

# FORMATOR SAFETY GLASS

HeatVision® - heated glass for a wide range of interior and exterior applications

Modern architecture makes great use of glass — in both interior and exterior applications. In this article, we take a look at one of the products of Formator — heated glass — that is already used on more than 60 cruise ships, as a heating system to achieve maximum comfort in residential homes.



**HeatVision®**

**F**ormator Safety Glass was founded in autumn 2003 by IMSA Group and, over these 15 years, has grown fast, satisfying ever-increasing customer demands for safety glass products.

Formator products are delivered all over the world, and include tempered glass, laminated glass, screen-printed and enamelled glass, as well as special glass products, such as privacy glass, electrically-heat-

ed glass, anti-hurricane glass, privacy glass, LED glass etc. New products are developed continuously.

### HEATVISION®

HeatVision® is Formator's multifunctional electrically

heated glass for a wide range of interior and exterior applications in buildings.

Formator is the leading supplier of electrically heated glass for marine applications in Europe,



counting more than 60 cruise ships where its glass has been installed over the past 10 years. Formator also offers HeatVision® glass for a wide range of interior and exterior applications in buildings.

### HEATVISION® AS A PRIMARY HEATING SOURCE IN BUILDINGS

HeatVision® glass can be used as a heating system to achieve maximum comfort in residential homes. The electrically heated glass at the surface temperature of 26–28°C triggers transfer by radiation, bringing the entire room to

a temperature of 20–22°C. Heat is evenly distributed throughout the entire space, ensuring a high degree of comfort.

The dimension of the heated glass depends on the level of thermal insulation of the building, and should be between 10 and 30 per cent of the floor area of the room.

This heating system should not be confused with glass radiators, which are heated to very high temperatures (60-90°C).

### HEATVISION® AS ANTI-CONDENSATION GLASS

HeatVision® anti-conden-



## FORMATOR SAFETY GLASS

Formator Safety Glass, founded in 2003 by IMSA Group, is the leading supplier of electrically heated glass for marine applications in Europe, counting more than 60 cruise ships where its HeatVision® glass has been installed. Formator also offers HeatVision® glass for a range of interior and exterior applications in buildings, meeting the most demanding requests for projects worldwide.

### PRODUCTS

**SentryGlas®:** helps create lighter, safer laminated glass, opening up new levels of performance.

**PrivaStar®:** laminated glass with a switchable film that instantly turns glass from translucent and transparent and vice versa, allowing privacy at all time.

**HeatVision®:** used to prevent panes from freezing, fogging or snowing.

**SafeDesign®:** Safety laminated glass with a colour palette able to meet the requests of the most demanding investors.

**Sefar®:** Black precision fabric that can be coated on one or both sides or printed on and used in laminated glass.

**TSSA®:** Bonding technology, including an optically clear and high-strength silicone film for exterior facade applications.

**SuperSpacer®:** Structural foam spacer system which provides excellent perimeter insulation for sealed glazing units and significantly simplifies insulating glass production.

### HEATVISION® TECHNICAL FEATURES

<b>Maximum size</b>	3,100mm x 2,100mm
<b>Colour</b>	Wide range of colour laminating films, coloured glass, Screen printing, sandblasting, enamelling
<b>Shape</b>	Rectangle, square, trapezoid, round, oval, triangle
<b>Glass type</b>	Single laminated glass, double insulating glass, and triple insulating glass
<b>Safety</b>	Composed of tempered, laminated glass
<b>Voltage</b>	12–380 V AC/DC – Appropriate voltage is determined depending on the application
<b>Power</b>	30–1,000W/m <sup>2</sup> – Appropriate power intensity is determined depending on the application.
<b>Certifications</b>	CE EN 12150, EN 12543

sation glass raises the glass temperature beyond the dew point to prevent condensation.

It can be used for a wide range of applications: in doors and windows in rooms with high humidity, in indoor glass partition walls, glass roofs.

Major benefits in interior use:

- invisible heating source (no visible wires);

- it can be used in single laminated glass, double insulating glass and triple insulating glass;
- excellent comfort in heated areas;
- no cold spots near windows;
- no condensation on windows;
- reduction of health problems associated with forced hot air systems (e.g. dust, mites);

- no need for costly under-floor heating, heating plants or hot water circuits;
- 100 per cent green technology if used in combination with renewable energy sources;
- no maintenance.

Where it can be used:

- in insulating glass units, installed in traditional windows or in all-glass façade systems;
- in offices as partition walls, one glass can heat two rooms. The glass is safety laminated with acoustic PVB, so safety and noise reduction are also guaranteed.

techniques are not put into use.

HeatVision® heated glass can solve the problem of snow accumulation on glass roofs, greenhouses, conservatories and canopies. When the snow sensor detects snowflakes, the glass automatically begins to heat, melting the snow. The surface remains clean the whole time as the heated glass turns the snow into water.

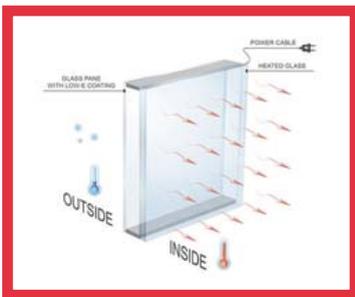
Benefits in exterior use:

- Invisible heating source;
- Low energy consumption;

- No risks of collapse;
- No condensation on the inner side of glass;
- No maintenance.

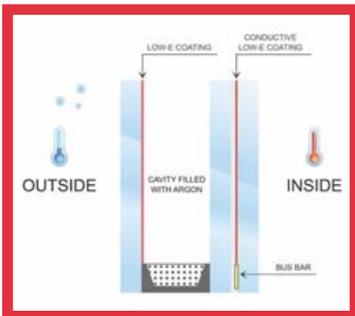
Where it can be used:

- Glass roofs;
- Glass greenhouses and conservatories;
- Glass floors and staircases;
- Glass canopies.



### HEATVISION® AS SNOW MELTING SYSTEM FOR OVER- HEAD GLAZING

Heavy snow loads can cause glass and its related structures to collapse, if proper snow removal



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