

CERTIFICATE

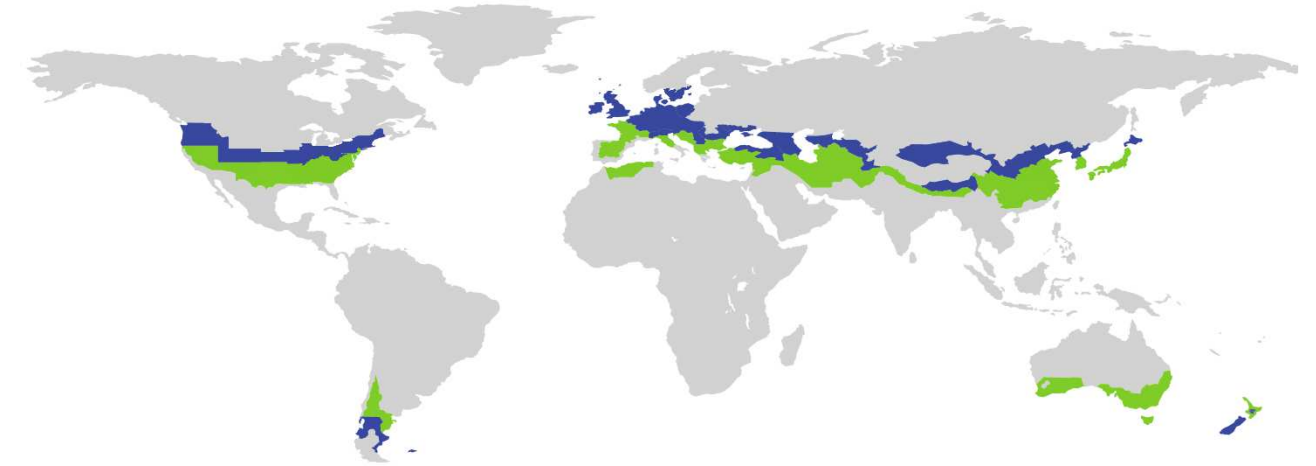
Certified Passive House Component

ID: 1192es03 valid until 31. December 2021

Passive House Institute
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Additional thermal bridges

Name	Thermal bridge	f_{Rsi}	Description
EWEC02	$\Psi = 0.092 \text{ W/(mK)}$	0.94	Exterior corner EW1, EW2
FSIW02	$\Psi = 0.305 \text{ W/(mK)}$	0.93	Floor slab - internal wall 2



Catregory	Construction system EnerPHit insulation system
Manufacturer	Renolution BV Haaksbergen NL
Product name	Renolution - Refurbished city homes

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

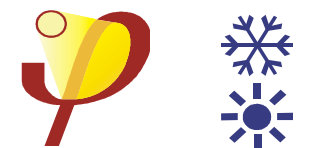
Heat transfer coefficient of building envelope $U \cdot f_{PHI} \leq 0.15 \text{ W/(m}^2\text{K)}$

Temperaturfactor of opaque junctions $f_{Rsi=0,25m^2K/W} \geq 0.86$

Thermal bridge free design for key connection details $\Psi \leq 0.01 \text{ W/(m}^2\text{K)}$

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

cool, temperate climate



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COMPONENT**

Passive House Institute

Opaque building envelop

The system is intended as an extra external insulation layer for existing buildings. The thermal quality of the existing walls is improved by blown insulation in the existing cavity. Prefabricated steel frame elements are placed against the existing outside walls. The prefabricated walls consist of a steel frame covered with EPS insulation. The finish is made on the EPS insulation. This differs from stucco to brick slips. The roof elements consist of a steel frame covered with Resol insulation. Due to the higher insulation value, the thickness can be limited. Battens, fastened by stainless steel screws through the Resol-layer, are used to attach the solar panels to this insulation.

Windows

The PHI example window spruce/fir-integral frame (0.11 W/(mK)) with 48 mm glazing and pA-class spacer was taken into account. The threshold is from fibre glass and timber, no aluminum is used. The window represents a very good standard and leads to low thermal bridges and high inner surface temperatures.

Airtightness concept

The airtight layer is realized by the OSB. The seams of the OSB boards are taped with "Silisto" tape on the inside of the wall and roof elements. From the edge of the element, a "morgo profol PE" foil is attached and taped with "Silisto" tape to the existing structure. At the bottom of the wall elements an EPDM foil is taped with "Silisto" tape to the existing structure. The adhesive foam provides an airtight connection between wall or roof elements. A "morgo profol PE" film that is connected to the roof elements provides an airtight connection between wall and roof elements.

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

