

ECOSMART SQRBO SUPPLY

Consultants Specification

Make up Air Supply Unit specification

The Unit shall be configured and arranged as detailed on the drawings and in accordance with the schedule of equipment. Unit shall be manufactured from acoustically lined, heavy gauge pre-galvanised, corrosion resistant steel. The units shall provide exceptional thermal and acoustic insertion. The general construction is to class A leakage.

The unit will be manufactured to provide a low height solution to enable it to be located in low depth ceiling and floor voids. For ease of installation the unit shall be provided with a single point mounting bracket with integrated, anti vibration strips.

The fan impeller and motor shall be selected to provide the most energy efficient solution conforming to part L regulations and shall be direct drive with high efficiency motors to BS5000 as standard. The fan impeller shall be a high efficiency backward curved centrifugal design, manufactured in galvanised steel.

The contractor shall allow for all necessary ductwork transformations to and from the fan unit and any associated components in accordance with the manufacturers recommendations, DW 144 and general good practice.

The unit and ancillaries shall be of the Ecosmart Sqrbo type as manufactured by Nuair Ltd.

All other components shall be in accordance with the manufacturer's specification.

Control Specification

The fan unit shall be supplied with one of the following control options:-

Ecosmart controls

The compact Ecosmart control system complete with all necessary controls to facilitate the operation of the ventilation system. It shall be come complete with an integral factory fitted Ecosmart PCB which will control the fan unit within the desired design parameters and provide the interface between all external control devices and the unit itself.

The Unit shall have the following energy saving components integrally mounted, pre-wired to interface with the purpose made PCB, all components pre-wired, configured and factory fitted by the manufacturer: -

- Integral Frequency inverter/speed controller.
- Integral maximum and minimum speed adjustment for commissioning.
- Integral adjustable run on timer.
- Integral BMS interfaces – summer/winter switching, heating control, 0-10V speed adjustment. (using ES - UCFT).
- Volt free failure and status indication.
- Integral air off temperature adjustment.
- Facility for remote temperature control.
- Integral background ventilation switch (trickle switch).
- Multiple IDC sockets for interconnection of sensors or fans using pre-plugged 4-core low voltage cable.
- Volt free frost alarm/heat demand interface.
- Frost protection/hold off stat.

Coil types and Controls

- Low Pressure Hot Water.

The Low Pressure Hot Water heating coil shall be factory fitted with a 4-port valve, double regulating valve, drain cocks and air vents. The actuator controlling the 4-port valve shall be controlled via the on-board PCB by the off coil temperature sensor. All components pre-piped, assembled and tested by the manufacturers.

The control for the coils shall be fully integrated and shall maintain a constant off coil temperature. The system shall have frost protection which shall, at temperatures below 4 degrees C, fully open the 4-port valve and only start the fan when the temperature at the filter has risen above the designated set point. Unit shall have contacts which shall act as a frost alarm and/or signal boiler and circulating pumps to switch on.

Electric Heater Battery

The Electric Heater Battery shall be factory fitted and pre-wired to an integral closed loop thyristor control.

The Fan unit shall have a 5 year warranty.

All equipment to be as manufactured by Nuair Ltd.