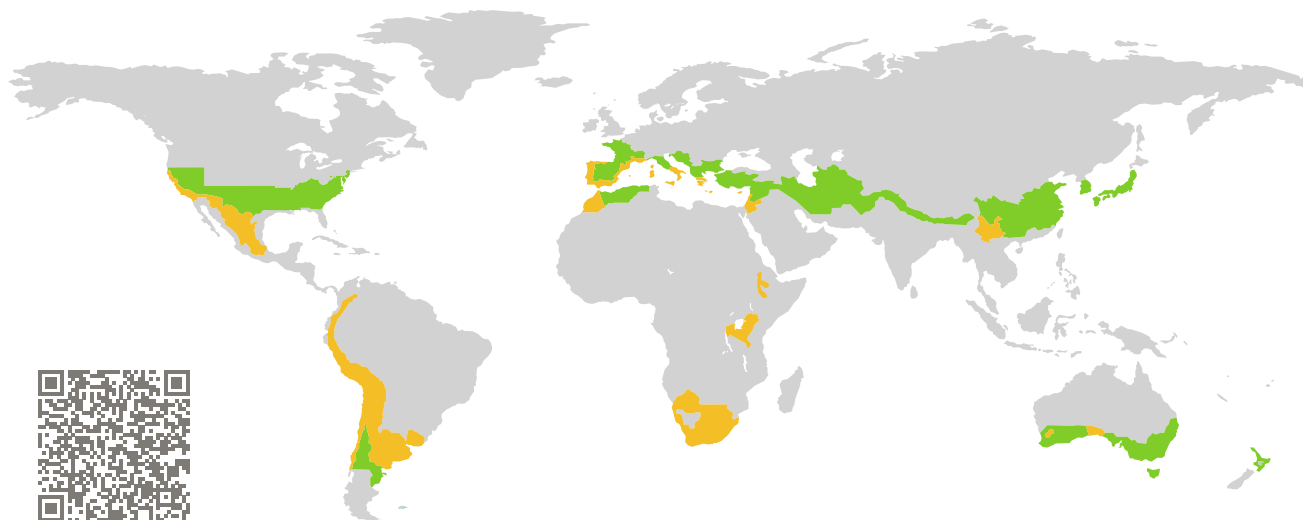


# CERTIFICATE

Certified Passive House Component

Component-ID 1620wi04 valid until 31st December 2025

Passive House Institute  
Dr. Wolfgang Feist  
64283 Darmstadt  
Germany

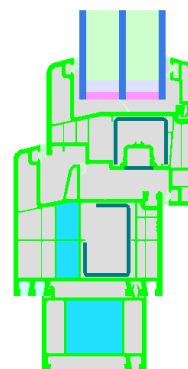


Category: **Window Frame**  
Manufacturer: **CONSTRUAL, S.L.,  
Navarrete (La Rioja),  
Spain**  
Product name: **Construal Passiv-Vent**

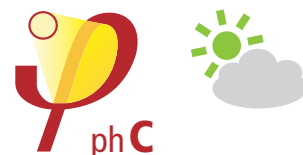
**This certificate was awarded based on the following  
criteria for the warm, temperate climate zone**

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



ph C

**CERTIFIED  
COMPONENT**

Passive House Institute

Passive House  
efficiency class

phE

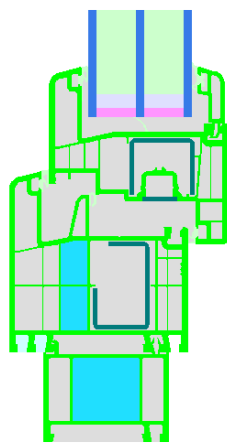
phD

phC

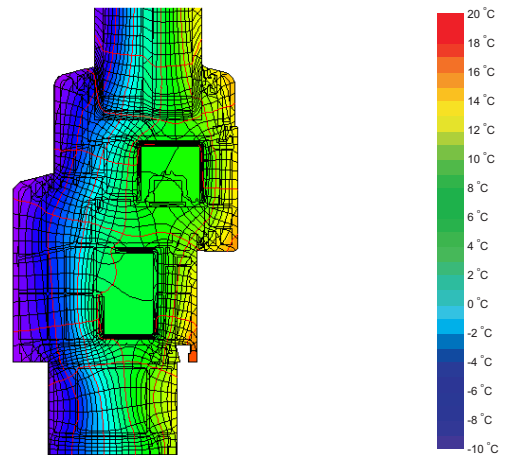
phB

phA

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



Calculation model



Isothermal

## Description

PVC frame with PU foam (IKD<sup>®</sup>, 0.026 W/(mK)) insulated chamber. Frame 6009 IKD with reinforcement 6716 and frame extension 7299 IKD, mullion 6088 with reinforcement 6711, sash 6003 with reinforcement 6706. Pane thickness: 48 mm (4/18/4/18/4), rebate depth: 23 mm. Maximum window size up to 30 kg/m<sup>2</sup> glass weight: White frame 0.95 \* 2.3 m, max. 2.2 m<sup>3</sup>. Coloured frame: 0.95 \* 2.10 m, max. 2.2 m<sup>2</sup>.

## 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/(m<sup>2</sup> K). If a higher quality glazing is used, the window U-values will improve as follows:

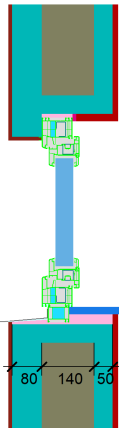
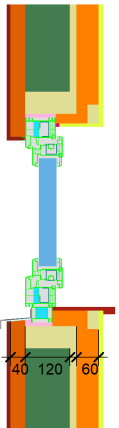
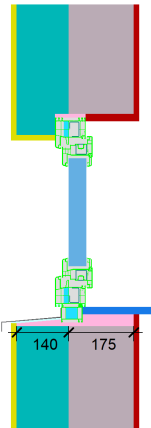
Glazing	$U_g =$	0.90	0.64	0.58	0.52	W/(m <sup>2</sup> K)
		↓	↓	↓	↓	
Window	$U_W =$	1.00	0.84	0.80	0.76	W/(m <sup>2</sup> K)




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).

## Validated installations

Formwork blocks (operable)		Lightweight timber (operable)		Exterior insulation and finishing system (EIFS) (operable)	
$U_{\text{Wall}} = 0.25 \text{ W}/(\text{m}^2 \text{ K})$		$U_{\text{Wall}} = 0.19 \text{ W}/(\text{m}^2 \text{ K})$		$U_{\text{Wall}} = 0.23 \text{ W}/(\text{m}^2 \text{ K})$	
					
$\Psi_{\text{install}}$	W/(m K)	$\Psi_{\text{install}}$	W/(m K)	$\Psi_{\text{install}}$	W/(m K)
Top	-0.005	Top	0.004	Top	0.005
Side	-0.005	Side	0.004	Side	0.005
Bottom	0.008	Bottom	0.000	Bottom	0.037
$U_{W,\text{installed}} = 0.99 \text{ W}/(\text{m}^2 \text{ K})$		$U_{W,\text{installed}} = 1.01 \text{ W}/(\text{m}^2 \text{ K})$		$U_{W,\text{installed}} = 1.04 \text{ W}/(\text{m}^2 \text{ K})$	

Frame values			Frame width	$U$ -value frame	$\Psi$ -glazing edge	Temp. Factor
			$b_f$	$U_f$	$\Psi_g$	$f_{Rsi=0.25}$
			mm	W/(m <sup>2</sup> K)	W/(m K)	[-]
Flying Mul-lion	(FM1)		170	1.08	0.025	0.66
Bottom	(OB1)		174	1.07	0.026	0.71
Top	(OH1)		132	0.97	0.026	0.72
Lateral	(OJ1)		132	0.97	0.026	0.72
Spacer: SWISSPACER ULTIMATE			Secondary seal: Polysulfide			

