## Whole House Mechanical Ventilation with Heat Recovery - MVHR

# Midi









### Midi

- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 170m²
- 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
   Parts L1A 2013 and F 2013
- manufactured in UK to ISO 9001
- accurate commissioning via optional integral LCD or remote LCD commissioning unit

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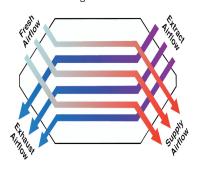


#### **GENERAL FEATURES**

- 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 +8°C and -3°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 impellors
- 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 adjustable over-run timer from 0 to 250 minutes, pre-set to 15 minutes (adjustable at factory).
- · 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 (trip point 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
- remote purge
- purge speed over-run time
- 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**

- Part L1A 2013 of Building Regulations for enhanced energy saving capability
- Part F 2013 of 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
- CE marked
- SAP PCDB Listed

TYPICAL SPECIFICATION AVAILABLE AT http://www.vectaire.co.uk/downloads

### 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

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

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| TECHNICAL CHARACTERISTICS |               |     |     |     |     |      |                      |     |     |     |        |
|---------------------------|---------------|-----|-----|-----|-----|------|----------------------|-----|-----|-----|--------|
| Model                     | Airflow I/sec |     |     |     |     |      | Operating<br>Current |     |     |     |        |
|                           | 100%          | 80% | 60% | 40% | 20% | 100% | 80%                  | 60% | 40% | 20% | (Amps) |
| Midi                      | 101           | 79  | 58  | 36  | 14  | 120  | 69                   | 31  | 11  | 2.2 | 1.21   |

| Midi                |          | Sound Power Levels, $L_{\scriptscriptstyle W}$ (dB) - Octave Bands Frequency Hz. |     |     |     |    |    |    |    | Sound Pressure |  |
|---------------------|----------|--|-----|-----|-----|----|----|----|----|----------------|--|
| Curve Ref           |          | 63   | 125 | 250 | 500 | 1k | 2k | 4k | 8k | dBA @ 3m       |  |
| 100%<br>[101 l/sec] | Extract  | 65   | 65  | 63  | 63  | 59 | 58 | 57 | 54 |                |  |
|                     | Supply   | 70   | 70  | 68  | 68  | 64 | 63 | 62 | 59 |                |  |
|                     | Breakout | 56   | 50  | 55  | 49  | 44 | 42 | 37 | 32 | 33.9           |  |
| 80%<br>(79 l/sec)   | Extract  | 61   | 61  | 58  | 58  | 54 | 53 | 50 | 46 |                |  |
|                     | Supply   | 66   | 66  | 63  | 63  | 59 | 58 | 55 | 51 |                |  |
|                     | Breakout | 52   | 51  | 50  | 46  | 41 | 34 | 32 | 28 | 29.9           |  |
| 60%<br>(58 l/sec)   | Extract  | 55   | 55  | 51  | 51  | 47 | 45 | 41 | 36 |                |  |
|                     | Supply   | 60   | 60  | 56  | 56  | 52 | 50 | 46 | 41 |                |  |
|                     | Breakout | 47   | 51  | 46  | 43  | 38 | 27 | 25 | 24 | 26.6           |  |
| 40%<br>(36 l/sec)   | Extract  | 47   | 46  | 41  | 41  | 38 | 35 | 29 | 21 |                |  |
|                     | Supply   | 52   | 51  | 46  | 46  | 43 | 40 | 34 | 26 |                |  |
|                     | Breakout | 43   | 52  | 43  | 41  | 35 | 23 | 18 | 21 | 24.6           |  |
| 20%<br>[14 l/sec]   | Extract  | 33   | 32  | 24  | 24  | 22 | 18 | 8  | 11 |                |  |
|                     | Supply   | 38   | 37  | 29  | 29  | 27 | 23 | 13 | 15 |                |  |
|                     | Breakout | 36   | 50  | 37  | 35  | 27 | 12 | 9  | 14 | 19.7           |  |

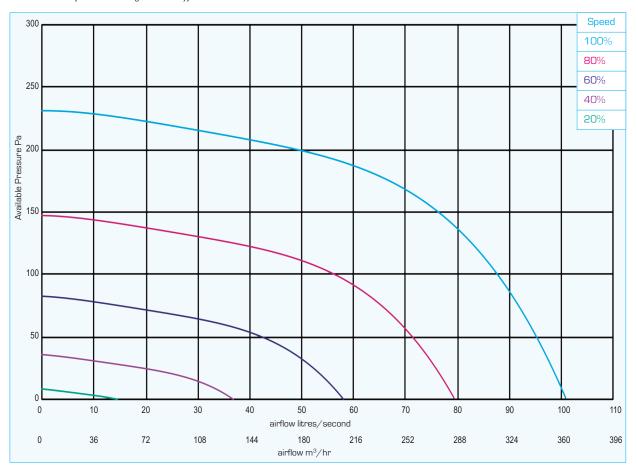
The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit All the above data has been independently tested to BS EN ISO 3743-1:2010

| RESULTS for SAP CALCULATIONS ENERGY LEVEL PERFORMANCE - using rigid ducting only |                 |                                    |                                |                    |                                    |                                |  |  |  |  |
|--|-----------------|------------------------------------|--------------------------------|--------------------|------------------------------------|--------------------------------|--|--|--|--|
|  |                 | 2009 Data                          |                                | 2012 Data          |                                    |                                |  |  |  |  |
| Exhaust Terminal Configuration   | Airflow [I/sec] | Specific<br>Fan Power<br>(W/I/sec) | Heat<br>Exchange<br>Efficiency | Airflow<br>(I/sec) | Specific<br>Fan Power<br>(W/I/sec) | Heat<br>Exchange<br>Efficiency |  |  |  |  |
| Kitchen + 1 additional wet room  | 15              | 0.50                               | 94%                            | 21                 | 0.51                               | 93%                            |  |  |  |  |
| Kitchen + 2 additional wet rooms   | 21              | 0.50                               | 93%                            | 29                 | 0.61                               | 91%                            |  |  |  |  |
| Kitchen + 3 additional wet rooms   | 27              | 0.55                               | 92%                            | 37                 | 0.75                               | 90%                            |  |  |  |  |
| Kitchen + 4 additional wet rooms   | 33              | 0.65                               | 91%                            | 45                 | 0.92                               | 89%                            |  |  |  |  |
| Kitchen + 5 additional wet rooms   | 39              | 0.76                               | 89%                            |                    |                                    |                                |  |  |  |  |
| Kitchen + 6 additional wet rooms   | 45              | 0.88                               | 89%                            |                    |                                    |                                |  |  |  |  |
| Figures at minimum flow rate conditions  |                 |                                    |                                |                    |                                    |                                |  |  |  |  |

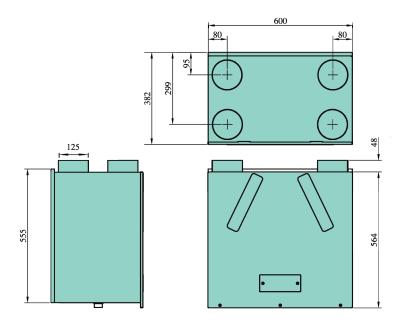




#### PERFORMANCE (curves are for guidance only)



### DIMENSIONS - mm



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