

# Certificate

## Certified Passive House component

for cool, temperate climate, valid until 31.12.2016

Passive House Institute  
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Category: **Inclined Curtain Wall**  
Manufacturer: **SCHÜCO International KG**  
**33609 Bielefeld, GERMANY**  
Product name: **AOC 50 ST.SI**

The following comfort criteria were used in awarding this certificate:

Given a  $U_g$  value of  $0,72 \text{ W}/(\text{m}^2\text{K})$  and an element size of  $1.23 \text{ m}$  by  $2.50 \text{ m}$ ,

$$U_{\text{CWi}} = 0,82 \text{ W}/(\text{m}^2\text{K}) \leq 1.00 \text{ W}/(\text{m}^2\text{K})$$

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 facade meets the following criterion.

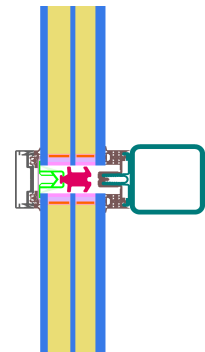
$$U_{\text{CWi,installed}} \leq 1.00 \text{ W}/(\text{m}^2\text{K})$$

### Thermal data of the construction

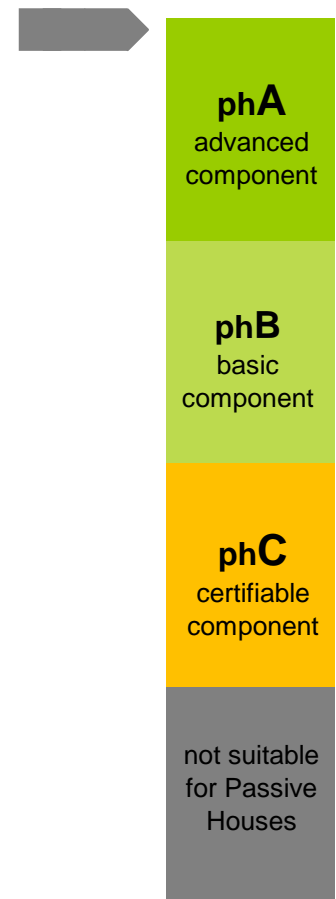
	$U_f$ -value [W/(m <sup>2</sup> K)]	Width [mm]	$\Psi_g$ [W/(mK)]	$f_{\text{Rsi}=0,25}$ [-]
Spacer	SwisspacerV*			0,79
Transom (t)	1,05	50	0,034	
Mullion (m)	1,05	50	0,034	
Thermal glass carrier bridge $\chi_{\text{GT}}$ [W/K]:				0,004

\*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

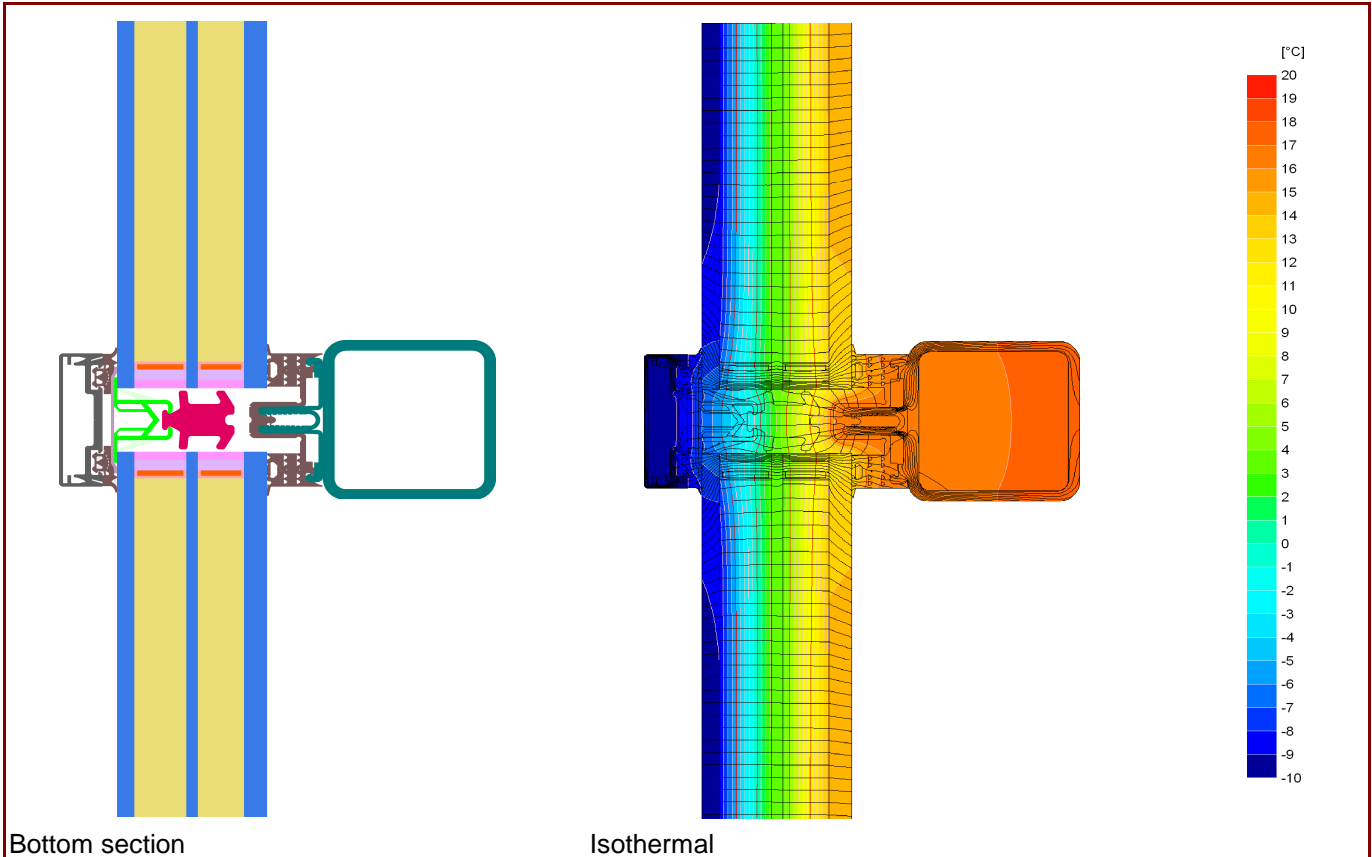


**CERTIFIED COMPONENT**

Passive House Institute

## Data Sheet SCHÜCO International KG, AOC 50 ST.SI

**Manufacturer** SCHÜCO International KG  
33609 Bielefeld, GERMANY  
Tel.: +49 521 783 0  
www.schueco.com



### Description

Steel construction, with steel system carrier. Covering- and pressure-strip from aluminium. PE-foam insulator in the glazing rebate (0,040 W/(mK)). Used Pane: 52 mm (6/18/4/16/8), intersection of the Glass: 13 mm. Used spacer: SwisspacerV

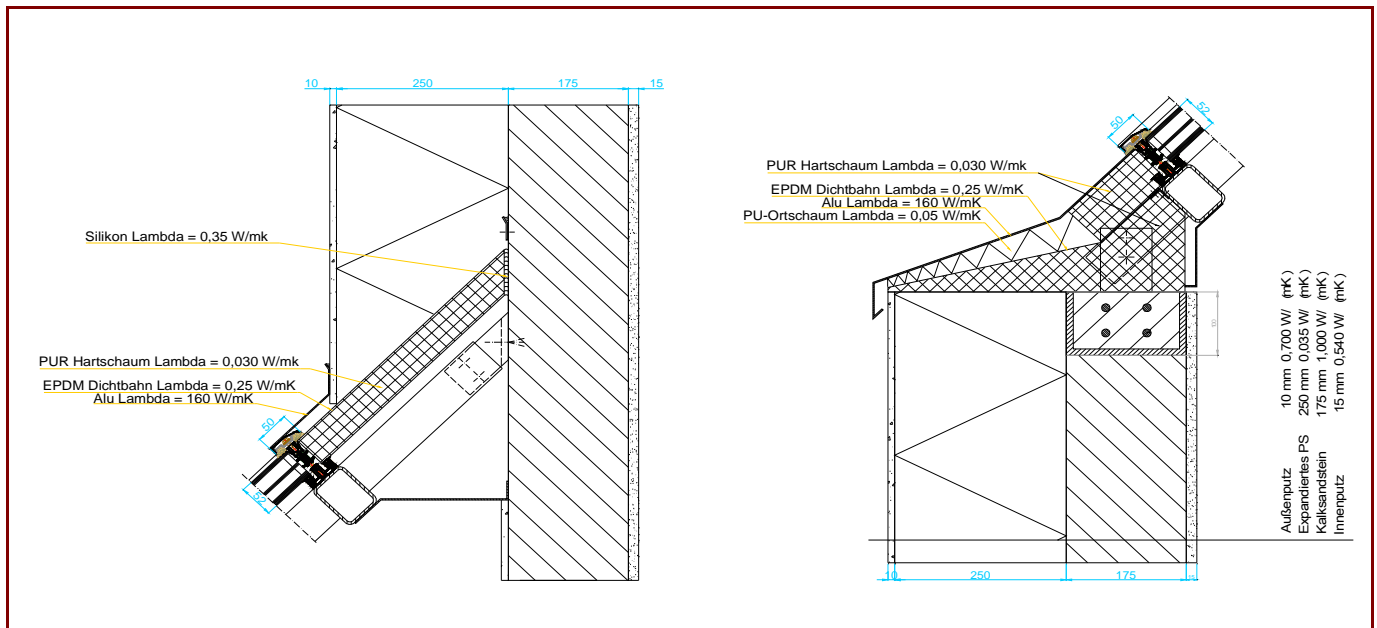
### Thermal data

	<b>U<sub>f</sub>-value</b> [W/(m²K)]	<b>Width</b> [mm]	<b>Ψ<sub>g</sub></b> [W/(mK)]	<b>f<sub>Rsi=0.25</sub></b> [-]
Spacer	SwisspacerV*			
Transom (t)	1,05	50	0,034	0,79
Mullion (m)	1,05	50	0,034	
Opening element				
-				
Thermal glass carrier bridge $\chi_{GT}$ [W/K]:				0,004
1: Includes $\Delta U = 0,22$ W/(m²K), measured by ift Rosenheim				
2: Measured by ift Rosenheim				

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

# Data Sheet SCHÜCO International KG, AOC 50 ST.SI

## Installation



## Installation based thermal bridge $\Psi_{\text{instal.}}$ in Passive House suitable walls

		EIFS	Timber construction wall	Ventilated facing
<b>Position</b>				
<b>Bottom</b>	[W/(mK)]	0,092		
<b>Side/top</b>	[W/(mK)]	0,092		
<b><math>U_{\text{CW,instaled}}</math></b>	[W/(m²K)]	0,94		

## Explanatory notes

The facade-U-values were calculated based on a 1.20 m by 2.50 m element  $U_g = 0.72 \text{ W/(m²K)}$ .  
If better glazing is used, the facade-U-value decrease as follow:

<b>U Glazing</b>	<b><math>U_g</math> [W/(m²K)]</b>		0,80	0,90
<b>U Facade</b>	<b><math>U_{\text{CW}}</math> [W/(m²K)]</b>		0,90	0,99

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](http://www.passivehouse.com) or [www.passipedia.org](http://www.passipedia.org).