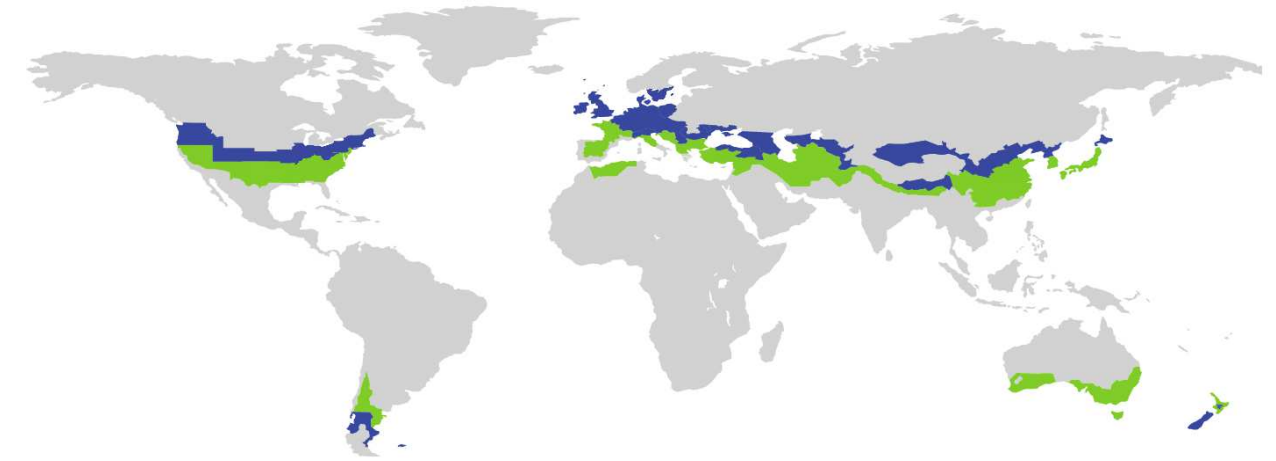


CERTIFICATE

Certified Passive House Component

ID: 1160cs03 valid until 31. December 2019

Passive House Institute
Dr. Wolfgang Feist
64342 Darmstadt
GERMANY



Category **Construction system | Insulated formwork blocks**
Manufacturer **Izodom 2000 Polska**
Zduńska Wola
Poland
Product name **Izodom Complete Passive 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

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

Efficiency criteria

Heat transfer coefficient of building envelope

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

Temperature factor of opaque junctions

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

Thermal bridge-free design for key connection details

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

An airtightness concept for all components and connection details was provided



Opaque building envelope

The Izodom Complete Passive System is a concrete formwork construction system, insulated with 200mm thick EPS forms for the external walls, 250mm thick EPS roof panels and a combination of 250mm thick EPS and 100mm thick XPS panels in the floor slab. The roof structure takes the form of timber joists and counter battens. The system has undergone analysis by the Passive House Institute against the thermal performance criteria for cool-temperate climate zones, and although the ceiling connection detail does not quite meet the efficiency criteria, the system has been deemed suitable for the construction of passive houses in both cool-temperate and warm-temperate climates.

Windows

Analysis was undertaken using a generic, passive house standard timber-framed, triple-glazed window unit, featuring pH thermal values for the spacer and a polysulfide secondary seal. The calculations undertaken demonstrate that the window installation locations are suited to the warm-temperate climate zone, with no risk of surface condensation and subsequent mould growth.

Airtightness concept

The interior plaster works as the airtightness layer of the interior walls. In the roof a membrane provides the airtightness layer, which is connected to the plaster via airtightness tapes. The windows are connected in the same way. In the bottom, the concrete floor slab serves as airtightness layer.

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. Their use might make economic sense in certain circumstances.

Thermal bridge not calculated
Criteria achieved

Efficiency criteria not achieved
Hygiene or comfort criterion not achieved

