

Passiv Palau, an open door onto a Mediterranean passive house

Passiv Palau opened its doors during the Passivhaus Open Door day. A timber single-family home in Palau-solità i Plegamans that cuts energy use by 75% and ranks among Europe's best Blower Door results.

From 3 to 5 July, the Passivhaus Open Door day gave the public a chance to visit buildings constructed to the standard's requirements. At PAPIK Group we opened the doors of Passiv Palau, a single-family home in Palau-solità i Plegamans, in the Vallès Occidental, already established as a benchmark in the sector for the results it achieved in its certification test.

The house stands out above all for the figures reached in its Blower Door test, among the best in Europe. That airtightness, combined with insulation and ventilation, allows the home to reduce energy consumption by 75% compared with an equivalent conventional build. The open door day was designed for exactly that purpose: to let anyone considering building experience first hand what living in a high-efficiency home actually means.

A Mediterranean passive house

Passiv Palau is a passive house conceived for the Mediterranean climate, built with a modular timber system of OSB panels and cellulose insulation. The façade combines an external insulation finish of the SATE type with a ventilated timber-slat façade, while the roof resolves ventilation with Arabic tile at the front and sandwich panel at the rear. It is the same logic behind our [Passivhaus construction](#): a continuous thermal envelope, thermal-bridge control and verified airtightness.

The result is a home that needs no additional heating or cooling system. Comfort rests on balanced ventilation with heat recovery, an aerothermal unit for domestic hot water and a sealed stove for occasional support. Outside, large Alicante-style blinds temper solar radiation, and windows integrated within the wall allow the openings to be fully cleared.

Why open the doors

Few things explain a passive house better than standing inside one. During the day, visitors could tour the home, talk with the people who live there and understand the everyday advantages of a well-resolved envelope: stable temperature, continuously renewed air and very low energy bills. The visit ran by prior registration with limited places, across two sessions, on Friday afternoon and Sunday morning.

Technical data

Building type

- Typology: detached single-family
- Useful built area: 106 m²
- Construction type: timber
- Work type: new build
- Certification: certified

Energy consumption

- Pressure test: 0.2 h⁻¹
- Annual heating demand: 9.0 kWh/(m²a)
- Heating load: 9.0 W/m²
- Annual cooling demand: 17.0 kWh/(m²a)
- Cooling load: 10.0 W/m²
- Total primary energy demand: 117.0

Technical credits

- Constructor: PAPIK Group
- Architect: Eva Jordan Guerrero
- PH consultant / engineer: Micheel Wassouf
- Developers: Mònica Vela and Jordi Bolao

Cases like Passiv Palau explain why the Passivhaus standard has moved from a technical aspiration to a way of building. The same discipline also guides our energy retrofit of existing homes.

A passive house is not proven by argument but by living in it: stable temperature, clean air and a consumption figure that speaks for itself.