

CERTIFICATE

Certified Passive House Component

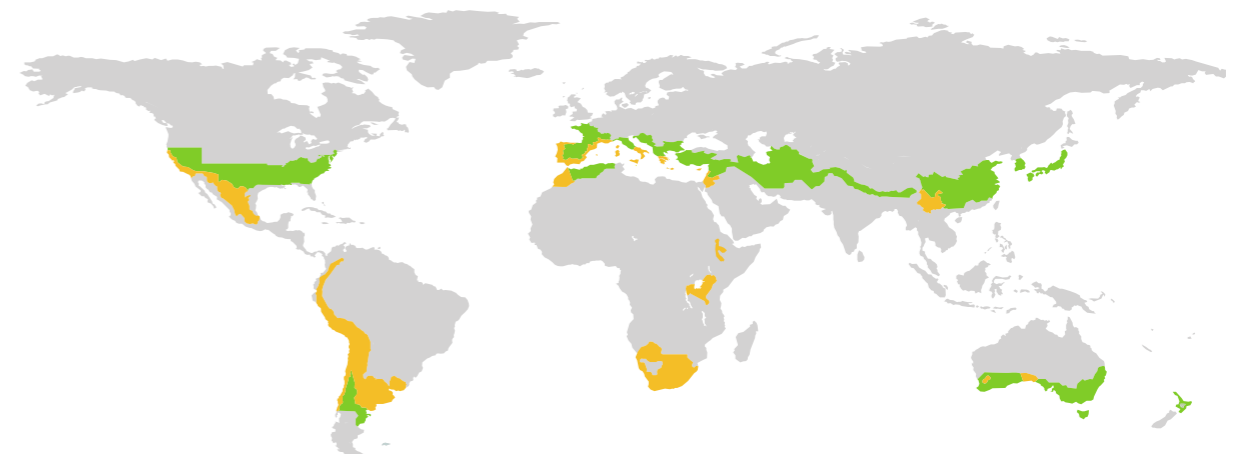
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Passive House Institute

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Category **Wall System | Mixed construction**
Manufacturer **Proyectopía S.L.**
Pontevedra
SPAIN
Product name **Proyectopía**

This certificate for the warm, temperate climate zone was awarded based on the following criteria

Hygiene criterion

The minimum temperature factor of the interior surfaces is

$$f_{R_{si}=0,25m^2K/W} \geq 0.65$$

Comfort criterion

The U-value of the installed windows is

$$U_{W,i} \leq 1.05 \text{ W}/(\text{m}^2\text{K})$$

Efficiency criteria

Heat transfer coefficient of building envelope

$$U * f_{PHI} \leq 0.30 \text{ W}/(\text{m}^2\text{K})$$

Temperature factor of opaque junctions

$$f_{R_{si}=0,25m^2K/W} \geq 0.82$$

Thermal bridge-free design for key connection details

$$\Psi \leq 0.01 \text{ W}/(\text{mK})$$

An airtightness concept for all components and connection details was provided

warm, temperate climate



CERTIFIED COMPONENT

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Opaque building envelope

Proyectopia building system is a cassette system made of extruded aluminium for the construction of sustainable detached houses. The system is based on modular load-bearing walls and roofs made of cassettes in continuous layout, façades made of sandwich panels and floors made of a concrete slab. The aluminium panels have three key functions: structure for façades & roof and solar collector. The panels are 30 cm wide and up to 900 cm long and assembled by a high precision joint with screws each 40 cm. It is an industrialised construction system for passive houses in the warm-temperate climate zone (4), as the regular U-values of the walls are 0,22 W/m²K, the U-value of the roof is 0,25 W/m²K, and the connections meet the criteria of 'thermal bridge free'. The system consists of a ventilated façade and roof formed by an omega-shaped aluminium panel of 90 mm thickness, a waterproof sheet, an oriented strand board of 15 mm, a layer of mineral wool of 170 mm thickness, a vapour barrier and two gypsum plasterboards. The surface temperature of all connections meets the hygiene requirements.

Windows

For the purposes of certification a standard passive house window (Uw = 1,00 W/m²K with Ug = 0,90 W/m²K) was used. The overall U-value of the installed window of standard size (1,23 m wide by 1,48 m tall) should be no more than 0,05 W/m²K greater than the Uw to ensure occupant comfort - this criteria is met in this instance.

Airtightness concept

Airtightness of the system is achieved in the following way: windows and doors are taped, and the airtight layer of the wall and roof is a vapour control layer USB Micro Light, made of PE film, mass 120 g/m2, thickness 0.57 mm. The sheet is to be placed between the plasterboards and joined with tape along its perimeter.

Explanatory notes

The Passive House Institute has defined international component criteria for seven climate zones based on hygiene, comfort and affordability criteria. In principle, components which have been certified for climate zones with higher requirements may also be used in climates with less stringent requirements. Their use might make economic sense in certain circumstances.

Thermal bridge not calculated
Criteria achieved

Efficiency criteria not achieved
Hygiene or comfort criterion not achieved

