UNIT SPECIFICATION

The Unit shall be configured and arranged as detailed on the drawings and in accordance with the schedule of equipment.

Units have a patented 'Floating Fan' technology incorporating an inner casing which is held inside an outer casing by AV mounts, ensuring any vibration is isolated. This technology eliminates the requirement for additional AV mounts.

The Extended length case Type 'A' shall be acoustically lined and manufactured from heavy gauge, corrosion resistant aluzinc and tested to leakage class 'L2'.

The unit will be manufactured to provide a low height solution to enable it to be located in low depth ceiling and floor voids. The units shall have a maximum depth of 233/300/345/370/410/455/500mm (models DS1-7). For ease of installation the unit shall be supplied complete with 4 mounting brackets for inclusion into a drop rod mounting system.

Impellers shall be of high efficiency, performance and sound optimised backward curved design.

The unit shall be fitted with ErP 2015 rated, low energy, high efficiency IP54 EC motorised fans providing low specific fan powers and stepless speed control without tonal noise generation. Fan/motor assemblies have sealed for life bearings with an anticipated working life of 70,000 hours (L10) and shall be suitable for single phase supply. Units are suitable for operation in ambient temperatures of up to 60ºC (unit sizes 1 - 5) and up to 40ºC (unit sizes 6 - 7).

The unit and ancillaries shall be of the DAVE Supply type as manufactured by Nuaire Ltd.

COIL TYPES - LOW PRESSURE HOT WATER

(Example code: DS2A-LES)
The Low Pressure Hot Water heating coil shall be factory fitted with a 2-port pressure independent control valve (PICV) and actuator. All components pre-piped, assembled and tested by the manufacturer.

The system shall have frost protection (ES models only) which shall, at temperatures below 4 degrees C, fully open the 2-port pressure independent valve and only start the fan when the temperature in the chamber has risen to the designated set point.

ELECTRIC HEATER BATTERY

(Example code: DS2A-EES)
The Electric Heater Battery shall be of stainless steel sheathed element design, factory fitted and pre-wired to an integral closed loop thyristor control. NOTE: Heaters will need an enable signal for heater (ES-LCD, 0-10V BMS or ES-CI).

NO HEATER

(Example code: DS2A-NES)
The unit is also available without a heater fitted. Note: heater operation requires an enable signal (eg ES-LCD, 0-10V BMS or ES-CI).

INSTALLATION

By the appointed contractor. The DAVE supply fan can be installed internally or externally as standard without the requirement for additional weather protection. Refer to manufacturers installation and maintenance manual for details on mounting orientation. Mechanical installation

requires mounting of the supply unit in the designated position and connection to the associated duct work. Either Top or bottom access is available. Electrical installation requires the provision and connection of single phase electrical supply at the fan.

INSTALLATION REQUIREMENTS

The mechanical contractor shall ensure that all necessary ancillaries are included eg. flexible connections, additional attenuators, etc. The contractor shall allow for all necessary ductwork transformations to and from the fan unit and any associated components in accordance with the manufacturer's recommendations, DW 144 and general good practice.

RANGE MODELS

DAVE Supply Plus - No Heater: Extended lined case Type 'A', G4 filter, attenuation pods, Energy efficient Ecosmart control. Circular spigots.

DAVE Supply Plus - LPHW: Extended lined case Type 'A', LPHW coil with 2 port pressure independent valve (PIBC), G4 filter, attenuation pods, Energy efficient Ecosmart control. Circular spigots.

DAVE Supply Plus - Electric heater: Extended lined case Type 'A', Electric heater & thyristor control, G4 filter, attenuation pods, Energy efficient Ecosmart control. Circular spigots.

CODE DESCRIPTION

DS7A-LES
|||| ||
1234 56

1. DAVE Range
2. Supply fan
3. Case size (1-7)
4. Case type: A = Extended
5. L = LPHW Coil/valve
   E = Electric heater,
   N = No heater
6. ES = Ecosmart control

CONTROL SPECIFICATION

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

ECOSMART CONTROL – DEMAND CONTROLLED VENTILATION

Provides the facility for energy saving via an intelligent function with local diagnostics status indication, or allows convenient integration with the client BMS with a minimal co-ordination requirement. The factory fitted Ecosmart control panel mounted to the fan unit includes: integral infinitely variable speed /duty control for the extract fan, with independent minimum, maximum speed adjustment for accurate commissioning. The control assembly is side mounted with a removable weather control fascia (if required).

The Ecosmart control enables the fan's speed to be varied automatically as conditions in the ventilated space change by linking low voltage sensors or as the low voltage user control is adjusted. It also enables multiple fans to be directly interlinked. The user control (ES-LCD) and low voltage sensor are supplied complete with a 10m length of low voltage, pre-plugged cable. The control features a run on timer and "background" ventilation function, and is provided with unit status indication, run and fail relays and interface connections for Ecosmart sensors and enablers.

The fans shall have the following energy saving and operational functions integrally installed within it, all components will be pre-wired and fitted by the manufacturer:

- Integral frequency inverter/speed controller
- Integral adjustable run-on timer
- Maximum and minimum speed adjustment/ setting (trickle and boost)
- Volt free run & failure/status indication
- 0-10V BMS interface for remote operation (this will enable the following functions:-Switch the unit ON/OFF. Variable speed/duty control, switch from low speed to high speed, enabling heating where applicable.
- Low voltage interface
- Multiple low voltage sockets for interconnection of sensors or fans
- Background ventilation/trickle enable switch.

Fan, Ecosmart controls and associated sensors/ controllers shall be manufactured by Nuaire Ltd. Units fitted with Ecosmart control (code example DS3A-LES) shall have a 5 year warranty.