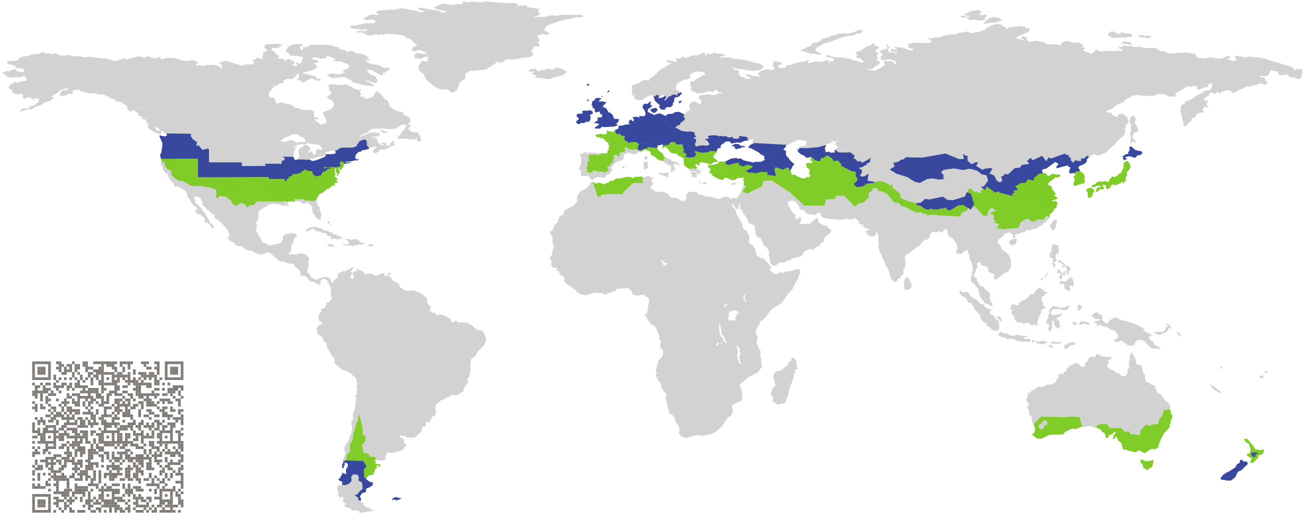
CERTIFICATE

Certified Passive House Component

Component-ID 2351cw03 valid until 31st December 2025

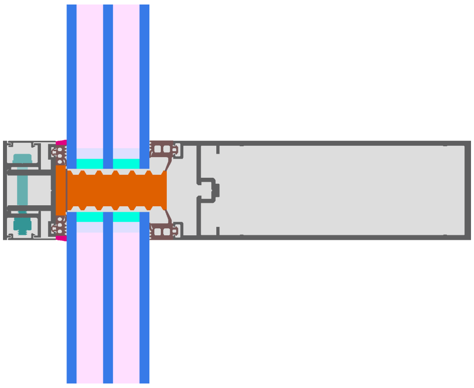
Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
Germany



Category: **Curtain Wall**

Manufacturer: **Beijing Jiamao Huasheng Technology Development Co., BEIJING, China**

Product name: **Jiamao Huasheng Passive House Curtain Wall System**



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

Comfort $U_{CW} = 0.80 \leq 0.80\,\mathrm{W/(m^2\,K)}$

$U_{CW,\mathrm{installed}} \leq 0.85\,\mathrm{W/(m^2\,K)}$

with $U_g = 0.70\,\mathrm{W/(m^2\,K)}$

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

Passive House efficiency class

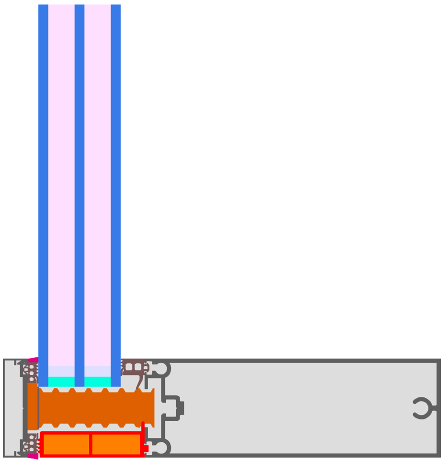
phE | phD | phC | phB | phA

cool, temperate climate

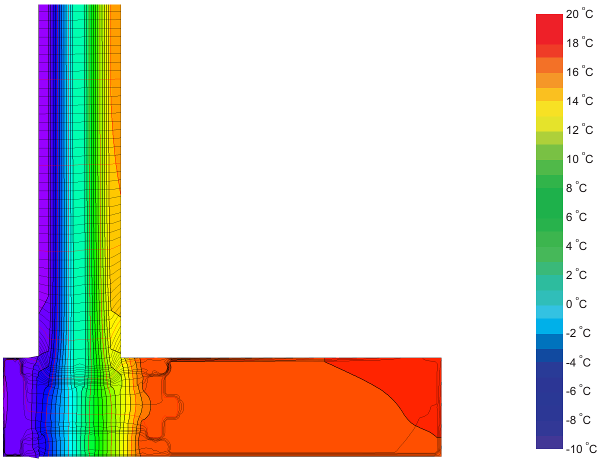
phA

CERTIFIED COMPONENT

Passive House Institute



Calculation model



Isothermal

Description

60mm wide aluminium curtain wall; Isolator made from PE-foam (0.05 W/(mK)); Plastic glass carrier fixed with metal screws; Aluminium pressure plate with aluminium capping. The latter is fixed to the pressure plate of the mullion using screws to enable attachment of shading elements. Pane thickness: 50 mm (6/16/6/16/6), rebate depth: 17 mm. Spacer: Technoform-Spacer SP16 with butyl as secondary seal.

Explanation

The element U-values were calculated for the test element size of 1.20 m × 2.50 m with U_g = 0.70 W/(m^2 K). If a higher quality glazing is used, the element U-values will improve as follows:

Glazing	U_g =	0.70	0.68	0.56	0.52	W/(m^2 K)
		↓	↓	↓	↓	
Element	U_{CW}	0.80	0.78	0.67	0.63	W/(m^2 K)

Transparent building components are sorted 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 that have been certified for climate zones with higher thermal 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 and passipedia.org.

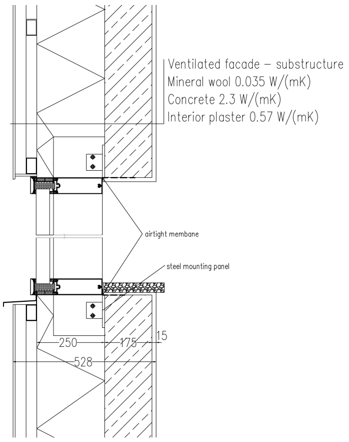
Frame values		Frame width b_f mm	U-value frame U_f [1] $W/(m^2 K)$	Ψ-glazing edge Ψ_g $W/(m K)$	Temp. Factor $f_{Rsi=0.25}$ [-]
Mullion fixed	(0M1)	60	0.93	0.035	0.77
Transom fixed	(0T1)	60	0.93	0.034	0.77
Bottom fixed	(FB1)	60	1.21	0.033	0.76
Top fixed	(FH1)	60	1.15	0.033	0.77
Lateral fixed	(FJ1)	60	1.15	0.033	0.76
Spacer: Technoform-Spacer SP16			Secondary seal: Butyl		

Thermal glass carrier bridge[2] $\chi_{GT} = 0.004\ W/K$

Validated installations

Ventilated facade (fixed glazing)

$U_{Wall} = 0.13\ W/(m^2 K)$

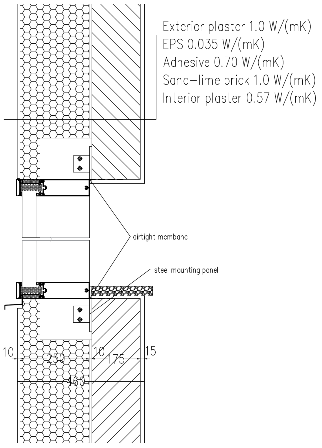


$\Psi_{install}$	$W/(m K)$
Top	0.031
Left	0.023
Right	0.023
Bottom	0.034

$U_{W,installed} = 0.86\ W/(m^2 K)$

Exterior insulation and finishing system (EIFS) (fixed glazed)

$U_{Wall} = 0.13\ W/(m^2 K)$

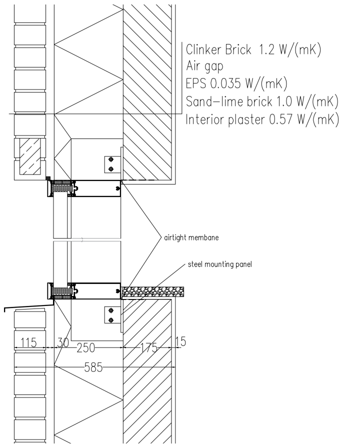


$\Psi_{install}$	$W/(m K)$
Top	0.025
Left	0.018
Right	0.018
Bottom	0.031

$U_{W,installed} = 0.85\ W/(m^2 K)$

Cavity wall (fixed glazing)

$U_{Wall} = 0.13\ W/(m^2 K)$



$\Psi_{install}$	$W/(m K)$
Top	0.030
Left	0.022
Right	0.022
Bottom	0.033

$U_{W,installed} = 0.86\ W/(m^2 K)$

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[1] Includes $\Delta U = 0.30\ W/(m^2 K)$. Standard value

[2] Standard value. Glass carrier type: Non-metallic glass carrier with screws