

Origin and meaning of Passivhaus: what a passive house really is

The term Passivhaus has become shorthand for maximum energy efficiency, yet behind it lies a concrete history and a verifiable standard. This article traces where the concept comes from, how it was formalised and what it certifies.

To talk about Passivhaus in Spain is, in fact, to talk about low energy consumption buildings, sustainable construction and respect for the environment. Passivhaus is not a marketing label but a certificate that guarantees a building with the highest possible energy efficiency, verified against defined technical criteria. Understanding its origin helps separate the standard from the marketing that often surrounds it.

What Passivhaus means

The term comes from German and its literal translation would be "passive house". It refers to the construction of homes that do not need to consume energy to generate comfort inside. The house holds a stable temperature not because heat or cold is injected continuously, but because the design, the insulation and the ventilation reduce losses until they become almost irrelevant.

Behind this result lies the collaboration of several sectors. Passive houses bring together architects, builders and environmental scientists to achieve a synthesis that translates into the lowest possible energy consumption, always adapted to the specific setting of each home.

Where the passive house concept comes from

The passive house was first discussed in the early 1980s in the United States, as a building model capable of achieving comfort with zero energy consumption, drawing exclusively on the energy generated by the house itself. To reach that goal, different construction types were established according to the climates found across the country, defining sixteen building models that took into account factors such as:

- Temperature
- Humidity
- Wind
- Solar impact

These factors determine the location and orientation, the level of insulation, the ventilation systems and the structure of the house. A house in the mountains will be very different from a house in the desert, yet both will achieve maximum comfort with minimum consumption thanks to their constructive fit, what we can call high energy efficiency.

Formalisation in Germany

Closer in time and place, the Passivhaus concept was born in Germany during the 1990s. It was there that the term "passive house" became a formal standard, thanks to the Passivhaus Institute, which developed a certification system able to guarantee that a home carrying this seal reaches Class A energy efficiency.

The standard allows energy savings of 80% in severe climates such as Germany's and of 60% in milder climates such as the Mediterranean. The cost of energy and its environmental impact make this building system a sound example of sustainable construction. In Spain, the Plataforma Edificación Passivhaus brings together the various actors involved, from architects and builders to material manufacturers.

The PAPIK Group approach

At PAPIK Group we work with a high energy efficiency building system capable of meeting the Passivhaus standards, in constant adaptation to the latest technologies and materials. To this performance we add a low-polluting manufacturing process, so that sustainability is not limited to how the house behaves once finished but extends to the way it is built. It is the same logic we apply in new construction and in energy retrofit alike.

A passive house consumes less not because comfort is given up, but because comfort stops depending on consumption.