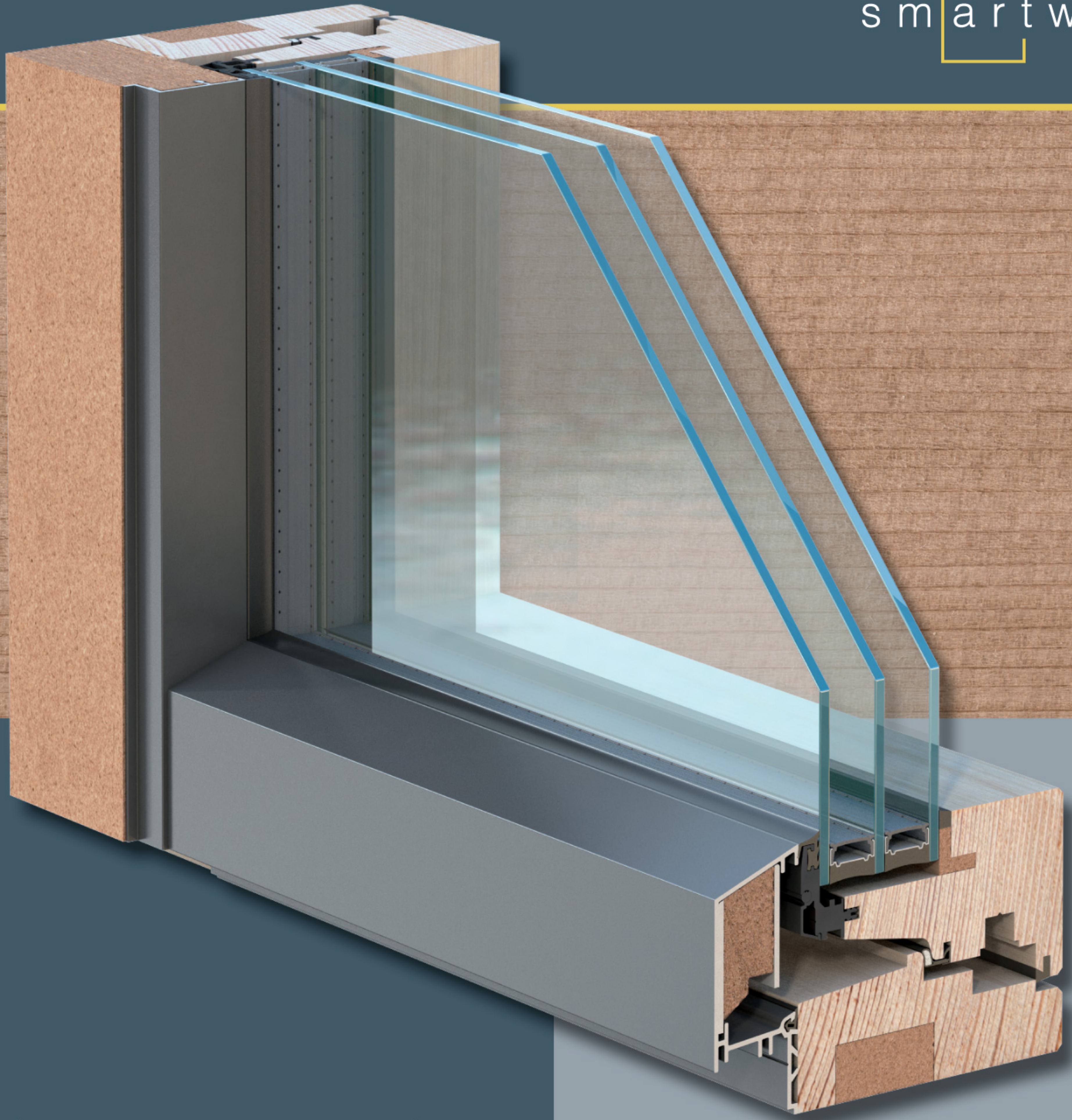


smartwin



less energy more savings

Smartwin: innovative passive house Window

Smartwin is a window which has been designed as a first class passive house window at an affordable price. The aim was to combine an intelligent network (smart), attractive design (art) and energy saving window (win) into one unit.

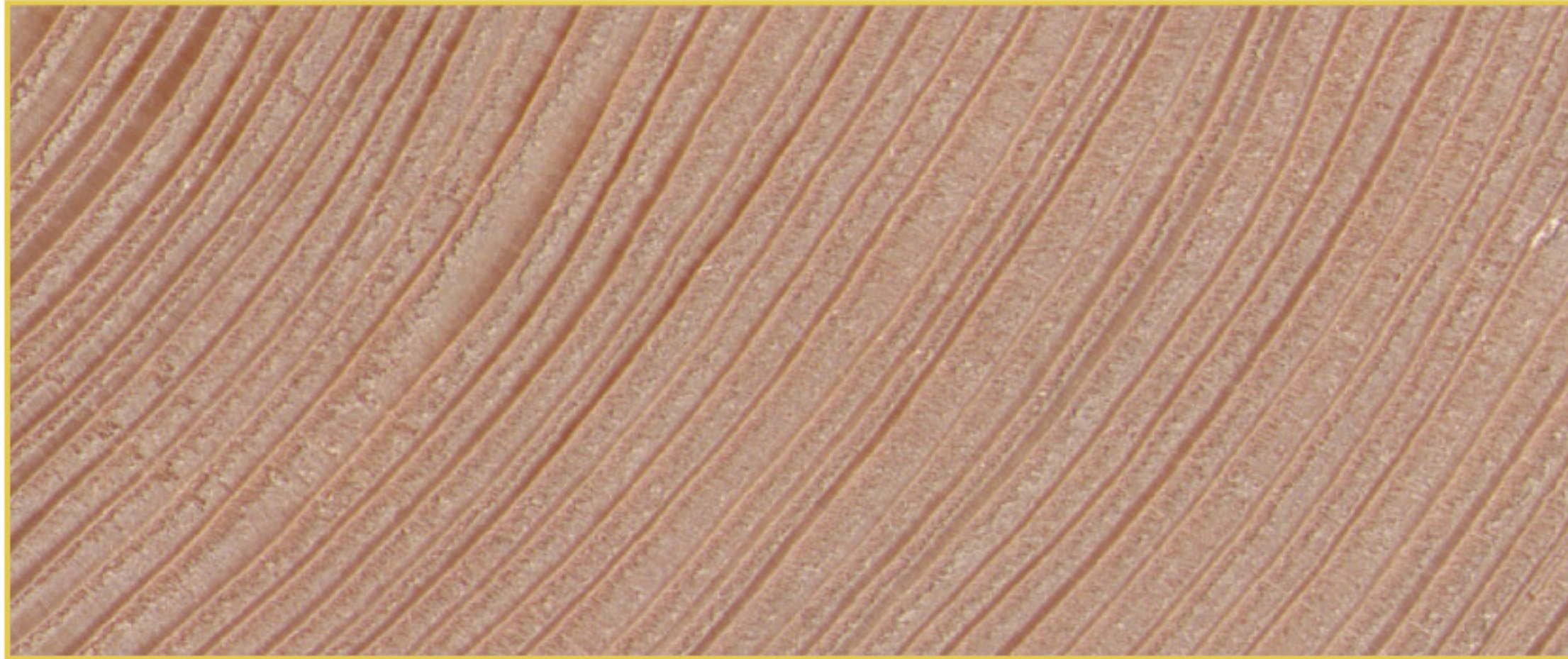
The Smartwin founders developed several versions to make your visions a reality (Smartwin, Smartwin - sliding and Smartwin - historic). All versions reach strict criteria for use in passive houses. Certificates issued by Dr. Wolfgang Feist of the Passivhaus Institute in Darmstadt confirm this. To get Smartwin Windows in your house, a network of co-operating companies from different European countries was established. A strong team was born and is now able to collaborate and share their common knowledge.

The materials used for Smartwin windows provide not only excellent insulating properties but also have high aesthetic and practical qualities. Last but not least, these materials are considerate of our environment.

Smartwin: less energy, more savings! Smartwin: back to nature!

smartwin.eu





Smartwin offers the best protection against the weather. Using high-quality wood from Central Europe, protected externally by solid aluminium giving your windows a long life without any need for maintenance. Using innovative components in the Smartwin frames and high-performance insulating triple-glazing these Windows perform two or three times better than the current standard which is available on the market.

Smartwin is a result of precise German engineering. The optimal use of wood, aluminium, glass and insulation materials result in a high-quality product, which can be used in any building. From the energy point of view, Smartwin thanks to its optimised design, brings a lot to you, and this is confirmed by PHI certification. You can rely on the declared properties. It is an optimum product designed to comply with tighter building energy regulations from 2014 to 2020.

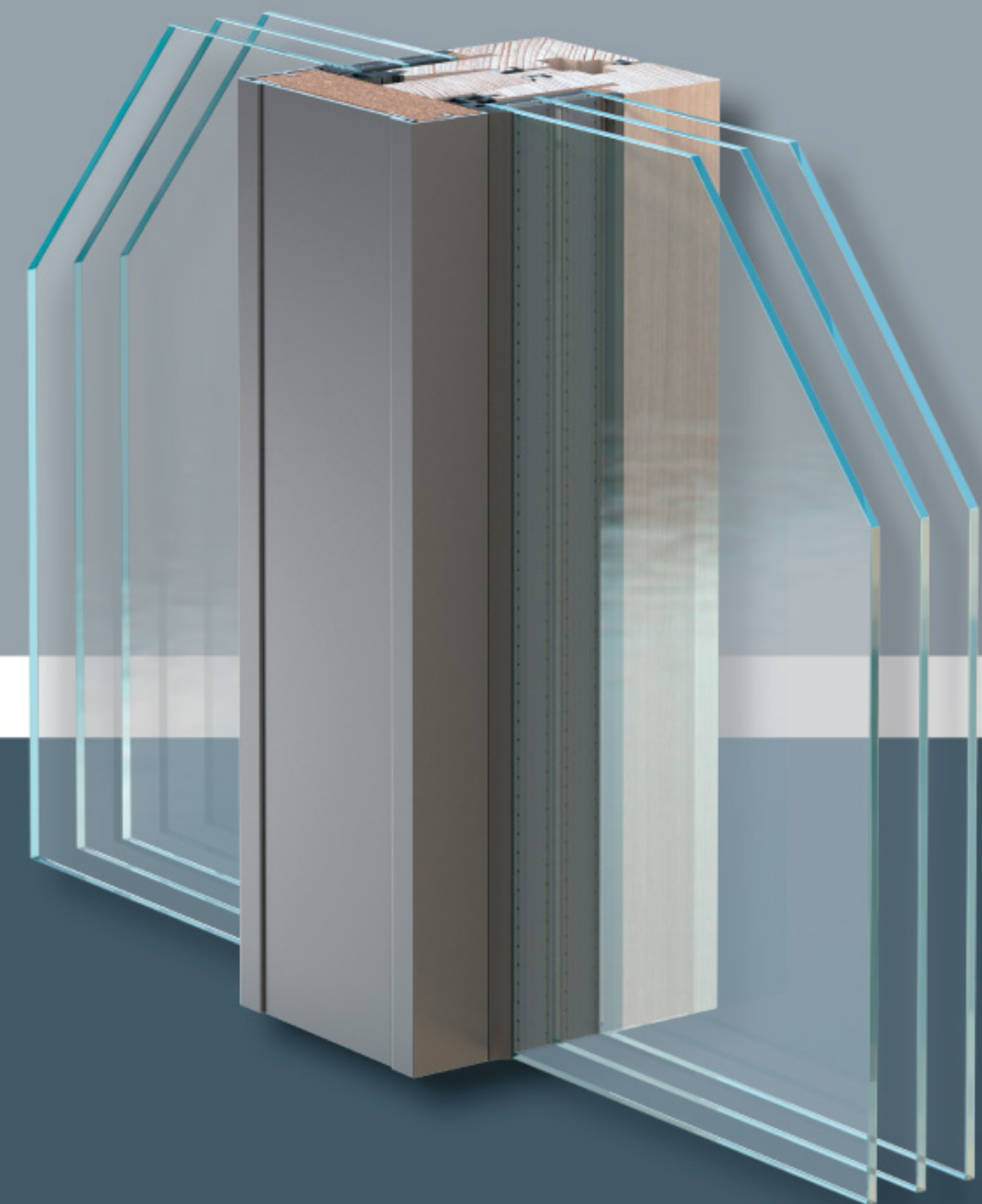
Construction of passive houses is expanding constantly and each year the number built increases. In Europe, there are now more than 30000 passive houses built proving that this type of energy performance is possible.

Properties such as design, orientation, thickness of insulation, good airtightness, results in a much reduced energy demand compared with standard construction. It delivers lower running costs, affordable mortgage repayments and all this with in a comfortable living environment. Smartwin makes passive house construction easier.

Last but not least, Smartwin has brought an aesthetic breakthrough to passive house window frames. All the models of Smartwin windows have an elegant and attractive look.

Smartwin properties:

- Elegant and slim frame with good insulation
- Weather resistant outdoors(ALU), comfortable indoors(wood)
- Attractive details: invisible frame from external facade
- Minimal frame width, maximum glass surface
- High surface temperatures, no need for heating under the windows
- Opening sash with no visible hinging hardware
- Standard production, affordably priced
- Complete service - manufacture, delivery and installation



Comfort

Would you like to feel comfortable inside your windows despite freezing outside temperatures? Smartwin allows you to do this. Perfect separation between outdoor cold and indoor warmth. Reduction in energy consumption and maximum thermal comfort!

You can relax as rising energy costs will affect you only minimally. High-quality passive and zero energy houses can allow this. No need for radiators under your windows, so now you can use the space under the window in a more useful way.





Smartwin window properties:

Frames:

- Frames of high-quality wood in a slim profile
- Surface treatment maintains the attractive wood finish
- 86mm face width of frame (sides, bottom and top)
- 110mm face width of transom and mullion
- total depth of frame 145mm
- identical sightlines of frame and sash
- low profile thermally efficient composite threshold on opening and sliding doors

Weather protection:

- Weather resistant aluminium profiles
- profiles in RAL colours, or anodized

Glazing:

- insulated triple-glazing
- in standard $U_g=0,54 \text{ W/m}^2\text{K}$, $g=50\%$
- or glazing for higher solar gain $U_g=0,63 \text{ W/m}^2\text{K}$, $g=62\%$
- Argon filled triple glazing
- spacer bar = Swisspacer V

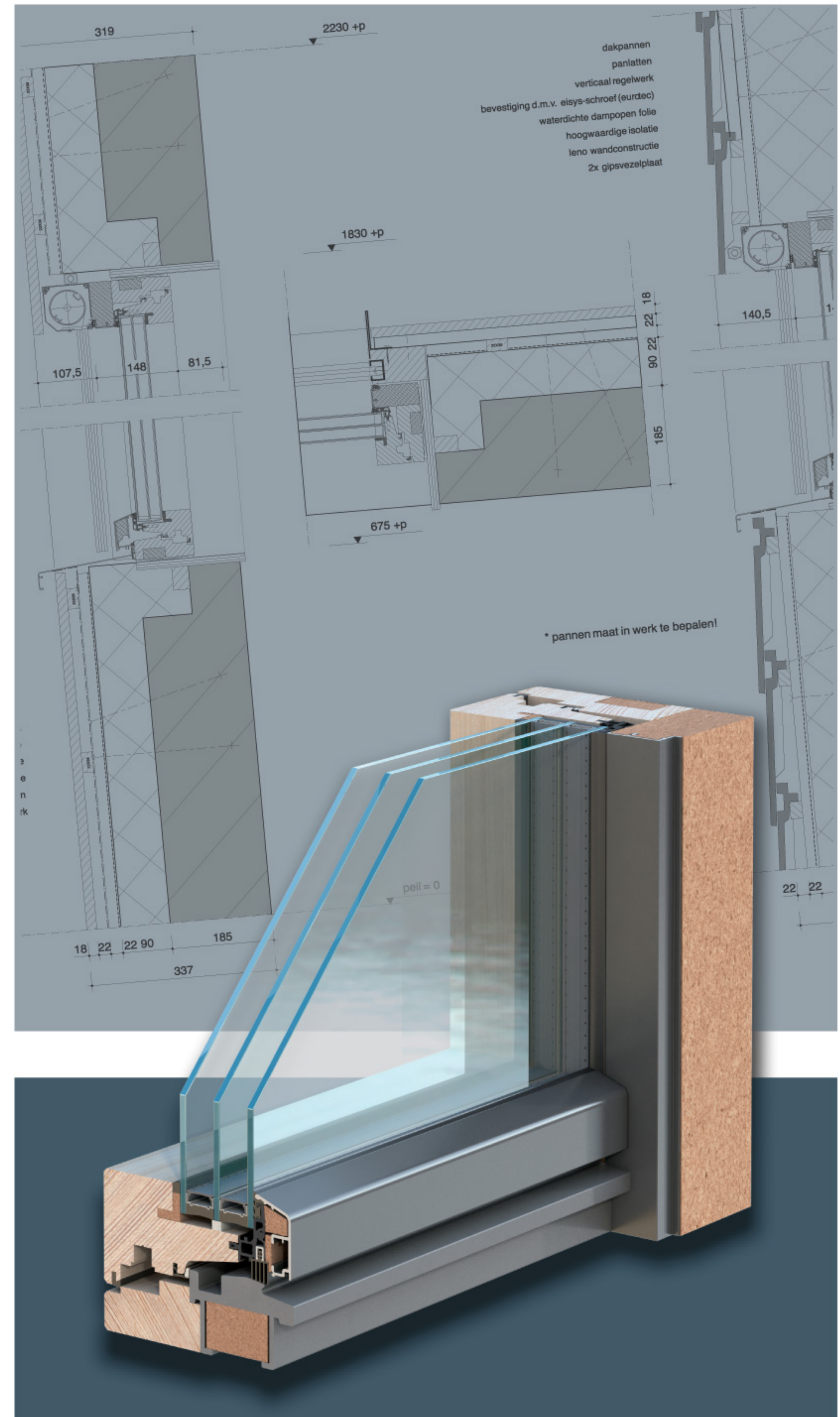
maximum height balcony door up to 2850mm

maximum width single opening window up to 1450mm

maximum height of sliding door up to 2800mm

maximum width sliding door up to 3300mm

CE label, certificate from PHI Darmstadt





Design

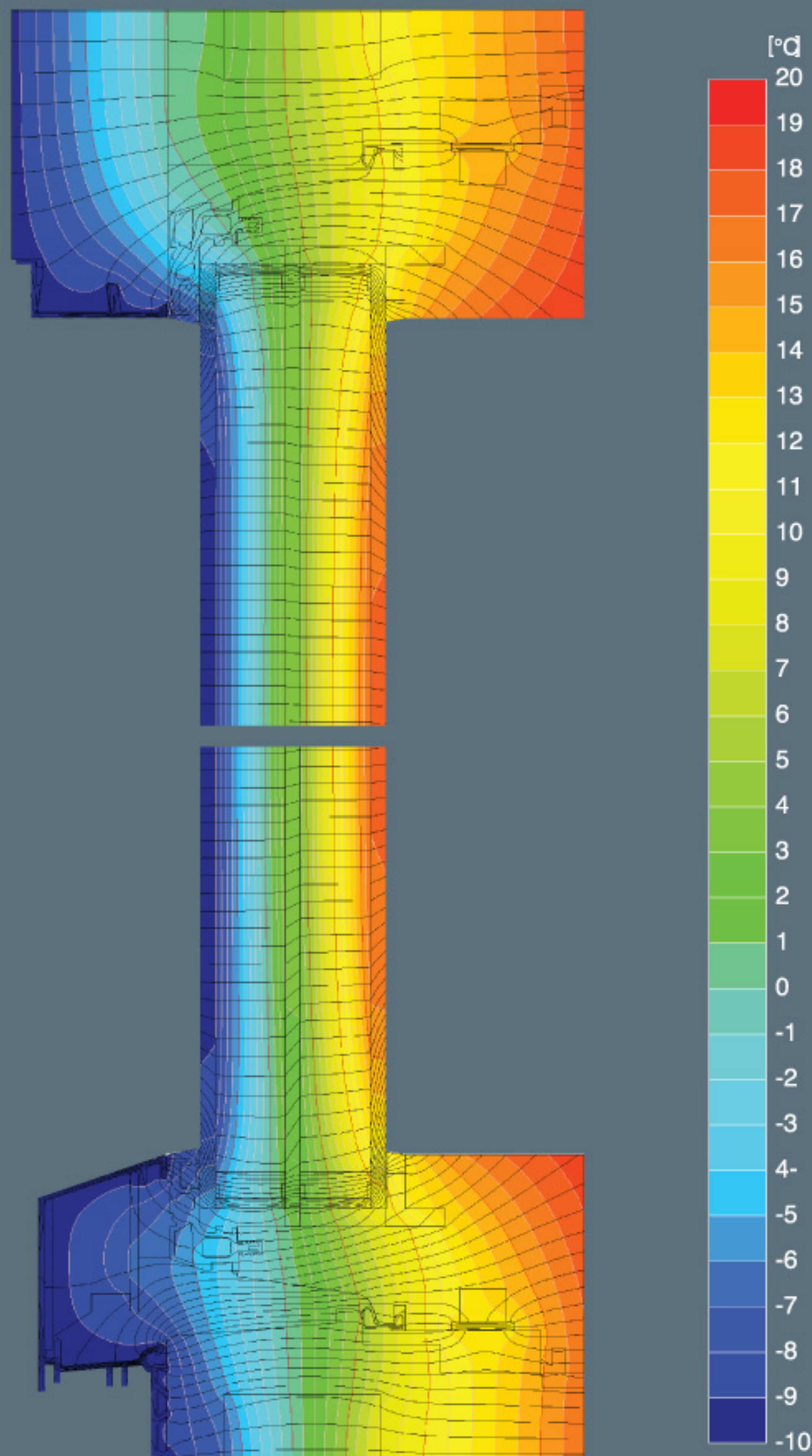
Nowadays with modern architectural designs we understand your desire for big glazed elements with clean lines. If a pleasant feeling from materials such as wood, glass and aluminium is also desired then Smartwin is the right choice for you.

Smartwin includes sensible design, contemporary aluminium and the sensational warmth of wood. Another advantage of Smartwin is the reduced need for heating in winter and cooling in summer. This allows you to reduce your future expenses not only on energy but also on maintenance.

The Smartwin Windows with their properties have been classed into the highest rating phA.

What is your advantage?

If your aim is to build an energy saving house, then SmarWin windows can help you. You can now afford to build a passive house or zero energy house even in a location where with other windows it was not possible. It is up to you how you take advantage of these extraordinary qualities.



Zertifikat

Passivhaus geeignete Komponente
für kühl gemäßigtes Klima, gültig bis 31.12.2012

Kategorie: **Fensterrahmen**
Hersteller: **pro Passivhausfenster GmbH**
83080 Oberaudorf, GERMANY
Produkt: **Smartwin**

Folgende Behaglichkeitskriterien wurden für die Zuerkennung des Zertifikates geprüft:

Mit $U_g = 0,70 \text{ W}/(\text{m}^2\text{K})$ und bei einem Fenstermaß von $1,23 \text{ m} * 1,48 \text{ m}$ ergibt sich:

$$U_{W, \text{eingebaut}} = 0,78 \text{ W}/(\text{m}^2\text{K}) \leq 0,80 \text{ W}/(\text{m}^2\text{K})$$

Einschließlich der Einbauwärmeverbrücken erfüllt das Fenster folgende Bedingung, vorausgesetzt der Einbau erfolgt wie im Datenblatt angegeben bzw. thermisch gleich- oder höherwertig.

$$U_{W, \text{eingebaut}} \leq 0,85 \text{ W}/(\text{m}^2\text{K})$$

Folgende Rahmenkennwerte wurden ermittelt:

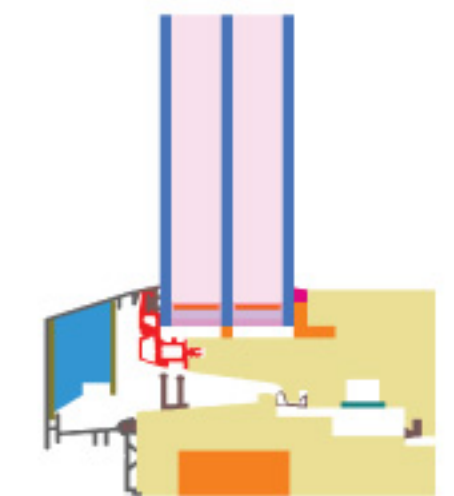
	U_f -Wert [W/(m ² K)]	Breite [mm]	Ψ_g [W/(mK)]	$f_{Rsi=0,25}$ [-]
Abstandhalter	SwisspacerV*			
Unten	0,91	86	0,025	0,70
Seitlich/oben	0,70	86	0,026	

*Thermisch weniger hochwertige Abstandhalter, insbesondere solche aus Aluminium, führen zu höheren Wärmeverlusten am Glasrand und zu geringeren Temperaturfaktoren.

Weitere Informationen siehe Datenblatt

www.passiv.de

Passivhaus Institut
Dr. Wolfgang Feist
64283 Darmstadt
GERMANY



Passivhaus Effizienzklasse

phA
advanced component

phB
basic component

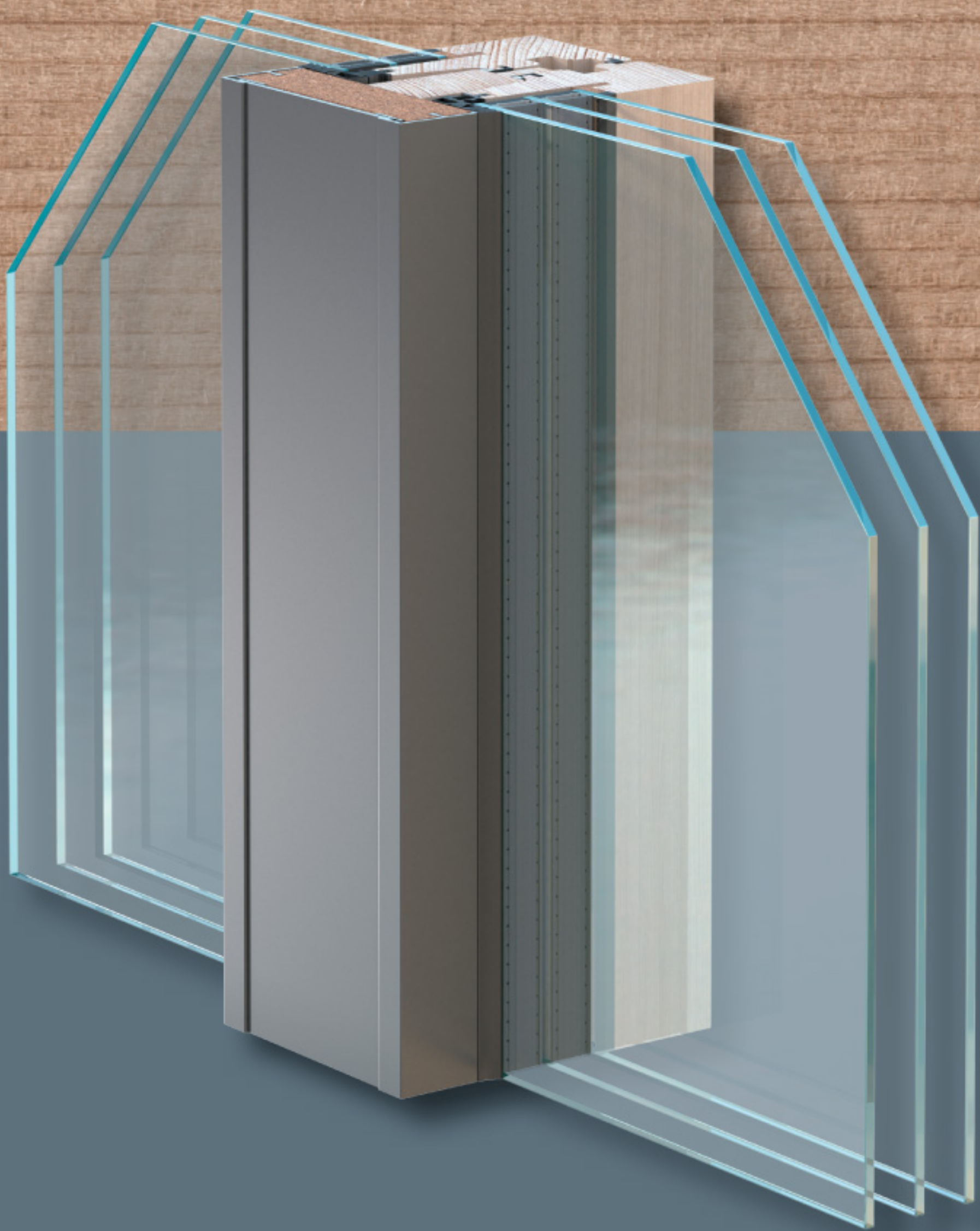
phC
certifiable component

not suitable for Passive Houses

PASSIVHAUS
geeignete
Komponente
Dr. Wolfgang Feist

Smartwin U_w - value

	U_f W/(m ² K)	Glazing W/(m ² K)		
		$U_g=0,54$	$U_g=0,6$	$U_g=0,7$
Smartwin	0,75	0,66	0,70	0,78
Smartwin FIX	0,57	0,61	0,66	0,74



Pro Passivhausfenster

Martin-Greif-Straße 20
D-83080 Oberaudorf
Email: ff@propassivhausfenster.net
www.propassivhausfenster.net

Your local manufacturer:
