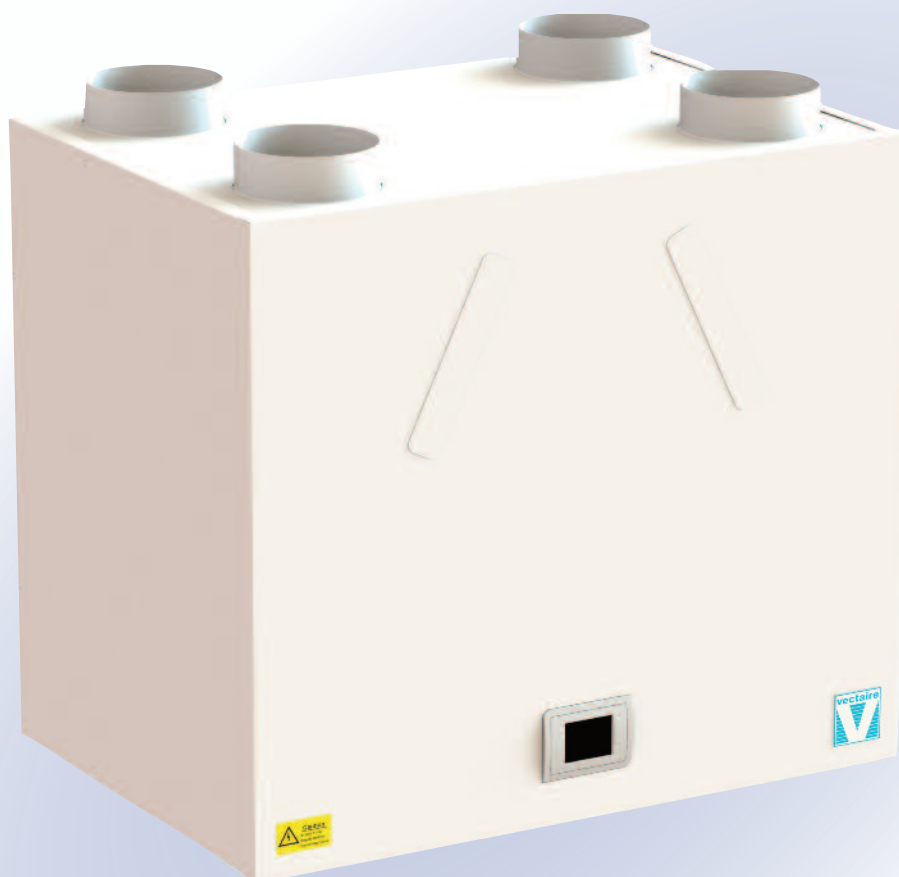




Maxi



Maxi

- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 250m²
- 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 Parts L1A 2013 and F 2013
- manufactured in UK to ISO 9001
- accurate commissioning via optional integral LCD or remote LCD commissioning unit



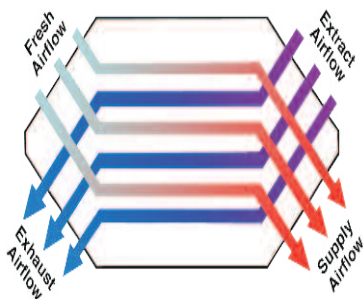
Maxi

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 +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
- 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



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

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
 - CO₂ 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>

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

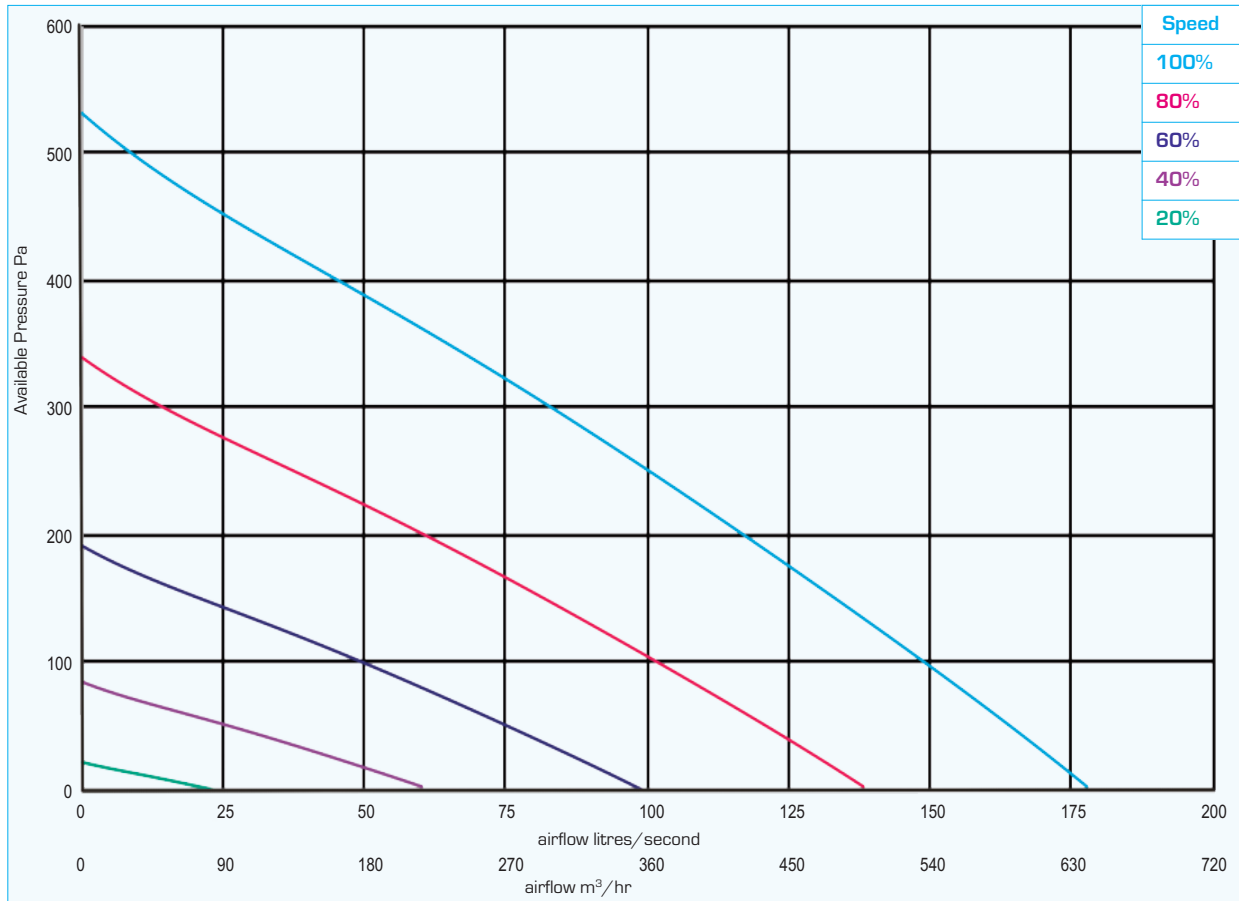
| RESULTS for SAP CALCULATIONS | | | | | | |
|---|-----------------|------------------------------|--------------------------|-----------------|------------------------------|--------------------------|
| ENERGY LEVEL PERFORMANCE - using rigid ducting only | | | | | | |
| Exhaust Terminal Configuration | 2009 Data | | | 2012 Data | | |
| | Airflow (l/sec) | Specific Fan Power (W/l/sec) | Heat Exchange Efficiency | Airflow (l/sec) | Specific Fan Power (W/l/sec) | Heat Exchange Efficiency |
| Kitchen + 1 additional wet room | 15 | 0.43 | 92% | 21 | 0.45 | 92% |
| Kitchen + 2 additional wet rooms | 21 | 0.40 | 92% | 29 | 0.47 | 92% |
| Kitchen + 3 additional wet rooms | 27 | 0.42 | 92% | 37 | 0.54 | 91% |
| Kitchen + 4 additional wet rooms | 33 | 0.48 | 91% | 45 | 0.66 | 90% |
| Kitchen + 5 additional wet rooms | 39 | 0.55 | 91% | 53 | 0.80 | 90% |
| Kitchen + 6 additional wet rooms | 45 | 0.63 | 90% | 61 | 0.99 | 89% |
| Kitchen + 7 additional wet rooms | 51 | 0.76 | 90% | 69 | 1.21 | 89% |

Figures at minimum flow rate conditions

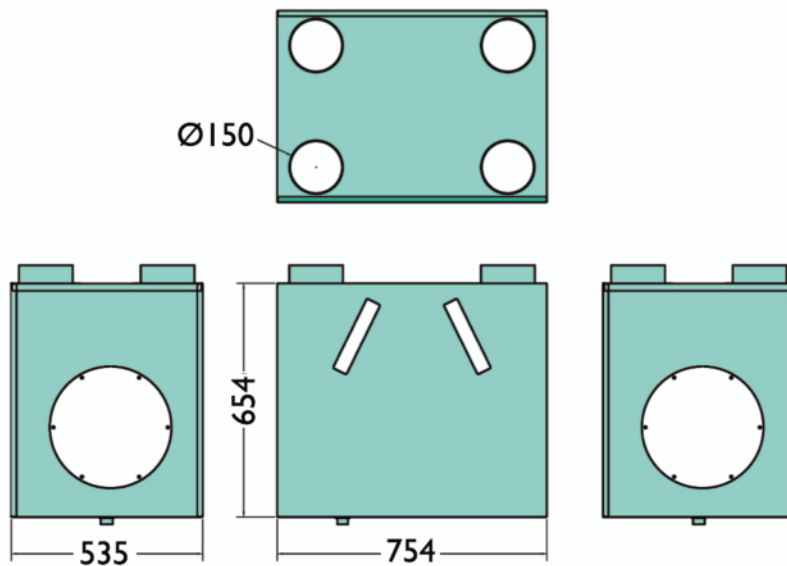


Maxi

PERFORMANCE (curves are for guidance only)



DIMENSIONS - mm



N.B a clearance of at least 200 mm should be allowed on each side of the cabinet for access to the interior



MVHR

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 Handing (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/SAP2012 | K+6/4 | K+6/4 | K+6/4 | K+7/7 | K+7/7 | K+7/7 | K+7/7 | K+7/7 | K+7/7 |
| SFP w/l/s SAP2009/SAP2012 | 0.50/0.51 | 0.50/0.51 | 0.50/0.51 | 0.40/0.45 | 0.40/0.45 | 0.40/0.45 | 0.46/0.47 | 0.46/0.47 | 0.46/0.47 |
| % Heat Recovery SAP2009/SAP2012 | 94/93 | 94/93 | 94/93 | 92/92 | 92/92 | 92/92 | 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



Vertical MVHR

Midi and Maxi

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 60m² to 400m² 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 +8°C and -3°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.

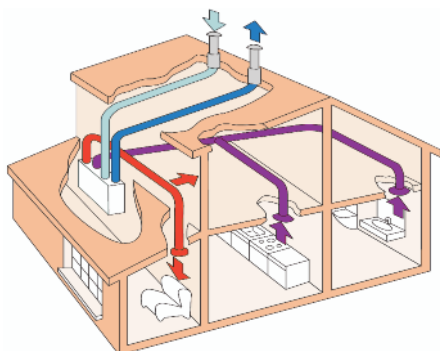
"Super Silent"

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

LCD Control

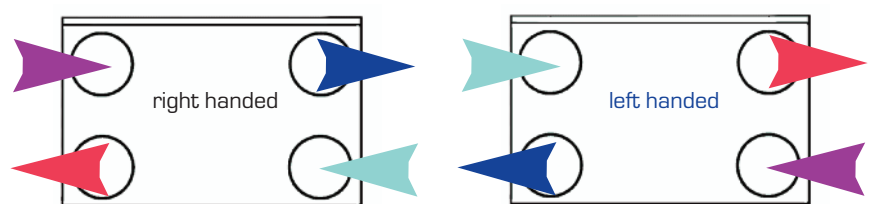
All models can have an integral or remote commissioning state-of-the-art touch screen LCD controller. It is one of the most technologically advanced available giving both installer and user a range of options to ensure that the MVHR is set to provide quiet and efficient ventilation at all times whilst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

TYPICAL INSTALLATION



- Incoming fresh air
- Warmed fresh air
- Extracted warm, moist, stale air
- Cooled outgoing stale air
- MVHR

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]

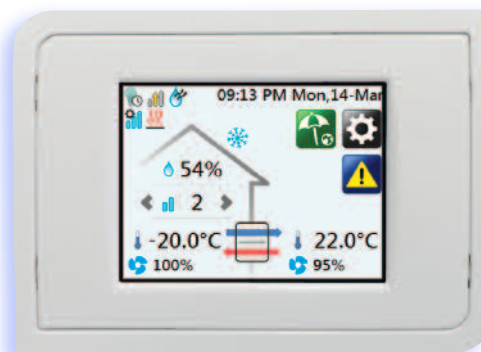
LCD Touch Screen Functions

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.

| | | | |
|---|--|--|---|
|  TIME | Setting Time: sets up 12 or 24hr format, DST (daylight saving time) and time zone. |  A | Language Selection |
|  DATE | 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 |
|  ON | Boost Speed Time Delay |  | Night Time Boost Inhibitor |
|  OFF | Boost Speed Over-run Timer |  | Screen Cleaning: wipe screen safely without deleting settings |
|  | Run Time Counter and Filter Saturation |  | Exit to main screen |