

What are the primary advantages of passive houses?



Extremely low energy use

90-95% less heating and cooling energy use (max 10W/sq.m). This means that a 100sq. metre house can be heated with ten light bulbs.

60-80% overall energy savings compared to NZ Building Code compliant buildings.

Thermal comfort and superior air quality

Consistent temperature in each room of the house.

Minimum temperature of 20°C. throughout the year.

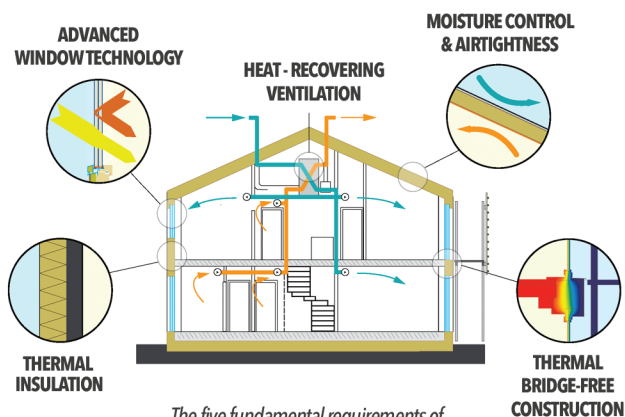
Dry, warm, healthy and comfortable environment which helps reduce bronchial and asthmatic conditions.

Consistent supply of fresh, heated outdoor air.

Pests and allergens filtered from outdoors.

Low carbon footprint

Minimal energy and fossil fuel consumption.



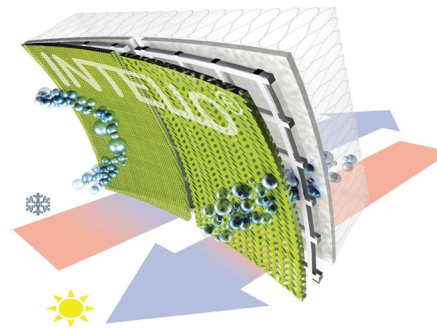
The five fundamental requirements of passive house construction

How are passive house criteria achieved?

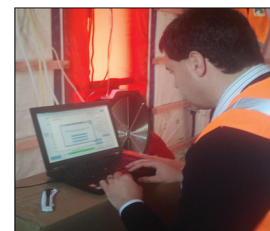
Certification of a passive house is granted after strict criteria have been met using the five fundamental construction requirements and proven test results.

Heating load	10W/m ²
Annual space heat/cooling demand	≤ 15kWh/(m ² a)
Air tightness n ⁵⁰	≤ 0.6h ⁻¹
Annual primary energy needs	≤ 120kWh/(m ² a)

1. Moisture control and airtight building



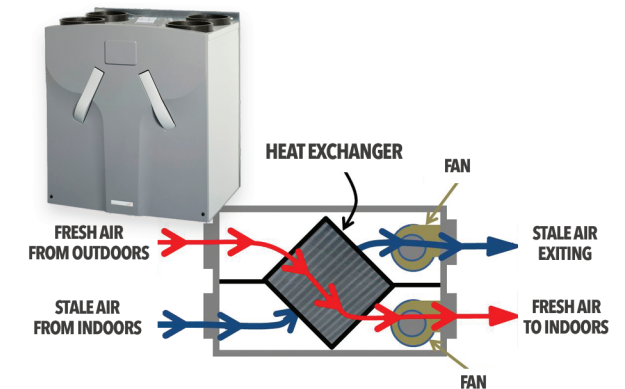
Air tightness/moisture control membrane



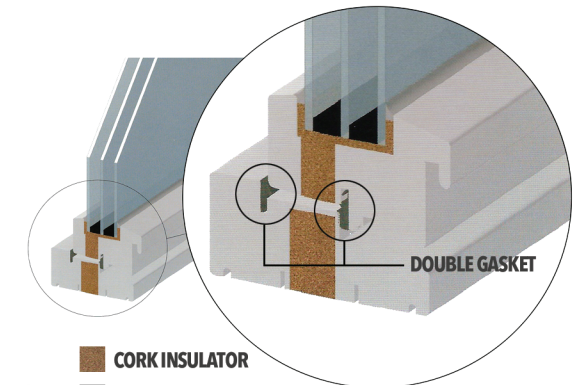
Pressure test result: 0.26 h⁻¹

2. Heat-recovering ventilation system

Fresh air is drawn from the outside and through the heat exchanger. At the same time, stale air is extracted from the house.



3. Advanced window technology



CORK INSULATOR
WARM EDGE PROFILE