THE FLAT GLASS SECTOR IN THE EU

FLAT GLASS MELTING — GLASS PROCESSING — GLASS PRODUCT ASSEMBLY

- **60 industrial installations in 12 countries,** where all types of flat glass are melted and produced: float glass, rolled glass, patterned and cast glass.
- **10 million tonnes** of flat glass produced annually in the EU.
- **5 world leaders** manufacturing flat glass in Europe.

- **Over 1000 companies** processing and transforming flat glass into advanced glass and glazing products for buildings, cars and all other sectors of the economy.

- **90% of SMEs in building glass processing** and insulating glass unit fabrication, present in all countries of the European Union.

- **15 Billion Euros** turnover in Europe.

- **100.000 workers** directly employed in the flat glass sector in manufacturing, R&D, administration, processing and fabrication.

- **Over 100 million Euros invested annually** in R&D, product innovation and advanced manufacturing.

GLASS FOR EUROPE is the trade association for Europe's flat glass sector. Flat glass is the material that goes into a variety of end products, primarily in windows and facades for **buildings**, windscreens and windows for **automotive** and **transport** as well as **solar energy equipment**, **electronics**, **furniture** and **appliances**. Glass for Europe brings together multinational firms that are the world leaders in flat glass manufacturing and over one thousand SMEs from all across Europe, to represent the whole flat glass value-chain. It is composed of flat glass manufacturers, AGC Glass Europe, Guardian, NSG Group, Saint-Gobain Glass Industry and Şişecam-Trakya Cam. It works in association with Carlex, a leading automotive glass processor, and national partners gathering building glass processors and transformers from all over Europe.

MEMBERS

AGC · Guardian Glass · NSG Group · Saint-Gobain · Şişecam Flat Glass

CORPORATE PARTNER

Carlex

NATIONAL PARTNERS

Assovetro · BF Bundesverband Flachglas · UDTVP Union des Transformateurs de Verre Plat · Fédération de l'Industrie du Verre / Verbond van de Glasindustrie · Bouwend Nederland · GGF

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COMFORT

The transparency of glass makes it a unique material. Be it in cars or in buildings, it is made to look through and to connect us to the outside environment.

In buildings, where we spend 80 % of our time, it provides daylight whose benefits in terms of sensation of well-being, increased focus, learning, productivity and the maintenance as well as the recovery of good health conditions are well documented.

Glass contributes to comfort in many other ways: its acoustics and insulation properties, the absence of adverse effect on indoor air quality, its easy maintenance, its stylish effect, etc. No wonder, glass is a material valued in so many sectors!

INNOVATION

Innovation in glass is most often invisible, yet we benefit from it every day.

Beneath increased performance in energy efficiency, resistance and acoustics, we experience the digital world thanks to touch-screen glass technologies. High-tech glass allows unprecedented interactions when used in smart windows and mirrors and it can incorporate solar-power generating cells, audiovisual displays or OLED lighting. Glass functionalities keep expanding beyond our imagination to make our homes and buildings smarter. In transport, glass is the substrate for the integration of sensors, cameras and receptors which link our cars to enable the automated driving revolution and to offer a new and always safer driving experience.

SUSTAINABILITY

Made from natural and available resources, glass is an inert material, which can be endlessly recycled into new glass products.

Throughout its life-cycle, glass carries minimal environmental impacts as its manufacturing requires low quantity of water and generates very little waste or other pollutants. Although glass requires energy to be produced, it helps save vast amount of energy in its main applications, i.e. in windows and buildings. Coming from earth, produced responsibly, fully recyclable, it protects our climate and our planet as a net CO_2 saving material.

SAFETY

Glass is designed to last for decades, to endure all weather conditions and usages while always maintaining its resistance and safety properties.

In buildings, safety glass is used to prevent people and objects from falling down, to slow down the spread of fire in buildings or to resist to fire guns' bullets. In vehicles, it is meant to reduce the risk of fatal injuries for passengers in case of accidents. Although this glass property means it acts as a shield, no compromise on durability, transparency and unaltered visibility is possible when developing ever lighter but stronger glass.

ENERGY

Clean energy in all its facets is intertwined with glass technologies.

In Europe, more than 100 million tonnes of CO_2 could be saved annually if buildings were equipped with adequate energy-efficient glazing technologies, insulating against the cold and avoiding over-heating in hot and sunny conditions. Extra-clear glass helps maximizing electricity generation in photovoltaic modules, which can now be integrated into the glass façade of buildings. The switch to electromobility is enabled with lighter and better insulating glass pieces as well as photovoltaic sunroof to save power and extend battery ranges. Vacuum glazing, smart glass, electrochromic glazing, fully transparent photovoltaic cells directly integrated into the insulating glass unit: clean energy in all its facets is intertwined with glass technologies.

DESIGN

Glass brings a unique aesthetics while allowing you to see further.

From the Cathedrals of the Medieval Ages to contemporary architecture, in car design, furniture and even your latest smartphones, glass contributes distinctively to sleek design. From perfectly flat surfaces to the warmth of smooth curves, with inimitable colour effects or the highest transparency, glass brings a unique aesthetics while allowing you to see further.