

CERTIFICATE

Certified Passive House Component

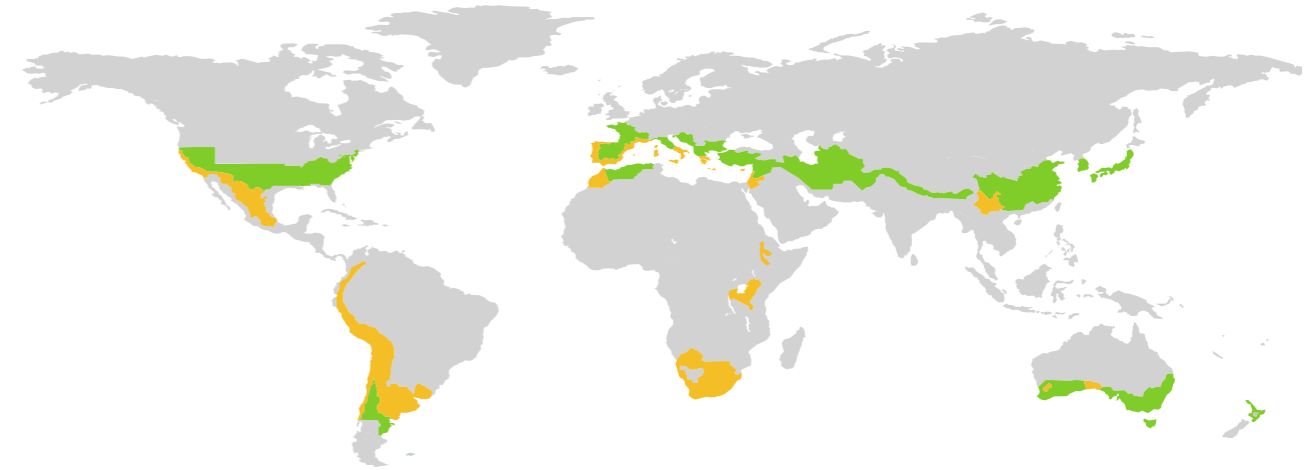
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Passive House Institute

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Category **Construction system | Lightweight timber Construction**
Manufacturer **Gaiga & Gaiga Top Natural House
Selva di Progno (VR)
Italy**
Product name **Strawblock System Gaiga and Gaiga**

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

$$f_{Rsi=0,25m^2K/W} \geq 0,65$$

Comfort criterion

The U-value of the installed windows is

$$U_{W,i} \leq 1,05 \text{ W}/(m^2K)$$

Efficiency criteria

Heat transfer coefficient of building envelope

$$U \cdot f_{PHI} \leq 0,30 \text{ W}/(m^2K)$$

Temperaturfactor of opaque junctions

$$f_{Rsi=0,25m^2K/W} \geq 0,82$$

Thermal bridge free design for key connection details

$$\Psi \leq 0,01 \text{ W}/(m^2K)$$

An airtightness concept for all components and connection details was provided.

warm, temperate climate



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COMPONENT**

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Opaque building envelope

The thermal insulation of the system consists of straw bales, which are lined with clay plaster on the inside and lime plaster on the outside. The bales are fitted into a timber construction.

The construction rests on a floor slab that is insulated on the warm side with dry screed made of mineralized woodspans.

The roof is also insulated with straw bales. A timber board closed off to the room, and a fiber board layer combined with a timber board closed to the outside.

Windows

The certification was done with a timber/aluminium window frame modelled for a warm-temperate climate on the basis of the Passivhaus window Purista by the company Optiwin with triple glazing.

Airtightness concept

The airtight layer of the walls is formed by the interior clay plaster layer and an additional air sealing tape is present between adjacent prefabricated modules. The connection to the windows is made by plasterable adhesive tapes. The airtight layer of the roof is a membrane that protrudes towards the walls and is plastered in.

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. This use might make sense in certain circumstances.

Thermal bridge not calculated
Criteria achieved

Efficiency criterium not achieved
Hygiene or comfort criteria not achieved

