

WIND DRIVEN

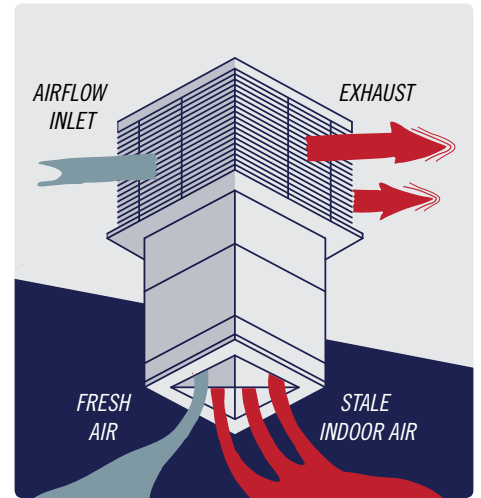
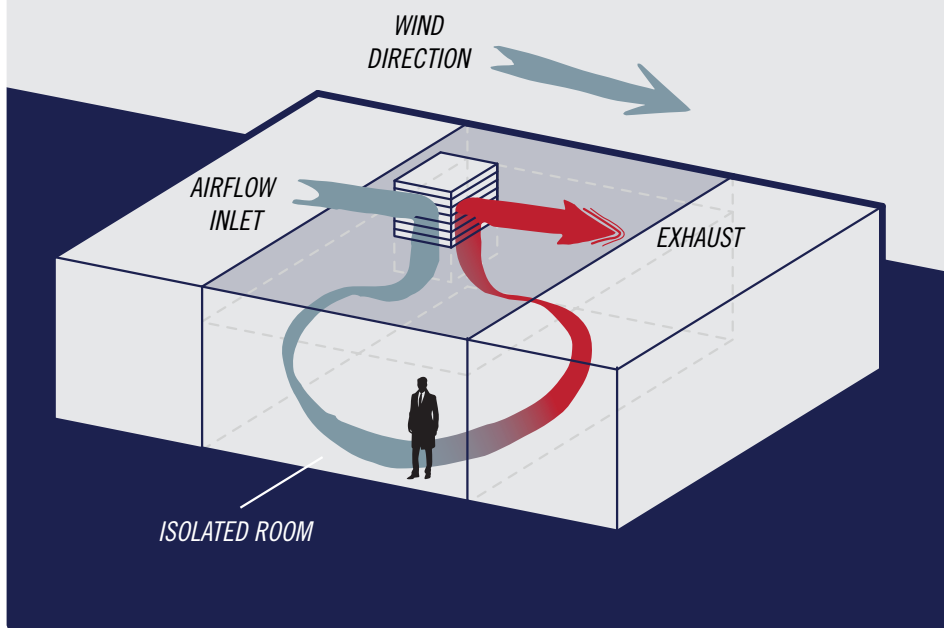
NATURAL VENTILATION WIND DRIVEN STRATEGY

Dependant on wind behaviour, wind driven ventilation harnesses prevailing wind to supply fresh air into an indoor space using a rooftop turret. This air then displaces and exhausts the warmer, stale air out of the same turret.



ENVIRONMENT

Wind Driven natural ventilation must take into consideration the location and orientation of a building. Ideally the roof should be higher than surrounding buildings to allow the wind to be captured, and the direction of the prevailing wind can help determine the best positioning of the turrets.



TURRET AIR FLOW

Wind-flow is captured with the opening side(s) of the turret facing the wind direction. This air is then driven down into the room below where it circulates and mixes with the stale indoor air. Warm air rises out of the space and out of the remaining quadrants.

A DIVIDED DUCT ASSEMBLY ALLOWS FOR INLETS AND OUTLETS IN ONE UNIT



CASE STUDY



NANT CELYN PRIMARY SCHOOL

Nant Celyn primary school includes the regional centre for the Hearing Impaired. As well as meeting Building bulletin 101 standards, attention was required to control acoustic performance in classrooms.

The build included:

- Eight wind driven turrets
- Weatherproofing
- BMS control integration
- Acoustic insulated splitters

THE BENEFITS

- ACOUSTIC PERFORMANCE
- REDUCED ENERGY USE
- IMPROVED CARBON FOOTPRINT
- IMPROVED LEARNING ENVIRONMENT
- COST EFFECTIVE SOLUTION