

Why choose a Passivhaus home: up to 90% savings on heating and cooling and a healthier interior

The Passivhaus standard combines energy efficiency, stable comfort and indoor air quality. At PAPIK Group we build it to measure, with sustainable materials adapted to the Catalan climate.

In a context where comfort and energy efficiency weigh more and more heavily on the decision to build, the Passivhaus standard has established itself as one of the soundest answers for anyone seeking a sustainable, healthy and low-consumption home. The premise is clear: to offer maximum wellbeing with minimum energy expenditure, without giving up on design or quality of life.

This article sets out why a Passivhaus home improves a family's daily life, reduces environmental impact and guarantees a comfortable home throughout the entire year.

What a Passivhaus home is

The Passivhaus concept originated in Germany during the 1990s with a precise aim: to build homes with minimal energy consumption without sacrificing comfort. The standard is not a commercial label but a verifiable construction method resting on five fundamental principles.

- **Thermal insulation.** Prevents heat loss in winter and holds a pleasant temperature in summer.
- **High-efficiency windows and doors.** Triple low-emissivity glazing that reduces thermal exchange with the outside.
- **Airtightness.** Eliminates the uncontrolled air leaks that undermine energy efficiency.
- **Absence of thermal bridges.** The points where heat would escape are resolved to improve the performance of the whole.
- **Mechanical ventilation with heat recovery.** Ensures fresh, healthy air indoors without wasting the energy already accumulated.

These five pillars work in a coordinated way. None of them, on its own, defines a Passivhaus; it is their combination that produces a stable, quiet and efficient home.

Energy efficiency: a present-day necessity

Reducing energy consumption has ceased to be an aspiration and become a requirement, for both economic and environmental reasons. Passivhaus homes achieve savings of up to 90% on heating and cooling compared with a conventional older dwelling.

- Lower electricity and gas bills.
- Reduced CO2 emissions.
- Less dependence on external energy sources.

Whereas a conventional house needs heating or cooling almost constantly, a Passivhaus keeps its temperature stable throughout the year by drawing on solar gain and the thermal inertia of its envelope. The result is a home that works in favour of its occupants rather than demanding energy from them continuously. Several studies also indicate that living in a Passivhaus is associated with a lower risk of respiratory illness and better sleep quality.

Comfort: the balance between design and function

The comfort of a home does not depend on temperature alone. Noise, air quality and natural light also come into play, factors that the Passivhaus standard addresses together.

- **Acoustic insulation.** Passivhaus construction dampens outside noise and provides a calm interior.
- **Constant temperature.** Abrupt swings and the sensation of extreme cold or heat are avoided.
- **Controlled ventilation.** Continuously renews the indoor air and removes pollutants.
- **Sustainability.** At PAPIK Group we build with sustainable materials such as timber.

A healthy home

A Passivhaus home is not only efficient: it is also a healthy one. Indoor air quality is a decisive factor in daily wellbeing, and controlled mechanical ventilation makes it possible to keep the environment free of pollutants without opening windows constantly.

- **Physical wellbeing.** Respiratory complaints are reduced by minimising humidity, dust mites and the presence of mould.
- **Psychological wellbeing.** A comfortable interior improves rest and quality of life.
- **Longevity of the build.** Sustainable materials and efficient design prevent construction pathologies over the long term.

This attention to health connects directly with the way we understand construction: a home well resolved from the outset ages better and demands far less corrective maintenance across its service life.

Why choose a Passivhaus home from PAPIK Group

Choosing a Passivhaus home means opting for comfort, savings and sustainability in a single decision. It is an investment that improves quality of life, protects the environment and preserves the value of the property over the long term.

At PAPIK Group we design bespoke Passivhaus homes, with sustainable materials such as timber, integration of renewable energy and agile construction processes, adapted to the Catalan climate. The same efficiency logic applies when the task is to improve an existing building through energy retrofit.

Passivhaus homes represent a mature route towards sustainable construction: the combination of energy efficiency, comfort and health makes them a coherent choice for anyone seeking an intelligent home that is responsible towards its surroundings.

A Passivhaus asks you to give up nothing: it changes the way the house manages energy so that comfort no longer depends on the bill.