

Certificate

Certified Passive House component

for cool, temperate climate, valid until 31.12.2014

Passive House Institute
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Category: **Window Frame**
 Manufacturer: **SLAVONA, s.r.o.**
378 81 Slavonice, CZECH REP.
 Product name: **Progression**

The following comfort criteria were used in awarding this certificate:

Given a U_g value of $0.70 \text{ W}/(\text{m}^2\text{K})$ and a window size of 1.23 m by 1.48 m,

$$U_w = 0.80 \text{ W}/(\text{m}^2\text{K}) \leq 0.80 \text{ W}/(\text{m}^2\text{K})$$

Taking into account the installation based thermal bridges, and provided that the installation is, with regard to the thermal bridges, equal or better than shown in the data sheet, the window meets the following criterion.

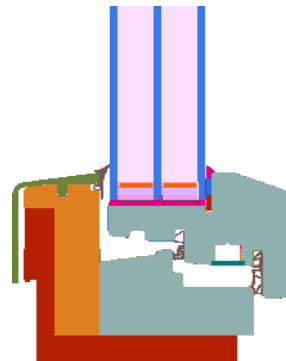
$$U_{w,\text{installed}} \leq 0.85 \text{ W}/(\text{m}^2\text{K})$$

Thermal data

	U_f -value [W/(m ² K)]	Width [mm]	Ψ_g [W/(mK)]	$f_{Rsi=0.25}$ [-]
Spacer			SwisspacerV*	
Bottom	0.81	109	0.026	0.72
Side/top	0.83	89	0.025	

*Spacers of lower thermal quality, especially those made of aluminium, lead to significantly higher thermal losses and lower temperature factors.

Further information see data sheet



Passive House Efficiency Class

phA
advanced component

phB
basic component

phC
certifiable component

not suitable for Passive Houses



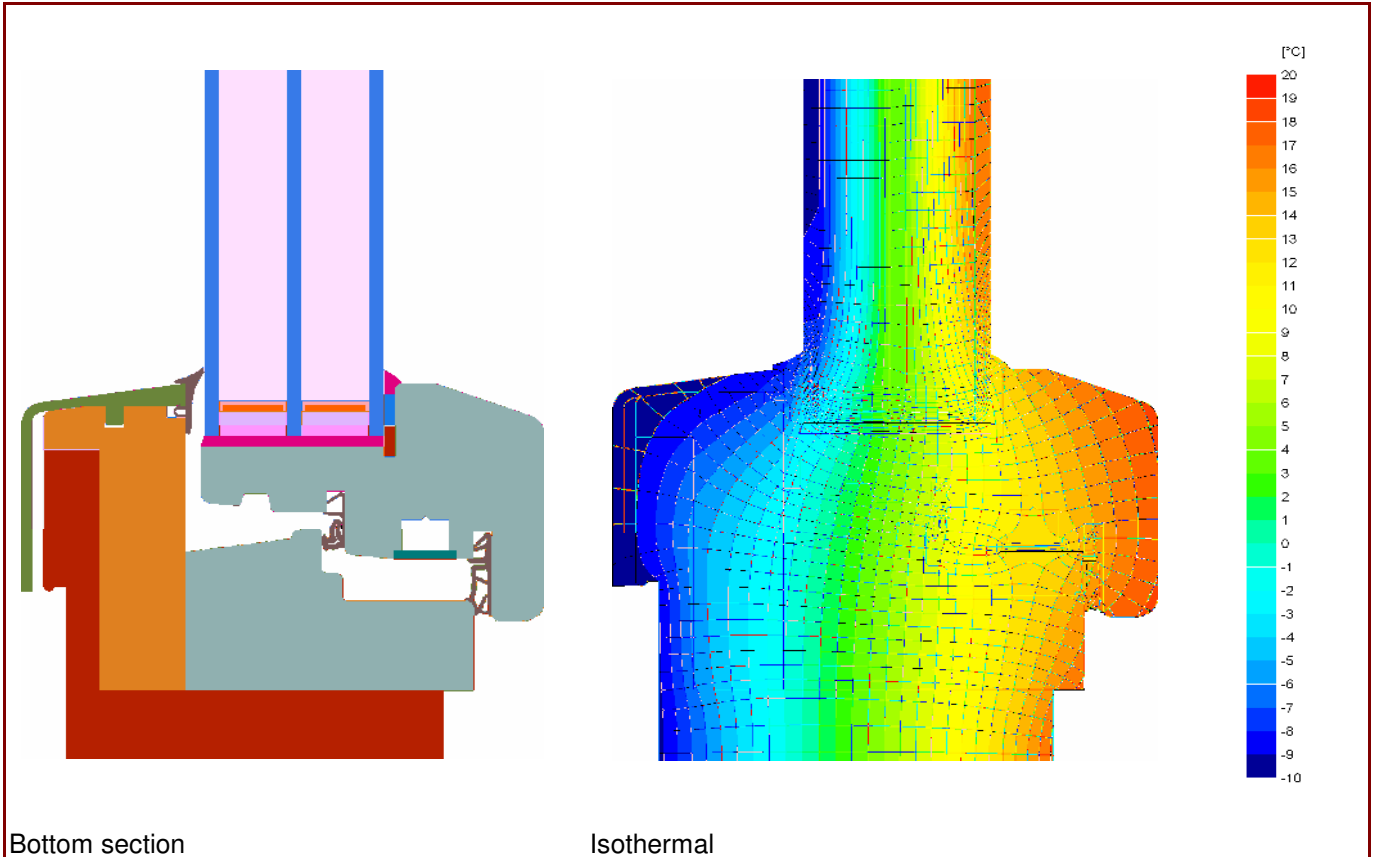
phA

CERTIFIED COMPONENT

Passive House Institute

Data Sheet SLAVONA, s.r.o., Progression

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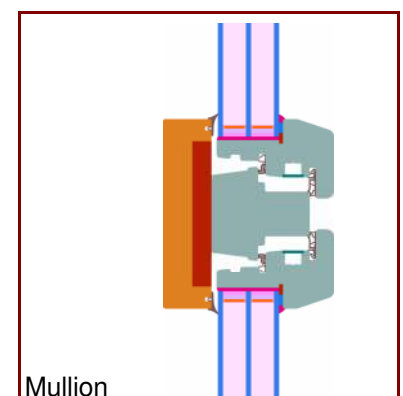


Description

Timber frame (Spruce and Thermowood) with insulation ($\lambda = 0,058\text{W/mK}$). Used Pane: 48 mm (4/18/4/18/4), intersection of the Glass: 18 mm.

Thermal data for the window frame

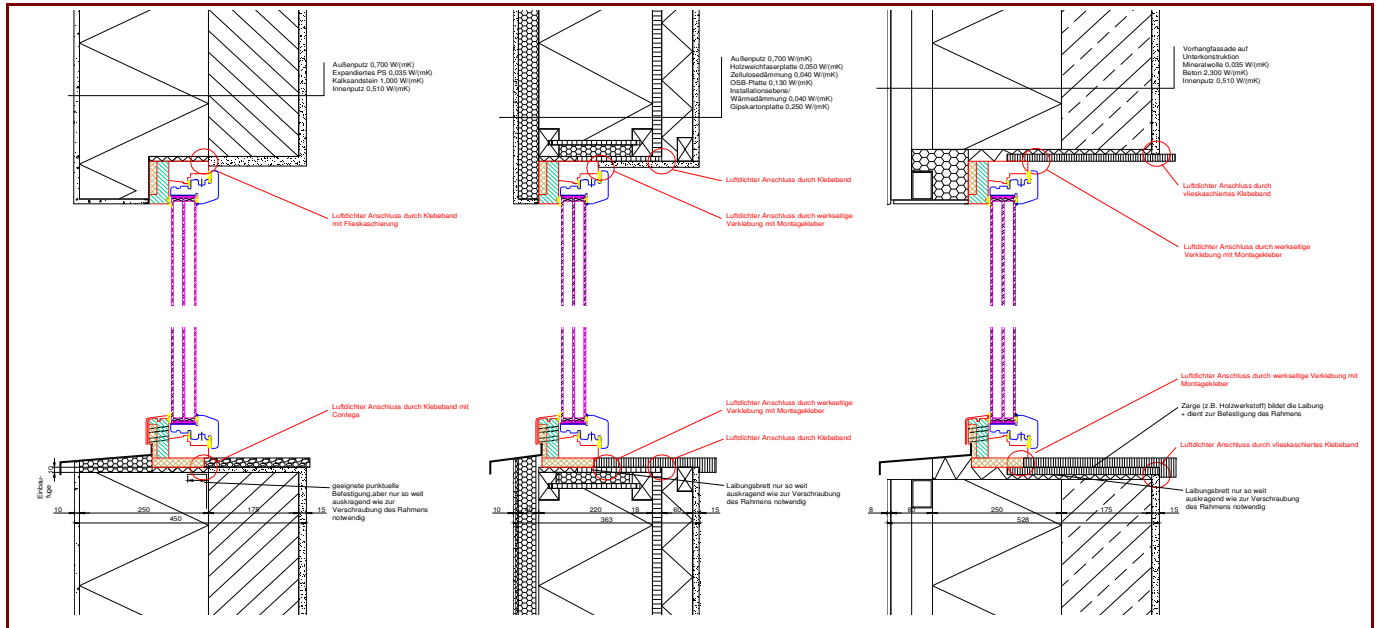
	U_f -value [W/(m ² K)]	Width [mm]	ψ_g [W/(mK)]	$f_{Rsi=0.25}$ [-]
Spacer	SwisspacerV*			0.72
Bottom	0.81	109	0.026	
Side/top	0.83	89	0.025	
Mullion	0.82	164	0.026	0.72



* Spacers of lower thermal quality leading to higher thermal losses and lower temperatures.

Data Sheet SLAVONA, s.r.o., Progression

Installation



Installation based thermal bridge Ψ_{instal} in Passive House suitable walls

		EIFS	Timber construction wall	Ventilated facing
Position				
Bottom	[W/(mK)]	0.010	0.020	0.008
Side/top	[W/(mK)]	-0.005	0.014	0.000
$U_{W,instal}$	[W/(m ² K)]	0.79	0.84	0.80

Explanatory notes

The window U-values were calculated based on a 1.23 m by 1.48 m window $U_g = 0.70 \text{ W}/(\text{m}^2\text{K})$. If better glazing is used, the window U-value decrease as follow:

U Glazing	U_g [W/(m²K)]	0.66	0.60	0.54
U Window	U_w [W/(m²K)]	0.77	0.72	0.68

Depending on the thermal losses through opaque elements, transparent components are categorised according to efficiency classes. These thermal losses include the losses through the frame, multiplied by its width, the thermal bridge at the edge bond as well as the length of the edge bond.

Please ask the manufacturer for a detailed report containing all calculations and results. For further information, please visit www.passivehouse.com or www.passipedia.org.