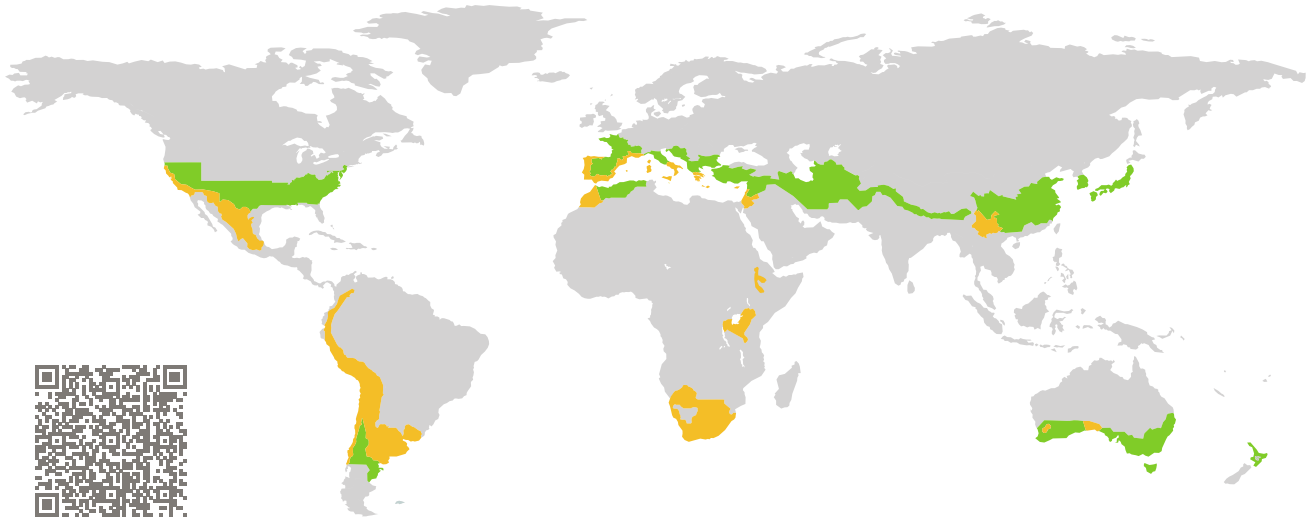


CERTIFICATE

Certified Passive House Component

Component-ID 1372wi04 valid until 31st December 2025

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
Germany

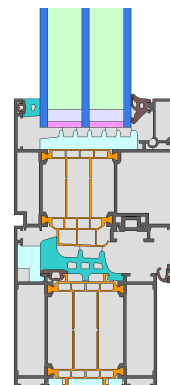


Category: **Window Frame**
Manufacturer: **Hydro Building Systems Espana, S.L.U., Sant Cugat del Vallès (Barcelona), Spain**
Product name: **WICLINE 75**

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

Comfort $U_{W=1.00} \leq 1.00 \text{ W}/(\text{m}^2 \text{ K})$
 $U_{W,\text{installed}} \leq 1.05 \text{ W}/(\text{m}^2 \text{ K})$
with $U_g = 0.90 \text{ W}/(\text{m}^2 \text{ K})$

Hygiene $f_{Rsi=0.25} \geq 0.65$



warm, temperate climate



CERTIFIED COMPONENT

Passive House Institute

Passive House efficiency class

phE

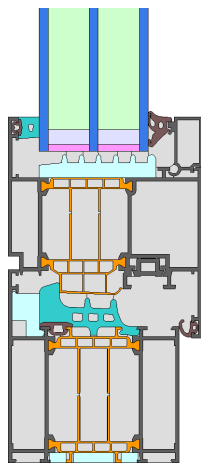
phD

phC

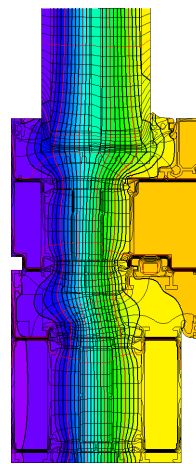
phB

phA

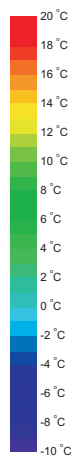
www.passivehouse.com



Calculation model



Isothermal



Description

Aluminium- windowframe with ETC-Intelligence composite zone, thermal separation (0.18 W/(mk)) with low emissivity-foil (0.03), insulation (0.029 W/(mk)) inside the glazing-rebate and fold. Pane thickness: 48 mm (4/18/4/18/4), rebate depth: 15 mm.

Explanation

The window U-values were calculated for the test window size of 1.23 m × 1.48 m with $U_g = 0.90$ W/(m² K). If a higher quality glazing is used, the window U-values will improve as follows:

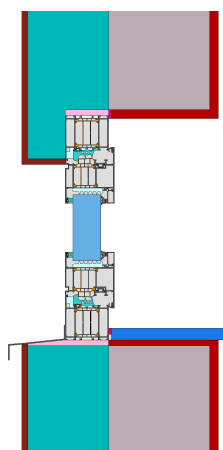
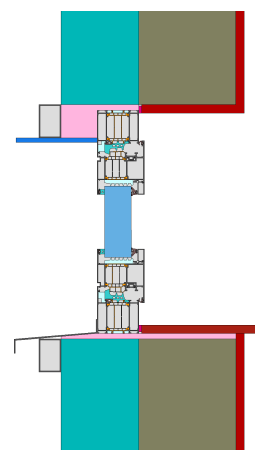
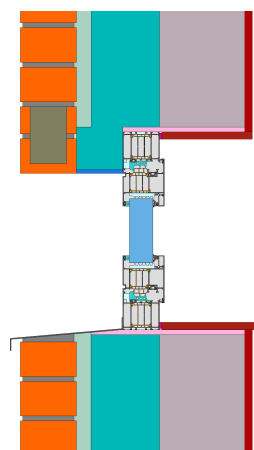
Glazing	$U_g =$	0.90	0.88	0.70	0.64	W/(m ² K)
		↓	↓	↓	↓	
Window	$U_w =$	1.00	0.99	0.88	0.84	W/(m ² K)

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 and passipedia.org.

Validated installations

Exterior insulation and finishing system		Ventilated facade		Cavity wall	
$U_{\text{Wall}} = 0.23 \text{ W}/(\text{m}^2 \text{ K})$		$U_{\text{Wall}} = 0.23 \text{ W}/(\text{m}^2 \text{ K})$		$U_{\text{Wall}} = 0.22 \text{ W}/(\text{m}^2 \text{ K})$	
					
Ψ_{install}	W/(m K)	Ψ_{install}	W/(m K)	Ψ_{install}	W/(m K)
Top	0.006	Top	0.015	Top	0.012
Side	0.006	Side	0.015	Side	0.012
Bottom	0.018	Bottom	0.025	Bottom	0.017
$U_{W,\text{installed}} = 1.02 \text{ W}/(\text{m}^2 \text{ K})$		$U_{W,\text{installed}} = 1.05 \text{ W}/(\text{m}^2 \text{ K})$		$U_{W,\text{installed}} = 1.04 \text{ W}/(\text{m}^2 \text{ K})$	

Frame values		Frame width b_f mm	U -value frame U_f W/(m ² K)	Ψ -glazing edge Ψ_g W/(m K)	Temp. Factor $f_{Rsi=0.25}$ [-]
Mullion 1 casement	(1M1) 	200	1.23	0.023	0.72
Bottom	(OB1) 	152	1.00	0.025	0.75
Top	(OH1) 	152	1.00	0.025	0.75
Lateral	(OJ1) 	152	1.00	0.025	0.75
Spacer: SWISSPACER Ultimate			Secondary seal: Polysulfide		

