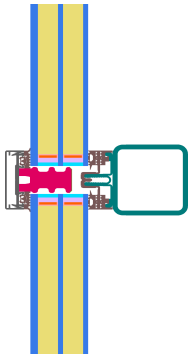
Certificate

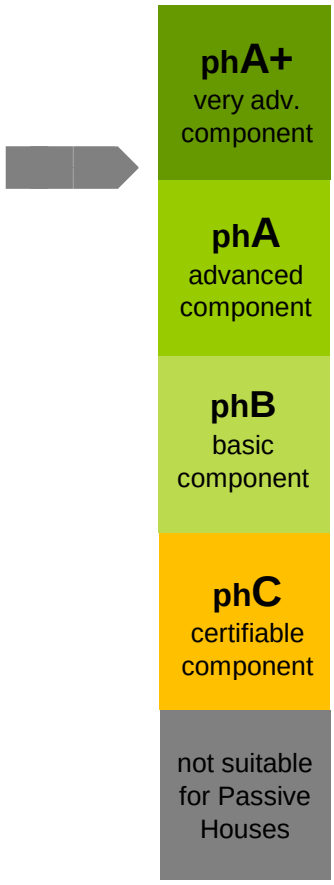
Certified Passive House component
for cool, temperate climate, valid until 31.12.2016

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
GERMANY

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



Passive House Efficiency Class



The following comfort criteria were used in awarding this certificate:

Given a Ug value of 0,7 W/(m²K) and an element size of 1.20 m by 2.50 m,

U_{CW} = 0,79 W/(m²K) ≤ 0,80 W/(m²K)

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 facede meets the following criterion.

$U_{CW,installed}$ ≤ 0.85 W/(m²K)

Thermal data of the construction

	U_f-value [W/(m²K)]	Width [mm]	Ψ_g [W/(mK)]	$f_{Rsi=0,25}$ [-]
Spacer			SwisspV PU*	
Transom (t)	0,93	50	0,031	0,79
Mullion (m)	0,93	50	0,031	
Thermal glass carrier bridge χ_{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

Data Sheet SCHÜCO International KG, AOC 50 ST.SI

Manufacturer SCHÜCO International KG
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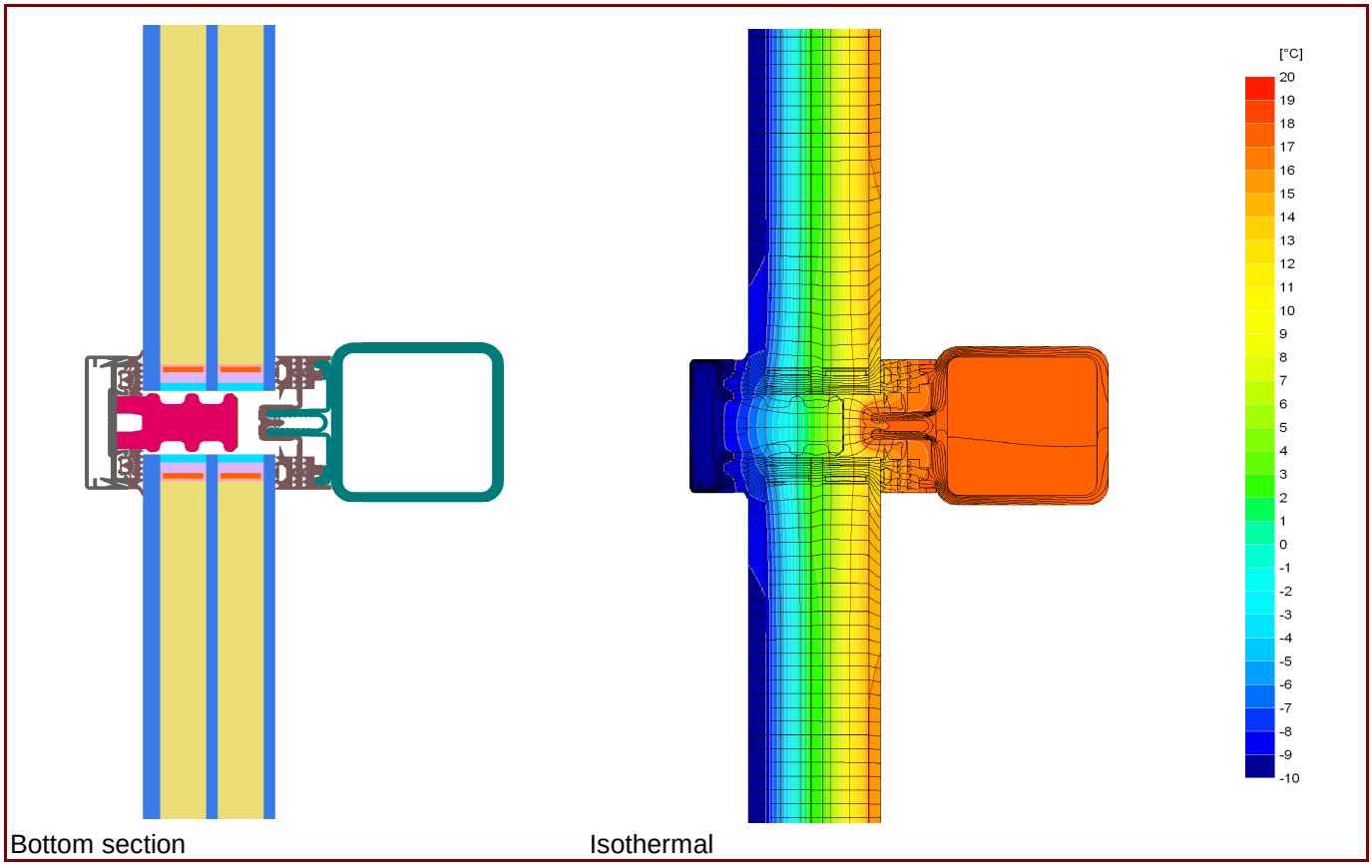


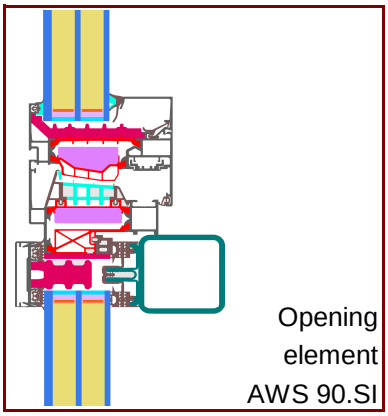
Bottom section Isothermal

Description

Steel construction, with steel system carrier. Covering- and pressure-strip from aluminium. PE-foam insulator in the glazing rebate (0,040 W/(mK)), cover by aluminium foil on the inside. . Used Pane: 46 mm (4/16/4/16/6), intersection of the Glass: 13 mm. Used spacer: SwisspV PU

Thermal data

	U_f-value [W/(m²K)]	Width [mm]	Ψ_g [W/(mK)]	$f_{Rsi=0.25}$ [-]
Spacer			SwisspV PU*	
Transom (t)	0,93	50	0,031	0,79
Mullion (m)	0,93	50	0,031	
Opening element	1,23	155	0,023	0,77
-				
Thermal glass carrier bridge χ_{GT} [W/K]:				0,004
1: Includes ΔU = 0,22 W/(m²K), measured by ift Rosenheim				
2: Measured by ift Rosenheim				

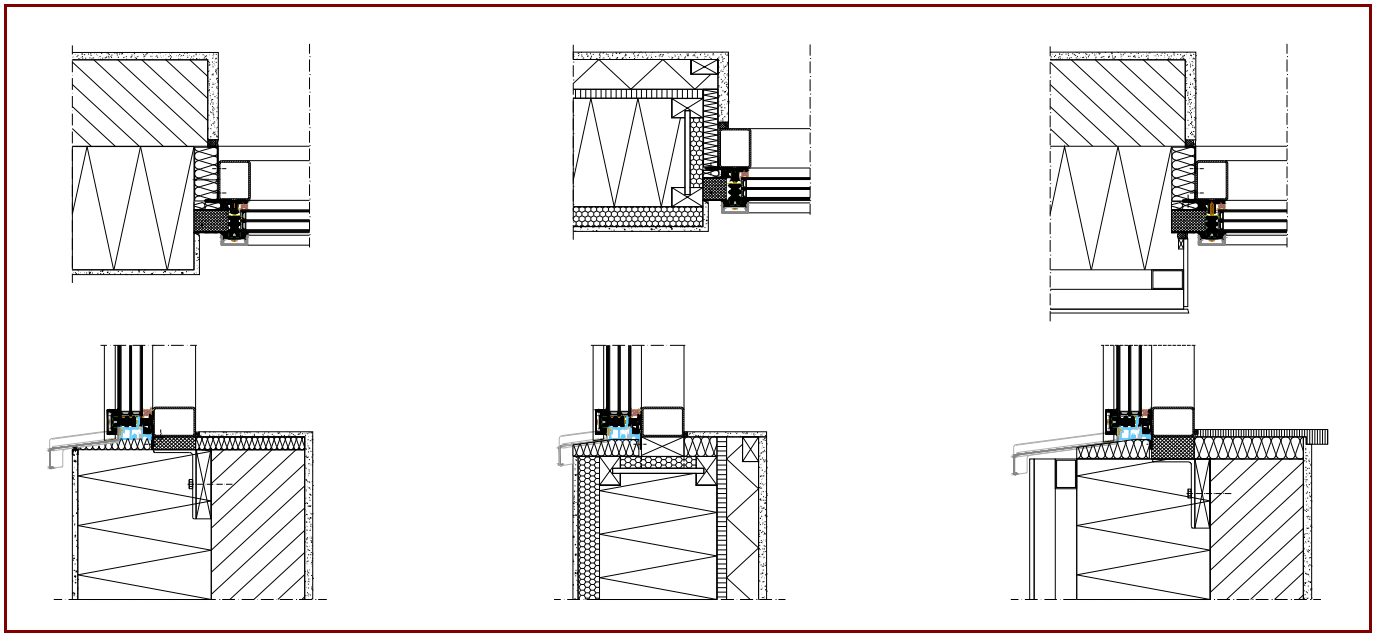


Opening element AWS 90.SI

* 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 $\Psi_{instal.}$ in Passive House suitable walls

Position		EIFS	Timber construction wall	Ventilated facing
Bottom	[W/(mK)]	0,063	0,072	0,056
Side/top	[W/(mK)]	0,035	0,037	0,032
$U_{CW,instaled}$	[W/(m²K)]	0,85	0,85	0,84

Explanatory notes

The facade-U-values were calculated based on a 1.20 m by 2.50 m element U_g = 0.70 W/(m²K).
If better glazing is used, the facade-U-value decrease as follow:

U Glazing	U_g [W/(m²K)]	0,66	0,60	0,57
U Facade	U_{CW} [W/(m²K)]	0,75	0,69	0,67

Depending on the thermal losses through opaque elements, transparent components are categorised according to efficency 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.