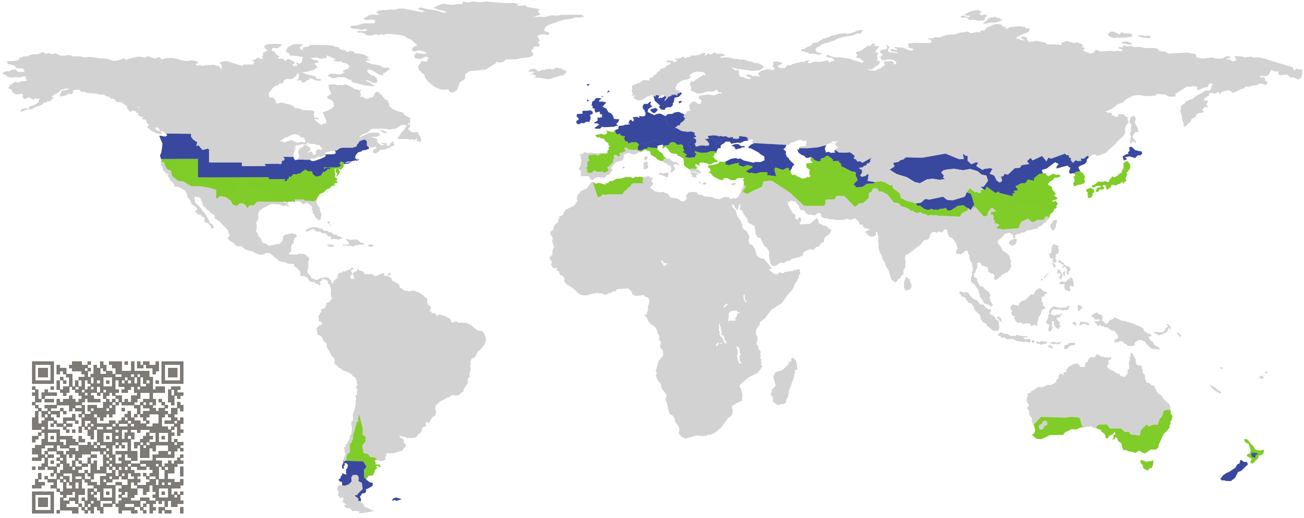
CERTIFICATE

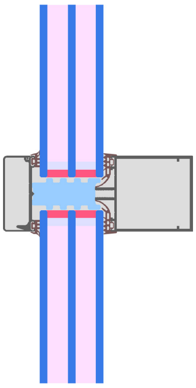
Certified Passive House Component

Component-ID 1641cw03 valid until 31st December 2025

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
Germany



Category:	**Curtain Wall**
Manufacturer:	**Shandong Huajian Aluminium Group Co.,LTD, Shandong Province, China**
Product name:	**EF60HI Passive Curtain Wall**



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

Comfort	$U_{CW} = 0.80$	$\leq$	0.80 W/(m² K)
	$U_{CW,\mathrm{installed}}$	$\leq$	0.85 W/(m² K)
	with U_g	=	0.70 W/(m² K)
Hygiene	$f_{Rsi=0.25}$	$\geq$	0.70

cool, temperate climate

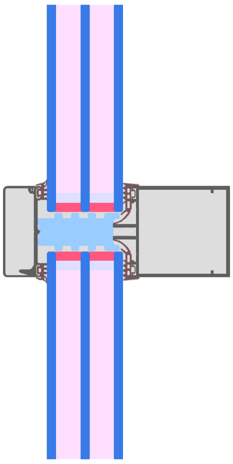
phA

CERTIFIED COMPONENT

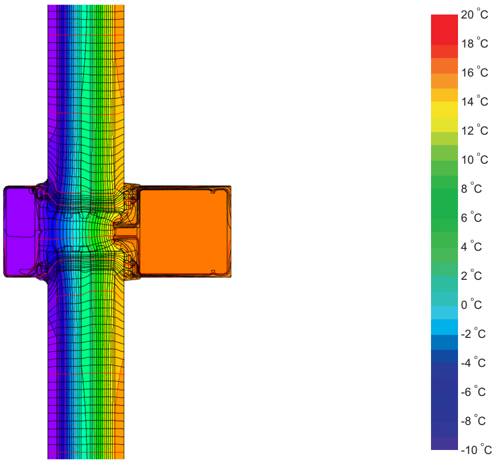
Passive House Institute

Passive House efficiency class	phE	phD	phC	phB	phA

www.passivehouse.com



Calculation model



Isothermal

Description

Aluminium mullion and transom facade, standard values used for screw and glass carrier (plastic with metal screws) Insulation: polyethylene foam (0,038 W/(mK)). Pane thickness: 50 mm (6/16/6/16/6 mm). Spacer: TGI Precision with DOWSIL 3364 Warm Edge IG Sealant.

Explanation

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

Glazing	U_g =	0.70	0.69	0.58	0.53	$\mathrm{W/(m^2\,K)}$
		↓	↓	↓	↓	
Element	U_{CW}	0.80	0.79	0.69	0.64	$\mathrm{W/(m^2\,K)}$

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/(m² K)	Ψ-glazing edge Ψ_g W/(m K)	Temp. Factor $f_{Rsi=0.25}$ [-]
Mullion fixed	(0M1)	60	0.96	0.033	0.82
Transom fixed	(0T1)	60	0.96	0.033	0.81
Bottom fixed	(FB1)	60	0.97	0.032	0.80
Top fixed	(FH1)	60	0.97	0.032	0.80
Lateral fixed	(FJ1)	60	0.97	0.032	0.81

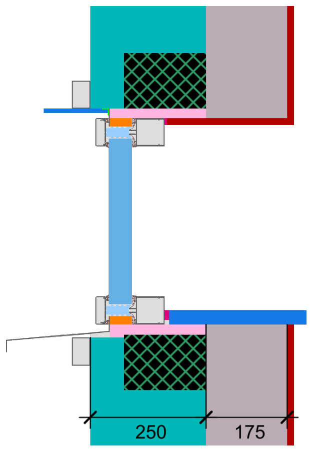
Spacer: Technoform-Spacer SP16 Secondary seal: DOWSIL ™ 3364 Warm Edge IG Sealant

Thermal glass carrier bridge[2] χ_{GT} = 0.004 W/K

Validated installations

Ventilated facade (fixed glazing)

U_{Wall} = 0.13 W/(m² K)

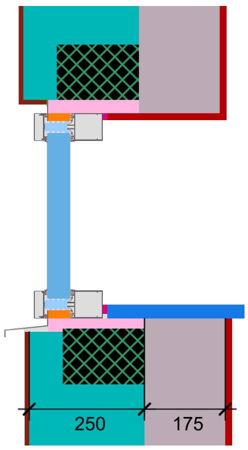


$\Psi_{install}$	W/(m K)
Top	0.028
Left	0.022
Right	0.022
Bottom	0.029

$U_{W,installed}$ = 0.84 W/(m² K)

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

U_{Wall} = 0.13 W/(m² K)



$\Psi_{install}$	W/(m K)
Top	0.029
Left	0.022
Right	0.022
Bottom	0.029

$U_{W,installed}$ = 0.84 W/(m² K)

[1] Includes ΔU = 0.30 W/(m² K). Standard value

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