

CERTIFICATE

Certified Passive House Component

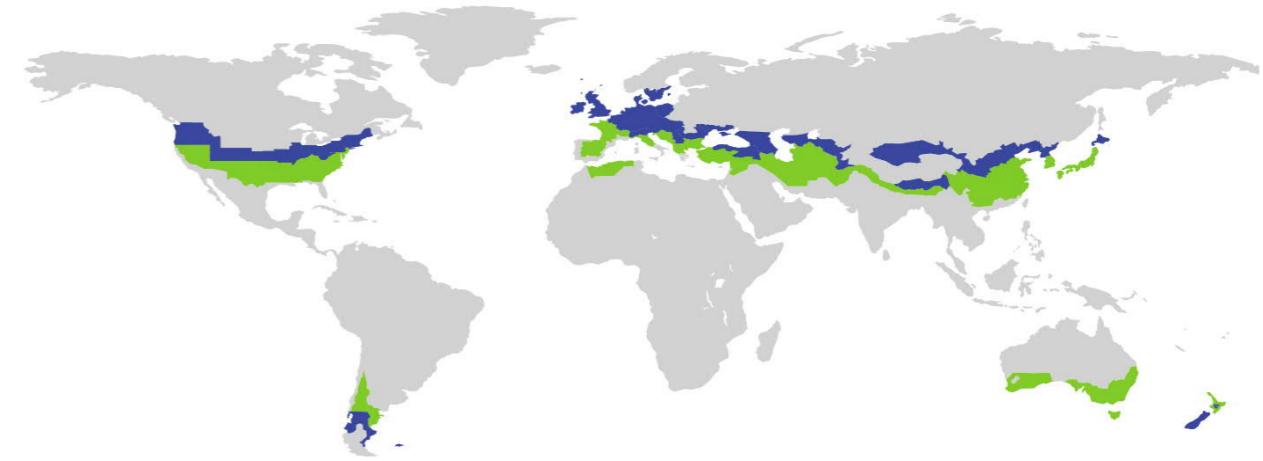
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Passive House Institute

Dr. Wolfgang Feist

64342 Darmstadt

GERMANY



Category **Wall system | Solid construction with EIFS**
Manufacturer **DAW SE, Geschäftsbereich Caparol
Ober-Ramstadt
GERMANY**
Product name **Capatect WDVS für Passivhaus-Bauweise**

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

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

Temperature factor 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



Opaque building envelope

With the "Capatect ETICS for passive house construction" the thermal insulation of buildings can be adjusted to a desired level. The "Capatect ETICS for passive house construction", in combination with a solid outer wall, has both a moisture and temperature regulating effect. This prevents overheating in summer, so long as the planning principles according to PHPP are observed. In winter heat is retained in the building for longer. The examined construction is suitable for passive houses, as both the regular U-values of the exterior components are below 0.15 W/(m²K) and the connections are free of thermal bridges. The surface temperatures of all connections (except window connections) are above the requirement of 17°C.

Windows

A typical passive house frame, which is at the limit of certifiability ($U_w \approx 0.80 \text{ W}/(\text{m}^2\text{K})$ with $U_g = 0.7 \text{ W}/(\text{m}^2\text{K})$) has been used for the purpose of calculation; frame width = 138 mm, U-frame = 0.75 W/(m²K), Ψ glass edge = 0.035 W/(mK). The total U-value (U_w) of the installed window of standard size (1.23 m wide, 1.48 m high) may increase by no more than 0.05 W/(m²K) as a result of the installation, i.e.: $U_{w,installed} \leq 0.85 \text{ W}/(\text{m}^2\text{K})$.

Airtightness concept

Airtightness is achieved by the following procedure: Windows and doors should be installed with permanently elastic + tight materials. Internal surfaces of external walls must be plastered over the entire surface, up to the bottom of the carcass floor up to the lower edge of the ceiling; internal surfaces of external walls in lightweight construction must be covered over the entire surface with continuous, airtight membranes; adjacent to the external wall, suitable airtight window connecting membranes or profiles must be properly connected.

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

