

CERTIFICATE

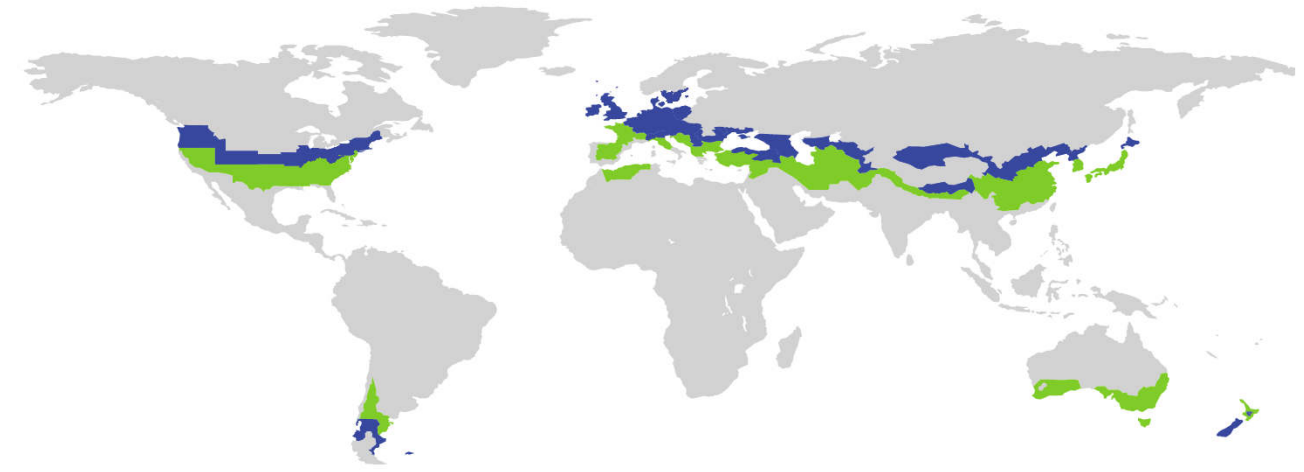
Certified Passive House Component

ID: 1513cs03 valid until 31. December 2020

Passive House Institute
Dr. Wolfgang Feist
64342 Darmstadt
GERMANY

Additional thermal bridges

| Name | Thermal bridge | Description |
|--------|----------------|--|
| ROVE02 | -0,067 | 0,92 Verge in conjunction with the roof insulated by cellulose |
| ROEA02 | -0,026 | 0,89 Eaves in conjunction with the roof insulated by cellulose |
| RORI02 | -0,022 | 0,91 Ridge in conjunction with the roof insulated by cellulose |
| FSEW02 | -0,032 | 0,94 Floor - exterior wall with 1 m perimeter insulation |
| FSEW03 | -0,015 | 0,84 Floor - exterior wall with 0.5 m perimeter insulation |
| FSEW04 | 0,025 | 0,84 Floor - exterior wall without perimeter insulation |
| WITH02 | 0,016 | 0,82 Threshold with oak window frame |



Category **Construction system | Lightweigt timber Construction**
Manufacturer **Benediktinerabtei Plankstetten im Interreg-Projekt UP STRAW
Berching
Deutschland**
Product name **Strohballen-Bohlenständerbau Putz-Putz**

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

Hygiene criterion

The minimum temperature factor of the interior surfaces is $f_{Rsi=0,25m^2K/W} \geq 0,70$

Comfort criterion

The U-value of the installed windows is $U_{w,i} \leq 0,85 W/(m^2K)$

Efficiency criteria

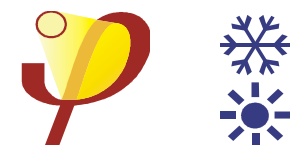
Heat transfer coefficient of building envelope $U \cdot f_{PHI} \leq 0,15 W/(m^2K)$

Temperaturfactor of opaque junctions $f_{Rsi=0,25m^2K/W} \geq 0,86$

Thermal bridge free design for key connection details $\Psi \leq 0,01 W/(m^2K)$

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

cool, temperate climate



**ZERTIFIZIERTE
KOMPONENTE**

Passive House Institute

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 (60/340), e = 1.0 m.

The construction rests on a floor slab that is insulated with cellulose on the inside.

The roof is also insulated with straw bales. A clay board closed off to the room, and a soft fiber board closed to the outside. In addition, a variant with cellulose insulation was considered.

Windows

The certification was done with the timber window smartwin compact (1).

In addition, the calculations were carried out for an oak-window with triple glazing (2).

Airtightness concept

The airtight layer of the walls is formed by the 3-layer clay plaster, in the 2nd layer of which a reinforcement fabric is incorporated. 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 criteria not achieved
Hygiene- or comfortcriteria not achieved

