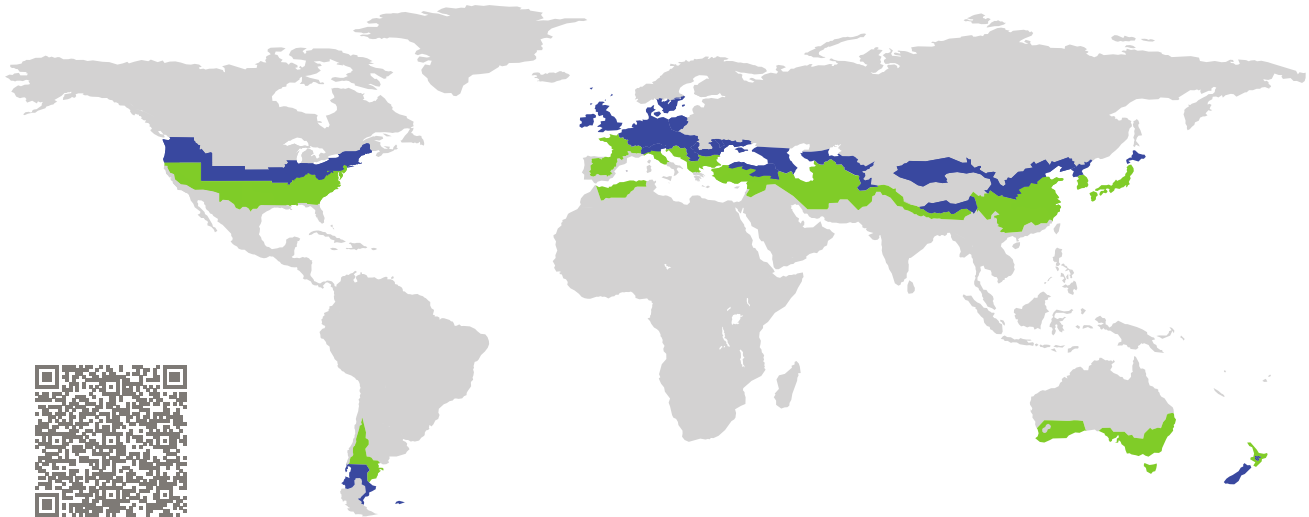


# CERTIFICATE

Certified Passive House Component

Component-ID 1136wi03 valid until 31st December 2021

Passive House Institute  
Dr. Wolfgang Feist  
64283 Darmstadt  
Germany

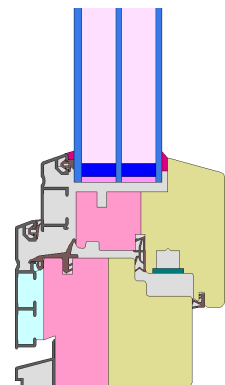


Category: **Window Frame**  
Manufacturer: **Hebei Orient Sundar Window Co., Ltd., Gaobeidian City, Hebei Province, China**  
Product name: **Passive Super 78**

**This certificate was awarded based on the following criteria for the cool, temperate climate zone**

Comfort  $U_W = 0.80 \leq 0.80 \text{ W}/(\text{m}^2 \text{ K})$   
 $U_{W,\text{installed}} \leq 0.85 \text{ W}/(\text{m}^2 \text{ K})$   
with  $U_g = 0.70 \text{ W}/(\text{m}^2 \text{ K})$

Hygiene  $f_{Rsi=0.25} \geq 0.70$



cool, temperate climate



**CERTIFIED COMPONENT**

Passive House Institute

Passive House  
efficiency class

phE

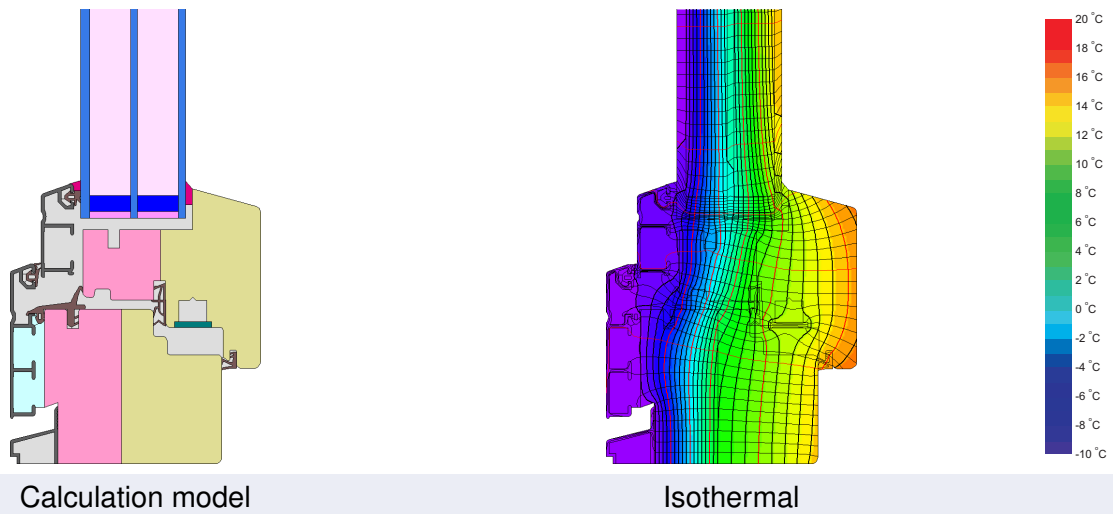
phD

phC

phB

phA

[www.passivehouse.com](http://www.passivehouse.com)



### Description

Timberframe (0.13 W/(mK)) with aluminium-facing-shell and insulation (0,036 W/(mK) inside the sash and blindframe. Pane thickness: 46 mm (4/18/3/18/3), rebate depth: 13 mm, spacer: SuperSpacer TruPlas

### Explanation





The window U-values were calculated for the test window size of 1.23 m × 1.48 m with  $U_g = 0.70$  W/(m<sup>2</sup> K). If a higher quality glazing is used, the window U-values will improve as follows:

Glazing	$U_g =$	0.70	0.64	0.58	0.52	W/(m <sup>2</sup> K)
		↓	↓	↓	↓	
Window	$U_W =$	0.80	0.76	0.72	0.68	W/(m <sup>2</sup> K)

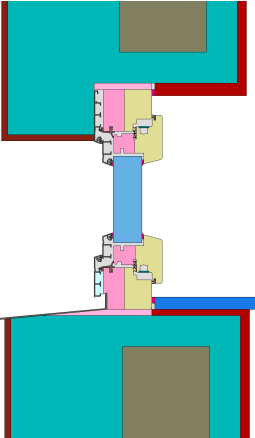
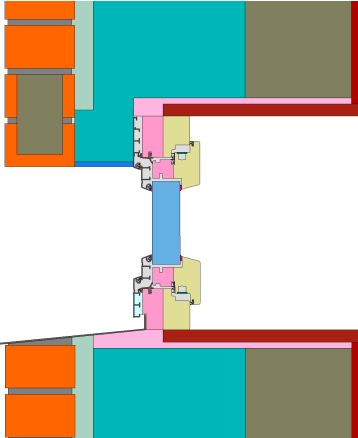
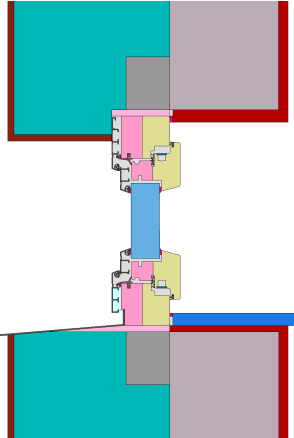
Transparent building components are classified into efficiency classes depending on the heat losses through the opaque part. The frame U-Values, frame widths, thermal bridges at the glazing edge, and the glazing edge lengths are included in these heat losses. A more detailed report of the calculations performed in the context of certification is available from the manufacturer.

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).

Frame values			Frame width $b_f$ mm	$U$ -value frame $U_f$ W/(m <sup>2</sup> K)	$\Psi$ -panel edge $\Psi_g$ W/(m K)	Temp. Factor $f_{RSI=0.25}$ [-]
Top	(to)		123	0.81	0.026	0.71
Side	(s)		123	0.81	0.026	0.71
Bottom	(bo)		121	0.84	0.026	0.71
Mullion 1 casement	(m1)		145	0.84	0.026	0.71
Spacer: Super Spacer TriSeal / T-Spacer Premium					Secondary seal: Polysulfid	

### Validated installations

Formwork blocks (operable)	Cavity wall	Exterior insulation and finishing system
$U_{Wall} = 0.15 \text{ W/(m}^2 \text{ K)}$	$U_{Wall} = 0.13 \text{ W/(m}^2 \text{ K)}$	$U_{Wall} = 0.13 \text{ W/(m}^2 \text{ K)}$
		
$\Psi_{install}$ W/(m K)	$\Psi_{install}$ W/(m K)	$\Psi_{install}$ W/(m K)
Top 0.013	Top 0.014	Top 0.016
Side 0.013	Side 0.014	Side 0.016
Bottom 0.022	Bottom 0.022	Bottom 0.022
$U_{W,installed} = 0.85 \text{ W/(m}^2 \text{ K)}$	$U_{W,installed} = 0.85 \text{ W/(m}^2 \text{ K)}$	$U_{W,installed} = 0.85 \text{ W/(m}^2 \text{ K)}$

