

## ŞİŞECAM FLAT GLASS



### INCREASE IN ŞİŞECAM FLAT GLASS SALES REVENUES

# 85%

**EUROPE'S 1<sup>ST</sup>  
WORLD'S 5<sup>TH</sup>  
LARGEST FLAT  
GLASS PRODUCER**

#### AN OVERVIEW OF 2021

The Covid-19 pandemic affecting the whole world for the last two years, supply problems in different sectors on a global scale and increasing production costs, as well as the sudden and high demand increases experienced with the removal of pandemic restrictions have led to the growth of the flat glass market globally. By adapting to the rapidly changing market conditions and developing proactive approaches, the demand was met at the maximum level as per capacities both in the markets with local production and in nearby geographies, and the high sales performance was maintained increasingly.

While the construction sector, one of the main sectors in which flat glass is consumed in Turkey, is expected to close the year without growth despite the signs of recovery in the first half of 2021, the construction materials industry is estimated to grow by 20% due to the increase in domestic consumption and export demands. In addition, with Turkey's new position as an alternative supplier of construction materials, exports in the processed glass industry increased by 42% and its share in Turkey's flat glass consumption rose to 15%. Apart from construction materials, the high flat glass demand seen in the automotive, white goods, and furniture industries was met at an optimum level thanks to commissioning two flat glass lines that were in cold repair during the year.

In Europe, which has entered economic recovery after the pandemic, there is an expectation of 5% growth in 2021. In Europe, which is one of the most important global flat glass consumption geographies, significant increases were recorded in demands and, accordingly, sales prices.

Likewise, with the effect of the increase in energy and oil prices in Russia, the Russian economy is expected to close 2021 with a significant growth rate of 4.3%. In the country, there was a significant increase in demand, especially in the architectural glass sector, and a high increase in sales prices was observed.

The post-pandemic economic recovery process has continued in the Middle East and Africa Region as well.

The impacts of the pandemic continued in India in 2021, however, there was an economic recovery and an increase in demand. Demographically, the country's a high consumption potential and tendency towards value-added products is an indication that the market will promise high growth in the future.

#### Şişecam Flat Glass Sales Revenues (TRY million)

2019	4,316
2020	5,284
2021	9,778

**Şişecam succeeded in increasing its sales in flat glass to TRY 9.8 billion.**



## ŞİŞECAM FLAT GLASS



**HAVING RAPIDLY  
ADAPTED TO  
CHANGING  
MARKET  
CONDITIONS,  
ŞİŞECAM  
MAINTAINED  
ITS CUSTOMER-  
ORIENTED  
APPROACH AND  
DEVELOPMENT  
ACTIVITIES IN  
LINE WITH THE  
NEEDS OF ALL  
STAKEHOLDERS IN  
THE VALUE CHAIN.**

Despite the fact that 2021 was a difficult year due to the Covid-19 closures, raw material, freight and chip crisis for the white goods sector, which is one of the important sectors of the Turkish economy with its significant added value and export volume, exports increased throughout the year with the accumulated demand and loosening of restrictions. The global freight crisis also increased the demand for the Turkish market. In the sector, which was affected by the fluctuations in the exchange rate, increasing raw material prices, and the chip crisis, production did not decrease despite the negative impacts on domestic sales.

The European white goods sector grew by approximately 7% in 2021 compared to the previous year, and the Turkish white goods sector grew by 22%.

In the automotive sector, automobile sales in EU (26), UK and EFTA countries reached a total of 10.8 million units in the January-November 2021 period, increasing by 0.8% compared to the same period of 2020. During the same period in Turkey, automotive sales decreased by 2.1% year-on-year with a total of 518.3 thousand vehicles sold. With this performance, Turkey ranked 6<sup>th</sup> in the European automobile market for the year.

In line with Şişecam's sustainability strategy, by closely monitoring developments in the field of solar energy, Şişecam Flat Glass continued to serve the photovoltaic glass market by delivering high-performance Anti-Reflective (AR) coated solar panel glass.

### **ACHIEVEMENTS IN 2021 AND GOALS FOR THE FUTURE**

While the Covid-19 pandemic continued to exert its influence all over the world in 2021, Şişecam rapidly adapted to changing market conditions and maintained its customer-oriented approach and development activities in line with the needs of all stakeholders in the value chain.

In Turkey, Şişecam Flat Glass continued efforts to further boost its service levels. The company aimed to achieve customer satisfaction across the flat glass value chain and quickly respond to market needs by implementing brand building initiatives on digital platforms. Despite the domestic market conditions showing seasonality shifts, Şişecam Flat Glass was able to capitalize on its product diversity advantages in its target sectors. The company also took appropriate actions related to sales terms and conditions.



## ŞİŞECAM FLAT GLASS INTERNATIONAL SALES

# 5.3 TRY billion

IN INTERNATIONAL  
MARKETS, ŞİŞECAM  
OPERATES WITH  
A QUALIFIED  
PRODUCT  
PORTFOLIO,  
HIGH-CAPACITY  
POTENTIAL, AND  
A WIDESPREAD  
DISTRIBUTION  
NETWORK.

In international markets, Şişecam Flat Glass operates with a qualified product portfolio tailored for customer needs, thanks to its high-capacity potential and widespread distribution network. Şişecam Flat Glass tried to respond to increasing market demands via market and customer diversification.

The increase in demands continued exponentially in 2021, and in the European geography where there is a lack of supply, the demands from the Italian, Bulgarian and Turkish factories were tried to be met within the capacity potential through customer segmentation. Especially with the Manfredonia factory in Italy, which became operational at the end of 2019, the variety of value-added products required by the market was increased, and sales volumes were taken to the targeted level. With the impact of both the lack of supply and the increase in energy and logistics costs, sales prices rose considerably together with the achieved turnover. It became the market leader in Italy in 2021.

The increasing demand in Russia was tried to be met as much as the capacity allowed, and with the impact of increasing domestic market sales prices, a year above the target was seen. Therefore, exports were maintained at a minimum level, taking into account the supply-demand balance, and the existing capacity was mainly directed to the domestic market.

In the flat glass market, Şişecam conducted its operations in the Middle East and North Africa by meeting the demands mainly for value-added products and leveraging the benefits of its diversified product portfolio, and significant progress was made in the project-based business segment. Limited capacity allocation was optimally managed with a profitability and strategic point of view.

Overseas sales, which grew each year in the previous years, were strategically reduced due to the demand intensity in the main markets after the pandemic, and production capacity was directed to the main markets.

The impacts of the pandemic continued in India in 2021, however, the increase in consumption and demand increased significantly. Value-added products needed by the market were tried to be supplied from other factories, taking into account the capacity conditions. Efforts continued to further boost Şişecam's global reach and raise awareness of its product range in the region.

In general, in order to meet the increasing demand in international markets after the Covid-19 pandemic restrictions, it was observed that flat glass manufacturers postponed their shutdown and cold repair decisions, yet the demand was not fully met. China's flat glass supply reduction on a global scale also has an impact on this. In 2022, it is expected that the strong demand in the markets will continue and that the market conditions will remain favorable. However, it is predicted that the lack of supply will continue until the end of 2022. It is also expected that the sales of high value-added products will maintain its upward trend to a varying extent in all markets.

Şişecam is a key supplier of automotive products to the European market and advancing with increasing momentum in the American market. Its customer portfolio includes leading domestic and global companies. Şişecam Automotive took firm steps toward the future by applying to many projects in 2021.

### **New Investments, New Capacities**

Şişecam continues to increase its activities in global markets with its strong brands, customer-oriented approach and high value-added product portfolio, while reinforcing its position in the markets where it is a local manufacturer, with its efforts in flat glass in line with its pioneering vision and technological competencies.

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Continuing its investments without slowing down despite the uncertainty created by the pandemic in order to ensure the continuity and development of the point reached today in the entire value chain, Şişecam completed the cold repair of the sixth flat glass line with a capacity of 240 thousand tons/year at Yenişehir Factory and commissioned the line in 2021, that was renewed and modernized with advanced technology in accordance with Industry 4.0. After a cold repair process was initiated in 2020, the fifth flat glass line at Yenişehir Factory was commissioned in November 2021 with a capacity of 240 thousand tons/year.

Şişecam operates in flat glass manufacturing with eight flat glass lines at four locations in Turkey with the goal of creating sustainable value for all its stakeholders. In response to rapidly growing demand in the country, Şişecam decided to invest in two new flat glass lines for architectural glass and auto glass in Turkey.

### New Product R&D Studies

Şişecam remains committed to maintaining its competitive and pioneering position in the sectors where it operates. To this end, Şişecam develops products for different sectors via innovative projects carried out with its Şişecam Science Technology and Design Center – one of the world's leading glass research centers.

Şişecam Temperable Solar Low-E Glass Neutral 40/22 and Şişecam Temperable Solar Low-E Glass Neutral 50/25 products were developed to maximize energy savings with maximum thermal insulation and solar control and provide high-level savings in heating and cooling costs.

Şişecam Temperable Solar Low-E Glass Green 40/28 product – which creates a green color effect on the facade with controlled daylight, effective heat and solar control – was developed and introduced to customers and business partners during the year.

Şişecam enriched its Solar Low-E product portfolio by developing non-temperable equivalents with the same appearance and performance as the Temperable Solar Low-E Glass Neutral 50/33 and Neutral 50/25 products. These innovations were introduced in response to emerging customer demand in target markets and evolving customer needs.

Collaboration R&D studies are carried out with research institutions, universities, and various start-up companies for glasses demanded by the sector, as well as for innovative smart glass systems.

Şişecam has taken major steps forward with its new investments and functional coating, mirror and smart glass development efforts that offer value-added solutions in line with global market needs.

### Integrated Promotion and Communication Activities

In parallel with the onset of the global pandemic in 2020, Şişecam has engaged in a wide range of innovative and digital marketing communication activities, including in-person events.



## ŞİŞECAM FLAT GLASS INVESTMENTS

# 637

TRY million

**IN 2021, ŞİŞECAM  
STEPPED UP  
EFFORTS TO  
RAISE BRAND  
AWARENESS IN  
FLAT GLASS AND  
CONDUCTED  
DIGITAL  
COMMUNICATION  
CAMPAIGNS  
TO PROMOTE  
ITS PRODUCTS  
OF STRATEGIC  
IMPORTANCE IN  
ALL MARKETS.**

In its marketing communications, Şişecam focused on ensuring brand awareness in its flat glass business line. Key aims included bolstering the brand image and promoting strategically important flat glass products. Digital communication campaigns were conducted to emphasize the benefits of using these products, in the respective local language of target markets. Campaigns on digital platforms were also supported by traditional communication activities across 11 countries. More than 90% of flat glass website visits were due to campaigns. Şişecam's flat glass digital campaigns recorded nearly 80 million views and 23 million individual user sessions. Positive feedback was received with impressive results, especially in India and Italy.

Target audiences were reached in all operating markets. Şişecam prepared wide-ranging creative communication activities in 10 languages. These activities focused on the concept of comfort and the positive impact of the psychological and physiological benefits of the use of flat glass products on human health, which offer the right solutions for different needs.

An emerging digital media trend is to communicate with the target audience by supporting user experiences with well-known persons. In line with this popular trend, Şişecam implemented a YouTube initiative specific to the Isicam brand. Isicam Systems "Transparent Talks" YouTube program was developed and introduced to convey the product features and different areas of use of Isicam and its advantages for consumers. "Transparent Talks" reached more than 21 million viewers on YouTube in 2021. The program was supported with a digital communication plan that also includes artificial intelligence and programmatic marketing methods.

Şişecam Flat Glass effectively capitalizes on the speed and targeted access capabilities of social media. Communication campaigns are executed via 17 social media accounts that provide content in Turkish and English. In 2021, Şişecam Flat Glass recorded a 53% increase in follower numbers globally. In India, more than 4 million access sessions were achieved with influencer collaborations specialized in architecture, social media initiatives, and activities on the social media platforms of key architectural publications. Thanks to these efforts, Şişecam boosted the brand awareness of decision-making target audiences in its flat glass business line.

During the year, Şişecam showcased its flat glass products as well as major projects in which its flat glass products and services were used on Archiexpo – a leading online architectural marketplace. More than 350 thousand industry professionals visited the Şişecam Flat Glass stand at Archiexpo during the year.

As part of glass consultancy services, Şişecam held more than 3 thousand meetings with about 4 thousand sector stakeholders – including architects, front desk consultants, investors and contractors. These key stakeholders were decision-makers for projects in the Turkish market and internationally. Şişecam also performed 3,350 project-specific technical calculations and provided specification proposals. With this approach, Şişecam ensures that its flat glass products that add value to life are used in projects around the world.

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Glass consultancy meetings continued throughout the year. These meetings aimed to strengthen existing relations with prestigious architectural firms and establish new relations with newer architecture firms.

R&D Meetings: “Glass and Innovation on the Facade” workshops were organized with the participation of Turkey’s leading facade consultants in order to contribute to the development of innovative products. The workshops were held at Şişecam Science Technology and Design Center and Şişecam headquarters.

After a one year pause due to the pandemic, the Romania and Bulgaria editions of the International Architecture and Engineering Forum “Share” resumed in-person this year. Şişecam participated as an official partner at both events. ZAK World of Façades, an international conference on facade design and engineering, was held for the first time in Istanbul with Şişecam as the event partner. At these events, Şişecam delivered its “Creating Value with Glass” presentation, which included its new flat glass products and reference projects. The presentation was shared with industry representatives, consisting of architects, facade

consultants, engineers, glass professionals, and architecture students.

“Reference Projects 2021” is the third installment of the series that is a key resource in the construction industry. The Reference Projects series records architectural structures of the near-term, when glass has begun to be used more widely on the facade. Şişecam gifted the 2021 edition to industry professionals who made flat glass products come to life.

The Architecture bulletin and website “Transparent Bulletin” is published monthly and reaches out to a readership of 19 thousand architects. The English language bulletin published under the name “Transparent Architecture” is delivered to about 7 thousand international architects worldwide.

To ensure that flat glass products are included in the specifications of global projects that require the use of BIM (Building Information Modeling) and are widely preferred by guaranteeing their use, BIM Smart Objects, Şişecam created digital replicas of its flat glass products. The digital versions were published on the Şişecam website and on BIMobject, the most widely known digital materials library.

English, Russian, Bulgarian, Romanian, Italian and French online e-learning programs published on the Şişecam Academy website were once again shared with customers in 2021.

Trainings provided to the decision makers of the future at Turkey’s leading universities continued online during the year. Technical field trips to Şişecam’s plants were replaced by product and production videos. Some 1,400 students participated in Şişecam training programs in 2021.

Isicam Systems MoneyBox Card Club, which creates Isicam brand ambassadors, celebrated its fifth anniversary in 2021. The club has steadily expanded its membership network, and now boasts more than 8,500 members. Using this platform, Şişecam carried out awareness programs and campaigns to direct frame producer firms to energy-efficient, high-quality Isicam products.

The Processing Franchise System ensures the sustainability of final product quality by boosting the product and service quality of flat glass and mirrors in the Turkish market. The system is recording steady growth by including new authorized processors as part of dissemination strategies.

The Accreditation System was implemented in Turkey and global markets to further improve the quality during processing of the temperable coated products used in the project-based sales market. The system also ensures that the quality of the final product is sustainable. The Accreditation System has expanded by including new processor companies from various countries.

Loyalty campaigns for direct customers and targeted customer subgroups were conducted in India to boost brand awareness and sales of value-added products.

As part of corporate collaborations initiated for market development, Şişecam continued to collaborate with TEKFEN for solar mirror development and with IKEA for Flotal E in 2021.

Şişecam supported efforts to prepare laws, regulations and standards related to reducing energy use in buildings and making them more energy efficient. Efforts are ongoing to ensure that the use of energy-saving glasses becomes mandatory.

The Glass Mastery initiative, which aims to train certified glass masters for sustainable quality in the Turkish glass industry, undertook efforts to ensure that the industry benefitted from government incentives. As of year-end 2021, more than 2,000 applications were submitted to testing and certifying bodies to obtain certification.

## EXPECTATIONS AND OBJECTIVES FOR 2022

While the impact of the Covid-19 pandemic persisted around the world in 2021, Şişecam rapidly adapted to changing market conditions. During this challenging time, Şişecam maintained its customer-oriented approach and development activities in line with the needs of all its stakeholders in the value chain. Despite the uncertainties caused by the pandemic worldwide, Şişecam moved forward with its investment plan. While expanding its production capacity with capital investments, Şişecam also aims to offer innovative solutions for the needs of diverse sectors with its advanced production technologies.

Operating in flat glass manufacturing with eight flat glass lines at four locations in Turkey, Şişecam plans to invest further in the two new flat glass lines it started in 2021 for architectural glass and auto glass. This investment is aimed at meeting rapidly growing demand in the country and creating sustainable value for all its stakeholders.

As a result of the investments, Şişecam will expand its current annual float production capacity in Turkey by 30% to 2.6 million tons, strengthening its leadership position in the Turkish market.

After bolstering its position in Europe by expanding its distribution channel with new initiatives, Şişecam aims to further improve its effectiveness in the region by developing the value-added product portfolio it offers to the European market.

In the Indian market, which has high growth potential, Şişecam is evaluating new investment plans in parallel with the increase in flat glass demand. Accordingly, Şişecam aims to boost its market share and develop competitive capacity with a high value-added product range for the Indian market.

Şişecam effectively manages all its business operations under an integrated structure across its operating regions. It is committed to offering innovative products to the markets that improve quality of life in line with its focus on achieving sustainable growth with value-added products. To these ends, Şişecam plans to step up its innovation and product development efforts in 2022 in line with technology developments in the sector. In particular, Şişecam aims to collaborate with other organizations as part of its R&D activities and Industry 4.0 studies.

Şişecam is a global flat glass company offering innovative solutions to diverse sectors with its strong brands. As such, Şişecam undertakes R&D studies to develop new products with clearly diversified performance features. Its investments are designed to provide the necessary technological infrastructure in order to contribute to a sustainable future and add value to life.

In Turkey, NSEB (Nearly Zero Energy Buildings) standards were included in the Energy Performance Regulation; this is set to be revised by the government in 2022. As a result, the use of triple glazing units with two coated plates is expected to become mandatory. In line with these developments, Şişecam aims to disseminate the use of its value-added products.

As part of its cost excellence drive, Şişecam plans to maintain cost reduction, Six Sigma and energy saving efforts in 2022.

**ŞİŞECAM EFFECTIVELY MANAGES ITS BUSINESS OPERATIONS UNDER AN INTEGRATED STRUCTURE ACROSS ITS OPERATING REGIONS. ŞİŞECAM REMAINS COMMITTED TO OFFERING INNOVATIVE PRODUCTS TO GLOBAL MARKETS IN LINE WITH ITS FOCUS ON ACHIEVING GROWTH VIA VALUE-ADDED PRODUCTS.**