



ISOCLIMA

YOUR INNOVATIVE TRANSPARENT SOLUTIONS



Automotive

Marine

Military

Railway

Aerospace

Architectural

2019
PC coating and special applications on
Automotive and Aerospace.

2015
Bending furnace plant.

2010
Manufacture of ultra-light glazings
using Gorilla Glass.

2002
Acquisition of the manufacturing plant
Lipik Glas in Croatia.

2000
Installation of a
"magnetron sputtering" system
for the deposit of thin metal layers.

1996
Manufacture of glazings
for High-speed trains.

1994
Installation of a chemical
strengthening plant,
the largest in Europe.

1986
Manufacture of micro-wire
heated glazings.

1981
Manufacture of windows
with polished and un-sealed edges.

1979
Registered license to manufacture
glass with polycarbonate.

2017

Aerospace development with
transparent helicopter application.

2013

Development of Iposcope products.

2005

Manufacture of "CromaLite" glazings
with SPD technology.

2001

Manufacture of "PrivaLite" glazings
with laminated liquid crystal film
manufacture of glazing for the marine
market (curved laminated glazings
chemically strengthened).

1997

Acquisition of a manufacturing plant
in Mexicali and foundation
of **ISOCLIMA** de Mexico.

1995

Manufacture of composite glazings
(PC or methacrylate) for the
racing car market.

1988

Manufacture of products
for the aerospace market.

1984

Purchasing of a furnace for the
thermal tempering process, enabling
the curvature of large glazings
(2.2x4m).

1980

1st in Europe to manufacture
bullet-resistant glazings using
glass+PC.

1977

Year of **ISOCLIMA**'s foundation,
production of double-glazing windows.



The Company

The World leader in the market of high-performance glass, thanks to the technologies applied and developed over time, **ISOCLIMA** is committed to the constant pursuit of perfection, quality, and a product developed for the personal safety and protection of its customers on Land, Air and by Sea.

ISOCLIMA finds solutions based on the customer's needs aiming for longterm results.

Always ready to accept new challenges and to invest in R&D, **ISOCLIMA** represents the point of reference as the leader in the markets in which it operates.



ISOCLIMA's World

Today **ISOCLIMA** stands out thanks to the reputation acquired over the years as well as the co-engineering processes that allow **ISOCLIMA** to be the supplier of the main automotive groups in the world (FCA Group, Daimler Group, BMW Group, VW-Audi Group,...).

The large range of the products that **ISOCLIMA** can offer is highly appreciated in various markets and sectors, especially for the ever increasing demand of products with high quality standards.

A special feature of the company is the ability to respond to every need and to succeed in tailoring the product to the customer's requirements, specifically with reference to resistance, protection, solar and energy control.

ISOCLIMA's History

ISOCLIMA was founded in 1977 as a glass processing company for architectural products. Within a short period its emphasis was directed to the research and development of new technologies to achieve high ballistic performance transparent composite panels, particularly using glass and polycarbonate.

The combination of these two materials laminated together has allowed the company to offer bullet-resistant glazings, with the advantage of being "No-Spall", allowing an equivalent performance to then existing products but being far thinner and lighter.

ISOCLIMA has expanded over time with the acquisition of other important Italian and foreign glass companies, such as **ISOCLIMA** de Mexico S.A. de C.V. in Mexico and Lipik Glas d.o.o. in Croatia.

Military

ISOCLIMA has leveraged its technological expertise in the field of civilian vehicle armoring to give reliable protection also in the military sector.

Based on its innovative capacity internationally renowned, thanks to its more sophisticated engineering knowledge, today **ISOCLIMA** is able to offer the widest range of products according to the various international specifications including that of the NATO standards STANAG 4569 level 1÷4.

With the lightest and thinnest glazings in the world, capable of maintaining their performance even in the most extreme weather conditions, **ISOCLIMA**'s solutions perfectly meet the military requirements of the 21st century.

ISOCLIMA supplies the armed forces in the territories of international crises by providing them with modern equipment. At the heart of the philosophy of the product is always reliability and effectiveness.

Through its international network of subsidiaries, **ISOCLIMA** is able to react to specific customer requirements quickly and efficiently.

ISOCLIMA glazings can incorporate heating systems via micro-wire and coatings, electromagnetic shielding, IR-reflective coatings, and steel and aluminum frames, to name just a few of the most common options.





Know-how

- **Anti-IR coating**

ISOCLIMA guarantees efficient performance, in terms of comfort and energy saving with its Anti-IR coating, a selective filter which works as a solar protection element.

- **Hybrid Armored Transparent Composite (HATC)**

HATC is a new lightweight cross-section, adopting next generation high performance materials which allow an impressive thickness and weight reduction compared to standard armored transparent panels. Also the ballistic performances benefits from the material properties, providing a higher multi-hit capability.

- **Magnetron Sputtering**

The process of magnetron sputtering consists in the generation and confinement of argon gas plasma through an electric field. The process deposits thin conducting or semiconducting layers on the glass panels and covers large size curved surfaces, reaching absolutely outstanding performance in terms of light transmission and electrical resistivity.

- **Thermal toughening**

During the thermal toughening process the residual stress level is obtained via transitory thermal gradients that are determined in the stage of rapid cooling from temperatures above the glass transition temperature.

- **Chemical strengthening**

The chemical strengthening process is a surface treatment which takes place at temperatures below the glass transition temperature. The residual stress level is characterized by compressive tensions on the surface offset by the traction tensions within the glass.

- **Encapsulation**

Encapsulation is a lamination process developed for the application of the rubber gasket. This technology provides a significant increase of the glass panel durability and reduction of the life cycle cost of the final product. A significant cost reduction and service friendliness is guaranteed by avoiding gluing and sealing process.

Products

- **OmniArmor®**

A transparent bullet-resistant high-tech panel for the protection of civilian and military armored vehicles, as well as public, residential and commercial buildings.

- **IsoLite®**

Is a panel containing an internal liquid crystal film that allows, by the flip of a switch, to change from transparent to opaque in an instant.

- **CromaLite®**

The SPD Cromalite system is activated by the presence of an electromagnetic field capable of orienting the suspended particles within the film.

- **EmiGard®**

A composite panel of laminated glass or glass and polycarbonate with the feature of being able to shield the electromagnetic waves emitted by various electronic devices.

- **OmniGard®**

Is a glass with high anti-penetration and anti-robbery features specifically developed for the automotive industry.



Case Histories



GFF4



G-Wagon



Lynx Wildcat



LMV



ENOK



Cavour
Air Carrier



Bushmaster



Dingo 2

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