

## CONSULTANTS SPECIFICATION

### OPERATION

The extract fans shall be as indicated on the drawings and shall be in accordance with the particular fan schedule in this specification. The vitiated air shall be extracted from each area via ductwork as shown. All necessary ductwork fittings and ancillaries shall be allowed for by the mechanical sub contractor.

The extract fans shall be operated as it receives signals from one of the interconnected sensors or an external signal e.g. light switch. The OPUS plus shall have the facility to increase speed on a trickle and boost principle when triggered.

### GENERAL FAN SPECIFICATION

The fans are acoustically lined with high density class "O" flame retardant acoustic insulation, giving extremely low noise levels and shall be complete with an integral filter (surface mounted versions only); integral controls, magnetic backdraught shutters and fascia mounted run and fail indication. The breakout noise level and power requirements shall be in accordance with the schedule and the manufacturer's details.

The fans shall have low energy, high efficiency fan/motor assembly with sealed for life bearings.

### OPUS PLUS

The unit shall be supplied complete with automatic fan changeover in the event of failure, sensed via a "hall effect" airflow sensor, and auto duty share every 12 hours of run time. (For twin fan only).

### DUCT MOUNTED

The unit shall incorporate a low profile single point mounting bracket, incorporating a pre-stressed synthetic anti vibration seal. The bracket shall enable the unit to be mounted horizontally or vertically. The depth of the unit shall not be greater than 260mm. The unit shall be constructed with one removable panel allowing full maintenance access. To facilitate the interconnection of branch ducts the unit shall have 4x100 dia & 1x 125 dia knockouts on the suction side of the unit (spigots provided).

Fan shall be the OPUS100- (2) M or the OPUS150-M as manufactured by Nuair.

### SURFACE MOUNTED

All fan components are manufactured from ABS polymer and pre-coated steel. Unit finish shall be white.

Fan to have the option of an integrated PIR detector to switch the unit from trickle or off to full speed. Fans complete with integrated magnetic backdraught shutters. Air inlet grilles are fitted with foam filters to protect the fan/motor assembly from airborne dust and contaminants. The unit shall have a 125dia spigot to connect to ductwork or wall mounting kit. Surface mounted LED indicators shall show the unit operational status.

The unit shall be supplied complete with automatic fan changeover in the event of failure, sensed via a "hall effect" airflow sensor, and auto duty share every 12 hours of run time. (For twin fan only).

All versions shall have the following functions integrally mounted within the fan unit on a purpose made PCB, all such components pre-wired and factory fitted by the manufacturer:

- Integral adjustable background ventilation control/set point (0 – 50%).
- Integral adjustable trickle ventilation control/set point (50 – 100%).
- Integral adjustable run on timer.
- Integral S/L terminal for boost trigger from remote switch, e.g. light switch.
- Integral low voltage terminal for boost trigger from remote low voltage switch.
- Volt free failure/status indication.
- 3 years manufacturers warranty.

The unit shall be controlled by one of the following remote options:

- OPUS –SPD – Low voltage (12V) speed control, ON/OFF and speed control between min and max settings.
- 230-PIR - (passive infra-red) movement detector (includes run-on timer), 2-30 mins).
- 230-PIRNT - (passive infra-red) movement detector (without run-on timer).
- HUMISEN - Humidity sensor.
- 230-TSTATR – Room thermostat.
- CT- AVI – Remote failure indication.

Fan shall be the OPUS100- 2 B or M or the OPUS150- B or M as manufactured by Nuair Ltd.

The manufacturer's recommendations should be observed at all times.