



TEACH Passiv



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FACT SHEET No.1

What is a Passivhaus?

Passivhaus is a rigorous, voluntary, design and construction standard for energy efficiency in a building. It results in ultra-low energy buildings that require little energy for space heating or cooling and thereby reducing its ecological footprint.

For a building to be considered a Certified Passivhaus, it must meet the following criteria:

1. The Space Heating Energy Demand is not to exceed 15 kWh per square meter of net living space (treated floor area) per year or 10 W per square meter peak demand.

In climates where active cooling is needed, the Space Cooling Energy Demand requirement roughly matches the heat demand requirements above, with a slight additional allowance for dehumidification.

2. The Primary Energy Demand, the total energy to be used for all domestic applications (heating, hot water and domestic electricity) must not exceed 120 kWh per square meter of treated floor area per year.

3. In terms of Airtightness, a maximum of 0.6 air changes per hour at 50 Pascals pressure, as verified with an onsite pressure test (in both pressurised and depressurised states).

4. Thermal comfort must be met for all living areas during winter as well as in summer, with not more than 10 % of the hours in a given year over 25 °C.

Passivhaus buildings are planned, optimised and verified with the Passive House Planning Package (PHPP).

All of the above criteria are achieved through intelligent design and implementation of the 5 Passive House principles: thermal bridge free design, superior windows, ventilation with heat recovery, quality insulation and airtight construction.

Source: passiv.de