Year 16 – No.48 / 2025
Sep./Oct./Nov./Dec.

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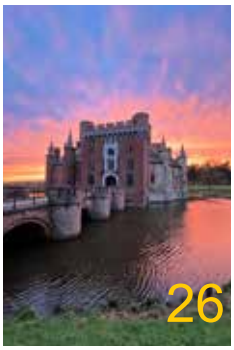

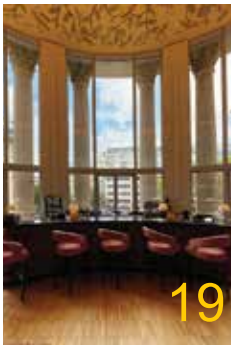

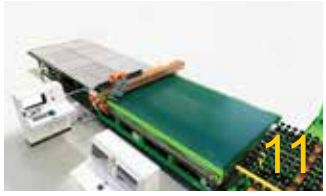

MIDDLE EAST glass MAGAZINE

Published every 4 months by

AGEX Arabian German Exhibitions & Publishing Ltd.

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Subscription rates
For one year : (3 issues)
*African & Arab Countries 56 Euro
*All other Countries 150 Euro

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Ekaterina Firsova
Executive Director
Glass Plant Technology

HORN
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Glaston @VITRUM 2025 – Advancing glass processing with intelligence and efficiency

At VITRUM 2025, Glaston presents a comprehensive range of smart technologies and integrated solutions that redefine glass processing across tempering, laminating, insulating, and mobility glass sectors. The focus is on automation, energy efficiency, and superior product quality.

Glass Tempering

The new Glaston FC Series E tempering line combines flexibility and energy efficiency with the Glaston Bora convection system for precise heating. It supports all glass types and features advanced automation for consistent, high-quality output. The Roller Heat Control (RHC) ensures uniform roller temperatures, reducing defects and energy use.

Other latest advancements in Glaston tempering technology include:

Autopilot: The only fully automated solution for mixed production, adjusting heating and cooling based on glass type, size, and load to boost efficiency and eliminate operator dependency.

Online Stress Calculation: Real-time, data-driven monitoring of hardening results for consistent quality and enhanced safety.

Glass Temperature Imaging: Ensures accurate Low-E glass temperature control for energy-efficient production without compromising quality.

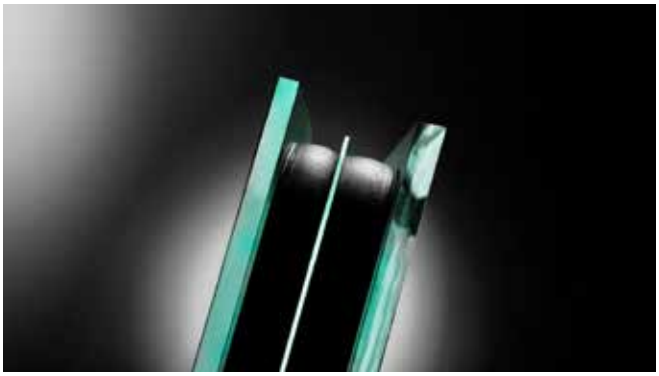
Anisotropy Control: Lowers anisotropy levels by up to 50% using advanced airflow and heating control.

Adaptive Quench: Automatically adjusts cooling zones to match glass load length, reducing energy use and carbon footprint while maintaining productivity.

All the above features are also available as upgrades!

Glass Laminating

Glaston ProL lamination technology offers flexibility for mixed production with a convection heating chamber that simplifies switching between glass types. The new ProL SPEED edition increases efficiency by up to 40% with full automation for handling, foil placement, and trimming. The patented ProL Convection Control enhances output with structural laminates like SentryGlas®, while the ProL-zone upgrade replaces infrared heating with convection,



reducing energy consumption by at least 50%.

Insulating Glass Manufacturing

Glaston ULTRA TPS® introduces a patented method for producing thin triple IGUs, with center glass as thin as 0.5 mm. These units match the thickness of standard double IGUs but offer superior thermal performance, ideal for both new builds and retrofits. They also improve light transmission and reduce material use. The line also efficiently produces quadruple IGUs with thin glass.

Glaston MUNTIN'MASTER automates muntin placement, eliminating manual steps and increasing precision and cost-efficiency.

Mobility Glass Processing

Glaston CHAMP EVO is the latest in pre-processing for mobility glass, offering high precision, energy-efficient drives, and faster changeovers. Glaston MATRIX EVO, a new automatic bending furnace, delivers top optical quality for complex automotive glass applications like ADAS and HUD. Its modular design and active convection system enhance energy efficiency. The line is especially effective for processing borosilicate glass – a more durable and lightweight alternative to traditional soda-lime glass.

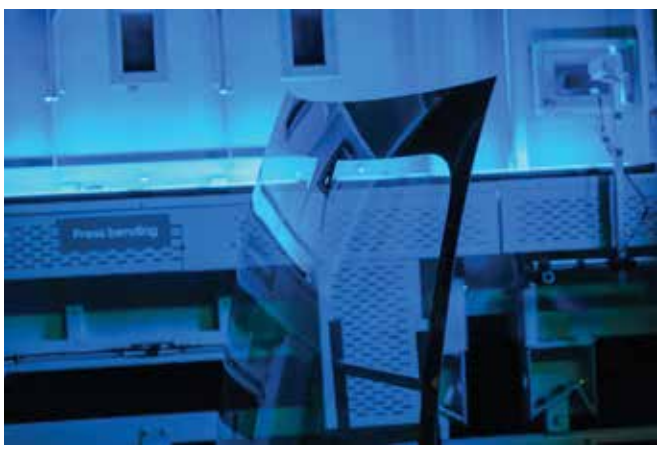
Automation and Upgrades
Glaston Batch Optimization uses robotics to create the most efficient batch patterns,

maximizing furnace bed use and production capacity.

Glaston's automation solutions integrate mechanical systems with process intelligence, ensuring every step in the workflow is optimized.

To support long-term performance, Glaston also offers a comprehensive portfolio of upgrades and lifecycle services. These help you maintain equipment efficiency, extend machinery lifetime and ensure your production stays up to date and meets or even exceeds industry standards.

Come meet with our industry experts at Booth #D13 E12 in Hall 9. We can tell you more! Event page: Glaston at VITRUM 2025



HORN Completes 12 Furnace Start-Ups in the First Half of 2025 – Focusing on Sustainable Future Technologies

Despite a challenging market environment, the technology company continues to prove itself as a reliable partner to the glass industry. Thanks to its innovation capabilities, comprehensive EPCM expertise, and global presence, HORN successfully completed numerous projects in the early months of 2025 – with more currently underway.

Strong Performance in the First Half of 2025

A total of 12 glass melting furnaces have already been successfully commissioned – including major projects for clients in Europe, Asia, and Australia. Six additional furnace start-ups are currently in preparation and will be completed in the coming months. Furthermore, three large-scale turnkey plant projects are in progress, where HORN is acting as the EPCM partner and taking on full project responsibility. In addition, 26 small-scale projects with a total value of around EUR 3 million have been successfully implemented.

HORN – Expertise for the Glass Industry

The traditional company is one of the world's leading technology providers for the glass industry. HORN´s core competencies lie in two business areas:

•Container and specialty glass: Development and construction of melting plants for container glass, solar glass, and specialty glass.

•Glass plants: Taking over the entire project execution for the customer – from planning and procurement to manufacturing, assembly, and commissioning.

As an Engineering, Procurement, and Construction Management (EPCM) partner, HORN does not only deliver individual components but also turnkey plant solutions. With its own engineering teams, a high level of in-house manufacturing, and qualified service teams, the specialist in glass melting technology ensures that projects are executed efficiently and on schedule. Customers particularly

value the company's reliability, innovative strength, and global service presence.

How the Technology Company Works – Capacity for Major Challenges

Thanks to modern planning and manufacturing capacities, HORN is able to realize 15 to 20 large-scale projects and 30 to 40 smaller projects annually. In doing so, HORN places the highest value on:

•Innovative engineering solutions that ensure maximum efficiency and durability
•Sustainability to reduce the carbon footprint of glass production
•Flexibility to best meet individual customer requirements

"Our customers do not only expect excellent technology but also a partner who takes responsibility. That's exactly what we strive to be," says Stephan Meindl, CEO of HORN Glass Industries.

Project Highlights from 2025

Despite challenging conditions, HORN was able to achieve important milestones in the first months of 2025. The following projects provide insight into recent accomplishments:

•Oxy-fuel furnace for Orora (Australia)
An energy-efficient oxyfuel melting furnace was delivered for the international packaging manufacturer Orora. The new plant significantly reduces energy consumption and CO_2 emissions – a major step toward decarbonization.

•Glass melting furnace for PGP Glass (India)
In January 2025, PGP Glass commissioned its new facility in Kosamba. HORN supplied an environmentally friendly 120 tpd furnace, including an E-Fusion Power Boosting System and HRD-BEAM glass level measurement system. This project highlights the strong collaboration with HORN India and the shared focus on CO_2 reduction and high glass quality.

•Furnace repair for Crown Sivesa (Mexico)
In June 2025, a 375 tpd recuperatively heated cross-flame furnace was modernized for Crown Sivesa in Orizaba. In addition to refractory repairs, the furnace was equipped with new technologies. The upgraded furnace supplies four production lines – continuing a successful partnership.

•Furnace upgrade for Noelle + von Campe (Germany)
For the long-established glass manufacturer Noelle + von Campe, HORN has comprehensively modernized the existing melting furnace. These upgrades increase efficiency, extend furnace lifespan, and lead to a significant reduction in CO_2 emissions.

Market Outlook – Challenges as Opportunities

The glass industry is facing subdued demand in 2025. However, HORN is using this phase to better position itself for the future:

•Consolidation of internal processes
•Completion of pending projects
•Investments in R&D

"Challenging times reveal who is truly reliable and innovative. We are confident that our sustainable solutions will play a vital role in shaping the future of the industry," emphasizes Stephan Meindl.

Innovation & the Future – Sustainability at the Core

The development priorities of the technology company set clear signals for the future:

•Hybrid furnaces with up to 80% electrical energy input
•All electric furnaces with capacities of up to 400 tons per day

These technologies significantly contribute to CO_2 reduction and align with global climate goals. We continue to view glass as a key material – for food packaging, technical applications, and modern architecture.

Conclusion & Outlook

With over 140 years of experience, a strong team, and a spirit of innovation, HORN remains a reliable partner for the glass industry – today and in the future. The company looks ahead to the coming months with optimism and is convinced: the future of glass production is sustainable, efficient, and based on partnership.

SORG Group Delivers Second Furnace for Vetri Speciali's Gardolo Plant in Italy

SORG Group has successfully delivered and commissioned the second F6 furnace for Vetri Speciali S.p.A., part of a significant expansion at the company's Gardolo production site in northern Italy.

The new 70 m² regenerative endport furnace is designed for the production of flint, amber, green and dark green glass containers. It comprises a working end and four forehearths, built to ensure efficiency, durability and consistent glass quality.

SORG Group's engineering package covered refractory and steel planning, including the platform for the furnace and glass conditioning area, as well as detailed engineering for the furnace and feeder equipment. Construction of the steel structure, installation of refractory materials, equipment installation and commissioning were all carried out under the supervision of Nikolaus SORG.

Advanced Technology and Equipment

The scope of supply included: complete furnace equipment, including combustion air supply, gas and heavy oil heating, electrical boosting and measurement and control systems. For the glass conditioning system, SORG supplied one STW distribution channel, two SORG 340S+® forehearths and two SORG 240+® forehearths, all fitted with SORG Conti-Drain® technology. The EME-NEND-S2® batch charger was supplied by EME.

SKS delivered and installed the full steel construction, including platforms for the entire plant, and carrying out refractory construction from the exhaust gas duct to the gob points (regenerators, furnace, working end, four forehearths and glass retention basin). SKS also provided hot insulation of the furnace, supplying the spray insulation of the regenerators, and technical support during heat-up.

State-of-the-Art Control Systems

In addition to the physical and mechanical infrastructure, SORG Group supplied a dual-redundant SCADA WINCC software control system, featuring the ES III™ expert system for optimised furnace and forehearth performance.

"We are proud to have partnered with Vetri Speciali on this important expansion project," said SORG Group. "The new furnace combines proven SORG technology with advanced control systems to deliver reliable, energy-efficient and high-quality glass production."

SORG Group extends its thanks to Vetri Speciali for their trust and cooperation throughout the project and looks forward to the start of a long and successful furnace campaign.

Vitrum: Thin glass meets LSG, ERP, and dolce vita

Milan alone would be reason enough to travel to the Vitrum trade fair. In addition, there are trends to discover that can transform a mere visit into a real experience. The HEGLA Group is among the exhibitors: on display are solutions for cutting and automatic handling of thin glass, a new laminated safety glass (LSG) cutting system, laser processing options and the glass365 ERP system.

Trend topic: Thin glass in triple glazing

Thin glass is a trending topic in the industry. While triple glazing made of soda lime glass panes has been an established component of energy-efficient buildings, glass as thin as 0.5 mm in the middle position offers new potential. Thanks to its slim design and light weight, existing double glazing can be replaced with triple glazing during renovations. The U-value is comparable to that of conventional triple glazing. The combination also offers advantages in new buildings. The design is narrower and lighter, reducing the load on the building structure and fittings.

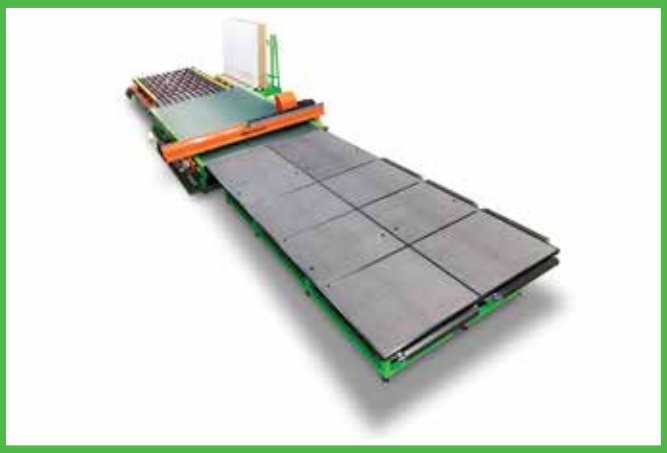
Homogeneous cutting edge for high edge strength

Up to now, thin glass has been widely used for technical applications. The borosilicate glass typically used for this purpose is more heat-resistant and break-proof than float glass. On the other hand, the demands on handling and edge quality are greater. "A high degree of automation and adapted processes ensure process reliability here," says HEGLA Managing Director Bernhard Hötger. "A special cutting head takes care of everything else, achieving a homogeneous cut edge with high edge strength." After automatic transfer to a harp rack, an insulating glass unit with TPS spacers is then produced on a Glaston line, for example.

System evolution for laminated safety glass

A newly developed cutting table for laminated safety glass is to be exhibited for the first time. "We have combined the best features of AdvaLam

Fig. 1: HEGLA has been offering systems for technical glass for over 30 years. Thin glass, starting from 0.5 mm thick, has been used primarily for technical applications such as displays.



Figs. 2+3: Thin glass requires automated and adapted processes due to higher demands on handling and cutting quality.

and ProLam and taken them to an even higher level", emphasises Bernhard Hötger. "The result is a system that works autonomously in fully automatic mode with maximum throughput and cycle times." In conjunction with automatic glass transfer, a glass flow is created that is system-controlled and specified by the machine. Productivity can be increased by 20 per cent, thanks to optional laser diode heating. With this new development, it is no longer the operator but the machine that sets the cycle.

Added value with laser

Whether it's bird protection, RF transparency or heatability: laser processing adds value to standard glass. A bird protection pattern can be printed during production or later on the building. The effect is threefold: it makes it impossible for birds to fly through. The pattern interrupts reflections from trees and bushes, for example. As an additional warning, a reflection is created that is only visible to the bird. The finish is applied without damaging the surface. Ceramic particles are transferred to the glass, which remain scratch-resistant, weather-resistant and colourfast for over 20 years.

Other innovations include laser edge coating. The coating is removed with the highest optical quality without damaging the surface. The 'UC-Stamp line' is also being presented at the stand for the first time. The laser professionals from Halle are presenting a new laser marking system that is lightweight and more compact, designed to make it easier to get started with the technology.

Fig. 4: At Vitrum, HEGLA is presenting a newly developed cutting system for laminated safety glass that uses automated processes to control the flow of glass. Equipped with optional laser diode heating, it produces maximum edge quality.

The latest generation of ERP

The HEGLA-HANIC is presenting its new 'glass365' ERP system. The Bochum-based specialists have completely redesigned the existing ERP system based on Microsoft Dynamics 365 Business Central. "This allowed us to transfer the strengths of our programme and our glass expertise into a state-of-the-art software structure," explains Dr Jan Schäpers, Managing Director of HEGLA-HANIC. "This gives us the freedom to focus on our core competence, while our users benefit from modern interfaces and numerous connections to Office 365, for example." The software is device-independent, receives automatic updates, and is scalable to other applica-

Fig. 5: Using laser printing, BIRDfriend mobile creates a triple-action protective pattern on the glass to prevent bird strikes – without damaging the surface.

Fig. 6: A partially transparent or opaque bird protection pattern is printed on the glass, customised to the customer's requirements, and adapted to the properties of the glass.

tions, products and even multiple locations. Add-ons are available in Dynamics App Source. Customer orders, for example, can be transferred to the system via data import or app. Among other things, an activatable AI tool is also available, which reads orders from email attachments in Office 365, for example. After user approval, the data is transferred to the system, and optional evaluations are provided or AI-supported marketing measures suggested. HEGLA-HANIC currently has a new MES/PPS in the starting blocks: anyone who would like further information or is interested in how to respond independently and system-controlled to events in production in the future should stop by HEGLA-HANIC.

The HEGLA Group can be found at stand 21 in hall 9.

Fig. 7: The ERP system from HEGLA-HANIC is entirely new and combines modern software structure with industry expertise and knowledge of glass.

Fig. 8: The ERP glass365 can be expanded with apps from Dynamics App Source. An optional AI integration tool enables, for example, the automatic transfer of email attachments, which are transferred to the system after user approval.

The 34th China Glass Exhibition Concludes with Resounding Success, Spotlighting Global Glass Industry Innovation

The 34th China International Glass Industrial Technical Exhibition (China Glass 2025) wrapped up successfully at the China International Exhibition Center (Shunyi Hall) in Beijing on May 29, 2025. As the world's largest and most influential glass industry exhibition this year, the event—under the theme "Intelligent Manufacturing, Green Future"—vividly showcased China's dynamic innovation capabilities and vast market potential. It provided an unparalleled global platform for industry exchange collaboration, exceeding all expectations.

Record Scale Reflects Industry Vitality

Spanning 106,800 square meters, the exhibition hosted 910 leading glass enterprises from 31 countries. Over four days, it drew 105,987 professional visits from 136 countries and regions. International visitor numbers doubled compared to the previous exhibition, setting a new historical record at 13,140. This robust global engagement underscores the event's prominence as the industry's "barometer and weather vane".

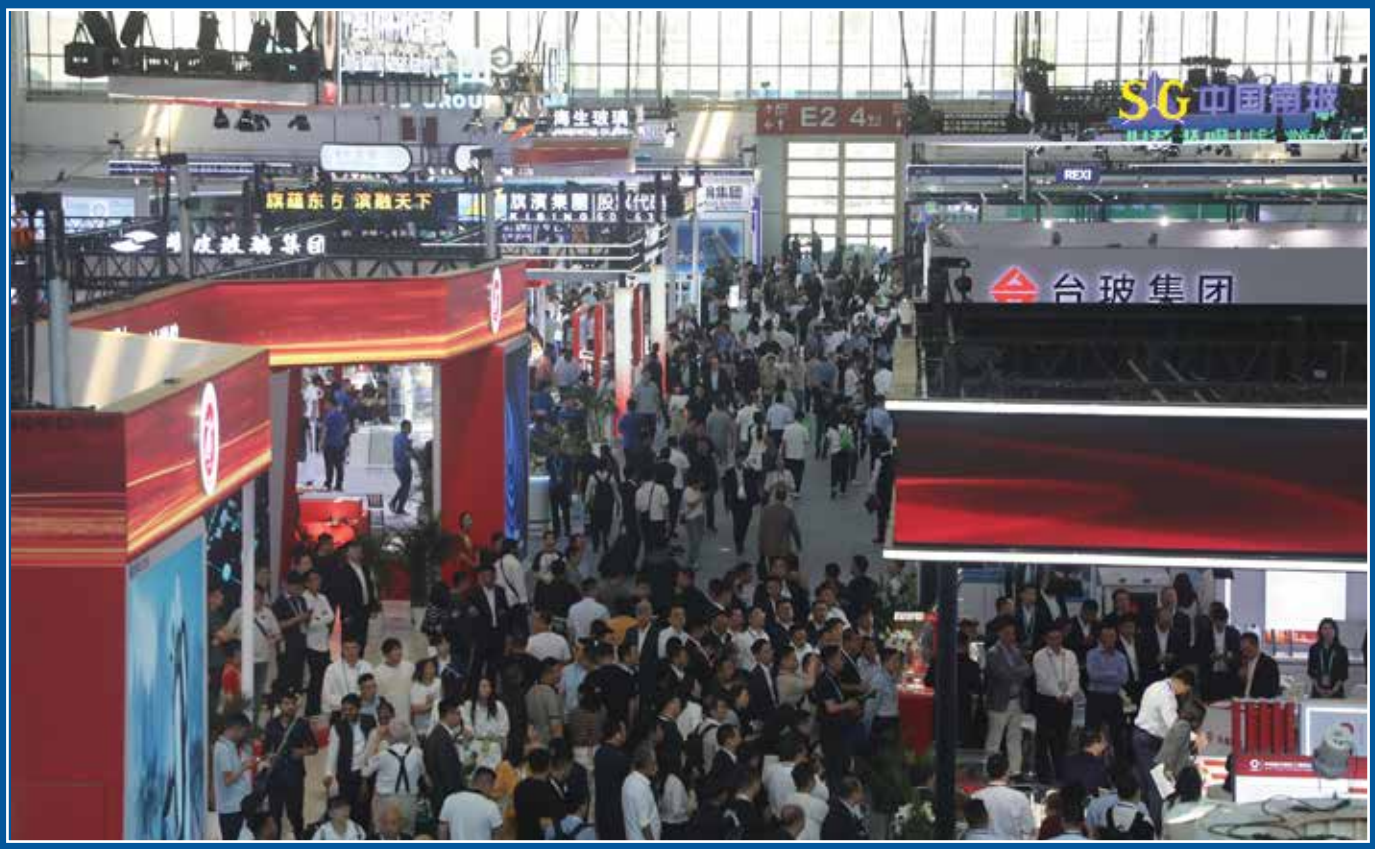
Insights into Future Trends

The exhibition crystallized three key global industry trajectories:

1. Accelerated Green & Low-Carbon Transition: Driven by "Dual carbon" goals, eco-innovations dominated displays—including photovoltaic glass, cadmium telluride power-generating glass, energy-saving architectural glass (Low-E/vacuum variants), and sustainable production technologies (full-oxygen combustion, electric boosting, waste-heat recovery). Green, low-carbon, and circular solutions are now core competitive imperatives.

2. Deepening Intelligent Manufacturing & Digital Transformation: AI, big data, and IoT are reshaping the glass manufacturing chain. From raw material precision and furnace optimization to real-time defect detection and smart logistics, digital solutions boosted efficiency, quality, and flexibility—propelling the sector into Industry 4.0.

3. Rise of Multifunctional & High-Value-Added



Glass: Innovations surged in ultra-thin, self-cleaning, antibacterial, smart-dimming, electrochromic, and fire/explosion-resistant glass. High-growth segments like display glass, EV glass, and pharmaceutical glass emerged as key innovation drivers.

Spotlight on Innovation & Exchange

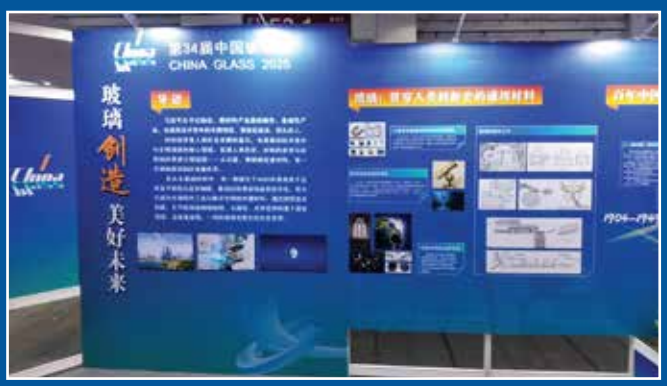
The exhibition debuted breakthrough technologies from global pioneers: Triumph Group showcased industrial robots, 30μm ultra-thin foldable glass, 0.12mm touch glass, and borosilicate vials. China Building Materials Academy featured novel refractory materials, large-scale quartz glass, and aerogel glass. NorthGlass unveiled premium tempering furnaces with smart lines. HAN'S LASER presented precision glass processing systems. Delphi Laser launched advanced laser micromachining solutions. Air Products (U.S.) premiered an intelligent polishing/cutting inspection system in Asia. Honeywell demonstrated thermal solutions for glass production. Global leaders like BOTTERO (Italy), Glaston (Finland), and LISEC (Austria) spotlighted cutting-edge processing materials and automation.

International participation soared, with strong pavilions from Germany and Italy. Ten high-level international technical exchange seminars addressed kiln innovations, smart tempering, AI inspection, insulating glass automation, and sustainable materials (e.g., thermoplastic warm-edge spacers, TPSS). Concurrently, the "Glass Creates a Better Future" science display chronicled glass evolution—from origins to modern breakthroughs in energy efficiency, displays, photovoltaics, biotech, and advanced optics—captivating numerous audiences with its vision of tech-driven transformation.

China Glass 2025 not only highlighted technological strides in technological innovation, green development and smart manufacturing but also catalyzed profound global supply-chain partnerships. It has infused the industry with renewed confidence to navigate challenges and seize opportunities.

We extend heartfelt gratitude to all exhibitors, visitors, partners, and media for their steadfast support. China Glass remains committed to advancing the global glass industry through a higher-level, more valuable international professional platforms.

Mark your calendars: The 35th China International Glass Exhibition will take place in Shanghai in April 2026. Join us to shape a brighter future for glass!



Sensor technology and data law in automated glass production

At its spring meeting, the Industry Working Group Research & Technology of the VDMA Glass Technology Forum dealt with aspects of measurement and testing technology and future data protection requirements.

In their presentation, Dr.-Ing. Matthias Seel and Prof. Dr.-Ing. Michael Kraus dealt with the need-based use of the digital twin to increase quality in flat glass production. They emphasized the importance of measuring and testing technology. Quality assurance is often still based on subjective empirical values, which limit the internal resilience and the ability to innovate. The two experts drew a clear distinction between the digital twin and the digital shadow: While the digital twin enables bidirectional communication and control (interaction between digital model and physical production process for active control), the digital shadow is limited to data acquisition and diagnostics.

For applications in flat glass production for the digital twin, they highlighted several process steps. Monitoring and controlling temperature fields in the tempering process enables homogenization and need-based adjustment of glass and product properties. This leads to a reduction in distortions, anisotropies or roller waves. When cutting flat glass, the optimization and monitoring of cutting parameters (e.g. cutting force, cutting fluid) is crucial in order to ensure defined edge qualities. Early detection of nickel sulphide inclusions in combination with a digital twin can reduce the risk of nickel sulphide fractures in the future, even without a hot storage test. The implementation of the digital twin increases efficiency through predictive maintenance and process control and reduces costs through data-based decision-making. However, according to Seel and Kraus, the decisive factor for successful implementation is to develop a need-based and target-oriented design together with the users that is geared towards the specific requirements of the respective production.

Optical measurement technology in the glass industry

Modern optical measurement technology enables high-precision one- and multi-dimensional inspection processes that are used in various industries. Johannes Schuler from Keyence Germany presented exemplary applications of various measurement methods.

These technologies are used primarily in medical technology, for example in the measurement of contact lenses, which must be very precise. The precise determination of position data for downstream processes, such as robot handling, in which sensitive components must be gripped precisely, is also crucial.

Innovative measurement methods are also used in semiconductor technology. One example is the measurement of wafers with a special 2D transmitted light micrometer, in which the transmitter and receiver are calibrated and supplemented with additional optics. This allows not only the edge geometry of a wafer to be recorded, but also transparent wafers to be analyzed with high precision. Such methods are essential, as fragile and delicate components often have to be inspected in the micrometer range.

Schuler described 2D and 3D inspection using laser profile sensors as a further application. This technology can be used to generate and evaluate simple distances, individual profile sections of a component as well as entire 3D scans. A recently developed technology allows such 3D measurements to be carried out without external movement systems by swiveling the measuring head internally. According to Schuler, this

combination of laser and snapshot technology offers advantages in many industrial applications.

Such methods are particularly challenging in the glass industry, as glass has both diffuse and specular reflections. The measurement of transparent objects can be problematic as reflections often occur in undesirable places. A special algorithm makes it possible to capture the actual transition of an object as a profile curve instead of measuring a diffuse reflection cloud within the material. In the case of reflective surfaces, the laser beam must also be aligned at a certain angle to avoid total reflection and enable precise measurement.

Using the automotive industry as an example, Johannes Schuler presented laser measurement systems for gap and height measurement in vehicle glazing. The edge position of glass components is recorded, which is essential for downstream processes such as robot handling. However, the use of optical measuring systems extends far beyond the glass industry. For example, the automation of food production is also a development focus for the industry.

Optical sensors in the flat glass industry

Precitec Optronik develops high-precision optical measurement methods for the flat glass industry. In particular, chromatic confocal and interferometric sensors are used. Chromatic confocal technology uses white light sources that are coupled into a measuring head. The light is split into a spectrum along the measuring range so that precise distance and thickness measurements can be carried out using the wavelengths. This method enables high-precision measurements in the micrometer range, whereby thickness fluctuations and deformations as well as inclusions and cracks in the glass can also be detected.

A currently new application is the detailed measurement of the scoring line including all breakouts and stresses. This is made possible by a confocal chromatic line sensor with 1200 points along a line length of a few millimeters. The result is a topography measurement of the entire scoring line.

Markus Rosskopf, representing Malte Hapich, from Precitec Optronik, named inline monitoring of production processes as another area of application, with sensors that can record up to 92 measuring points simultaneously. For special applications, such as the measurement of very dark glass with low transmission, the company has developed controllers with eight times the light intensity, which can reliably analyze coated or recycled glass.

In addition to chromatic confocal sensors, white light interferometry is used for multilayer systems in particular. Here, broadband infrared light is used to determine the thickness of transparent materials with high accuracy by means of interference effects. For the interferometric measurement, there is a measuring head with a measuring distance of one meter for the measurement in the flat glass line at the hot end. The head can be positioned outside of the tin bath and provides responsive thickness values when adjusting the line.

Rosskopf cited laser radiometry, a technology for measuring the thickness of non-transparent materials, as another innovative process. The surface is minimally heated with a laser diode so that the heat spreads through the material. The reflection of the heat radiation from the substrate into the layer and back to the surface allows conclusions to be drawn about the layer thickness. This method is particularly useful for measuring paint layers on glass, for example for the enamel coating on windscreens.

According to Rosskopf, the various sensor technologies can be used both as offline solutions for laboratory analyses and for inline measurements in production lines. With special cooling systems, such as water cooling, measurements can also be carried out in demanding environments such as high-temperature processes. Overall, these highly developed measurement methods offer the flat glass industry precise, fast and flexible solutions for quality control and process optimization.

Quality measurement on toughened glasses

Kai Vogel from Viprotron GmbH, a specialist in glass inspection systems for architectural glass production, described various functions of scanners that are specially designed to detect specific defects. These check for inclusions and layer defects before cutting, detect soiling, scratches and other optical defects after the washing machine or record dimensional accuracy,

drill holes and defects such as bubbles and inclusions. Over 600 inspection systems are in use worldwide.

A 5G temperature scanner is particularly relevant for measuring directly at the furnace outlet. This system analyzes the glass using five measurement methods: optical distortion (distortion and waviness), anisotropy, white haze, glass defects and layer defects. As optical distortion has a significant influence on the appearance of facades, special reflection methods can precisely determine the waviness of the glass. Anisotropy, which becomes visible through polarized light, causes disturbing stripe patterns under certain lighting conditions. White haze is caused by minimal surface roughness during the tempering process and is detected using dark field illumination. In addition, measuring systems enable the detection of bubbles, inclusions, scratches and coating defects.

The system works independently of the transport speed or unevenness and documents the measurement data for quality assurance. The results are displayed visually so that operators can quickly see whether a glass meets the requirements. The measured values are based on existing standards, in particular for anisotropy measurement, which the company developed in collaboration with Darmstadt University of Applied Sciences.

Scalability creates added value

Digitalized and automated processes must be scalable in order to create real added value, says Markus Kick from Phoenix Contact GmbH. This is the only way to integrate modern technologies such as artificial intelligence and machine learning in a meaningful way. Scalability also means involving all employees in the processes. To this end, the company is developing solutions that appeal to both existing and new generations of specialists.

One key aspect is the handling of data. It is not about collecting as much information as possible, but about collecting the right data and using it efficiently. There are numerous sensors and measuring points in many areas, but often over 90 percent of the data collected is not needed. The challenge is to use minimally invasive methods to extract only relevant information and process it bidirectionally.

Phoenix Contact relies on an open, interoperable system that works independently of the manufacturer. This enables the flexible integration of a wide variety of components and ensures efficient use of the collected information. Particularly in energy-intensive sectors such as the glass industry, it has been shown that targeted measurements and intelligent data processing enable considerable savings and minimize downtime. Practical and intuitive solutions make the digital transformation more tangible for all employees.

According to Kick, manufacturers, suppliers and users must work together on open, secure and scalable solutions. Modern processes are based on a sophisticated data architecture that can function both locally and in the cloud. The integration of machine learning makes it possible to derive well-founded decisions from a small number of specifically selected measured values.

The EU Data Act and Cyber Resilience Act

Companies must be aware that the collection and processing of data is subject to binding requirements. In her session, lawyer Salome Peters from VDMA explained that companies must comply with extensive provision and transparency obligations, including the disclosure of data and its provision in machine-readable form. The EU Data Act, which will be binding from December 9, 2025, affects networked products and associated services that collect and pass on data. This results in new compliance requirements.

The Cyber Resilience Act introduces mandatory cyber security requirements for digital products. Alexey Markert from VDMA explained that the CRA is closely linked to CE marking and affects products with digital elements. Companies should take immediate action to meet the new requirements. This includes, for example, adapting development and design processes.

Important links:
www.vdma.org/cybersecurity
www.vdma.org/glastechnik

The extraordinary new lightness.

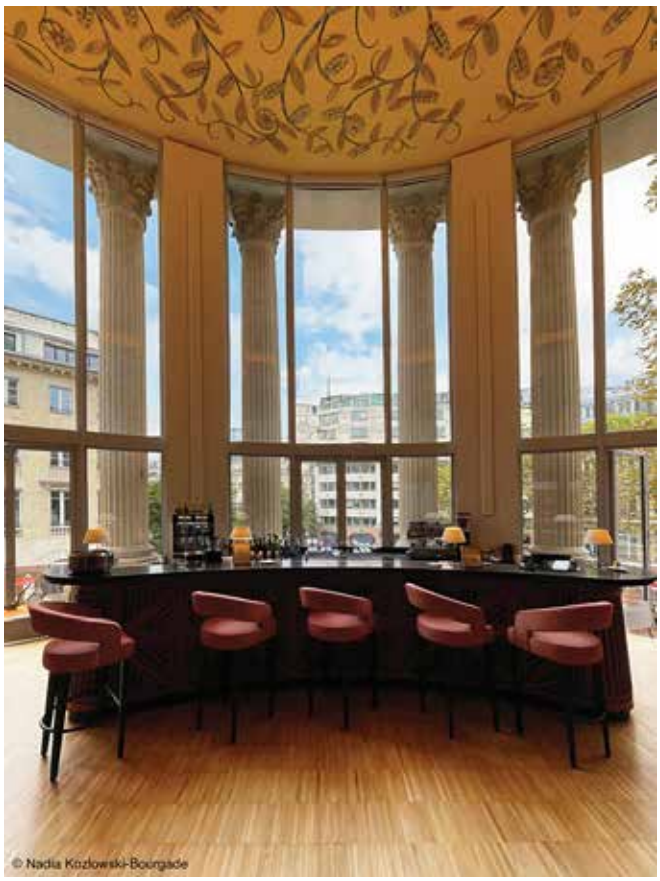
The all-in-one qualities of Super Spacer® have proven their worth at the Pathé Palace in Paris.

Today, warm-edge spacers fulfil many more functions than simply increasing energy efficiency and room comfort. There is an increasing demand for outstanding aesthetics, processing quality and production-related advantages.

With applications ranging from automated large-scale production and structural glazing to organic shapes and monument protection Quanex Company Edgetech claims that its flexible Super Spacer® is the ideal solution for all projects, even the most challenging ones. For example, it was used in the restoration and modernisation of the magnificent Pathé Palace in Paris, a building from the Parisian Belle Époque, by Renzo Piano Building Workshop.

The successful transformation of an iconic film venue.

For over 150 years, the building at the intersection of Boulevard des Capucines and Rue de la Chaussée d'Antin has been a cultural landmark. Originally opened in 1869 as a vaudeville theatre, it was converted into a cinema by Paramount in 1927 and later transformed into a luxurious film palace by Renzo Piano on behalf of the Pathé Group. The new Pathé Palace boasts seven state-of-the-art auditoriums with LED screens and heated, adjustable leather seats.


© Nadia Kozlowski-Bourgade

At the same time, the golden age of Parisian Belle Époque and widescreen cinema has been brought back to life. Instead of streaming from the comfort of your own home, an exclusive concierge service awaits. Behind the rotunda façade, characterised by three curved windows between pairs of neo-classical columns, is the Art Deco-style bar. Designed by Jacques Grange, probably the world's most famous interior designer, it offers a breathtaking view of the vibrant theatre district in Paris's 9th arrondissement.

"Light and transparency are very close friends."

This quote by Renzo Piano encapsulates the design leitmotif of many of his buildings. The Pathé Palace was therefore completely gutted and extensively glazed at street level. The building's transparency is intended to invite the city to enter the light-flooded atrium, 'the piazza'. Only the striking dome, rotunda and natural stone façade from the Belle Époque period were reconstructed. In accordance with official specifications, some interior elements such as the grooved marble, stucco work and cast-iron banisters also had to be integrated into the redesign.

An inverted glass pyramid dominates the 300-square-metre 'piazza' behind the entrance area. Measuring just 45 square metres at its base, this elegant glass and steel structure expands to a width of 29 metres, creating a clear opening of 154 square metres and allowing natural light to flood into the building five storeys deep. The 1,200-square-metre, 150-tonne interior façade is suspended. To hold and stabilise the filigree mullion-transom system for the glazing, façade builder Josef Gartner constructed a light grey, painted steel structure.

Super Spacer®: flexible for difficult geometries, light grey for transparency

Gartner and the renowned bending specialists at Döring Glass developed a technically complex insulating glass construction for the corners. The 28 double cylindrically curved rectangular panes ranged in dimension from 1638 x 5546 mm to 1663 x 3440 mm. The 44- and 46-degree bends each form a 90-degree corner with a flat section in between, followed by a short straight section after the bends.

The radii range from 100 to 150 millimetres, depending on the bend. The inner and outer panes are made of 12 mm laminated safety glass composed of extra-clear DIAMANT® float glass and PVB film. A 10-millimetre-wide Super Spacer® TriSeal™ Premium Plus spacer in 'light grey' was used in the space between the panes. The architects had specified a grey spacer for the entire glass pyramid. As it virtually merges with the glass, the spacer plays its part in realising Renzo Piano's vision of an atmosphere of light, airiness and transparency.

Martin Lenz, Sales Manager at Döring Glass, emphasises: 'Super Spacer TriSeal Premium is ideal for difficult geometries as it can adapt flexibly to any contour. Fortunately, Edgetech allows for individual colour selection, so we were able to meet all the technical specifications without any problems.'

Joachim Stoss, Edgetech Europe's Vice President of International Sales, adds: 'We have a long-standing partnership with Döring Glass. We are delighted that our Super Spacer enables us to fulfil even the most demanding architectural requirements in terms of edge seal aesthetics. Curved glass is finding more and more applications in architecture as it enables the creation of fluid, organic shapes. The fine art of glass bending and the production of free-form glass are integral to parametrically planned building envelopes."

Super Spacer® flexible spacers are ideal for curved glass, as they can adapt to complex curves and radii. However, they also offer advantages for flat glazing. Their elasticity reduces stress in the edge seal and distributes forces evenly, thereby minimising the risk of breakage. During production, they facilitate precise application, even with tight radii. They also absorb hardly any climatic loads, which relieves the edge seal even further. They ensure maximum accuracy and parallelism of the panes, as well as clean edges, with both automated and manual processing, particularly with large format insulating glass elements.

“Super Spacer has several key properties that make it ideal for clean corner formation in the edge seal. Applying it from the roll enables precise 45-degree transitions. Thanks to its elasticity, the silicone structural foam can adapt better to the corners of the glass, ensuring an even surface without the risk of bubbles forming," explains Christoph Rubel, technology expert at Edgetech.

A view of the Boulevard des Capucines as seen through double-curved XL glasses.

For the Pathé Palace's rotunda façade, Döring combined and realised two further manufacturing challenges with Super Spacer®: large format

curved double glazing, with the largest piece measuring 963 by 4,811 millimetres and comprising three different glass structures.

“Only white glass was used for the 24 curved insulating glazing units on the exterior of the building. In some cases, this was combined with ECLAZ and ECLAZ ONE coatings to maximise transparency and light transmission while ensuring optimal thermal insulation,” says Lenz.

The curved glass underwent various long-term tests on ageing behaviour, dew point and gas concentration over a period of more than six months before installation and acceptance by the client, in order to prove the performance and reliability of the spacer.

‘In a constantly changing world, adaptability is the key to success,’ explains Joachim Stoss of Edgetech. ‘Super Spacer provides our customers with the means to react to current market requirements and proactively shape future trends.’

TRADITIONAL EGYPTIAN GLASS TECHNIQUES REALIZED BY CUTTING-EDGE SOFTWARE

TRADITIONAL EGYPTIAN GLASS TECHNIQUES REALIZED BY CUTTING-EDGE SOFTWARE

Decorative Glass reinterprets an ancient artistic-cultural heritage with modern materials to create individually designed products. Arab Union Glass is a leading player in the flat glass processing industry, producing top-notch IG units. Together they supply architects with complete solutions to realize the most ambitious projects. In LiSEC machines & software solutions, the group of companies has a trustworthy partner supporting them to realize their vision.

The Decorative Glass showroom © LiSEC

THE EGYPTIAN MARKET LEADER WITH EXPORT AMBITION

Arab Union Glass, a prominent Egyptian flat glass processor, was established by Mr. Sobhy El Genedy in 1960. The company takes pride in being Proudly Made in Egypt and holds certifications for ISO 9001 (quality management systems), ISO 45001, and ISO 1400112. Their commitment to quality and service ensures that they remain at the forefront of glass innovation and customer satisfaction.

Decorative Glass's success story began in 1963, driven by a passion for glass artistry. From design to production, supply, and application, Decorative Glass offers a diverse range of solutions tailored to their customers' requirements. The brand made significant strides in the fabricated glass field, combining quality craftsmanship with the latest exterior and interior design trends.

The merger between Decorative Glass and Arab Union Glass represents a milestone in Egypt's glass history, uniting decades of experience and innovation to create something greater than the sum of its parts. It was preceded by years of cooperation and helped to solve supply chain issues as well as allowing centralized planning. Together the group of companies employs over 1,500 skilled workers who process glass in three shifts. Their collaborative effort has positioned them as market leader in Egypt.

With a combined production area of 97,000 sqm spread over multiple sites, they can offer their customers comprehensive solutions. Their product range includes laminated, pained, printed and PVD polished glass for architectural and interior applications as well as double IG units, with one factory specializing in clear glass and architectural glass while another is dedicated to decorative glass. With a current export rate of 2 – 3 %, their focus is on developing markets abroad, with partners in Europe, Turkey, Morocco, Libya, UAE, Russia and China.

ARAB UNION GLASS, DECORATIVE GLASS & LISEC: A LONGSTANDING RELATIONSHIP BASED ON TRUST

The cooperation with their local LiSEC representative, Mr. Hany Mohsen, is a success story in itself. “We’ve known each other for more than twenty years,” tells Mr. Mahmoud El Genedy, CEO of Arab Union Glass. “And we have deep trust in Mr. Mohsen. In 2003, we bought our first cutting line from LiSEC, and we remained in contact ever since.” LiSEC machines can also be found in Arab Union Glass’ IG line, where they use the KBU edge processing solution, while Decorative Glass put a LiSEC cutting table in operation in 2010.

Before every new investment, the company investigates new technologies, focussing on output and functionality. “At the glasstec, we always visit the LiSEC booth to check out the latest developments. We consider LiSEC as highly innovative, with solutions for all areas of flat glass processing,” so Mr. El Genedy.

Our LiSEC machines work well and are highly reliable, with few downtimes. And if something unexpected happens, spare parts are quickly available.

Defending their market leadership position with high-quality glass products requires the right machinery – and well-trained operators. Mr. El Genedy says, “For the best quality products, you need the best quality team. The machines work great, it’s important to train the operators to manage them well. The training must be done on your own machines.”

NETWORKING ARAB UNION GLASS & DECORATIVE GLASS: LISEC SOFTWARE

To realize high-quality products, the group of companies not only relies on LiSEC machines, but also on the appropriate software: GPS.order for order management and processing and GPS.prod for successful production planning. Mr. Tarek Bahr, Chairman of Decorative Glass, sums up his impression: “Reliable and user friendly, the software features are very useful.”

The positive results: The entire group of companies has been successfully networked. The recording and management of prices and the creation of quotations is a paperless process. All relevant information is collected at order entry and reused throughout the life cycle of the order; no further data entry required. Capacity and feasibility checks are fully automated and delivery dates are determined realistically and feasibly.

On the production side, the capacity planning module supports the fully automatic creation of work steps and work step to machine assignments based on priority rules and working time formulas. Those formulas are easy to maintain and can be edited and aligned by key users. Based on the assigned work steps and the calculated produc-

tion time detailed production scheduling is possible. This allows the visualization of production gaps prior to production and gives the planner the necessary data to refine the production planning on demand.

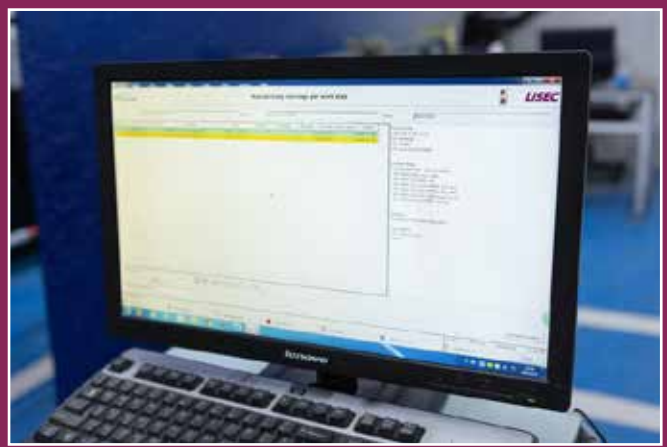
The full integration of all these features into one production control system has significant advantages: the integration of new users or organizations, such as the group's new factory, is easily accomplished with a multisite system with a central master data structure.

THE EGYPTIAN MARKET – QUALITY AND AUTOMATION

"Especially in facades and construction, the glass market has become very attractive, drawing a lot of competitors. We have seen the number of glass processors almost triple in recent years," recaps Mr. Tarek. "The trend is moving towards better quality end products, with requires well-performing machines. Formerly, only large glass processors imported machines from Europe – nowadays, everyone wants a good machine."

Another major factor are the operators, says Mr. El Genedy: "It is difficult to find specialist workers, and personnel costs are rising. Automation is becoming more and more important – it saves time, money and materials, and it reduces injuries and other problems in the production." But personnel will never be obsolete: "A major success factor in automation is having the best maintenance team. We will build up our team along with increasing the automation."

Regarding the transformation towards full automation with all it's effort and cost, the group follows a step-by-step approach: "We negotiate every project very well. Our next target is the completion of our new factory – the production halls are already built."



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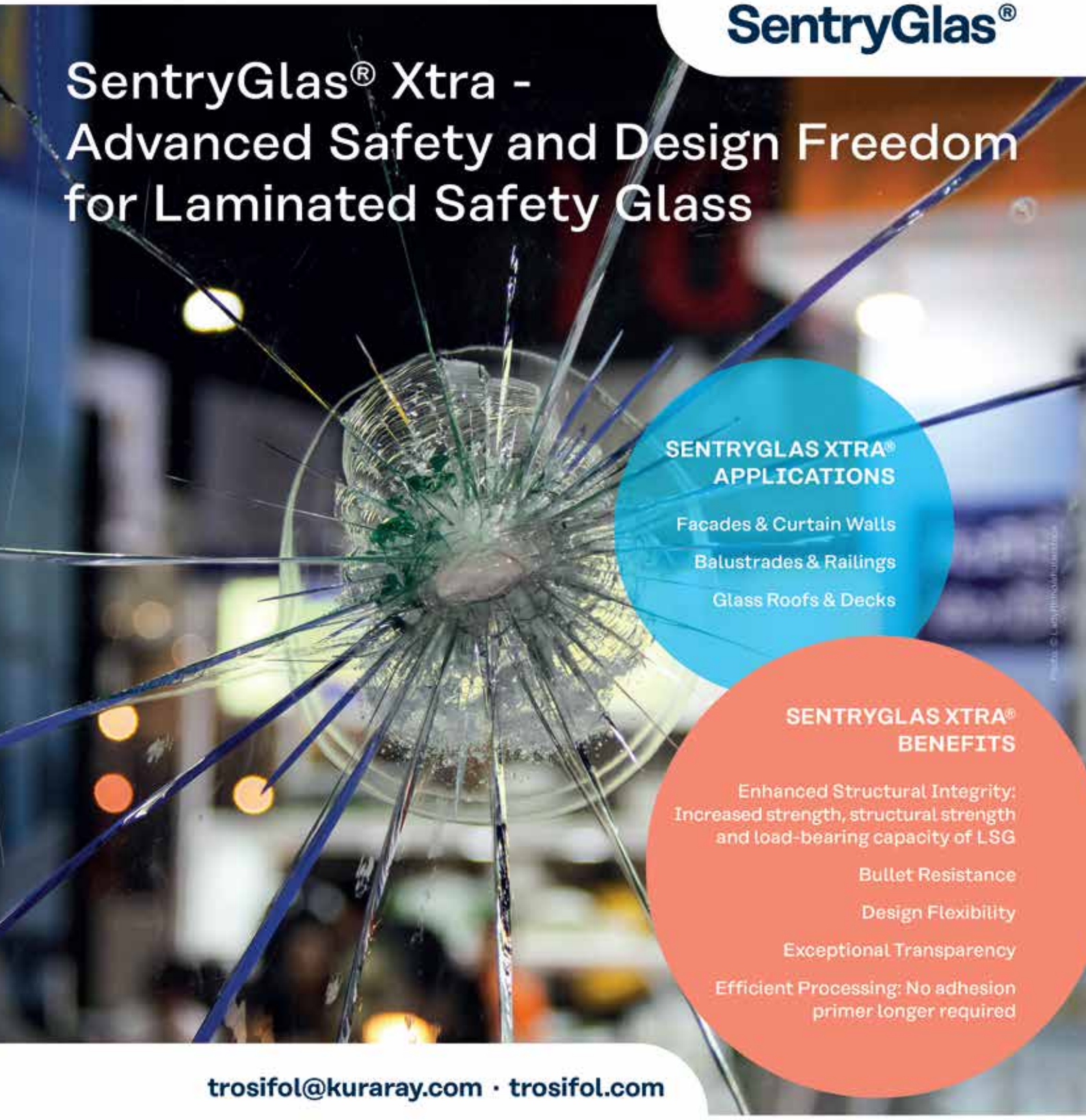

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Old oak window frames at Wynendaele Castle have been fitted with new, vacuum insulating glazing

Careful restoration of Flemish cultural heritage with FINEO vacuum insulating glass

‘Wynendaele Castle is a magical place,’ enthuses Jérôme Matthieu de Wynendaele, the castle’s owner. ‘FINEO is a magical product,’ adds Christophe Vanassche, project consultant at RenoWindow, a Belgian company specialising in sustainable window renovation. The energy-efficient restoration of the historical glazing at the idyllic, moated castle in West Flanders brought together two partners that could not have been more perfectly matched.

Wynendaele Castle was originally built as a wooden castle complex in the late 11th century. In the 13th century it was replaced by a walled circular castle. In the 12th and 13th centuries the castle was the seat of the Counts of Flanders and later became the setting for many significant historical events, among them the fatal riding accident of the 25-year-old Mary of Burgundy in the surrounding woods. In the 1870s the Matthieu family — who have owned the estate continuously since 1833 — remodelled the castle extensively in the neo-Gothic style, giving it its current appearance with medieval-style towers, battlements, stepped gables and arched doorways.

After moving to West Flanders in 2021, Jérôme Matthieu de Wynendaele was faced with major challenges. Saving energy was the main issue. How could the spirit of a 2,000 square meters, 1,000-year-old listed castle be preserved while reducing energy consumption? He believed that the only solution lays in FINEO's thermally efficient vacuum insulating glazing.

'The Flemish Heritage Authority asked us to

preserve the existing window frames wherever possible. That's why we needed heat-insulating glass that was just as thin as single glazing,' explains the castle owner. FINEO vacuum insulating glass was chosen as it combines modern energy efficiency with minimal installation disruption.

The specialists at RenoWindow recognise the clear advantages of renovating historical windows using vacuum glass. Rather than a complete reconstruction, the process focuses on upgrading the existing frames and replacing the glass to improve energy efficiency. This approach leaves reveals and connections to the masonry untouched — a significant advantage over complete replacement, as historically accurate windows often require customisation and manual fabrication.

Traditionally installed, state-of-the-art customisation

Wynendaele has 203 windows in around 30 unique designs. Before replacing the glazing, RenoWindow measured all existing glass panes precisely. Using this data, AGC Glass Europe produced about 60 different glass formats and thicknesses, ranging from 6.7 to 20.1 millimeters, on the ultra-modern FINEO production line in Lodelinsart, Belgium – each one custom-made precisely. Due to strict conservation requirements, the existing glazing bars were preserved and glass units manufactured in small dimensions were inserted to preserve the original subdivision. Every window frame was thoroughly inspected for damage and precisely measured, while the seals and fittings were also checked, with any necessary replacements carried out.

Replacing the glass took around two weeks and was carried out in the traditional way. After milling and cleaning the existing rebates, classic linseed oil putty was used to insert the glass. Finally, the painted surface was professionally restored. In only a few cases was it necessary to remove the window sashes to enable more efficient milling. ‘Our aim is always to preserve the original aesthetics of the frames and not to use any additional materials,’ explains Vanassche. ‘Thanks to the insulation value and thickness, we can offer glass replacement while maintaining the frame’s original appearance 100 per cent.’

A vacuum space of just 0.1 millimeter thick provides thermal insulation

Stefan Lips, Sales Manager Europe for FINEO by AGC, explains: ‘The functional centrepiece of FINEO vacuum glazing is a 0.1-millimeter-thick

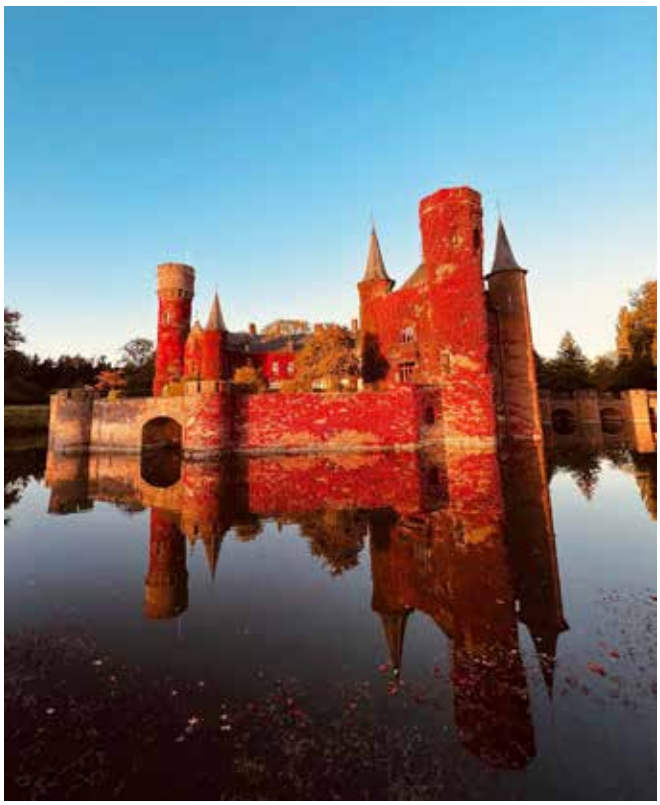
vacuum space between two panes of glass that ensures high energy efficiency with an extremely slim design.' This cavity virtually eliminates heat conduction and convection, providing highly efficient thermal insulation. Unlike conventional insulating glazing, which is filled with inert gases, FINEO's insulating effect is achieved solely by the vacuum.

Despite having a total glass thickness ranging from just 6.7 to 20.1 millimeters, FINEO achieves thermal insulation values comparable to those of triple glazing. With a Ug value of 0.7 W/(m²K), it is a considerable improvement on the single glazing typically found in older buildings, which has a Ug value of around 5.8 W/(m²K).

'This project was special for our team. Working on this historical moated castle was technically challenging and personally enriching. It's not every day that we're asked not to disturb the tower spirit while working,' says Christophe Vannasche, smiling. Meticulous planning of the construction site logistics was required to avoid disrupting the castle's operations. Due to the surrounding moat, many windows were difficult to access, so a squirrel scaffold was used.

Sustainability encompasses more than just energy efficiency

In addition to its thermal properties, FINEO is characterised by increased light transmission. Compared to triple glazing, around 15 per cent



more daylight enters the interior, which contributes to the quality of the space, particularly in living and working areas. The vacuum glass also provides the same high level of sound insulation as modern triple glazing — the glass used in Wynendaele achieves values of up to 36 dB. FINEO is also flexible in its application: the standard glass can be customised to meet different requirements, offering additional functions such as solar control, sound insulation and safety glass. For use in listed buildings, FINEO Heritage is available, combining Fourcault glass to preserve the historical appearance of the original glazing.
'FINEO impressively combines high performance with sustainability, setting new standards in window technology,' says Clément Lemoine, Head of Product Management for FINEO by AGC. 'Our laboratory tests prove that FINEO retains its insulation and soundproofing properties for over 60 years, providing our customers with long-term peace of mind.'

FINEO's high quality and reliability are confirmed by various certifications and approvals that recognise it as a pioneer in the glass industry. For instance, the vacuum insulating glass is 100 per cent recyclable and has Cradle to Cradle certification, which verifies the sustainable nature of the material cycle and the environmentally friendly production process.

In November 2024 AGC's FINEO was the first manufacturer to receive the CE mark for its vacuum insulating glass, an internationally recognised seal of quality guaranteeing safety, reliability and high product standards.

About AGC Glass Europe, a European leader in flat glass
AGC Glass Europe produces, processes and markets flat glass for the construction industry (external glazing and interior decoration), the automotive industry (OEM and replacement glass) and other industrial sectors (transport, solar power and high-tech). It is the European branch of AGC, a world leader in flat glass. It has over 100 sites throughout Europe, with around 13,000 employees.
More information on www.agc-glass.eu (corporate site), www.agc-yourglass.com (glass for the construction industry) and www.agc-automotive.com (for the automotive industry).

About FINEO
FINEO is the new generation of insulating glass. This vacuum glazing, with its unrivalled thinness, provides optimum thermal and acoustic comfort, meeting the expectations of joinery professionals concerned about sustainability and energy efficiency.

Under the aegis of AGC Glass Europe, FINEO benefits from a revolutionary production method. Its incomparable thinness in no way detracts from its technical excellence, in terms of both thermal and acoustic insulation.

http://www.fineoglass.eu/

CPS to construct Canadian solar glass plant

Canadian Premium Sand (CPS) plans to build two solar glass facilities, one in Canada and one in the US.

Together, the projects represent a combined 10GW of annual proposed pattern solar glass manufacturing capacity.

This positions the company to become the largest supplier of pattern solar glass in North America.

It said demand for solar glass has reached a new high, with annual domestic solar panel manufacturing capacity in the US at 52GW.

Selkirk Project

The company is continuing to pursue finance options for its Canadian pattern solar glass manufacturing facility in Selkirk, Manitoba.

The proposed facility will utilise renewable hydroelectricity and is forecasted to produce 6GW of low-carbon solar glass.

However, current uncertainty surrounding Canada–US trade relations has created a challenging financing environment for the Selkirk Project.

This includes US import tariffs on Canadian goods as well as the potential for Canadian counter tariffs.

CPS awaits clarity on Canadian domestic economic policy following the 2025 Canadian federal election, which took place on April 28.

US Project

CPS is also progressing the development of a southern US-based solar glass facility.

The proposed plant is expected to produce 4GW of patterned solar glass annually.

CPS has executed a Letter of Intent for a 12-year lease on a previously operational glass manufacturing site, which includes an 850,000 ft² building and existing logistics infrastructure.

The agreement includes an option to purchase the site at a pre-determined price during the lease period.

The company has completed a Front-End Engineering and Design (FEED) study that indicates a capital cost of approximately $350 million.

CPS has selected TECO and Bottero to advance pre-construction engineering, working with Green City Glass as Owner's Engineer.

This process will result in a refined capital cost and construction schedule to support the company's construction financing efforts.

While the company continues to pursue strategic partners for development of its US Project, no definitive or binding agreements are in place at this time.

Next steps

CPS will continues to monitor legislative actions in the US, the impact of proposed legislation to Inflation Reduction Act (IRA) incentives and ongoing trade matters, particularly between Canada and the US.

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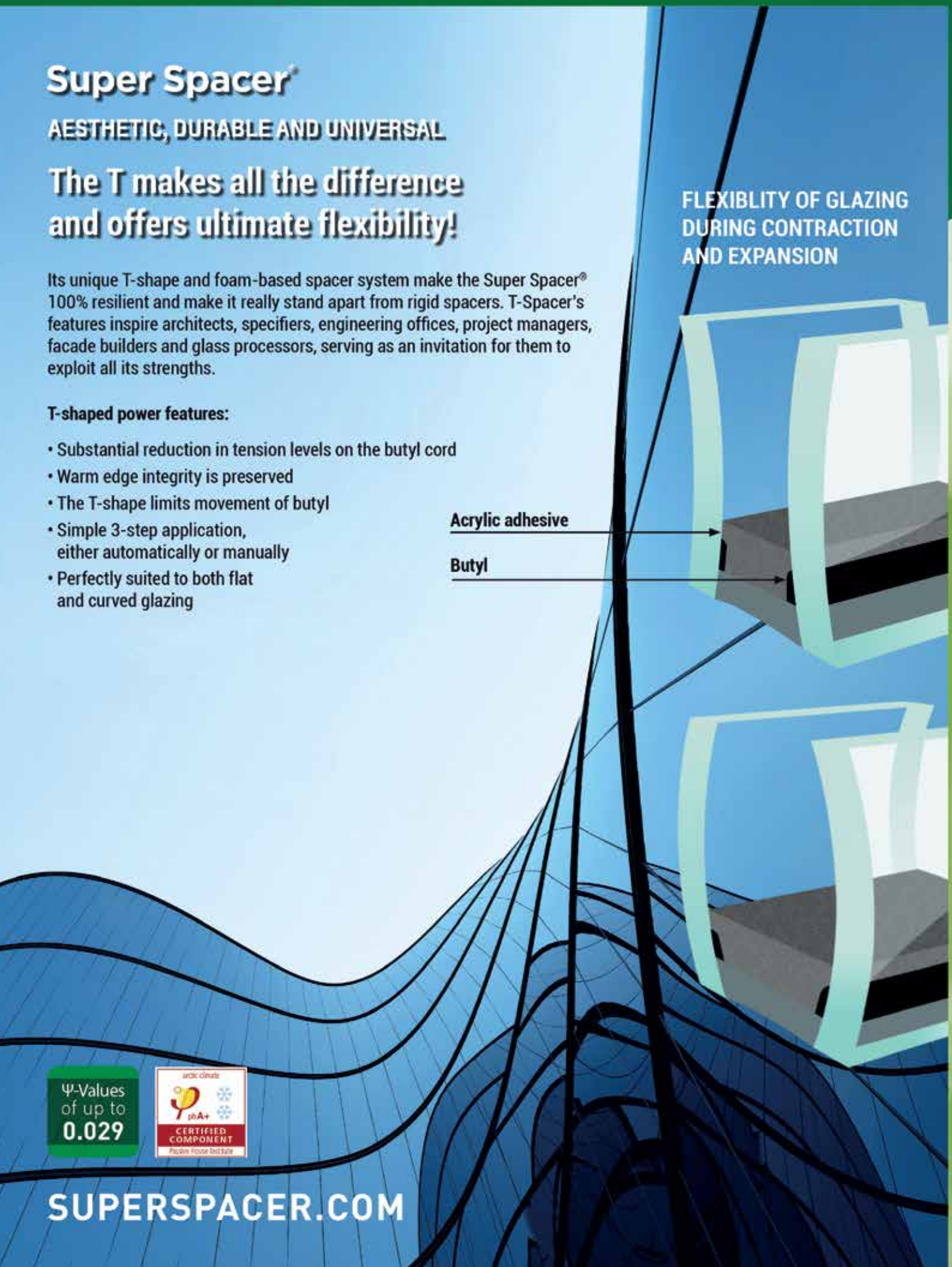

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Olivotto receives Supplier Award from Nanjing Electric

Caption: Award plaque handover between Olivotto and Nanjing Electric. Left to right: Sergio Sarvia, CEO and President of Olivotto; Hu Deliang, CEO of the Baiyun Power Group; and Sheng Qirong, General Manager of Nanjing Electric Technology Group.

Olivotto Glass Technologies, a manufacturer of automated glass equipment, has received Nanjing Electric's 2025 Supplier Award.

Nanjing Electric, a producer of tempered glass insulators, presented the award to Olivotto as recognition for its commitment to the company.

This included collaborative projects for fully automated forming production lines for tempered glass insulators.

Olivotto said the projects were an example of how automation and technological innovation can improve the efficiency and quality of industrial production.

Sergio Sarvia, CEO and President of Olivotto said: "We are proud to receive this award, which confirms our commitment to delivering reliable solutions of the highest quality.

"Our collaboration and partnership with Nanjing Electric have resulted in technologically advanced plants, that are already setting a benchmark in our industry."

Olivotto said its collaboration with Nanjing Electric would continue to grow, leading to innovative projects in the sector aimed at automating production processes.

Consequently, this could lead to higher quality products and efficiency standards never achieved before in the production of tempered glass insulators.

Olivotto said this was in response to the growing needs of the global market.

The company has over 80 years of experience in industrial and technical glass machineries production, and has sold more than 2700 pieces of equipment globally.

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CSG AUTOMATION LAYOUT (Acceptance year 2021)

- Product identity
  Identification and traceability
- Intelligent lamination
  Beat control
- Data interconnection
  Control production
- Smart factory
  Essential for transformation

Yinrui Intelligent has completed the delivery and acceptance of over 260 automation factories. Globally, more than 15,000 of its cutting machines are in use. In the field of glass processing, Yinrui Intelligent provides one-stop hardware and software services. When it comes to automation factory technologies in both software and hardware sectors, Yinrui holds an absolute leading position.

Sanda

Yinrui Intelligent provides a wide range of services, including various glass inspection systems, MES (Manufacturing Execution System), ERP, industrial cloud platforms, dynamic optimization, replenishment systems, shaped glass optimization, SCADA data collection, online ordering, and real-time monitoring. Yinrui Intelligent's software boasts the most comprehensive portfolio of automated software solutions. Equipped with a core AI algorithm library and various learning models, we are capable of providing you with the optimal smart factory solution—freeing you from worries about both online and offline production.

Industrial Cloud Platform 01 | *Enterprise Management Software* 02 | *Production Line Control Software* 03 | *Production Management Software* 04

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WhatsApp: +86 18355269935
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INTERESTING FACTS ABOUT TPA INSULATING GLASS PRODUCTION: THE 10 MOST FREQUENTLY ASKED QUESTIONS

LiSEC training courses aim to provide our customers with the knowledge and skills required to benefit from the full potential of our solutions. We have put together the most frequently asked questions from our TPA training course for newcomers and those keen to refresh their knowledge.

© LiSEC; Re. question 5: Joining unit clamp

© LiSEC; Re. question 5: Seam closure

1. Is it possible to reuse the material that has been drained into the collection drum?
To guarantee the quality of the TPA spacers, the material must be applied to the glass sheet at the correct temperature. After the machine has been at a standstill, a certain amount of TPA material must be drained until the correct temperature is reached. The TPA material contains a desiccant that is activated on contact with air, after which it can no longer be used. As such, it is not possible to reuse the drained material.

Tip for users! To prevent the TPA material from sticking to the collection drum, you can line the drum with the protective film that covers the surface when you open a TPA material drum. This makes cleaning much easier later on.

2. The menu contains presets for different spacer widths. Can I also define my own spacer width?
The machine operator can create their own recipe for an individual spacer width. The simplest way to produce a 7 mm wide spacer is to clone the recipe for a 6 or 8 mm wide spacer. The recipe parameters must then be fine-tuned to avoid unsightly corners or deformations. The recommended settings sequence is: First check the straight lines, then the quantity, followed by the spacer width, corners and finally the closure.

Tip for users! If you know the desired widths in advance, you can request customised recipes when ordering the machine. These recipes will then be tested before the machine is delivered.

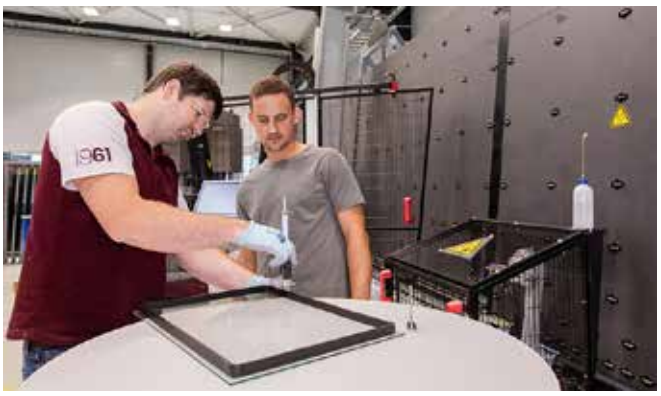
3. Does the TPA material have to be black?
Alternatives are being researched, but black material is currently the best option because it does not become brittle due to UV radiation. Depending on the method of installation, the colour only slightly impairs the aesthetic properties of the insulating glass unit.

4. I would like to increase production. Can I speed up the application of the TPA material?
The nozzle application speed automatically adjusts to the quantity of material flowing through it. More material results in a faster application speed, while less material means a slower application speed. This ensures that the application remains precise and consistent. The LiSEC TPA line offers other options for increasing production

capacity: Counter sheets can be transported past the application head to reduce waiting times for applications.

5. What do the TPA spacers look like at the seam? Can the closure be implemented in a clean and gas-tight way?
Technical tricks exist for closing TPA spacers cleanly and in a gas-tight manner, such as a pressure equalisation point and precisely adjusted offsets. The closure is made narrower and pressed to the desired width in the press, after which it is pulled apart with clamps to ensure that it expands correctly.

6. What is the point of the material storage tank? Is it not possible to feed the TPA material directly from the drum to the nozzle?
The material storage tank acts as an intermediate link between the drum and nozzle to guarantee optimum processing of the material. It ensures that the TPA material can settle and acclimatise before it reaches the nozzle and facilitates temperature regulation. The material storage tank also serves as a pressure boosting station to build up the pressure required for the application. Seamless production is possible with two material storage tanks (20 l each): While the first storage tank is being used for production, the second can be filled with new material.



7. I am considering changing material manufacturer. What cost and workload can I expect if I decide to do so?
The material behaviour varies depending on the manufacturer. Before delivery, all recipes are tested with the material specified by the customer and the machine is calibrated accordingly. When changing the material manufacturer, the old material must be rinsed out and the machine recalibrated for all 8 standard spacer widths. This requires about a 200 l drum and one day. We recommend requesting the support of a LiSEC technician or a specially trained employee for calibration.

Tip for users! When placing your order, LiSEC offers the option of specifying several material manufacturers and storing tested recipes for each respective manufacturer. Have your favourite supplier saved!
Some suppliers will support the changeover on site and train your personnel on the material specifications and characteristics. Ask your new supplier about this service.

8. What quality features should I look out for to ensure optimum adhesion between the TPA

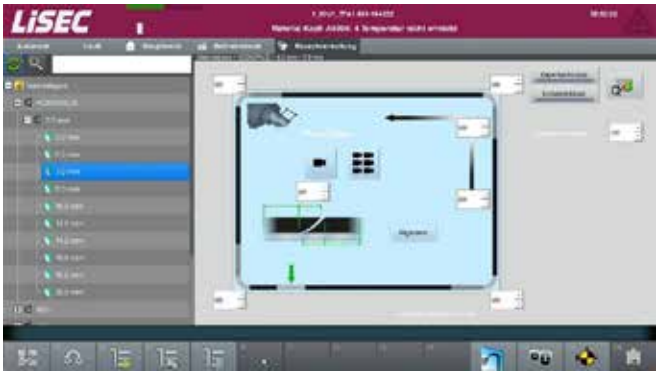
spacer and the glass?
TPA material is processed at 130°C, after which it has a consistency similar to chewing gum. The quality can be visually checked immediately after application. The TPA material should be black, glossy and evenly applied to the glass. The material must first expand on the counter sheet and establish a chemical bond with the glass. Freshly applied spacers are light grey and even, without air bubbles, while fully expanded spacers are black and shiny. The permissible expansion time is specified in the manufacturer's processing guidelines. If the desired results are not achieved within the specified time, the application process must be checked.

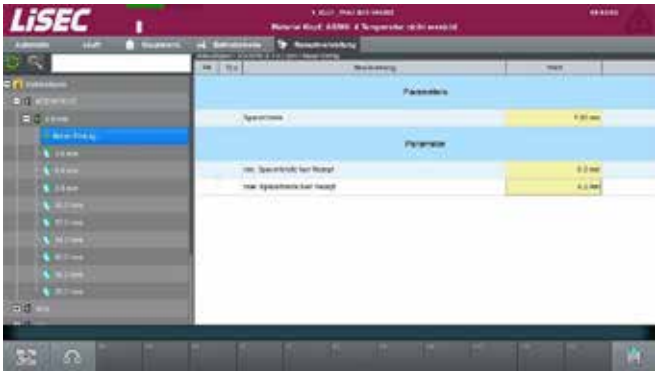
9. The material manufacturer's label contains a lot of information. What details are important to

me?
When changing to a new drum, the batch number on the label of the TPA material drum is most important. TPA material is mixed in batches of around 4 to 8 drums. As there may be slight differences between batches, it is advisable to use up all of the supplied batches and to check the recipes when switching to a new batch.

Tip for users! In the TPA program, you can enter the batch number in the production data for each drum. In the event of a complaint, this makes it easy for you to trace whether an entire batch has quality defects.

10. Recipe settings are being implemented on my TPA line. What equipment do I need to have on hand for this?
TPA application quality checks are carried out during the machinery set-up, adjustment work and on-site technician visits. The main tools required here are a digital sliding gauge for measuring the spacer height and width, and a small angle stop for checking the right angle to the glass sheet. This is particularly important for wider spacers due to their higher dead weight. Also useful are test sheets in various sizes, a high-quality measuring tape, markers for defining measuring points, cleaning paper, isopropyl alcohol and a drum for collecting the used test material.





Vitro Glass Transforms Innovative Mixed-Use Space on San Jose's Acclaimed Santana Row

700 Santana Row brings a new dimension to San Jose's acclaimed Santana Row district by offering a seamless blend of modern design, sustainability and vibrant public spaces.

700 Santana Row encompasses 28,000 square feet of retail space, 290,000 square feet of Class A office space and a 450,000-square-foot parking structure with 1,300 stalls. Its dynamic façade, made of Solarban® 70 glass by Vitro, and its LEED® Silver certification underscore its commitment to both aesthetic innovation and environmental responsibility.

This year marks two decades of Solarban® 70 glass, the industry's most trusted and widely specified triple-silver-coated low-e glass. With over 700 million square feet shipped since its debut, Solarban® 70 glass has become a benchmark in performance and design. In a standard one inch insulating glass unit (IGU), Solarban® 70 glass delivers a solar heat gain coefficient (SHGC) of 0.27 and a visible light transmittance (VLT) of 64%.

The ideal balance of VLT, solar control and exceptional clarity provided by Solarban® 70 glass aligned perfectly with architect WRNS Studio's vision for a dynamic and engaging design.

700 Santana Row features a metal facade with flowing curves that reflect sunlight and a translucent curtain wall design that brings natural light into its eight stories. A breezeway connects the public plaza to the office lobby and parking garage for better accessibility and connectivity. At the center, the building includes a public plaza that serves as a space for community gatherings, events, and activities.

700 Santana Row showcases a range of environmentally sustainable features, including cool roofs, water-efficient landscaping, an eco-friendly irrigation system, and the use of recycled materials. This innovative development transforms its surroundings, elevating the district from a renowned shopping and entertainment hub into a dynamic, integrated space for living, working, and leisure.

Vitro Glass Transforms Innovative Mixed-Use Space on San Jose's Acclaimed Santana RowBernardo Grijalva

Project Credits:

Architect: WRNS Studio
Fabricator: Glassfab Tempering Services
Glazier: Walters & Wolf
Photography: Bernardo Grijalva

SORG Group Completes Reconstruction of Vidrala AV3 Furnace in Spain

SORG Group has successfully completed the reconstruction of the AV3 furnace for Vidrala S.A., a leading glass packaging designer and manufacturer, at its site in Llodio, Spain.

Originally built by SORG, the AV3 furnace required a full rebuild following a successful campaign. The regenerative endport furnace, designed for the production of containers in multiple glass colours, has now been upgraded to the latest technical standards. The rebuild supports Vidrala's ongoing commitment to delivering high-quality glass packaging and excellent service to its customers.

Modernised Design and Advanced Technology

The updated furnace design features an increased use of electric energy and incorporates the latest advances in furnace engineering. SORG Group supplied a full suite of key systems, including the combustion air and waste gas system, gas heating, electrical heating, measurement and control systems, and a dual-redundant SCADA software control system.

Glass conditioning was supported by the delivery of an STW working end and SORG 340S+® forehearths, alongside planning and supply of all necessary equipment. EME provided the EME-NEND® batch chargers to manage batch

feeding into the furnace. Installation and commissioning were conducted under the supervision of Nikolaus Sorg.

Full-Service Construction by SKS

SKS was responsible for the complete steel and refractory services on-site. This included draining and demolition of the old furnace, supply and erection of the steel structure, and refractory construction of the furnace and glass conditioning system. SKS also handled heating-up, furnace charging, hot insulation, and ceramic welding to seal joints. The removal and disposal of refractory material rounded out the full-service package.

Strong Collaboration and Shared Commitment

The successful reconstruction of the AV3 furnace highlights the close collaboration between Vidrala and SORG Group, and their joint commitment to advancing efficiency and sustainability in the glass manufacturing sector.

“We are proud to support Vidrala with this comprehensive furnace reconstruction,” said SORG Group. “The upgraded AV3 unit reflects our shared ambition to combine proven technology with modern engineering solutions that benefit both production and the environment.”

SORG Group thanks Vidrala for their continued trust and partnership throughout the project.

Techglass Sp. z o.o., now SORG Polska Sp. z o.o., reconstructs furnace 2 for Qemetica Glass Sp. z o.o.

SORG Polska was awarded the contract for a modernisation and complete furnace renewal, including the batch house and batch and cullet transport, for Qemetica Glass Sp. z o.o, Poland's largest manufacturer of glass lanterns for grave lights.

The scope of supply and services ranged from the design and construction to the delivery of the steel, the refractory material, working end, forehearths and regenerators, to the heating up and filling. SORG Polska carried out everything from the modernisation of the batch house with the batch and cullet transport to the installation of the steel and refractory material.

As part of the work, the gas fired furnace was modified to enable a boosting system to be installed at a later date, supporting more flexible operation as a hybrid furnace. SORG Polska also provided systems for the heating, cooling and exhaust gas, as well as transporting the IS machines, their cabling and piping.

Qemetica Glass Sp. z o.o is part of Qemetica S.A, a leading European group of companies in the chemical industry based in Warsaw, Poland. The company has been continuously active in the production of glass containers since 1946.

SORG Polska would like to thank Qemetica Glass Sp. z o.o. for their trust and cooperation on the project and wishes Qemetica Glass a long and successful furnace campaign.

Vidrala in glass sales decline

Vidrala saw glass sales decline by 6.7% in the first half of the year amid soft market conditions.

It reported sales of €750.1 million to the end of June this year, down 6.7% from last year first half sales of €813.4 million.

Profit was €216 million, down about 2% compared to the first six months of 2024.

However it predicted an increase in volumes by the end of the year.

CEO Rául Gómez Merino said while results were broadly in line with expectations, demand for the Spanish headquartered glassmaker remained soft in the first half of 2025.

"In fact, actually persistently weaker than initially expected," he said.

The company was boosted by its operations in Brazil which posted a 4% increase in volume, minus 1% in Iberia and minus 7% in the UK and Ireland.

The comparison basis in the UK and Ireland though was impacted by an increase in volumes in 2024 as a result of the impact of The Park beverages filling site in Bristol, UK.

Iñigo Mendieta de la Rica, Corporate Finance Director, said: "Our margins in the UK remain solid despite this weak top line performance. And that gives me the confidence that we can recover volumes and recover market share."

Mr de la Rica discussed the impact of the UK Extended Producer Responsibility scheme, where recycling costs will shift from local authorities to beverage producers.

The company had initially suggested it could be £240 per tonne, but the final fee was round £192 per tonne.

"The reality is that it is probably too early to assess potential impact on volumes, but we are not seeing any significant changes in customer behaviour.

"And in any case, it's relevant to understand that if this regulation means that the UK is less competitive, it should mean that other regions are more competitive.

"Vidrala is a group composed by three different regions, Iberia and others, the UK and Brazil.

"And finally, if we take a look at the very final impact, the impact on the price of the final product for a consumer, it should be no more than 2%, 3% of the selling price of a standard product.

"So while it is not good news, but probably not dramatic."

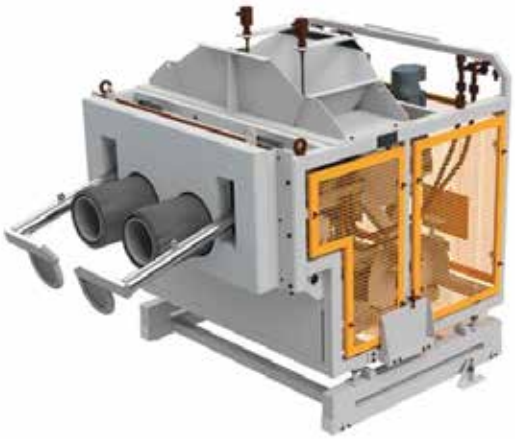
For the remainder of the year, the company forecast volume growth of up to 1%.

Mr de la Rica said: "The reality is that we are expecting more than a significant recovery on end demand. We're expecting a progressive contribution of volumes in the second half.

"Probably the third quarter will be key in that sense.

"But let's consider that for the full year, we are expecting to be slightly positive in terms of volumes, okay, something between 0% to plus 1%."

EME launches latest batch charger



EME has launched its latest technology, the EME-NEND 2 Flex Batch Charger.

The German-headquartered company said the solution offers advantages in performance, energy efficiency and maintenance.

Based on the EME-NEND series of sealed doghouse chargers, the EME-NEND 2 Flex offers engineering and digital control enhancements.

With a 20% lighter frame than previous models, it combines structural strength with improved handling and simple installation and maintenance.

A lightweight insulation material in the heat shield helps reduce thermal conductivity, improving energy efficiency while extending the life of key components.

A removable protective grid, accessible from either side of the machine, ensures easier access for maintenance behind the heat shield.

The screw conveyors are now centrally aligned, minimising the machine's footprint while enhancing accessibility and batch flow.

The advanced screw oscillation offers time-adjustable delivery rates with customisable oscillation cycles providing greater control over the material feed.

Especially worth mentioning are the two independently controlled pushers, each driven by a servo gearbox, for enhanced precision and adaptability.

For maximum flexibility operators can choose from three programmable modes:

• Batch Cutting: independently operating pushers pause at designated intervals for optimised distribution

• Synchronous Mode: pushers move in unison for standard operations

• Independent Mode: pushers operate separately for custom melting profiles

Adjusting the EME-NEND 2 Flex is faster and simpler than ever. Operators can fine-tune pusher settings without having to take any of the machinery apart, via the rear handwheel and front-mounted mechanical adjustment points.

The side-mounted pusher design further reduces downtime by providing easier maintenance access.

The EME-NEND 2 Flex is powered by a Siemens TIA-CPU 150 with integrated web-based control access, providing secure remote operation and diagnostics.

A 12" Touch Panel with WinCC Unified interface allows intuitive recipe management and process customisation. The system lets operators save and switch between parameter sets to accommodate variations in batch compositions and melting needs.

Thorsten Christ, Sales Director at EME, said: "We've combined everything our customers value: reliability, control and efficiency, and integrated it with intelligent features for future-ready performance."

Orora to close glass furnace next month

Orora will close the first of two glass furnaces in its portfolio in a few weeks.

The glass manufacturer confirmed it will close its Gawler G1 furnace in South Australia in September.

It also said the F4 furnace in its Le Havre facility, France will close next year.

In response to ongoing challenging conditions across the global glass industry, Orora undertook a review of its glass production network.

As previously reported, the Gawler facility will transition from three furnaces to two.

The commercial wine market in Australia remains in structural decline, which led to the decision to close the furnace.

Furthermore, plans are underway to close the F4 furnace at Le Havre in France, transitioning the site to a single furnace operation.

All European wine and champagne bottle production will be consolidated to the Ghlin site in Belgium, with a rebuild of the site's furnace to be completed by July 2026.

These changes reflect decisive action taken by Orora to adjust its production network to reflect market demand, with flexibility to increase capacity when market conditions improve.

Brian Lowe, Managing Director and CEO of Orora, said: "Within our Global Glass business, the Saverglass business reported EBIT of €79.2m, down 5.5% compared to the prior corresponding period on a pro-forma basis.

"Our Gawler glass facility reported EBIT of $25.4m, a decrease of 54% which reflects the structurally challenged commercial wine market in Australia as well as the impact of the G3 furnace rebuild.

"This was higher than initially expected, due to the complexity of work required and equipment and weather delays."

The added complexity of the G3 rebuild and construction of the oxygen plant increased the total capital cost to $184m.

Revenue

In its latest financial release for the year ending 30 June 2025, Orora achieved a 24.4% increase in revenue, which totalled $2.1 billion.

This reflected 12 months of contribution from Saverglass, compared to seven months in the prior corresponding period, as well as strong volume growth in its Cans sector.

Statutory net profit after tax (NPAT) was up by 425.4% at $973.1m, including net profit from discontinued operations and significant items.

EBITDA was $418.8m, up by 19.4%.

In addition, the group completed the divestment of its Orora Packaging Solutions (OPS) business in December 2024 for $1.8 billion.

Mr Lowe said: "Orora delivered a solid result over the past financial year as we completed the strategic transformation of our portfolio, with the divestment of OPS marking the final step in our journey to become a focused beverage packaging manufacturer.

"This was achieved despite ongoing challenges in the global operating environment, particularly around tariff implementation and consumer demand."

Sustainability

Orora made strong progress across its sustainability agenda in FY25.

The Gawler site achieved 59.5% recycled content in its glass bottles manufactured in FY25, and is on track to achieve its target of 60% by the end of CY25.

The site also achieved a 30% improvement in emissions due to the oxygen plant installed as part of its G3 furnace rebuild.

The Global Glass Business (representing Saverglass and Gawler) achieved 44% recycled content for colour glass.

The group achieved a 19% reduction in Scope 1 and 2 greenhouse gas emissions in FY25 from an FY19 baseline for market-based factors, and a 22% reduction for location-based factors.

New sustainability targets have been set to encompass goals at group level, as well as for Global Glass and Cans.

Circular economy targets include 68% recycled content for colour glass beverage containers by FY35.

At a group level, climate change targets including 41% reduction in Scope 1 and Scope 2 greenhouse gas emissions by FY35 from at FY19 baseline.

In addition, for the first time, Orora has set a target for Scope 3 greenhouse gas emissions, with 31% reduction by FY35 from an FY25 baseline.

Orora will also continue to expand its cullet sourcing programme, particularly in Australia for container deposit schemes.

Global glass business

FY25 financial highlights (excluding significant items such as the Le Havre F4 furnace closure) included a revenue of $1,313.3m (33.1% increase) and an EBITDA of $300.1M (29.1% increase).

For the Gawler site, volumes were broadly in line with continued softness in commercial wine and beer offset by new products including food jars.

The ongoing softness in beer volumes has been caused by a shift in format towards aluminium cans, which has seen a strong volume growth in Orora's cans sector.

Saverglass saw volumes decrease by 12% compared to FY24, which predominantly reflects the ongoing softness from global de-stocking, particularly in Europe.

However, volumes improved in the second half with growth of 9% compared to H1 2025.

FY26 Outlook

For Saverglass, EBIT is expected to be broadly in line with FY25.

Volume growth and cost reduction initiatives are expected to support higher EBITDA despite a continuation of the mix shift towards lower priced wine and champagne bottles.

This EBITDA growth is expected to be offset by higher depreciation.

For Gawler, EBIT is expected to be approximately $30m with the operational and financial benefits from the transition to a two-furnace operation being partially offset by higher depreciation.

This results in group EBITDA and cash flow growth for all businesses, which is expected to be partly offset by additional corporate costs previously allocated to OPS, and with higher depreciation, group EBIT growth will be tempered for FY26.

This outlook is subject to global and domestic economic conditions, currency fluctuations, and assumes no further changes to US tariffs.

Mr Lowe said: "With market-leading positions in cans, premium and luxury spirits, and wine packaging, and with an efficient and well calibrated footprint, we enter FY26 with cautious optimism and are well positioned for growth."

Ciner Glass pulls out of Welsh manufacturing facility plan

Ciner Glass will not proceed with its plans for a glass bottling facility in South Wales, UK.

It is though seeking alternative investment projects on the same site in Blaenau Gwent.

The decision not to proceed with the initial plans follows a review of the commercial viability the scheme, which has shown changes in UK market demand and a rise in the production costs for container glass.

It said work at its Lommel site in Belgium continues to progress according to the plan.

In line with an agreement signed last year with its European machinery equipment suppliers, the installation works for the first furnace will begin this autumn.

The company is in discussions with the Welsh Government to purchase the site on the Rassau industrial estate.

Ciner Group remains committed to making long-term investments in the UK and South Wales and has already invested close to £20 million in the development of this project, through social enterprise initiatives, research and development grants with universities, and strategic partnerships with industry.

Mrs Didem Ciner, Chair of the Board of Ciner Glass, said: "We would like to place on record our sincere thanks to the UK and Welsh Governments, as well as members of Blaenau Gwent County Council, for the support and engagement shown throughout the development of this project.

"We also extend our heartfelt gratitude to the people of Blaenau Gwent, who have warmly welcomed the Ciner family and company over the past three years.

"Their warmth and openness have left a lasting impression, and we remain deeply appreciative of the community's support and committed to supporting local projects where possible.

"We value the strong working relationships we have built and look forward to continuing these lines of engagement as we share new plans for our investment in Wales in due course. "

There is also no impact on the Ciner family's support for a range of community and sporting initiatives, locally and across Wales.

These include Ebbw Vale Rugby Club and the Welsh Rugby Union's Fit , Fed, Fun campaign, to which has extended its sponsorship by three years..

Lommel

Meanwhile, work at the Ciner Glass site in Lommel continues to progress according to the plan.

With the goal of starting production in the second quarter of 2026, each phase is being completed.

The site will eventually host two furnaces. Each furnace has a capacity of 650 tons per day and will feed 4 production lines.

In line with an agreement signed last year with its European machinery equipment suppliers, the installation works for the first furnace will begin this autumn.

On Tuesday, Ciner welcomed its European partners in Lommel.

They had the opportunity to observe the construction site of the first furnace, which will start production in the second quarter of 2026.

During the negotiations, the payment plans for the second furnace were revisited and an agreement reached on all terms.

The second furnace will be operational in 2027 and increase the total daily capacity of the plant to 1,300 tons.

This marks a new chapter in the development of one of Europe's most advanced and sustainable glass production facilities.

Suppliers to the facility include Bottero, Lahti Glass Technology, TecoGlas, E2Pack, and Tiama.

Ardagh to produce low-carbon glass bottles for Jägermeister

Ardagh Glass Packaging-Europe (AGP-Europe) will produce low carbon emerald green bottles from its NextGen Furnace in Germany for Jägermeister.

For over two decades, AGP-Europe has been producing Jägermeister bottles.

Now, both companies are strengthening their collaboration with the goal of reducing the CO_2 impact of the Jägermeister glass bottle.

Joris Goossens, R&D Project Manager at AGP-Europe, said: "Partnering exclusively with Jägermeister, we're scaling innovation with impact.

"After successfully producing lower-carbon amber glass in our NextGen Furnace, the next step is to use the same groundbreaking technology to produce green glass - aiming to deliver the first lower-carbon emerald glass bottles to the spirits sector."

AGP-Europe's NextGen Furnace in Obernkirchen, Germany, began glass production at the end of 2023.

The hybrid technology uses 42 electrodes which enable up to 80% electrical heating, and has already been proven in the production of amber glass packaging.

Based on the operating parameters of using 60% renewable electricity for glass melting and a recycled content of up to 70%, the carbon impact of amber glass packaging was reduced by 64%.

The solar-powered renewable electricity comes from a Power Purchase Agreement (PPA) with Sunnic Lighthouse, and parent company Enerparc, in Germany.

Carsten Doliwa, Vice President Procurement at Mast-Jägermeister SE, said: "The signing of a contract for up to 14 million 70cl bottles from the NextGen Furnace in Obernkirchen is a milestone in our long-standing partnership with Ardagh Glass Packaging.

"The production of our green Jägermeister bottles with this new technology aims to reduce CO_2 emissions by an envisaged 64% per bottle which, if achieved, will directly contribute to our sustainability goals."

Pujol Group at Vitrum 2025: Driving the Future of Glass with Smart Innovation and Sustainable Technology

In 2025, Pujol Group Returns to Vitrum, the International Glass Trade Fair, Taking Place September 16–19 in Milan.

At Hall 11 – Stand E01, we will showcase our latest technological solutions for glass tempering, lamination, and advanced processing, along with the full range of Evalam interlayers. Our presence at Vitrum once again reflects our strong commitment to industry evolution, sustainability, and technical excellence.

At Vitrum 2025, Pujol Will Showcase the Following Innovations:

TEMPER FLEX:
The first glass tempering oven in the market with high productivity and high installed power that is able to adapt and produce at low consumption and low installed power if required by customer. TEMPER FLEX is designed to meet the current demands of the industrial sector and is built on five key pillars:
•Fast return on investment
•Cost savings and profitability per square meter
•Consistent finished product quality
•Production flexibility
•Low maintenance costs

PUJOL 100 PVB+:
More than just a laminating oven, since its launch in 2011 it has become a benchmark in the industry. Capable of laminating with all types of interlayers (EVA/PVB/SGP), it has transformed the market with its efficiency, flexibility, automation, and high production capacity—making it the essential tool for companies striving for excellence and production leadership.

•High flexibility and production versatility
•Energy efficiency and sustainability
•Lower installed electrical power
•Reduced investment with greater profitability
•Less labor required
•Lower raw material consumption
•Reduced maintenance costs
•Optimized space usage

LAM-PRO
A high-performance lamination oven designed for companies requiring both high productivity and technical precision. Available in both flat and curved glass models, it features:
•Independent chambers for greater operational flexibility
•Automated rapid cooling system
•Advanced software with customizable HMI
•Dual radiation system for uniform heating
•Ergonomic design for improved working conditions
•Modern, lightweight yet robust structure
•Curved chamber with a standard 500 mm arc (other sizes available)
•Full Industry 4.0 integration via Pujol e-Connect
•Fast production cycles and intelligent control for reduced environmental impact

HEAT SOAK TEST
Performs the accelerated Heat Soak Test, the only certified method that guarantees over 95% detection of nickel sulfide inclusions—an invisible impurity that can cause spontaneous breakage in float glass.
•Complies with European Standard EN 14179-1
•Excellent thermal uniformity
•Advanced control and traceability software

•Exclusive door locking system
•Optional multi-chamber configuration
EVALAM will showcase its full range of high-performance EVA films and decorative solutions. Renowned worldwide for their quality and innovation, they are ideal for both architectural and decorative applications.

VISUAL: Exceptional transparency, strong adhesion, and outstanding acoustic insulation. Its high crosslinking index makes it the perfect choice for expert laminators seeking a premium, high-value product.

AB-AR: Structural post-breakage interlayer, ideal for public areas and high-load applications. It outperforms structural ionomers in mechanical strength and maintains its properties even at temperatures above 36°C.

EVALAM COLOR: A decorative solution with excellent durability and color consistency. Now available in five new colors, giving architects and designers even more creative possibilities.
I-ON by Pujol: A laminated glass featuring PDLC technology, allowing for switchable transparency. Compatible with smart home systems and remote control. Fully CE-compliant, suitable for both interior and exterior use, combining functionality and aesthetic appeal.

Ciner Glass renews sponsorship of Welsh Rugby Club

Ciner Glass UK has extended its sponsorship of Ebbw Vale Rugby Club for another year.

The renewed agreement builds on a partnership that began in 2021, during which Ciner Glass became the club's official main sponsor.

Over the past four years, the company has supported the men's first team and junior academy.

It has also secured stadium naming rights, with the ground known as the Ciner Glass Community Stadium.

Didem Ciner, Chair of Ciner Glass, said: "We are delighted to continue our partnership with Ebbw Vale Rugby Club for another year.

"The club holds a special place in the community, and we are proud to support its ambitions both on and off the pitch.

"We look forward to another exciting season and to seeing the club continue to thrive."

Ciner Glass will continue its investment into the club's first team, junior academy, and the rugby stadium itself, remaining as the main sponsor on the front of the club's jerseys for the 2025/26 season.

The company will also maintain its investment in the club's facilities and development programmes, helping to nurture the next generation of Ebbw Vale rugby stars and the future prosperity of the club.

To date, Ciner Glass has invested more than £20 million into the UK and Welsh economy through sponsorship support, social enterprise initiatives, research and development grants with leading universities, and strategic partnerships with industry.

O-I Glass outlines strong results for Q2 2025

O-I Glass outlines strong results for Q2 2025
O-I Glass reported a strong performance in the second quarter of 2025 despite a slow demand environment.

The glass manufacturer's financial results for its second quarter ended on June 30, 2025.

Net sales in Q2 2025 were consistent with the prior year period at $1.7 billion.

Benefits from favourable currency translation were offset by slightly lower selling prices and an approximately 3% decline in shipment volume (in tons).

While demand increased in the Americas, it softened in Europe.

On a year-to-date basis, shipment volumes were up nearly 1% compared to the prior year.

Earnings before income taxes totalled $7 million, down from $104 million in the same period last year.

This decline primarily reflected items not considered representative of ongoing operations.

This included $108 million in restructuring and asset impairment charges, largely associated with the discontinuation of the Modular Advanced Glass Manufacturing Asset (MAGMA) programme.

Gordon Hardie, CEO of O-I Glass, said: “Our teams executed effectively to deliver a strong second quarter 2025 performance, despite a sluggish demand environment.

“While reported earnings declined year-over-year due to restructuring charges, our adjusted earnings rose 20% compared to the second quarter of last year.

“Notably, the company’s continued performance on Fit to Win initiatives to improve our competitive position has more than offset macroeconomic softness in several markets.”

O-I continues to expect full-year 2025 sales volumes will be in line with prior year levels.

In late July 2025, and in addition to halting MAGMA, the company finalised its plans for the indefinite suspension of operations of one furnace as well as the closure of one plant in its Americas segment.

These actions are part of O-I’s Fit to Win initiative to reduce redundant capacity and begin to optimise its network.

Subject to finalisation of certain estimates, the company expects to record charges associated with these closures of approximately $45 million in the third quarter of 2025.

Mr Hardie said: “The company remains focused on executing against controllable factors - and the results reflect that discipline.

“Year-to-date, Fit to Win benefits have reached $145 million, reinforcing our confidence in achieving or surpassing the ambitious goals we set during our recent Investor Day.

“Given our strong performance and momentum, we are raising our full-year 2025 guidance and now anticipate adjusted earnings will increase 60 to 90% over 2024.”

Fire at Stoelzle Flaconnage's UK glass plant

Qemetica Glass has reconstructed a furnace at its glass plant in Iłowa, Poland.

The project encompassed a rebuild of the furnace and the installation of fully automated glass forming lines.

The furnace has a capacity of 110 tpd, expandable to 140 tpd in the long term.

Implemented between 2024 and 2025, the investment is a direct response to the market's growing expectations around product quality, production flexibility, and sustainable development.

Robert Janeczko, Head of Business Unit Glass and President of the Management Board of Qemetica Glass in Iłowa, said: "We have rebuilt the furnace, which for years has been at the heart of the Qemetica Glass plant in Iłowa.

"This is a step that aligns with both our business and ESG goals, as well as meeting the growing customer expectations for responsibly sourced products."

Qemetica Glass said the furnace rebuild is a key component of its long-term business development strategy for its glass division.

By 2029, the company aims to reduce its CO_2 emissions by 20% compared to 2019 levels (from 20,000 to 16,000 tonnes annually).

This objective will be achieved through decreased natural gas consumption, increased use of cullet in production, and the planned implementation of renewable energy sources, including photovoltaic (PV) installations.

In addition, the investment in the advanced forming lines will increase the efficiency and quality of container glass production.

The deployment of two automated Individual Section (IS) machines, equipped with intelligent process control systems, enables precise droplet forming, reduced material losses, and shorter production cycles.

New product capabilities

As a result of the completed investment, Qemetica Glass can now expand its product portfolio to include new types of glass packaging, such as twist-off jars and bottles.

At the same time, the company continues to strengthen its core segment – the production of glass lanterns and Comfort jars.

By the end of 2025, the company also plans to implement an advanced Warehouse Management System (WMS), further supporting the digitalisation of its operational processes.

Qemetica Glass is part of chemical group Qemetica, which creates products such as soda ash, a vital raw material for glass production.

SGD Pharma publishes sustainability report

SGD Pharma publishes sustainability report Pharmaceutical glass manufacturer SGD Pharma has released its 2024 Sustainability Report.

SGD Pharma has made advancements in its CSR performance outlined in the report, including:

• 87/100 Platinum EcoVadis rating, the company's highest ever score placing it in the top 1% of glass manufacturers in the world

• Uplifted Science Based Targets initiative (SBTi) targets approved (42% reductions by 2030 instead of 35%)

• Scores of B and B- respectively in the CDP Climate Change and Water Security programs

• 100% of SGD Pharma's global manufacturing sites in France, China, India and Germany are ISO 14001, ISO 45001 and ISO 50001 certified

• 1000 accident-free days at the Zhanjiang (ZJ), China plant

• 10,000 mangrove trees planted in China in 2024.

The 2024 Sustainability Report celebrates SGD Pharma's decarbonisation efforts.

CEO Olivier Rousseau said: "In line with the 1.5°C scenario, we aim to achieve a 42% reduction in Scope 1 & 2 carbon emissions (up from 35%) and a 25% reduction in Scope 3 emissions by 2030.

"We've already made steps towards achieving these targets across our global manufacturing plants: the Saint-Quentin-Lamotte plant in France boasts a fully electric furnace and an oxy-fuel combustion furnace with electrical boosting while our site in Zhanjiang, China, has recently undergone a furnace rebuild to optimise energy efficiency.

"We look forward to further increasing the share of renewable energy in our operations to reduce SGD Pharma's carbon footprint further."

For the first time, this year's report is voluntarily aligned with the Corporate Sustainability Reporting Directive (CSRD), an achievement made possible through a Double Materiality Assessment (DMA) and gap analysis undertaken in 2024 in collaboration with an independent third party.

The DMA investigated SGD Pharma's entire upstream and downstream value chain to identify key environmental, governance and social as well as financial risks.

These were then factored into business decisions to mitigate negative impact while leveraging opportunities for sustainable growth.

Investigations into greenhouse gas (GHG) emissions identified potential factors that could decrease emissions further.

SGD Pharma will regularly review and update its decarbonization strategy to assess and manage these risks.

As part of the DMA, SGD Pharma also completed a living wage analysis across all its manufacturing sites and offices to ensure fair remuneration for all employees.

Over the last year, SGD Pharma has enhanced its social strategy to maintain the highest levels of employee health, safety and wellbeing across the globe.

A new and comprehensive management training

curriculum has been designed and is deployed in all our geographies to support company-wide employee development.

Attendance of events, such as 'He for She 2024' in China, and participation in initiatives, including the UN Women's Empowerment Principles (WEP), demonstrate SGD Pharma's continued commitment to equality and inclusion.

Your Voice, the company's employee engagement survey, has now been implemented across all its geographies (France, China, India and Germany), allowing the company to respond to employee feedback more effectively and deploy relevant action plans.

SGD Pharma works to promote sustainable practices within its supply chain.

For example, Europe Supplier Day 2024 brought together nearly 100 stakeholders from across the glass and sustainability ecosystem to foster collaboration on sustainable development goals.

For the fifth consecutive year, SGD Pharma has supported the UN Global Compact and aligned its CSR strategy with its ten main principles.

In doing so, the company illustrates its dedication to human rights, environmental protection and anti-corruption across all aspects of the business.

Verallia launches 100% recycled glass packaging

Verallia launches 100% recycled glass packaging Verallia UK has unveiled Vista, a packaging solution made from 100% Post-Consumer Recycled (PCR) glass.

From used bottles to windshields, every piece is reclaimed and transformed into glass packaging without hindering quality.

York Gin is the first brand to adopt Vista, applying the fully recycled glass to its latest packaging design.

Nolan Kane, Head of Marketing & Emerging Brands at Verallia UK, said: "Creating 100% PCR glass bottles in the UK is a positive step forward for our industry and Verallia's commitment to sustainability.

"Verallia has been making bottles in Yorkshire for over 150 years, and the launch of Vista by Verallia is an exciting step forward."

The project aligns with companies long-term sustainability goals, offering packaging with a lower environmental footprint.

Recycled glass melts at a lower temperature than virgin glass, meaning less energy is consumed in the production phase, and consequently less carbon emissions are released.

Consequently, Verallia has established 19 cullet processing centres across eight countries.

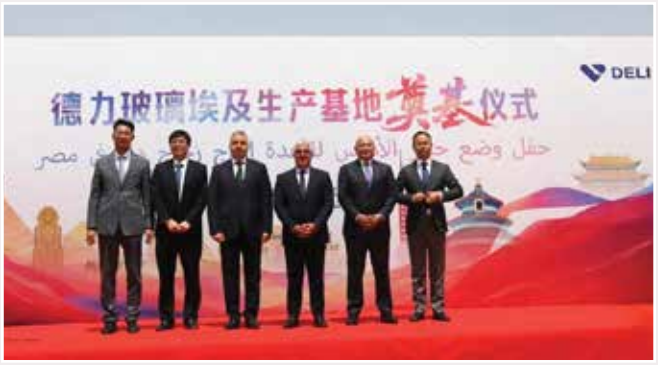
These facilities sort, clean and prepare used glass to be made into packaging.

Many Verallia plants recycle all of their internal cullet and are dedicated to reusing cullet collected from consumers wherever possible.

These efforts have allowed Verallia to increase the amount of recycled glass it uses.

In 2023 alone, Verallia used an additional 227,000 tonnes of cullet compared to 2019, equating to more than 54,000 tonnes of CO_2 emissions avoided.

China's Anhui Deli breaks ground on $70 million glassware facility



China's Anhui Deli has broken ground on an Egyptian glassware facility.

The foundation stone for the Deli Egypt project for household glassware took place in Sokhna.

The site is on a 120,000m2 plot in the TEDA Egypt industrial zone

The investment cost is $70 million, equivalent to EGY3.5 billion.

The project provides 500 direct job opportunities and aims to export 80% of its production abroad.

The project will be implemented in two phases with the first phase expected to open during the second half of 2026.

The ceremony was attended by Mr. Weidong Shi, Chairman of the Board of Directors of Deli, Mr. Yu Li, CEO of the company, and Mr. Walid Gamal El-Din, Chairman of the General Authority for the Suez Canal Economic Zone,

Mr. Walid Gamal El-Din stated this investment reflects the success of the partnership between the economic zone and its investor partners, especially the Chinese ones.

This is due to the strategic relations between Egypt and China, in light of the support provided by the political leadership of both countries, he said.

UK medical glass facility secures new machinery

SINA Medical Glass has received the delivery of two machines to its glass production site in St Helens, UK.

The delivery marks the first phase in the creation of the modern medical glass manufacturing facility.

The site is expected to deliver approximately 180 jobs.

SINA Medical Glass is receiving £5.5 million as part of the St Helens Town Deal, with support from Glass Futures and shareholding partners SGC Group Intl Limited and Hambleden Capital.

The project has already seen the completed refitting of the former distribution warehouse.

Walter Coxon, Director of SINA Medical Glass

said: "We are very pleased with the progress we have made in setting up the SINA Medical Glass facility.

“We are very grateful for the support from the St Helens Borough Council and the Liverpool City Region Combined Authority in getting us to this stage.

“We look forward to the build-up to full production at the site, both in delivering new jobs to the community and ensuring security of UK supply for medical glass packaging.”

The SINA Medical Glass site will eventually have the capacity to manufacture approximately 300 million glass containers a year.

This is enough to meet the UK's domestic demand of 150-200 million annually, with the surplus to be exported to meet global demand.

SINA is currently recruiting and will work closely with Glass Futures, as well as local employment and training providers, to ensure that local residents are supported into accessing these roles.

Ciner Glass secures €504 million for Belgian glass plant

A 3D model of Ciner Glass's container glass production facility in Lommel, Belgium.

Ciner Glass has signed a €504 million financing agreement to support the development of its container glass production facility in Lommel, Belgium.

The project marks one of the largest foreign direct investments in Belgium in the past decade.

The financing will support the development of the new glass packaging production facility, which will feature two high-capacity furnaces.

Each furnace will a capacity of 650 tpd, feeding a total of eight production lines.

Once fully operational, the plant will reach a total capacity of 1,300 tpd.

It will create approximately 500 jobs, as well as contributing to the local economy and the European container glass supply chain.

Gökhan Şen, CEO of Ciner Glass, said: “This investment is a significant milestone for Ciner Glass and a testament to our long-term vision for sustainable industrial growth in Europe.

“We are proud to bring one of the most advanced container glass production facilities to Belgium, creating hundreds of jobs and delivering high-quality, environmentally responsible products to our customers.”

The €504 million financing package comprises of:

€252 million in ECA-backed facilities, supported by SACE, UK Export Finance, and SERV.
€252 million in commercial facilities, with a portion guaranteed by Gigarant.
Construction at the Lommel site continues to progress at speed, with the plant expected to be up and running in the second quarter of 2026.

The second furnace is scheduled to become operational in 2027, bringing the plant to full capacity.

The group also recently welcomed its first new hires at the Lommel site, as part of Ciner Glass’ recruitment drive to employ and support job opportunities for people in the local community.

Qemetica invests PLN 70 million in Polish glass facility

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Quality You Can Prove: The Power of In-House Testing at Thermoseal Group

Thermoseal Group's Sales Director, Mark Hickox, explains why having an in-house lab is vital to the component manufacturer's success.

At Thermoseal Group, we've never been content with just meeting the minimum. When it comes to the performance of our IGU components, we've always believed in doing things properly - and that means putting every product we make through its paces before it reaches our customers.

That's why we established our own in-house laboratory. While many of our competitors still rely on external testing facilities, we've brought quality control, material analysis, and performance testing in-house, complete with a polymer chemist to run the testing.

But why would go to this additional expense, when we could just do what our competitors do? Because we believe our customers deserve complete transparency, and products they can depend on.

Inside our lab, every product - be it a spacer, corner key, or hot melt - is tested thoroughly to ensure it lives up to the demands of real-world application.

For example, with our hot melt, we run solvent extraction using a Soxhlet station to check for anything that might leach out of our materials. That means we can pinpoint any unwanted impurities before a product ever goes to market.

We also use gas chromatography-mass spectrometry (GCMS) to examine its chemical structure which allows us to see exactly what's in a formulation, how many components are present, and in what concentrations.

To back that up, we measure hot melt density to make sure our customers receive the correct volume per block or drum - no guesswork involved.

But we know that testing in a controlled lab environment doesn't replicate the real-world.

That's why we simulate long-term performance using tensometers to test adhesion strength after weathering, UV exposure, and water immersion. We even age our test units in-house so we can see how they perform after seven days immersed in water, or after prolonged exposure to different environments, for example.

The result? We don't just test against standards like EN1279 - we prepare our products to exceed them.

Having everything under one roof means we can react faster, develop better, and offer full traceability. There are no delays waiting on external labs, no compromises on quality, and no blind spots. It's this level of control and accountability that allows us to deliver the consistency our customers expect, and it's something we're extremely proud of.

For us, an in-house laboratory isn't just a box-ticking exercise. It's an essential part of what makes us different. It's how we prove, every day, that quality isn't just a promise; it's a process.

SOGEVAC SV55/70 BI2 from LEYBOLD – the two new roughing pumps for analytical applications

Intelligent, quiet and low-maintenance

Cologne, June 2025 – Leybold has launched two new versions of its renowned oil-sealed rotary vane pumps for analytical applications. The new developments are characterized by their high pumping speed, low noise level and maintenance intervals of up to 24,000 hours in LC or GC MS applications (Liquid or Gas Chromatography-Mass Spectrometry). The SV BI2 sets new Standards in sustainability, compactness, reliability and ease of use.

Precise performance, maximum operating time

Equipped with an integrated frequency converter, the SOGEVAC BI2 also has flexible speed control. This allows the rotary vane pumps to be easily adapted to the respective process requirements. LEYBOLD synthetic oils allow maintenance free operation up to 3 years / 24'000 hours in LC or GC MS.

Up to 38 percent less power consumption

"With the help of power consumption monitoring, users also have a real-time overview of the power consumption and pump temperature at all times," says the responsible Product Manager Laurent Furrer, explaining the user-friendly features. Thanks to the lower generator speeds, quiet operation can be guaranteed across the entire pressure range of the SOGEVAC BI2. "The bottom line is that the new backing pumps consume up to 38 percent less electricity on average. CO2 emissions are also noticeably reduced," adds Furrer.

Compact design thanks to integrated permanent magnet motor

The SOGEVAC BI2 offers more installation space thanks to its compact design. "In terms of design, we have also achieved this by integrating the permanent magnet motor and redesigning the oil casing. The pump volume & weight are almost divided by 2!" reports Laurent Furrer Product Manager.
Intelligent and sustainable packaging increase ease of use and user safety

Positive for transport and commissioning: The packaging made of recyclable, biodegradable material has shock indicators for optimum pump protection. A hinged unloading ramp enables easy and safe unpacking. Thanks to the mobile design and the handles on the oil casing cover, the new SOGEVAC BI2 can be transported and installed easily and safely. No need lifting of the pump what avoids potential health & safety risks for the users.

Important advantges of the SOGEVAC BI2 at a glance:

– Significant cost of ownership and CO2 reduction for Laboratory operation – Up to 38 percent less power consumption
– Up to 46 percent lighter
– Quieter operation

– Very compact size, pump mobility, more flexibility
– Integrated frequency converter, very low inrush current
– Up to three years/24,000 hours of maintenance-free operation on LC or GC MS.

The SOGEVAC BI2 offers more installation space thanks to its compact design.

Government Visit to Glass Futures Highlights National Collaboration for a Net Zero Future

Glass Futures welcomed Minister Sarah Jones MP today, highlighting the vital role of national innovation assets in driving the UK's Industrial Strategy and accelerating the transition to net zero.

Sarah Jones MP, Minister of State with joint responsibilities across the Department for Energy Security and Net Zero (DESNZ) and the Department for Business and Trade (DBT) visited Glass Futures to spotlight the critical role national assets play in delivering the UK's Industrial Strategy and net zero ambitions.

Glass Futures, a world-leading centre of excellence in glass manufacturing and innovation, exemplifies how collaboration between government, industry, and academia can accelerate clean growth, drive regional economic development, and support the UK's global competitiveness.

Minister for Industry, Sarah Jones, said: "The Glass Futures facility is an innovative example of how we can decarbonise industry, providing proud manufacturing communities with good jobs and skills for working people. Through our modern industrial strategy, we are advancing clean technologies of the future in places like St Helens - all part of our mission to make Britain a clean energy superpower."

The visit underscored how Glass Futures aligns the UK's Modern Industrial Strategy, specialising in the scaling of innovation to create lasting impact. By fostering cutting-edge research and innovation, and acting as a demonstration platform for next generation technologies in an industrial application, the centre is helping to decarbonise manufacturing while creating high-quality jobs and skills in the North West and beyond.

Dr Sarah Harrold, Head of Government and Strategy Engagement at Glass Futures, commented:
"Glass Futures is a living example of what's possible when government, industry, and academia collaborate. Our model accelerates innovation, aligns research with real-world industrial needs, and creates a scalable blueprint for other sectors. We're proud to be helping shape a cleaner, more competitive future for UK manufacturing and beyond."

Cllr Kate Groucutt, Deputy Leader of St Helens Council, added: "We are delighted to continue our support for Glass Futures and witness their dedication to innovation and clean technology. Their presence in St Helens reinforces our borough's position as a hub for advanced manufacturing innovation and sustainable growth, and we're proud to be part of this journey toward a greener, more prosperous future for industries."

The visit also highlighted the importance of a sustainable green transition—ensuring that workers and communities are supported as the UK moves toward a low-carbon economy. Through its collaborative model, Glass Futures is not only advancing technology but showing how public-private partnerships can enhance the resilience of critical industries within the UK.

Viridian Glass and LiSEC: Partnering for Innovation and Automation in Australia

Viridian Glass is future-proofing its production with LiSEC's advanced automation solutions.

Viridian Glass works at the cutting edge. The company, which can reflect back on a long history in glass processing, keeps a constant an eye on the latest trends and developments. "The change to Australian building regulations has resulted in higher thermal efficiency requirements for new residential buildings. Over time, this will lead to significantly higher market penetration for double glazed units," says Dean Haritos, CEO of Viridian Glass, "Viridian has invested in in-house capability and capacity over many years to meet this demand. As the market continues to evolve, we will ensure that our facilities are optimised to efficiently meet the needs of our customers."

LiSECLiSEC KSR at the Viridian Glass factory © LiSEC

Implementing new trends in everyday production

In order to meet these new developments as part of the digital transformation, it is also important to scrutinise existing production equipment. "We are currently examining a comprehensive modernisation of one of our most important facilities and LiSEC is working with us to plan this measure. We are using LiSEC's expertise to guarantee that we optimise the product flow and achieve the right balance between automation and production flexibility. LiSEC is also helping us decide how best to initiate and implement this upgrade to minimise disruption to our business," explains Dean Haritos, who already relies on LiSEC for existing equipment and automation.

Dean Haritos, CEO of Viridian Glass (left), and Tarun Bhatia, National OPEX Manager (right) © LiSEC

The centrepieces of the Viridian Glass production facility are the automated LiSEC cutting systems. "Our automated lines start with a LiSEC PKL, which is connected to several cutting tables that allow X, Y and Z breakouts, and which subsequently feed the LiSEC KSR. These systems enable us to deliver a consistently high quantity of quality glass to the tempering oven, resulting in an increased

output of finished products."

Viridian was one of the first LiSEC customers in the world to connect a tempering oven fully automatically, eliminating the need for operators. The tempering bed is generated and loaded automatically. Production is therefore practically fully automated from the raw glass to the finished insulating glass unit.

Downstream of the LiSEC PKL with remnant plate storage is a LiSEC ESL-RS with automatic X-breakout, which supplies the LiSEC KSR and KSV glass edge grinding and edging systems fully automatically, and a LiSEC GFB-VB cutting table for laminated glass.

With the LiSEC PKL/SBL, Viridian Glass has the option of unloading the raw glass sheets directly from the inner loader frame, which is delivered by HGV and placed in glass storage, and transporting the sheets to the stationary LiSEC ATL glass loading station. The laminated glass is fed into the float line and travels past the oven via a bypass into the sorting system, which feeds the insulating glass line.

LiSEC PKL connected to multiple cutting tables at Viridian Glass © LiSEC

Highly automated production at Viridian Glass
Highly automated work is not only an advantage in view of the ongoing shortage of skilled labour; consistently high quality is also important to Viridian Glass in enabling the company to realise its strategy and vision. For Viridian Glass, trustworthy cooperation with its customers is central to its business activities. It forms the basis for the company's undertaking to it customers: Obsessive customer focus, the furthest-reaching presence and the most extensive production capacities, as well as industry-leading expertise and technological support for all challenges.

The automated LiSEC cutting systems at Viridian Glass © LiSEC

This requires a strong partner for the machines and solutions used in production. "A true test of cooperation is when things are not going well. During these times, LiSEC has taken responsibility and worked hard to get the right result for our company," says Dean Haritos on working with the LiSEC team. "LiSEC has the advantage of offering fully integrated machine and software solutions. This means we have one point of contact for any problems that arise. Furthermore, the business relationship with LiSEC has grown over the years – right up to management level. Gottfried Brunbauer and Oliver Pichler are an important element of the cooperation between LiSEC and Viridian. We feel listened to and supported when issues come up. That's what defines a good partnership."

As the largest glass processor in Australia, it is important for Viridian Glass to stay at the forefront of innovation. This is possible with the right employees and the right partners – like LiSEC – who can make a significant contribution, particularly in terms of quality and efficiency, and also when it comes to collaboration and exchange.

European partners unite to deliver Ukraine float glass plant

Caption: At the Ukraine Recovery Conference (URC) 2025 in Rome. From left to right: Philipp Zippe, CEO of Zippe; Stephan Meindl, CEO of Horn Glass Industries; Igor Liski, CEO of NovaSklo and Founder of the EFI Group; and Alberto Masoero, Executive Director Sales, Marketing & After Sales for Flat Glass at Bottero.

NovaSklo has signed co-operation agreement with Horn, Bottero, and Zippe for its float glass manufacturing plant in Ukraine.

The agreement was signed at the Ukraine Recovery Conference (URC) 2025 in Rome, laying the foundation for a strategic partnership within the NovaSklo Project framework.

The partners will collaborate on engineering, project management, and equipment supply.

The €240 million project is initiated by Ukrainian investment company EFI Group, with support from UkraineInvest and Ukraine's Ministry of Economy.

The float glass plant is scheduled to be built in the Kyiv region by 2028.

Igor Liski, CEO of NovaSklo and founder of the EFI Group, said: “Ukraine's recovery must be based on modern industry and partnerships that bring technologies, experience, and mutual growth.

“I am convinced that NovaSklo will become the foundation for the sustainable development of Ukraine's construction industry.

“Our comprehensive strategic partnership is an excellent example that investing in Ukraine is needed right now.”

NovaSklo serves as the project's lead developer and is responsible for co-ordinating all phases and integrating partners' contributions into the plant's development strategy.

Horn Glass Industries, Bottero, and Zippe have started providing engineering and project services, including technical design, equipment configuration, and engineering expertise in their respective areas.

The plant aims to reduce dependence on float glass imports and create a foundation for exporting high-quality products.

The facility's production capacity will amount to 24.8 million m2 of glass per year.

The plant will utilise its deposit of quartz sand, which has the highest quality indicators in the country, specifically for the production of ultra-clear structural float glass.

The team has already secured the land plot for the facility and signed an agreement with the general design contractor.

This multilateral agreement provides for technical consulting, engineering support, and equipment configuration development during the plant's planning and design phases.

Final terms for equipment and technology supply will be outlined in separate commercial agreements.

Olha Batova, CEO of the EFI Group, added that the team has secured a technical partnership agreement with a float glass manufacturer, and expects to sign the agreement in the near future.

NEXT Energy Installs First-Ever Large Format Building Integrated Organic Photovoltaic (BIPV) Façade

This milestone proves the potential of the technology: it is sustainable, scalable, attractive, and ready to transform the built environment.

NEXT Energy Technologies, Inc. has accomplished another significant milestone toward commercialization of NEXT's BIPV solution, with the first installation of a commercial facade Powered by NEXT transparent OPV coatings at its headquarters in Santa Barbara, California.

The groundbreaking installation features six transparent photovoltaic (PV) windows, each measuring 40 by 60 inches, for a total of 100 square feet of NEXT's proprietary energy-generating glass. This marks the world's first installation of its kind: a Building Integrated PV (BIPV) facade featuring organic photovoltaic (OPV) coatings developed by NEXT.

Each insulating glass unit (IGU) incorporates NEXT's OPV coating on the outboard lite and runs cables through the framing system. The high-performance windows were fabricated with Low-e coated inboard lites and spacers supplied by Viracon. Walters & Wolf designed, supplied, and installed the framing system as part of the facade integration, showcasing NEXT's seamless integration into the window fabrication supply chain.

"The successful scaling of NEXT's OPV technology, both on glass and in facades, takes NEXT and the industry closer to a future of sustainable building design," said Daniel Emmett, CEO, Executive Chairman, and Co-Founder of NEXT. "We're incredibly proud of the quality of the coating, the seamless installation, and the power generation performance we're already seeing from this first facade installation."

Installed at the company's Santa Barbara headquarters, the windows now offer architects, developers, and industry stakeholders a real-world demonstration of NEXT's aesthetic, energy-producing glass in action. Visitors can see the seamless integration of solar technology into a standard commercial facade and observe firsthand how the system generates power while maintaining transparency and design flexibility.

"This is the first of many," added Jonathan Hafemann, NEXT's VP, Commercialization & Growth. "We're thrilled to share this tangible demonstration of our vision for energy-generating facades, and to invite the industry to imagine what's possible when windows do more than just manage heat gain and U-Value."

NEXT's transparent organic photovoltaic (OPV) technology enables commercial windows to generate solar energy, turning building facades into on-site power sources. This innovation supports greater energy efficiency, generates clean power at the point of use, enhances building resilience, and helps improve grid efficiency.

When integrated into a building, a NEXT OPV facade can generate enough electricity to offset approximately 20–25% of the energy consumption typical of commercial properties while leveraging the existing infrastructure of a commercial facade. By capturing and converting infrared light, the windows also help lower indoor cooling demands, easing the load on HVAC systems.

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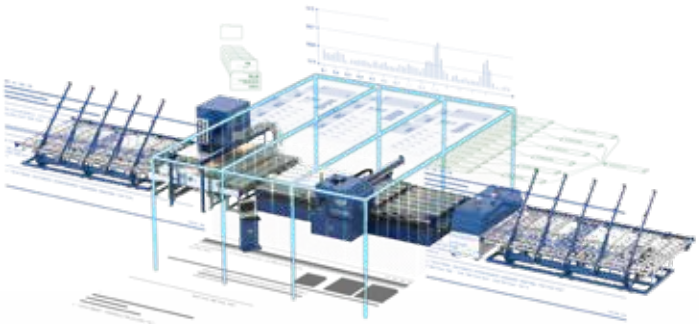
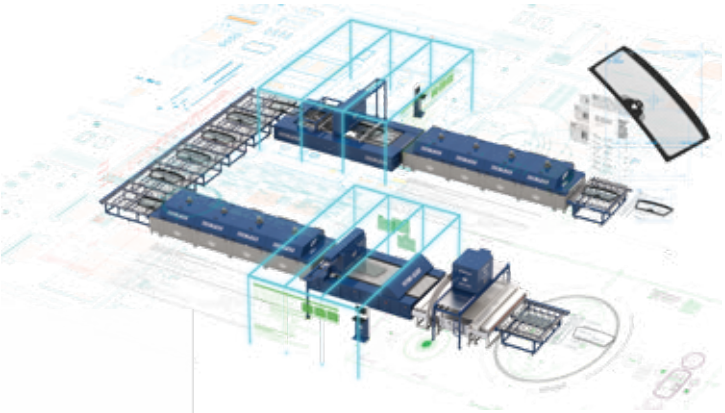


Automotive



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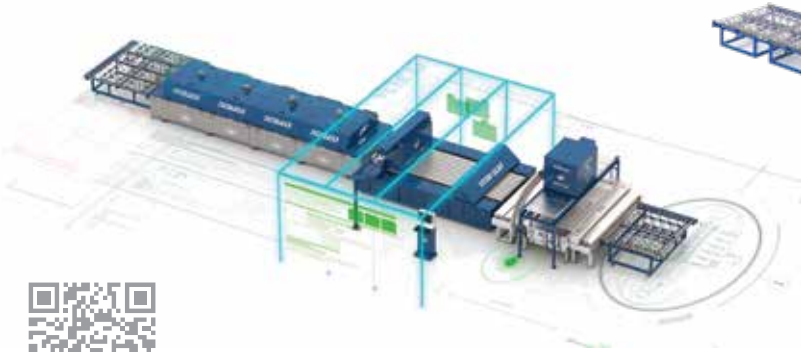

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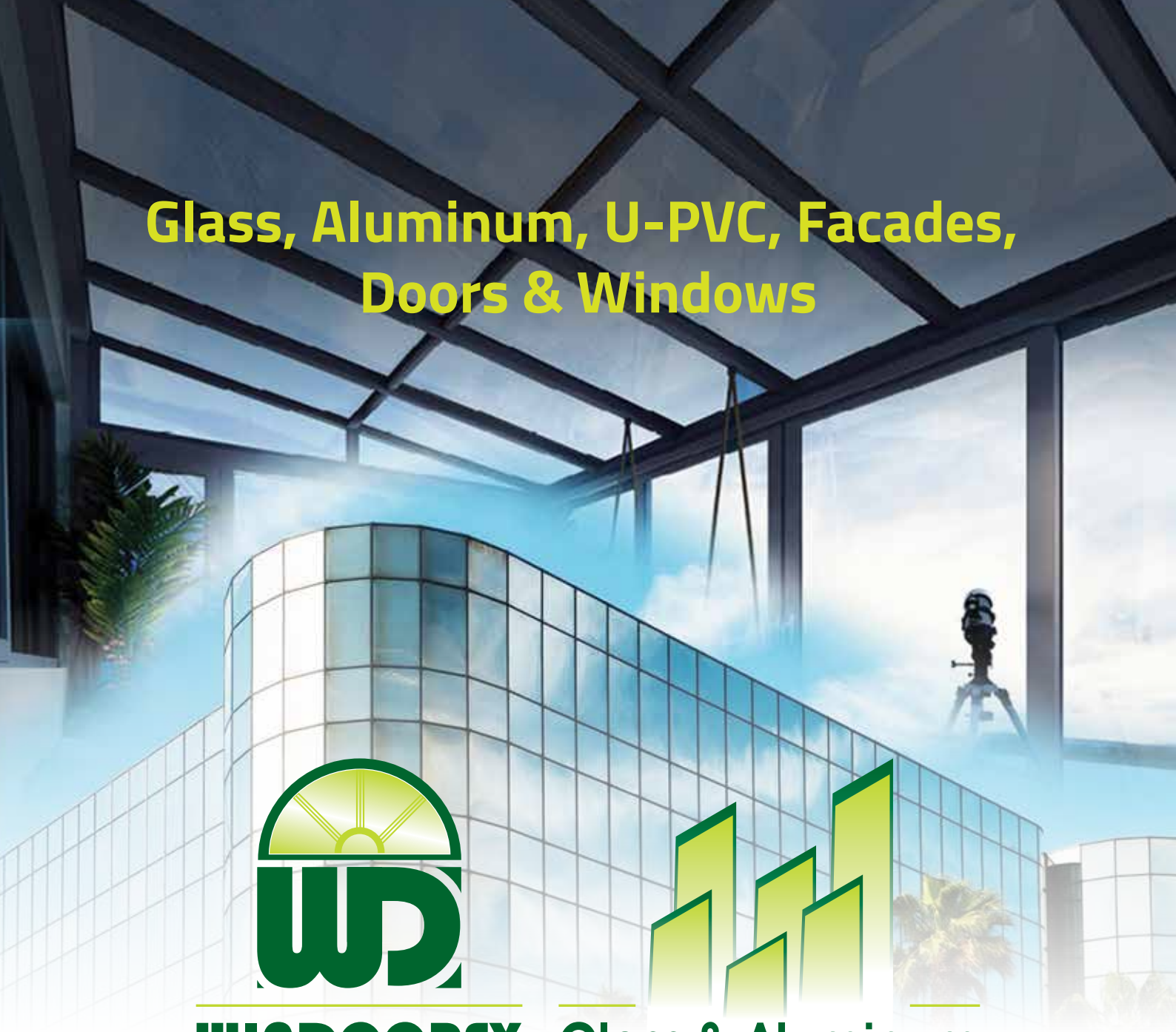

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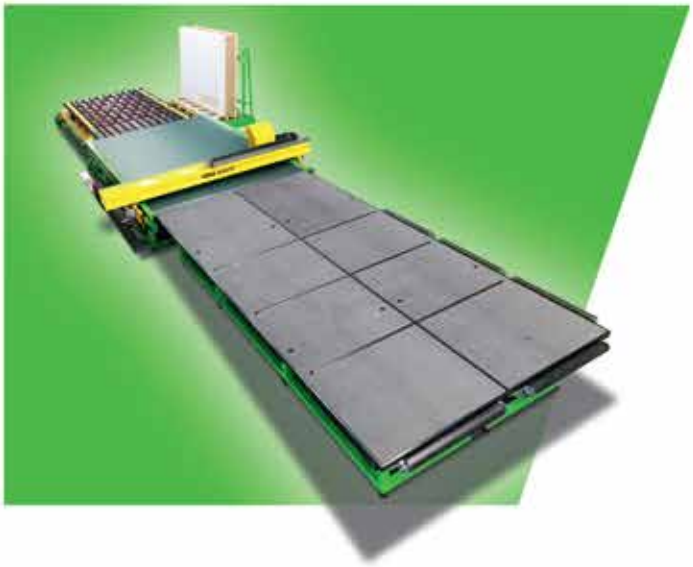

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