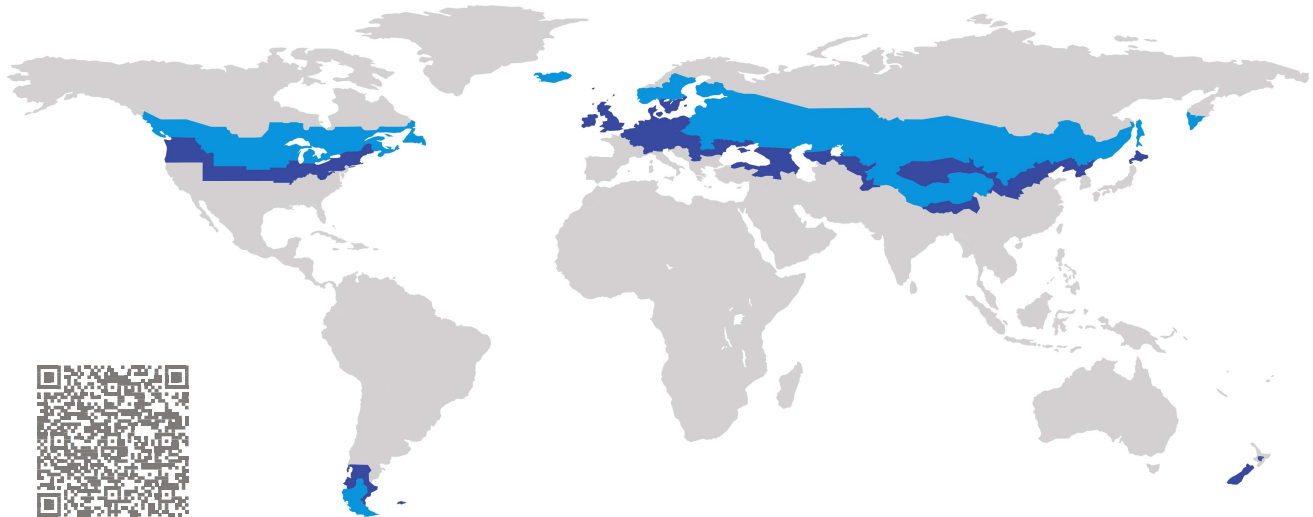


# CERTIFICATE

Certified Passive House Component

Component-ID 2387wm02 valid until 31st December 2025

Passive House Institute  
Dr. Wolfgang Feist  
64283 Darmstadt  
Germany



Category: **Window mounting system**

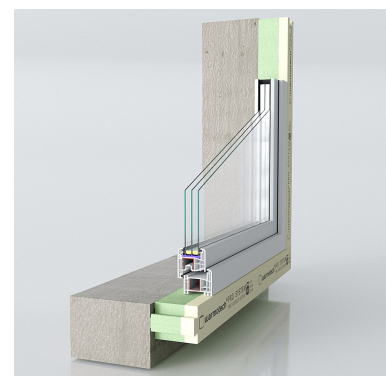
Manufacturer: **UAB WARMOTECH,  
Kaunas,  
Lithuania**

Product name: **Warmotech PRO/PRO+**

**This certificate was awarded based on the following  
criteria for the cold climate zone**

Efficiency  $\Delta U \leq 0.05 \text{ W}/(\text{m}^2 \cdot \text{K})$

Hygiene  $f_{\text{Rsi}} = 0.25 \geq 0.75$

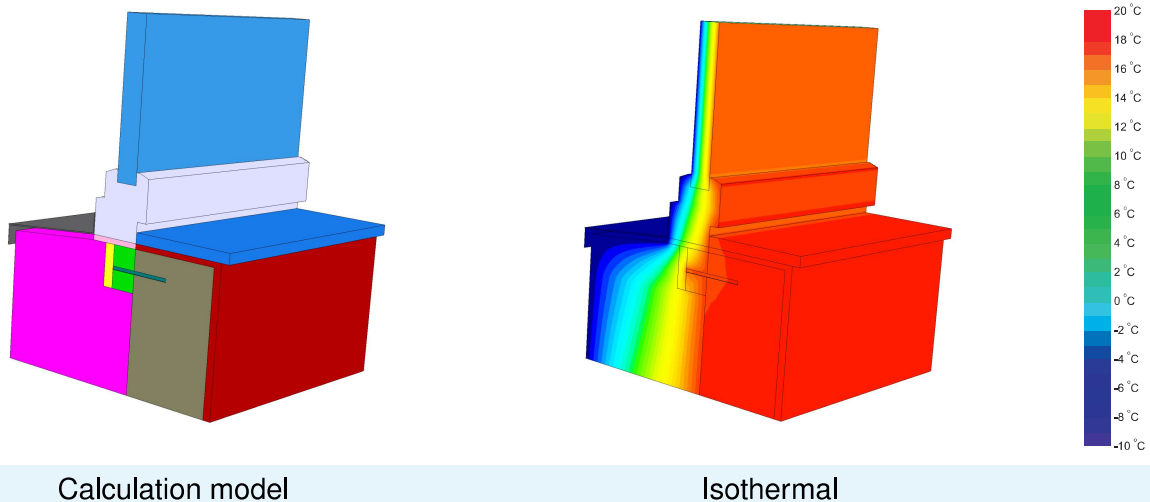


cold climate



**CERTIFIED  
COMPONENT**

Passive House Institute



### Description

Pre-Wall Mounting System from rigid PU foam (0.088 W/(mK)) and XPS (0,035W/(m.K)), 80 mm high. Assembly by glueing and screwing. Additional thermal losses through screws determined by 3D heat flux simulation. Losses are included in the conductivity of the PU foam (0.095W/(m.K)).

### Explanation

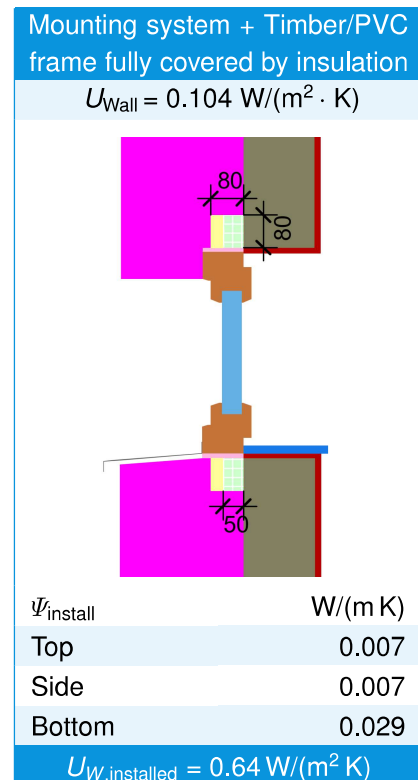
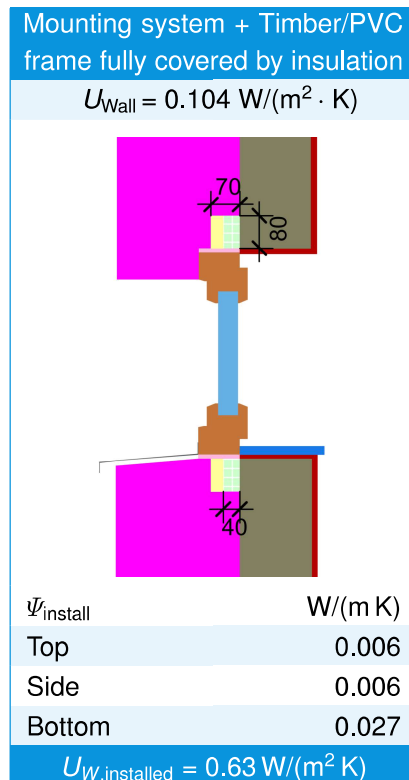
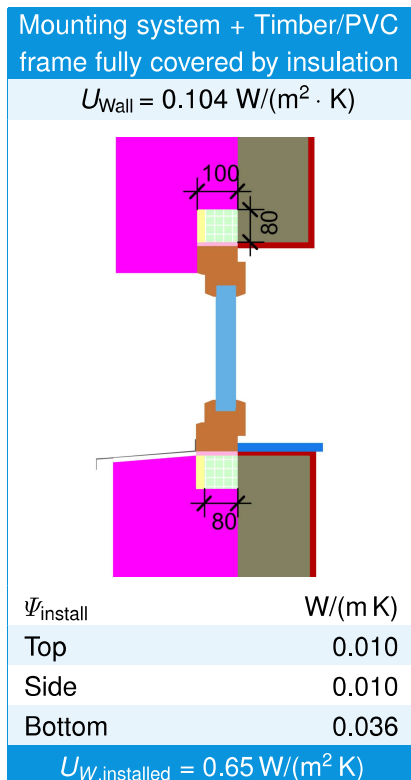
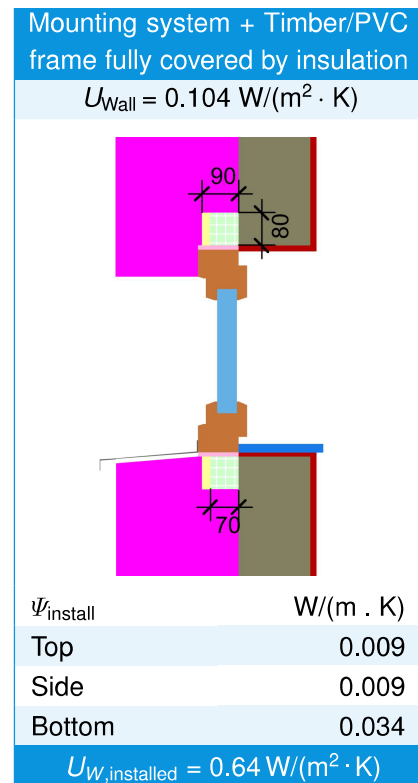
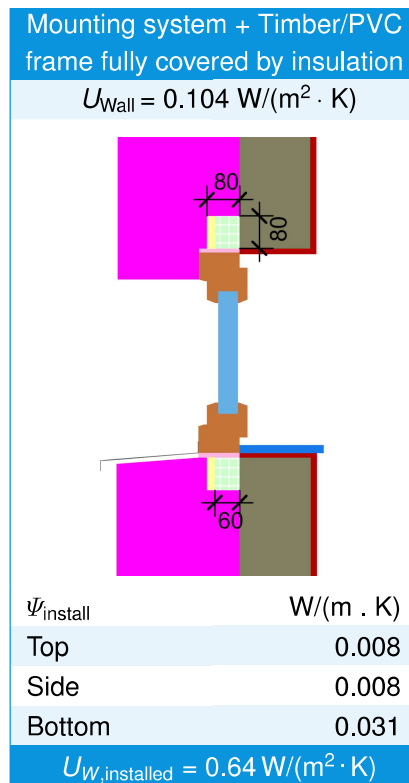
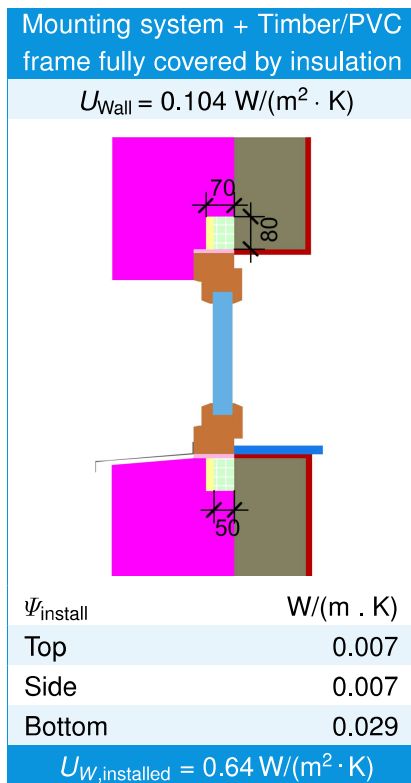
The certifiability is demonstrated by the increase of the heat transfer coefficient  $\Delta U$  [W/(m<sup>2</sup> K)] caused by the installation thermal bridge (efficiency criterion) in conjunction with given installation situations and window frames as well as by the minimum temperature factor at the coldest point of the installation connection (hygiene criterion).

The heat transfer coefficients (U-values) and the thermal bridge loss coefficients ( $\Psi$ -values) of the window are determined on the basis of DIN EN ISO 10077-2, the installation thermal bridges according to ISO 10211.

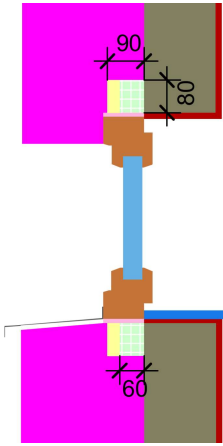
The Passive House Institute has defined international component criteria for seven climate zones. In principle, components which have been certified for climate zones with higher requirements may also be used in climates with less stringent requirements. In a particular climate zone it may make sense to use a component of a higher thermal quality which has been certified for a climate zone with more stringent requirements.

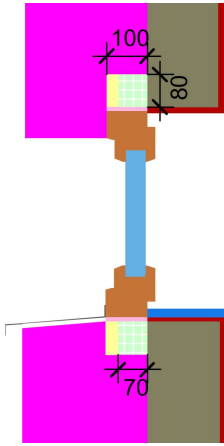
Further information relating to certification can be found on [www.passivehouse.com](http://www.passivehouse.com) and [passipedia.org](http://passipedia.org).




## Validated installations



## Validated installations

Mounting system + Timber/PVC frame fully covered by insulation	
$U_{Wall} = 0.104 \text{ W}/(\text{m}^2 \cdot \text{K})$	
	
$\psi_{install}$	$\text{W}/(\text{m} \cdot \text{K})$
Top	0.008
Side	0.008
Bottom	0.031
$U_{W,installed} = 0.64 \text{ W}/(\text{m}^2 \cdot \text{K})$	

Mounting system + Timber/PVC frame fully covered by insulation	
$U_{Wall} = 0.104 \text{ W}/(\text{m}^2 \cdot \text{K})$	
	
$\psi_{install}$	$\text{W}/(\text{m} \cdot \text{K})$
Top	0.009
Side	0.009
Bottom	0.034
$U_{W,installed} = 0.64 \text{ W}/(\text{m}^2 \cdot \text{K})$	

Timber/PVC Frame values		Frame width $b_f$ mm	$U$ -value frame $U_f$ $\text{W}/(\text{m}^2 \cdot \text{K})$	$\psi$ -glazing edge $\psi_g$ $\text{W}/(\text{m} \cdot \text{K})$	Temp. Factor $f_{Rsi=0.25}$ [-]
Bottom	(OB1) 	125	0.62	0.020	0.79
Top	(OH1) 	125	0.62	0.020	0.79
Lateral	(OJ1) 	125	0.62	0.020	0.79
Spacer: PHI phA Spacer			Secondary seal: Butyl		

