Product Specification

Colourfan® Supply Acoustic Fan Small Ventilation Units

1.1. General

A. Provide a supply fan unit to meet the performance and configuration as indicated in the schedule and detail drawings. The supply fan unit shall be tested in accordance with BS EN ISO 5801:2008, BS 848-1:2007 and shall be of the Colourfan type as manufactured by VES Andover Ltd a company accredited with BS EN ISO 9001:2008.

1.2 Unit Construction

A. The unit shall be provided pre-assembled comprising of a rigidly constructed 50mm tubular aluminium case, centrifugal backward curved fan with direct drive motor, pleated panel filter and rectangular spigots.

B. The unit shall be supplied with a pleated panel filter as standard. Grade as indicated in the schedule and detail drawings.

C. The unit shall be available with optional fitted electric or hot water heating as indicated in the schedule and detail drawings.

D. The unit shall be available in Plantroom or weatherproof construction as indicated in the schedule and detail drawings.

E. Weatherproof units shall be fitted with an inlet cowl as standard, finished to match the unit casework.

F. The unit casework shall incorporate high quality rubber gaskets seals on service doors and panels.

G. The unit shall be provided pre-assembled comprising of a rigidly constructed 50mm tubular aluminium case, double skinned galvanised sheet steel panels.

H. Access for maintenance shall be via hinged panels, allowing access for the cleaning or removal of internal components as indicated in the schedule and detail drawings.

I. Plantroom units shall be suitable for top or bottom access as indicated in the schedule and detail drawings. Weatherproof units shall be suitable for top access only via a removable weather lid.

J. Plantroom units shall incorporate mounting brackets compatible with drop-rod systems.

K. 1. Sizes 0-3 Weatherproof units shall be supplied as standard with mounting feet. Plantroom units shall be available with optional mounting feet as indicated in the schedule.

2. Sizes 4-10 Weatherproof units shall be supplied as standard on a galvanised sheet steel channel base, the frame shall be 100mm high.

L. Weatherproof units shall be supplied powder coated signal grey RAL7004 as standard. Alternative colour according to schedule.

1.3. Fans

A. The fan impellers shall be of PA6 glass-fibre reinforced, backward curved plastic blade construction with galvanised steel mounting plate.

B. The impellers shall be statically and dynamically balanced to G 2.5 / G 6.3 according to ISO1940 part 1.

C. The fan impellers shall be mated with aerodynamic bell inlet eyes for high efficiency and low noise generation.

D. The fan impellers are supplied as standard in natural uncoated finish.

1.4. Motors

A. The fans shall incorporate external rotor motors to insulation class F, IP44 environmental protection rating and shall be supplied with thermal protection cut-out as standard.

B. The integrated motor shall be supplied epoxy painted grey to RAL7032.

1.5 Filtration

A. The filters shall be 98mm pleated filter media as standard, with rigid wax treated cardboard moisture resistant frame.

B. Filters shall be to BS EN 779 Classification, grade as indicated in the schedule and detail drawings.

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1.6 Heating

A. The unit shall be available with hot water or electric element 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.

D. The hot water heater battery shall be available with an optional fitted and pre-wired valve and actuator where indicated in the schedule and detail drawings.

E. The electric heater battery shall be suitable for single or three-phase supply with thyristor control as indicated in the schedule and detail drawings.

F. The electric heater battery shall consist of an element array sized to suit the power requirement and supply phase as indicated in the schedule and detail drawings. The elements shall consist of a tubular incoloy shroud containing compressed magnesium oxide powder packed around a Nickel Chromium resistance wire. The element array shall be evenly spread across the open area of the duct.

G. Where multiple elements are required to achieve the required power rating and supply phase as I indicated in the schedule, elements shall be terminated with electrical connectors.

H. The electric heater battery shall be fitted as standard with a 130 °C non-adjustable thermal safety cut out, with manual reset.

I. All electric heaters shall be 1500 V flash tested, and resistance tested for correct component assembly. Test certificates shall be available on request.

1.7 Operation Environment

A. The unit shall be designed to operate in ambient temperatures from -20 °C up to 40 °C, and can run continuously at up to 80% humidity level.

1.8 Controls

A. The unit shall be fitted as standard with EC fan speed control system to match fan type with max/min speed and 0-10 VDC BMS control, i.e. Air Quality or Temperature sensor.

B. The unit shall be available with optional unit mounted CPG control panel as manufactured and factory fitted by VES Andover Ltd. to suit electric or hot water heating, or alternative loose CPG panel for installation by others. If no control panel is ordered the unit will be supplied with local isolator for unit mains connections.

C. Fitted Controls shall be positioned as indicated in the schedule and detail drawings.

D. Controls shall be supplied with internally mounted circuit breakers, run, trip and panel live indication and lockable door isolation switch.

E. Control panels shall have individual circuit breakers for Supply, Extract, Control and Electric Heater Battery where indicated in the schedule and detail drawings.

F. Fitted controls shall be supplied with a supply air duct sensor to be fitted on-site by others as indicated in the schedule.

G. Fitted controls shall be supplied with a wired AHU mounted LCD controller. Optional room user interfaces are available.

H. 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.

1.9 Ancillaries

A. The unit shall be fully compatible with the colourfan Acoustic unit mounted silencers. The silencers shall be suitable for direct mounting to the unit.

B. The silencer shall be a rigidly constructed 50mm tubular aluminium case double skinned galvanised sheet steel panels incorporating internal splitting vanes lined with resin bonded mineral wool.

C. The silencer casework shall be provided naturally finished in high quality galvanised steel as standard. Internal and External Powdercoat available as indicated in the schedule. Colour to be in accordance with schedule.

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