

SGG CLIMAPLUS EGLAS®

Heatable double-glazed units

Technical Sheet
United Kingdom

SGG CLIMAPLUS EGLAS®

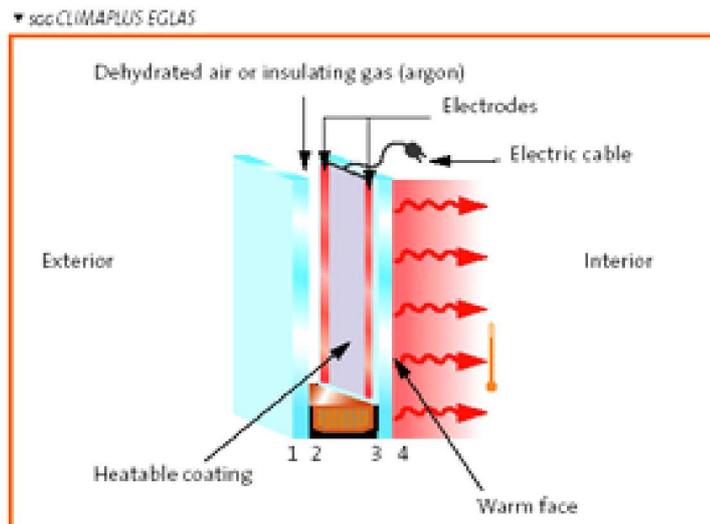
Heatable double-glazed units

Description

SGG CLIMAPLUS EGLAS is a double-glazed unit in which one of the panes can be electrically heated.

The basic technology is a double-glazed unit comprising a pyrolytic low-emissivity coating located on face 3. The coating is connected to an electricity power supply via 2 electrodes positioned on either side of the glass. When the power supply is switched on, the coating converts the electrical energy into heat. When the power supply is switched off, SGG CLIMAPLUS EGLAS behaves like a thermally insulating glass. As a result of the low-emissivity property of the coating, the heat is mainly diffused towards the inside of the building through the untreated face of the glass (face 4).

The sealant barriers of the double-glazed unit are made of materials which withstand the combined effect of the heating function and climatic stresses.



Applications

SGG CLIMAPLUS EGLAS is an efficient heat source, either as the main heating system or combined with others such as radiators or under floor heating.

SGG CLIMAPLUS EGLAS is often used in harsh climates to improve the comfort of both new build and refurbishment projects. It is also an ideal solution for rooms which are only occupied occasionally and require virtually instantaneous heating. SGG CLIMAPLUS EGLAS is suitable for numerous applications in windows and picture windows.

• In the home, rooms which are difficult to keep warm can be used all year round:

- windows
 - conservatories
 - balconies
 - indoor swimming pools.
- In commercial buildings:
- nursing homes
 - hospitals
 - shopfronts
 - schools
 - restaurants.

Advantages

SGG CLIMAPLUS EGLAS is an efficient heating solution:

- totally invisible
- no extra space required
- clean appearance
- maintenance-free.

The effect has many additional technical advantages

Radiant heating

- Gentle and pleasant warmth
- Immediate feeling of comfort
- Surface temperature can be regulated
- No cold surfaces
- Significantly reduces condensation on the inner pane
- Constant temperature in the room
- Minimises draughts near windows.

Reduced energy consumption

- Excellent thermal insulation
- Increased electrical efficiency
- Possible to lower the room temperature by 1 or 2 °C without it becoming uncomfortable.

Safety

- The power supply is cut should the heatable glass be broken.
- Toughened glass must be used for the inner pane to protect against injury.

Appearance

The appearance of SGG CLIMAPLUS EGLAS is very similar to standard double-glazed units.

Multi-functional glazing

It is possible to combine different features with the heating function:

- self-cleaning action
- acoustic insulation
- safety and security
- solar control
- decoration
- privacy.



Nokia, Finland

Range

Characteristics of SGG CLIMAPLUS EGLAS double-glazed units

- The inner pane is the heatable glass, which is a 4mm or 6mm toughened or laminated low-emissivity glass with the coating on face 3.
- Outer pane can be any type of glass; clear float, solar control, low-emissivity, toughened, laminated, patterned, screen-printed, etc.

Manufacturing sizes	
Minimum dimensions	300 x 300 mm
Maximum dimensions	4000 x 2170 mm
Shapes	rectangular

For other dimensions please contact SAINT-GOBAIN GLASS.

Performance

Heating performance

Surface temperature and electrical power		
Principle function	Surface temperature of interior glass ⁽¹⁾	Electrical power (W/m ²)
Heating	+30 to +45°C	100 to 300
Comfort	+20 to +30°C	50 to 100

(1) These values may vary depending on the exterior temperature.

Spectrophotometric and thermal performance

When unheated, SGG CLIMAPLUS EGLAS double-glazed units are nearly 3 times more thermally efficient than standard double-glazing (U-value as low as 1.1 W/m²K compared with 2.9 W/m²K for an ordinary double-glazed unit).



Gostiny Dvor, Moscow, Russia
• Architect : *Jacomo Quarenghi*

Installation Guidelines

SGG CLIMAPLUS EGLAS is always designed and installed on a case by case basis. It must be the subject of a specific study, taking all national regulations into consideration.

The installation instructions and connection diagram for the glass are supplied on delivery.

Installation Guidelines

Installation into a frame

SGG CLIMAPLUS EGLAS heatable glass is compatible with most window frames and facades (aluminium, PVC, timber). For casement windows, a flexible cable guide must be used, which links the frame to the casement.

Installation

SGG CLIMAPLUS EGLAS is installed, for both new-build and refurbishment, in the same way as an ordinary double-glazed unit, taking into consideration the presence of the power supply cable. The unit can be installed by a professional joiner without the need for special tools. To heat a room, the heatable face must be positioned on face 3.

Electrical connection

SGG CLIMAPLUS EGLAS glazing must be connected in accordance with the electrical wiring diagram which is supplied by the manufacturer and 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 profiles, the wall or the false ceiling.

An electrical transformer can be used if necessary to alter the supply voltage.

If the heatable glass unit is installed in a complex environment on the electrical wiring diagram (high voltage in the vicinity, etc.), it is advisable to use shielded cables and filters.

Temperature control

It is possible to regulate the temperature of the glass. It is preferable to choose an on-off controller, with no thyristor.

Standards and Regulations

Insulating glass

SGG CLIMAPLUS EGLAS double-glazed units meet the requirements of standard BS EN 1279 and will receive the relevant CE marking when it is officially in force.

Safety glass

SGG CLIMAPLUS EGLAS complies with the requirements of standard BS EN 12150.

Electromagnetic compatibility

SGG CLIMAPLUS EGLAS carries the FIMKO certificate of conformity, No. EMC/098/96.

Electrical safety

SGG CLIMAPLUS EGLAS complies with European standard EN 60 335-2-30 for electrical heating devices in buildings (230 VAC max., 600 W/m² max., class II, IP34).



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