

Natural Daylight & Natural Ventilation

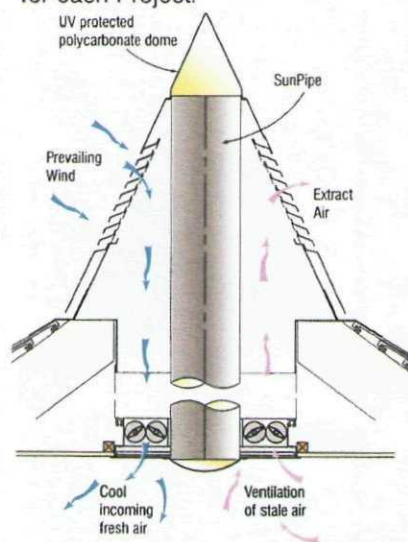
Whereas Monovents are designed for domestic and small office applications, Monodraught SunCatchers provide a satisfactory solution of combining natural light and natural ventilation.

The Monodraught SunCatcher system provides controlled natural ventilation as well as providing all the benefits of natural daylight. Any prevailing wind pressure carries a continuous fresh air supply through weather protected louvres on the windward side of the system at roof level. The wind movement is encapsulated by internal quadrants which turns the wind through 90° forcing air down through internal ducts into the room below, slightly pressurising the internal space. Warm, stale air is expelled from the room by the Passive Stack ventilation principle of differential temperatures and the natural buoyancy of air movement. Manual or motorised motors at the base of the system control the rate of ventilation.

The central SunPipe tube is integrated into the system and conveys natural daylight to the same room or internal space.

The SunCatcher has the unique advantage that with air intakes on all four sides, it does not matter which way the wind is blowing since one side of the system will always act as the air intake whilst the opposite side, being in the low pressure zone, related to the system, becomes a natural extract to the room. When the wind changes direction so the intake and extract will also change their function.

The system is designed to produce an air change rate of 5 to 6 AC/hr and full calculations are provided for each Project.



The 'famous' Eco House at Nottingham University which has had wide publicity in the Architectural press, featured a bespoke pinnacle SunCatcher system, with a polycarbonate cone. This highlights Monodraught's ability to produce any architectural feature. The pinnacle SunCatcher serves the first floor landing and staircase and a further SunPipe serves the ground floor cloakroom.

Top left: John Groom Housing Association at Borehamwood.
Top right: The Key Centre, University of Hertfordshire.
Centre right: Jane Lane Special School, Walsall (see page 8).
Lower right: Handsworth Community Fire Station, Birmingham.

