

Product Specification

Ecovent® Hybrid Fan enhanced natural ventilation

1.1. General

- A. Provide a hybrid air handling unit to meet the performance and configuration as indicated in the schedule and detail drawings. The hybrid air handling unit shall be tested to BS EN ISO 5801:2017 and shall be of the Ecovent type as manufactured by VES Andover Ltd, a company accredited with BS EN ISO 9001:2015.
- B. The unit shall conform to the schedule regarding component layout and finish. The detail drawings shall be supplied for approval where indicated in the schedule.

1.2. Unit Construction

- A. The unit shall be provided pre-assembled comprising a rigidly constructed aluminium case, single skinned fully insulated galvanised sheet steel panels finished to RAL9010 semi-gloss as standard, forward curved supply fan(s), direct drive fan motor(s), and a 3-way mixing system.
- B. The unit shall be supplied in one section.
- C. The unit shall be available with optional fitted hot water heating as indicated in the schedule and detail drawings.
- D. The unit shall be available in plantroom construction as indicated in the schedule and detail drawings.
- E. The unit shall be fitted with an automated 3-way mixing system to utilise natural ventilation where possible to maintain air quality and temperature.
- F. Access for maintenance shall be via a removable lid or panels, allowing access for the cleaning or removal of internal components as indicated in the detail drawings.
- G. Casework shall incorporate mounting brackets compatible with drop-rod systems.
- H. Access and handing options shall be as indicated in the schedule and detail drawings.
- I. The unit shall have component arrangement as indicated in the schedule and detail drawings

1.3. Fans

- A. The fan impellers shall be statically and dynamically balanced to G 2.5 / G 6.3 according to either VDE2060 or ISO 21940-11:2016 for smooth running and extended life.
- B. The fan impellor shall be mated with an aerodynamic fan scroll for high efficiency and low noise generation.
- C. The fan impellers shall be supplied in natural uncoated finish as standard.

1.4. Motors

- A. The fans shall incorporate external rotor motors to insulation class F, IP4X environmental protection rating and shall be supplied with thermal protection cut-out as standard.

1.5. Heating

- A. The supply units shall be available with hot water heating as indicated in the schedule and detail drawings.
- B. The hot water heater battery shall be of copper tube, aluminium fin block construction, with galvanised sheet steel casework. The flow and return pipe connections shall be handed as indicated in the schedule and detail drawings.
- C. The hot water heater battery shall be available with alternative fin coatings by special order, as indicated in the schedule.

1.6. Operation Environment

- A. The unit shall be designed to operate in ambient temperatures from -20 °C up to +40 °C and to run continuously at up to 90% relative humidity level.

1.7. Controls

- A. The unit shall be fitted with an EC fan speed control system with max/min speed and 0-10 VDC BMS control, i.e. Air Quality or Temperature sensor, as standard.
- B. Fitted Controls shall be positioned as indicated in the schedule and detail drawings.
- C. Control panels shall have individual circuit breakers for Supply and Control where indicated in the schedule and detail drawings.
- D. Fitted controls shall be supplied with room mounted combined CO2 and temperature sensor together with a room mounted teacher switch plate, that incorporates manual override and purge facility, unless otherwise specified.
- E. Fitted controls shall be fully pre-wired to internal components. Hot water controls shall be pre-wired to a local junction box for easy electrical connection to optional four port valve actuator supplied by VES Andover Ltd as indicated in the schedule.

1.7. Ancillaries

- A. The unit shall be fully compatible with a range of spigot and unit mounted transitions pieces. The transition pieces shall be suitable for direct mounting to the unit.
- B. The transition pieces shall be a rigidly constructed single skinned galvanised sheet steel case lining incorporating internal splitting vanes lined with acoustic foam.
- C. The transition piece casework shall be provided with high quality galvanised steel finished to RAL9010 semi-gloss as standard.