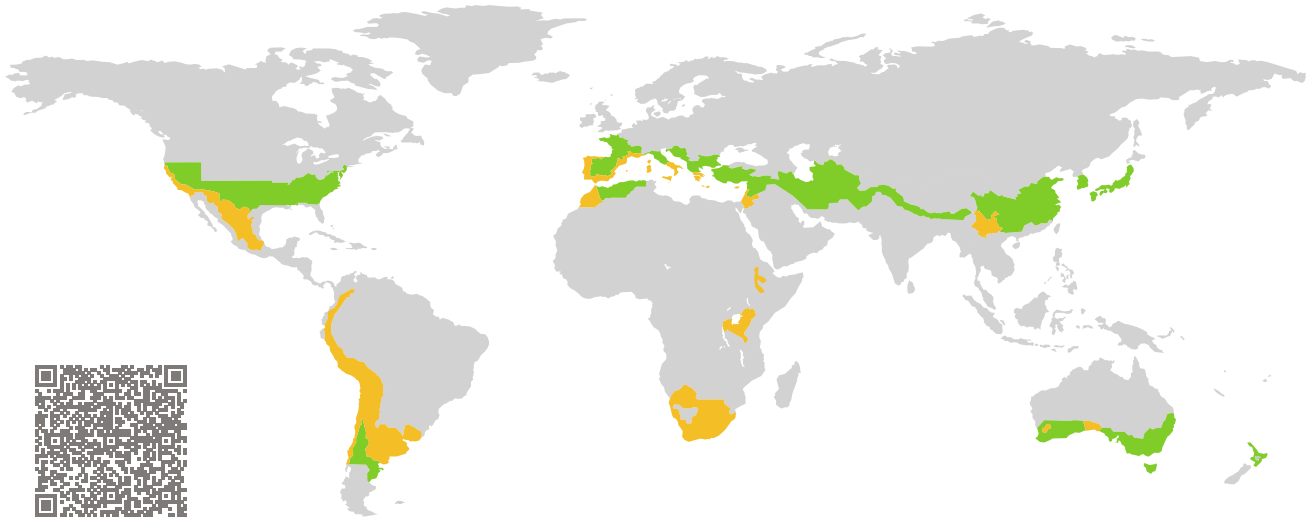


CERTIFICATE

Certified Passive House Component

Component-ID 1726rs04 valid until 31st December 2023

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
Germany

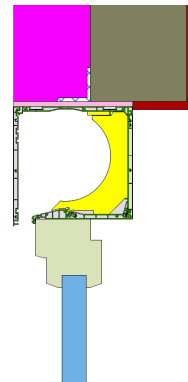


Category: **Sun Protection (Roller shutter)**
Manufacturer: **PROFINE IBERIA S.A.
UNIPERSONAL - SISTEMAS
KÖMMERLING,
Camarma de Esteruelas, Spain**
Product name: **VariNova**

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

Efficiency: $\Delta_U = 0.13 \leq 0.16 \text{ W}/(\text{m}^2\text{K})$

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

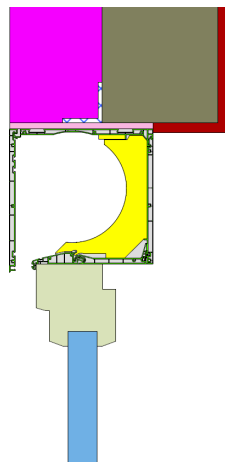


warm, temperate climate

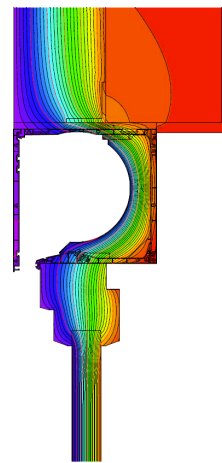


**CERTIFIED
COMPONENT**

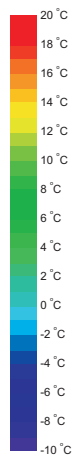
Passive House Institute



Calculation model



Isothermal






Description

Vinyl shutter case, available in two sizes. Possible shutter height up to 3.84 m with a casing height of 250 mm. Insulation filling of EPS (0.032 W/mK). Thermal bridges of the brackets determined via 3D-FEM Simulation. PHI standard frame representing a wooden or vinyl frame. Conductivity: 0.113 W/(mK), depth: 100 mm
The 217 mm shutter casing can accommodate a maximum shutter height of 280 cm.
The 250 mm shutter casing can accommodate a maximum shutter height of 384 cm.

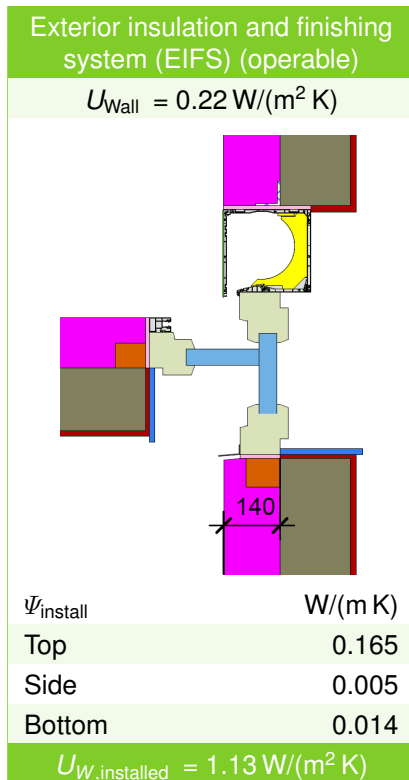
The Passive House Institute has defined international component criteria for seven climate zones. In principle, components which have been certified for climate zones with higher requirements may also be used in climates with less stringent requirements. In a particular climate zone it may make sense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

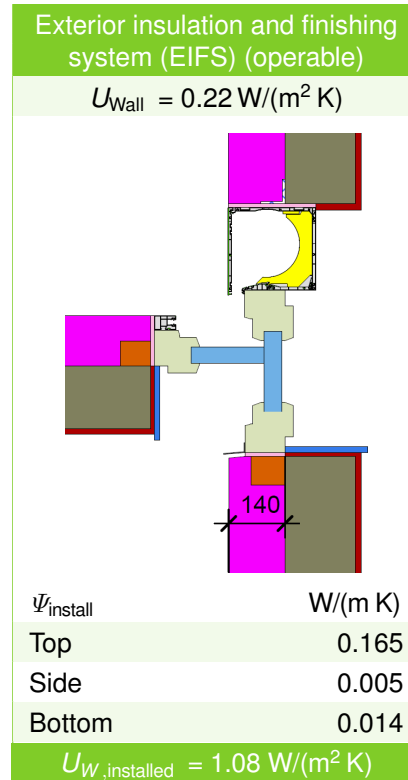
Frame values		Frame width b_f mm	U -value frame U_f W/(m ² K)	Ψ -panel edge Ψ_g W/(m K)	Temp. Factor $f_{RSI=0.25}$ [-]
Top	(to) 	125	0.92	0.038	0.67
Side	(s) 	125	0.92	0.038	0.67
Bottom	(bo) 	125	0.92	0.038	0.67

Spacer: PHI pHB-Spacer Secondary seal: Polysulfid

Validated installations



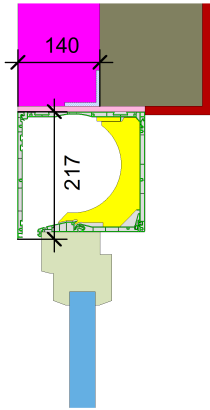
Window size
1.23 m x 1.48 m



Window size
1.10 m x 2.20 m

Shading 140 mm insulation V1

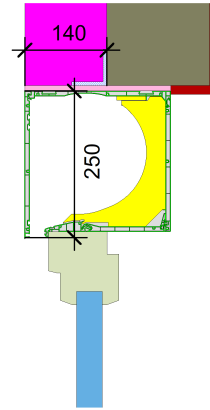
$$U_1 = 0.22 \text{ [W/(m}^2 \text{ K)]}$$



$$\Psi_{\text{install}} = 0.165 \text{ W/(m K)}$$

Shading 140 mm insulation V2

$$U_1 = 0.22 \text{ [W/(m}^2 \text{ K)]}$$



$$\Psi_{\text{install}} = 0.210 \text{ W/(m K)}$$