

MY PERFECT WINDOW
WITH ECLAZ[®] AND ECLAZ[®] SUN PLUS



My perfect window

When choosing windows, often we are looking for budget-friendly solutions instead of future benefits. A window should not only connect us with the outside world, but also—depending on glazing—allow us to spend time in the conditions we desire, rather than those we have to adjust to.

Creating the right atmosphere is achievable with ECLAZ® glass, which ensures winter comfort by reducing heating costs, and ECLAZ® SUN PLUS glass, which provides summer comfort against overheating.

This choice is ideal for both new and renovations residential market. In either case, access to natural daylight remains at an optimal level all year round.

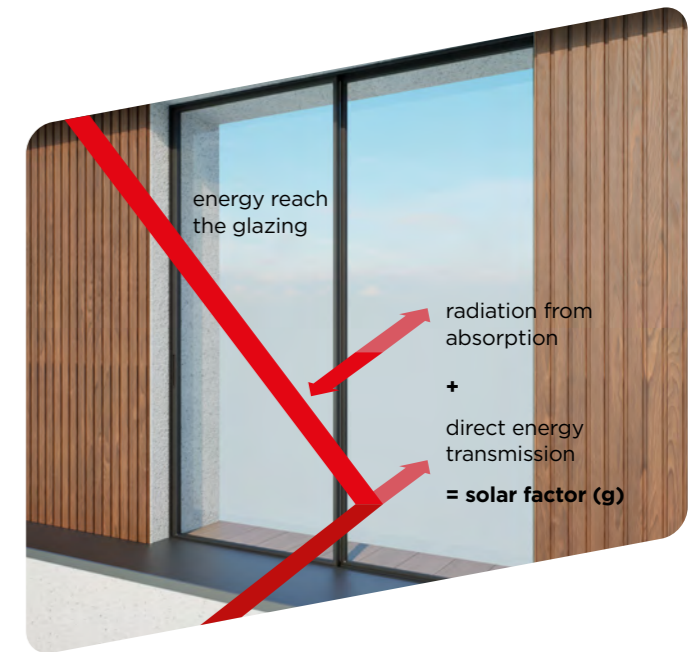
ECLAZ® winter comfort



ECLAZ® SUN PLUS summer comfort

How does glass handle energy?

When solar radiation reaches the glass, part of the sun's energy is reflected off the glazing surface, part of the energy passes through the glazing, and part of the energy is absorbed by the glass and then emitted by the glazing both inside and outside.



The most important parameter of glass that determines how much energy will enter a building and ensure comfort in winter or summer is the «solar factor g.»

How does it work?

- ↓ A low „solar factor g” value prevents the „greenhouse effect” in a room
- ↑ while a high value guarantees free solar heat inside, which passes through the glass



Example: A solar factor g value of 35% or 0.35 indicates that 65% of solar radiation heat will not enter the building, helping to avoid overheating during the summer. If the solar factor g is at 58% or 0.58, then 42% of the heat is reflected by the glazing, providing free heat inside, reducing the energy bills in winter.

Other parameters to consider when choosing windows

LT - (Light Transmission) indicates how bright the glass is. The higher the light transmission percentage, the brighter the room will be.

U - (W/(m².K) Heat Transfer Coefficient - refers to the window's insulation value (the lower the value, the better the thermal insulation of the windows), meaning that heat from inside the room does not escape outside. This is especially important in winter when heating costs rise.

Glass with technical parameters precisely matched to the local climate and building orientation will help you save on energy costs from day one and improve your comfort at home. So don't ask the window manufacturer for the cheapest windows but for those that will save you the most in the long run!

How to choose the right glazing?

Change your perspective and look at your home based on the size of the glazing and the positioning of windows in relation to cardinal directions.

ECLAZ®

comfort in winter, lower heating bills

-40%

lower energy demand for heating

By replacing old double glazing windows with triple glazing with **ECLAZ®** glass, you can reduce gas consumption for heating by up to 2300 kWh annually

ECLAZ® SUN PLUS

summer comfort, against overheating

-55%

the period of room overheating ($T > 25^{\circ}\text{C}$) is reduced by half

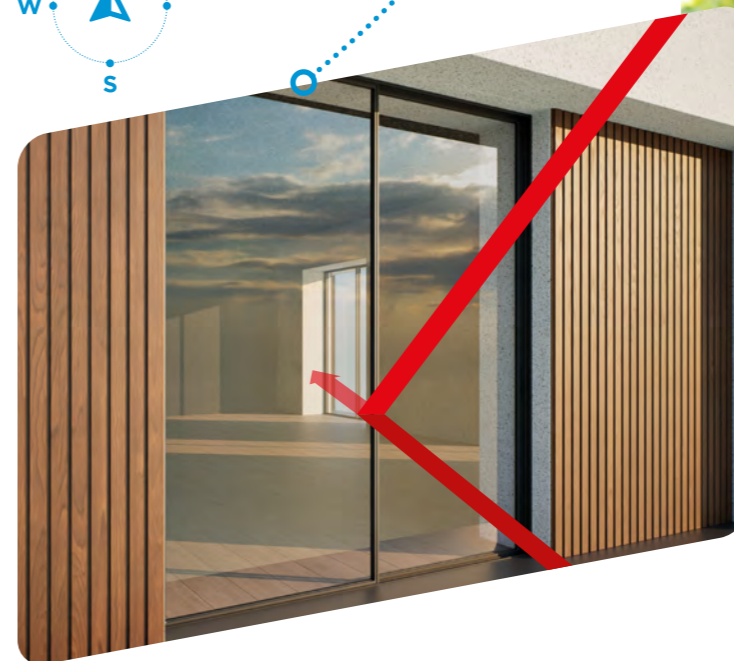
By replacing old double glazing windows with triple glazing with **ECLAZ® SUN PLUS** glass, you can reduce the gas consumption needed for heating to 1900 kWh per year



Source: Passive House Institute study 2023, House 156 m², Warsaw, 16% ratio window/floor, west orientation, heavy construction, well insulated



more heat = lower heating bills



less heat = reduced overheating period

Northern and eastern exposure of windows should have the highest possible solar factor g value, which will ensure thermal comfort in winter. The solution is ECLAZ.

South and west exposure of windows have a low solar factor g value, ensuring thermal comfort in summer. The solution is ECLAZ® SUN PLUS glass.



All orientations – a high LT light transmission parameter – more daylight in rooms. ECLAZ® and ECLAZ® SUN PLUS are ideal.

more light inside = better well-being



Hot, hotter, scorching

Across Europe, people are looking for ways to escape summer heat waves, which are becoming increasingly severe due to climate change. According to a study published in Nature Climate Change, record-breaking heat waves could become two to seven times more frequent worldwide over the next three decades compared to the past 30 years.

In Poland, the IMGW-PIB reports a significant increase in hot days over the last 20 years, especially when accumulated by decade. For the Warsaw Okęcie measurement station, this increase is over 50% (from 101 days in the period 2005–2014 to 153 days in the last decade, 2015–2024).

Examples

ECLAZ®
winter comfort
lower heating bill

 0,6 W/m²K lower Ug* value	 60% high solar factor g* value	 77% high LT value - indoor with full of daylight*
---	--	--

*TGU composition 4/14/4/14/4 ECLAZ® on face #2 and #5, 90% Argon, warm edge

ECLAZ SUN PLUS
summer comfort
against indoor overheating

 0,6 W/m²K lower Ug* value	 35% lower solar factor g* value	 65% high LT value - indoor with full of daylight*
---	---	--

*TGU composition 4/14/4/14/4 ECLAZ® SUN PLUN on face #2 and ECLAZ® on face #5, 90% Argon, warm edge

4/14/4/14/4 – the example of triple glazing unit configuration consists of three glazing with 4mm thickness (the larger the window, the thicker the glazing to reduce risk of thermal breakage) 14mm spacer bar (usually filled 90% Argon).

The color of the spacer bar affects the aesthetic aspects of the glazing unit.



SAINT-GOBAIN
INNOVATIVE MATERIALS SP. Z O.O.
BRANCH GLASS
IN DĄBROWA GÓRNICZA

ul. Szklanych Domów 1
42-530 Dąbrowa Górnicza, Poland

bgp@saint-gobain.com
www.saint-gobain-glass.pl