or right (see separate diagram on page 6 for handing on humidistat models)
- for fitting vertically into lofts, or cupboards - wall fixing bracket supplied - weight only 29 kgs
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

#### TECHNICAL FEATURES

- compact unit - casing from steel sheet - epoxy paint finish
- lined with Class "O" fire resistant acoustic foam
- low energy EC brushless motor with single width, single inlet, direct drive, forward curved impellers
- operates in temperature up to 60°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger



#### MODELS AVAILABLE:

- **MidiBY-AT** - bypass, attenuation, universal, integral LCD
- **MidiBYATH/LH** - bypass, attenuation, humidistat, left drain, integral LCD
- **MidiBYATH/RH** - bypass, attenuation, humidistat, right drain, integral LCD

#### CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 90 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat - proportionally reduces intake motor speed as temperature falls
- automatic summer bypass

#### CONTROL FEATURES - FACTORY SET

- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat - proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- relay for external pre-heater
- 3 speed selector switch
- optional remote purge cable - factory connected - adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option)
- run-time and power outage counters downloadable via QR code.

#### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB Listed

#### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products

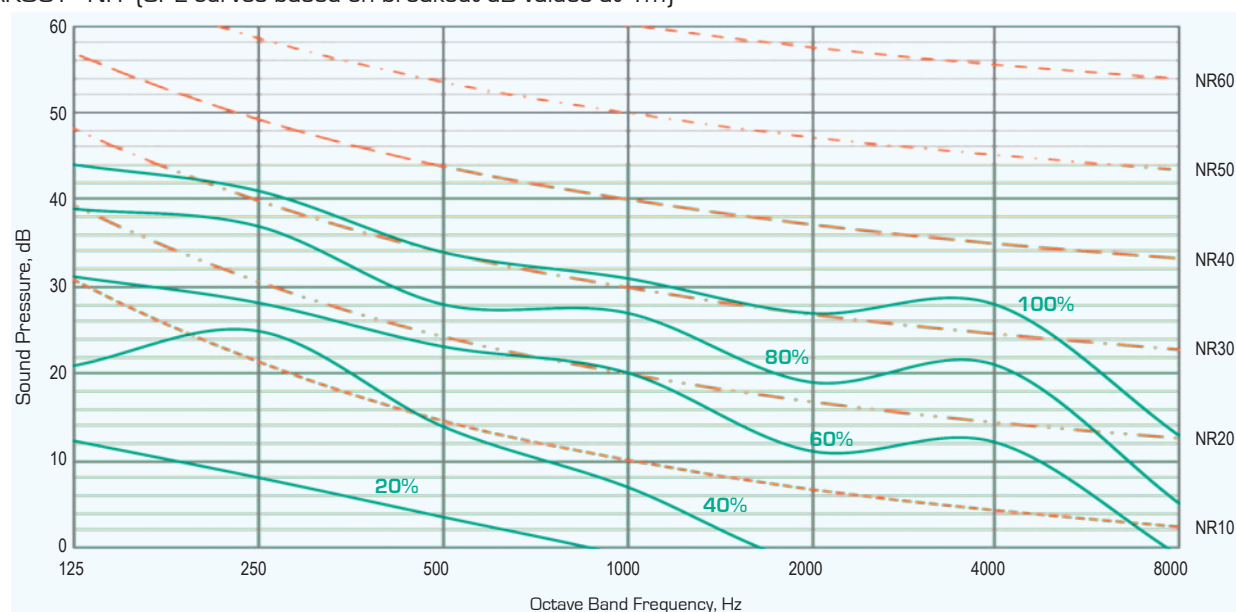


## Midi-BY-AT

## with integral acoustic attenuation

Midi-BY-AT		Sound Power Levels, $L_w$ [dB] - Octave Bands Frequency Hz.							Sound Pressure dBA @ 3m	Noise Rating based on dB @ 1m
Curve Ref		125	250	500	1k	2k	4k	8k		
100% [101 l/sec]	Extract	61	58	48	41	34	26	23	28.3	34
	Supply	74	69	60	57	50	44	43		
	Breakout	52	49	42	39	35	36	21		
80% [79 l/sec]	Extract	56	53	45	37	29	21	16	23.4	28
	Supply	70	65	55	53	44	39	36		
	Breakout	47	45	36	35	27	29	13		
60% [58 l/sec]	Extract	49	45	39	29	19	10	7	15.8	21
	Supply	62	56	47	45	34	27	21		
	Breakout	39	36	31	28	19	20	7		
40% [36 l/sec]	Extract	38	38	32	17	8	3	6	9.8	15
	Supply	51	47	38	31	22	13	8		
	Breakout	29	33	22	15	6	5	6		
20% [14 l/sec]	Extract	31	20	10	4	0	2	6	<5.0	<10
	Supply	32	27	13	8	1	2	6		
	Breakout	20	16	12	7	1	2	6		
The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit										
Extract and Supply values are in-duct sound power levels										
All the above data has been independently tested and verified by BRE to BS EN 13141-7:2010 and BS EN ISO 3741:2010										

BREAKOUT - NR (SPL curves based on breakout dB values at 1m)



## RESULTS for SAP CALCULATIONS

## ENERGY LEVEL PERFORMANCE - using rigid ducting only

Exhaust Terminal Configuration	2009 Data		2012 Data		SAP 10 Data	
	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.50	94%	0.51	93%	0.51	93%
Kitchen + 2 additional wet rooms	0.50	93%	0.61	91%	0.61	91%
Kitchen + 3 additional wet rooms	0.55	92%	0.75	90%	0.75	90%
Kitchen + 4 additional wet rooms	0.65	91%	0.92	89%	0.92	89%
Kitchen + 5 additional wet rooms	0.76	89%	-	-	-	-
Kitchen + 6 additional wet rooms	0.88	89%	-	-	-	-

Figures at minimum flow rate conditions

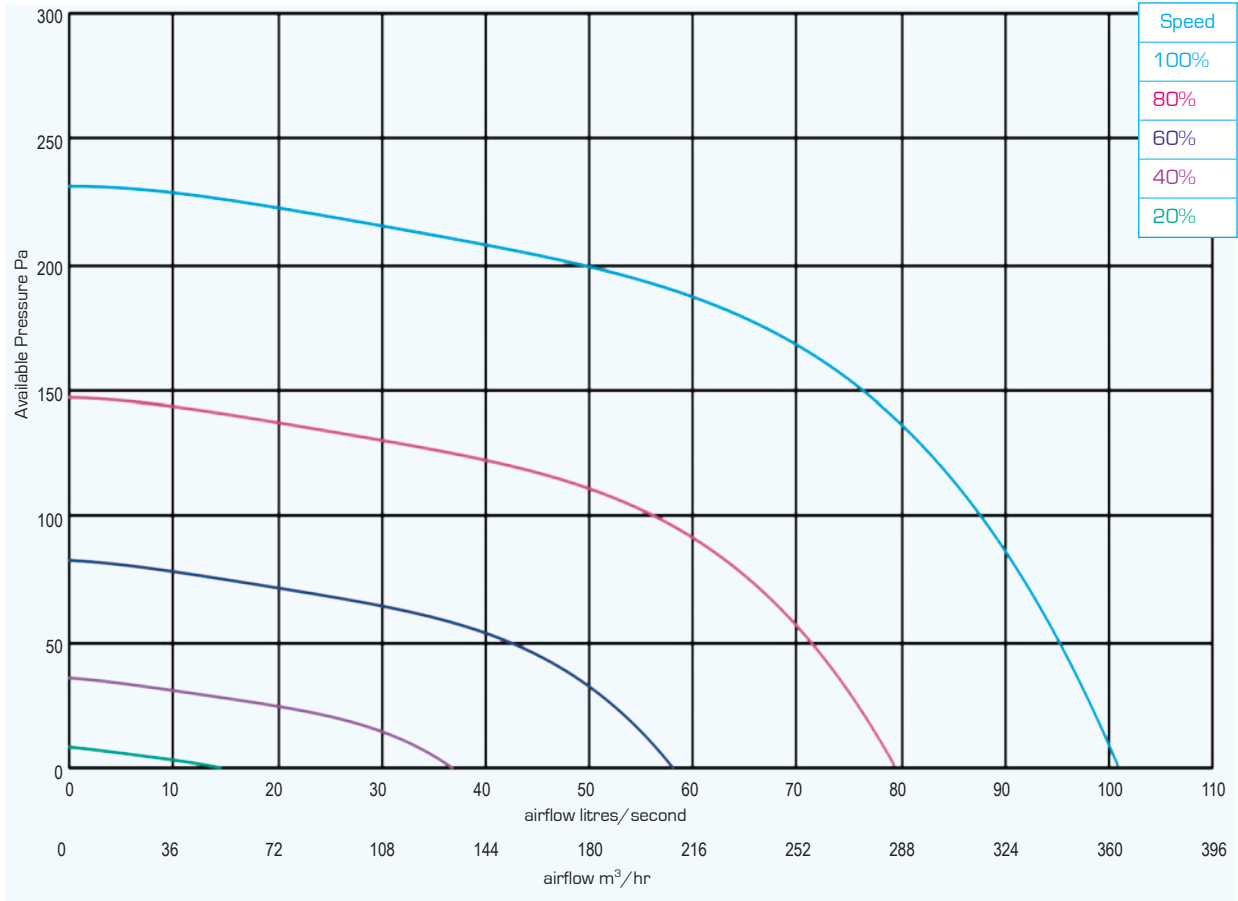


# Midi-BY-AT

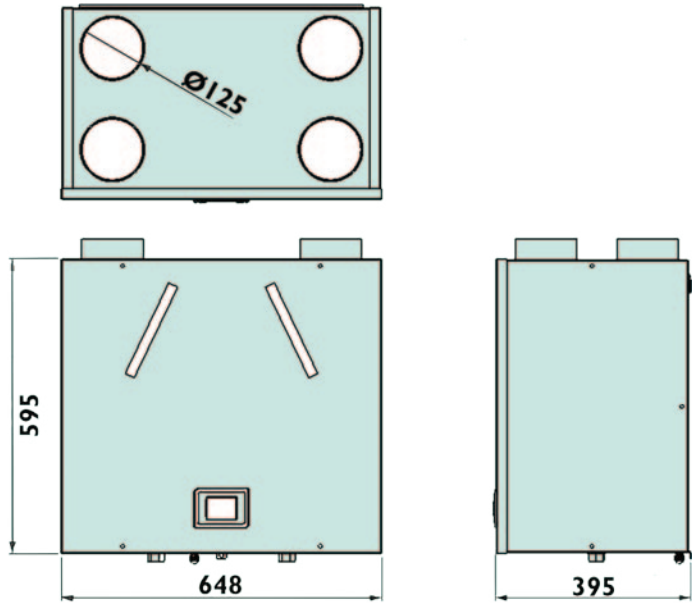
## with integral acoustic attenuation

TECHNICAL CHARACTERISTICS											
Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	
Midi-BY-AT	101	79	58	36	14	120	69	31	11	2.2	1.21

PERFORMANCE [curves are for guidance only]



DIMENSIONS - mm

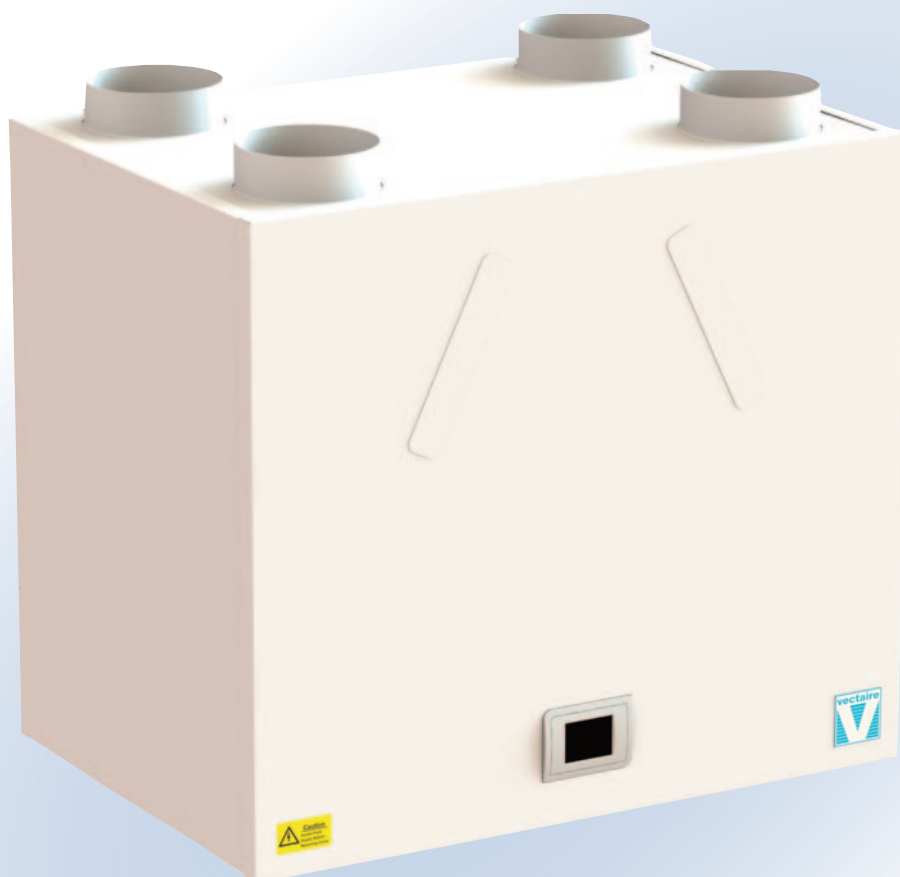


Weight - 29kg

**N.B** a clearance of 200 mm should be allowed on each side of the cabinet for access to the motors



## Maxi



### Maxi

- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 250m<sup>2</sup>
- up to 92% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for wall, cupboard or loft installation
- universal handing for models without humidistat
- very quiet
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via optional integral LCD or remote LCD commissioning unit





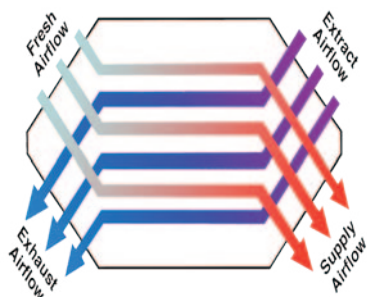
## Maxi

### GENERAL FEATURES

- up to 163 litre/sec at 50Pa - max 177 litre/sec capacity
- sfp down to 0.40 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-stat - proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C.
- run-time and power outage counters
- easy to install and maintain
- easy to access G3 filters
- universal handing for models without humidistat - left or right (see separate diagram on page 6 for handing on humidistat models)
- for fitting vertically into lofts, or cupboards - wall fixing bracket supplied
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- low noise levels
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- casing from steel sheet - epoxy paint finish
- foam construction lining
- EPS internal components provide acoustic and thermal enhancement
- low energy EC brushless motor with single width, single inlet, direct drive, forward curved impellers
- operates in temperature up to 60°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger



### CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 90 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat - proportionally reduces intake motor speed as temperature falls
- automatic summer bypass

### CONTROL FEATURES - FACTORY SET

- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat - proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- relay for external pre-heater
- 3 speed selector switch
- optional remote purge cable - factory connected - adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option) - default setting is 50% of trickle speed
- run-time and power outage counters downloadable via QR code.

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB Listed

TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

### MODELS AVAILABLE:

- WHHR Maxi/ BY - bypass, universal
- WHHR Maxi/ BLH - bypass, left drain humidistat
- WHHR Maxi/ BRH - bypass, right drain, humidistat
- Maxi BY+LCD - bypass, universal, integral LCD
- Maxi+LHHLCD - bypass, left drain, humidistat, integral LCD
- Maxi+RHHLCD - bypass, right drain, humidistat, integral LCD

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products



## Maxi

## TECHNICAL CHARACTERISTICS

Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	
Maxi	177	138	99	60	23	176	97	44	17	4	1.41

Maxi		Sound Power Levels, $L_w$ [dB] - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% (177 l/sec)	Extract	52	57	61	58	59	58	55	50	38.1
	Supply	57	62	66	63	64	63	60	55	
	Breakout	54	55	60	56	43	39	30	21	
80% (138 l/sec)	Extract	48	53	55	53	54	52	49	42	35.9
	Supply	53	58	60	58	59	57	54	47	
	Breakout	52	55	57	54	42	37	28	22	
60% (99 l/sec)	Extract	42	47	48	46	47	45	40	32	33.2
	Supply	47	52	53	51	52	50	45	37	
	Breakout	51	54	54	51	41	35	26	22	
40% (60 l/sec)	Extract	36	40	40	37	38	36	30	18	24.2
	Supply	41	45	45	42	43	41	35	23	
	Breakout	48	51	46	40	29	25	19	22	
20% (23 l/sec)	Extract	27	29	27	22	22	19	8	10	20.2
	Supply	32	34	32	27	27	24	15	17	
	Breakout	43	50	41	35	20	16	11	15	

The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit

Extract and Supply values are in-duct sound power levels

All the above data has been independently tested to BS EN ISO 3743-1:2010

## RESULTS for SAP CALCULATIONS

ENERGY LEVEL PERFORMANCE - using rigid ducting only

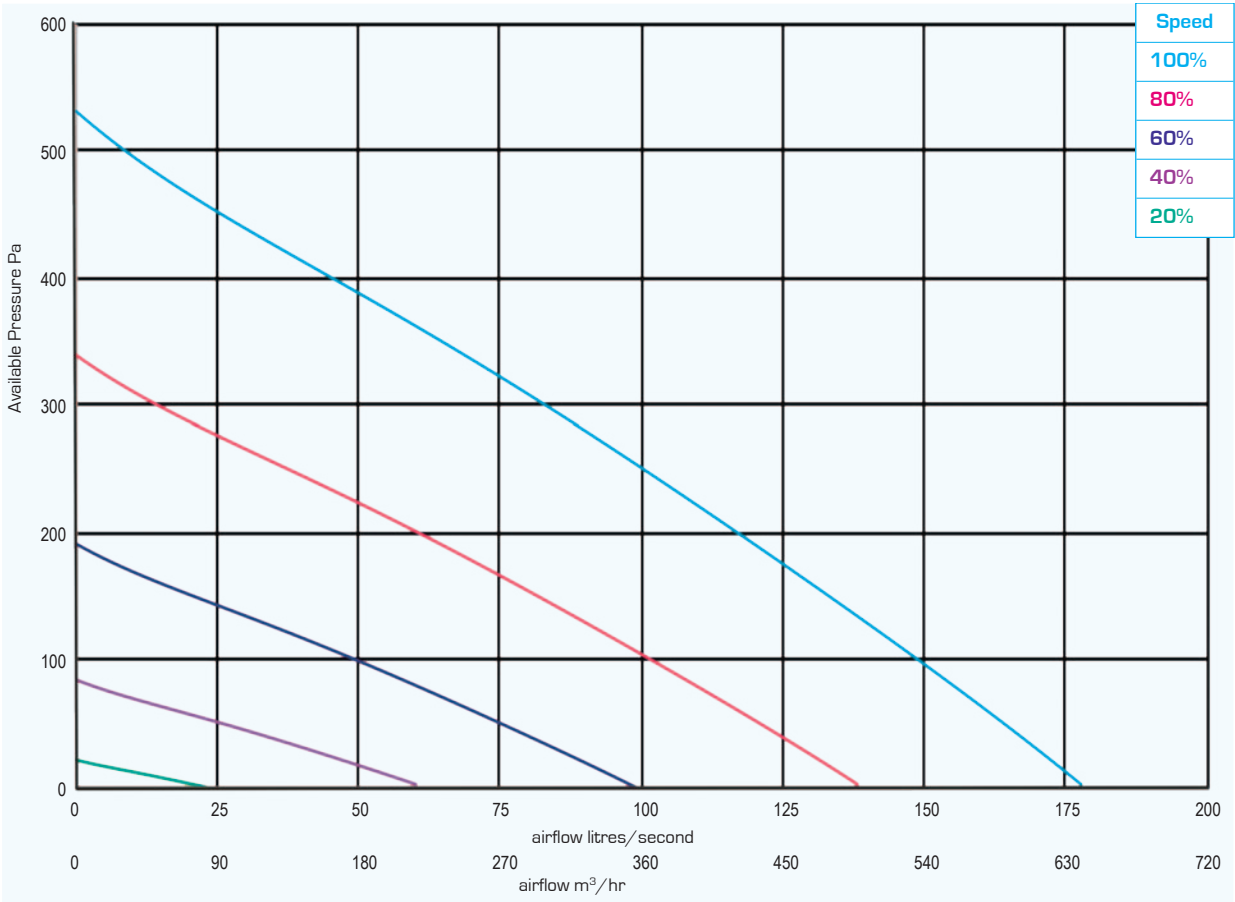
Exhaust Terminal Configuration	2009 Data		2012 Data		SAP 10 Data	
	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.43	92%	0.45	92%	0.45	92%
Kitchen + 2 additional wet rooms	0.40	92%	0.47	92%	0.47	92%
Kitchen + 3 additional wet rooms	0.42	92%	0.54	91%	0.54	91%
Kitchen + 4 additional wet rooms	0.48	91%	0.66	90%	0.66	90%
Kitchen + 5 additional wet rooms	0.55	91%	0.80	90%	0.80	90%
Kitchen + 6 additional wet rooms	0.63	90%	0.99	89%	0.99	89%
Kitchen + 7 additional wet rooms	0.76	90%	1.21	89%	1.21	89%

Figures at minimum flow rate conditions

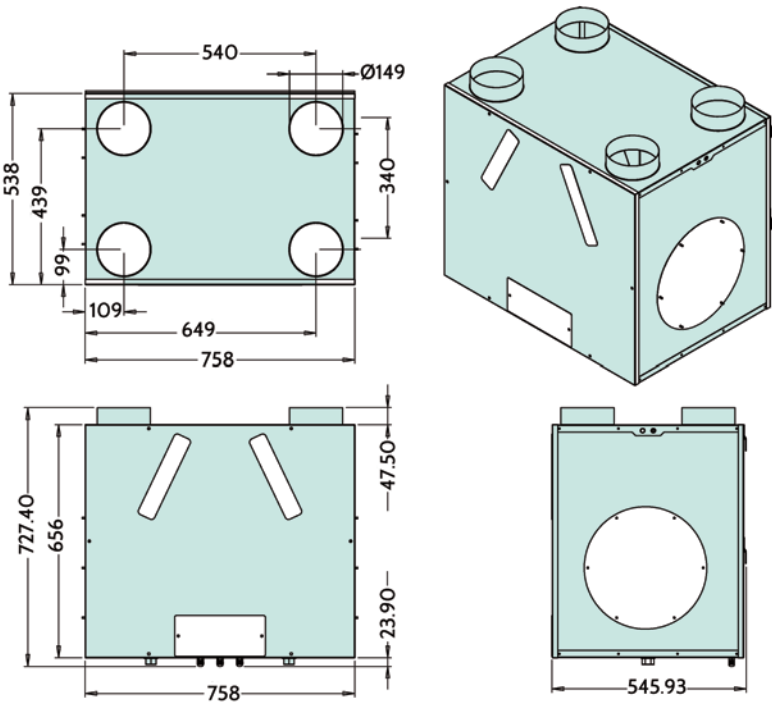


Maxi

PERFORMANCE [curves are for guidance only]



DIMENSIONS - mm



Weight - 37kg

**N.B** a clearance of 200 mm should be allowed on each side of the cabinet for access to the motors

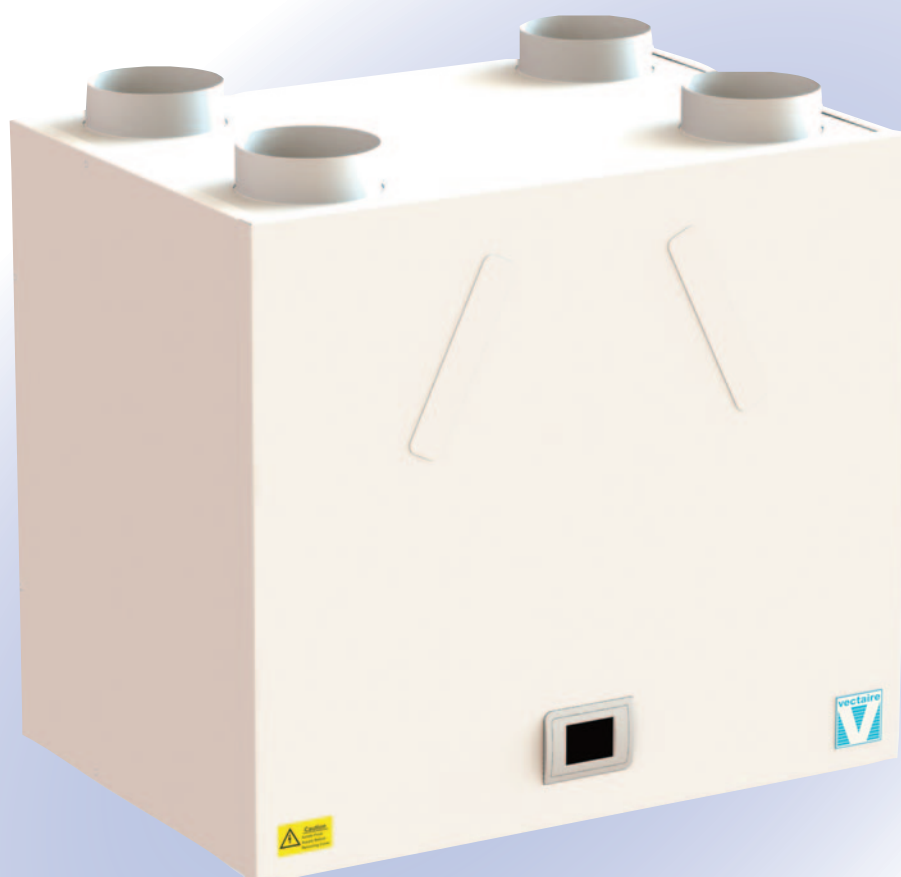


## Maxi-BY-AT

with integral acoustic attenuation



**NEW**



### Maxi-BY-AT

- very low noise levels - lined with Class "O" fire resistant acoustic foam
- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 250m<sup>2</sup>
- up to 92% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for wall, cupboard or loft installation - no extra cabinet required
- universal handing for models without humidistat
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via integral touch screen LCD





## Maxi-BY-AT

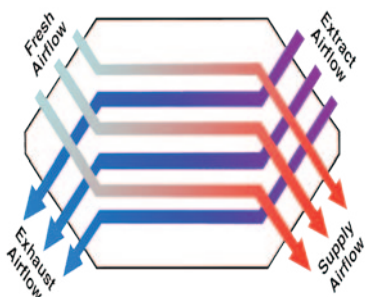
### with integral acoustic attenuation

#### GENERAL FEATURES

- extremely low noise levels
- up to 163 litre/sec at 50Pa - max 177 litre/sec capacity
- sfp down to 0.40 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-stat - proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C.
- run-time and power outage counters
- easy to install and maintain - no extra cabinet required
- easy to access G3 filters
- universal handing for models without humidistat - left or right (see separate diagram on page 6 for handing on humidistat models)
- for fitting vertically into lofts, or cupboards - wall fixing bracket supplied - weight only 42 kgs
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

#### TECHNICAL FEATURES

- casing from steel sheet - epoxy paint finish
- lined with Class "O" fire resistant acoustic foam
- low energy EC brushless motor with single width, single inlet, direct drive, forward curved impellers
- operates in temperature up to 60°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger



#### MODELS AVAILABLE:

- Maxi BY-AT+-LCD - bypass, attenuation universal, integral LCD
- Maxi BYAT+LCDLH - bypass, attenuation, left drain, humidistat, integral LCD
- Maxi BYAT+LCDRH - bypass, attenuation, right drain, humidistat, integral LCD

#### CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 90 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat - proportionally reduces intake motor speed as temperature falls
- automatic summer bypass

#### CONTROL FEATURES - FACTORY SET

- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat - proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- relay for external pre-heater
- optional remote purge cable - factory connected - adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option) - default setting is 50% of trickle speed
- run-time and power outage counters downloadable via QR code.

#### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB Listed

#### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products

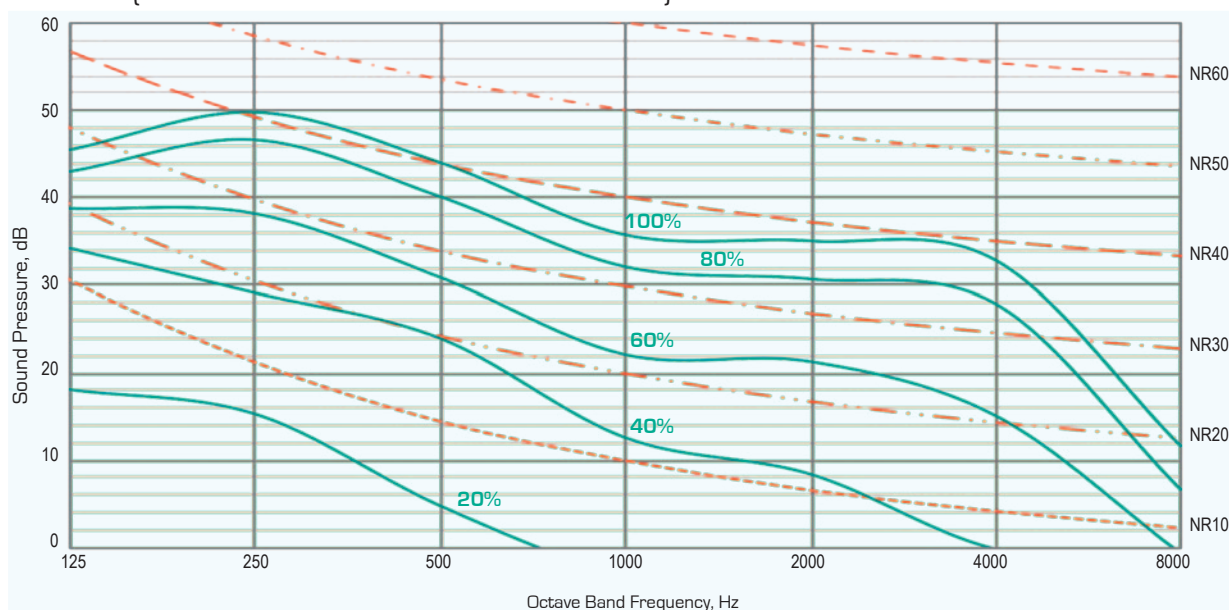


# Maxi-BY-AT

## with integral acoustic attenuation

Maxi BY AT		Sound Power Levels, $L_w$ [dB] - Octave Bands Frequency Hz.							Sound Pressure dBA @ 3m	Noise Rating based on dB @ 1m
Curve Ref		125	250	500	1k	2k	4k	8k		
100% [177 l/sec]	Extract	60	64	51	46	38	30	24	36.8	41
	Supply	70	74	69	59	53	46	42		
	Breakout	54	58	52	44	43	41	20		
80% [138 l/sec]	Extract	57	63	51	42	33	24	18	32.4	38
	Supply	69	70	67	56	50	41	37		
	Breakout	51	55	48	40	39	36	15		
60% [99 l/sec]	Extract	52	51	39	30	21	8	6	23.4	29
	Supply	68	63	54	53	44	38	36		
	Breakout	47	46	39	30	29	23	7		
40% [60 l/sec]	Extract	47	45	29	21	9	2	6	15.1	20
	Supply	58	49	45	34	27	12	7		
	Breakout	42	37	32	21	16	8	6		
20% [23 l/sec]	Extract	32	28	13	11	0	2	6	<5.0	<10
	Supply	39	31	27	14	5	2	6		
	Breakout	26	23	13	5	1	2	6		
The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit										
Extract and Supply values are in-duct sound power levels										
All the above data has been independently tested and verified by BRE to BS EN 13141-7:2010 and BS EN ISO 3741:2010										

BREAKOUT - NR (SPL curves based on breakout dB values at 1m)



### RESULTS for SAP CALCULATIONS

ENERGY LEVEL PERFORMANCE - using rigid ducting only

Exhaust Terminal Configuration	2009 Data		2012 Data		SAP 10 Data	
	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.43	92%	0.45	92%	0.45	92%
Kitchen + 2 additional wet rooms	0.40	92%	0.47	92%	0.47	92%
Kitchen + 3 additional wet rooms	0.42	92%	0.54	91%	0.54	91%
Kitchen + 4 additional wet rooms	0.48	91%	0.66	90%	0.66	90%
Kitchen + 5 additional wet rooms	0.55	91%	0.80	90%	0.80	90%
Kitchen + 6 additional wet rooms	0.63	90%	0.99	89%	0.99	89%
Kitchen + 7 additional wet rooms	0.76	90%	1.21	89%	1.21	89%

Figures at minimum flow rate conditions



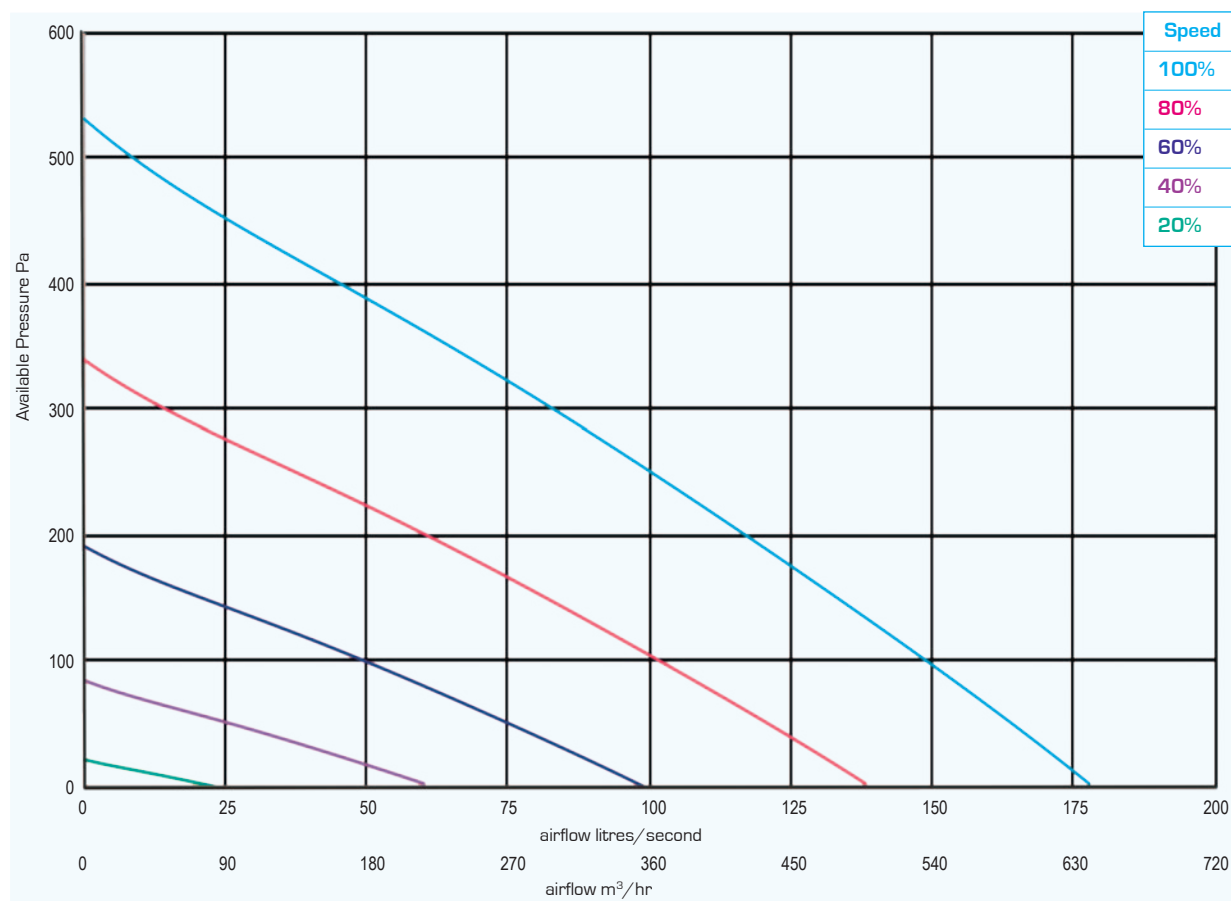
# Maxi-BY-AT

## with integral acoustic attenuation

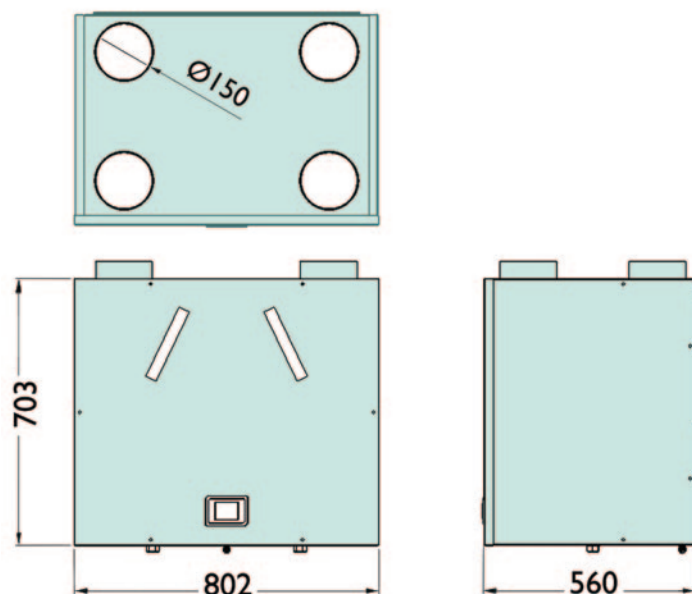
### TECHNICAL CHARACTERISTICS

Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	
Maxi BY AT	177	138	99	60	23	176	97	44	17	4	1.41

### PERFORMANCE [curves are for guidance only]



### DIMENSIONS - mm



Weight - 42 kg

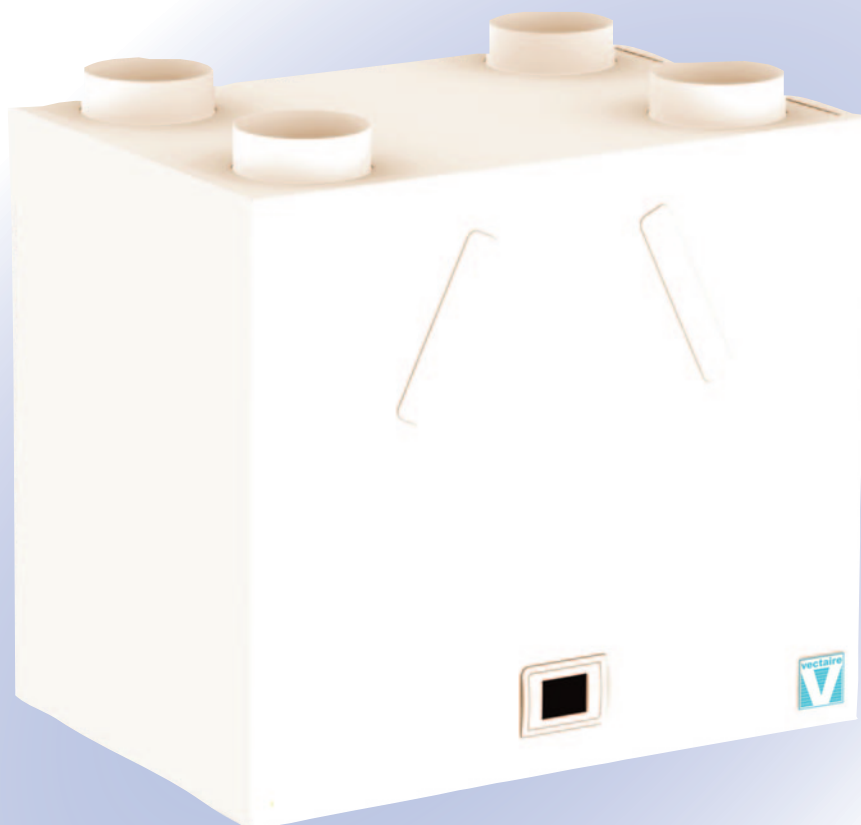
**N.B** a clearance of 200 mm should be allowed on each side of the cabinet for access to the motors



## Maxi Plus BY



**NEW**



### Maxi Plus BY

- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 400m<sup>2</sup>
- up to 89% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for wall, cupboard or loft installation
- universal hanging for models without humidistat
- very quiet
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via optional integral LCD or remote LCD commissioning unit



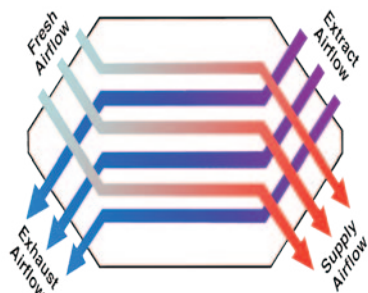
## Maxi Plus BY

### GENERAL FEATURES

- up to 230 litre/sec at 50Pa - max 238 litre/sec capacity
- sfp down to 0.46 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-stat - proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C.
- run-time and power outage counters
- easy to install and maintain
- easy to access G3 filters
- universal handing for models without humidistat - left or right (see separate diagram on page 6 for handing on humidistat models)
- for fitting vertically into lofts, or cupboards - wall fixing bracket supplied
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- casing from steel sheet - epoxy paint finish
- foam construction lining
- EPS internal components provide acoustic and thermal enhancement
- low energy EC brushless motor with single width, single inlet, direct drive, forward curved impellers
- operates in temperature up to 60°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger



### MODELS AVAILABLE:

- Maxi Plus/BY - bypass, universal,
- Maxi Plus/BLH - bypass, left drain, humidistat
- Maxi Plus/BRH - bypass, right drain, humidistat
- MaxiPlus BYLCD - bypass, universal, integral LCD
- MaxiPlus BLHLCD - bypass, left drain, humidistat, integral LCD
- MaxiPlus BRHLCD - bypass, right drain, humidistat, integral LCD

### CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 90 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat - proportionally reduces intake motor speed as temperature falls
- automatic summer bypass

### CONTROL FEATURES - FACTORY SET

- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat - proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- relay for external pre-heater
- 3 speed selector switch
- optional remote purge cable - factory connected - adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option) - default setting is 50% of trickle speed
- run-time and power outage counters downloadable via QR code.

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB Listed

### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowl. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products



# Maxi Plus BY

## TECHNICAL CHARACTERISTICS

Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	
Maxi Plus BY	238	186	135	84	35	355	184	85	32	8	2.81

Maxi Plus BY		Sound Power Levels, $L_w$ [dB] - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% (238 l/sec)	Extract	67	63	66	64	64	61	58	54	43.1
	Supply	72	68	71	69	69	66	63	59	
	Breakout	67	65	64	57	51	53	49	32	
80% (186 l/sec)	Extract	63	58	61	59	58	55	51	46	37.4
	Supply	68	63	66	64	63	60	56	51	
	Breakout	62	59	60	52	45	44	39	28	
60% (135 l/sec)	Extract	58	52	53	51	51	48	43	35	32.8
	Supply	63	57	58	56	56	53	48	40	
	Breakout	58	54	57	45	39	37	31	25	
40% (84 l/sec)	Extract	51	44	44	42	42	37	31	21	26.0
	Supply	56	49	49	47	47	42	36	26	
	Breakout	52	47	48	41	36	31	26	23	
20% (35 l/sec)	Extract	40	32	30	29	27	24	14	16	20.4
	Supply	45	37	35	34	32	29	22	25	
	Breakout	44	36	34	33	31	28	20	21	

The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit

Extract and Supply values are in-duct sound power levels

All the above data has been independently tested to BS EN ISO 3743-1:2010

## RESULTS for SAP CALCULATIONS

ENERGY LEVEL PERFORMANCE - using rigid ducting only

Exhaust Terminal Configuration	2009 Data		2012 Data		SAP 10 Data	
	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.75	89%	0.56	89%	0.56	89%
Kitchen + 2 additional wet rooms	0.56	89%	0.47	89%	0.47	89%
Kitchen + 3 additional wet rooms	0.46	89%	0.50	88%	0.50	88%
Kitchen + 4 additional wet rooms	0.46	88%	0.56	87%	0.56	87%
Kitchen + 5 additional wet rooms	0.49	88%	0.66	86%	0.66	86%
Kitchen + 6 additional wet rooms	0.55	87%	0.78	85%	0.78	85%
Kitchen + 7 additional wet rooms	0.63	86%	0.94	84%	0.94	84%

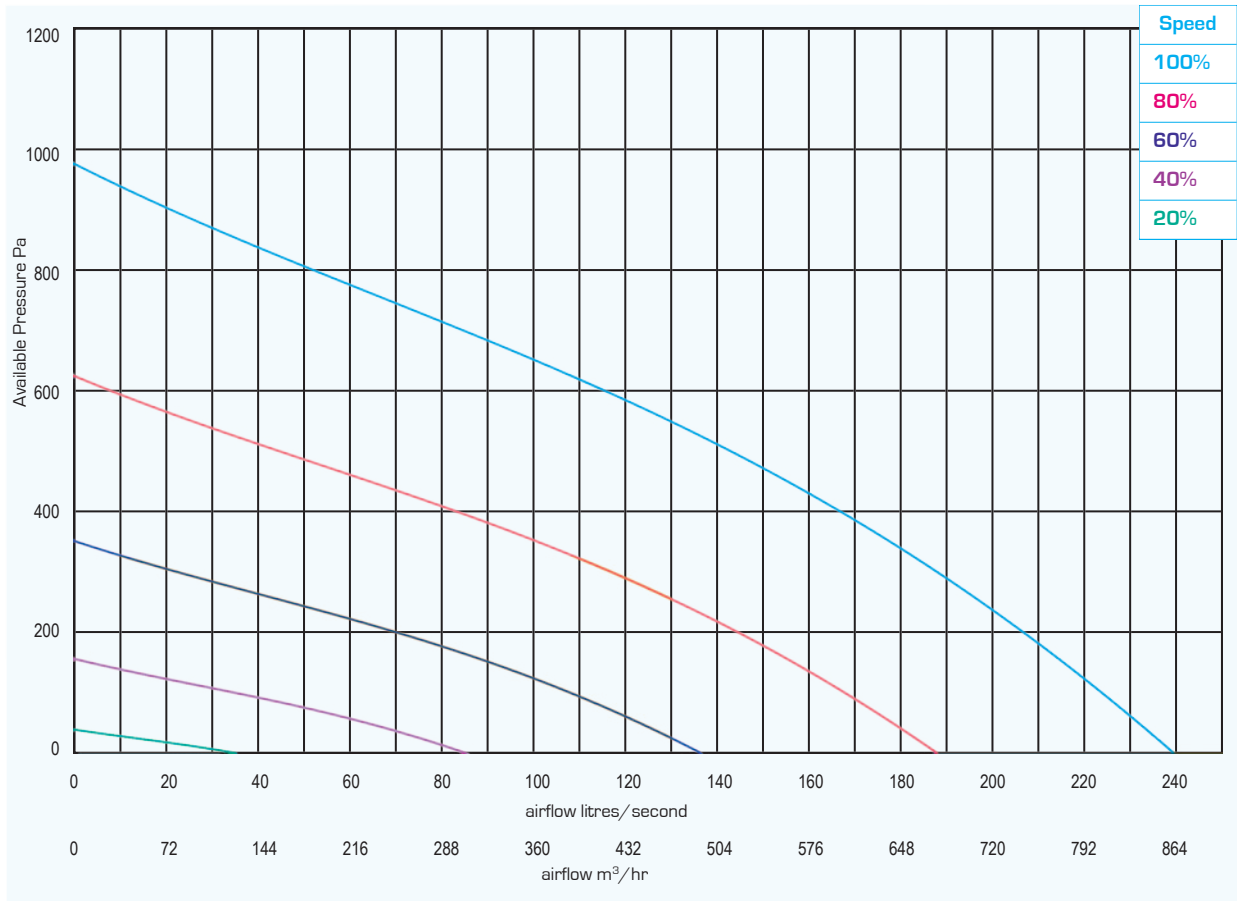
Figures at minimum flow rate conditions



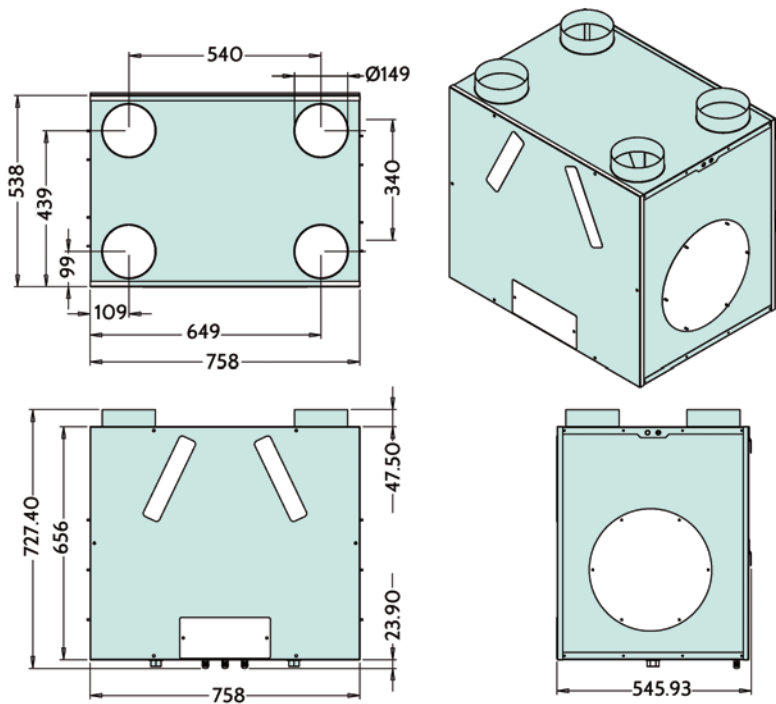


Maxi Plus BY

PERFORMANCE (curves are for guidance only)



DIMENSIONS - mm



Weight - 37kg

**N.B** a clearance of 200 mm should be allowed on each side of the cabinet for access to the motors

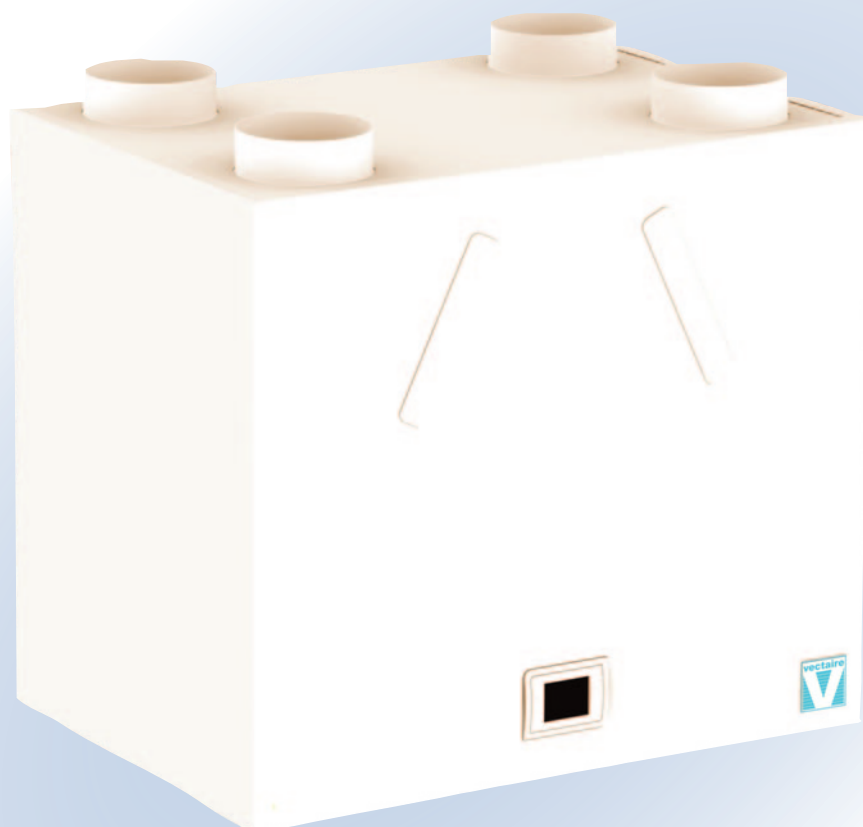


## Maxi-Plus-BY-AT

with integral acoustic attenuation



**NEW**



### Maxi-Plus-BY-AT

- very low noise levels - lined with Class "O" fire resistant acoustic foam
- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 400m<sup>2</sup>
- up to 89% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for wall, cupboard or loft installation - no extra cabinet required
- universal handing for models without humidistat
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via integral touch screen LCD



## Maxi-Plus-BY-AT

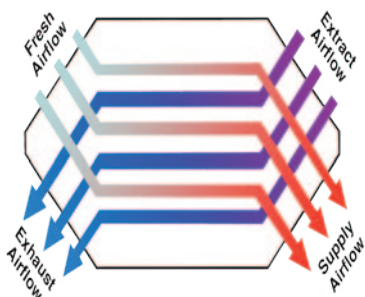
### with integral acoustic attenuation

#### GENERAL FEATURES

- extremely low noise levels
- Up to 230 litre/sec at 50Pa - max 238 litre/sec capacity
- sfp down to 0.46 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-stat - proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C.
- run-time and power outage counters
- easy to install and maintain - no extra cabinet required
- easy to access G3 filters
- universal handing for models without humidistat - left or right (see separate diagram on page 6 for handing on humidistat models)
- for fitting vertically into lofts, or cupboards - wall fixing bracket supplied - weight only 42 kgs
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

#### TECHNICAL FEATURES

- casing from steel sheet - epoxy paint finish
- lined with Class "O" fire resistant acoustic foam
- low energy EC brushless motor with single width, single inlet, direct drive, forward curved impellers
- operates in temperature up to 60°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger



#### MODELS AVAILABLE:

- MaxiPlus/ BYATLCD - bypass, attenuation, universal, integral LCD
- MaxiPlus/ ATLCDLH - bypass, attenuation, left drain, humidistat, integral LCD
- MaxiPlus/ ATLCDRH - bypass, attenuation, right drain, humidistat,

#### CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 90 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat - proportionally reduces intake motor speed as temperature falls
- automatic summer bypass

#### CONTROL FEATURES - FACTORY SET

- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat - proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- relay for external pre-heater
- 3 speed selector switch
- optional remote purge cable - factory connected - adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option) - default setting is 50% of trickle speed
- run-time and power outage counters downloadable via QR code.

#### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB Listed

#### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowl. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products

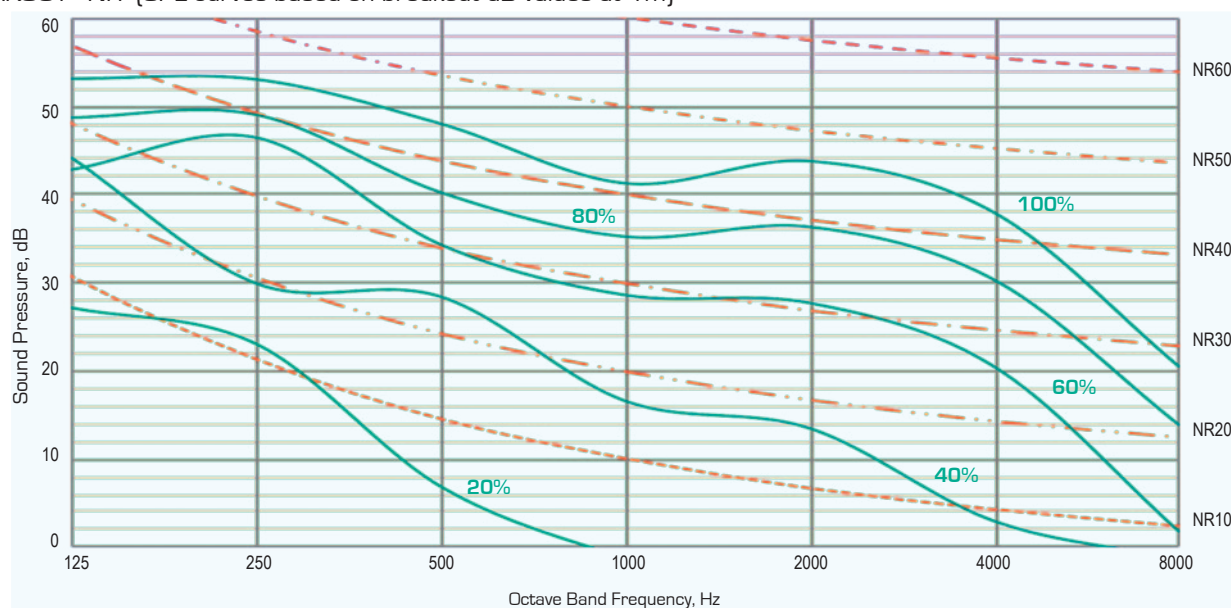


# Maxi-Plus-BY-AT

## with integral acoustic attenuation

Maxi Plus BY AT		Sound Power Levels, $L_w$ [dB] - Octave Bands Frequency Hz.							Sound Pressure dBA @ 3m	Noise Rating based on dB @1m
Curve Ref		125	250	500	1k	2k	4k	8k		
100% (238 l/sec)	Extract	61	63	57	49	43	34	28	41.1	47
	Supply	75	79	74	66	63	52	52		
	Breakout	61	61	56	49	52	46	29		
80% (186 l/sec)	Extract	57	59	51	44	37	28	23	34.9	40
	Supply	71	71	66	60	58	46	47		
	Breakout	57	57	48	43	44	38	22		
60% (135 l/sec)	Extract	51	55	45	36	27	15	8	28.9	37
	Supply	64	68	60	51	48	34	29		
	Breakout	51	54	42	37	36	28	10		
40% (84 l/sec)	Extract	49	44	35	26	17	4	6	20.7	26
	Supply	59	52	48	41	36	19	12		
	Breakout	52	38	36	25	21	11	7		
20% 35 l/sec}	Extract	36	36	28	12	3	2	6	5.8	12
	Supply	42	41	31	21	12	2	6		
	Breakout	35	31	15	7	1	3	7		
The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit										
Extract and Supply values are in-duct sound power levels										
All the above data has been independently tested and verified by BRE to BS EN 13141-7:2010 and BS EN ISO 3741:2010										

### BREAKOUT - NR (SPL curves based on breakout dB values at 1m)



### RESULTS for SAP CALCULATIONS

#### ENERGY LEVEL PERFORMANCE - using rigid ducting only

Exhaust Terminal Configuration	2009 Data		2012 Data		SAP 10 Data	
	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.75	89%	0.56	89%	0.56	89%
Kitchen + 2 additional wet rooms	0.56	89%	0.47	89%	0.47	89%
Kitchen + 3 additional wet rooms	0.46	89%	0.50	88%	0.50	88%
Kitchen + 4 additional wet rooms	0.46	88%	0.56	87%	0.56	87%
Kitchen + 5 additional wet rooms	0.49	88%	0.66	86%	0.66	86%
Kitchen + 6 additional wet rooms	0.55	87%	0.78	85%	0.78	85%
Kitchen + 7 additional wet rooms	0.63	86%	0.94	84%	0.94	84%

Figures at minimum flow rate conditions



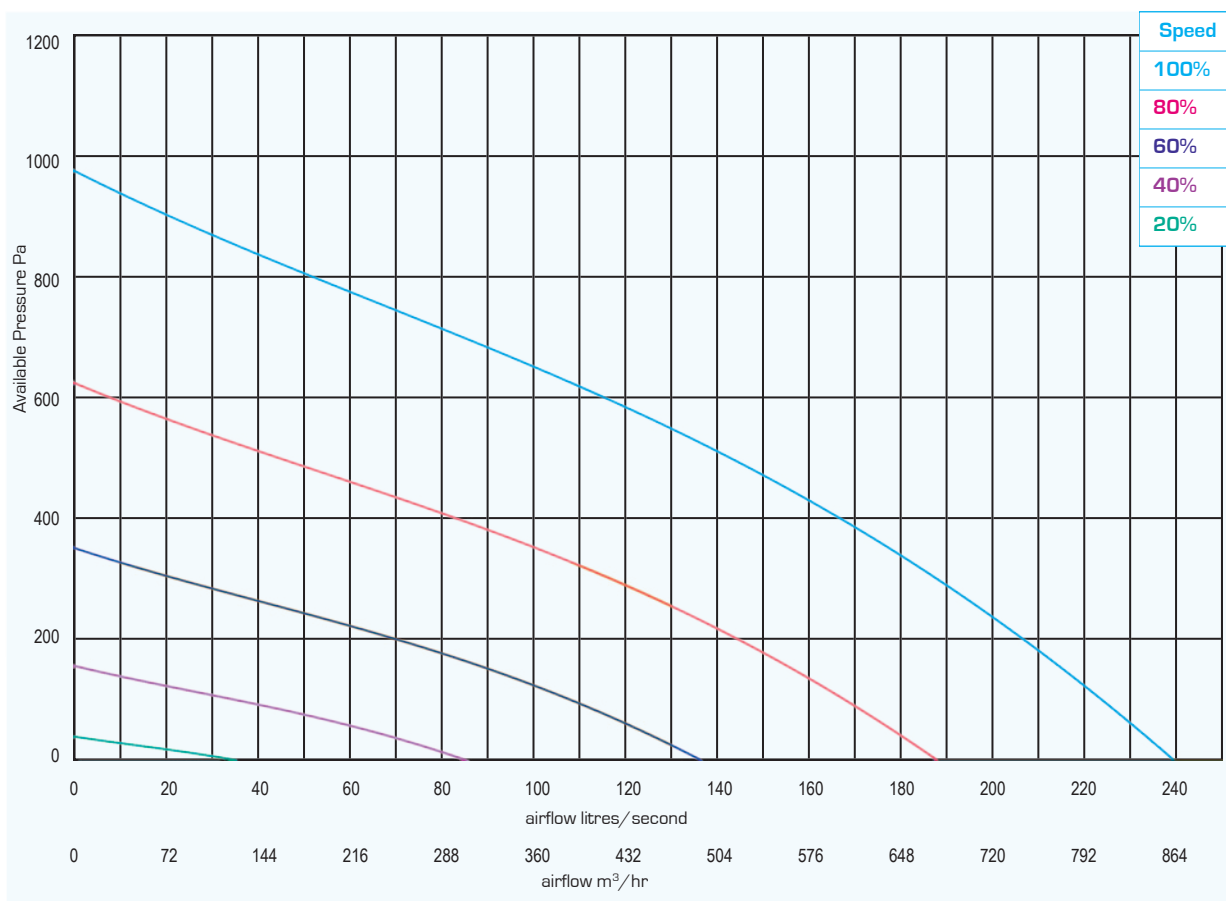
# Maxi-Plus-BY-AT

## with integral acoustic attenuation

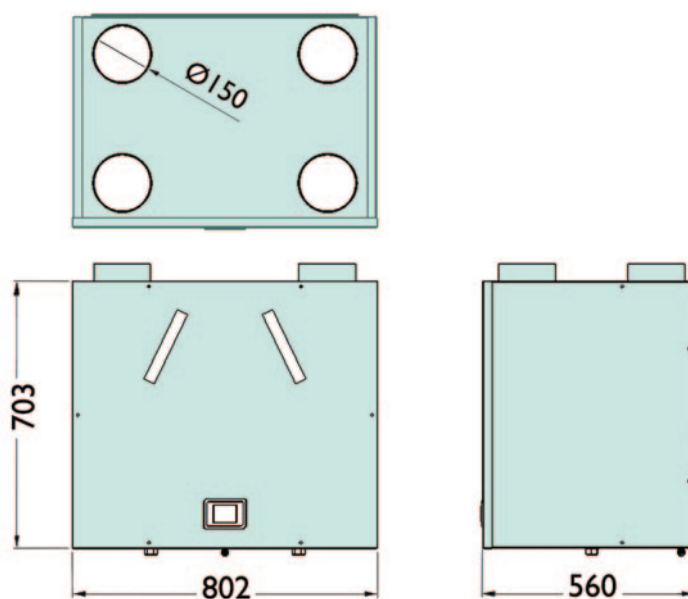
### TECHNICAL CHARACTERISTICS

Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	
Maxi Plus BY AT	238	186	135	84	35	355	184	85	32	8	2.81

### PERFORMANCE (curves are for guidance only)



### DIMENSIONS - mm



Weight - 42kg

**N.B** a clearance of 200 mm should be allowed on each side of the cabinet for access to the motors



## Horizontal MVHR

### EVOs, Mini and Studio

Vectaire's range of horizontal MVHRs include the EVOs, Mini and Studio. All these models provide optimum ventilation by continuously and quietly supplying fresh air. The energy efficient motors automatically remove excess moisture helping to maintain a healthy atmosphere.

They tackle condensation in areas between 60m<sup>2</sup> and 200m<sup>2</sup> making them ideal for all residential dwellings, whether houses, apartments or student accommodation with the most powerful models also being suitable for hotels, care homes, multi-occupancy establishments and other commercial properties.

These MVHRs meet the latest requirements of the Building Regulations for whole house ventilation systems with heat recovery (System 4).

#### How They Work

They incorporate two fans - one extracts stale, damp air from the wet rooms in a building, and the other replaces it with warmed fresh air from outside. The two airflows pass through a heat exchanger which recovers the heat from the outgoing air. This is filtered and tempered before being transferred to the incoming fresh air supply and ducted to the living areas. Thus the dwelling is permanently well ventilated and comfortable with good indoor air quality.

Vectaire MVHRs can recover up to 94% of the heat which might otherwise be lost.

The speed of the two fans can be adjusted independently with a choice of variable trickle, boost and purge speeds at installation

#### Summer Bypass

All models incorporate a summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.

#### Frost Protection

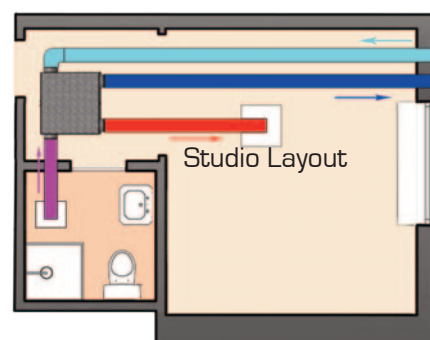
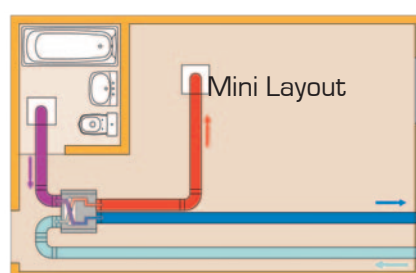
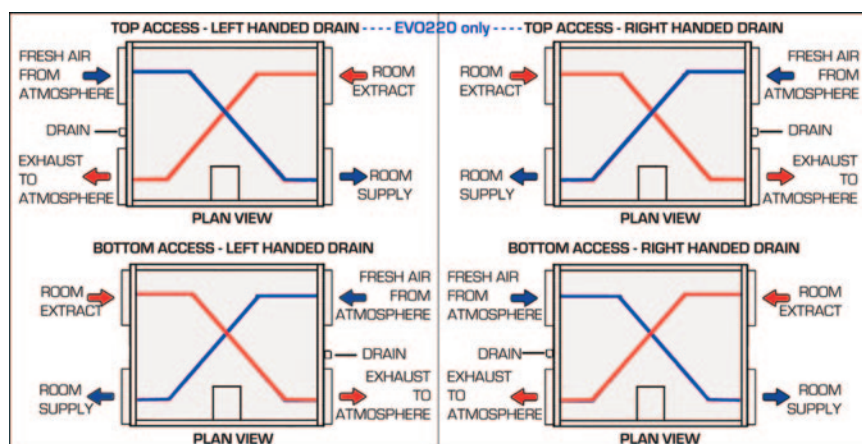
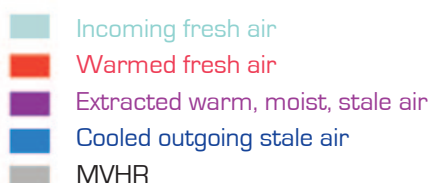
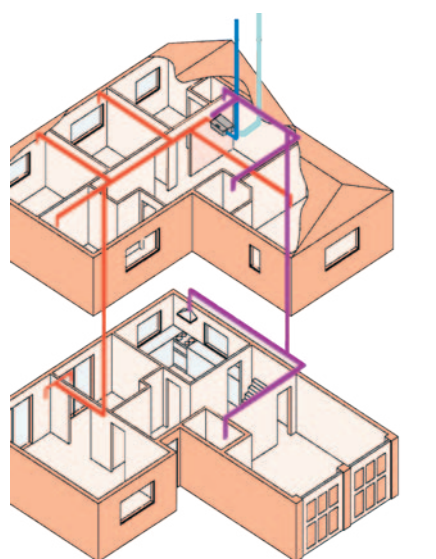
The integral frost-stat proportionally reduces intake motor speed as the temperature falls. This stops the ingress of cold air and consequently the removal of warm air making sure that the ambient remains comfortable. It is activated when the outside temperature is between +3°C and -8°C.

#### Humidity Control

Models with an integral humidity sensor (H) increase the speed of the motors proportionally as the humidity rises. It responds to increases in relative humidity ensuring a comfortable ambience throughout the day and night. The speed of the motors will fall back to normal levels once the excess humidity has been cleared making sure the minimum amount of energy is used.

#### LCD Control

All models can have a remote commissioning state-of-the-art touch screen LCD controller. It is one of the most technologically advanced available giving both installer and user a range of options to ensure that the MVHR is set to provide quiet and efficient ventilation at all times whilst recovering the heat that would otherwise be lost.





## MVHR LCD Controller



- For use with all Vectaire Heat Recovery Units
- Remote units can be mounted wherever is convenient to the user ( Model No: LCD-DISPLAY)
- (Option of Integral LCD screen with upright MVHRs Midis and Maxis)

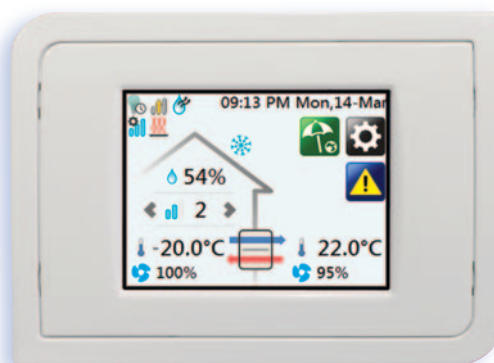
### LCD Touch Screen Functions

Display shows:


- > motor speeds - for both supply and extract fans. They can be set independently and are variable
- > inside and outside temperatures
- > status icons - show which functions are currently controlling fan speeds
- > date and time
- > relative humidity level
- > bypass status
- > error and service notifications
- > filter saturation level - shows when filters need replacing

### LCD Touch Screen Functions for USER

- > screen allows USER to set and control:
  - time
  - date
  - reset the filter saturation level after filters have been changed
  - holiday mode - sets system to minimum running, saving energy whilst maintaining air quality
  - operating speed
  - language



Commissioning Options - these options are ONLY for use by the installer, and can only be used with a Commissioning Access Code. If an incorrect passcode is entered 5 times consecutively the system will automatically lock for one hour. Access permissions are lost every time the option screen is exited.

	Setting Time: sets up 12 or 24hr format, DST (daylight saving time) and time zone.		Language Selection
	Setting Date: sets date format		Touch Screen Calibration
	Holiday Mode: sets system to minimum running when required (factory set to maintain air quality)		Commissioning Screen
	Boost Speed Time Delay		Night Time Boost Inhibitor
	Boost Speed Over-run Timer		Screen Cleaning: wipe screen safely without deleting settings
	Run Time Counter and Filter Saturation		Exit to main screen



## EVO250



### EVO250DC

- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 150m<sup>2</sup>
- up to 88% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for ceiling, loft or void installation
- low noise levels
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via remote LCD commissioning unit



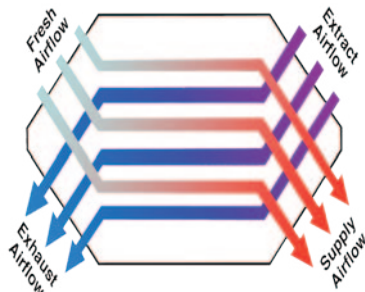
## EVO250

### GENERAL FEATURES

- up to 80 litre/sec at 50Pa - max 85 litre/sec capacity
- sfp down to 0.70 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-stat - proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C.
- run-time and power outage counters
- easy to install and maintain
- for ceiling, loft or void in-line installation
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- very low noise levels
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- compact low profile unit
- spigot size 204mm x 60mm
- casing from galvanised sheet steel
- thermo-acoustic lining
- pre-wired for easy electrical connection
- low energy EC brushless motor with single width, single inlet, direct drive, backward curved impellers
- operates in temperature up to 60°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger
- all models bottom access only



### MODELS AVAILABLE:

- EVO250DC/BABY - bottom access, bypass
- EVO250DC/BALBYH - bottom access, left hand, bypass, humidistat
- EVO250DC/BARBYH - bottom access, right hand, bypass, humidistat

### CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 90 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat - proportionally reduces intake motor speed as temperature falls
- automatic summer bypass

### CONTROL FEATURES - FACTORY SET

- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat - proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- relay for external pre-heater
- 3 speed selector switch
- optional remote purge cable - factory connected - adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option) - default setting is 50% of trickle speed
- run-time and power outage counters downloadable via QR code.

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB Listed

### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products



## EVO250

## TECHNICAL CHARACTERISTICS

Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	
EVO250	85	67	48	30	12	101	53	23	9	2	0.93

EVO250		Sound Power Levels, $L_w$ (dB) - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% (85 l/sec)	Extract	63	60	62	64	61	59	60	50	33.4
	Supply	68	65	67	69	66	64	65	55	
	Breakout	66	58	54	50	41	33	28	16	
80% (67 l/sec)	Extract	59	57	58	58	56	53	53	42	28.7
	Supply	64	62	63	63	61	58	58	47	
	Breakout	62	55	50	44	36	27	21	8	
60% (48 l/sec)	Extract	54	51	51	52	49	46	43	31	22.4
	Supply	59	56	56	57	54	51	48	36	
	Breakout	57	49	43	38	29	20	11	< 5	
40% (30 l/sec)	Extract	46	44	43	42	40	36	31	17	14.1
	Supply	51	49	48	47	45	41	36	22	
	Breakout	49	42	35	28	20	10	< 5	< 5	
20% (12 l/sec)	Extract	33	33	29	28	24	20	5	3	< 10.0
	Supply	38	38	34	33	29	25	10	8	
	Breakout	36	31	21	14	< 5	< 5	< 5	< 5	
The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit										
Extract and Supply values are in-duct sound power levels										

## RESULTS for SAP CALCULATIONS

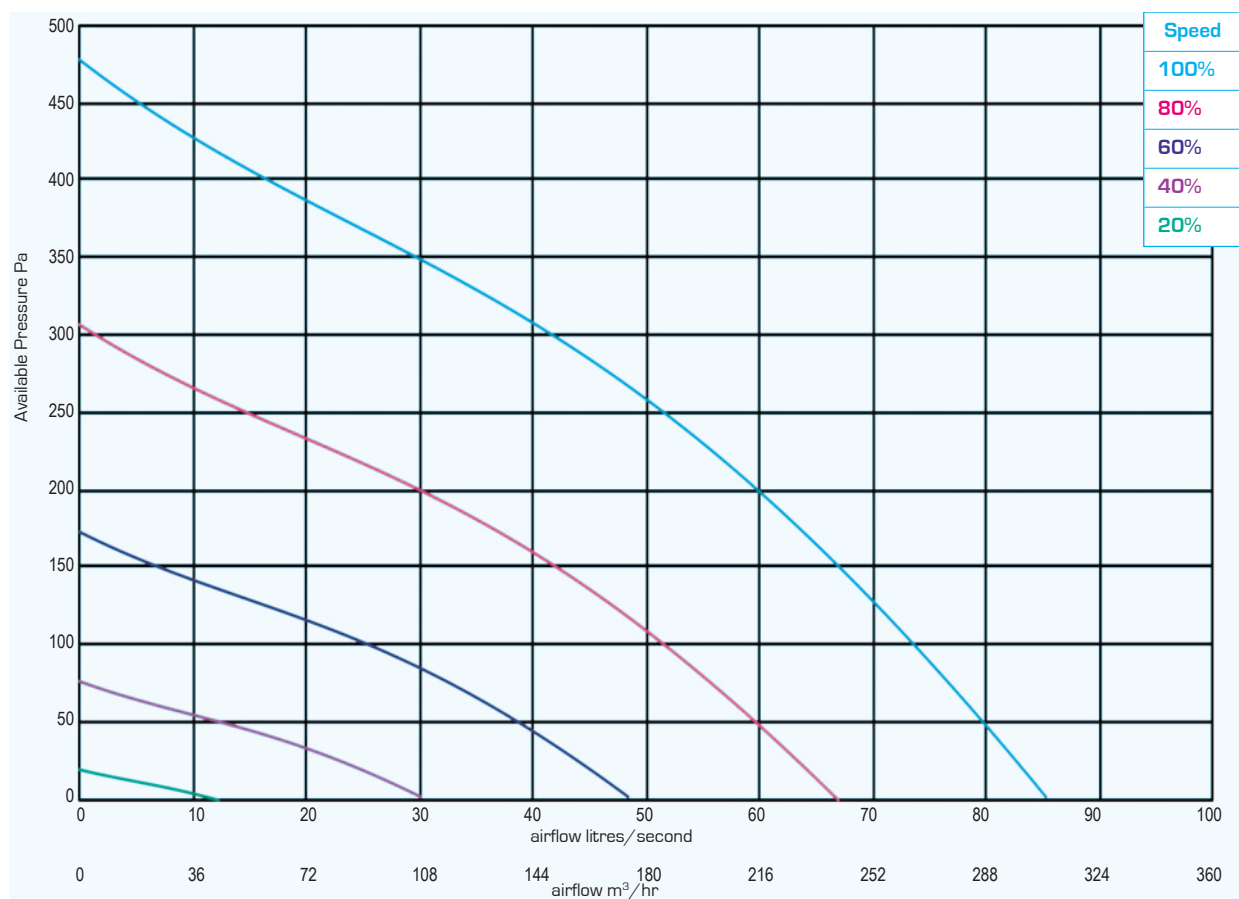
## ENERGY LEVEL PERFORMANCE - using rigid ducting only

	2009 Data		2012 Data		SAP 10 Data	
Exhaust Terminal Configuration	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.70	88%	0.75	87%	0.75	87%
Kitchen + 2 additional wet rooms	0.72	87%	0.89	86%	0.89	86%
Kitchen + 3 additional wet rooms	0.82	87%	1.00	85%	1.00	85%
Kitchen + 4 additional wet rooms	0.99	86%	1.37	84%	1.37	84%
Kitchen + 5 additional wet rooms	1.01	85%				
Kitchen + 6 additional wet rooms	1.35	84%				
Figures at minimum flow rate conditions						

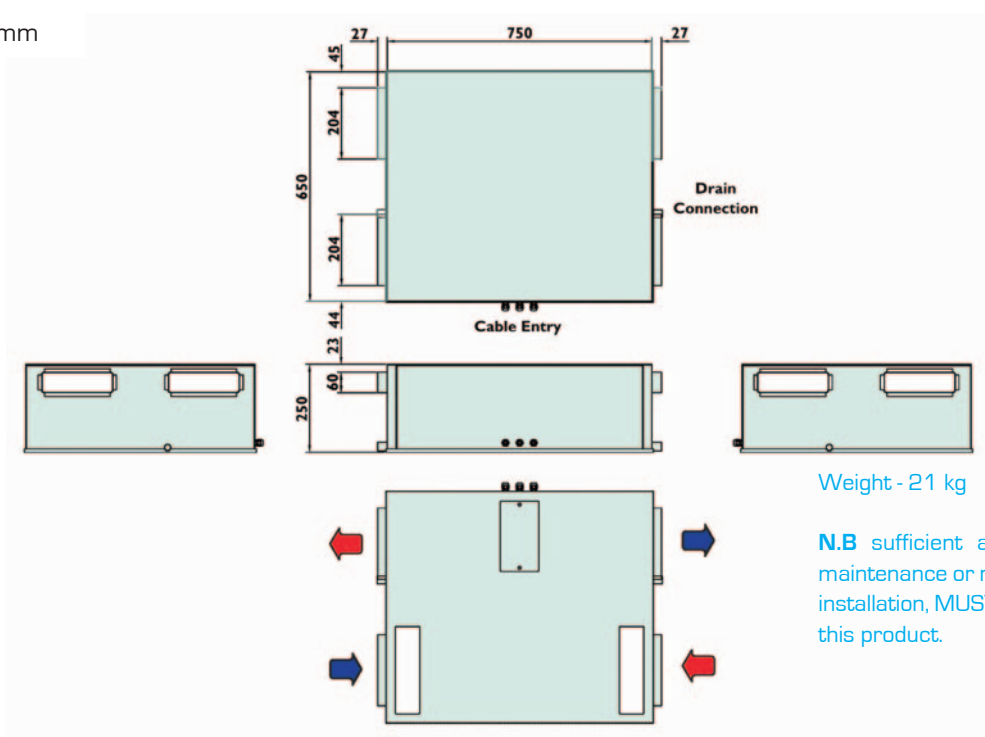


## EVO250

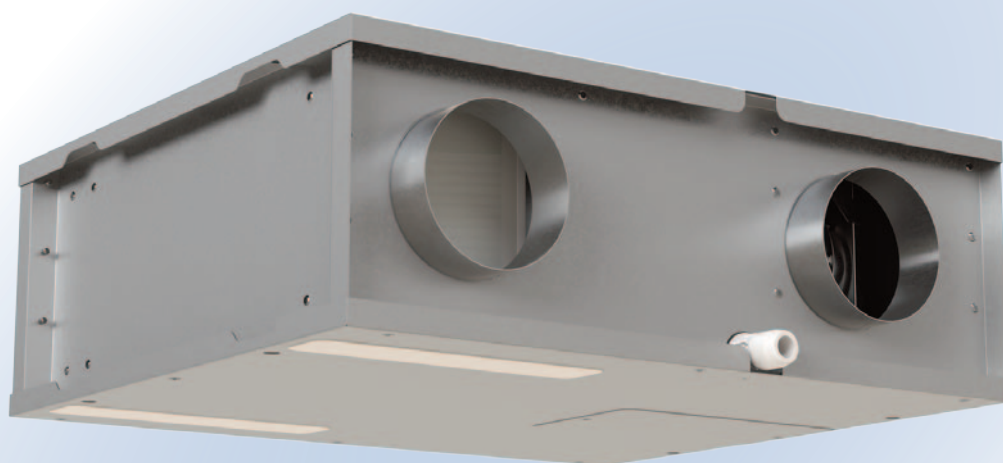
### PERFORMANCE (curves are for guidance only)



### DIMENSIONS - mm



## EVO220



### EVO220DC

- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties
- up to 87% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for ceiling, loft or void installation
- low noise levels
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via remote LCD commissioning unit





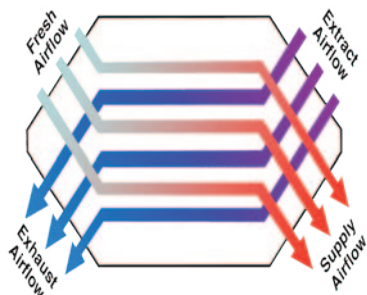
## EVO220

### GENERAL FEATURES

- up to 70 litre/sec at 50Pa - max 75 litre/sec capacity
- sfp down to 0.55 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-protection - proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C.
- run-time and power outage counters
- easy to install and maintain
- for ceiling, loft or void in-line installation
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- very low noise levels
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- compact low profile unit
- casing from galvanised sheet steel
- thermo-acoustic lining
- pre-wired for easy electrical connection
- low energy EC brushless motor with single width, single inlet, direct drive, backward curved impellers
- operates in temperature up to 60°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger



### MODELS AVAILABLE:

- EVO220DC/BALBY - bottom access, left drain, bypass
- EVO220DC/BARBY - bottom access, right drain, bypass
- EVO220DC/TALBY - top access, left drain, bypass
- EVO220DC/TARBY - top access, right drain, bypass
- Humidistat models available

### CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 90 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat - proportionally reduces intake motor speed as temperature falls
- automatic summer bypass

### CONTROL FEATURES - FACTORY SET

- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat - proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- relay for external pre-heater
- 3 speed selector switch
- optional remote purge cable - factory connected - adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option) - default setting is 50% of trickle speed
- run-time and power outage counters downloadable via QR code.

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked

### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products



## EVO220

## TECHNICAL CHARACTERISTICS

Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	
EVO220DC	75	58	42	26	10	96	52	26	11	5	0.93

EVO220DC		Sound Power Levels, $L_w$ (dB) - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% (75 l/sec)	Extract	63	62	63	64	61	59	58	49	34.0
	Supply	68	67	68	69	66	64	63	54	
	Breakout	66	60	55	50	41	33	26	21	
80% (58 l/sec)	Extract	59	58	58	58	56	53	51	41	28.9
	Supply	64	63	63	63	61	58	56	46	
	Breakout	62	56	50	44	36	27	19	15	
60% (42 l/sec)	Extract	54	53	52	52	49	47	43	32	23.2
	Supply	59	58	57	57	54	52	48	37	
	Breakout	57	51	44	38	29	21	11	9	
40% (26 l/sec)	Extract	47	47	45	44	41	38	32	19	16.2
	Supply	52	52	50	49	46	43	37	24	
	Breakout	50	45	37	30	21	12	7	6	
20% (10 l/sec)	Extract	37	40	36	35	29	25	18	11	7.9
	Supply	42	45	41	40	34	30	23	16	
	Breakout	40	38	28	21	9	7	6	5	
The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit										
Extract and Supply values are in-duct sound power levels										

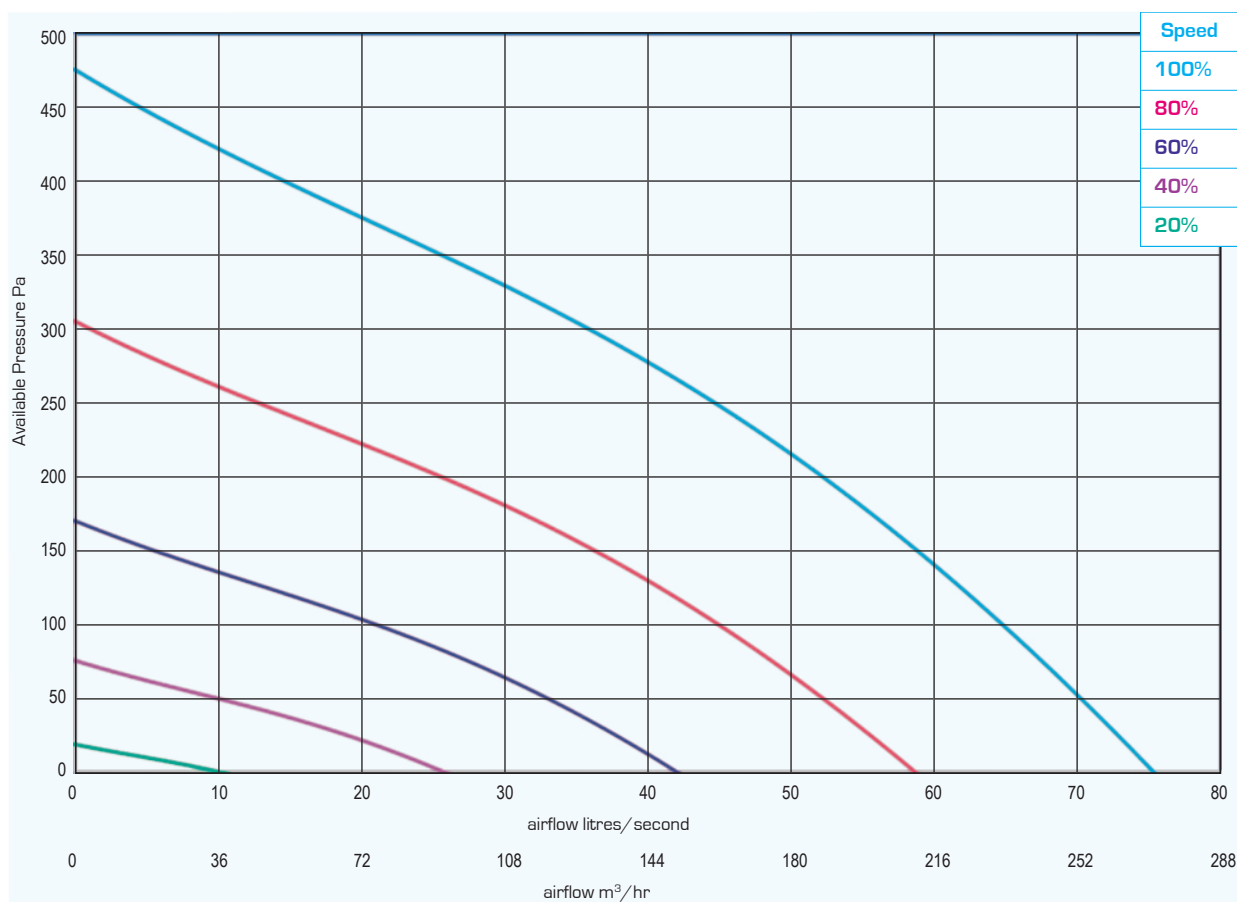
## RESULTS for SAP CALCULATIONS

ENERGY LEVEL PERFORMANCE - using rigid ducting only

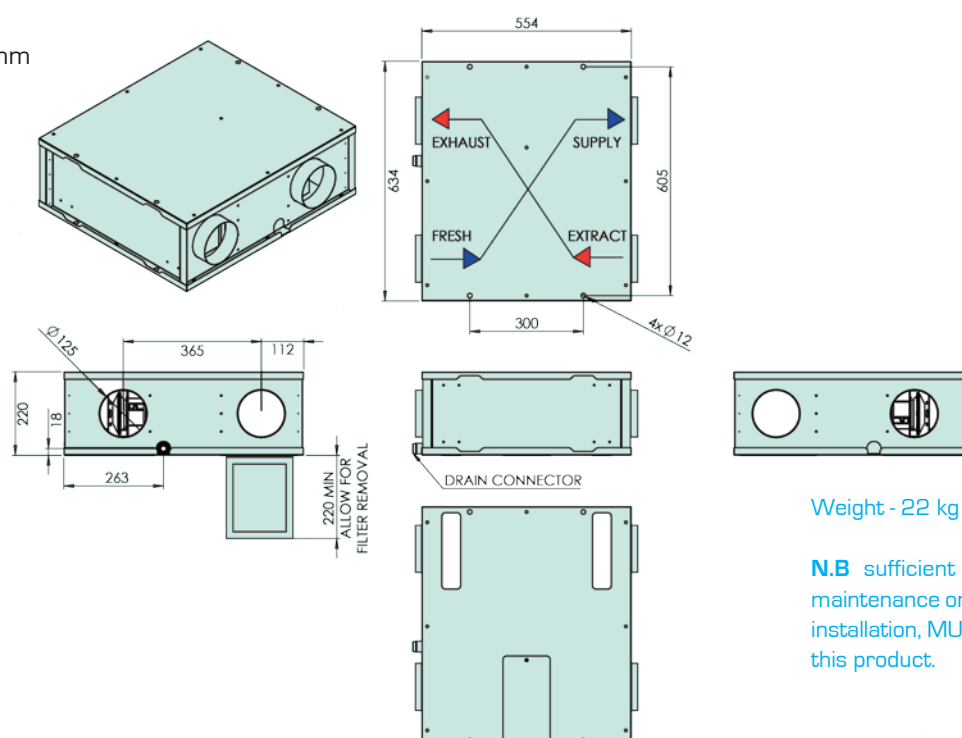
Exhaust Terminal Configuration	2012 Data		
	Airflow (l/sec)	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency
Kitchen + 1 additional wet room	21	0.55	87%
Kitchen + 2 additional wet rooms	29	0.69	84%
Kitchen + 3 additional wet rooms	37	0.88	81%
Kitchen + 4 additional wet rooms	45	1.16	79%
Kitchen + 5 additional wet rooms	53	1.48	77%
Figures at minimum flow rate conditions - tested by our own laboratory			

## EVO220

### PERFORMANCE (curves are for guidance only)



### DIMENSIONS - mm

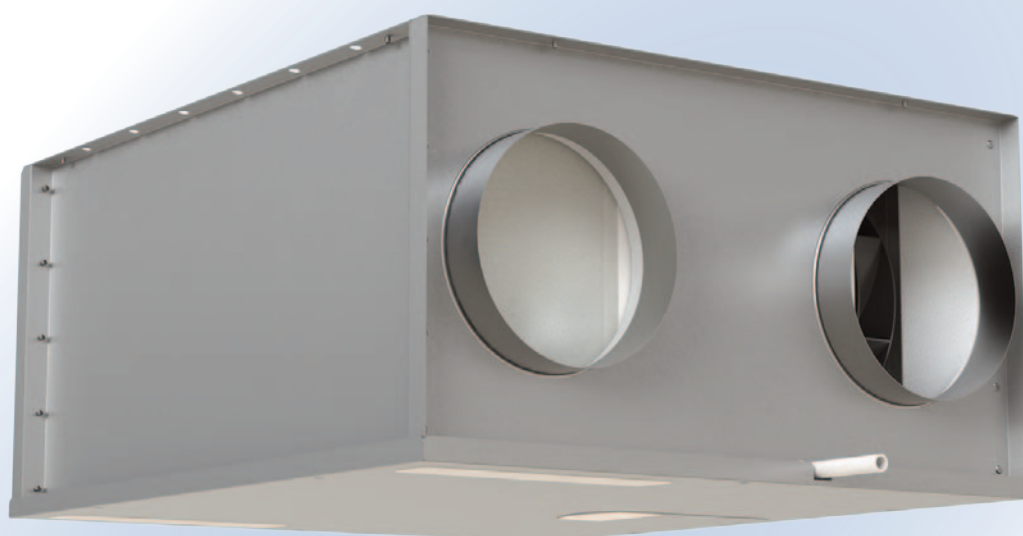


Weight - 22 kg

**N.B** sufficient access for safe maintenance or removal following installation, **MUST** be provided for this product.



## EVO350



### EVO350

- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 200m<sup>2</sup>
- up to 88% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for ceiling, loft or void installation
- low noise levels
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via remote LCD commissioning unit



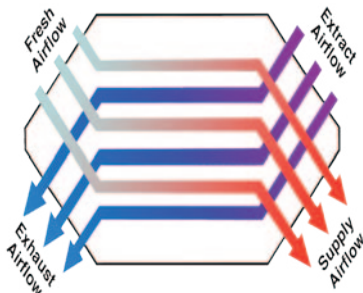
## EVO350

### GENERAL FEATURES

- up to 107 litre/sec at 50Pa - max 116 litre/sec capacity
- sfp down to 0.65 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-stat - proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C..
- run-time and power outage counters
- easy to install and maintain
- for ceiling, loft or void in-line installation
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- very low noise levels
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- compact low profile unit
- casing from galvanised sheet steel
- thermo-acoustic lining
- pre-wired for easy electrical connection
- low energy EC brushless motor with single width, single inlet, direct drive, backward curved impellers
- operates in temperature up to 60°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger
- all models bottom access only



### MODELS AVAILABLE:

- EVO350DC/BABY - bottom access, bypass
- EVO350DC/BALBYH - bottom access, left drain, bypass, humidistat
- EVO350DC/BARBYH - bottom access, right drain, bypass, humidistat

### CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 30 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat - proportionally reduces intake motor speed as temperature falls
- automatic summer bypass

### CONTROL FEATURES - FACTORY SET

- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat - proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- relay for external pre-heater
- 3 speed selector switch
- optional remote purge cable - factory connected - adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option) - default setting is 50% of trickle speed
- run-time and power outage counters downloadable via QR code.

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB Listed

### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowl. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products



## EVO350

## TECHNICAL CHARACTERISTICS

Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	
EVO350	116	90	64	38	14	157	83	39	15	4	1.41

EVO350		Sound Power Levels, $L_w$ (dB) - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% (116 l/sec)	Extract	63	65	64	63	60	57	54	49	34.6
	Supply	68	70	69	68	65	62	59	54	
	Breakout	66	63	56	49	40	31	22	15	
80% (90 l/sec)	Extract	59	61	60	58	54	52	48	41	30.3
	Supply	64	66	65	63	59	57	53	46	
	Breakout	62	59	52	44	34	26	16	9	
60% (64 l/sec)	Extract	53	55	54	52	48	45	40	32	24.3
	Supply	58	60	59	57	53	50	45	37	
	Breakout	56	53	46	38	28	19	8	5	
40% (38 l/sec)	Extract	46	48	46	43	39	35	29	17	16.5
	Supply	51	53	51	48	44	40	34	22	
	Breakout	49	46	38	29	19	9	7	< 5	
20% (14 l/sec)	Extract	35	36	32	28	24	20	7	5	<10
	Supply	40	41	37	33	29	25	12	10	
	Breakout	38	34	24	14	8	6	< 5	< 5	
The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit										
Extract and Supply values are in-duct sound power levels										

## RESULTS for SAP CALCULATIONS

## ENERGY LEVEL PERFORMANCE - using rigid ducting only

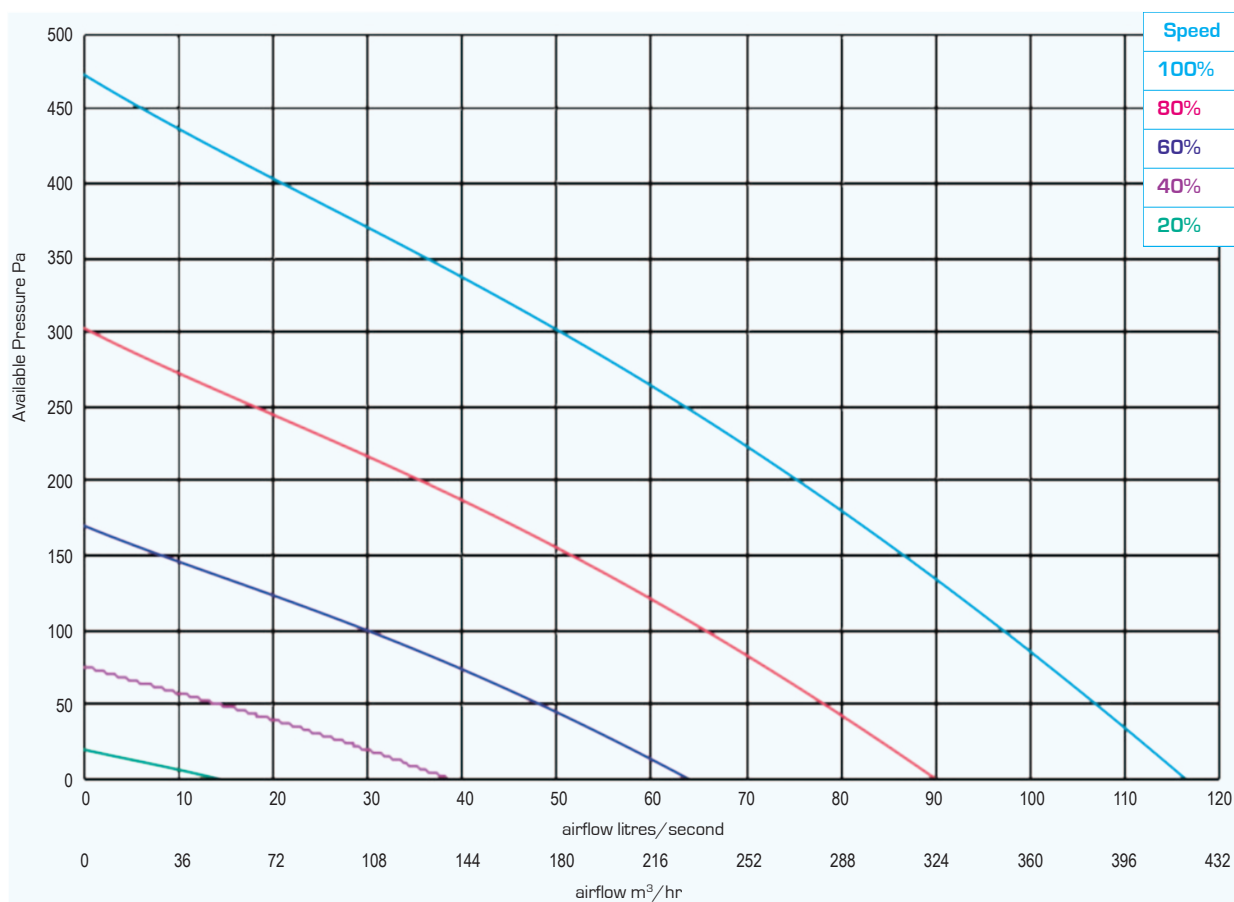
	2009 Data		2012 Data		SAP 10 Data	
Exhaust Terminal Configuration	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.72	88%	0.72	87%	0.72	87%
Kitchen + 2 additional wet rooms	0.65	87%	0.75	85%	0.75	85%
Kitchen + 3 additional wet rooms	0.67	85%	0.85	84%	0.85	84%
Kitchen + 4 additional wet rooms	0.76	84%	1.04	83%	1.04	83%
Kitchen + 5 additional wet rooms	0.87	83%	1.23	82%	1.23	82%
Kitchen + 6 additional wet rooms	1.01	83%				
Kitchen +7 additional wet rooms	1.18	82%				
Figures at minimum flow rate conditions						



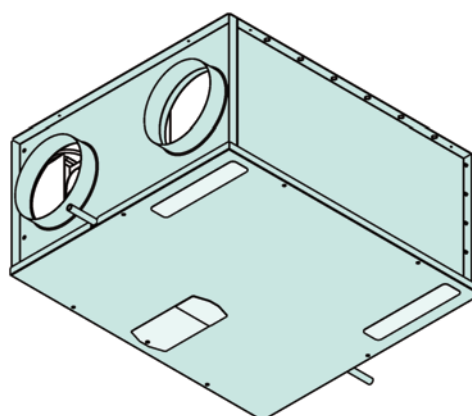
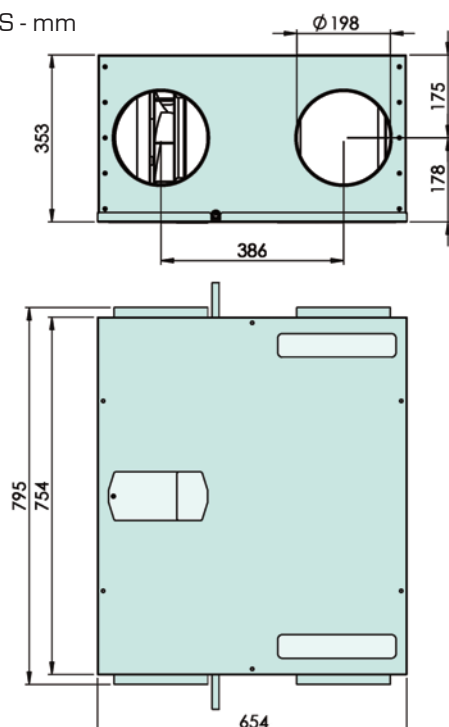


## EVO350

### PERFORMANCE (curves are for guidance only)



### DIMENSIONS - mm



Weight - 25 kg

**N.B** sufficient access for safe maintenance or removal following installation, **MUST** be provided for this product.



## Studio



### Studio

- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 100m<sup>2</sup>
- up to 80% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for ceiling, loft or void installation
- low noise levels
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via remote LCD commissioning unit
- \* non-bypass models available

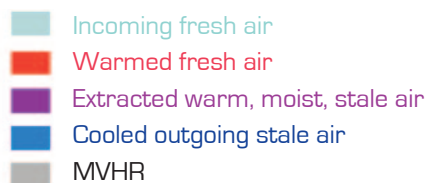
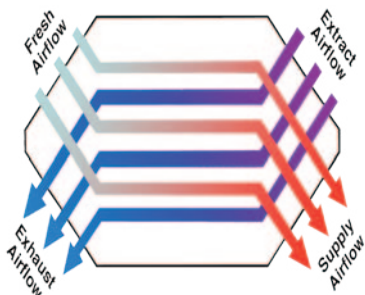
## Studio

### GENERAL FEATURES

- for 1 or 2 bedroom apartments, hotel rooms, student accommodation, extra care facilities, multi-occupancy establishments etc
- Up to 55 litre/sec at 50Pa - max 59 litre/sec capacity
- sfp down to 0.87 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-stat - proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C..
- run-time and power outage counters
- easy to install and maintain
- for ceiling, loft or void in-line installation
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- very low noise levels
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- compact low profile unit with galvanised sheet steel casing
- thermo-acoustic lining
- pre-wired for easy electrical connection
- low energy EC brushless motor with single width, single inlet, direct drive, backward curved impellers
- operates in temperature up to 50°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger
- all models bottom access only with right or left drain



### MODELS AVAILABLE:

- Studio LB - left drain, bypass
- Studio RB - right drain, bypass
- Studio LBH - left drain, bypass, humidistat
- Studio RBH - right drain, bypass, humidistat
- Studio L - left drain
- Studio R - right drain
- Studio LH - left drain, humidistat
- Studio RH - right drain, humidistat

### CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 90 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat - proportionally reduces intake motor speed as temperature falls
- automatic summer bypass

### CONTROL FEATURES - FACTORY SET

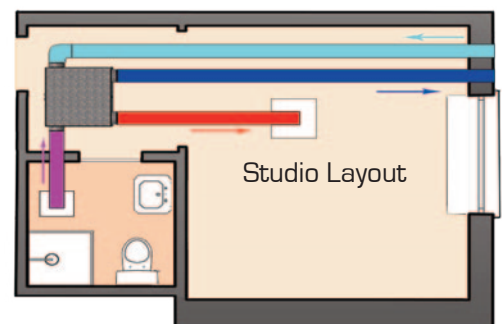
- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat - proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- relay for external pre-heater
- 3 speed selector switch
- optional remote purge cable - factory connected - adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option) - default setting is 50% of trickle speed
- run-time and power outage counters downloadable via QR code.

### COMPLIES WITH

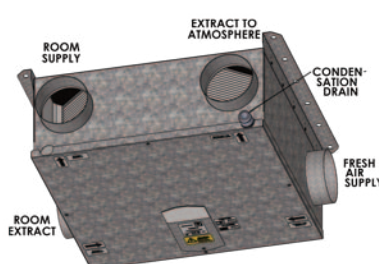
- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB Listed

### TYPICAL SPECIFICATION AVAILABLE AT

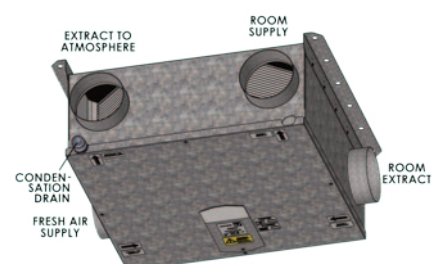
<http://www.vectaire.co.uk/downloads>



### STUDIO - OPTION 1 (RIGHT HAND DRAIN)



### STUDIO - OPTION 2 (LEFT HAND DRAIN)





# Studio

## TECHNICAL CHARACTERISTICS

Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	
Studio	59	45	30	17	6	100	57	25	10	2	0.93

Studio		Sound Power Levels, $L_w$ [dB] - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% (59 l/sec)	Extract	63	65	66	66	62	59	57	49	36.3
	Supply	68	70	71	71	67	64	62	54	
	Breakout	66	63	58	52	42	33	25	15	
80% (45 l/sec)	Extract	59	62	61	61	57	54	50	42	31.8
	Supply	64	67	66	66	62	59	55	47	
	Breakout	62	60	53	47	37	28	18	8	
60% (30 l/sec)	Extract	53	57	55	55	50	47	41	32	26.1
	Supply	58	62	60	60	55	52	46	37	
	Breakout	56	55	47	41	30	24	9	< 5	
40% (17 l/sec)	Extract	46	50	47	47	41	37	30	18	18.4
	Supply	51	55	52	52	46	42	35	23	
	Breakout	49	48	39	33	21	11	< 5	< 5	
20% 6 l/sec)	Extract	34	38	33	33	27	22	12	3	<10.0
	Supply	39	43	38	38	32	27	17	8	
	Breakout	37	36	25	19	7	< 5	< 5	< 5	
The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit										
Extract and Supply values are in-duct sound power levels										

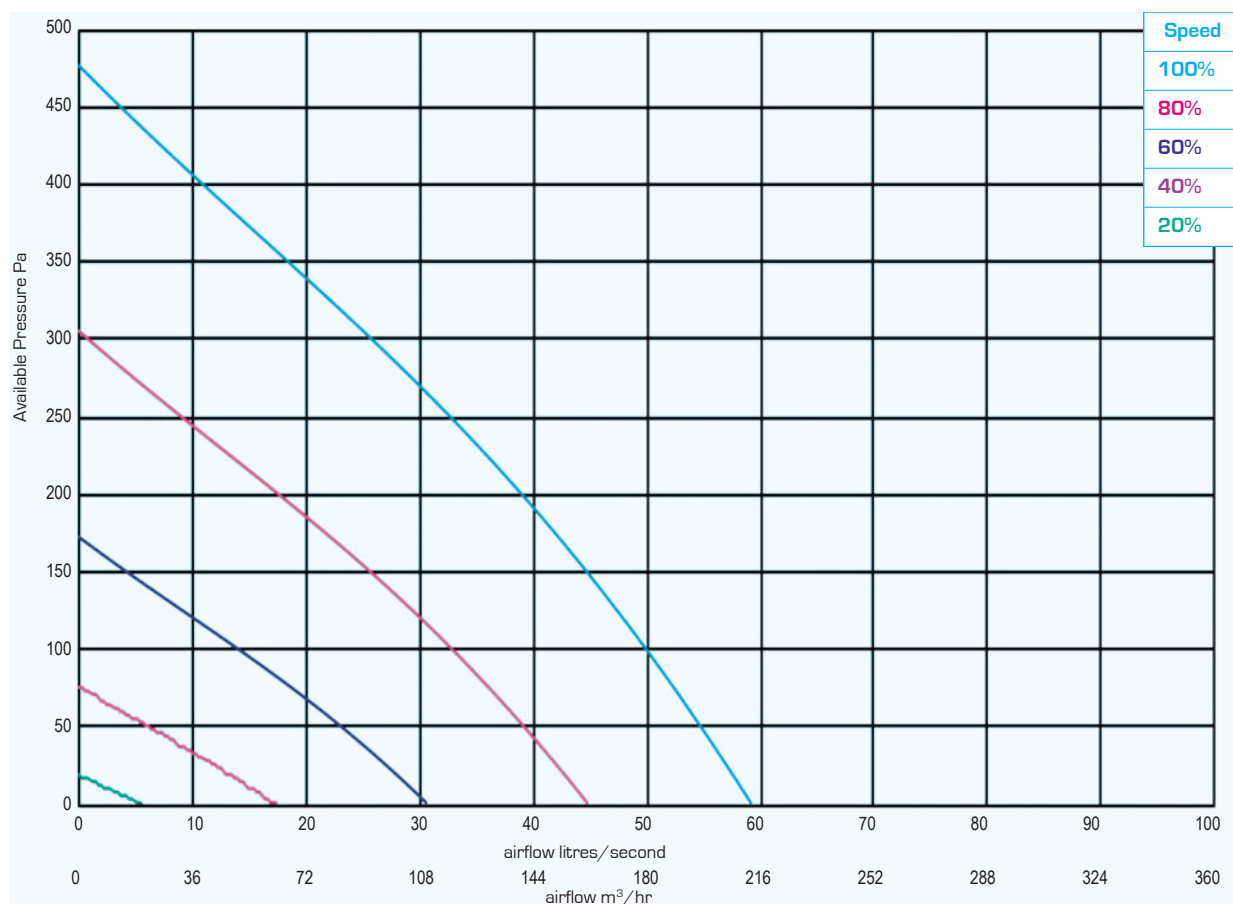
## RESULTS for SAP CALCULATIONS

### ENERGY LEVEL PERFORMANCE - using rigid ducting only

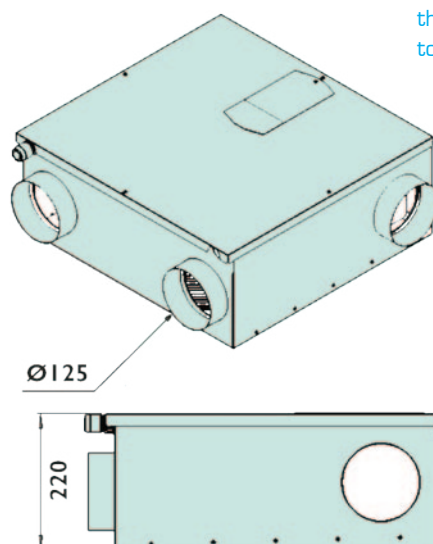
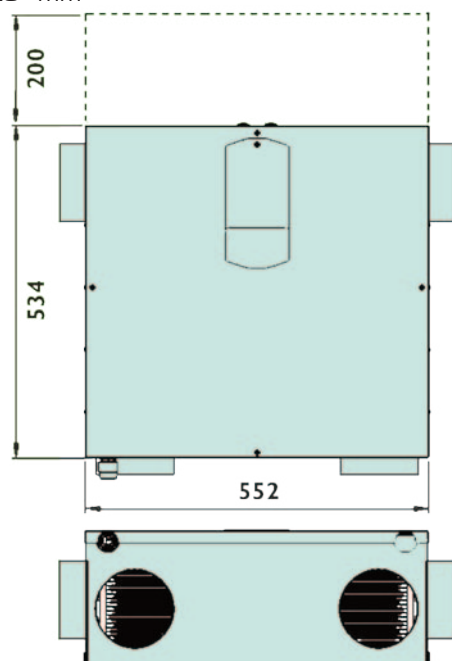
	2009 Data		2012 Data		SAP 10 Data	
Exhaust Terminal Configuration	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.87	80%	0.93	79%	0.93	79%
Kitchen + 2 additional wet rooms	0.89	79%	1.09	78%	1.09	78%
Kitchen + 3 additional wet rooms	1.02	78%	1.36	77%	1.36	77%
Kitchen + 4 additional wet rooms	1.21	77%				
Kitchen + 5 additional wet rooms	1.43	77%				
Figures at minimum flow rate conditions						

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.

### PERFORMANCE (curves are for guidance only)



### DIMENSIONS - mm

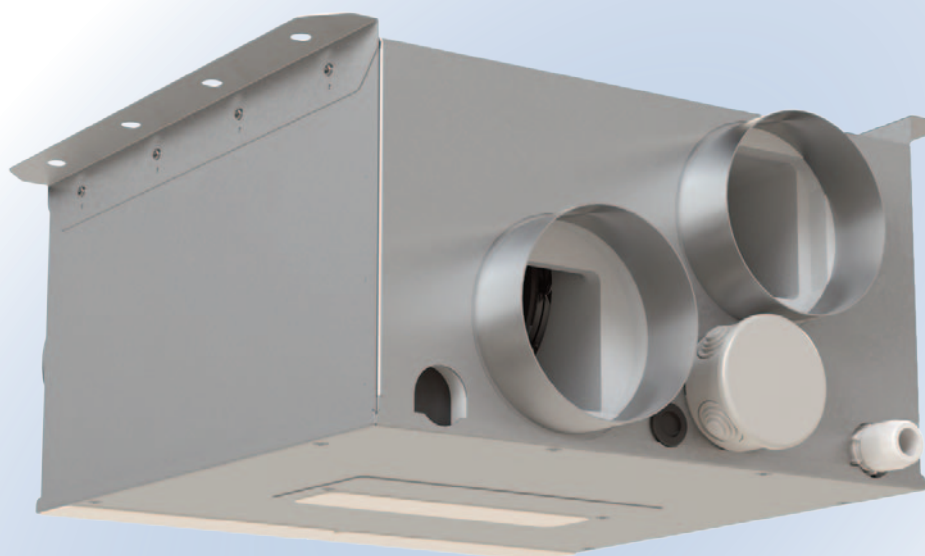


Weight - 17 kg

**N.B** a clearance of at least 200 mm should be allowed at the back of the unit for access to the filters,



## Mini



### Mini

- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 70m<sup>2</sup>
- up to 83% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for ceiling, loft or void installation
- low noise levels
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via remote LCD commissioning unit
- \* non-bypass models available



## Mini

### GENERAL FEATURES

- for 1 or 2 bedroom apartments, hotel rooms, student accommodation, extra care facilities, multi-occupancy establishments etc
- Up to 30 litre/sec at 50Pa - max 34 litre/sec capacity
- sfp down to 1.11 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-stat - proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C..
- run-time and power outage counters
- easy to install and maintain
- for ceiling, loft or void in-line installation
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- very low noise levels
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- compact low profile unit with galvanised sheet steel casing
- thermo-acoustic lining
- pre-wired for easy electrical connection
- low energy EC brushless motor with single width, single inlet, direct drive, backward curved impellers
- operates in temperature up to 60°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger
- all models bottom access only with right or left drain. Allow clearance on discharge side of unit for access to wiring connections. Sufficient allowance also required to remove lid

### CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 90 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat - proportionally reduces intake motor speed as temperature falls
- automatic summer bypass (except non-bypass models)

### CONTROL FEATURES - FACTORY SET

- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat - proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- relay for external pre-heater
- 3 speed selector switch
- optional remote purge cable - factory connected - adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option) - default setting is 50% of trickle speed
- run-time and power outage counters downloadable via QR code.

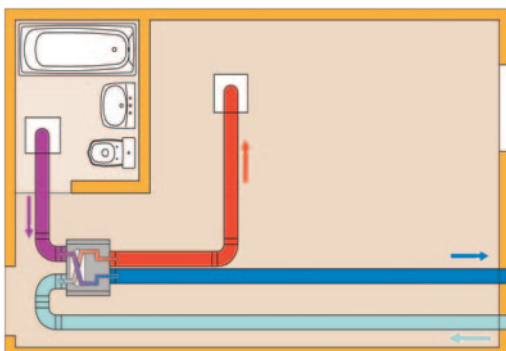
### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB listed

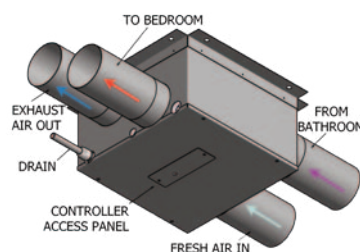
### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

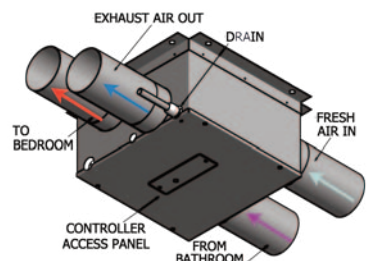
- Incoming fresh air
- Warmed fresh air
- Extracted warm, moist, stale air
- Cooled outgoing stale air
- WHHR Mini DC



**WHHR MINI DC OPTION 2  
(LEFT HAND DRAIN)**



**WHHR MINI DC OPTION 1  
(RIGHT HAND DRAIN)**



### MODELS AVAILABLE:

- WHHR Mini LB - left drain, bypass
- WHHR Mini RB - right drain, bypass
- WHHR Mini LBH - left drain, bypass, humidistat,
- WHHR Mini RBH - right drain, bypass, humidistat
- WHHR Mini L - left drain
- WHHR Mini R - right drain
- WHHR Mini LH - left drain, humidistat
- WHHR Mini RH - right drain, humidistat

also available with 100mm spigot



## Mini

## TECHNICAL CHARACTERISTICS

Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	
Mini	34	24	15	7	2	83	42	19	7	2	0.93

Mini		Sound Power Levels, $L_w$ (dB) - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% [34 l/sec]	Extract	63	69	69	69	63	59	56	50	39.3
	Supply	68	74	74	74	68	64	61	55	
	Breakout	66	67	61	55	43	33	24	16	
80% [24 l/sec]	Extract	59	65	64	64	58	54	50	43	34.6
	Supply	64	70	69	69	63	59	55	48	
	Breakout	62	63	56	50	38	28	18	9	
60% [15 l/sec]	Extract	54	59	58	58	51	47	42	33	28.6
	Supply	59	64	63	63	56	52	47	38	
	Breakout	57	57	50	44	31	21	10	<5	
40% [7 l/sec]	Extract	47	52	50	49	43	39	32	21	20.7
	Supply	52	57	55	54	48	44	37	26	
	Breakout	50	50	42	35	23	13	<5	<5	
20% [2 l/sec]	Extract	36	41	37	36	29	24	15	<5	<10.0
	Supply	41	46	42	41	34	29	20	7	
	Breakout	39	39	29	22	9	5	<5	<5	
The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit										
Extract and Supply values are in-duct sound power levels										

## RESULTS for SAP CALCULATIONS

ENERGY LEVEL PERFORMANCE - using rigid ducting only

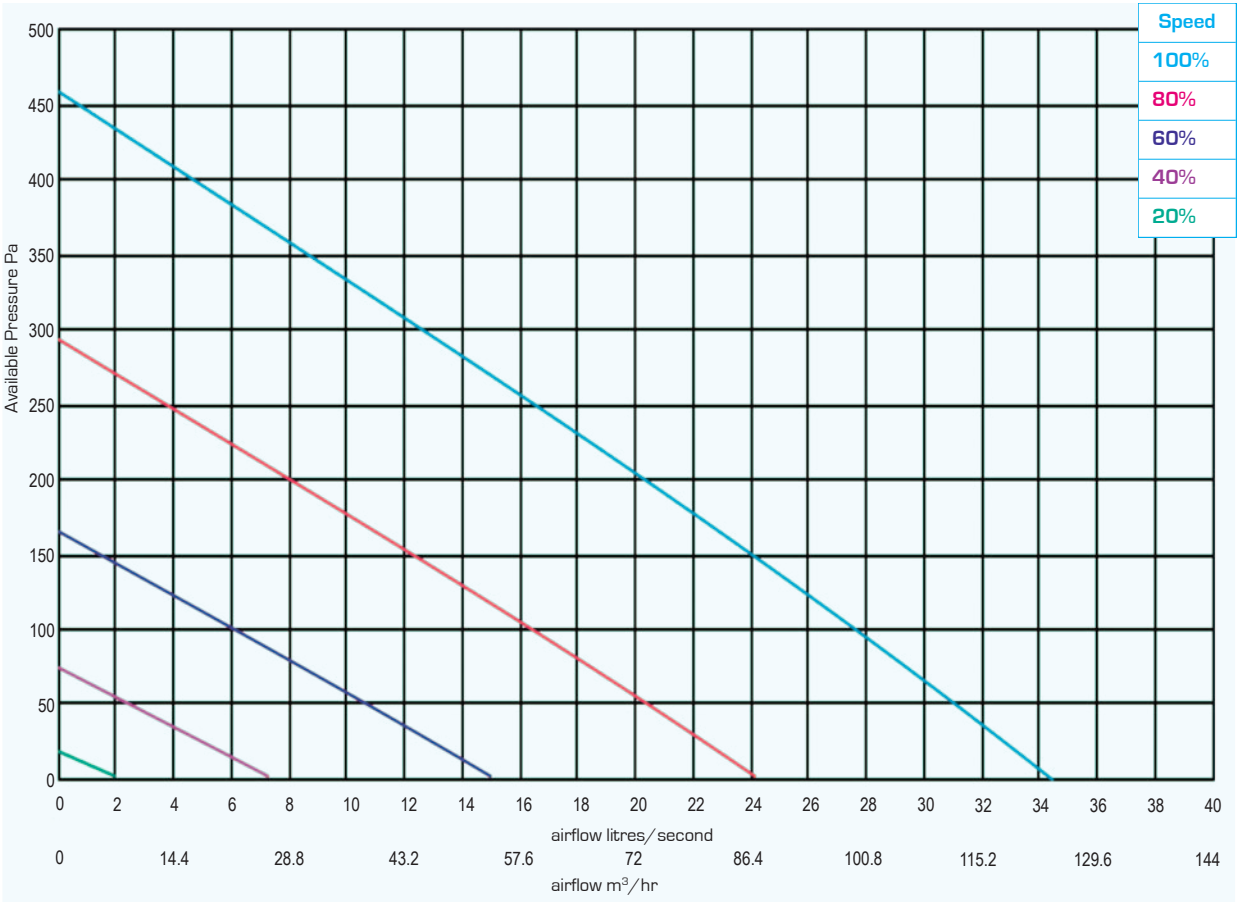
Exhaust Terminal Configuration	2009 Data		2012 Data		SAP 10 Data	
	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency
Kitchen + 1 additional wet room	1.11	83%	1.40	82%	1.40	82%
Kitchen + 2 additional wet rooms	1.40	82%				
Figures at minimum flow rate conditions						

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.



Mini

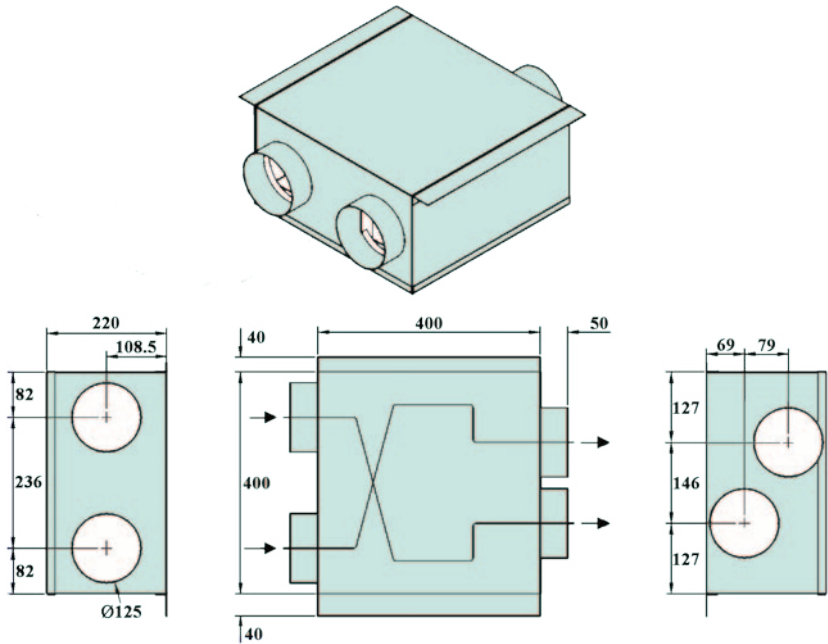
PERFORMANCE (curves are for guidance only)



DIMENSIONS - mm

Weight - 9 kg

**N.B** sufficient access for safe maintenance or removal following installation, **MUST** be provided for this product.



# Purge-Box 100

# Purge-Box 200



## Purge-Box

- Vectaire Purge-Box units are designed to provide purge ventilation as required by Building Regulations
- they are an efficient, low energy solution to creating a healthier ambient by removing humidity, poor quality air, and stale odours **QUICKLY** in residential dwellings
- Vectaire Purge-Box units can be used as stand alone units or in conjunction with a Vectaire MVHR or MEV system
- available in two capacities
- the two sizes of Vectaire Purge-Box will help tackle overheating issues (Building Regulations, Part O)
- variable adjustment - trickle, boost and purge speeds set at installation
- for ceiling, loft or void mounting
- Vectaire Purge Boxes are easy to install using 220mm x 90mm ducting
- low profile units
- require only one discharge grille
- low sound levels
- low running costs
- manufactured in UK to ISO 9001:2015 and 14001:2015



# Purge-Box 100

# Purge-Box 200

### GENERAL FEATURES

- **Purge-Box 100** - up to 188 l/s at 50Pa - max 200 l/s capacity - sfp down to 0.20 W/l/s
- **Purge-Box 200** - up to 233 l/s at 50Pa - max 251 l/s capacity - sfp down to 0.27 W/l/s
- powerful performance levels for rapid purge ventilation
- easy and economical to install and maintain
- for ceiling, loft or void in-line installation
- can be angled horizontally or vertically
- easy connection to 220mm x 90mm flat ducting
- variable boost speeds can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- very low sound levels
- low running costs
- 3 year warranty - 1 year parts and labour, 2 years parts only

### TECHNICAL FEATURES

- compact, low profile units
- casing from galvanised sheet steel
- pre-wired for easy electrical connection
- service and maintenance panel easily accessible from underneath
- low energy, high efficiency EC external rotor motor with sealed for life bearings and dynamically balanced backward curved impellers
- operates in temperature up to 60°C
- complete with mounting bracket
- IPX4 rated

### CONTROL FEATURES

- 3 integrated, fully adjustable speeds
- integral, adjustable over-run timer - adjustable from 0-30 minutes set at installation

### COMPLIES WITH

- Building Regulations
- The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012
- Electromagnetic Compatibility Regulations 2016
- Electrical Equipment (Safety) Regulations 2016
- manufactured in UK to ISO 9001:2015 and 14001:2015
- UKCA/CE marked

### MODELS AVAILABLE:

- **PURGE-BOX100** - max 200 l/s capacity
- **PURGE-BOX 200** - max 251 l/s capacity

Vectaire Ltd can supply all ancillaries for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.

# Purge-Box 100

# Purge-Box 200

TECHNICAL CHARACTERISTICS									
Model	Airflow l/sec				Total Power - Watts				Operating Current [Amps]
	100%	80%	60%	40%	100%	80%	60%	40%	
PURGE-BOX100	200	148	111	74	99	62	29	13	0.74
PURGE-BOX200	251	188	141	94	84	31	21	15	0.70

PURGE-BOX 100		Sound Power Levels, $L_w$ [dB] - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% (200 l/sec)	Extract	58	64	65	61	59	57	53	57	33.2
	Supply	64	69	70	66	65	63	58	63	
	Breakout	62	62	56	45	37	29	18	20	
80% (148 l/sec)	Extract	53	58	58	54	53	51	44	46	27.0
	Supply	58	64	64	59	58	56	50	52	
	Breakout	56	56	50	39	31	22	9	9	
60% (111 l/sec)	Extract	50	54	52	47	46	43	35	35	21.5
	Supply	55	59	57	53	52	48	41	41	
	Breakout	53	52	43	32	24	21	6	6	
40% (74 l/sec)	Extract	44	46	44	40	39	34	26	13	13.9
	Supply	50	52	50	45	44	40	32	19	
	Breakout	47	44	35	24	17	5	5	5	

The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit

PURGE-BOX 200		Sound Power Levels, $L_w$ [dB] - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% (251 l/sec)	Extract	58	60	65	63	64	62	58	58	34.4
	Supply	63	65	70	68	69	67	63	63	
	Breakout	61	58	57	49	44	36	26	24	
80% (188 l/sec)	Extract	53	55	59	56	57	55	50	48	28.2
	Supply	58	60	64	61	62	60	55	53	
	Breakout	56	53	51	42	37	29	18	14	
60% (141 l/sec)	Extract	49	50	52	49	50	48	42	39	21.6
	Supply	54	55	57	54	55	53	47	44	
	Breakout	52	48	44	35	30	22	10	5	
40% (94 l/sec)	Extract	43	42	43	40	41	38	32	25	13.0
	Supply	48	47	48	45	46	43	37	30	
	Breakout	46	40	35	26	21	12	<5	<5	

The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit



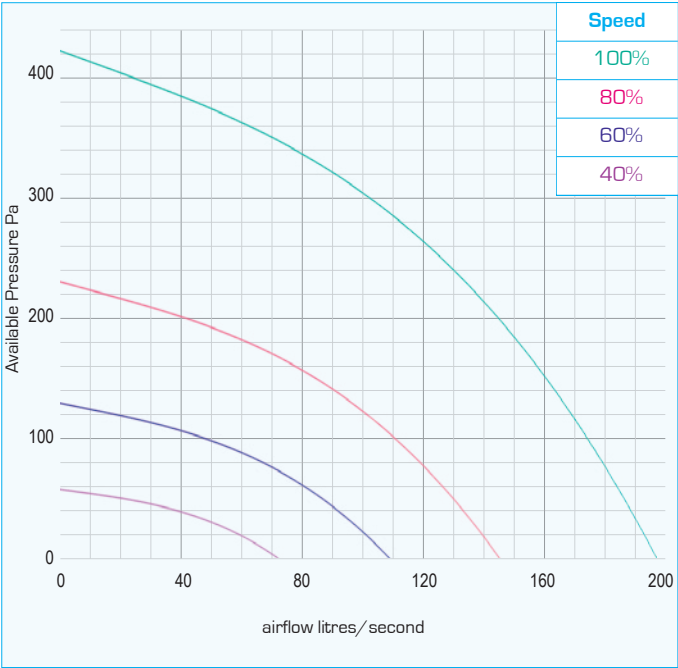


# Purge-Box 100

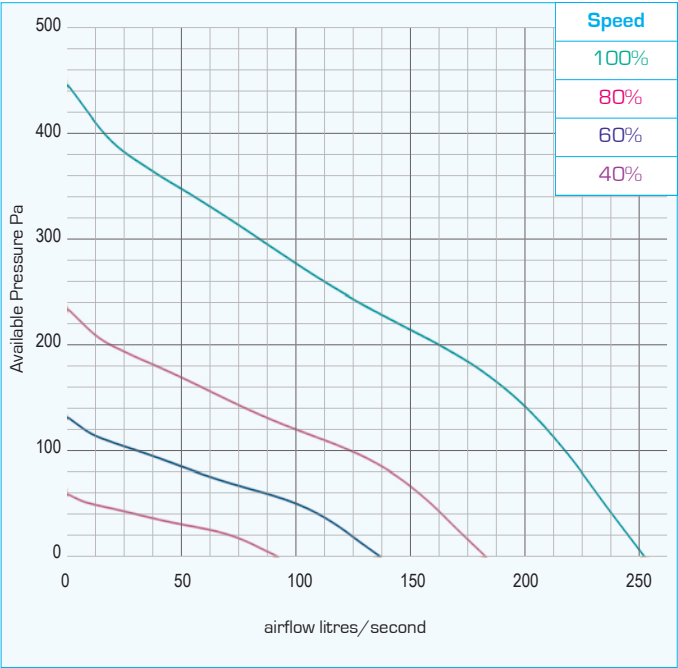
# Purge-Box 200

PERFORMANCE (curves are for guidance only)

Purge-Box 100

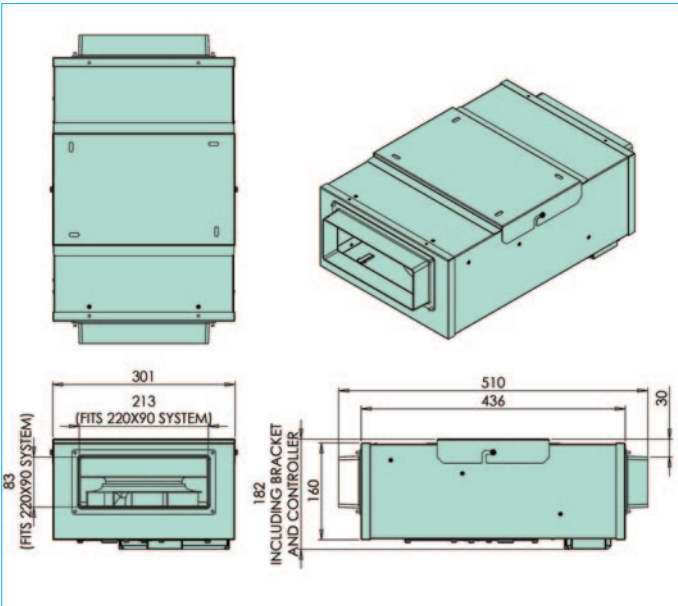


Purge-Box 200

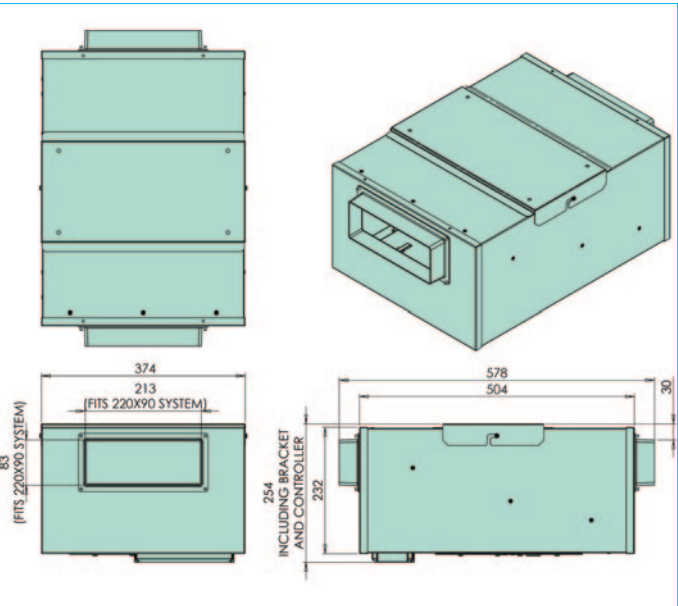


DIMENSIONS - mm

Purge-Box 100 - 7kgs



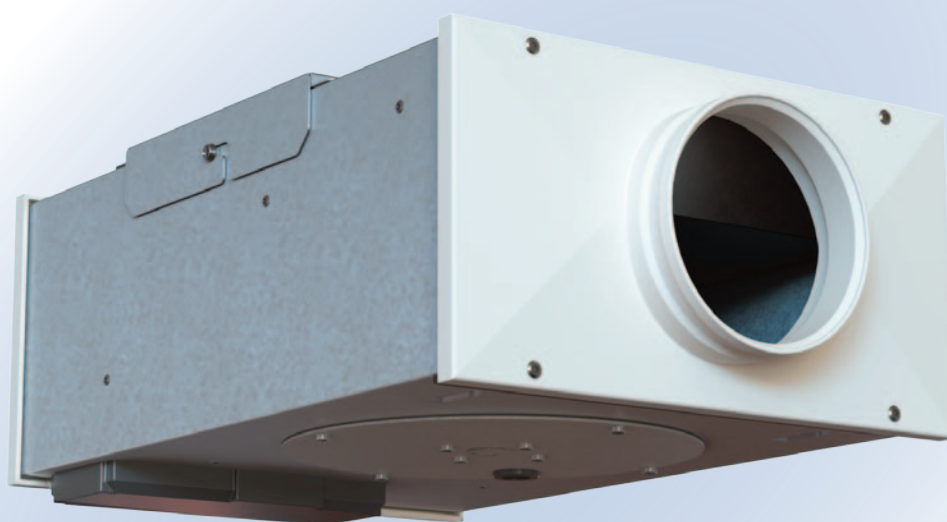
Purge-Box 200 - 10 kgs



**N.B** - sufficient access for safe maintenance or removal following installation, **MUST** be provided for this product -



## Microbox 125/2DC-B



### Microbox 125/2DC

- efficient, low energy solution to controlling condensation and pollution in residential properties up to 185m<sup>2</sup>
- variable choice of low (trickle), boost and purge speed at installation
- for ceiling, loft or void installation
- compact, ultra low profile unit
- requires only one discharge grille
- cost savings compared to multi-spigot installation
- low noise levels
- low running costs
- available with 204 x 60mm spigot
- humidistat model available
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015



## Microbox 125/2DC-B

### GENERAL FEATURES

- up to 97 litre/sec at 50Pa - max 108 litre/sec capacity
- sfp down to 0.20 W/l/s
- easy and economical to install and maintain
- for ceiling, loft or void in-line installation
- can be angled horizontally or vertically
- variable low (trickle), boost and purge options - purge option using own volt-free purge cable.
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- very low noise levels
- low running costs
- 3 year warranty - 1 year parts and labour, 2 years parts only

### TECHNICAL FEATURES

- compact, low profile unit
- casing from galvanised sheet steel
- thermal overload protection
- pre-wired for easy electrical connection
- service and maintenance panel easily accessible
- low energy EC external rotor motor with sealed for life bearings and dynamically balanced backward curved impellers
- operates in temperature up to 60°C
- complete with mounting bracket and anti-vibration plate
- IPX4 rated

### CONTROL FEATURES

- variable adjustment - trickle, boost and purge speeds set at installation (purge option using own volt-free purge cable)
- boost setting (via switched live)
- integral, adjustable over-run timer - adjustable from 0-30 minutes set at installation

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB Listed
- Energy Saving Trust Best Practice Compliant

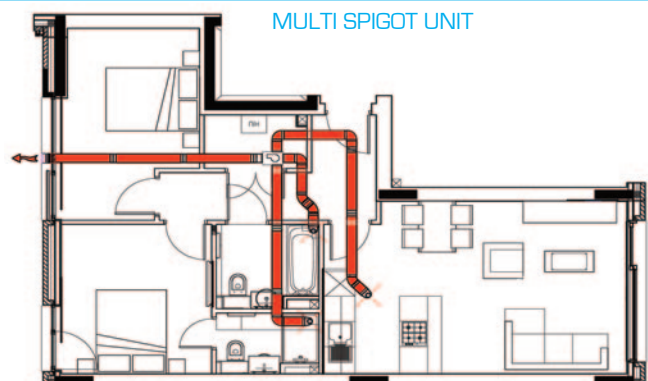
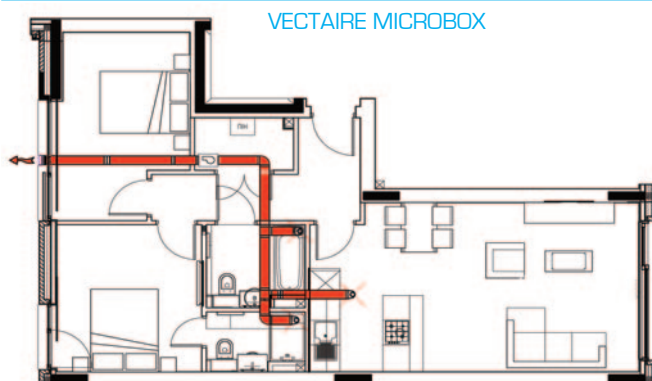
### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

**MBOX125/2DC204** -  
with rectangular  
spigots -  
204mm x 60mm



### DUCT RUN COST SAVINGS



**TYPICAL MICROBOX SAVING - £249 PER SYSTEM** - less ducting, fewer fire dampers and less coring, easier to install

### MODELS AVAILABLE:

- **MBOX125/2DC** - standard model
- **MBOX125/2DCH** - with integral humidistat
- **MBOX125/2DC204** - spigot - 204mm x 60mm
- **MBOX125/2DC204H** - spigot - 204mm x 60mm and integral humidistat

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowl. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.



# Microbox 125/2DC-B

TECHNICAL CHARACTERISTICS											
Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	Max Boost	Max Trickle	80%	60%	40%	Max Boost	Max Trickle	80%	60%	40%	
Microbox 125/2DC	108	101	80	60	40	46	45	26	12	6	0.74

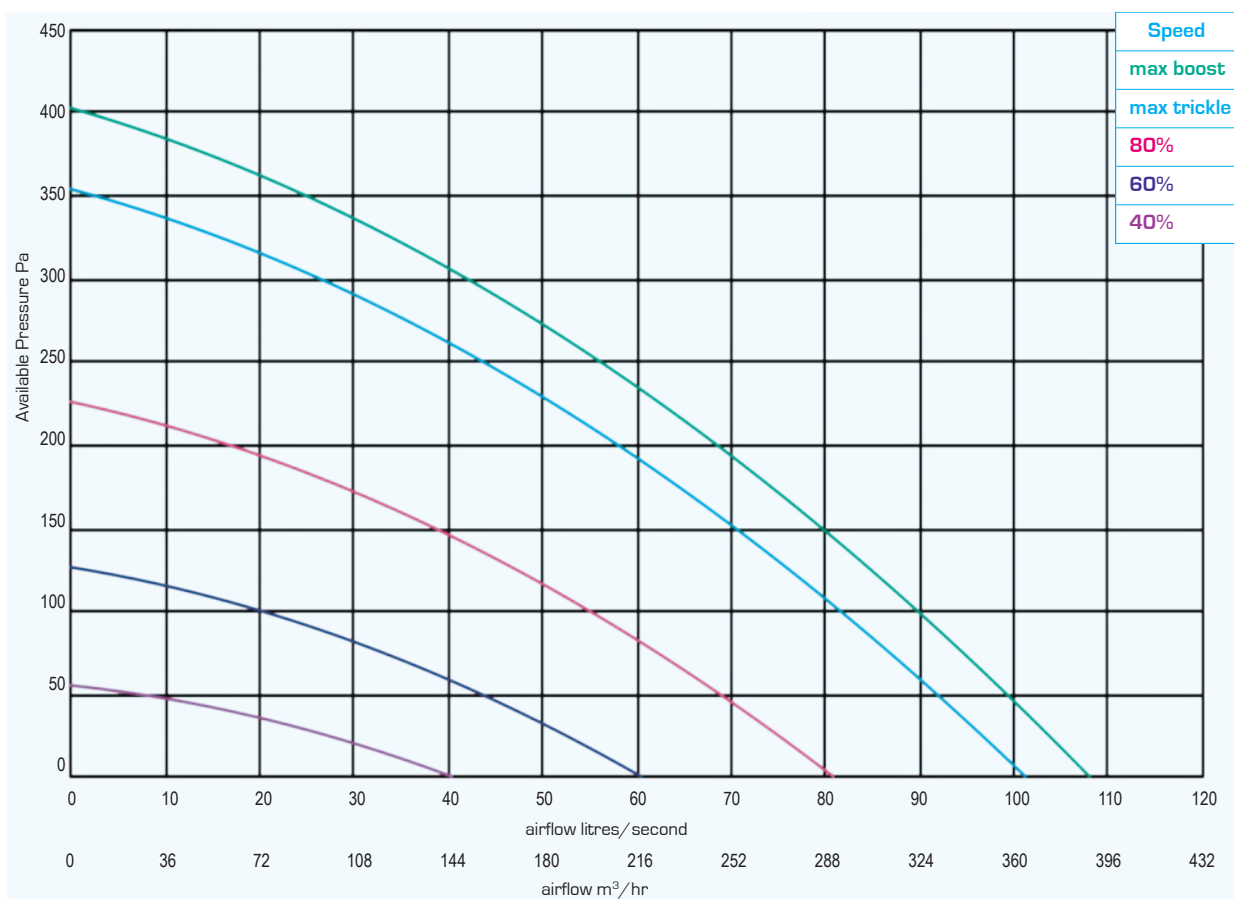
Microbox 125/2DC		Sound Power Levels, $L_w$ [dB] - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
Max Boost (108 l/sec)	Extract	53	58	59	55	54	52	48	52	28.2
	Supply	58	63	64	60	59	57	53	57	
	Breakout	56	56	51	41	34	26	16	18	
Max Trickle (101 l/sec)	Extract	52	57	58	54	53	51	46	50	27.2
	Supply	57	62	63	59	58	56	51	55	
	Breakout	55	55	50	40	33	25	14	16	
80% (80 l/sec)	Extract	48	53	53	49	48	46	40	42	22.5
	Supply	53	58	58	54	53	51	45	47	
	Breakout	51	51	45	35	28	20	8	8	
60% (60 l/sec)	Extract	45	49	47	43	42	39	32	32	17.4
	Supply	50	54	52	48	47	44	37	37	
	Breakout	48	47	39	29	22	19	< 5	< 5	
40% (40 l/sec)	Extract	40	42	40	36	35	31	24	12	10.5
	Supply	45	47	45	41	40	36	29	17	
	Breakout	43	40	32	22	15	5	< 5	< 5	
The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit										
Extract and Supply values are in-duct sound power levels										

RESULTS for SAP CALCULATIONS			
ENERGY LEVEL PERFORMANCE - using rigid ducting only			
	2009 Data	2012 Data	SAP 10 Data
Exhaust Terminal Configuration	Specific Fan Power (W/l/sec)	Specific Fan Power (W/l/sec)	Specific Fan Power (W/l/sec)
Kitchen + 1 additional wet room	0.20	0.20	0.20
Kitchen + 2 additional wet rooms	0.26	0.26	0.26
Kitchen + 3 additional wet rooms	0.34	0.34	0.34
Kitchen + 4 additional wet rooms	0.44	0.44	0.44
Kitchen + 5 additional wet rooms	0.55	0.55	0.55
Figures at minimum flow rate conditions			



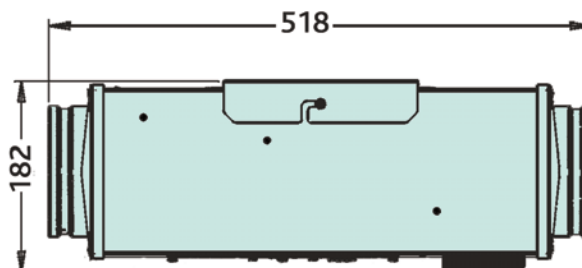
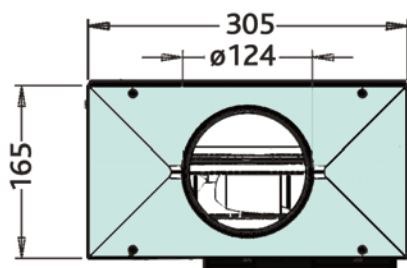
# Microbox 125/2DC-B

PERFORMANCE (curves are for guidance only)

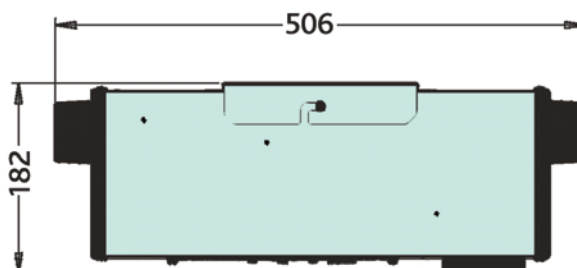
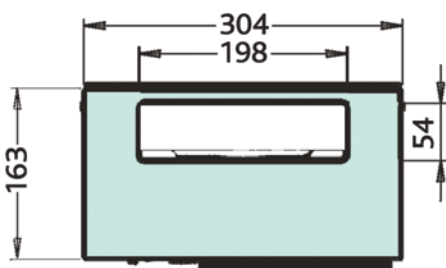


DIMENSIONS - mm

MBOX125/2DC



MBOX125/2DC204

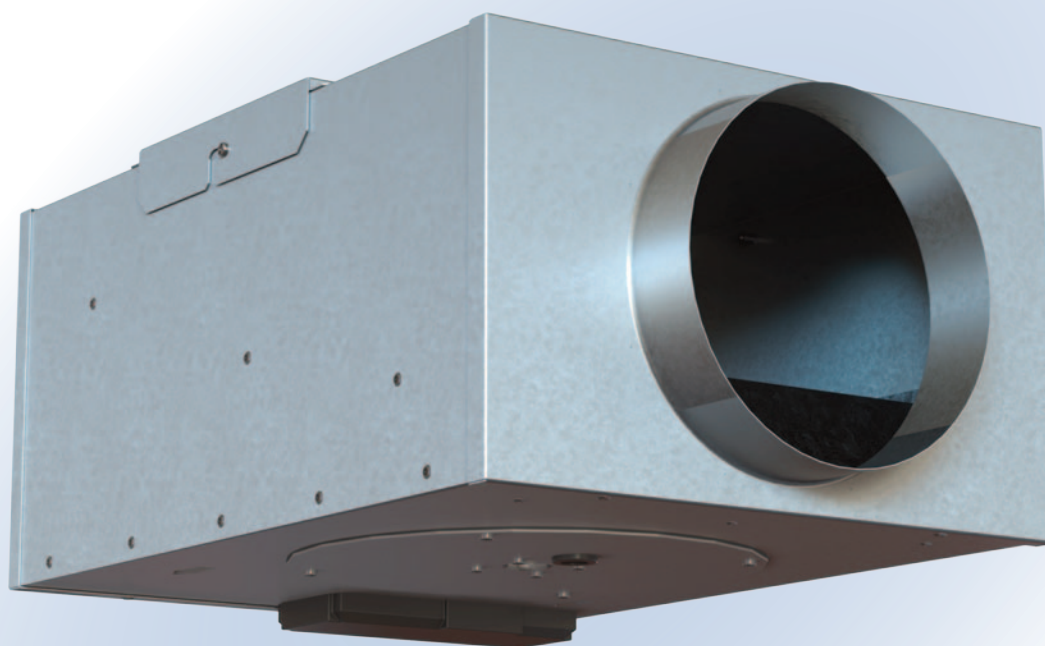


**N.B** sufficient access for safe maintenance or removal following installation, **MUST** be provided for this product - kg 7.





## Microbox 200/2DC



### Microbox 200/2DC

- efficient, low energy solution to controlling condensation and pollution in residential properties up to 335m<sup>2</sup>
- variable choice of low (trickle), boost and purge speed at installation
- for ceiling, loft or void installation
- powerful low profile unit
- requires only one discharge grille
- cost savings compared to multi-spigot installation
- low noise levels
- low running costs
- humidistat model available
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015





## Microbox 200/2DC

### GENERAL FEATURES

- up to 233 litre/sec at 50Pa - max 251 litre/sec capacity
- sfp down to 0.27 W/l/s
- easy and economical to install and maintain
- for ceiling, loft or void in-line installation
- can be angled horizontally or vertically
- variable low (trickle), boost and purge options - purge option using own volt-free purge cable.
- boost speed can be activated by a 230V switched live from:
  - A light switch (if more than one light switch is used, each one must be a double pole switch)
  - Remote humidistat (230V - DRH240)
  - Passive infra red (230V - PIRFF)
  - Thermostat (230V - THM)
  - Remote switch/pull cord - 230V
- very low noise levels
- low running costs
- 3 year warranty - 1 year parts and labour, 2 years parts only

### TECHNICAL FEATURES

- powerful, low profile unit, 232mm deep 234mm with control box]
- casing from galvanised sheet steel
- pre-wired for easy electrical connection
- service and maintenance panel easily accessible
- low energy EC external rotor motor with sealed for life bearings and dynamically balanced backward curved impellers
- operates in temperature up to 60°C
- complete with mounting bracket and anti-vibration plate
- IPX4 rated

### CONTROL FEATURES

- variable adjustment - trickle, boost and purge speeds set at installation (purge option using own volt-free purge cable)
- boost setting (via switched live)
- integral, adjustable over-run timer - adjustable from 0-30 minutes set at installation

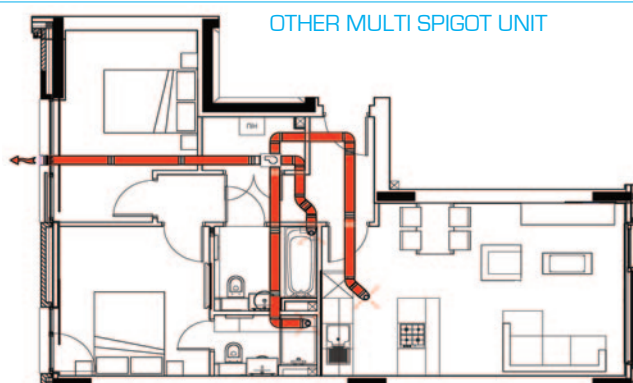
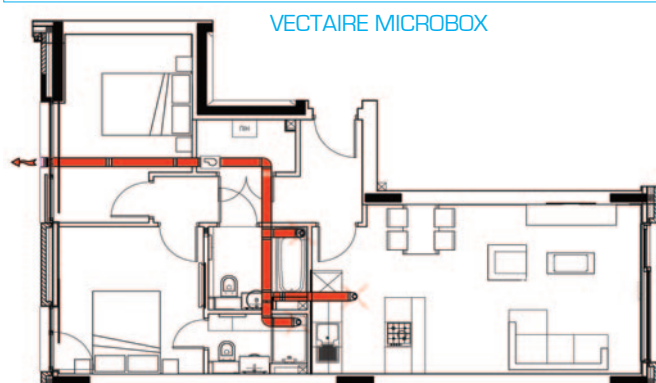
### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE
- EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB Listed

### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

### DUCT RUN COST SAVINGS



TYPICAL MICROBOX SAVING - £249 PER SYSTEM - less ducting, fewer fire dampers and less coring, easier to install

### MODELS AVAILABLE:

- MBOX200/2DC - standard model
- MBOX200/2DCH - with integral humidistat

also available with 150mm dia spigot or rectangular spigot 220mm x 90mm

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowl. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.



# Microbox 200/2DC

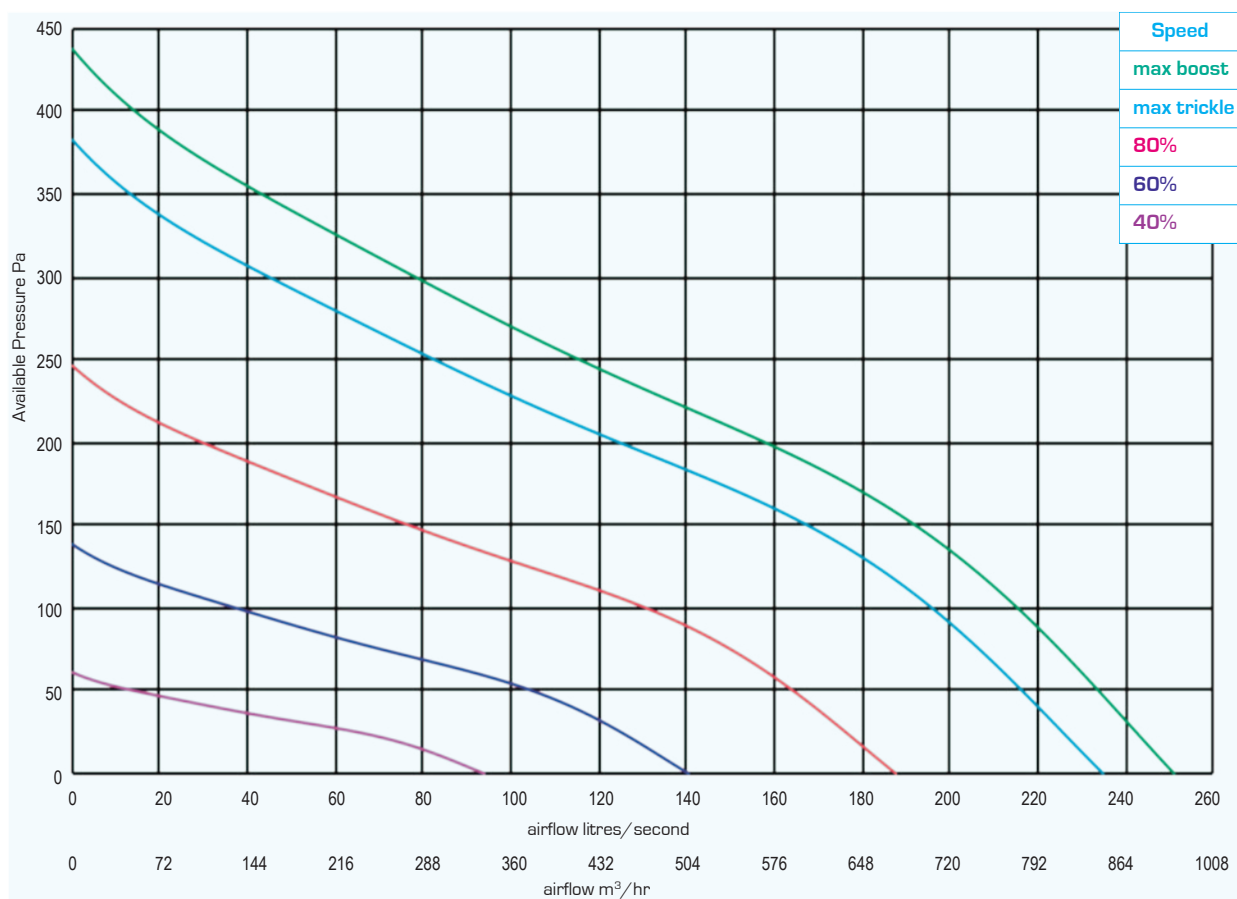
TECHNICAL CHARACTERISTICS											
Model	Airflow l/sec					Total Power - Watts					Operating Current (Amps)
	Max Boost	Max Trickle	80%	60%	40%	Max Boost	Max Trickle	80%	60%	40%	
Microbox 200/2DC	251	235	188	141	94	84	48	31	21	15	0.70

Microbox 200/2DC		Sound Power Levels, $L_w$ [dB] - Octave Bands Frequency Hz.								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
Max Boost [251 l/sec]	Extract	58	60	65	63	64	62	58	58	34.4
	Supply	63	65	70	68	69	67	63	63	
	Breakout	61	58	57	49	44	36	26	24	
Max Trickle [235 l/sec]	Extract	57	59	64	61	62	60	57	56	33.0
	Supply	62	64	69	66	67	65	62	61	
	Breakout	60	57	56	47	42	34	25	22	
80% [188 l/sec]	Extract	53	55	59	56	57	55	50	48	28.2
	Supply	58	60	64	61	62	60	55	53	
	Breakout	56	53	51	42	37	29	18	14	
60% [141 l/sec]	Extract	49	50	52	49	50	48	42	39	21.6
	Supply	54	55	57	54	55	53	47	44	
	Breakout	52	48	44	35	30	22	10	5	
40% [94 l/sec]	Extract	43	42	43	40	41	38	32	25	13.0
	Supply	48	47	48	45	46	43	37	30	
	Breakout	46	40	35	26	21	12	< 5	< 5	
The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit										
Extract and Supply values are in-duct sound power levels										

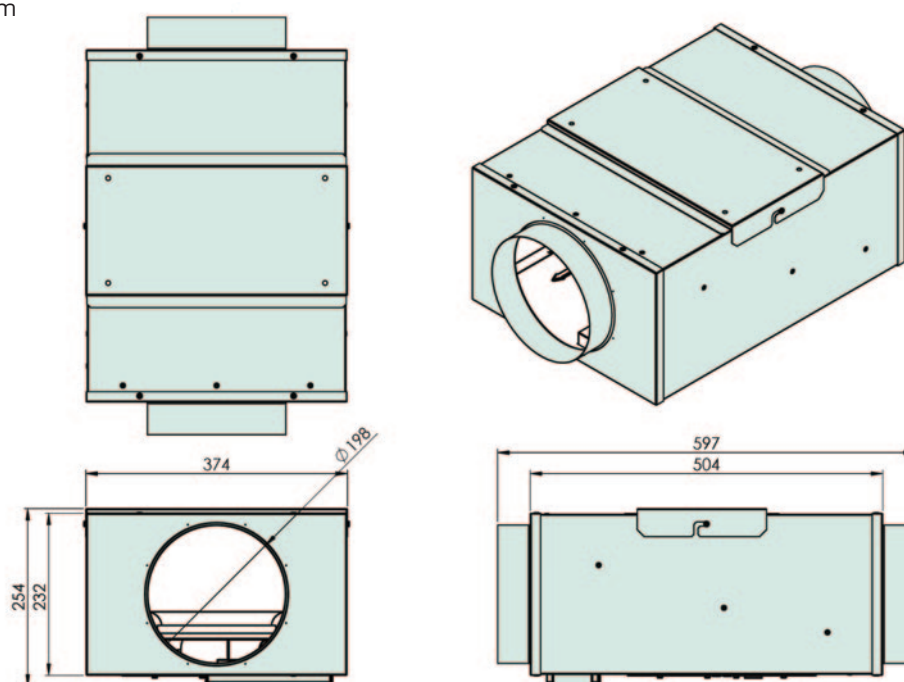
RESULTS for SAP CALCULATIONS			
ENERGY LEVEL PERFORMANCE - using rigid ducting only			
	2009 Data	2012 Data	SAP 10 Data
Exhaust Terminal Configuration	Specific Fan Power (W/l/sec)	Specific Fan Power (W/l/sec)	Specific Fan Power (W/l/sec)
Kitchen + 1 additional wet room	0.28	0.28	0.28
Kitchen + 2 additional wet rooms	0.27	0.27	0.27
Kitchen + 3 additional wet rooms	0.28	0.28	0.28
Kitchen + 4 additional wet rooms	0.36	0.36	0.36
Kitchen + 5 additional wet rooms	0.42	0.42	0.42
Kitchen + 6 additional wet rooms	0.52	0.52	0.52
Figures at minimum flow rate conditions			

# Microbox 200/2DC

## PERFORMANCE (curves are for guidance only)



## DIMENSIONS - mm



**N.B** sufficient access for safe maintenance or removal following installation, **MUST** be provided for this product - kg 10.



## Elegance “16”



### Elegance “16” - EL1003

- energy efficient EC motor - lowest energy consumption of comparable fan in the UK
- provides low level continuous ventilation to control condensation
- 3 speed axial fan - exceeds **16 l/sec** at Trickle Speed 2
- powerful low profile unit
- wall, ceiling or window (with additional window kit)
- low noise levels
- low running costs
- for any domestic wet room
- complies with Building Regulations



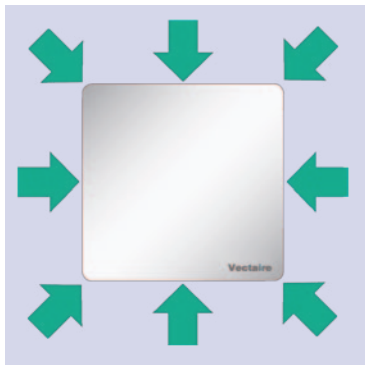
## Elegance “16” - EL1003

### GENERAL FEATURES

- exhausts directly to the outside (through wall, or window installation with additional window kit, or with medium length ducting)
- sfp down to 0.09 W/l/s
- easy and economical to install and maintain
- runs continuously at pre-selected choice of two speeds (fixed at installation)
- Speed 1 operates at 12 l/s (factory set)
- Speed 2 operates at 17 l/s
- speed boosted to maximum (26.7 l/s) using integral pull cord or by:
  - remote switch/light switch
  - PIR sensor
  - DRH240 (dynamic remote humidistat)
- anti-vibration gasket
- patented anti-turbulence deflectors ensure very low noise levels and optimum performances
- energy saving ventilation
- **extremely low running costs**
- low carbon footprint
- 5 year warranty - 1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- shockproof, high quality technopolymer casing
- designed using latest wind tunnel technology and CFD simulations
- EC induction motor with thermal protection
- 43,000 hour life motors with maintenance free and long life ball bearings
- operates in ambient temperatures up to 40°C
- double insulated - no earth required
- IPX4 Splashproof rated - can safely be installed in Zones I and II, SELV models IPX7 rated



### ELEGANCE “16” MODELS AVAILABLE:

- **EL1003** - 3 speed, continuous running, cord or remote
- **EL1003DT** - 3 speed, continuous running with comfort timer (timer does not activate unless fan has been running for 2 minutes to avoid unnecessary night-time operation) and pull-cord
- **EL1003HDT** - with comfort timer, humidistat and pull-cord
- **EL1003LV** - 3 speed, continuous running with pull-cord - LOW VOLT (SELV)
- **EL1003DTLV** - 3 speed, continuous running, with comfort timer, and pull-cord LOW VOLT (SELV)
- **EL1003HDTLV** - 3 speed, continuous running, with comfort timer, humidistat and pull-cord - LOW VOLT (SELV)

**N.B timer adjustable from 0-30 minutes**

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- CE marked
- SAP PCDB Listed
- Energy Saving Trust Best Practice Compliant

TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>



Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.

**N.B These fans are NOT suitable for use with Gravity Grilles. They should be installed using either Cowls or Fixed Grilles. Only approved accessories should be used:**

Wall Plates – as required

Window kits – as required

Wall terminations – all wall terminations must use the approved wall cowl or high rise kit



# Elegance “16” - EL1003

TECHNICAL CHARACTERISTICS									
Model	Airflow l/sec			Power - Watts			dBA (@ 3m in free field)		
	Trickle 1	Trickle 2	Boost	Trickle 1	Trickle 2	Boost	Trickle 1	Trickle 2	Boost
EL1003	12	<b>17</b>	26.7	0.7	1.2	3.2	14	22	33

RESULTS for SAP CALCULATIONS - SAP2012 data ENERGY LEVEL PERFORMANCE - using rigid ducting only			
Unit Configuration	Specific Fan Power (W/l/s)	EST Best Practice Performance Compliant	Flow Rate (l/sec)
In room - kitchen	0.12	Yes	13.0
In room - wetroom	0.11	Yes	8.0
Through wall - kitchen	0.09	Yes	13.0
Through wall - wetroom	0.09	Yes	8.0
Figures from BRE test results at minimum flow rate conditions			

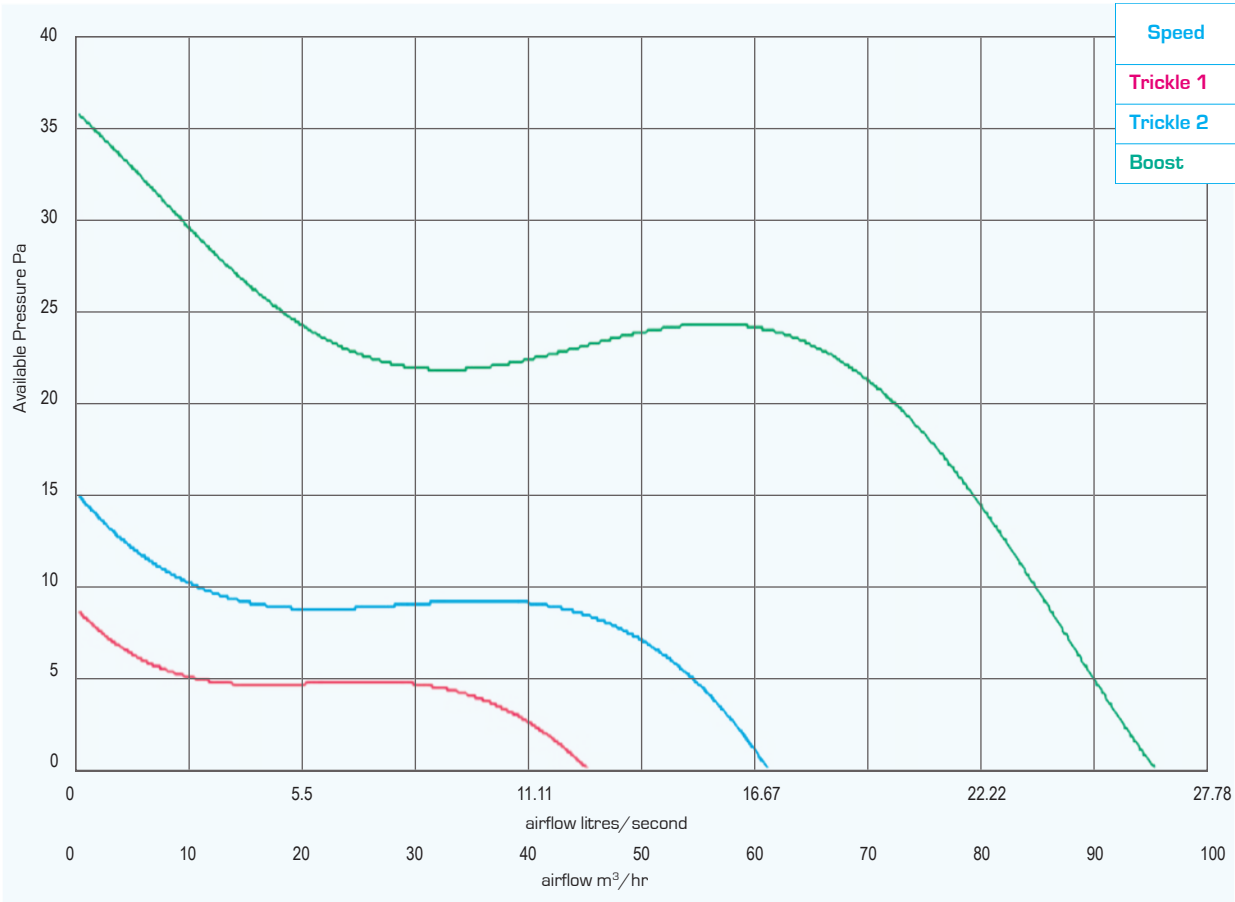
RESULTS for SAP CALCULATIONS - SAP2012 data ENERGY LEVEL PERFORMANCE - using flexible ducting only			
Unit Configuration	Specific Fan Power (W/l/s)	EST Best Practice Performance Compliant	Flow Rate (l/sec)
In room - kitchen	0.13	Yes	13.0
In room - wetroom	0.11	Yes	8.0
Through wall - kitchen	0.09	Yes	13.0
Through wall - wetroom	0.09	Yes	8.0
Figures from BRE test results at minimum flow rate conditions			



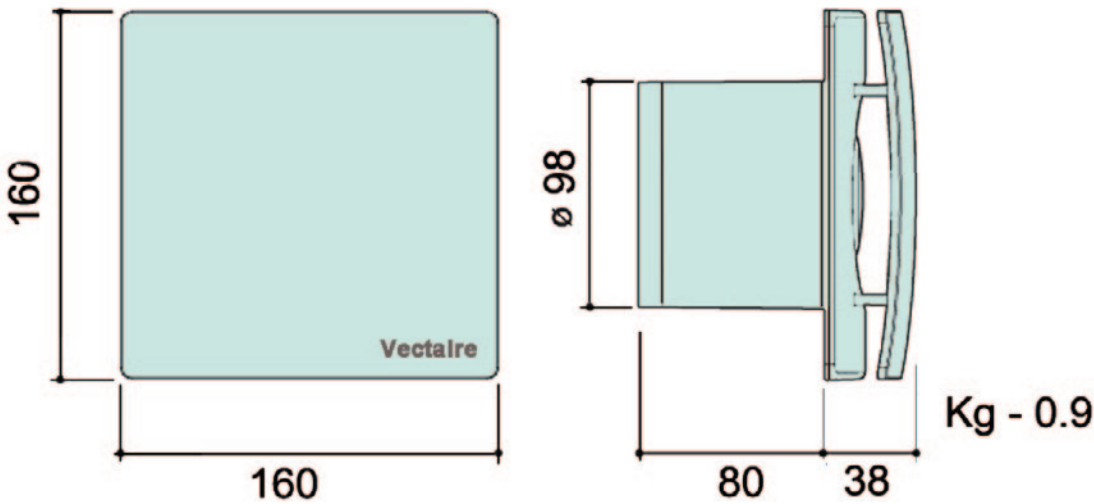


# Elegance “16” - EL1003

PERFORMANCE (curves are for guidance only)



DIMENSIONS - mm





## Elegance - EL1203

### 120 mm 3 Speed Fan



#### Elegance - EL1203

- 120mm diameter
- energy efficient EC motor
- provides low level continuous ventilation to control condensation
- 3 speed axial fan
- powerful low profile unit
- wall or ceiling
- low noise levels
- low running costs
- for all domestic wet room
- complies with Building Regulations



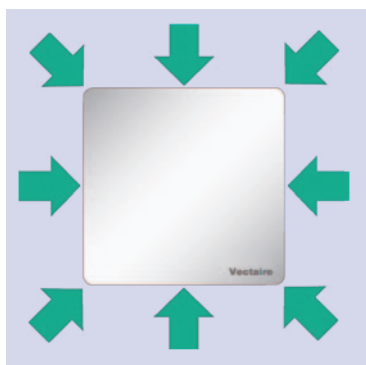
## Elegance - EL1203

### GENERAL FEATURES

- exhausts directly to the outside (through wall, or with medium length ducting)
- easy and economical to install and maintain
- runs continuously at pre-selected choice of two speeds (fixed at installation)
- Speed 1 operates at 13 l/s (factory set)
- Speed 2 operates at 19 l/s
- speed boosted to maximum (44 l/s) by:
  - remote switch/light switch
  - PIR sensor
  - DRH240 (dynamic remote humidistat)
- anti-vibration gasket
- patented anti-turbulence deflectors ensure very low noise levels and optimum performances
- energy saving ventilation
- [extremely low running costs](#)
- low carbon footprint
- 5 year warranty -1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- shockproof, high quality technopolymer casing
- designed using latest wind tunnel technology and CFD simulations
- EC induction motor with thermal protection
- 43,000 hour life motors with maintenance free and long life ball bearings
- operates in ambient temperatures up to 40°C
- double insulated - no earth required
- IPX4 Splashproof rated - can safely be installed in Zones I and II



### MODELS AVAILABLE:

- EL1203 - 3 speed, continuous running
- EL1203DT - 3 speed, continuous running with comfort timer (timer does not activate unless fan has been running for 2 minutes to avoid unnecessary night-time operation).
- EL1203HDT - with humidistat, comfort timer

N.B timer adjustable from 0-30 minutes

humidistat adjustable from between 40% and 90% relative humidity

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- CE marked



Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.

N.B These fans are NOT suitable for use with Gravity Grilles. They should be installed using either Cowls or Fixed Grilles. Only approved accessories should be used:

Wall Plates – as required

Window kits – as required

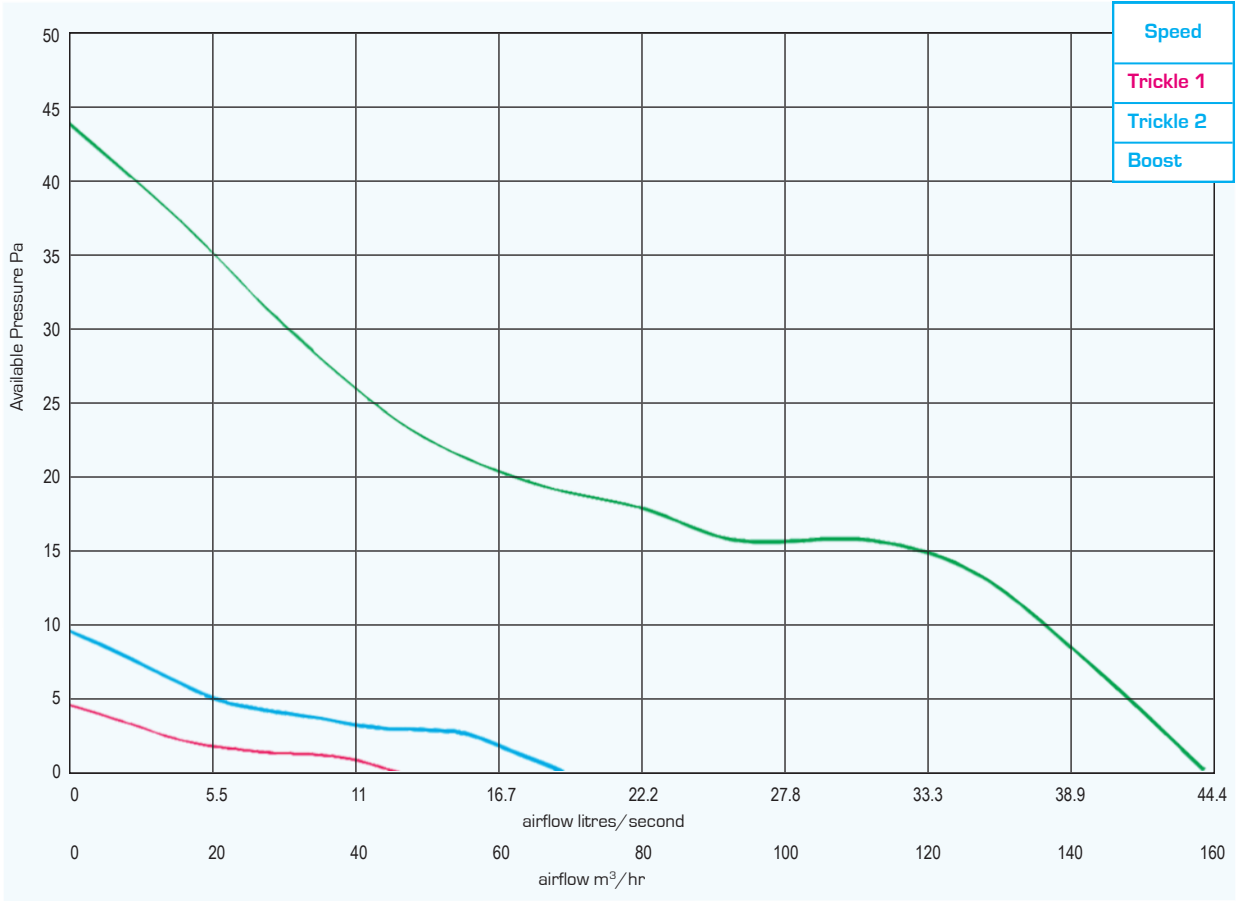
Wall terminations – all wall terminations must use the approved wall cowl or high rise kit



# Elegance - EL1203

TECHNICAL CHARACTERISTICS									
Model	Airflow l/sec			Power - Watts			dBA (@ 3m in free field)		
	Trickle 1	Trickle 2	Boost	Trickle 1	Trickle 2	Boost	Trickle 1	Trickle 2	Boost
EL1203	13	19	44	0.5	0.8	5	15.1	17.3	32.4

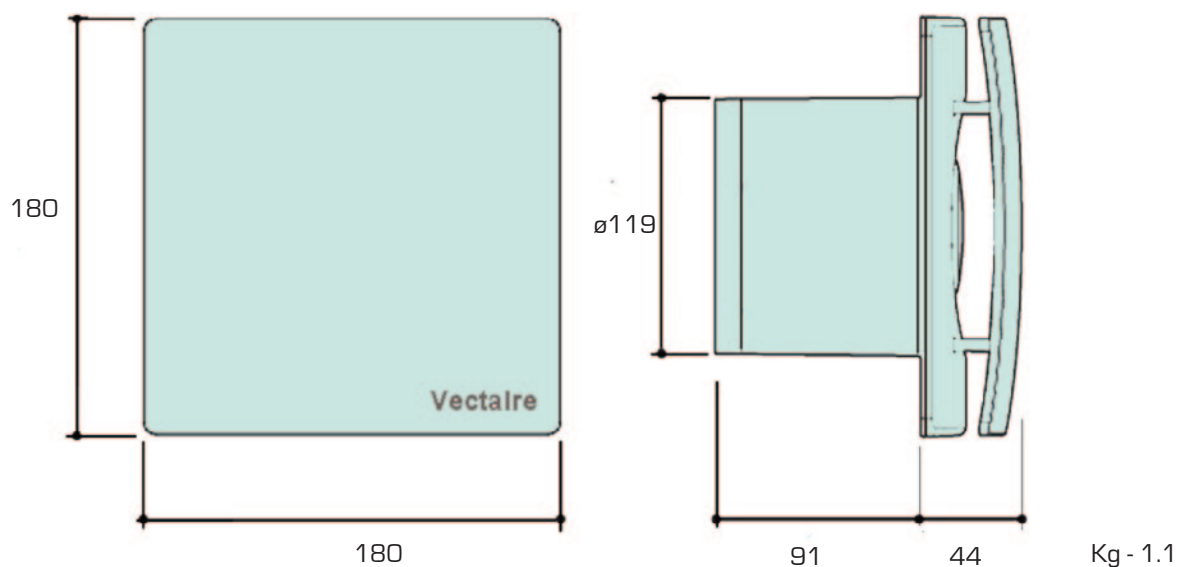
PERFORMANCE [curves are for guidance only]





## Elegance - EL1203

DIMENSIONS - mm





## Elix "16" - ELX1003



### Elix "16" - ELX1003

- energy efficient EC motor
- provides low level continuous ventilation to control condensation
- 3 speed centrifugal fan - **16** l/sec Trickle Speed 2
- powerful low profile unit
- wall or ceiling
- low noise levels
- low running costs
- for any domestic wet room
- complies with Building Regulations



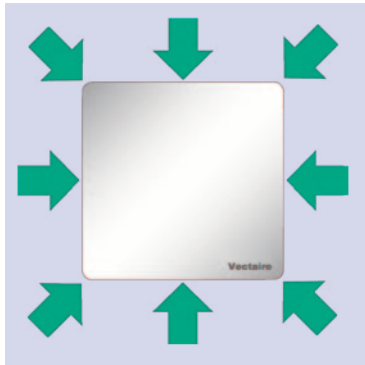
## Elix "16" - ELX1003

### GENERAL FEATURES

- exhausts directly to the outside or through long lengths of ducting (up to 15m)
- sfp down to 0.14 W/l/s
- easy and economical to install and maintain
- runs continuously at pre-selected choice of two speeds (fixed at installation)
- Speed 1 operates at 8.9 l/s (factory set)
- Speed 2 operates at **16** l/s
- speed boosted to maximum (27.8 l/s) using integral pull cord or by:
  - remote switch/light switch
  - PIR sensor
  - DRH240 (dynamic remote humidistat)
- anti-vibration gasket
- easily removable, washable polypropylene filter
- energy saving ventilation
- **extremely low running costs**
- low carbon footprint
- 5 year warranty - 1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- shockproof, high quality technopolymer casing
- designed using latest wind tunnel technology and CFD simulations
- EC induction motor with thermal protection
- 43,000 hour life motors with maintenance free and long life ball bearings
- operates in ambient temperatures up to 40°C
- double insulated - no earth required
- IPX4 Splashproof rated - can safely be installed in Zones I and II, SELV models IPX7 rated



### ELIX "16" MODELS AVAILABLE:

- **ELX1003** - 3 speed, continuous running, cord or remote
- **ELX1003DT** - 3 speed, continuous running with comfort timer (timer does not activate unless fan has been running for 2 minutes to avoid unnecessary night-time operation) and pull-cord
- **ELX1003HDT** - with comfort timer, humidistat and pull-cord
- **ELX1003DL** - with datalogging facility for number of hours run and number of power outages
- **ELX1003LV** - 3 speed, continuous running with pull-cord - LOW VOLT (SELV)
- **ELX1003DTLV** - 3 speed, continuous running, with comfort timer, over-run timer and pull-cord LOW VOLT (SELV)
- **ELX1003HDTLV** - 3 speed, continuous running, with comfort timer, humidistat and pull-cord - LOW VOLT (SELV)

N.B timer adjustable from 0-30 minutes

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- CE marked
- SAP PCDB Listed
- Energy Saving Trust Best Practice Compliant

### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>



Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.

N.B These fans are NOT suitable for use with Gravity Grilles. They should be installed using either Cowls or Fixed Grilles. Only approved accessories should be used:

Wall Plates – as required

Wall terminations – all wall terminations must use the approved wall cowl or high rise kit



# Elix “16” - ELX1003

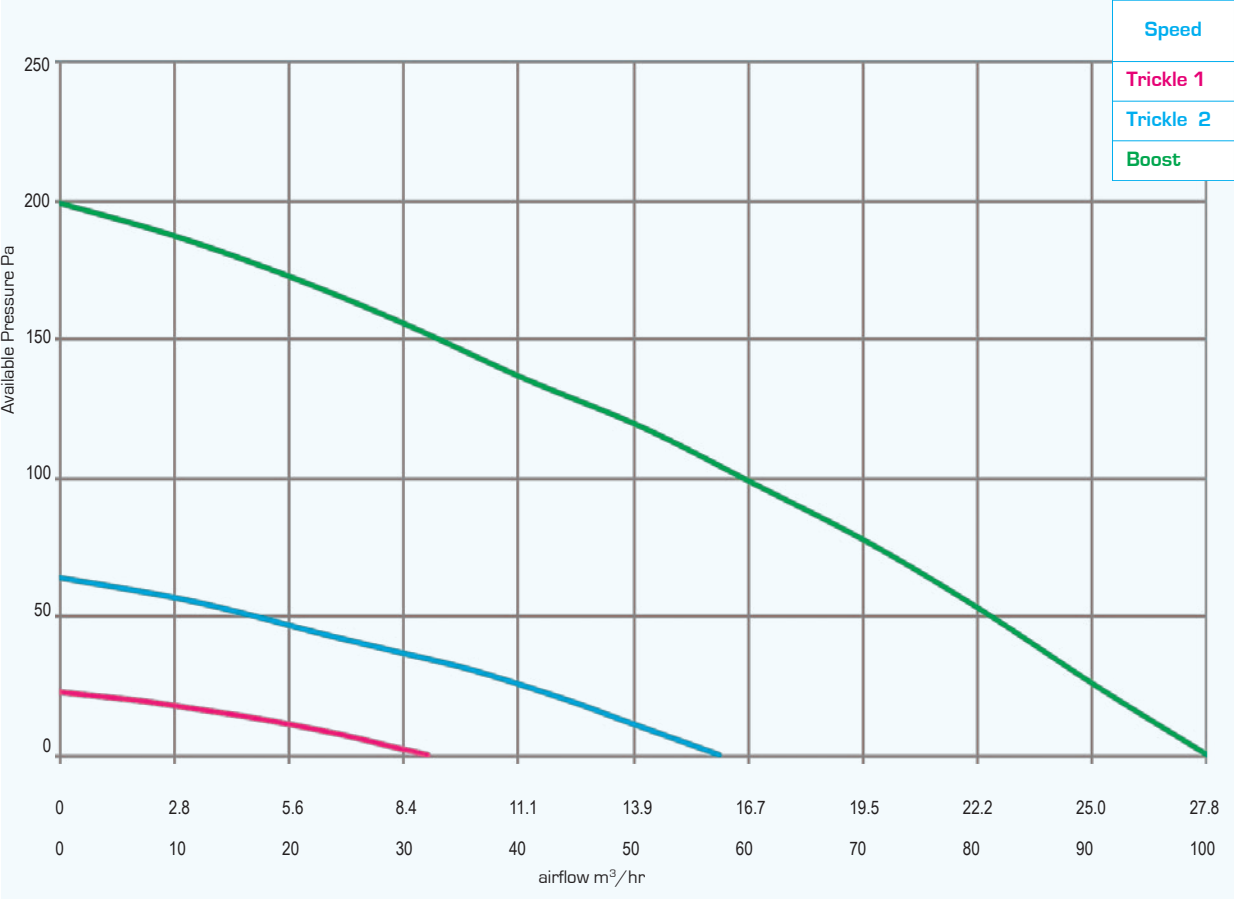
TECHNICAL CHARACTERISTICS									
Model	Airflow l/sec			Power - Watts			dBA (@ 3m in free field)		
	Trickle 1	Trickle 2	Boost	Trickle 1	Trickle 2	Boost	Trickle 1	Trickle 2	Boost
ELX1003	8.9	<b>16</b>	27.8	1.6	3.5	15	15.5	17.5	35

RESULTS for SAP CALCULATIONS - SAP2012 data ENERGY LEVEL PERFORMANCE - using rigid ducting only			
Unit Configuration	Specific Fan Power (W/l/s)	EST Best Practice Performance Compliant	Flow Rate (l/sec)
In room - kitchen	0.22	Yes	13.0
In room - wetroom	0.16	Yes	8.0
Through wall - kitchen	0.17	Yes	13.0
Through wall - wetroom	0.14	Yes	8.0
Figures from BRE test results at minimum flow rate conditions			

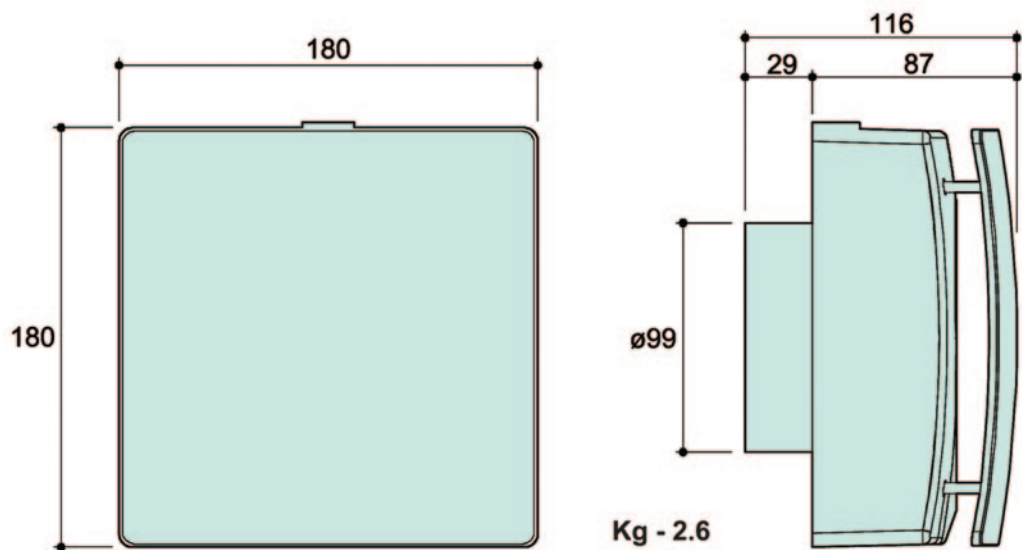


Elix “16” - ELX1003

PERFORMANCE (curves are for guidance only)



DIMENSIONS - mm





## Elprex "16" - ELP2204



### Elprex - ELP2204

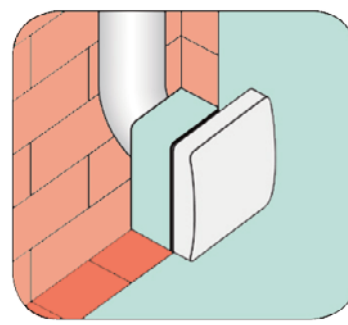
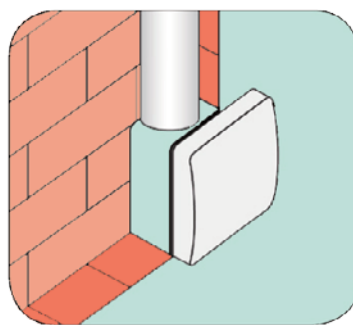
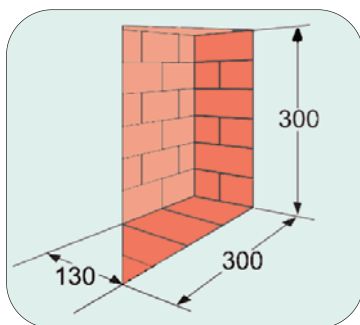
- energy efficient motor
- provides low level continuous ventilation to control condensation
- 4 speed centrifugal fan - **16 l/sec** Trickle Speed 1
- choice of three speeds at installation
- wall or ceiling
- for any kitchen
- low noise levels
- low running costs
- complies with Building Regulations

# Elprex "16" - ELP2204

## GENERAL FEATURES

- exhausts directly to the outside or through long lengths of ducting (up to 15m)
- sfp down to 0.35 W/l/s
- easy and economical to install and maintain
- runs continuously at trickle speed with choice of 3 boost speeds (fixed at installation)
- Trickle speed 1 operates at **16 l/s** (factory set)
- Boost speed 2 operates at 30 l/s  
Boost speed 3 operates at 45 l/s  
Boost speed 4 operates at 60 l/s
- speed boosted to maximum using integral pull cord or by:
  - remote switch/light switch
  - PIR sensor
  - DRH240 (dynamic remote humidistat)
- ELP2204HDT operates at Speed 2 if boost speed is automatically started by the integral humidistat when relative humidity reaches pre-set level. Fan runs at this speed until excess humidity dispersed. It then reverts to Trickle Speed 1. Boost speed can also be boosted manually by remote switch/light switch/PIR sensor or remote humidistat.
- anti-vibration gasket
- robust and anti-reverse (removable) backdraught shutter
- energy saving ventilation
- **extremely low running costs**
- low carbon footprint
- 2 year warranty

## Built-in Installation



## MODELS AVAILABLE:

- ELP2204 - 4 speed, continuous running, cord or remote
- ELP2204DT - 4 speed, continuous running with comfort timer (timer does not activate unless fan has been running for 2 minutes to avoid unnecessary night-time operation) and pull-cord
- ELP2204HDT - with comfort timer, humidistat and pull-cord
- ELP2204DL - 4 speed, continuous running with pull-cord and integral data logger
- ELP2204DTDL - with comfort timer, pull-cord and integral data logger
- ELP2204HDTDL - with comfort timer, humidistat, pull-cord and integral data logger

N.B timer adjustable from 0-30 minutes

## TECHNICAL FEATURES

- shockproof, high quality technopolymer casing
- designed using latest wind tunnel technology and CFD simulations
- motor with thermal protection
- 30,000 hour life motor with maintenance free and long life ball bearings
- operates in ambient temperatures up to 40°C
- double insulated - no earth required
- IPX4 Splashproof rated - can safely be installed in Zones I and

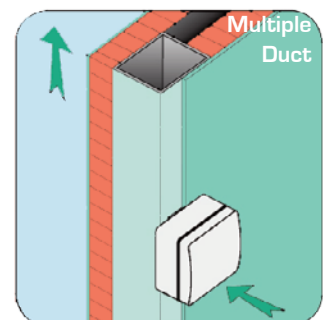
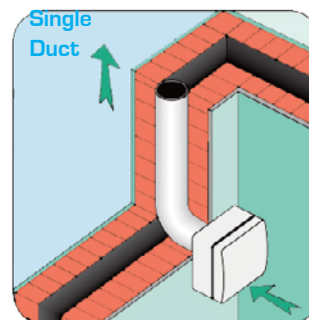
## ICOMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- CE marked

TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>

## Surface Mounted Installation



Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.

N.B These fans are NOT suitable for use with Gravity Grilles. They should be installed using either Cowls or Fixed Grilles. Only approved accessories should be used:

Wall Plates – as required

Wall terminations – all wall terminations must use the approved wall cowl or high rise kit



# Elprex "16" - ELP2204

TECHNICAL CHARACTERISTICS												
Model	Airflow l/sec				Power - Watts				dBA (@ 3m in free field)			
	Trickle 1	Boost 2	Boost 3	Boost 4	Trickle 1	Boost 2	Boost 3	Boost 4	Trickle 1	Boost 2	Boost 3	Boost 4
ELP2204	<b>16</b>	30	45	60	8.7	15.1	22.3	28.4	21	30	39	48

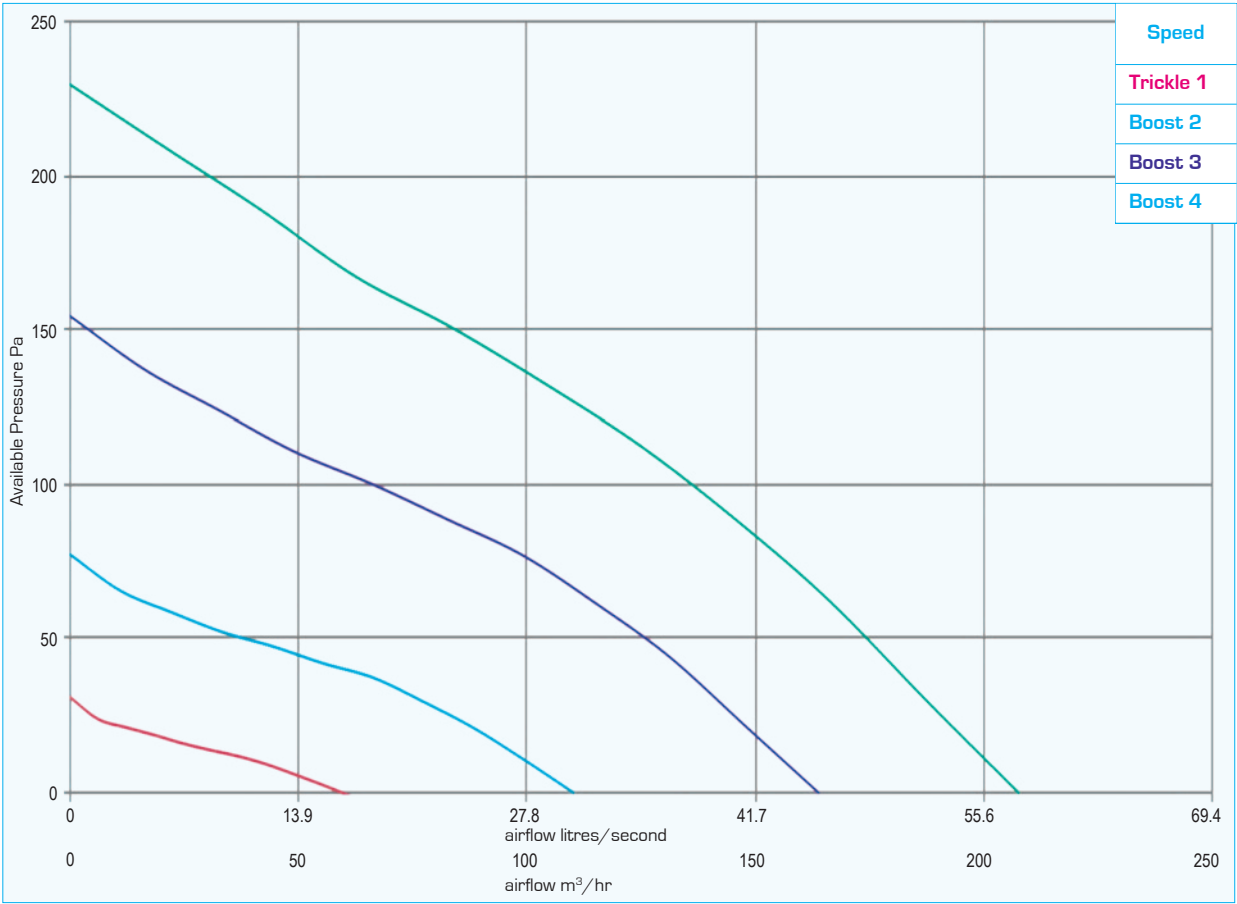
RESULTS for SAP CALCULATIONS			
Specific Fan Power (W/l/s)			
Speed 1	Speed 2	Speed 3	Boost
0.39	0.41	0.44	0.47
Results from our own laboratory - SAP2012 data			





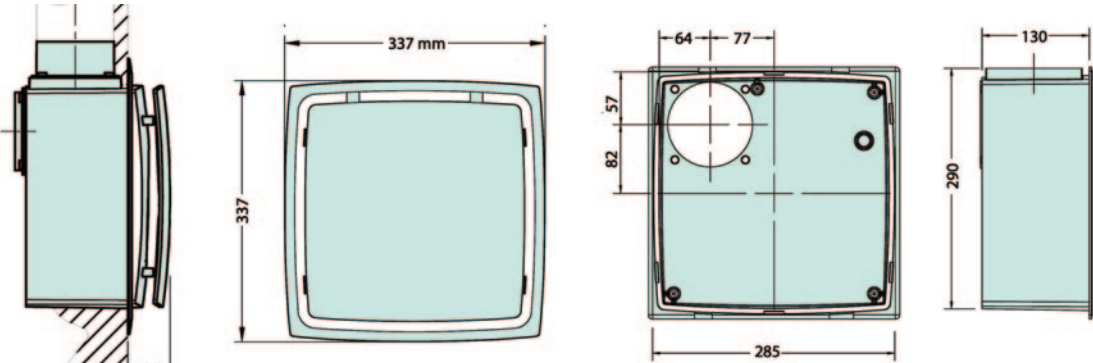
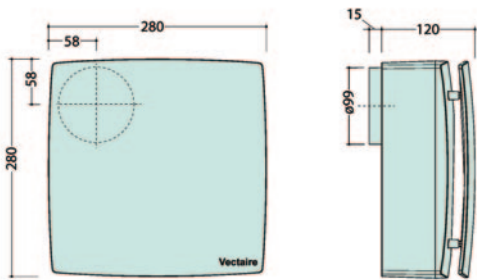
# Elprex “16” - ELP2204

PERFORMANCE [curves are for guidance only]



DIMENSIONS - mm

Weight - 2.8 kg





## E-Smile - ES1003



### E-Smile - ES1003

- provides low level continuous ventilation to control condensation
- 3 speed axial fan
- powerful low profile unit
- choice of two low speeds at installation
- wall or ceiling
- low noise levels
- low running costs
- for any domestic wet room
- complies with Building Regulations

## E-Smile - ES1003

### GENERAL FEATURES

- exhausts directly to the outside or through medium length ducting - up to 8m]
- sfp down to 0.37 W/l/s
- runs continuously at pre-selected choice of two speeds (fixed at installation)
- Speed 1 operates at 11 l/s (factory set)
- Speed 2 operates at 14 l/s
- speed boosted to maximum [21 l/s] using integral pull cord or by:
  - remote switch/light switch
  - PIR sensor
  - DRH240 (dynamic remote humidistat)
- easy and economical to install and maintain
- ES1003 design allows installation at any angle with only three fixing points
- energy saving ventilation
- **extremely low running costs**
- low carbon footprint
- 2 year warranty

### TECHNICAL FEATURES

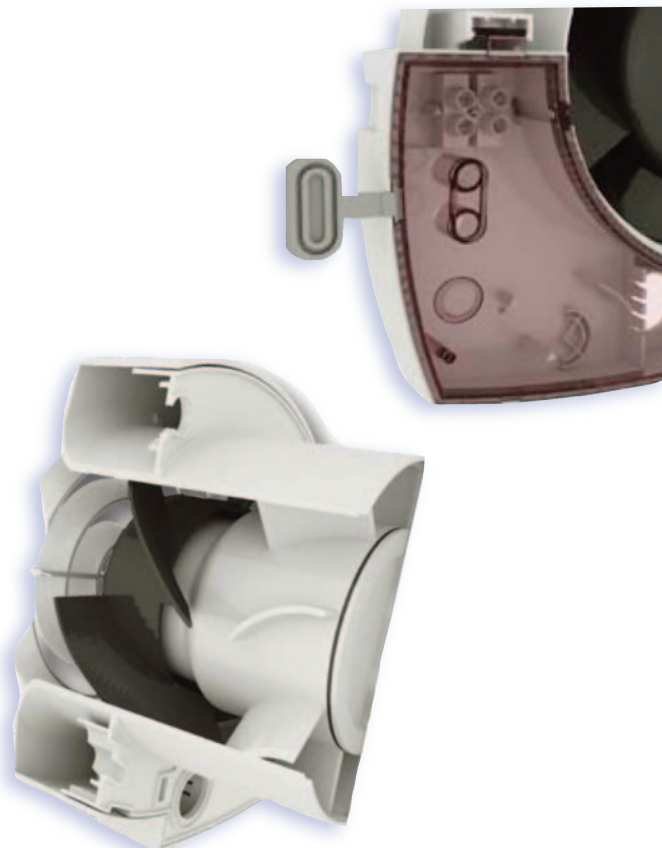
- constructed using recyclable and/or reusable materials and components for minimum ecological impact
- shockproof, high quality technopolymer casing
- designed using latest wind tunnel technology and CFD simulations
- advanced profile to increase aerodynamic efficiency
- induction motor with thermal protection
- 40,000 hour life motors with maintenance free and long life ball bearings
- operates in ambient temperatures up to 40°C
- double insulated - no earth required
- IPX4 Splashproof rated - can safely be installed in Zones I and II, SELV models IPX7 rated

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- CE marked
- SAP PCDB Listed
- Energy Saving Trust Best Practice Compliant

### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>



### MODELS AVAILABLE:

- **ES1003** - 3 speed, continuous running, cord or remote
- **ES1003CF** - model c/w filter
- **ES1003CLV** - SELV - 12v model
- **ES100H2C** - 2 speed, humidity control
- **ES100H2CLV** - 2 speed, humidity control - SELV - 12v model

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowl. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.

N.B These fans are NOT suitable for use with Gravity Grilles. They should be installed using either Cowls or Fixed Grilles. Only approved accessories should be used:

Wall Plates – as required

Window kits – as required

Wall terminations – all wall terminations

must use the approved wall cowl or high rise kit



# E-Smile - ES1003

## TECHNICAL CHARACTERISTICS

Model	Airflow l/sec			Power - Watts			dBA (@ 3m in free field)		
	Trickle 1	Trickle 2	Boost	Trickle 1	Trickle 2	Boost	Trickle 1	Trickle 2	Boost
ES1003	11	14	21	3.8	5.3	7.5	16	19	29

## RESULTS for SAP CALCULATIONS - SAP2012 data ENERGY LEVEL PERFORMANCE - using rigid ducting only

Unit Configuration	Specific Fan Power (W/l/s)	EST Best Practice Performance Compliant	Flow Rate (l/sec)
In room - kitchen	0.55	Yes	14.2
In room - wetroom	0.61	Yes	11.1
Through wall - kitchen	0.37	Yes	15.5
Through wall - wetroom	0.45	Yes	9.7
Figures from BRE test results at minimum flow rate conditions			

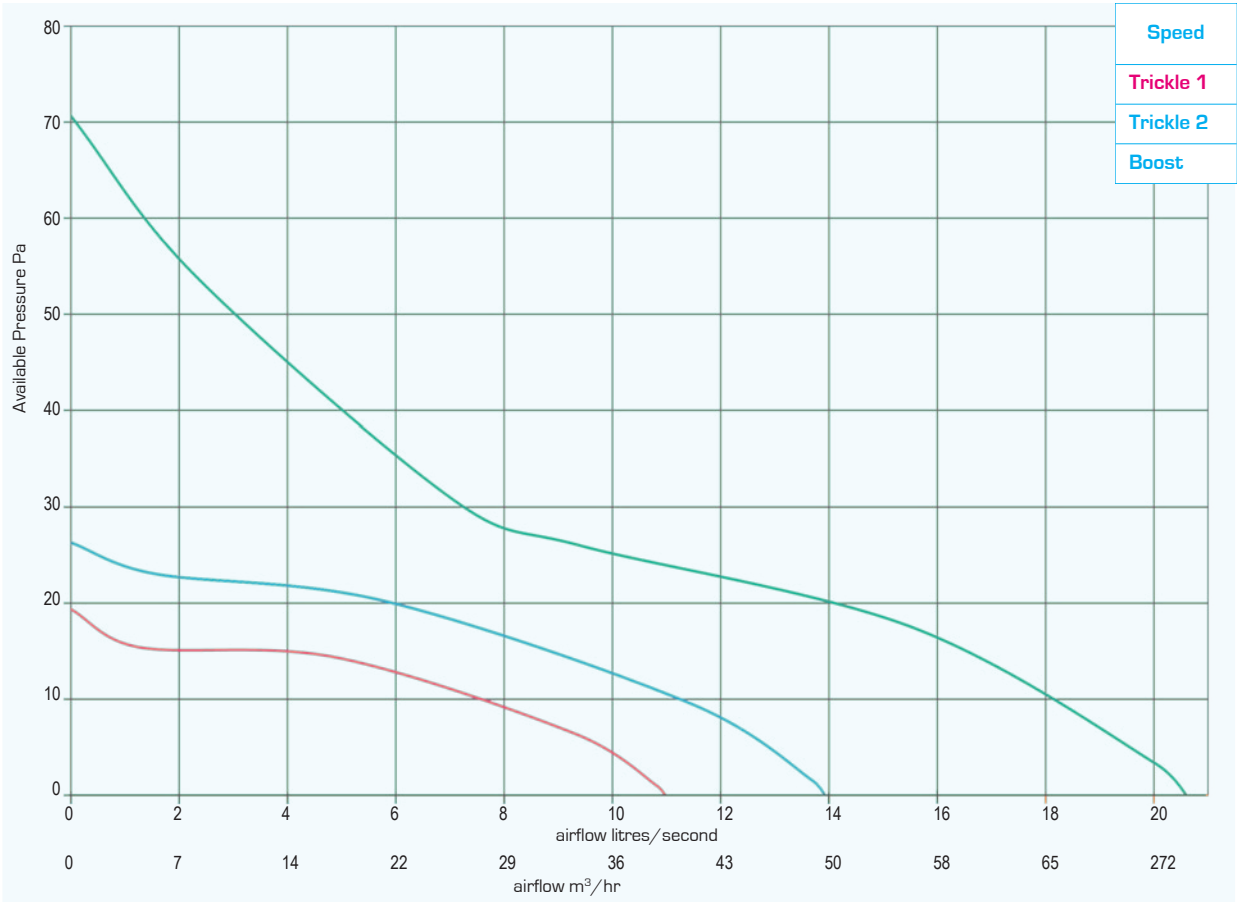
## RESULTS for SAP CALCULATIONS - SAP2012 data ENERGY LEVEL PERFORMANCE - using flexible ducting only

Unit Configuration	Specific Fan Power (W/l/s)	EST Best Practice Performance Compliant	Flow Rate (l/sec)
In room - kitchen	0.57	Yes	13.0
In room - wetroom	0.61	Yes	10.3
Through wall - kitchen	0.37	Yes	15.5
Through wall - wetroom	0.45	Yes	9.7
Figures from BRE test results at minimum flow rate conditions			

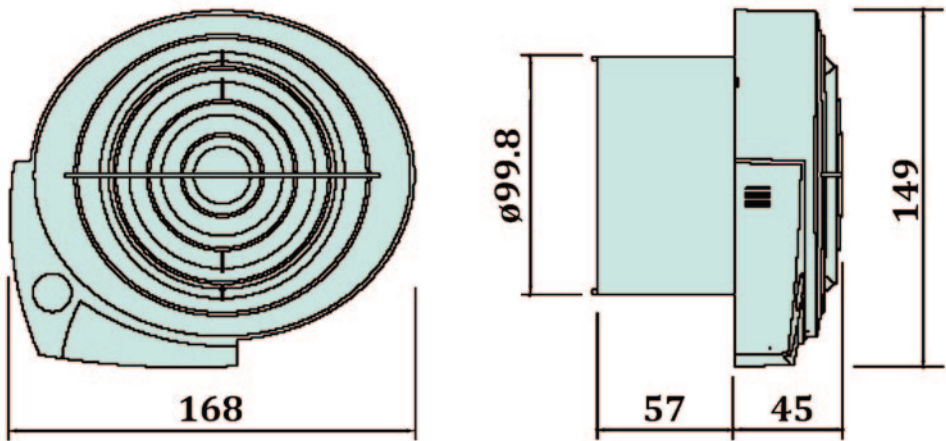


# E-Smile - ES1003

PERFORMANCE (curves are for guidance only)



DIMENSIONS - mm





## Elegance - EL100 and EL150



### Elegance - EL100 and EL150

- 2 sizes
- high performance, low carbon axial fans
- control condensation
- standard, timer, humidistat and SELV models
- powerful low profile units
- wall, ceiling or window (with additional window kit)
- low noise levels
- low running costs
- for any domestic wet room
- complies with Building Regulations





## Elegance - EL100 and EL150

### GENERAL FEATURES

- exhausts directly to the outside (through wall, or window installation with additional window kit, or with medium length ducting)
- easy and economical to install and maintain
- suitable for toilets, shower-rooms, bathrooms, utility rooms and kitchens
- **2 Speed versions** - boost speed by means of integral cord, or after removing cord with:
  - remote switch
  - PIR sensor
  - humidistat
- anti-vibration gasket
- patented anti-turbulence deflectors ensure very low noise levels and optimum performances
- energy saving ventilation
- **extremely low running costs**
- low carbon footprint
- 2 year warranty

### TECHNICAL FEATURES

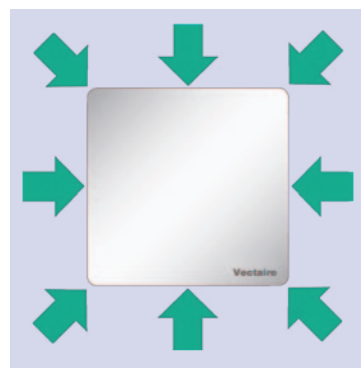
- shockproof, high quality technopolymer casing
- designed using latest wind tunnel technology and CFD simulations
- motor with thermal protection
- 43,000 hour life motors with maintenance free and long life ball bearings
- operates in ambient temperatures up to 40°C
- double insulated - no earth required
- IPX4 Splashproof rated - can safely be installed in Zones I and II

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- CE marked

### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>



### MODELS AVAILABLE - 4"/10cm

- EL100 - Standard
- EL100T - with overrun Timer
- EL100HT - with Humidistat and Timer
- EL100LV - SELV low voltage
- EL100TLV - SELV low voltage with Timer
- EL100/2AC - 2 Speed, Cord or Remote

### MODELS AVAILABLE - 6"/15cm

- EL150 - Standard
- EL150T - with overrun Timer
- EL150HT - with Humidistat and Timer
- EL150/2AC - 2 Speed, Cord or Remote

**N.B timer adjustable from 3-25 minutes**

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.

N.B These fans are NOT suitable for use with Gravity Grilles. They should be installed using either Cowls or Fixed Grilles. Only approved accessories should be used:

Wall Plates – as required

Window kits – as required

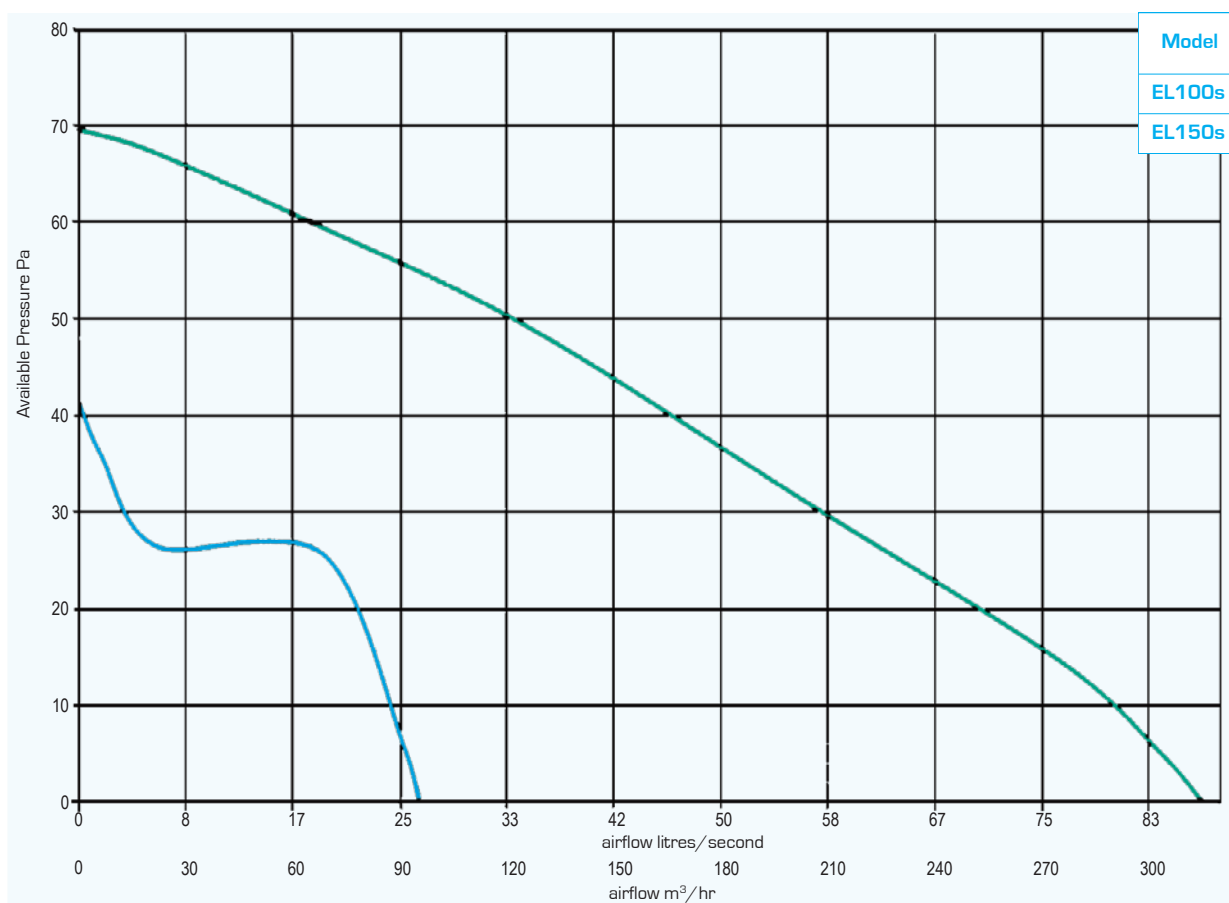
Wall terminations – all wall terminations must use the approved wall cowl or high rise kit



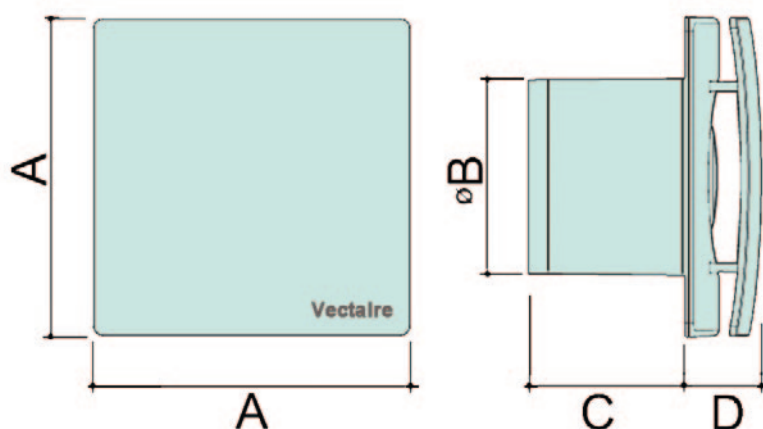
# Elegance - EL100 and EL150

TECHNICAL CHARACTERISTICS								
Model	Airflow l/sec		Pressure - Pa		Power - Watts		dBA [ @ 3m in free field ]	
	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum
EL100	25	16	40	20	14	6	31.4	27.4
EL150	87.5	50	71	15	25	13	43.9	29.5

PERFORMANCE (curves are for guidance only)



DIMENSIONS - mm



Model	EL100	EL150
A	160	200
øB	98	149
C	80	105
D	38	56
Kg	0.9	1.3

## Heatrec 1003



### Heatrec 1003

- 3 speed centrifugal fan for any domestic wet room
- energy efficient EC motors
- efficient, low energy solution to controlling condensation and pollution
- provides low level continuous ventilation
- with summer bypass and frost-stat
- up to 75% heat exchange efficiency
- choice of two low (trickle) speeds
- speed can be boosted by user
- low noise levels and running costs
- complies with Building Regulations

## Heatrec 1003

### GENERAL FEATURES

- single room heat recovery unit for new build or refurbishment
- for areas up to 40m<sup>2</sup>
- up to 75% of heat recovered
- easy to install and maintain
- for installation into walls - can be rotated to four positions
- two low (trickle) speeds
  - speed 1: 5 litres/sec
  - speed 2: 7.5 litres/sec
- boost speed (15 litres/sec) triggered by user with integral pull-cord or a remote switch
- tube heat recovery cell available in 400mm, 500mm or 600mm lengths
- heat recovery tube incorporates condensate drainage and weather louvre
- termination kit enables complete installation from inside (easy to install in high rise buildings)
- low noise levels
- low running costs
- 5 year warranty - 1 year parts and labour, 4 years parts only

### TECHNICAL FEATURES

- efficient and economical
- casing from shockproof, high quality technopolymer
- low energy EC motors
- operates in temperature up to 40°C
- easy to maintain
- filters and heat exchanger removable and washable
- IPX4 rated (SELV models IPX7)

### SUMMER BYPASS

The Heatrec 1003 has sensors which monitor the air intake and extract. When the outside temperature is comfortable and the inside ambient temperature is lower than 18°C, the air extract motor will be automatically switched off, whilst the air intake motor will continue to operate, ensuring a quick and efficient change of air inside the room. When the outside temperature is higher than 26°C, the air intake motor will be switched off to ensure ventilation without increasing the temperature.

### INTEGRAL FROST-STAT

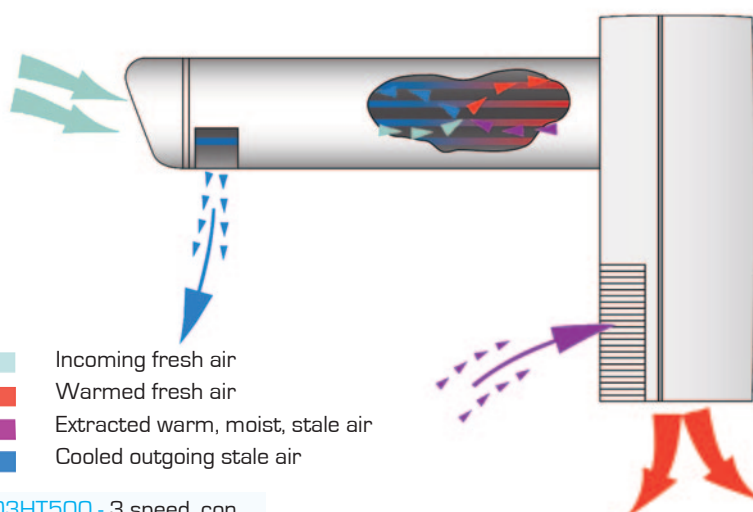
The unit is fitted with an internal thermostat, which automatically stops the air intake if there is a risk of the heat exchanger freezing up (when the outside temperature is too low) and also avoiding the intake of very cold air

### COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility)
- CE marked

### TYPICAL SPECIFICATION AVAILABLE AT

<http://www.vectaire.co.uk/downloads>



### MODELS AVAILABLE:

- **HREC1003** - 3 speed, continuous running with pull-cord, 400mm tube
  - **HREC1003T** - 3 speed, continuous running with timer and pull-cord, 400 mm tube
  - **HREC1003HT** - 3 speed, continuous running with timer, humidistat and pull-cord, 400 mm tube
  - **HREC1003HT500** - 3 speed, continuous running with timer, humidistat and pull-cord, 500 mm tube
  - **HREC1003HT600** - 3 speed, continuous running with timer, humidistat and pull-cord, 600 mm tube
- All above models available in SELV versions.  
Timer adjustable from 0-30 minutes  
Humidistat relative humidity adjustable between 40-90%.

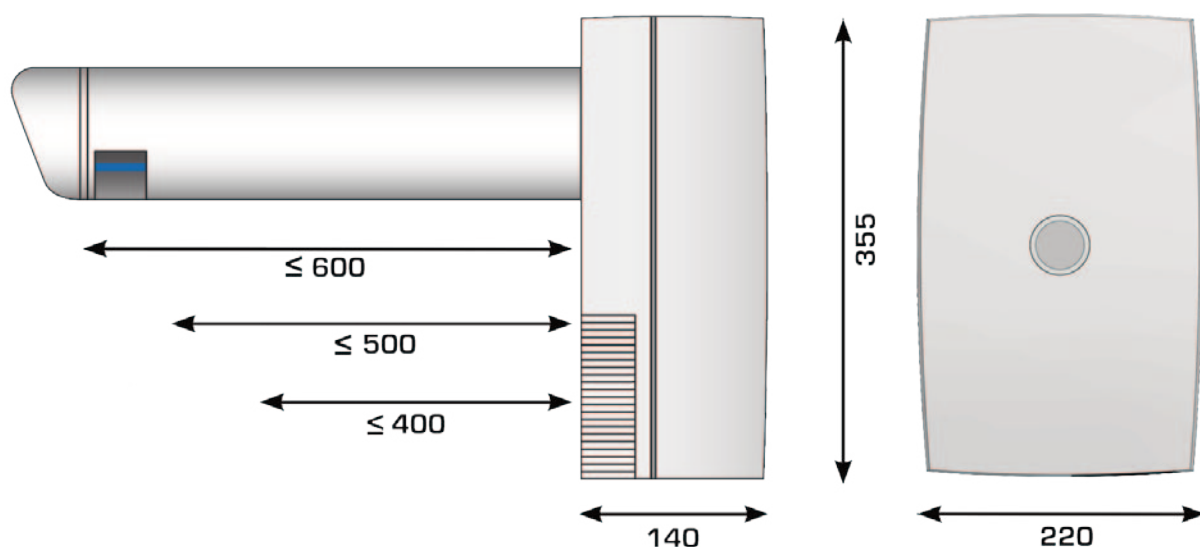
Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowl. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.

# Heatrec 1003

TECHNICAL CHARACTERISTICS									
Model	Airflow l/sec			Power - Watts			dBA (@ 3m in free field)		
	Trickle 1	Trickle 2	Boost	Trickle 1	Trickle 2	Boost	Trickle 1	Trickle 2	Boost
HREC1003	5	7.5	15	3.7	8.3	28.3	18.4	27.7	39.3

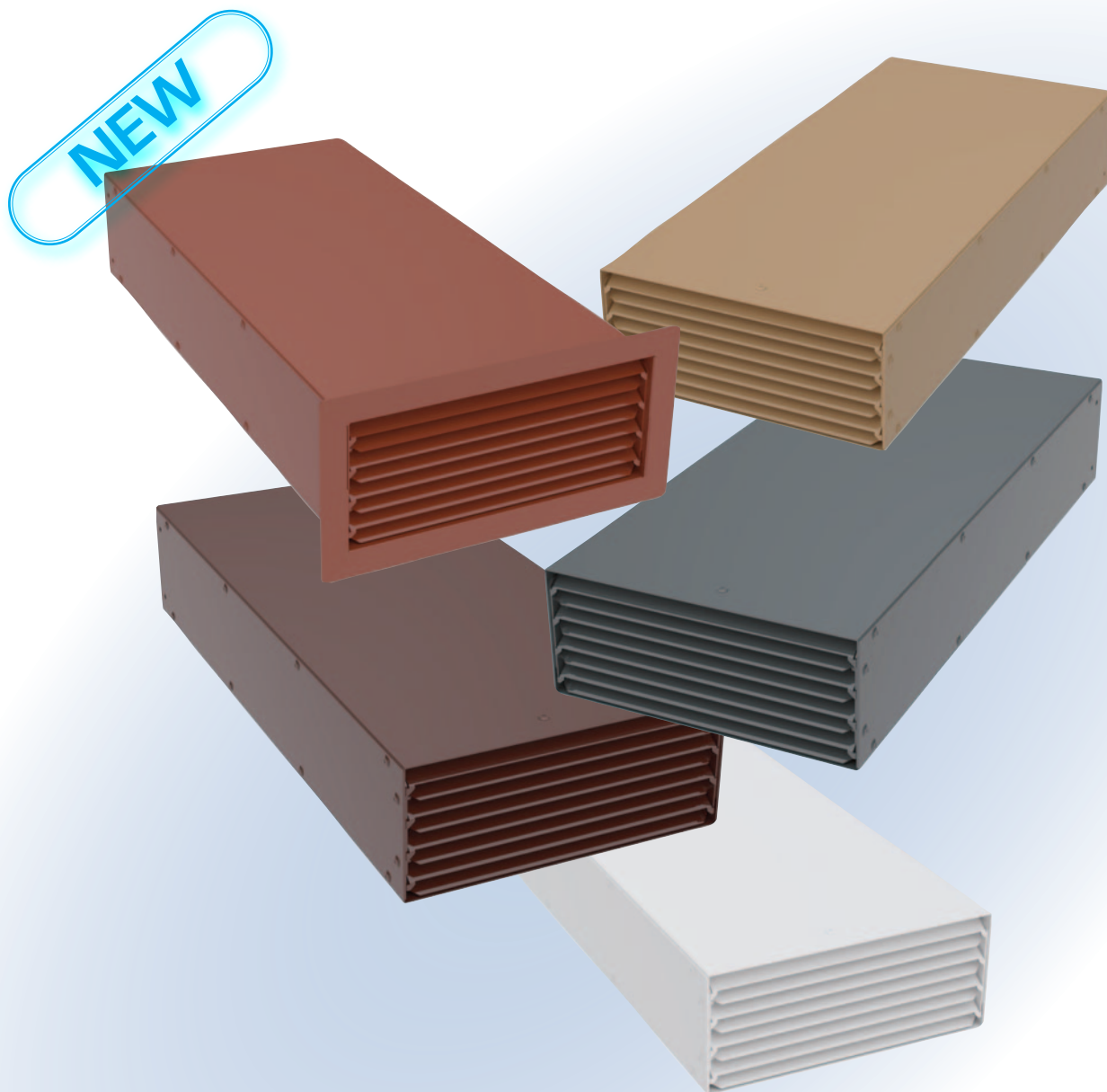
## DIMENSIONS - mm

3 models with 100mm dia duct for wall thickness up to:



Weight:  
 With 400mm tube - 3.8 kg  
 With 500mm tube - 3.9 kg  
 With 600mm tube - 4.0 kg

## FRAB



### Fire Rated Air Bricks - FRAB

- High performance non-combustible terminals designed for low resistance use with powered mechanical ventilation
- Non-combustible as set out in Approved Document B (fire safety) Volume 1: Dwellings, 2019 Edition
- Manufactured from 0.9mm electro-galvanised sheet steel, fire class A1 "no contribution to fire"
- Corrosion resistant - salt spray tested to ISO9227:2022, ASTM B117-19
- Polyester powder coating meeting EN13501-1 classification A2-s1,d0
- **FREE AREAS:**
  - 204x60 size - 11,007 mm<sup>2</sup>, 90% free area
  - 220x90 size - 18,222 mm<sup>2</sup>, 92% free area
  - 208x130 size - 24,660 mm<sup>2</sup>, 91% free area
- Complies with Approved Document F Volume 1, 2021 edition



## FRAB

### GENERAL FEATURES

- High performance non-combustible terminals designed for low resistance use with powered mechanical ventilation
- Very low airflow resistance
- Available in three sizes in 500mm and 100mm lengths
  - 204mm x 60mm
  - 220mm x 90mm
  - 208mm x 130mm
- Non-bezelled or bezelled
- Bezelled models suitable for exterior cladding
- Metal ducting available in standard 500mm length. Custom lengths available on request
- Metal straight, 45° and 90° connectors in all three sizes
- Blades integral with firebrick - therefore will not loosen
- Designed to fit into walls during building works
- Available in 5 colours:
  - brown - RAL8016
  - white - RAL9016
  - terracotta - RAL8004
  - grey - RAL7012
  - beige - RAL1001
- Custom colours on request
- Made in the UK

### TECHNICAL FEATURES

- Corrosion resistant - salt spray tested to ISO9227:2022, ASTM B117-19
- Polyester powder coating meeting EN13501-1 classification A2-s1,d0
- Non-combustible as set out in Approved Document B (fire safety) Volume 1: Dwellings, 2019 Edition
- Manufactured from 0.9mm electro-galvanised sheet steel, fire class A1 "no contribution to fire"
- **Free Areas:**
  - **204x60 size - 11,007 mm<sup>2</sup>, 90% free area**
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  - **208x130 size - 24,660 mm<sup>2</sup>, 91% free area**

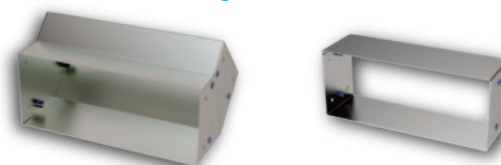
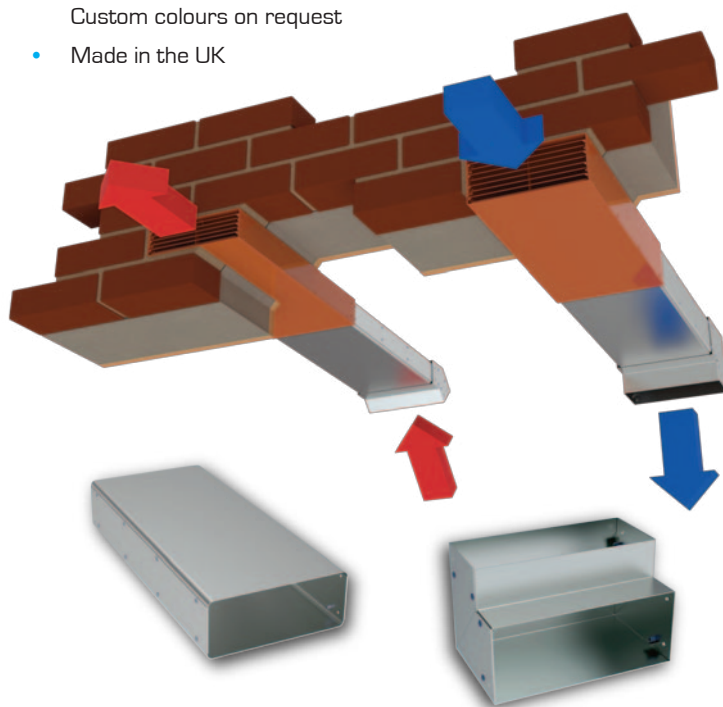
### COMPLIES WITH

- Performance tested to BS EN13141-2:2010
- Rated and tested to IPX3 against water ingress
- Corrosion resistant - salt spray tested to BS EN ISO 9227:2012
- Complies with Approved Document F Volume1, 2021 edition

### ALL MODELS REGISTERED DESIGNS:

- FRAB204x60 - Registered Design No: 6261188
- FRAB204x60x100 - Registered Design No: 6263780
- FRAB204x60B - Registered Design No: 6261189
- FRAB204x60x100B - Registered Design No: 6263781
- FRAB220x90 - Registered Design No: 6261190
- FRAB220x90x100 - Registered Design No: 6263782
- FRAB220x90B - Registered Design No: 6261191
- FRAB220x90x100B - Registered Design No: 6263783
- FRAB208x130 - Registered Design No: 6261192
- FRAB208x130x100 - Registered Design No: 6263784
- FRAB208x130B - Registered Design No: 6261193
- FRAB208x130x100B - Registered Design No: 6263785

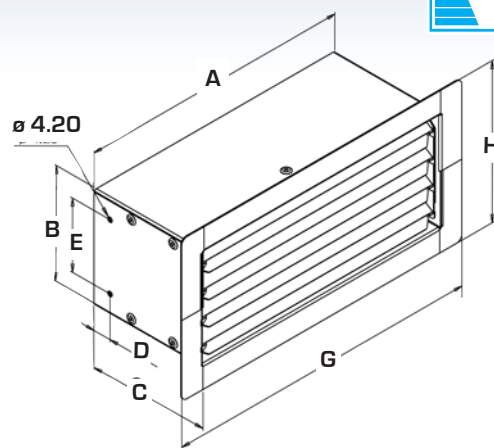
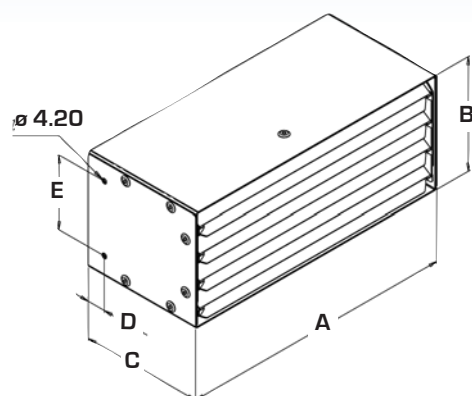
Vectaire Ltd can supply all accessories for use with these units, including air filter cassettes, silencers, fire dampers, air valves and ducting. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.



### MODELS AVAILABLE:

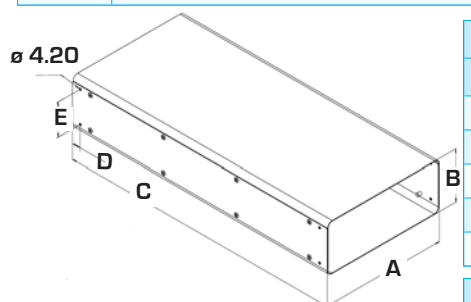
204 x 60MM SIZE	220 x 90MM SIZE	208 x 130MM SIZE	DESCRIPTION
FRAB204x60	FRAB220x90	FRAB208x130	Metal Air Brick 500mm
FRAB204x60x100	FRAB220x90x100	FRAB208x130x100	Metal Air Brick 100mm
FRAB204x60B	FRAB220x90B	FRAB208x130B	Metal Air Brick Bezelled 500mm
FRAB204x60x100B	FRAB220x90x100B	FRAB208x130x100B	Metal Air Brick Bezelled 100mm
FR204x60D	FR220x90D	FR208x130D	Duct - 500mm
FR204x60C	FR220x90C	FR208x130C	Connector - straight
FR204x60B45	FR220x90B45	FR208x130B45	Connector - 45° Bend
FR204x60B90	FR220x90B90	FR208x130B90	Connector - 90° Bend

# Dimensions



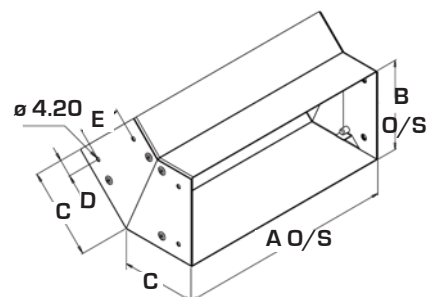
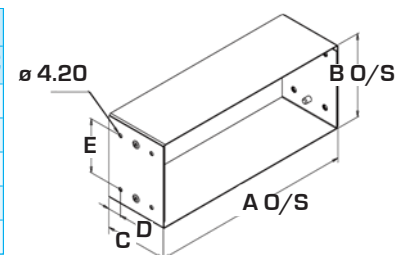
Standard and Bezzel Fire Rated Air Brick

	FRAB 204x60 & B (100mm)	FRAB 204x60 & B (500mm)	FRAB 220x90 & B (100mm)	FRAB 220x90 & B (500mm)	FRAB 208x130 & B (100mm)	FRAB 208x130 & B (500mm)
A	208.6		224.6		212.6	
B	62.8		92.8		132.8	
C	100	500	100	500	100	500
D	15		15		10	
E	30		60		75	
G	245		261		249	
H	101		131		171	



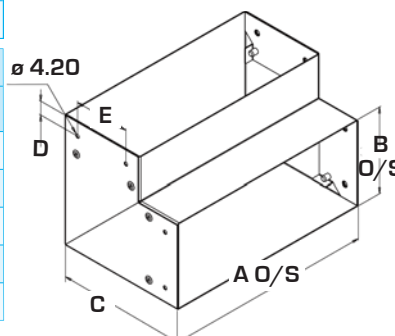
Duct - 500 mm			
	FR204x60D	FR220x90D	FR208x130D
A	204	220	208
B	60	90	130
C	500	500	500
D	15	15	20
E	30	60	75

Connector - Straight			
	FR204x60C	FR220x90C	FR208x130C
A	209	225	213
B	63	93	133
C	70	70	70
øD	15	15	10
E	30	60	75



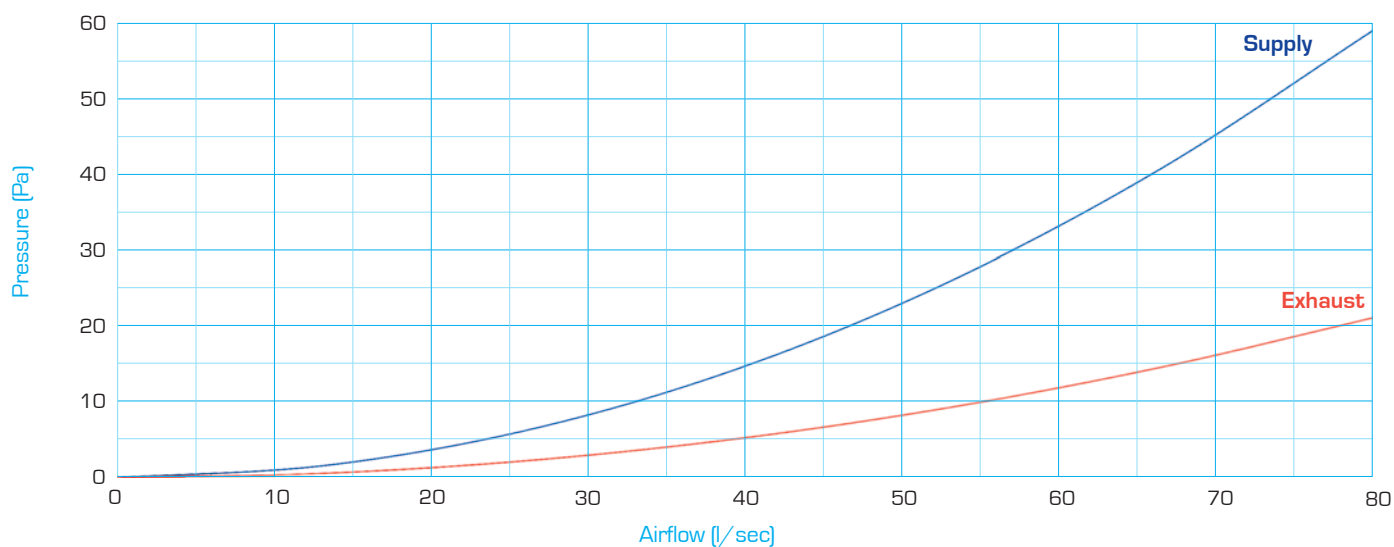
Connector - 45° Bend			
	FR204x60B45	FR220x90B45	FR208x130B4
A	209	225	213
B	63	93	133
C	66	78	95
D	15	15	10
E	30	60	75

Connector - 90° Bend			
	FR204x60B90	FR220x90B90	FR208x130B9
A	209	225	213
B	63	93	133
C	110	140	180
D	15	15	10
E	30	60	75

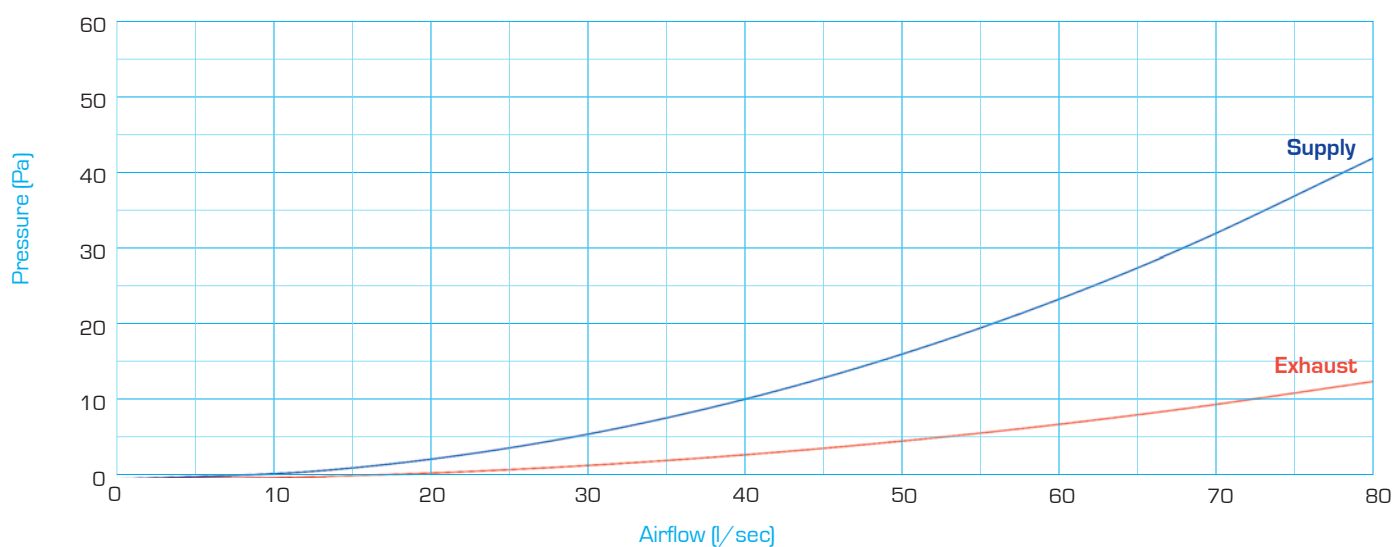


# Performance

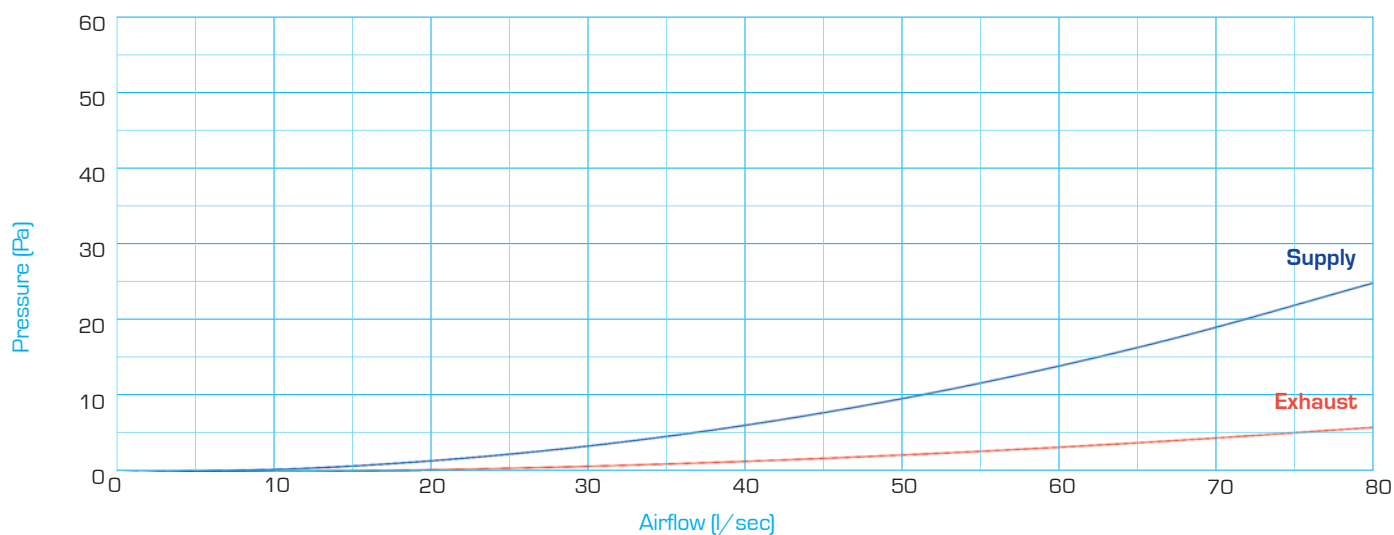
## FRAB204x60



## FRAB220x90



## FRAB208x130



# Thermal Self Seal Ducting - Rectangular and Round

## 2 sizes rectangular, 2 sizes round

- Push, click and lock system allows fixing position by one person
- Pre-moulded connection system provides added strength and stability
- Air leakage minimised
- 4 sizes, 2 rectangular and 2 round to suit any installation
- Energy saving - reduces heat transfer through ventilation duct work
- High thermal properties to reduce heat loss in ducting
- Especially for installation in unheated areas
- Helps prevent condensation on or in duct
- Larger sizes suitable for purge ventilation
- Low air resistance
- Made from Neopor® graphite impregnated expanded

polystyrene - infra red absorbers and reflectors improve thermal resistance.

- Neopor® meets thermal conductivity requirements BASF-EN13163 to help with condensation prevention
- Flame Retardant to DIN 4102 B1
- Ducting has minimum density of 25kg/m<sup>3</sup>
- Thermal conductivity of 0.03W/mK, providing minimum thermal resistance or "R" value of 0.666 m<sup>2</sup>K/W @ 20mm thickness
- Exceeds current UK Domestic Ventilation Regulations - Part F
- Joint integrity exceeds requirements in DW/143 Class A Leakage Test and DW/154 ductwork standards.
- Airflow performance independently tested by BRE

Model	Size	Box Qty
<b>THERMAL SELF SEAL FLAT DUCTING - 2M LENGTH</b>		



TSS-204-2M	204 x 60 mm	6
TSS-220-2M	220 x 90 mm	6

### THERMAL SELF SEAL FLAT DUCTING - 90° HORIZONTAL BEND



TSS-204-90HB	204 x 60 mm	6
TSS-220-90HB	220 x 90 mm	6

### THERMAL SELF SEAL FLAT DUCTING - 45° HORIZONTAL BEND



TSS-204-45HB	204 x 60 mm	6
TSS-220-45HB	220 x 90 mm	6

### THERMAL SELF SEAL FLAT DUCTING - 90° VERTICAL BEND



TSS-204-90VB	204 x 60 mm	6
TSS-220-90VB	220 x 90 mm	6

### THERMAL SELF SEAL FLAT DUCTING - 45° VERTICAL BEND



TSS-204-45VB	204 x 60 mm	6
TSS-220-45VB	220 x 90 mm	6

### THERMAL SELF SEAL FLAT DUCTING - ADAPTOR ROUND TO FLAT



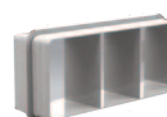
TSS-204-PL	204 x 60 mm	6
TSS-220-PL	220 x 90 mm	6

### THERMAL SELF SEAL FLAT DUCTING - "T" PIECE



TSS-204-TP	204 x 60 mm	6
TSS-220-TP	220 x 90 mm	6

### CONNECTOR - DUCT TO FITTING



TSS-204-DFCON	204 x 60 mm	6
TSS-220-DFCON	220 x 90 mm	6

### CONNECTOR - DUCT TO DUCT CONNECTOR



TSS-204-DDCON	204 x 60 mm	6
TSS-220-DDCON	220 x 90 mm	6

Model	Size	Box Qty
<b>THERMAL SELF SEAL ROUND DUCTING - 2M LENGTH</b>		



TSS-125-2M	125 mm	6
TSS-160-2M	160 mm	6

### THERMAL SELF SEAL ROUND DUCTING - 90° BEND



TSS-125-90B	125 mm	6
TSS-160-90B	160 mm	6

### THERMAL SELF SEAL ROUND DUCTING - 45° BEND



TSS-125-45B	125 mm	6
TSS-160-45B	160 mm	6

### THERMAL SELF SEAL ROUND DUCTING - "T" PIECE



TSS-125-TP	125 mm	6
TSS-160-TP	160 mm	6

### 160MM TO 150MM ADAPTOR



TSS-160-AD	160 mm	6
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### CONNECTOR - DUCT TO FITTING



TSS-125-DFCON	125 mm	6
TSS-160-DFCON	160 mm	6

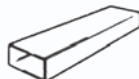
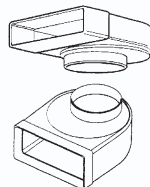
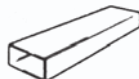

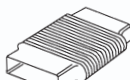

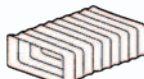
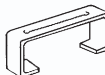




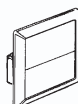
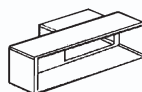



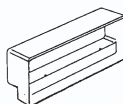
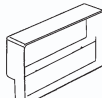

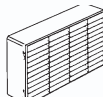

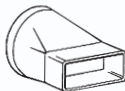

### CONNECTOR - DUCT TO DUCT



TSS-125-DDCON	125 mm	6
TSS-160-DDCON	160 mm	6

# Plastic Flat Ducting - 3 sizes

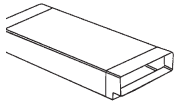
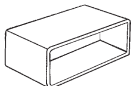
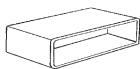

VFPD - 110x54mm: VPFD - 204x60mm: VPFDM - 220x90mm


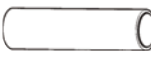
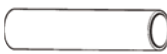
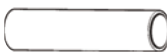







	Model	Size/Description	Box Qty		Model	Size/Description	Box Qty	
FLAT DUCTING - 1.5M LENGTH				ADAPTOR ROUND TO FLAT - VERTICAL BEND - OFFSET SPIGOT				
	VFPD	1500mm long	20		VPAVBSA4	100mm spigot	10	
	VPFDS	1500mm long	5		VPAVBSA5	125mm spigot	10	
	VPFDM	1500mm long	3		VPAVBSA6	150mm spigot	10	
FLAT DUCTING - 2M LENGTH					VPAVBM4	100mm spigot	6	
	VPFD-2M	2000mm long	10		VPAVBM5	125mm spigot	6	
	VPFDS-2M	2000mm long	5		VPAVBM6	150mm spigot	6	
	VPFDM-2M	2000mm long	2	"T" PIECE				
UNIVERSAL DUCT					VPT	110 x 54	20	
	VPFDS-UD	204 x 60	10		VPTS	204 x 60	10	
					VPTM	220 x 90	6	
CONNECTOR				RECTANGULAR FLEXIBLE DUCTING				
	VPC	110 x 54	20		VFD110/.5	110 x 54mm x .5m	1	
	VPCS	204 x 60	10		VFD110/3	110 x 54mm x 3m	1	
	VPCM	220 x 90	6		VFD204/.5	204 x 60mm x .5m	1	
MOUNTING BRACKET					VFD204/3M	204 x 60mm x 3m	1	
	VPMB	110 x 54	10		VFD220/.5	220 x 90mm x .5m	1	
	VPMB5	204 x 60	10		VFD220/3	220 x 90mm x 3m	1	
	VPMBM	220 x 90	10	WALL PLATE - FLAT CHANNEL				
90° HORIZONTAL BEND					VPAWP		10	
	VPHB	110 x 54	20		VPAWPS		10	
	VPHBS	204 x 60	10		VPAWPM		6	
	VPHBM	220 x 90	6	FIXED GRILLE WITH RECTANGULAR SPIGOT AND FLYSCREEN				
45° HORIZONTAL BEND					VPFG	W, B, COT or TC (for 110mm x 54mm duct size only)	20	
	VPHB45	110 x 54	20	GRAVITY GRILLE WITH RECTANGULAR SPIGOT				
	VPHBS45	204 x 60	10		VPGG	W, B, COT or TC (for 110mm x 54mm duct size only)	20	
	VPHBM45	220 x 90	6		AIRBRICK ADAPTOR			
ADJUSTABLE HORIZONTAL BEND					VPAB/AD	(VFPD only)	20	
	VPAHBS	204 x 60	10	AIRBRICK				
					VPAB	W, B, COT or TC	20	
90° VERTICAL BEND				ADAPTOR - 204MM x 60MM ('S') TO 220MM x 90MM ('M')				
	VPVB	110 x 54	20		VPAS-M	W, B, COT or TC	10	
	VPVBS	204 x 60	10		DOUBLE AIRBRICK ADAPTOR			
	VPVBM	220 x 90	6			VPDAB/ADM	Megaduct only	10
45° VERTICAL BEND				DOUBLE AIRBRICK				
	VPVB45	110 x 54	20		VPDAB	W, B, COT or TC	20	
	VPVBS45	204 x 60	10		AIRBRICK COWL			
	VPVBM45	220 x 90	6			PLT-DAB-10-VWCB		6
ADAPTOR ROUND TO FLAT								
	VPA	100mm dia spigot	20					
	VPAS	125mm dia spigot	10					
	VPAM	150mm dia spigot	6					
ADAPTOR ROUND TO FLAT - VERTICAL BEND								
	VPAVB	100mm dia spigot	20					
	VPAVBS4	100mm dia spigot	10					
	VPAVBS5	125mm dia spigot	10					
	VPAVBS6	150mm dia spigot	10					

White = W: Brown = B: Beige = COT: Terracotta = TC

# Ducting and Ancillaries



	Model	Size/Description	Box Qty
<b>SILENCER</b>			
	VPFDS-SIL.5	204 x 60mm x .5m	1
	VPFDM-SIL.5	220 x 90mm x .5m	1
<b>INTUMESCENT DUCT SLEEVES FOR VFDP</b>			
	VPFD-DS	110 x 54mm	1
	VPFDS-DS	204 x 60mm	1
	VPFDM-DS	220 x 90mm	1
<b>INTUMESCENT FIRE SLEEVE</b>			
	FS204/100	204 x 60 x 100mm	1
<b>INTUMESCENT FIRE DAMPER</b>			
	FD4INT	4"/10cm	1
	FD5INT	5"/12cm	1
	FD6INT	6"/15cm	1
<b>FIRE DAMPER - FUSIBLE LINK</b>			
	FD4	4"/10cm	1
	FD5	5"/12cm	1
	FD6	6"/15cm	1
<b>PLASTIC FLEXIBLE DUCTING</b>			
	VFD4/3	4"/10cm 3m	12
	VFD4/6	4"/10cm 6m	6
	VFD4/10	4"/10cm 10m	2
	VFD5/3	5"/12cm 3m	6
	VFD5/6	5"/12cm 6m	1
	VFD6/3	6"/15cm 3m	4
	VFD6/6	6"/15cm 6m	1
	VFD6/10	6"/15cm 10m	1
	VFD8/3	8"/20cm 3m	1
	VFD8/6	8"/20cm 6m	1
	VFD10/3	10"/25cm 3m	1
	VFD10/6	10"/25cm 6m	1
	VFD315/3	12"/31.5cm 3m	1
	VFD315/6	12"/31.5cm 6m	1
	VFD315/10	12"/31.5cm 10m	1
<b>INSULATED ALUMINIUM FLEXIBLE DUCTING</b>			
	VFD4/10INS	4"/10cm 10m	1
	VFD5/10INS	5"/12cm 10m	1
	VFD6/10INS	6"/15cm 10m	1
	VFD8/10INS	8"/15cm 10m	1
<b>ALUMINIUM FLEXIBLE DUCTING</b>			
	VFD4/10AL	4"/10cm 10m	1
	VFD5/10AL	5"/12cm 10m	1
	VFD6/10AL	6"/15cm 10m	1
<b>ACOUSTIC ALUMINIUM FLEXIBLE DUCTING</b>			
	VFD4/10AC	4"/10cm 10m	1
	VFD5/10AC	5"/12cm 10m	1
	VFD6/10AC	6"/15cm 10m	1
	VFD8/10AC	8"/15cm 10m	1

	Model	Size/Description	Box Qty
<b>TELESCOPIC DUCT - 8"-14"</b>			
	VTD10-200	4"/10cm	10
	VTD12-200	5"/12cm	10
	VTD15-200	6"/15cm	10
<b>RIGID DUCT - 14'/350MM</b>			
	VRD4-350	4"/10cm	10
	VRD5-350	5"/12cm	10
	VRD6-350	6"/15cm	10
<b>RIGID DUCT - 1000MM</b>			
	VRD4-1M	4"/10cm	3
	VRD5-1M	5"/12cm	3
	VRD6-1M	6"/15cm	3
<b>RIGID DUCT - 2000MM</b>			
	VRD4-2M	4"/10cm	3
	VRD5-2M	5"/12cm	3
	VRD6-2M	6"/15cm	3
<b>RIGID DUCT CONNECTOR</b>			
	VRD4/C	4"/10cm	10
	VRD5/C	5"/12cm	10
	VRD6/C	6"/15cm	10
<b>RIGID DUCT FIXING BRACKET</b>			
	VRD4/FB	4"/10cm	10
	VRD5/FB	5"/12cm	10
	VRD6/FB	6"/15cm	10
<b>RIGID DUCT T PIECE</b>			
	VRD4/T	4"/10cm	10
	VRD5/T	5"/12cm	10
	VRD6/T	6"/15cm	10
<b>RIGID DUCT Y PIECE</b>			
	VRD4/Y	4"/10cm	10
<b>RIGID DUCT 90° BEND</b>			
	VRDB90/4	4"/10cm	10
	VRDB90/5	5"/12cm	10
	VRDB90/6	6"/15cm	10
<b>RIGID DUCT 45° BEND</b>			
	VRDB45/4	4"/10cm	10
	VRDB45/5	5"/12cm	10
<b>ROUND GRILLE WITH FLYSCREEN</b>			
	T10	4"/10cm	10
<b>CIRCULAR REDUCER</b>			
	RED4/3P	10cm-7.5cm	10
	RED5/4P	12cm-10cm	10
	RED6/4P	15cm-10cm	10
	RED6/5P	15cm-12cm	10
	RED8/6P	20cm-15cm	1
<b>TAPE/ADHESIVES</b>			
	PVCDT	PVC Duct Tape	1
	DDSeal	Duct Seal	1
	MAS87	Intumescent Mastic	1




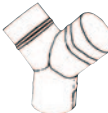
# Ducting and Ancillaries




	Model	Size/Description	Box Qty
<b>ADAPTOR PLATES</b>	PLT/EL	Elegance	1
	PLT/ELX	Elix	1
	PLT/ES1003	E-Smile	1
	PLT/ES1003S12	E-Smile	1
	PLT/ES1003/SIL	E-Smile	1
	PLT/ECO10	ECO	1
	PLT/ECO103030	ECO	1


<b>WALL VENT KITS</b>	AWVK10/4	4"/10cm	10
	AWVK12/5	5"/12cm	10
	AWVK15/6	6"/15cm	10

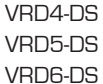
	<b>METAL DUCT JOINING PIECE</b>		
	DJP4	4"/10cm	1
	DJP5	5"/12cm	1
	DJP6	6"/15cm	1
	DJP8	8"/20cm	1
	DJP10	10"/25cm	1
	DJP12	12"/30cm	1


	<b>METAL "Y" SECTION</b>		
	YP4	4"/10cm	1
	YP5	5"/12cm	1
	YP6	6"/15cm	1
	YP8	8"/20cm	1


	<b>METAL "T" SECTION</b>		
	TP4	4"/10cm	1
	TP5	5"/12cm	1
	TP6	6"/15cm	1
	TP8	8"/20cm	1


	<b>METAL AIR VALVES WITH FIRE DAMPER</b>		
	VAV4+FD	4"/10cm	1
	VAV5+FD	5"/12cm	1
	VAV6+FD	6"/15cm	1


	<b>WORM DRIVE CLIPS</b>		
	WDC4	4"/10cm	1
	WDC5	5"/12cm	1
	WDC6	6"/15cm	1
	WDC8	8"/20cm	1
	WDC10	10"/25cm	1
	WDC12/16	12"-16"	1


	<b>DUCT SLEEVE</b>		
	VRD4-DS	4"/10cm	1
	VRD5-DS	5"/12cm	1
	VRD6-DS	6"/15cm	1

	<b>DUCT JOINING</b>		
	DW25N	Duct Wrap-1.2mx13m	1
	PVCDT	PVC Duct Tape	1
	DT75	Aluminium Foil Duct Tape	1
	DDSeal	Duct Seal	1

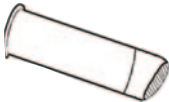
	<b>WALL COWLS</b>		
	VWC	4"-6"	1
	VWC4	4"/10cm	1
	VWC5	5"/12cm	1
	VWC6	6"/15cm	1

	<b>PLASTIC FIXED GRILLES</b>		
	FG4	4"/10cm	1
	FG5	5"/12cm	1
	FG6	6"/15cm	1


	<b>PLASTIC FIXED GRILLES WITH FLYSCREEN</b>		
	FG4F	4"/10cm	1
	FG5F	5"/12cm	1
	FG6F	6"/15cm	1


	<b>PLASTIC GRAVITY GRILLES</b>		
	GG4	4"/10cm	1
	GG5	5"/12cm	1
	GG6	6"/15cm	1


N.B plastic grilles available in: White = W: Brown = B: Beige - COT: Terracotta = TC. Grilles will be supplied in white unless requested otherwise at time of ordering

	<b>IN WALL ATTENUATORS</b>		
	VIWA4	4"/10cm - with grille	1
	VIWA4C	4"/10cm - with cowl	1
	VIWA4QF	4"/10cm - with quick fit cowl	1
	VIWA5	5"/12cm - with grille	1
	VIWA5C	5"/12cm - with cowl	1
	VIWA5QF	5"/12cm - with quick fit cowl	1

	<b>WALL TERMINATION KITS</b>		
	VWTK4	4"/10cm-high rise-wall 350mm duct-internal installation	1
	VWTK-Gas	4"/10cm only for VWTK4	1
	VWTK6	6"/15cm - as VWTK4	1
	VWTC4	4"/10cm-round wall cowl for internal installation	1
	VWTC6	6"/15cm - as VWTC4	1

	<b>ROOF TERMINATION KITS</b>		
	RTK4	4"/10cm - Kit	1
	RT4	4"/10cm - Cowl	1

	<b>PLASTIC AIR VALVES</b>		
	VAV4	4"/10cm	1
	VAV5	5"/12cm	1
	VAV6	6"/15cm	1

	<b>CONDENSATION TRAPS</b>		
	VCT4	4"/10cm	1
	VCT4P	4"/10cm- with overflow	1
	VCT5P	5"/12cm- with overflow	1
	VCT6P	6"/15cm- with overflow	1

# VENTILATION FOR THE BUILT ENVIRONMENT

low energy  
environmentally friendly  
economical

## **Vectaire Ltd**

Lincoln Road  
Cressex Business Park  
High Wycombe  
Buckinghamshire  
HP12 3RH

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

Email: [sales@vectaire.co.uk](mailto:sales@vectaire.co.uk)  
Web: [www.vectaire.co.uk](http://www.vectaire.co.uk)





## Cool Breeze



reducing  
the risk of  
over-heating  
in residential  
properties



# Cool Breeze



The **Cool Breeze** has been designed to provide an effective solution for mitigating overheating in residential properties, particularly during summer months. It meets the standards used in **CIBSE TM59** assessments and **Approved Document O** of the Building Regulations.

Designed for seamless integration with the **Vectaire Maxi MVHR** range, the **Cool Breeze** offers a compact, energy-efficient, and compliant approach to indoor temperature regulation.

The **self-contained, sealed-for-life system**, delivers up to **4.1 kW of total cooling capacity** without the need for an external condenser.

The **Cool Breeze** automatically senses the room temperature and that of the incoming fresh air to determine when cooling is required.

It removes heat from the supply air allowing the MVHR to distribute the cooled air throughout the property, providing a consistently comfortable indoor environment for residents.

The Vectaire range of MVHRs has been designed to ensure good indoor air quality in every type of domestic environment. They comply with UK Building Regulations for mechanical ventilation with heat recovery.

The system is ideally suited for use in new-build and retrofit applications where regulatory compliance and system efficiency are critical.

## HOW THE COOL BREEZE WORKS



above temperatures for reference only



### COOL BREEZE FEATURES

- Up to 4.1 kW of total cooling provided
- Fresh air supply is lowered by up to 20°C
- Uses R290 - eco friendly, natural refrigerant - over 225 times more environmentally friendly than R32
- **COP up to 4.3**
- **GWP Rating 3**
- **EER up to 3.2**
- Automatic control of supply temperature via integral sensor - no false activation from poorly sited external thermostat
- Optional manual override for user preference
- Universal handing via intelligent software
- Very quiet integral condenser
- Front access for servicing
- Wall or floor installation (with appropriate wall bracket or floor stand)

### MAXI MVHR FEATURES

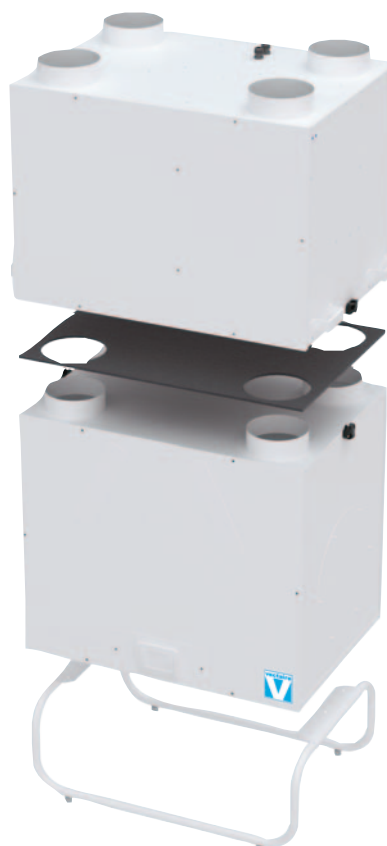
- High quality, energy efficient EC motors with low specific fan power
- 92% efficient counter-flow heat exchanger
- Very low noise levels
- Enhanced acoustic option available
- Fully automatic summer bypass
- Intelligent software for independent motor control
- 0-10V connections can be used for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- Tool free front filter access
- External pre-heater option
- Passive House Certified option
- **Manufactured in the UK**
- **Cool Breeze Registered Design**

### INSTALLATION OPTIONS

#### Wall



#### Floor





## COOLING DATA

External Temperature 28°C		Airflow l/sec					
Internal Temp		60	70	80	90	100	110
23°C	Combined Cooling Power (kW)	1.30	1.48	1.65	1.78	1.90	2.03
	Supply Air °C	10.1	10.6	11.0	11.7	12.3	12.8
	Total Cooling Power @ 50%RH (kW)	1.43	1.62	1.81	1.96	2.09	2.23
24°C	Combined Cooling Power (kW)	1.25	1.43	1.60	1.73	1.85	1.98
	Supply Air °C	10.8	11.2	11.5	12.1	12.7	13.1
	Total Cooling Power @ 50%RH (kW)	1.37	1.57	1.76	1.90	2.03	2.18
25°C	Combined Cooling Power (kW)	1.22	1.40	1.57	1.70	1.82	1.93
	Supply Air °C	11.2	11.5	11.8	12.4	13.0	13.5
	Total Cooling Power @ 50%RH (kW)	1.34	1.54	1.72	1.87	1.99	2.12
26°C	Combined Cooling Power (kW)	1.20	1.37	1.53	1.66	1.78	1.89
	Supply Air °C	11.5	11.9	12.2	12.8	13.3	13.8
	Total Cooling Power @ 50%RH (kW)	1.32	1.50	1.68	1.82	1.95	2.08

External Temperature 30°C		Airflow l/sec					
Internal Temp		60	70	80	90	100	110
23°C	Combined Cooling Power (kW)	1.43	1.63	1.83	1.99	2.14	2.28
	Supply Air °C	10.3	10.7	11.1	11.7	12.3	12.9
	Total Cooling Power @ 50%RH (kW)	1.57	1.80	2.01	2.19	2.35	2.51
24°C	Combined Cooling Power (kW)	1.39	1.58	1.77	1.93	2.08	2.22
	Supply Air °C	10.9	11.3	11.7	12.3	12.8	13.3
	Total Cooling Power @ 50%RH (kW)	1.52	1.74	1.95	2.12	2.29	2.44
25°C	Combined Cooling Power (kW)	1.36	1.55	1.72	1.88	2.02	2.16
	Supply Air °C	11.2	11.7	12.2	12.8	13.3	13.8
	Total Cooling Power @ 50%RH (kW)	1.50	1.70	1.89	2.06	2.22	2.37
26°C	Combined Cooling Power (kW)	1.34	1.52	1.69	1.83	1.96	2.09
	Supply Air °C	11.5	12.0	12.5	13.2	13.8	14.3
	Total Cooling Power @ 50%RH (kW)	1.48	1.68	1.86	2.02	2.15	2.30

External Temperature 32°C		Airflow l/sec					
Internal Temp		60	70	80	90	100	110
23°C	Combined Cooling Power (kW)	1.50	1.71	1.90	2.06	2.21	2.38
	Supply Air °C	11.3	11.9	12.4	13.1	13.7	14.2
	Total Cooling Power @ 50%RH (kW)	1.65	1.88	2.08	2.27	2.43	2.61
24°C	Combined Cooling Power (kW)	1.46	1.67	1.88	2.04	2.19	2.34
	Supply Air °C	11.9	12.3	12.6	13.3	13.9	14.4
	Total Cooling Power @ 50%RH (kW)	1.60	1.84	2.06	2.24	2.41	2.57
25°C	Combined Cooling Power (kW)	1.44	1.65	1.85	2.01	2.15	2.30
	Supply Air °C	12.1	12.5	12.9	13.6	14.2	14.7
	Total Cooling Power @ 50%RH (kW)	1.59	1.82	2.03	2.21	2.37	2.53
26°C	Combined Cooling Power (kW)	1.42	1.62	1.81	1.97	2.12	2.26
	Supply Air °C	12.4	12.9	13.3	13.9	14.5	15.1
	Total Cooling Power @ 50%RH (kW)	1.56	1.78	1.99	2.17	2.33	2.48



# Mitigating over-heating

## Cool Breeze



### COOLING DATA cont

External Temperature 34°C		Airflow l/sec					
Internal Temp		60	70	80	90	100	110
23°C	Combined Cooling Power (kW)	1.60	1.83	2.04	2.23	2.41	2.59
	Supply Air °C	11.9	12.4	12.9	13.5	14.1	14.6
	Total Cooling Power @ 50%RH (kW)	1.76	2.01	2.24	2.45	2.65	2.84
24°C	Combined Cooling Power (kW)	1.58	1.80	2.00	2.19	2.37	2.56
	Supply Air °C	12.2	12.8	13.3	13.9	14.4	14.8
	Total Cooling Power @ 50%RH (kW)	1.74	1.98	2.20	2.41	2.61	2.81
25°C	Combined Cooling Power (kW)	1.56	1.79	2.01	2.18	2.32	2.51
	Supply Air °C	12.5	12.9	13.2	14.0	14.8	15.2
	Total Cooling Power @ 50%RH (kW)	1.72	1.97	2.21	2.39	2.55	2.76
26°C	Combined Cooling Power (kW)	1.54	1.76	1.97	2.13	2.29	2.46
	Supply Air °C	12.8	13.3	13.7	14.4	15.1	15.5
	Total Cooling Power @ 50%RH (kW)	1.69	1.93	2.16	2.35	2.51	2.71

### TECHNICAL DATA

FLC - Amps	Power - Watts	Max Cooling Capacity - Kilowatts
4.8	700	4.1

SOUND DATA *		Sound Power Levels, $L_W$ - dB-Octave Bands Frequency Hz								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% 120 l/sec	Extract	52	57	61	58	59	58	55	50	43
	Supply	57	62	66	63	64	63	60	55	
	Breakout	67.6	38.4	44.1	35.5	29.3	29.5	19.6	11.8	
80% 100 l/sec	Extract	48	53	55	53	54	52	49	42	42
	Supply	53	58	60	58	59	57	54	47	
	Breakout	67.3	38.1	41.3	30.3	25.7	24.6	14.4	9.4	
60% 80 l/sec	Extract	42	47	48	46	47	45	40	32	41
	Supply	47	52	53	51	52	50	45	37	
	Breakout	67.1	36.2	33.6	24.3	20.8	19.6	8.3	8.2	

\* data from our own laboratory

# Mitigating over-heating

## Cool Breeze



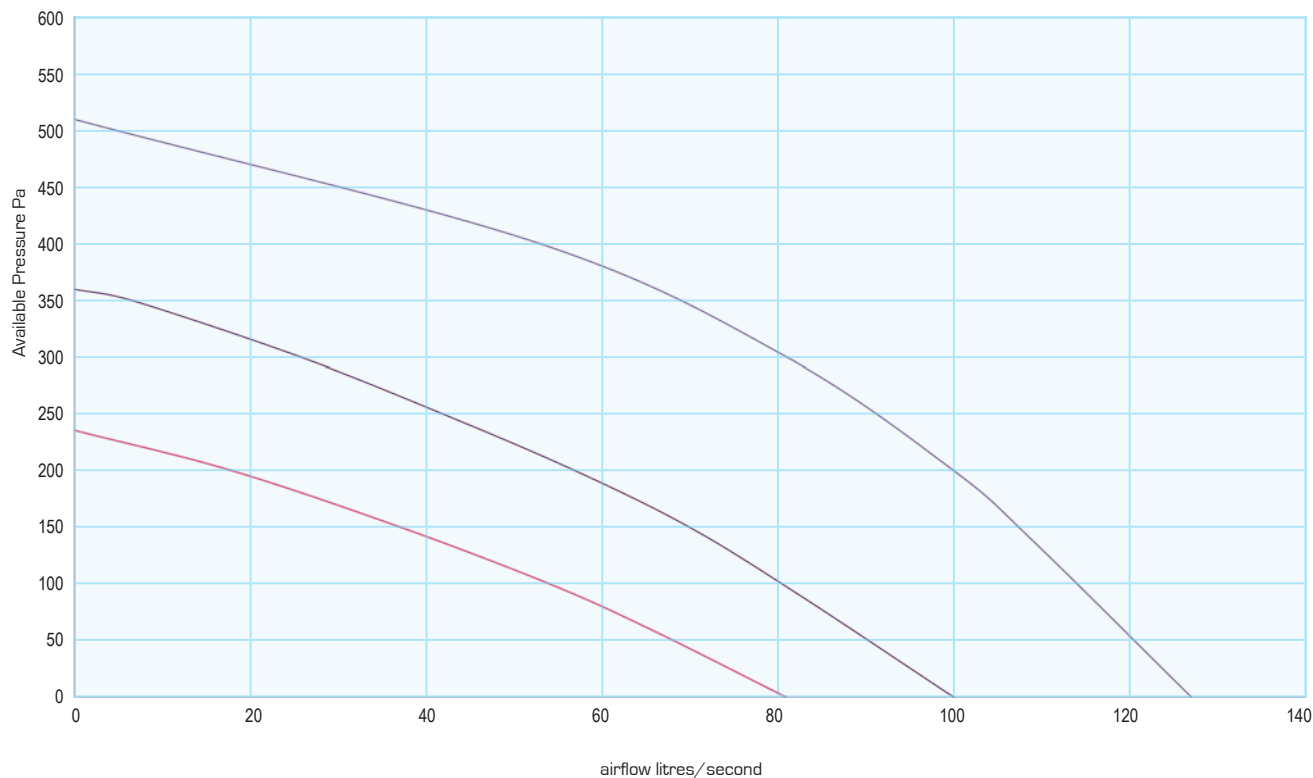
### MAXI - RESULTS for SAP CALCULATIONS

ENERGY LEVEL PERFORMANCE - using rigid ducting only

	2009 Data		2012 Data		SAP 10 Data	
Exhaust Terminal Configuration	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.43	92%	0.45	92%	0.45	92%
Kitchen + 2 additional wet rooms	0.40	92%	0.47	92%	0.47	92%
Kitchen + 3 additional wet rooms	0.42	92%	0.54	91%	0.54	91%
Kitchen + 4 additional wet rooms	0.48	91%	0.66	90%	0.66	90%
Kitchen + 5 additional wet rooms	0.55	91%	0.80	90%	0.80	90%
Kitchen + 6 additional wet rooms	0.63	90%	0.99	89%	0.99	89%
Kitchen + 7 additional wet rooms	0.76	90%	1.21	89%	1.21	89%

Figures at minimum flow rate conditions

### COOL BREEZE PERFORMANCE (curves are for guidance only)

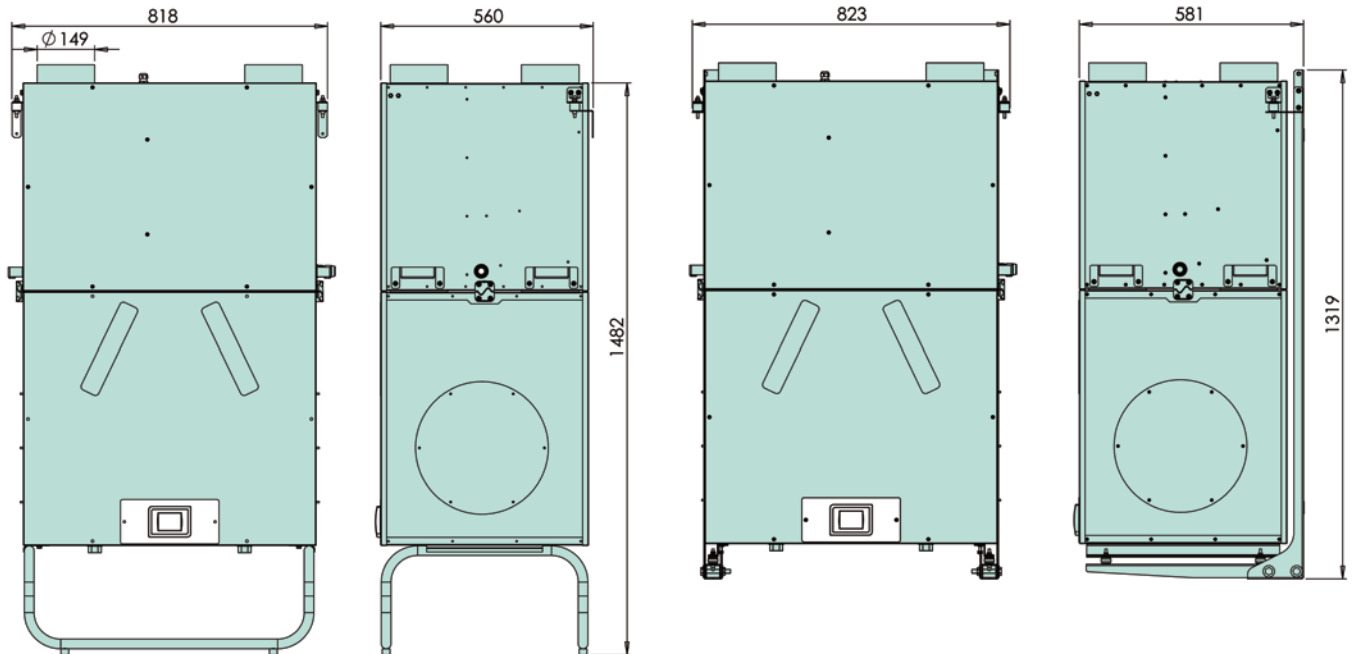


Mitigating over-heating

## Cool Breeze



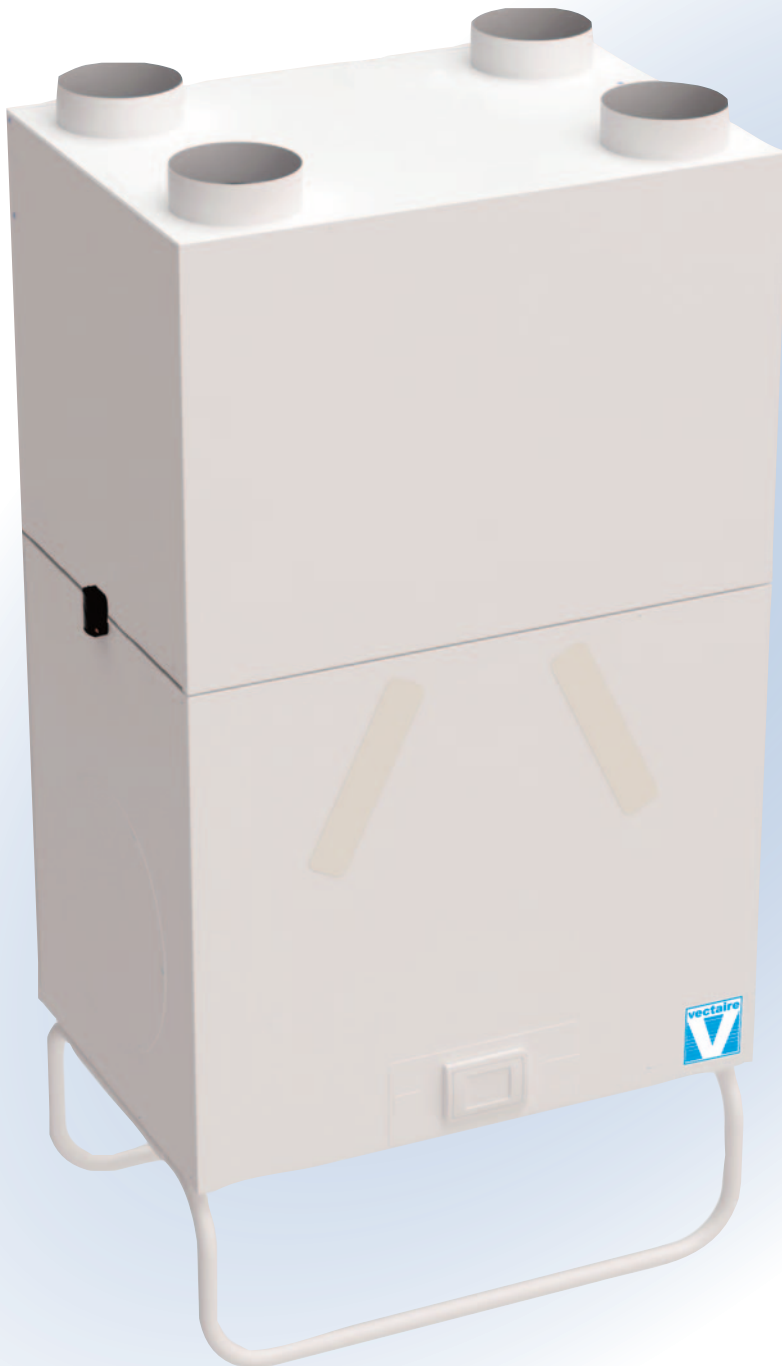
### COOL BREEZE DIMENSIONS with MAXI - mm



Cooling Unit Weight: 58 kgs  
Maxi Weight: 37 kgs  
Maxi-AT Weight: 42 kgs



## Cool Breeze Plus



reducing  
the risk of  
over-heating  
in residential  
properties



# Cool Breeze Plus



The **Cool Breeze Plus** has been designed to provide an effective solution for mitigating overheating in larger residential properties, particularly during summer months. It meets the standards used in **CIBSE TM59** assessments and **Approved Document O** of the Building Regulations.

Designed for seamless integration with the **Vectaire Maxi Plus MVHR** range, the **Cool Breeze Plus** offers a compact, energy-efficient, and compliant approach to indoor temperature regulation.

The **self-contained, sealed-for-life system**, delivers up to **4.3 kW of total cooling capacity** without the need for an external condenser.

The **Cool Breeze Plus** automatically senses the room temperature and that of the incoming fresh air to determine when cooling is required.

It removes heat from the supply air allowing the MVHR to distribute the cooled air throughout the property, providing a consistently comfortable indoor environment for residents.

The Vectaire range of MVHRs has been designed to ensure good indoor air quality in every type of domestic environment. They comply with UK Building Regulations for mechanical ventilation with heat recovery.

The system is ideally suited for use in new-build and retrofit applications where regulatory compliance and system efficiency are critical.

## HOW THE COOL BREEZE PLUS WORKS



above temperatures for reference only



## COOL BREEZE PLUS FEATURES

- Up to 4.3 kW of total cooling provided
- Fresh air supply is lowered by up to 20°C
- Uses R290 - eco friendly, natural refrigerant - over 225 times more environmentally friendly than R32
- **COP up to 6.5**
- **GWP Rating 3**
- **EER up to 4.6**
- Automatic control of supply temperature via integral sensor - no false activation from poorly sited external thermostat
- Optional manual override for user preference
- Universal handing via intelligent software
- Very quiet integral condenser
- Front access for servicing
- Wall or floor installation (with appropriate wall bracket or floor stand)

## MAXI PLUS MVHR FEATURES

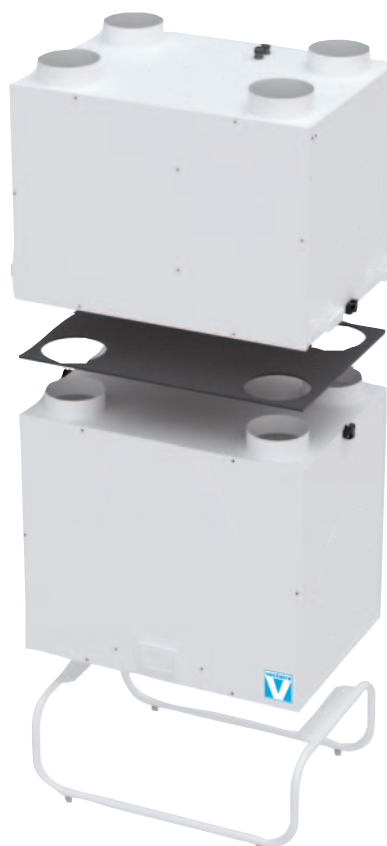
- High quality, energy efficient EC motors with low specific fan power
- 89% efficient counter-flow heat exchanger
- Very low noise levels
- Enhanced acoustic option available
- Fully automatic summer bypass
- Intelligent software for independent motor control
- 0-10V connections can be used for:
  - BMS - for remote motor shut-off
  - CO<sub>2</sub> detector
  - home automation system
- Tool free front filter access
- External pre-heater option
- Passive House Certified option
- **Manufactured in the UK**
- **Cool Breeze Registered Design**

## INSTALLATION OPTIONS

### Wall



### Floor







## COOLING DATA

External Temperature 27°C		Airflow l/sec								
Internal Temp		80	90	100	110	120	130	140	150	160
23°C	Combined Cooling Power (kW)	1.39	1.52	1.65	1.78	1.92	2.04	2.15	2.23	2.30
	Supply Air °C	12.6	13.0	13.4	13.6	13.8	14.1	14.3	14.7	15.1
	Total Cooling Power @ 50%RH (kW)	1.76	1.93	2.08	2.26	2.43	2.58	2.72	2.83	2.92
24°C	Combined Cooling Power (kW)	1.36	1.48	1.60	1.74	1.89	1.99	2.08	2.16	2.23
	Supply Air °C	13.0	13.4	13.8	13.9	14.0	14.4	14.7	15.1	15.5
	Total Cooling Power @ 50%RH (kW)	1.72	1.87	2.02	2.21	2.39	2.52	2.64	2.73	2.82
25°C	Combined Cooling Power (kW)	1.32	1.45	1.57	1.69	1.80	1.90	2.00	2.07	2.13
	Supply Air °C	13.4	13.7	14.0	14.3	14.6	14.9	15.2	15.6	16.0
	Total Cooling Power @ 50%RH (kW)	1.67	1.83	1.99	2.14	2.28	2.41	2.53	2.62	2.70
26°C	Combined Cooling Power (kW)	1.31	1.43	1.54	1.63	1.71	1.84	1.97	2.01	2.03
	Supply Air °C	13.5	13.9	14.3	14.8	15.2	15.3	15.4	16.0	16.5
	Total Cooling Power @ 50%RH (kW)	1.65	1.81	1.95	2.06	2.17	2.33	2.49	2.54	2.57
27°C	Combined Cooling Power (kW)	1.28	1.40	1.51	1.60	1.67	1.75	1.83	1.88	1.92
	Supply Air °C	13.8	14.2	14.5	15.0	15.5	15.9	16.2	16.7	17.1
	Total Cooling Power @ 50%RH (kW)	1.62	1.77	1.91	2.02	2.11	2.22	2.32	2.38	2.43

External Temperature 28°C		Airflow l/sec								
Internal Temp		80	90	100	110	120	130	140	150	160
23°C	Combined Cooling Power (kW)	1.44	1.61	1.78	1.90	2.02	2.14	2.25	2.35	2.44
	Supply Air °C	13.1	13.2	13.3	13.7	14.1	14.4	14.7	15.1	15.4
	Total Cooling Power @ 50%RH (kW)	1.83	2.04	2.25	2.41	2.55	2.71	2.85	2.98	3.09
24°C	Combined Cooling Power (kW)	1.43	1.60	1.75	1.87	1.97	2.08	2.17	2.28	2.38
	Supply Air °C	13.2	13.4	13.5	14.0	14.4	14.8	15.2	15.5	15.7
	Total Cooling Power @ 50%RH (kW)	1.81	2.02	2.22	2.37	2.50	2.63	2.74	2.88	3.01
25°C	Combined Cooling Power (kW)	1.39	1.55	1.69	1.81	1.92	2.01	2.10	2.20	2.28
	Supply Air °C	13.6	13.8	14.0	14.4	14.8	15.2	15.6	15.9	16.2
	Total Cooling Power @ 50%RH (kW)	1.76	1.96	2.14	2.29	2.43	2.55	2.66	2.78	2.89
26°C	Combined Cooling Power (kW)	1.36	1.51	1.65	1.75	1.84	1.93	2.02	2.11	2.19
	Supply Air °C	13.9	14.2	14.4	14.9	15.3	15.7	16.1	16.4	16.7
	Total Cooling Power @ 50%RH (kW)	1.73	1.91	2.08	2.22	2.33	2.45	2.55	2.67	2.77
27°C	Combined Cooling Power (kW)	1.31	1.45	1.59	1.68	1.77	1.86	1.95	2.04	2.13
	Supply Air °C	14.5	14.7	14.9	15.4	15.8	16.2	16.5	16.8	17.0
	Total Cooling Power @ 50%RH (kW)	1.65	1.83	2.01	2.13	2.24	2.36	2.47	2.58	2.70

External Temperature 30°C		Airflow l/sec								
Internal Temp		80	90	100	110	120	130	140	150	160
23°C	Combined Cooling Power (kW)	1.62	1.76	1.90	2.02	2.13	2.26	2.37	2.49	2.59
	Supply Air °C	13.3	13.8	14.3	14.8	15.3	15.7	16.0	16.3	16.6
	Total Cooling Power @ 50%RH (kW)	2.05	2.23	2.40	2.56	2.70	2.86	3.00	3.15	3.28
24°C	Combined Cooling Power (kW)	1.57	1.73	1.88	1.98	2.08	2.20	2.32	2.41	2.50
	Supply Air °C	13.8	14.2	14.5	15.1	15.7	16.0	16.3	16.7	17.1
	Total Cooling Power @ 50%RH (kW)	1.99	2.18	2.37	2.51	2.63	2.79	2.94	3.06	3.16
25°C	Combined Cooling Power (kW)	1.50	1.65	1.79	1.91	2.02	2.13	2.24	2.33	2.42
	Supply Air °C	14.5	14.9	15.2	15.7	16.1	16.5	16.8	17.2	17.5
	Total Cooling Power @ 50%RH (kW)	1.90	2.09	2.27	2.42	2.55	2.70	2.83	2.95	3.06
26°C	Combined Cooling Power (kW)	1.44	1.60	1.74	1.86	1.97	2.07	2.15	2.24	2.32
	Supply Air °C	15.1	15.4	15.6	16.0	16.4	16.9	17.3	17.7	18.0
	Total Cooling Power @ 50%RH (kW)	1.83	2.02	2.21	2.36	2.50	2.62	2.72	2.84	2.94
27°C	Combined Cooling Power (kW)	1.38	1.54	1.69	1.79	1.87	1.97	2.07	2.16	2.25
	Supply Air °C	15.7	15.9	16.0	16.6	17.1	17.5	17.8	18.1	18.4
	Total Cooling Power @ 50%RH (kW)	1.75	1.95	2.14	2.27	2.37	2.50	2.62	2.73	2.84

# Mitigating over-heating

## Cool Breeze Plus



TECHNICAL DATA		
FLC - Amps	Power - Watts	Max Cooling Capacity - Kilowatts
5.5	815	4.3

SOUND DATA *		Sound Power Levels, $L_W$ - dB-Octave Bands Frequency Hz								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% 175 l/s	Extract	67	63	66	64	64	61	58	54	45
	Supply	72	68	71	69	69	66	63	59	
	Breakout	70	65	65	59	54	56	52	33	
80% 150 l/s	Extract	63	58	61	59	58	55	51	46	42
	Supply	68	63	66	64	63	60	56	51	
	Breakout	67	59	61	53	47	47	42	30	
60% 110 l/s	Extract	58	52	53	61	51	48	43	35	41
	Supply	63	57	58	56	56	53	48	40	
	Breakout	67	54	58	46	41	40	34	27	

\* data from our own laboratory

MAXI PLUS - RESULTS for SAP CALCULATIONS						
ENERGY LEVEL PERFORMANCE - using rigid ducting only						
Exhaust Terminal Configuration	2009 Data		2012 Data		SAP 10 Data	
	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency	Specific Fan Power (W/l/sec)	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.75	89%	0.56	89%	0.56	89%
Kitchen + 2 additional wet rooms	0.56	89%	0.47	89%	0.47	89%
Kitchen + 3 additional wet rooms	0.46	89%	0.50	88%	0.50	88%
Kitchen + 4 additional wet rooms	0.46	88%	0.56	87%	0.56	87%
Kitchen + 5 additional wet rooms	0.49	88%	0.66	86%	0.66	86%
Kitchen + 6 additional wet rooms	0.55	87%	0.78	85%	0.78	85%
Kitchen + 7 additional wet rooms	0.63	86%	0.94	84%	0.94	84%

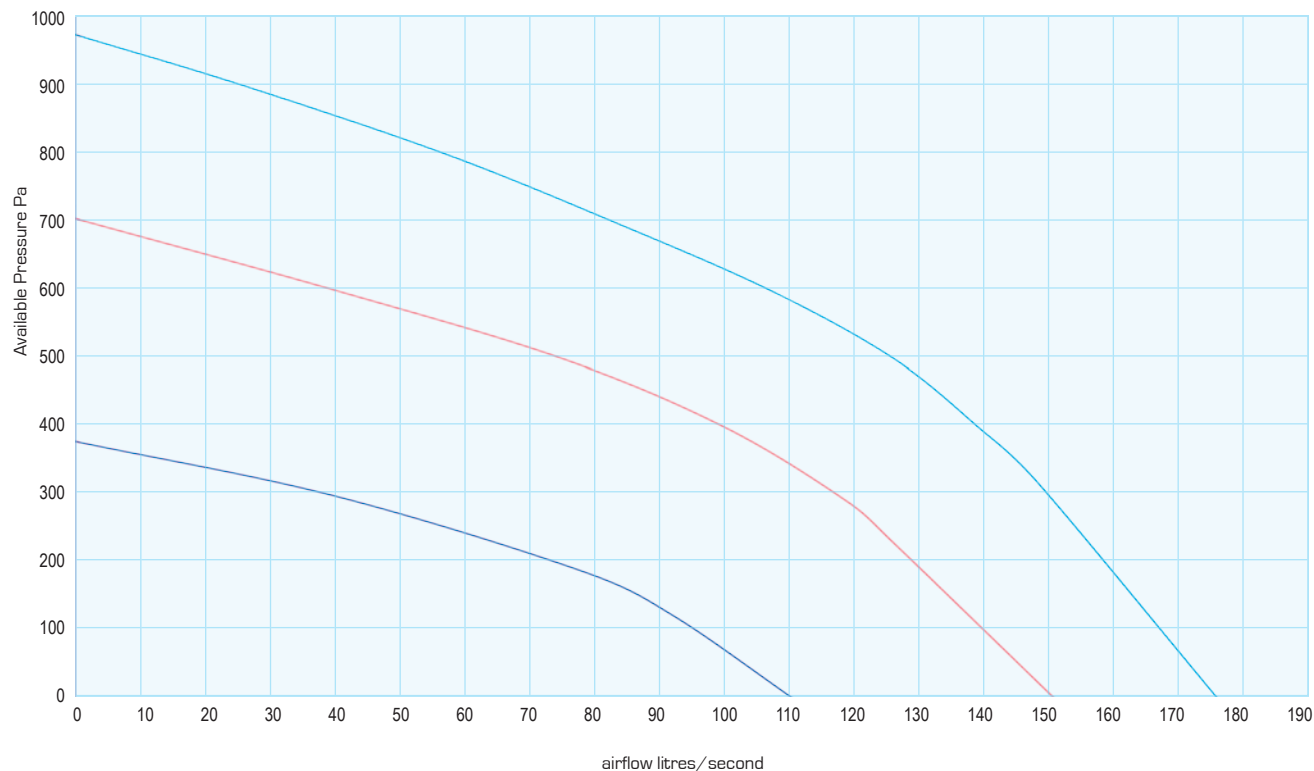
Figures at minimum flow rate conditions

Mitigating over-heating

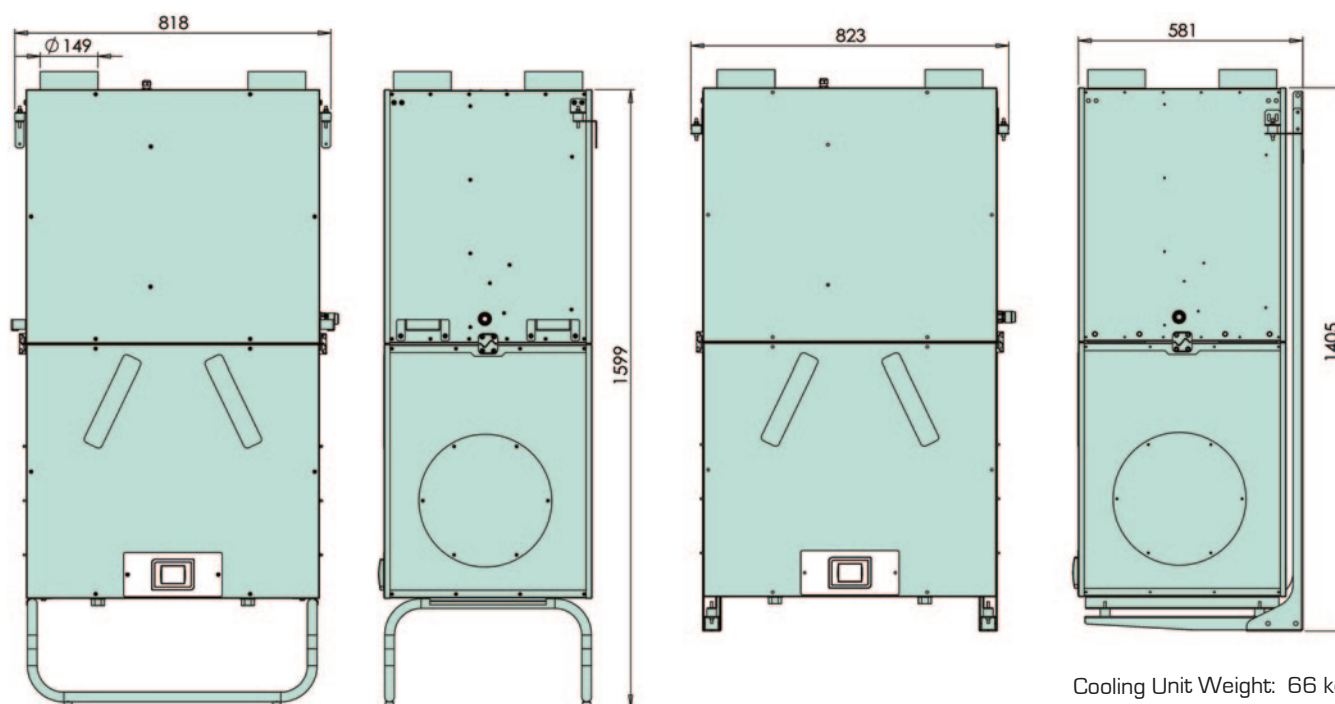
# Cool Breeze Plus



## COOL BREEZE PLUS PERFORMANCE (curves are for guidance only)



## COOL BREEZE PLUS DIMENSIONS with MAXI PLUS - mm

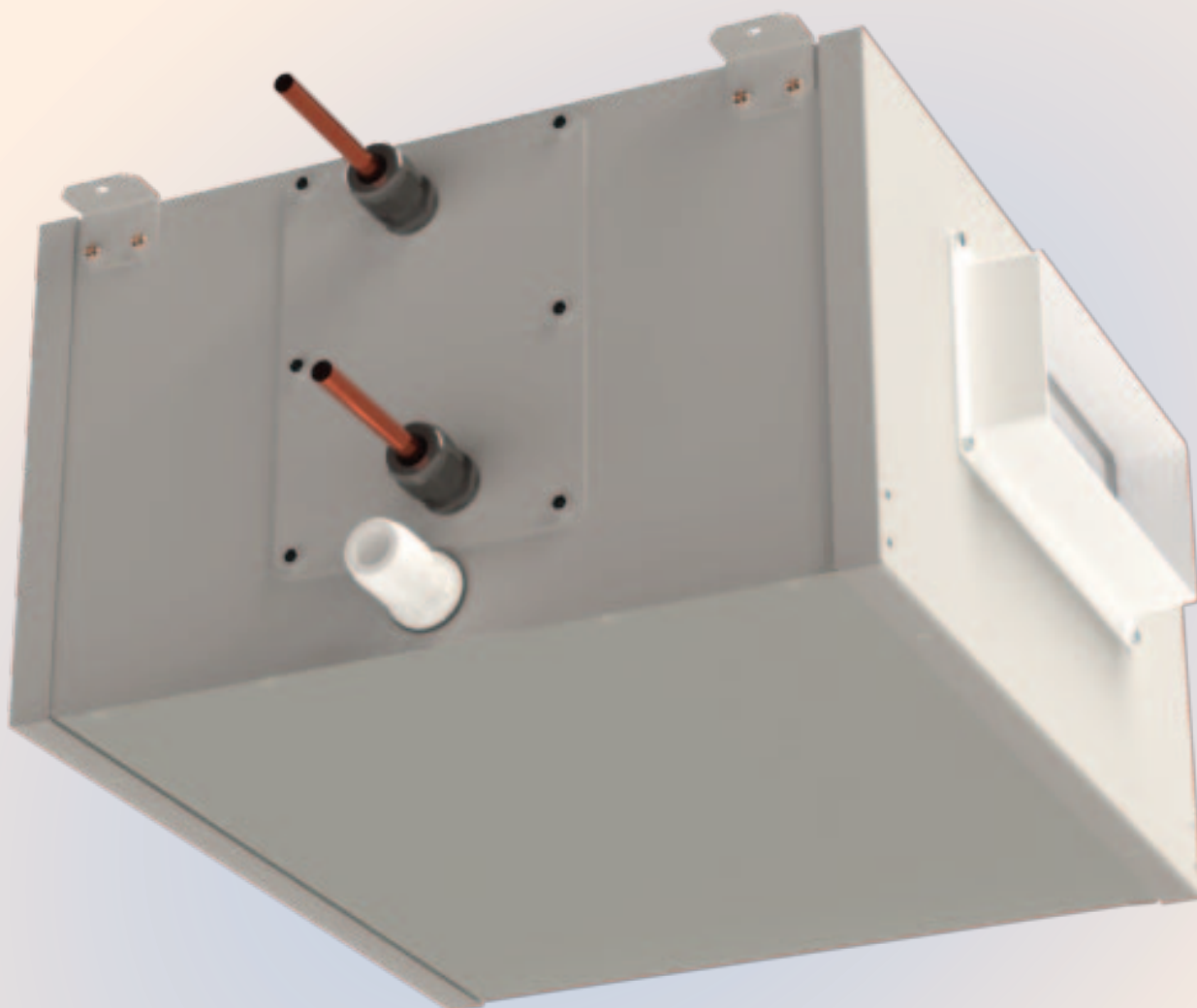


Cooling Unit Weight: 66 kgs  
Maxi Plus Weight: 37 kgs  
Maxi Plus-AT Weight: 42 kgs

In-line cooling/heating unit - a comfortable ambient cool or warm



## Cool-Aire



in-line cooling/heating unit

## Cool-Aire

The Vectaire **Cool-Aire** is an in-line cooling/**heating** module that utilises an existing water circuit within the property to cool the air flow by up to **17°C** or **heat** it by up to **29°C**

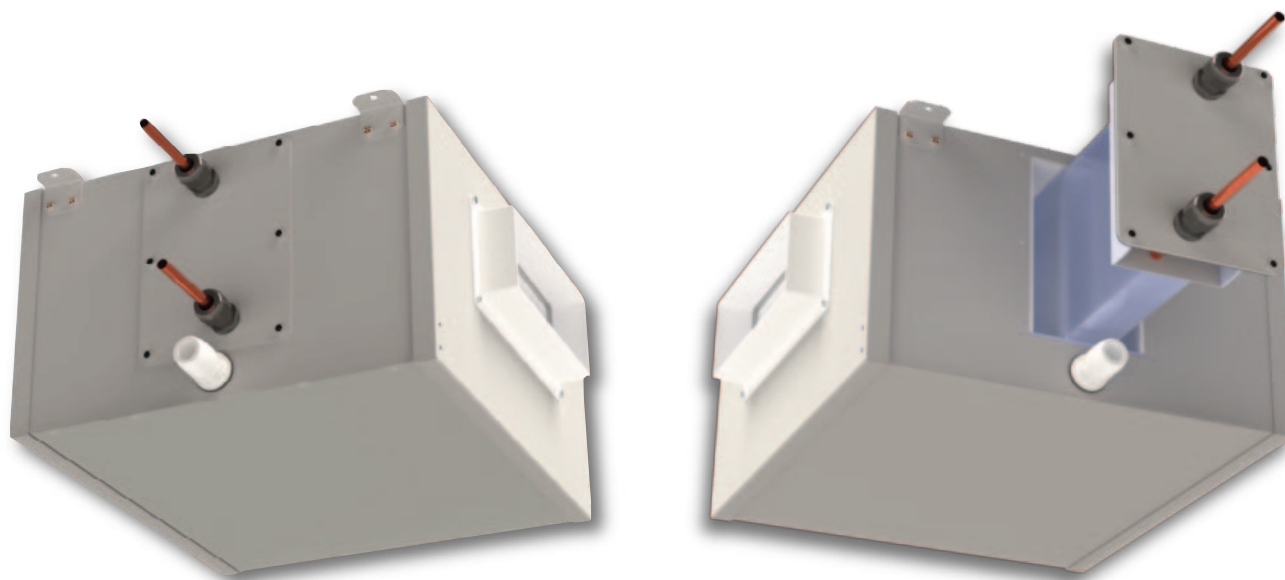
Its slimline design allows it to fit into any ceiling void of minimum 250mm height.

Universal handing allows the air to be passed in either direction over the coil through the 220mm x 90mm spigots at either end.

Internal, integral thermal lining - no exterior lagging required - no additional space taken up in ceiling void.

Designed to achieve compliance with **CIBSE TM59** assessments and **Approved Document O** of the Building Regulations.

Models are available with 2 or 3 port valves and actuators which can integrate seamlessly with any Vectaire MVHR for autonomous cooling.



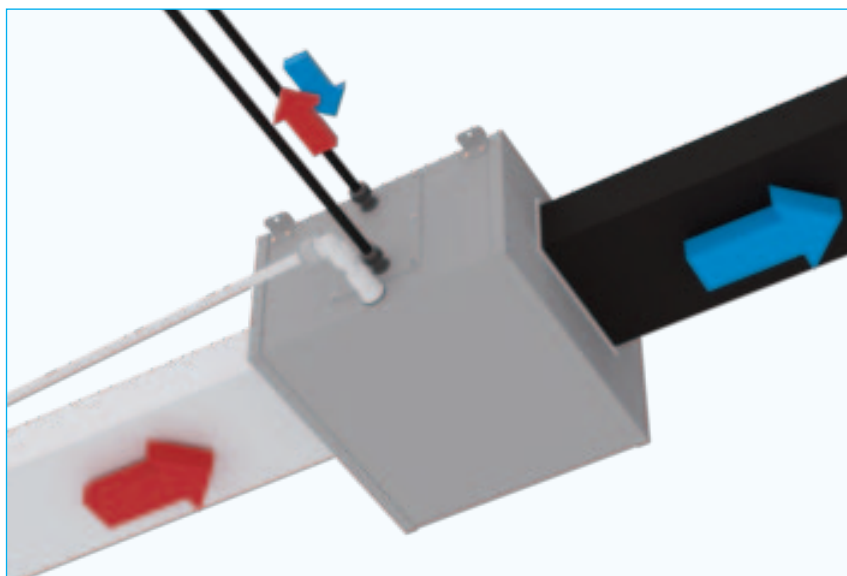
### GENERAL FEATURES

- ✓ Cooling/**heating** module
- ✓ In-line airflow installation
- ✓ Water loop required
- ✓ Integration with Vectaire MVHRs
- ✓ Slimline design to fit into shallow ceiling void
- ✓ Universal handing - bidirectional flow
- ✓ Alternative control models available
- ✓ Constructed from galvanised steel
- ✓ Ceiling, loft or void installation
- ✓ Easy to install and maintain
- ✓ Designed to achieve compliance with **CIBSE TM59** assessments and **Approved Document O** of the Building Regulations

Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.

# Cool-Aire

## INSTALLATION



The **Cool-Aire** should be placed in the room supply ducting of a Vectaire MVHR allowing for up to 93% heat recovery together with total automation of the coil.

The **Cool-Aire** is complete with hanging brackets for ceiling mounting. It can also be supported from the base by drop rods or a plinth.

The **Cool-Aire** is internally angled to encourage condensate flow out of the 15mm push fit connector.

Once the fresh air from the outside has passed through the MVHR it is pushed through the **Cool-Aire** which uses its 1.5kW capacity to cool the air by up to 17°C or **heat** it by up to 29°C when used with a **hot water** circuit.

## MODELS AVAILABLE

- **Cool-Aire 1** - Base unit only
- **Cool-Aire 2** - Base unit with ½" female thread 2-port valve and 230v actuator
- **Cool-Aire 3** - Base unit with ½" female thread 3-port valve and 230v actuator

**N.B** Valves and actuators on models **Cool-Aire 2** and **3** work through direct integration to a Vectaire MVHR.

The unit is controlled by monitoring the temperature of the fresh air coming into the property as well as the temperature of the extracted air from the dwelling.

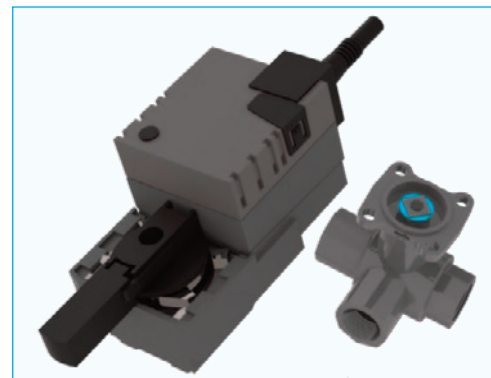
If cooling (**or heating if used with a hot water circuit**) is required the MVHR automatically opens the valve to begin cooling or **heating** the supply air.

Alternatively, a room mounted thermostat can be installed to control the coil directly.

## ACTUATOR AND 2 PORT VALVE



## ACTUATOR AND 3 PORT VALVE

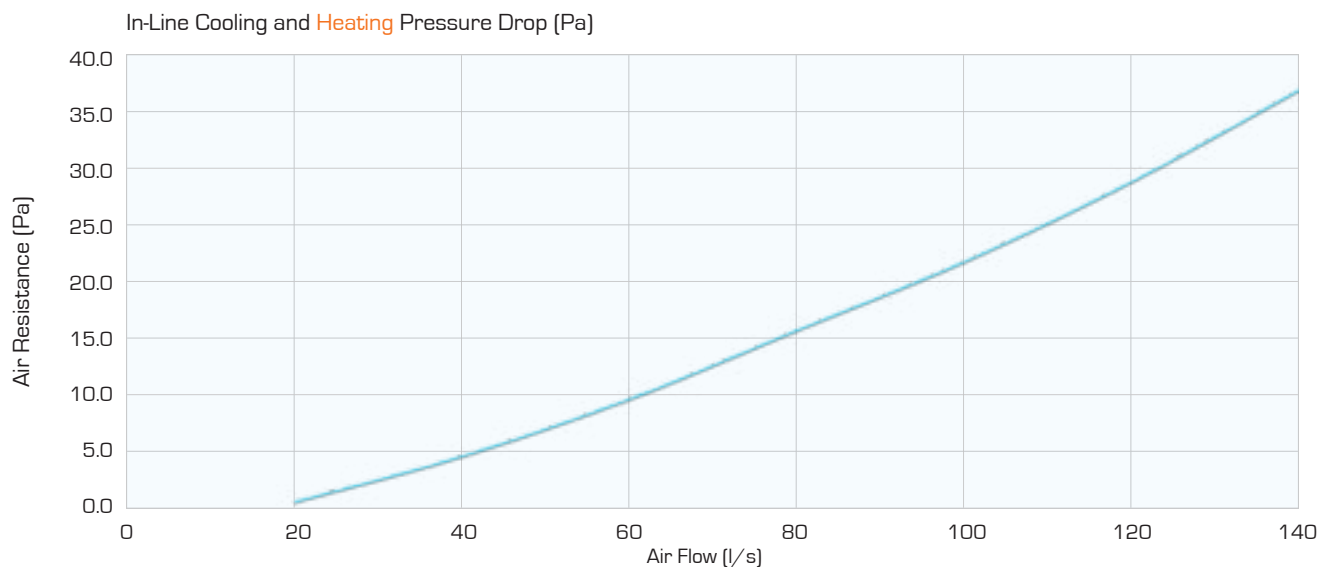
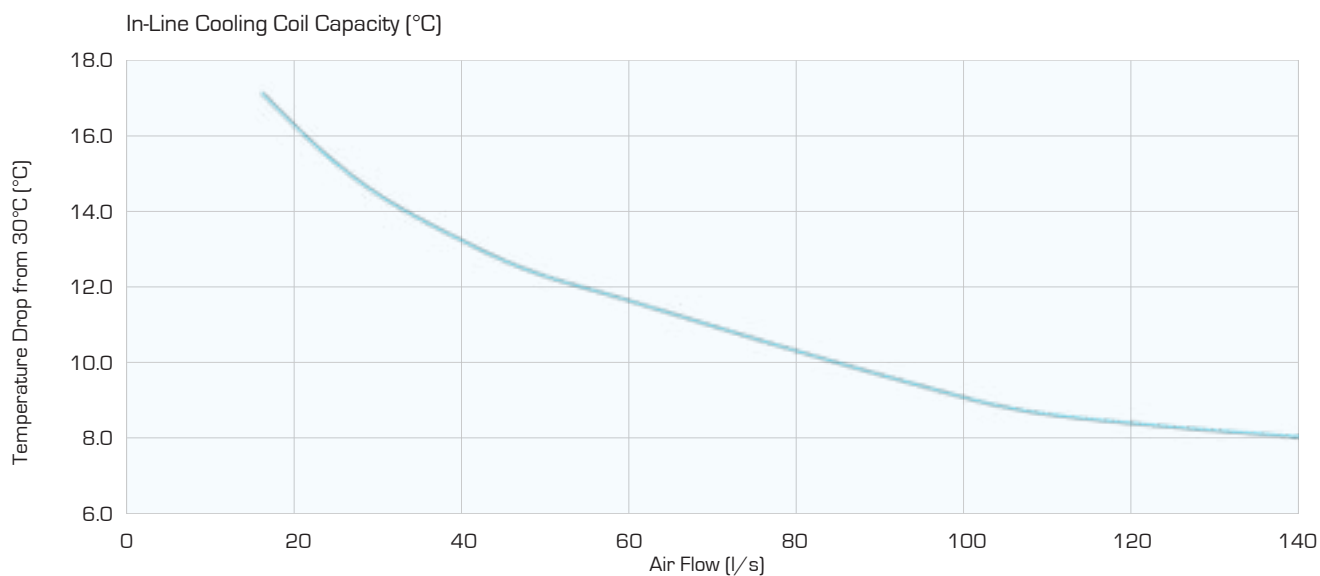
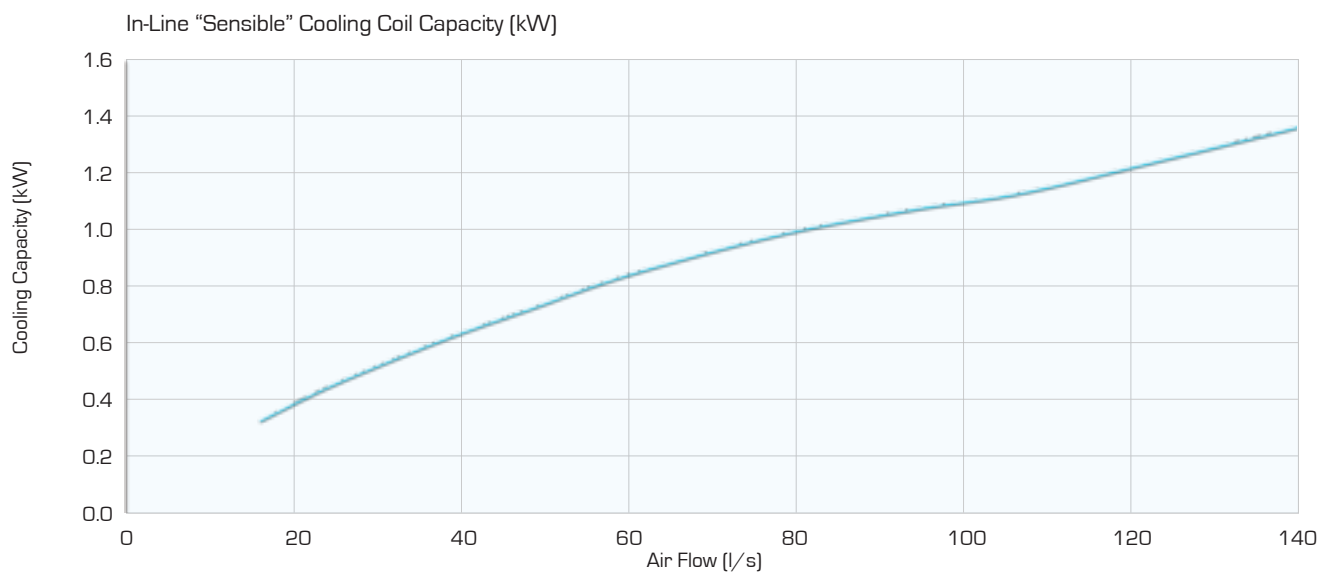


Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.



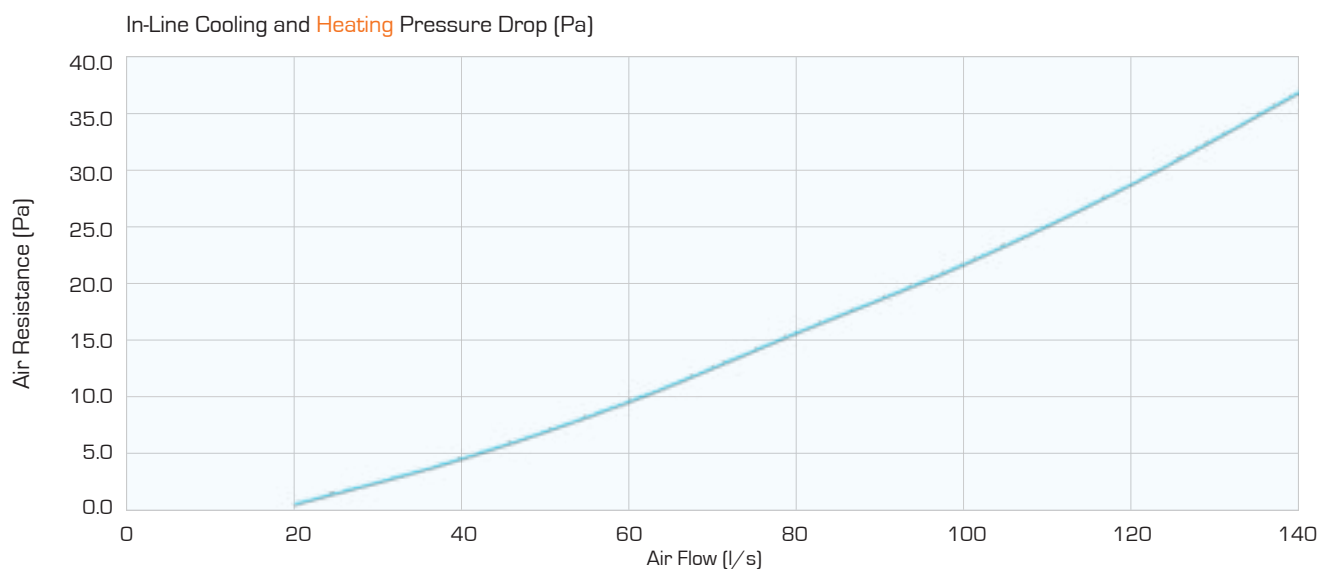
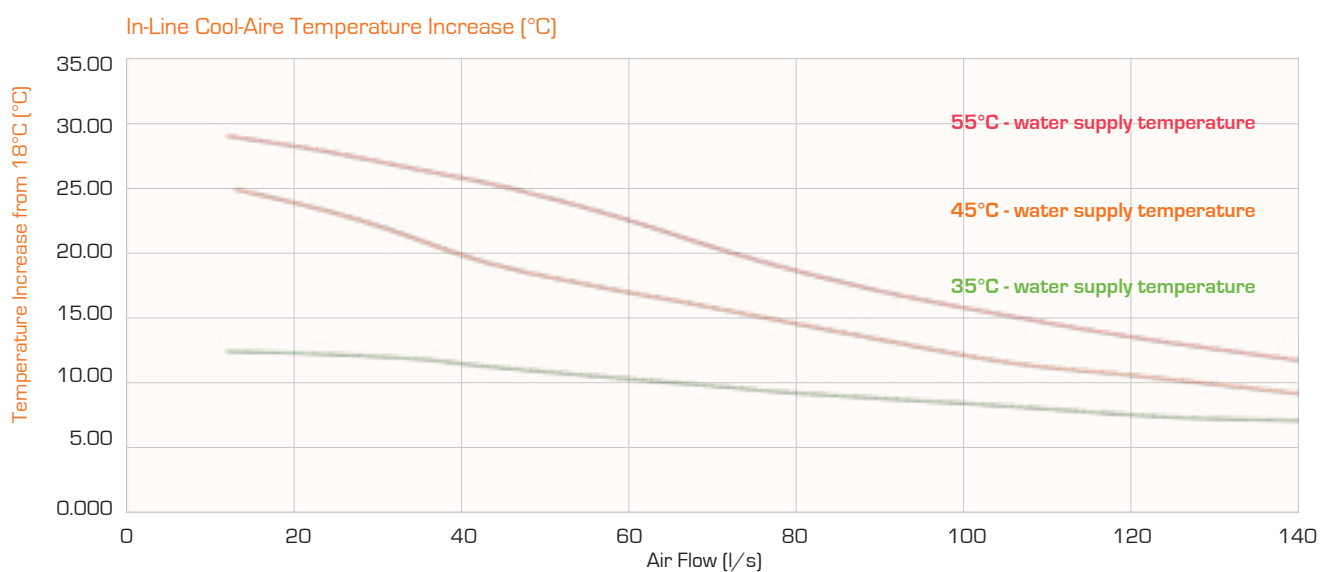
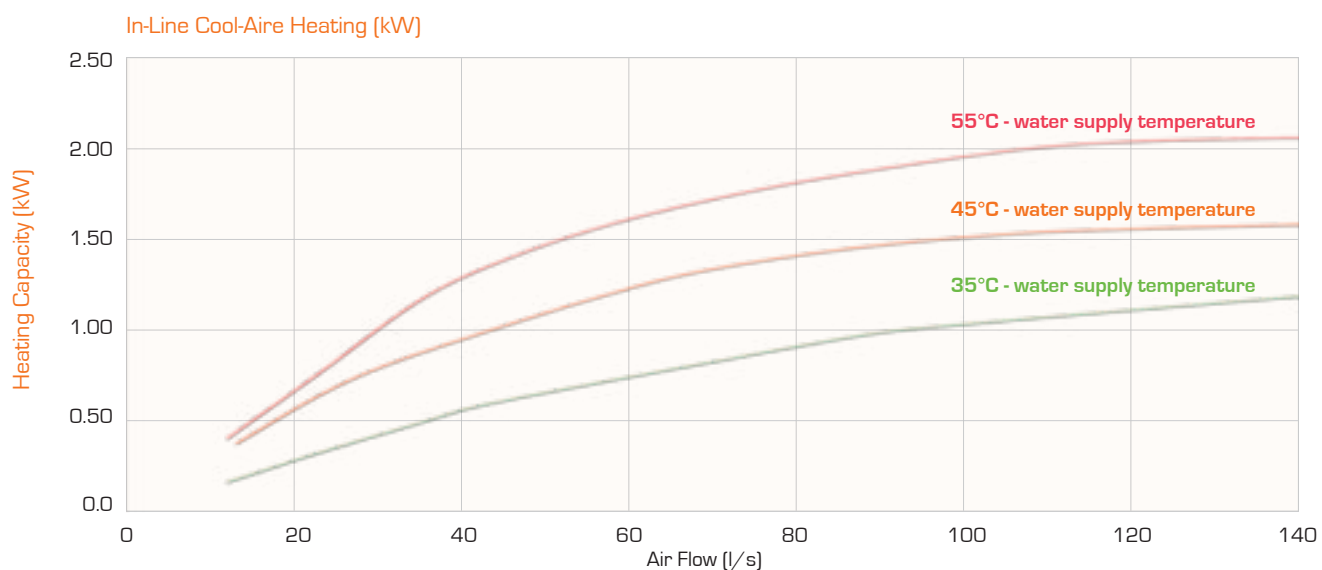
# Cool-Aire

## PERFORMANCE - COOLING POWER (curves are for guidance only)



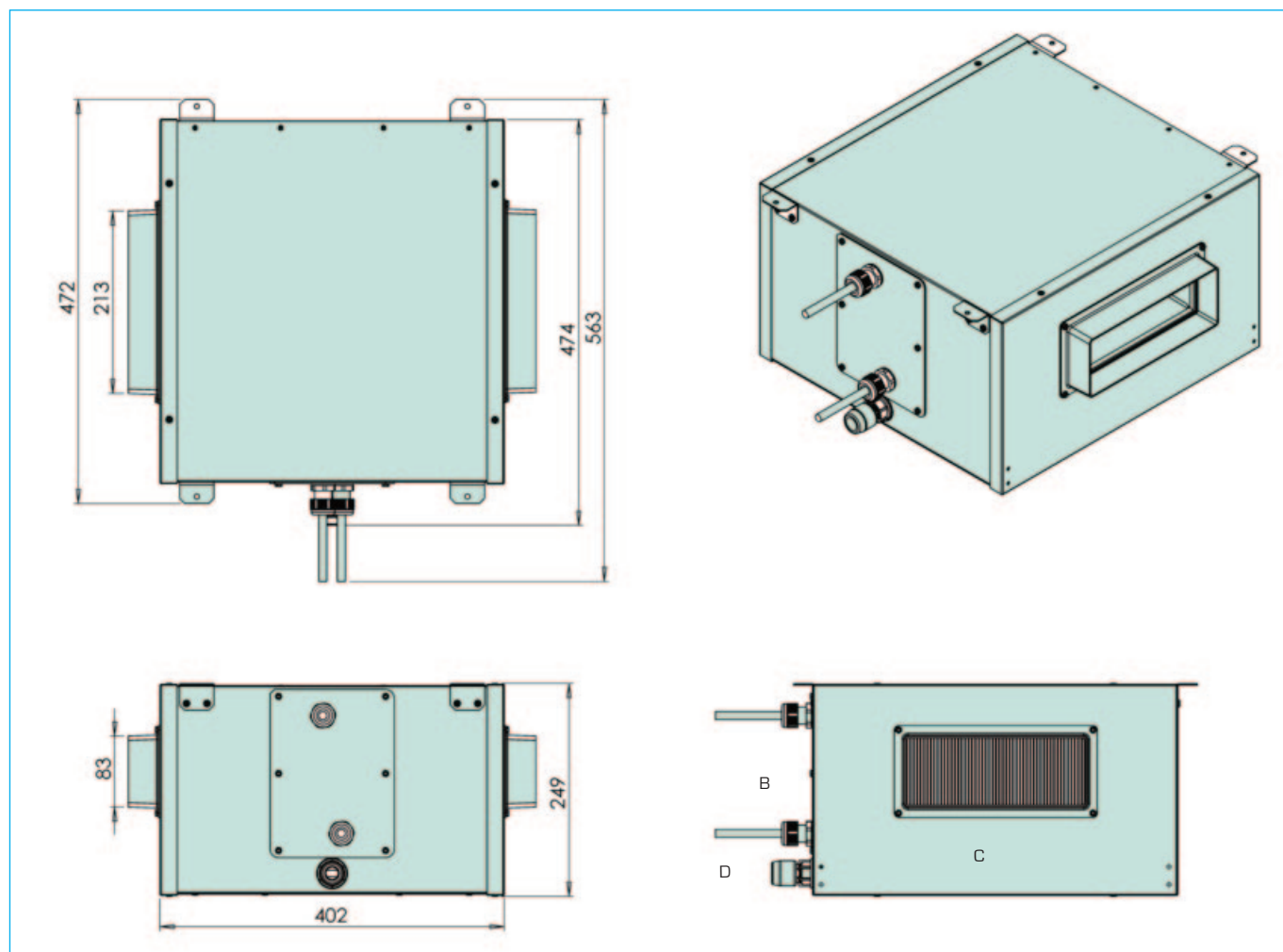
## Cool-Aire

## PERFORMANCE - HEATING POWER (curves are for guidance only)



# Cool-Aire

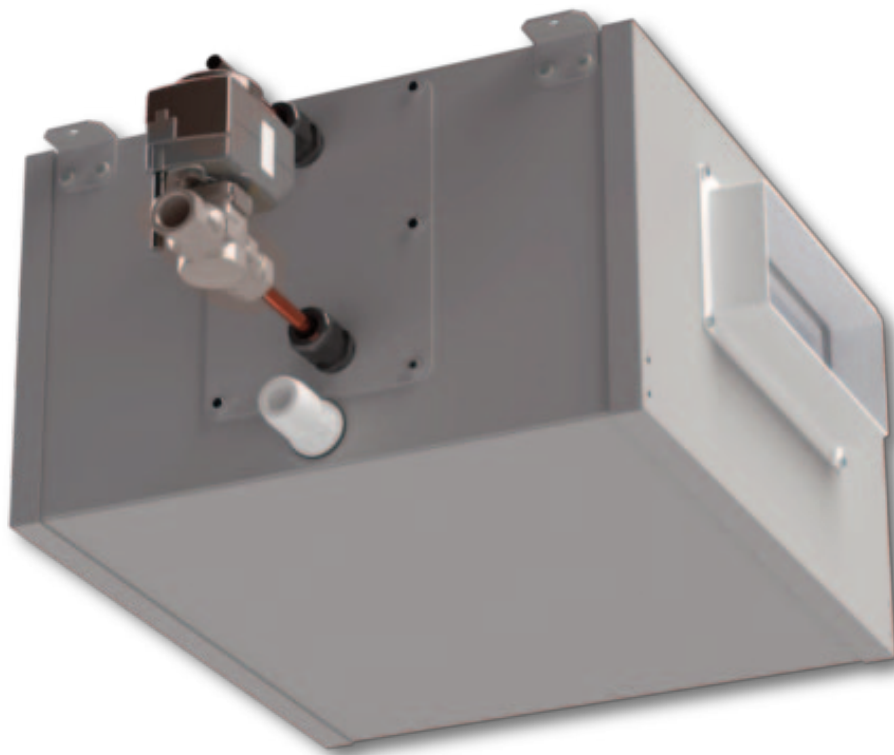
## DIMENSIONS - mm



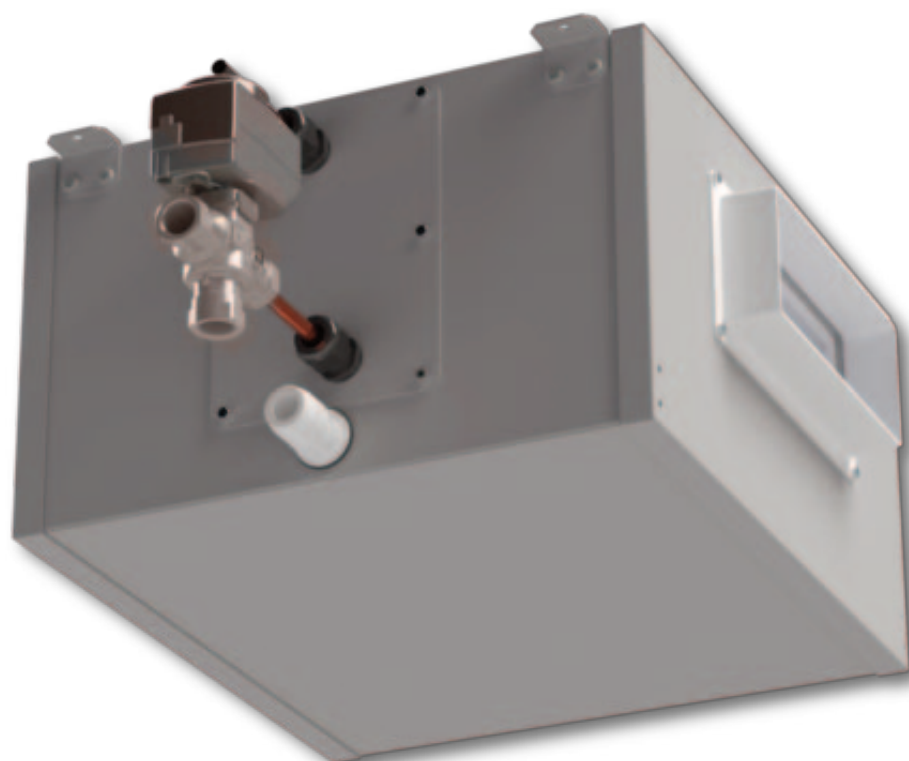
- A. Mass - 8 kgs (dry)
- B. Coil connections - 9.6mm
- C. Spigot - to fit 90mm x 220mm
- D. Drain - 15mm push fit adaptor

# Cool-Aire

## Cool-Aire 2



## Cool-Aire 3



Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.