

CERTIFICATE

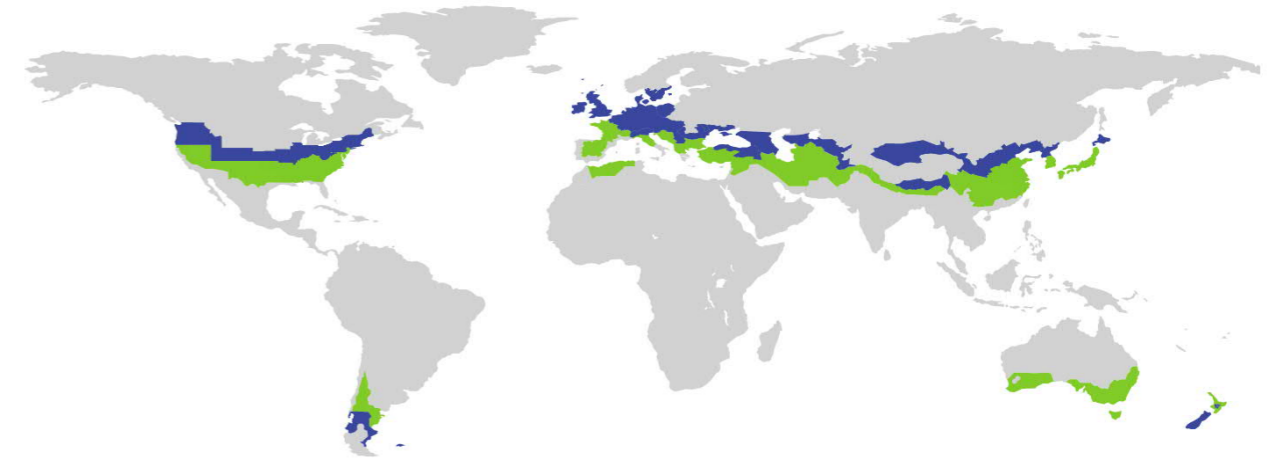
Certified Passive House Component

ID: 1370rc03 valid until 31. December 2021

Passive House Institute
Dr. Wolfgang Feist
64342 Darmstadt
GERMANY

Additional thermal bridges

Name	Thermal bridge	f_{Rsi}	Description
RWBO/TO/SI 02	$\Psi = 0,171 \text{ W/(mK)}$	0,84	Skylight variant 02
ROEJ 01	$\Psi = 0,002 \text{ W/(mK)}$	0,96	Roof expansion joint 01
ROEJ 02	$\Psi = -0,016 \text{ W/(mK)}$	0,97	Roof expansion joint 02



Category	Roof system Solid construction with EIFS
Manufacturer	VEDAG (China) Trade Co. Ltd. 200122 Shanghai CHINA
Product name	Passive House Roof System

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

$$U_{W,i} \leq 0,85 \text{ W/(m}^2\text{K)}$$

Efficiency criteria

Heat transfer coefficient of building envelope

$$U * f_{PHI} \leq 0,15 \text{ W/(m}^2\text{K)}$$

Temperature factor of opaque junctions

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

Thermal bridge-free design for key connection details

$$\Psi \leq 0,01 \text{ W/(mK)}$$

An airtightness concept for all components and connection details was provided

cool, temperate climate



**ZERTIFIZIERTE
KOMPONENTE**

Passive House Institute

Opaque building envelope

The VEDAG Roof Waterproofing System ensures both comprehensive weather proofing and Passive House standard thermal protection. The system is intended to be used with reinforced concrete construction with EIFS and comprises an exterior insulation finishing system of G-EPS (0,033 W/mK) installed using compatible adhesive materials. VEDAG membranes are applied on top of the insulation to form the weather barrier. The system has been assessed according to the Passive House Institute's criteria for roof systems and has been validated as suitable for Passive House projects in the cool-temperate and warm-temperate climate zone.

Windows

Analysis was undertaken for two separate roof window types; the 'Composite Glazing - öfönungsfähiges Glasoberlicht' from Glas Trösch ($U_w = 0,94 \text{ W/m}^2\text{K}$ with $U_g = 0,75 \text{ W/m}^2\text{K}$) and the 'Nauheimer Lichtkuppel' from Hans Börner GmbH & Co. KG ($U_w = 0,68 \text{ W/m}^2\text{K}$ with $U_g = 0,89 \text{ W/m}^2\text{K}$), based on dimensions 1,5 x 1,5 m. The calculations undertaken demonstrate that the window installation locations are suited to the cool-temperate climate, with no risk of surface condensation and subsequent mould growth.

Airtightness concept

Air tightness is achieved by the following procedure: Roof windows are to be constructed with permanently elastic + tight materials. Internal surfaces are to be plastered over the entire surface; internal surfaces in lightweight construction are to be covered over the entire surface with continuous, airtight membranes; windows are to be properly connected with suitable airtight window connection membranes or profiles.

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 comfort criterion not achieved

