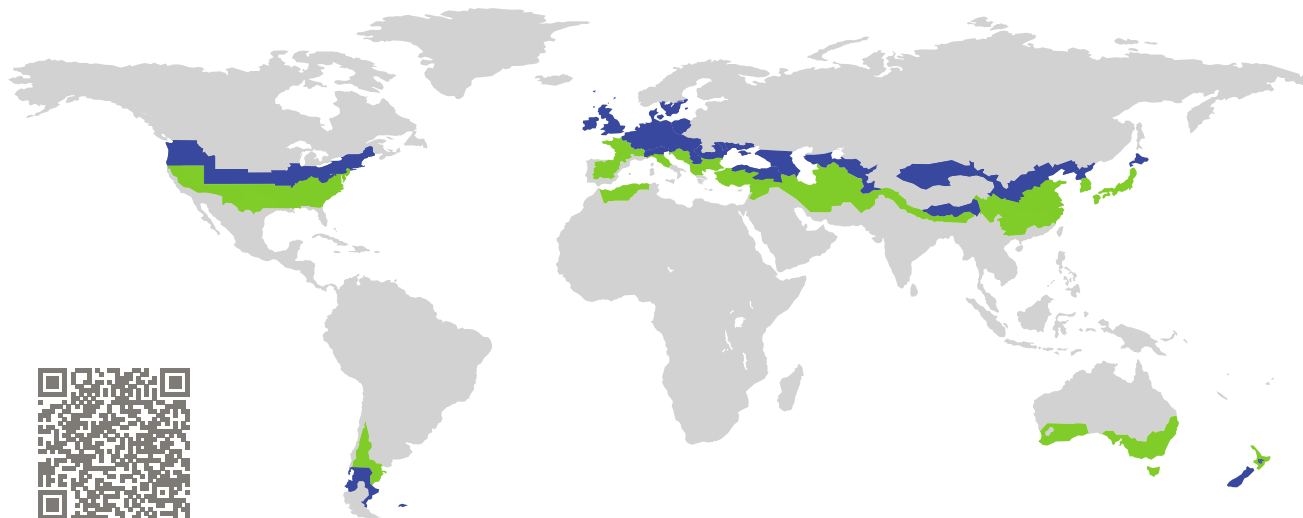


# CERTIFICATE

Certified Passive House Component

Component-ID 0786wi03 valid until 31st December 2017

Passive House Institute  
Dr. Wolfgang Feist  
64283 Darmstadt  
Germany

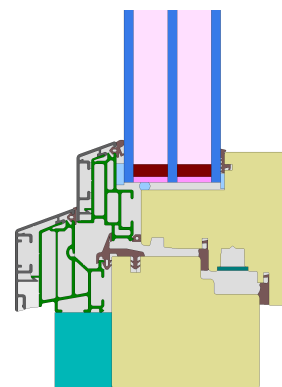


Category: **Window frame**  
Manufacturer: **Qingdao Anrida Door & Window Co., Ltd,**  
**Qingdao,**  
**People's Republic of China**  
Product name: **Passive-Ha130**

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

Comfort  $U_W = 0.78 \leq 0.80 \text{ W}/(\text{m}^2 \text{ K})$   
 $U_{W,\text{installed}} \leq 0.85 \text{ W}/(\text{m}^2 \text{ K})$   
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

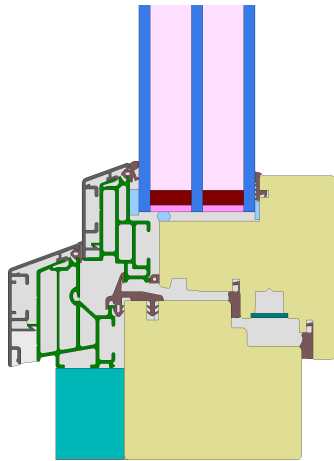
phD

phC

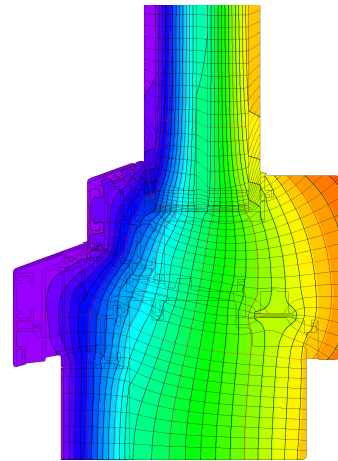
phB

phA

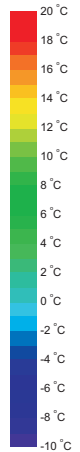
[www.passivehouse.com](http://www.passivehouse.com)



Calculation model



Isothermal



### Description

Timber frame with external shell made of ABS, insulation (0,035 W/(m<sup>2</sup>K)) and aluminium. Pane thickness: 51 mm (5/18/5/18/5), rebate depth: 20/25 mm, spacer: SWISSPACER Ultimate

### 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	$U_W =$	0.78	0.74	0.71	0.67	W/(m <sup>2</sup> K)

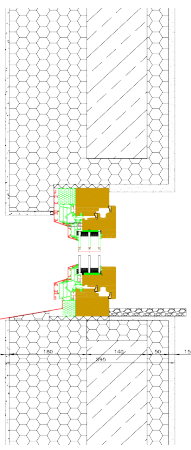
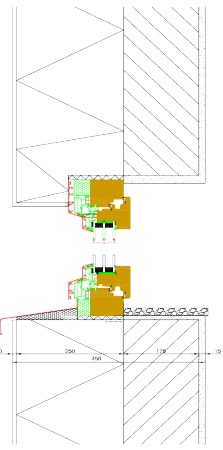
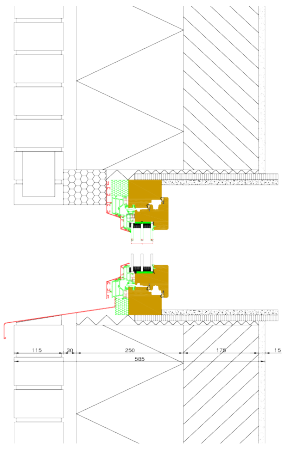
Transparent building components are classified into efficiency classes depending on the heat losses through the opaque part. The frame U-Values, frame widths, thermal bridges at the glazing edge, and the glazing edge lengths are included in these heat losses. A more detailed report of the calculations 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)	$\Psi$ -glass edge $\Psi_g$ W/(m K)	Temp. Factor $f_{Rsi=0.25}$ [-]
Top	(to)		131	0.76	0.025	0.75
Side	(s)		131	0.76	0.025	0.75
Bottom	(bo)		131	0.79	0.025	0.75
Mullion flying	(fm)		147	0.88	0.025	0.75
			Spacer: SWISSPACER Ultimate		Secondary seal: Polysulfide	

### Validated installations

Insulated formwork blocks		EIFS		Cavity wall (operable)	
					
$\Psi_{install}$	W/(m K)	$\Psi_{install}$	W/(m K)	$\Psi_{install}$	W/(m K)
Top	0.008	Top	0.008	Top	0.009
Side	0.008	Side	0.008	Side	0.009
Bottom	0.010	Bottom	0.009	Bottom	0.009
$U_{W,installed} = 0.81$ W/(m <sup>2</sup> K)		$U_{W,installed} = 0.81$ W/(m <sup>2</sup> K)		$U_{W,installed} = 0.81$ W/(m <sup>2</sup> K)	

