SAINT-GOBAIN
GLASS

SGG EGLAS® *Heatable glass*

SAINT-GOBAIN GLASS SYSTEMS

SGG EGLAS®

Heatable insulating glass unit for made to measure comfort

Applications

SGG EGLAS is an electric insulating glass unit which can be used as the main heating system or to provide extra comfort in addition to the main heating system.

Widely used in Northern Europe, SGG EGLAS provides unequalled comfort, in both new and refurbished buildings. It is an ideal solution for places which are only occupied occasionally and require rapid heating.

• In the residential sector, balconies, conservatories and indoor swimming pools become rooms you can use all year round.

• In the non-residential sector, doctors' surgeries, hospitals, waiting rooms, classrooms, shops and glazed terraces, all benefit from its advantages.

• SGG EGLAS is also useful to do de-icing of glass roofs.

Advantages

Total comfort !

• **Radiant heating**
- Gentle, pleasant warmth
- Immediate feeling of comfort
- The surface temperature can be regulated

• **No cold surfaces**
- No condensation
- An even temperature
- No draughts near windows

• **Energy savings**
- Very good thermal insulation
- High electrical efficiency
- It is possible to lower the ambient temperature by 1 to 2° C with no loss of comfort

• **Safety**
- The electrical power is cut if the heatable glass is broken
- The use of tempered glass for the inner pane ensures protection from injury

• **Appearance**
- Identical to a conventional low-E insulating glass unit.

Heating system

totally invisible

no extra bulk

clean

maintenance-free

Electrical power

50 to 300 W/m²

Temperature of the glass

20 to 40° C

Description

SGG EGLAS is an insulating glass unit where one of the faces can be electrically heated.

The technology is based on the use of a classic low emissivity glass, which exhibits a certain level of electrical conductivity.
The conductive coating is connected to an electricity supply cable via electrodes on either side of the glass.

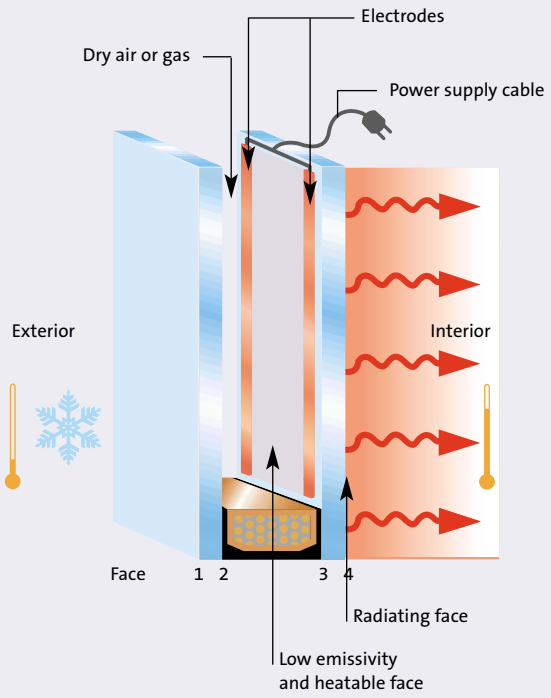
When the electrical power is switched off, SGG EGLAS behaves like a normal low-E insulating glass unit.

When the electrical power is switched on, the conductive coating converts the electrical energy into heat.

As a result of the low emissivity coating, the heat is prioritary transferred to the inside. It is diffused towards the inside of the room, through the untreated face of the glass (face 4).

The sealant barriers of the insulating glass unit are made of materials which withstand the cumulative effects of the heating function and climatic stresses.

SGG EGLAS heatable double glazing unit



Range

• Functions

Main function	Surface temperature of the internal glass (°C)	Electrical power (W/m²)
Heating	+ 25 à + 40	100 - 300
Comfort	+ 20 à + 25	50 - 100

For higher powers, please contact us.

• Electrical characteristics
- Electric cable: double insulated, standard length 1.5 m
- Supply voltage: 0 to 230 VAC maximum

• Glazing characteristics

Inner face heatable glass	Classic low emissivity glass 4 or 6 mm tempered (eventually laminated)
External face	Any type of glass (clear, solar control, low-emissivity tempered, laminated, patterned, screen-printed)
Minimum size	300 x 300 mm
Maximum size	2170 x 4000 mm
Shapes	Rectangular

As for other conventional low-E insulating glass units, there may be temporary external condensation when the U-value is very low (< 1.2 W/m².K).

Performances (CEN standards)

Light transmittance
75 %

Light reflectance
17 %

Solar factor
71 %

U-value (EN 673)
1.9 to 1.1 W/(m².K)

Glazing

The design and installation of SGG EGLAS is specific to each project. It requires a specific study, taking national regulations into account.
The installation instructions and connection diagram for the product are supplied on delivery.

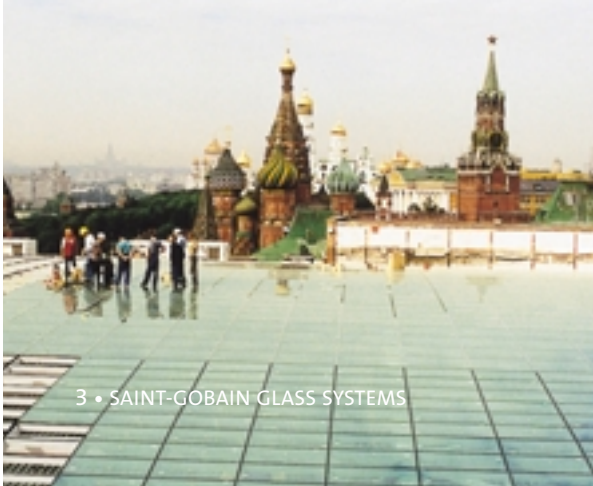
• Incorporation in a frame
SGG EGLAS heatable glass is compatible with most frames for windows and facades (aluminium, U-PVC or vinyl, wood). For casements, a flexible cable guide must be used, linking the frame to the casement.

• Installation
SGG EGLAS is installed, in new or refurbished buildings, in the same way as a conventional insulating glass unit, taking into account the presence of the electrical cable. Heatable glass can be installed in a window without the need for any special tools.
To heat the interior of a room, the heatable face must be face 3.

• Electrical connection
The glazing must be connected in accordance with the electrical diagram supplied by the manufacturer. It must comply with regulations currently in force for electrical installations.
It is recommended that the electrical cable is run through flexible sheaths in the internal spaces in the frames, the wall or the false ceiling.
An electrical transformer can be used to alter the supply voltage.

• Temperature regulation
It is possible to regulate the temperature of the glass. The choice of the method of regulation depends on what the heatable glass is used for (heating or comfort).

Gostiny Dvor, Moscow, Russia
Architect: Nodar V. Kantseli - Photographer: C. Leisio



Regulations

• Electrical safety
SGG EGLAS is certified as conforming to European standard EN 60 335-2-30 concerning the safety of electrical heating devices in buildings (230 VAC max., 600 W/m² max., class II, IP34).

• Electromagnetic compatibility
FIMKO certificate of conformity no. EMC/098/96.

• Insulating glass unit
Production complies with prEN1279.

• Safety glass
Compliance with the requirements of standard EN12150.

Performance

Values given in accordance with international standards

External pane				Clear float		SGG PLANITHERM FUTUR N*	
Internal pane				Classic low-E glass (tempered)*			
Composition (mm)				4-12-4	6-12-6	4-16-4	6-16-6
		Unit	Standard				
Light factors	LT	%	EN 410	75	73	73	71
	LRe	%	EN 410	17	17	15	14
	LRi	%	EN 410	16	16	14	13
UV transmittance		%	EN 410	38	32	27	23
Solar radiant	T	%	EN 410	59	54	47	44
heat factors	RE	%	EN 410	15	14	24	22
	A1	%	EN 410	11	15	20	24
	A2	%	EN 410	15	17	9	10
Solar factor	g		EN 410	0.72	0.68	0.55	0.53
	g		ISO9050M1	0.70	0.67	0.53	0.51
Shading coefficient	SC		EN 410	0.82	0.78	0.64	0.61
	SC		ISO9050M1	0.81	0.77	0.61	0.58
Thermal insulation**							
Air filled cavity	U-value	W/(m².K)	EN 673	1.9	1.9	1.4	1.4
	U_{winter}	BTU/hr.ft².°F	ASHRAE	0.33	0.33	0.24	0.24
	U_{summer}	BTU/hr.ft².°F	ASHRAE	0.37	0.37	0.27	0.27
	RHG	BTU/hr.ft²	ASHRAE	169	161	131	126
Argon filled cavity	U-value	W/(m².K)	EN 673	1.6	1.6	1.1	1.1

** Position of coating: face 3 for the classic low-E glass, face 2 for SGG PLANITHERM FUTUR N.*
*** Values given in the absence of heating.*

Distributor

SAINT-GOBAIN GLASS

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