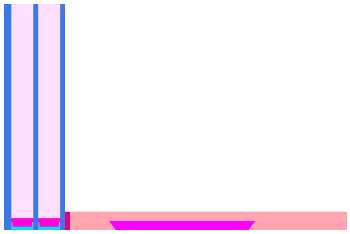
Certificate

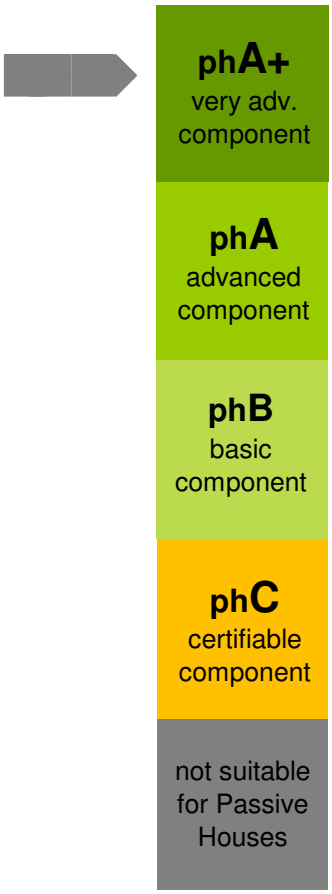
Passive House suitable component
for cool, temperate climate, valid until 31.12.2012

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
GERMANY

Category: **Window Frame**
Manufacturer: **Glas Trösch AG Isolierglas**
4922 Bützberg, SWITZERLAND
Product name: **Composite Glazing - Festverglasung**



Passive House Efficiency Class



The following comfort criteria were used in awarding this certificate:

Given a U_g value of 0.70 W/(m²K) and a window size of 1.23 m by 1.48 m,

U_W = 0.78 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 window meets the following criterion.

$U_{W,installed}$ ≤ 0.85 W/(m²K)

Thermal data of the window frame

	U_f-value [W/(m²K)]	Width [mm]	Ψ_g [W/(mK)]	$f_{Rsi=0.20}$ [-]
Spacer			SuperSp. TriSeal PU*	
Bottom	0.58	16	0.029	0.76
Side/top	0.58	16	0.029	

*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 suitable component
Dr. Wolfgang Feist

www.passivehouse.com

Data Sheet Glas Trösch AG Isolierglas, Composite Glazing - Festverglasung

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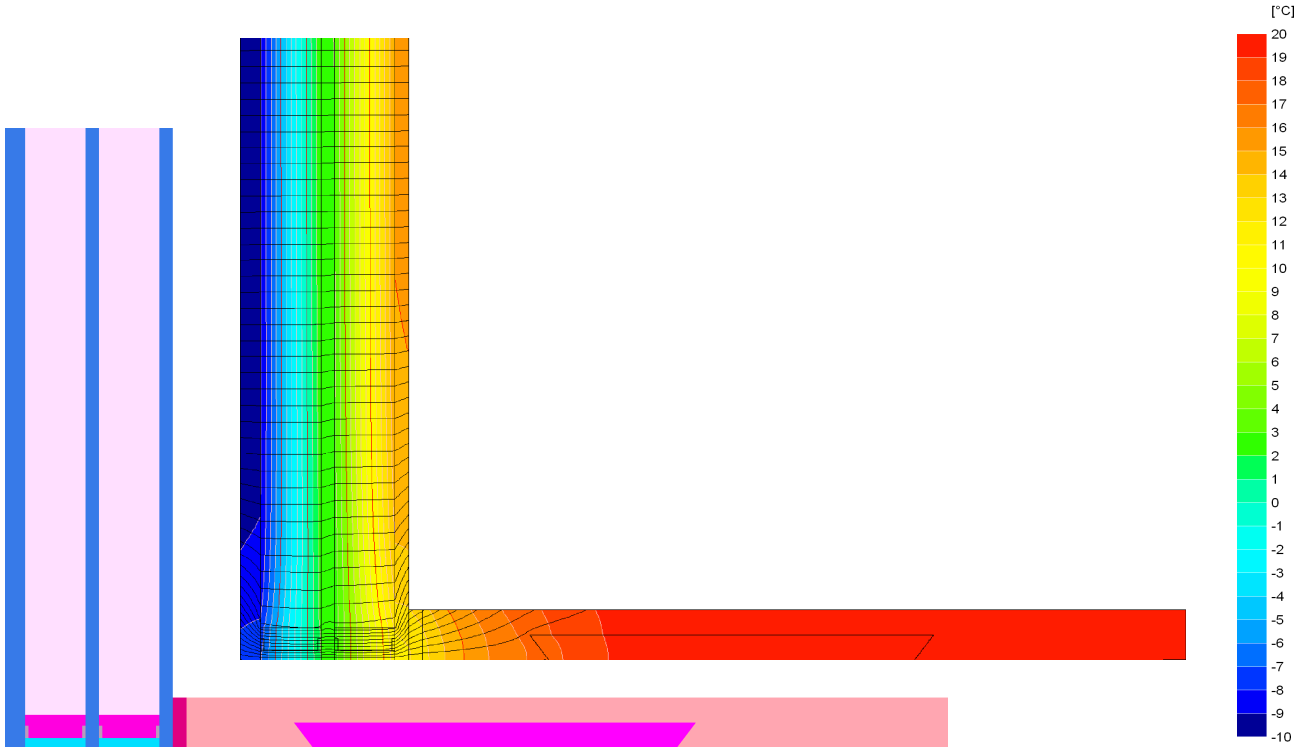


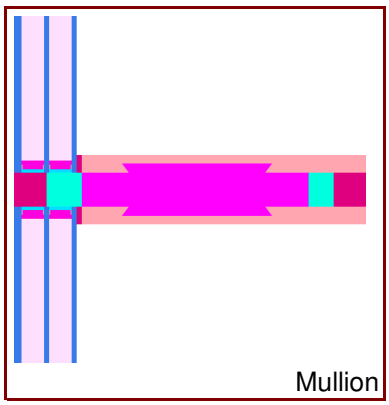
Bottom section Isothermal

Description

Glass fibre composite frame. The glass is directly glued to the frame.. Used Pane: 50 mm (6/18/4/18/4), intersection of the Glass: 22 mm. Used spacer: SuperSp. TriSeal PU

Thermal data for the window frame

	U_f-value [W/(m²K)]	Width [mm]	Ψ_g [W/(mK)]	$f_{Rsi=0.20}$ [-]
Spacer			SuperSp. TriSeal PU*	
Bottom	0.58	16	0.029	0.76
Side/top	0.58	16	0.029	
Flying Mullion	0.96		0.030	0.71

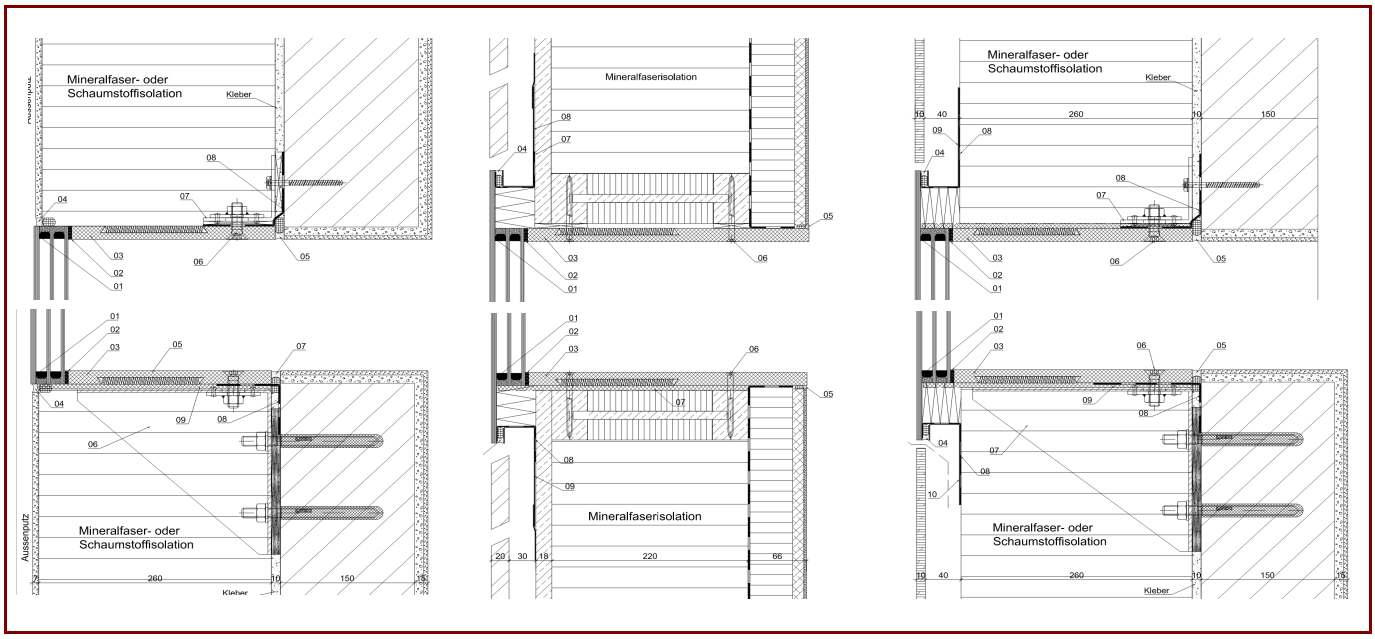


Mullion

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

Data Sheet Glas Trösch AG Isolierglas, Composite Glazing - Festverglasung

Installation



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

Position		EIFS	Timber construction wall	Ventilated facing
Bottom	[W/(mK)]	0.018	0.019	0.023
Side/top	[W/(mK)]	0.018	0.019	0.023
$U_{W,instal.}$	[W/(m²K)]	0.83	0.83	0.85

Explanatory notes

The window U-values were calculated based on a 1.23 m by 1.48 m window U_g = 0.70 W/(m²K).
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)]	0.74	0.68	0.63

Depending on the thermal losses through opaque elements, windows 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.