

SAINT-GOBAIN  
GLASS

SGG PLANITHERM® 4S EVOLUTION

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EVOLUTION  
COOL DURING SUMMER,  
COMFORT IN WINTER



*Superior solar control  
and thermal insulation*



SAINT-GOBAIN GLASS CLIMATE

The future of habitat. Since 1665.



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EVOLUTION**  
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COMFORT IN WINTER



Double function for your own comfort: SUPERIOR solar control and thermal insulation. With the new SGG PLANITHERM® 4S Evolution you can enjoy the perfect temperature and ideal light no matter the season. The summer-winter comfort function maintains a pleasant atmosphere all year long, and the reflexivity provides a comfortable level of privacy.

### A p p l i c a t i o n s

The characteristics of SGG PLANITHERM® 4S Evolution glass enable the use of product both in the residential (individual houses, blocks of flats), and in non-residential sector (office buildings, hotels and restaurants, trade centers, schools etc).

#### Types of Applications:

SGG PLANITHERM® 4S Evolution glass is dedicated for the windows of any new or renovated building.

- Windows and skylights
- Terrace doors and other exterior door types

SGG PLANITHERM® 4S Evolution combines perfectly with all types of joinery: PVC, wood, aluminum; also in renovation projects, the glazing units with SGG PLANITHERM® 4S Evolution may be used in the existing frames.



### D e s c r i p t i o n

SGG PLANITHERM® 4S Evolution coatings are obtained through cathodic sputtering deposits in specific installations (magnetron) under high vacuum and controlled atmosphere. These coatings are featured by low emissivity and have double qualities: they reflect the infrared radiation, characteristic to the warmth derived from the heat and at the same time, reflect a large part of the solar energy.

SGG PLANITHERM® 4S Evolution glass performances have been improved, providing an increased sun protection and enhanced aesthetics, through lowering the external reflection level.

### Insulating Glazing

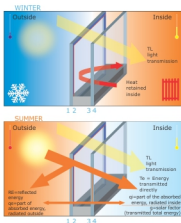
<sup>500</sup> PLANITHERM® 4S Evolution coatings are always placed on the #2 face of the insulating glazing.

### Lamination

<sup>500</sup> PLANITHERM® 4S Evolution glass can be laminated with one condition: the coating shouldn't be in contact with the PVB film.

### Mounting of Glazing

The <sup>500</sup> PLANITHERM® 4S Evolution glazing has to be mounted according to the standards and general guidelines for processing.



## Benefits

### Superior comfort in summer and thermal insulation in winter

<sup>500</sup> PLANITHERM® 4S Evolution turns you into a passive witness of the seasons inside your home, ensuring your ideal thermal comfort regardless of weather changes. With <sup>500</sup> PLANITHERM® 4S Evolution you lose the sense of time thanks to the ambiantly environment created by the constant optimum temperature and ideal light input throughout the year.



#### SUMMER

The ideal temperature for your house - comfort and coolness are ensured even in hot days.

<sup>500</sup> PLANITHERM® 4S Evolution enables a perfect symbiosis between the infusion of natural light and cool inside thanks to the reflection degree of up to 62%, even in the case of large glass surfaces. This benefit of the <sup>500</sup> PLANITHERM® 4S Evolution glass to maintain an optimal temperature indoors is reflected into a lower energy consumption due to the diminished rate of using the air conditioning.

<sup>500</sup> PLANITHERM® 4S Evolution sets new window design standards to the detriment of unaesthetic blinds, while providing a light input essential to the quality of life.

Also, the increased thermal comfort enables the use of large glazed surfaces by accessing new contemporary architectural exterior design trends.



#### WINTER

<sup>500</sup> PLANITHERM® 4S Evolution represents a further step on the evolutionary scale of the PLANITHERM family comfort products, providing a three times higher insulation than ordinary double glazing. The main advantages during cold season are the warmth and the comfort ensured by this. With <sup>500</sup> PLANITHERM® 4S Evolution, heat loss will decrease and the cold areas close to windows will be imperceptible.



#### SPRING

The double-glazed window with <sup>500</sup> PLANITHERM® 4S Evolution provides all the necessary comfort regardless of climate changes characteristic to the season.



#### AUTUMN

With <sup>500</sup> PLANITHERM® 4S Evolution the transition towards the cold weather becomes imperceptible, thus being ensured the comfort and cutting of early heating costs.

## Savings\*



Substantial savings – an effective thermal insulation means reduced energy consumption. With <sup>SGG</sup> PLANITHERM® 4S Evolution, the cooling and heating costs are significantly reduced!

Amounts saved annually* (RON)			
Using thermally insulated <sup>SGG</sup> Planitherm® 4S Evolution glass, Comparing to the simple Clear glass (one glazing unit)			
House type	Studio	Apartment 2 rooms	Apartment 3 rooms
Amount Saved (RON)	1028	1460	2374

Amounts saved annually* (RON)			
Using thermally insulated <sup>SGG</sup> Planitherm® 4S Evolution glass, Comparing to the classical thermally insulated Clear glass Clear (double glazing units)			
House type	Studio	Apartment 2 rooms	Apartment 3 rooms
Amount Saved (RON)	469	779	1004

Amounts saved annually* (RON)			
Using thermally insulated <sup>SGG</sup> Planitherm® 4S Evolution glass, Comparing to the classical thermally insulated Clear glass LowE (double glazing units)			
House type	Studio	Apartment 2 rooms	Apartment 3 rooms
Amount Saved (RON)	203	456	557

\*Calculations are performed using the PARASOL\* program, the margin of error being of approx. +/- 5%. Results obtained will vary depending on the winter climate area, summer climatic area, glazing weight, shape and facing of building etc. The table values represent the money savings that are got through the replacement of other more advanced glazing, being attained based on an energy price of RON 0.4330 / kWh (CD tariff - monomial type).

\*The thermal transfer coefficient  $U=1.0$  W/m<sup>2</sup>K (for a standard thermal insulating window) decreases the heating expenses and contributes to the environment protection, through cutting the CO<sub>2</sub> emissions.

## Performances\*

	Light transmission TL [%]	Solar factor, g	Thermal transfer coefficient, U [W/mpK]
<sup>SGG</sup> PLANITHERM® 4S Evolution	60	0.38	1.0

\* DGU: 4mm <sup>SGG</sup> PLANITHERM® 4S Evolution, face #2 - 16 Argon 90% - 4mm <sup>SGG</sup> Planilux®

## R a n g e

Available thickness	4 mm	6 mm	8 mm	10 mm
<sup>5000</sup> PLANITHERM® 4S Evolution	•	•	•	Upon demand

## A d d i t i o n a l F e a t u r e s

The windows with <sup>5000</sup> PLANITHERM® 4S Evolution may also fulfill additional features in combination with other types of glass:

### Safety and Security

- In combination with <sup>5000</sup> STADIP®, <sup>5000</sup> STADIP® PROTECT
- In laminated form <sup>5000</sup> STADIP® 4S Evolution

### Acoustic Insulation

- In combination with <sup>5000</sup> STADIP® SILENCE

## R u l e s a n d R e g u l a t i o n s

<sup>5000</sup> PLANITHERM® 4S Evolution meets the durability requirements of the European standard C category EN 1096, 1 and 2.



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<sup>5000</sup> PLANITHERM®, <sup>5000</sup> PLANILUX®, <sup>5000</sup> STADIP®, <sup>5000</sup> STADIP® PROTECT, <sup>5000</sup> STADIP® SILENCE, <sup>5000</sup> DECORGLASS® and all the other projects and logos are trademarks of Saint-Gobain.

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