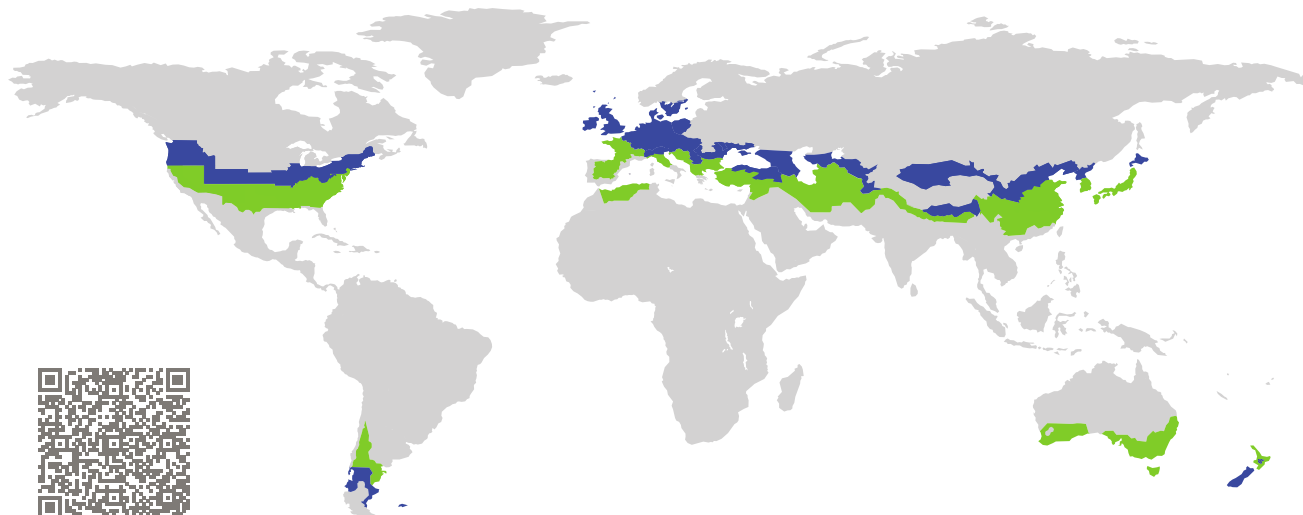


CERTIFICATE

Certified Passive House Component

Component-ID 1517ed03 valid until 31st December 2020

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
Germany

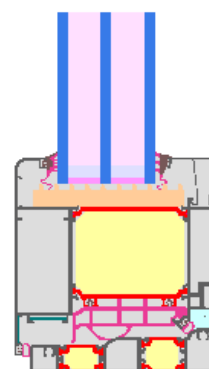


Category: **Entry door**
Manufacturer: **Qingdao Honghai curtain wall systems co., ltd**
Qingdao
China
Product name: **HHGR105**

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

Comfort $U_D = 0.80 \leq 0.80 \text{ W}/(\text{m}^2 \text{ K})$
 $U_{D, \text{installed}} \leq 0.85 \text{ W}/(\text{m}^2 \text{ K})$
with $U_g^1 = 0.70 \text{ W}/(\text{m}^2 \text{ K})$

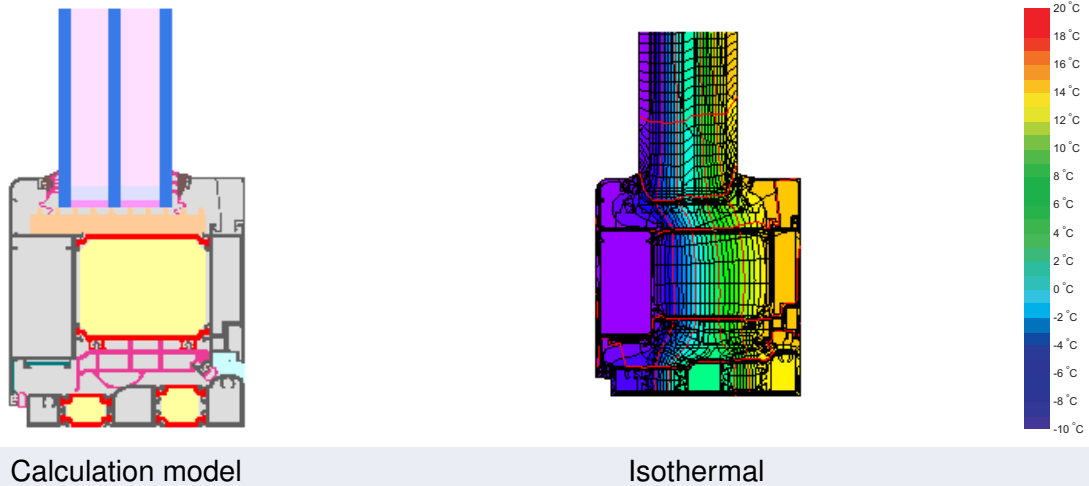
Hygiene $f_{Rsi=0.25} \geq 0.70$
Airtightness $Q_{100} = 2.25 \leq 2.25 \text{ m}^3/(\text{h m})$



(Outward open)

¹Fully glazed door





Description

Fully glazed door with thermally separated aluminium frame with insulation resol-foam ($0.023 \text{ W}/(\text{m}^2\text{K})$), and in the rebate $0.036 \text{ W}/(\text{m}^2\text{K})$; thermal separation in the threshold made by PA with 25% glass fiber ($0.30 \text{ W}/(\text{m}^2\text{K})$). Pane thickness: 6/18/6/18/6. Spacer: Swisspacer Ultimate with polysulfid as secondary seal.

Explanation





The U-values of the door apply to a door 1.10 m wide by 2.20 m tall.


A detailed report of the calculations performed in the context of certification is available from the manufacturer.

Unless stated otherwise, the air tightness was determined according to EN 1026 with respect to the joint length under climate load in conjunction with EN 1121 for the closed, non-locked door. The result corresponds at least to air-tightness class 3 according to EN 12207.


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 and passipedia.org.

Frame values			Frame width b_f mm	U-value frame U_f W/(m ² K)	Ψ edge Ψ_g W/(m K)	Temp. Factor $f_{Rsi=0.25}$ [-]
Top	(to)		161	0.78	0.026	0.73
Threshold	(th)		119	1.00	0.025	0.73
Hinge side Door	(hs)		161	0.78	0.026	0.73
Lock side Door	(ls)		161	0.78	0.026	0.73
Spacer: SWISSPACER ULIMATE			Secondary seal: Polysulfid			


 **Top**


$b_f = 161.40 \text{ mm}$
 $U_f = 0.78 \text{ W/(m}^2 \text{ K)}$
 $\Psi_g = 0.026 \text{ W/(m K)}$
 $f_{Rsi} = 0.73$




 **Threshold**


$b_f = 119.40 \text{ mm}$
 $U_f = 1.00 \text{ W/(m}^2 \text{ K)}$
 $\Psi_g = 0.025 \text{ W/(m K)}$
 $f_{Rsi} = 0.73$




 **Hinge side**
Door

$b_f = 161.40 \text{ mm}$
 $U_f = 0.78 \text{ W/(m}^2 \text{ K)}$
 $\Psi_g = 0.026 \text{ W/(m K)}$
 $f_{Rsi} = 0.73$



 **Lock side**
Door

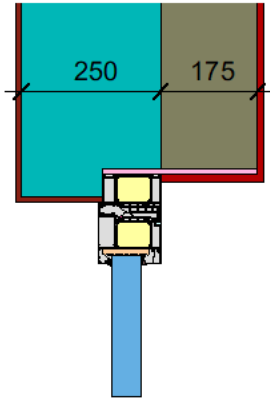
$b_f = 161.40 \text{ mm}$
 $U_f = 0.78 \text{ W/(m}^2 \text{ K)}$
 $\Psi_g = 0.026 \text{ W/(m K)}$
 $f_{Rsi} = 0.73$



Validated installations

Exterior insulation and finishing s (EIFS)
top (operable)

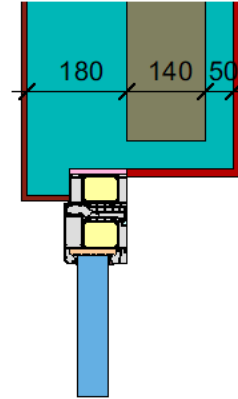
$$U_1 = 0.14 \text{ [W/(m}^2 \text{ K)]}$$



$$\Psi_{\text{install}} = 0.013 \text{ W/(m K)}$$

Formwork blocks top (operable)

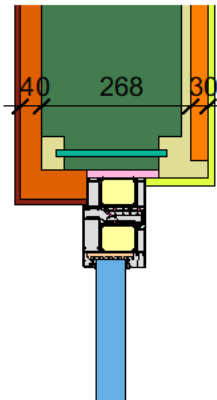
$$U_1 = 0.15 \text{ [W/(m}^2 \text{ K)]}$$



$$\Psi_{\text{install}} = 0.012 \text{ W/(m K)}$$

Lightweight timber top (operable)

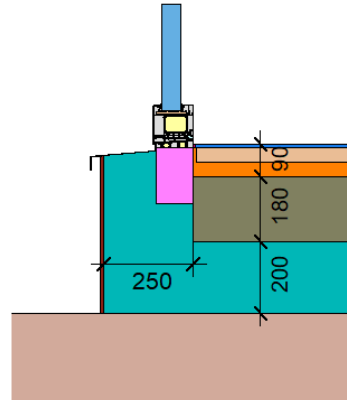
$$U_1 = 0.14 \text{ [W/(m}^2 \text{ K)]}$$



$$\Psi_{\text{install}} = 0.013 \text{ W/(m K)}$$

Threshold entrance door

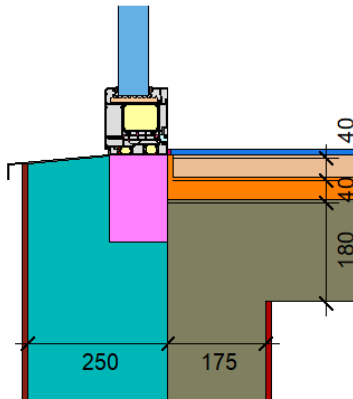
$$U_1 = 0.14 \text{ [W/(m}^2 \text{ K)]}$$



$$\Psi_{\text{install}} = 0.037 \text{ W/(m K)}$$

Threshold side entrance

$$U_1 = 0.14 \text{ [W/(m}^2 \text{ K)]}$$



$$\Psi_{\text{install}} = 0.056 \text{ W/(m K)}$$

