CERTIFICATE

Certified Passive House Component

Component-ID 1482fx04 valid until 31st December 2025

Passive House Institute
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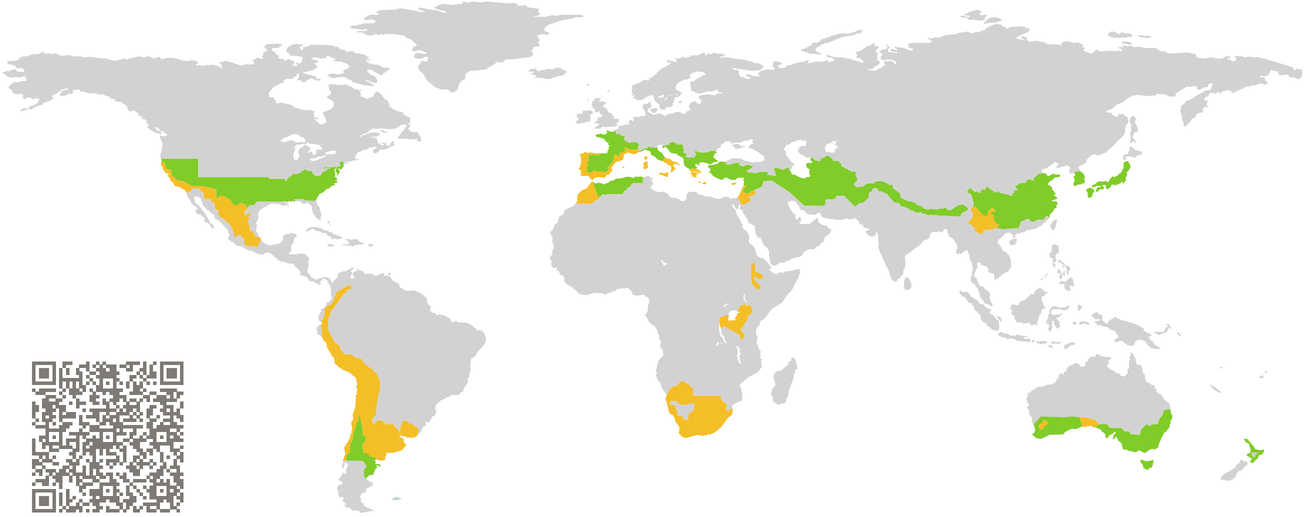
64283 Darmstadt
Germany



Category: **Fixed window**

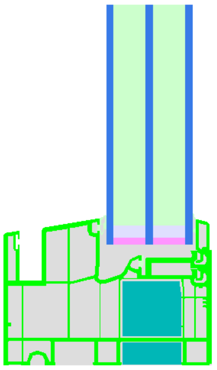
Manufacturer: **Piva Group S.p.A.,**
Roncanova di Gazzo Veronese (VR),
Italy

Product name: **PVC Piva Serie MD R fix**

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

Comfort $U_W = 0.94 \leq 1.00\ \mathrm{W/(m^2\,K)}$
$U_{W,\mathrm{installed}} \leq 1.05\ \mathrm{W/(m^2\,K)}$
with $U_g = 0.90\ \mathrm{W/(m^2\,K)}$

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



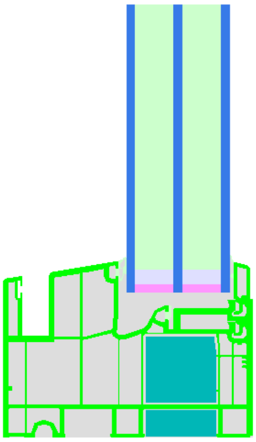
warm, temperate climate

phC

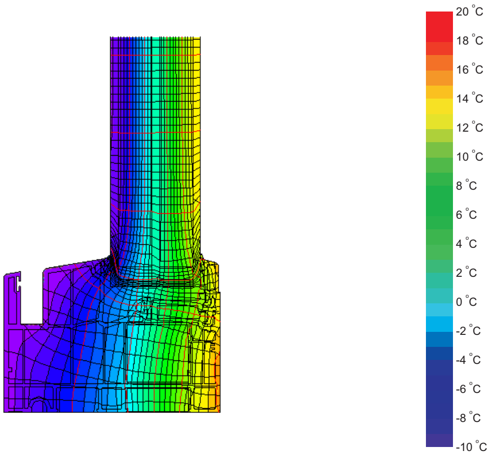
CERTIFIED COMPONENT

Passive House Institute

Passive House efficiency class phE phD **phC** phB phA



Calculation model



Isothermal

Description

PVC-windowframe ingrated roller shutter. Reinforced by steel inside the bottom and lateral sash as well as in the top frame. Insulated by EPS (0.035 W/(mK)). Pane thickness: 48 mm (4/18/4/18/4), rebate depth: 18 mm. Spacer: Multitech.

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^2 K). If a higher quality glazing is used, the window U-values will improve as follows:

Glazing	U_g =	0.90	0.70	0.62	0.54	W/(m^2 K)
		↓	↓	↓	↓	
Window	U_W =	0.94	0.82	0.77	0.72	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.

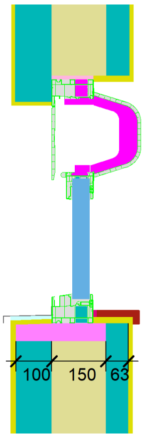
The Passive House Institute has defined international component criteria for seven climate zones. In principle, components which have been certified for climate zones with higher requirements may also be used in climates with less stringent requirements. In a particular climate zone it may make sense 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

Solid timber (fixed glazed)

U_{Wall} = 0.17 W/(m² K)

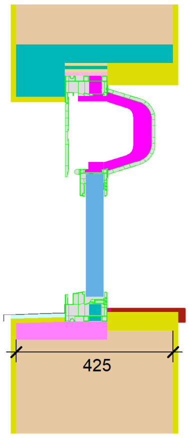


$\Psi_{install}$	W/(m K)
Top	0.024
Side	0.021
Bottom	0.024

$U_{W,installed}$ = 1.01 W/(m² K)

Monolithic construction (fixed glazed)

U_{Wall} = 0.19 W/(m² K)

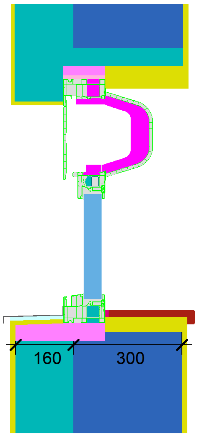


$\Psi_{install}$	W/(m K)
Top	0.018
Side	0.022
Bottom	0.028

$U_{W,installed}$ = 1.01 W/(m² K)

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

U_{Wall} = 0.17 W/(m² K)



$\Psi_{install}$	W/(m K)
Top	0.017
Side	0.014
Bottom	0.039

$U_{W,installed}$ = 1.00 W/(m² K)

Frame values		Frame width b_f mm	U-value frame U_f W/(m² K)	Ψ-glazing edge Ψ_g W/(m K)	Temp. Factor $f_{Rsi=0.25}$ [-]
Mullion fixed	(0M1)	98	1.24	0.025	0.69
Mullion 1 casement	(1M1)	132	1.24	0.026	0.67
Bottom fixed	(FB1)	82	0.73	0.026	0.71
Top fixed	(FH1)	328	0.94	0.025	0.69
Lateral fixed	(FJ1)	82	0.73	0.026	0.71

Spacer: MULTITECH Secondary seal: Polysulfide

www.passivehouse.com