

## Classroom Hybrid Ventilation System

*To improve air quality in a naturally ventilated classroom*

- A solution for ventilating classrooms to the required standards without the need for costly renovation.
- Supply air units draw air from outside into the classroom to meet required air changes by building regulations.
- Smart controls monitor Carbon Dioxide (CO<sub>2</sub>) and temperature to provide a stable air quality for students and teachers.
- Can be used to help meet the requirements of BB 101: Ventilation, thermal comfort and indoor air quality 2018.
- Optional Heating solutions can include LPHW coils.
- Extract Systems available to work in conjunction with supply air systems.
- Filtration available for areas that fall within polluted areas, or roadside (AQMA) including Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and Nitrogen Dioxide (NO<sub>x</sub>)
- Quiet Operation (Insulated Housing and Inline Attenuation)



### Applications

An easily retrofittable solution to hybrid ventilation for classrooms, or spaces when natural ventilation is insufficient to maintain an acceptable room temperature, humidity, or air quality.

### Hybrid Ventilation

The Hybrid Ventilation System offers an energy efficient method of controlling temperature, humidity, and indoor air quality within a room. The system allows for the use of openable windows in conjunction with the simple mechanical ventilation by using smart control systems.

### How does it work?

The Hybrid Ventilation System's internal fan draws air from outside and mixes it with a portion of the existing indoor air to temper it reducing cold draughts. The mix can be adjusted either manually using louvres, or by using smart controls which ensure the maximum amount of supply air is utilised to optimise conditions throughout the seasons.

### Installation

Hybrid Ventilation Systems are installed in each room that requires supplemental ventilation and should be installed as close to an external wall / window as possible ensuring minimal energy consumption and noise. These units can be installed above or below ceiling.

### Smart Controls

Smart control systems can be used in conjunction with a range of monitors (temperature, humidity, and VOCs) to operate supply and extract fans as required ensuring air quality and room conditions.

### Particulate Matter Filtration (PM<sub>10</sub> and PM<sub>2.5</sub>)

PM<sub>10</sub> and PM<sub>2.5</sub> Particulate air filters are optional within the Hybrid Ventilation System where outdoor air quality is poor.

### Pollutant Gas and Odour Filtration (Nitrogen Dioxide (NO<sub>x</sub>), VOCs and Ozone)

Airclean Type 1 Gas Filters are optional within the Hybrid Ventilation System where outdoor levels of Nitrogen Dioxide exceed acceptable limits. These filters have the added benefit of filtering VOCs (Volatile Organic Compounds), Ozone, and odours.

Part Number	Description	Rated Airflow	Weight	Dims. (mm)			Included Filters	Optional Filter Section	Optional Controls
		m <sup>3</sup> /s		H	W	L			
1908829	Hybrid Supply Air System	0.176	45kg	290	650	900	PM10	GAS + PM2.5	CO <sub>2</sub> / Temp.
1908830	Extract Air System	0.176	45kg	290	650	900	PM10	GAS + PM2.5	CO <sub>2</sub> / Temp.