

# CERTIFICATE

Certified Passive House Component

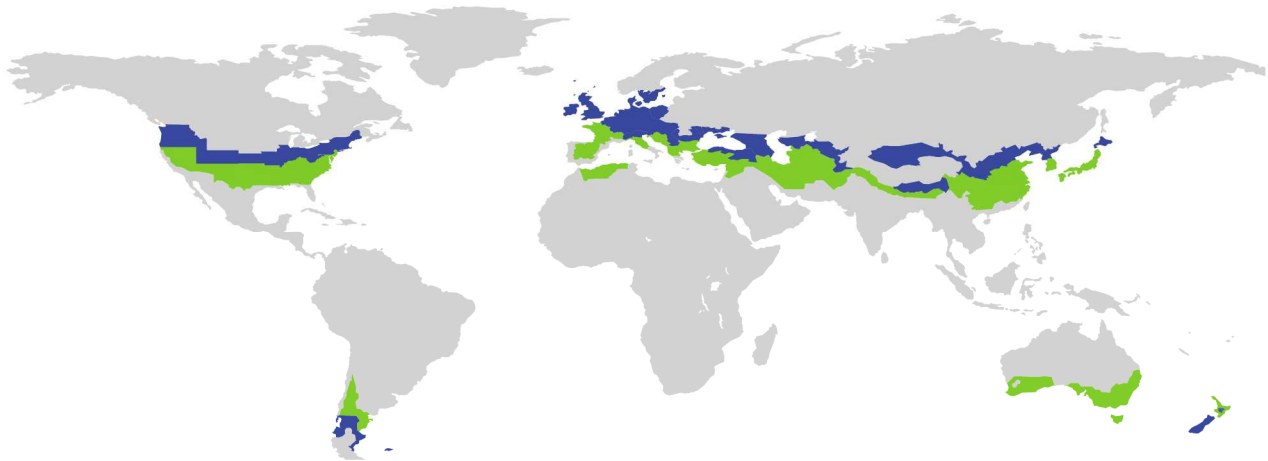
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Passive House Institute

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Category	<b>Construction system   Timber frame construction</b>
Manufacturer	<b>STEICO SE Feldkirchen Germany</b>
Product name	<b>STEICO-Bausystem</b>

**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

$$f_{R_{si}=0,25m^2K/W} \geq 0.70$$

## Comfort criterion

The U-value of the installed windows is

$$U_{w,i} \leq 0.85 \text{ W}/(m^2K)$$

## Efficiency criteria

Heat transfer coefficient of building envelope

$$U \cdot f_{PHI} \leq 0.15 \text{ W}/(m^2K)$$

Temperaturfactor of opaque junctions

$$f_{R_{si}=0,25m^2K/W} \geq 0.86$$

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.



cool, temperate climate

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## Determined values

Thermal heat transfer coefficient		Dimension [m]	U-value [W/(m <sup>2</sup> K)]
EW1	External wall	0,396	0,118
RO1	Roof	0,363	0,125
BC1	Basement ceiling	0,471	0,109
BW1	Basement wall	0,513	0,146

Thermal bridge coefficient - opaque envelope		Ψ [W/(mK)]	fRsi [-]
RO1_RO1	Roof ridge	-0,027	0,95
EW1_RO1_ea1	Roof eaves	-0,018	0,93
EW1_RO1_ve1	Roof verge	-0,050	0,90
EW1_EW1_ec1	External wall – outer corner	-0,041	0,90
EW1_EW1_ic1	External wall – inverted corner	0,039	0,96
EW1_IW1	External wall to internal wall	0,004	0,96
EW1_EW1_CE1	External wall to ceiling	0,010	0,94
BC1_EW1_1	Floor slab to external wall (unheat.)	-0,066	0,93
BC1_IW1	Floor slab to internal wall	0,009	0,97
BC1_EW1_2	Floor slab to external wall (heated)	-0,024	0,94

Thermal bridge coefficient – transparent connections		Ψ [W/(mK)]	fRsi [-]
EW1_OH1	Window connection - top	0,008	0,84
EW1_OJ1	Window connection - side	0,008	0,84
EW1_OJ1_V1	Window connection – side w. blind	0,008	0,84
EW1_OB1	Window connection - bottom	0,022	0,77
EW1_OB1_V1	Bottom connection w. blind	0,022	0,77
EW1_OH1_V1	Window connection - top w. blind	0,013	0,84
BC1_OB1	Balcony door threshold	0,024	0,75

Total U-value of the installed window	[W/(m <sup>2</sup> K)] (Criterion: ≤ 0,85 W/(m <sup>2</sup> K))
Installation 1	0,84
Installation 2, with blind	0,84
Installation 3, considering balcony door threshold	0,84