Glass-Technology International

THE LEADING MAGAZINE FOR THE INTERNATIONAL FLAT GLASS INDUSTRY

July/August • Year 36 • No. 4/2025

SPECIAL VITRUM 25 PREVIEW 2025

REVOLUTIONIZING LAMINATION: **IOCCO** SETS A NEW STANDARD WITH VACUUM BAG TECHNOLOGY

VITRUM 2025 TO HAVE **GLASTON** EXHIBITING BOTH INTELLIGENCE AND EFFICIENCY

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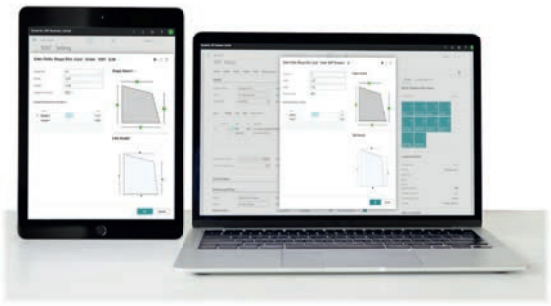

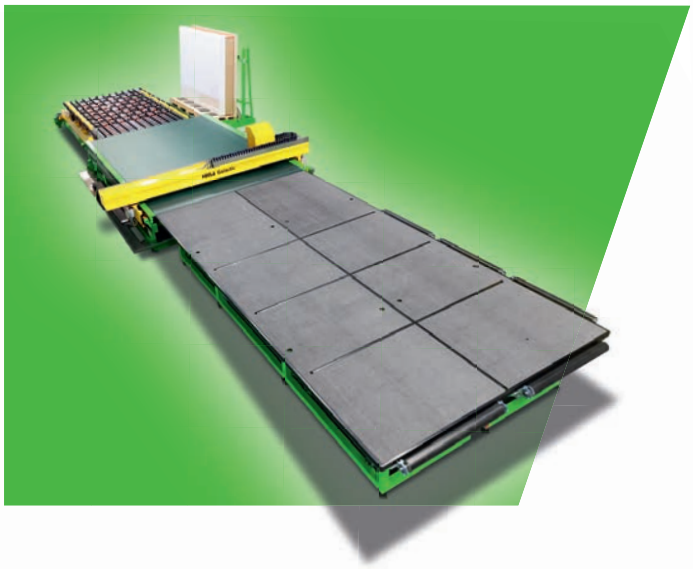

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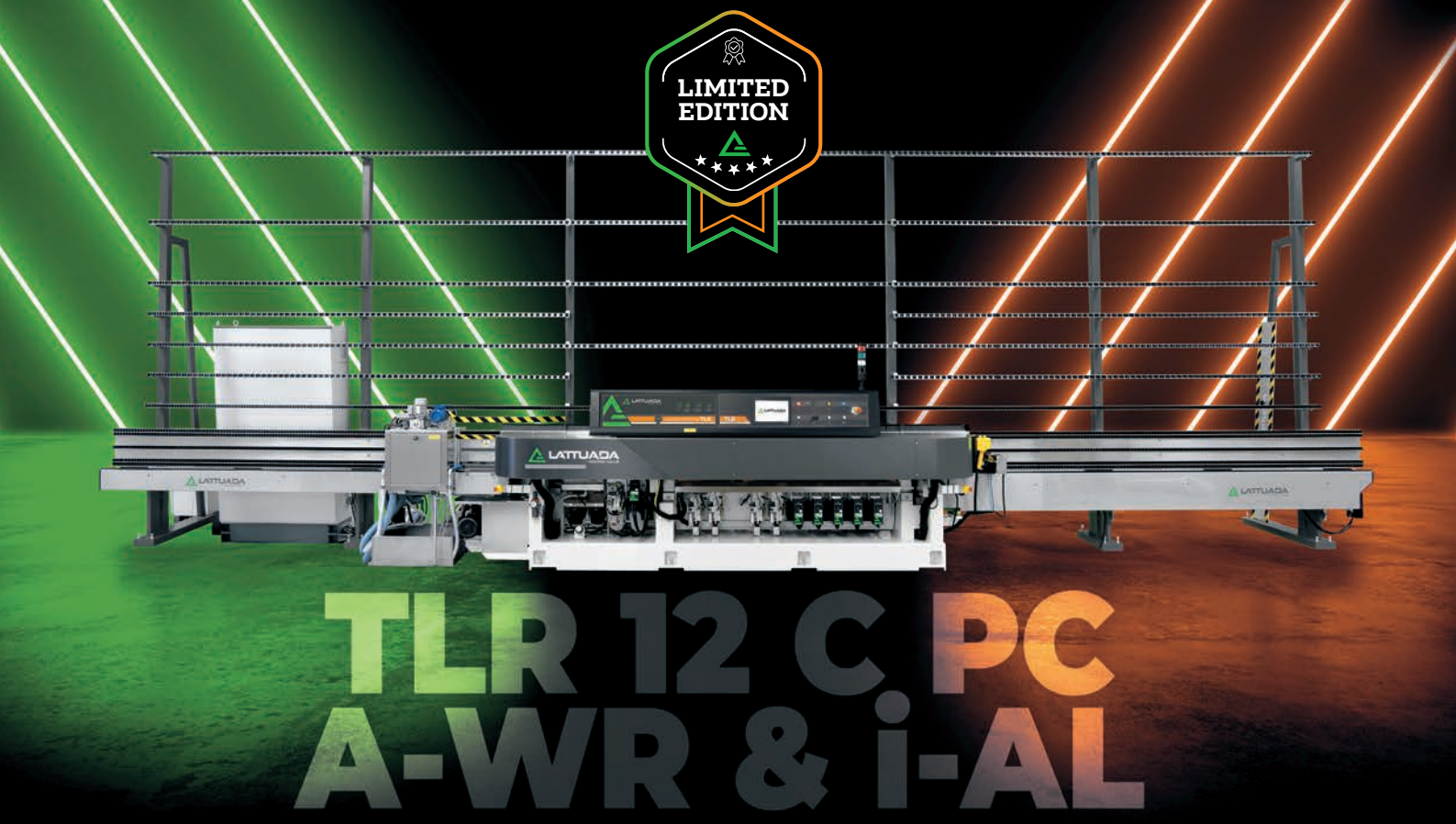

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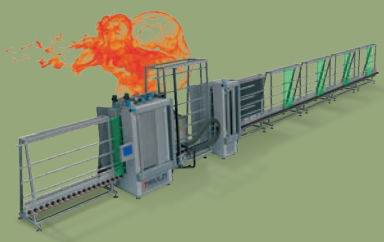

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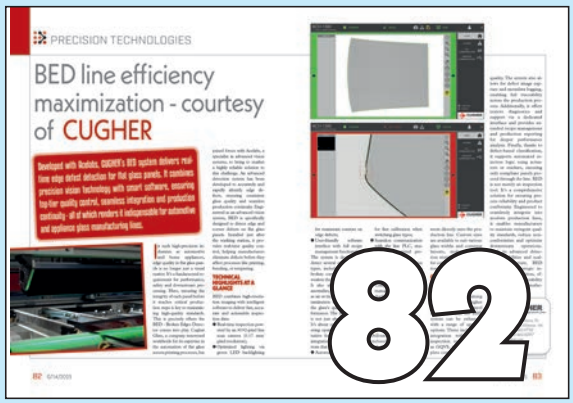

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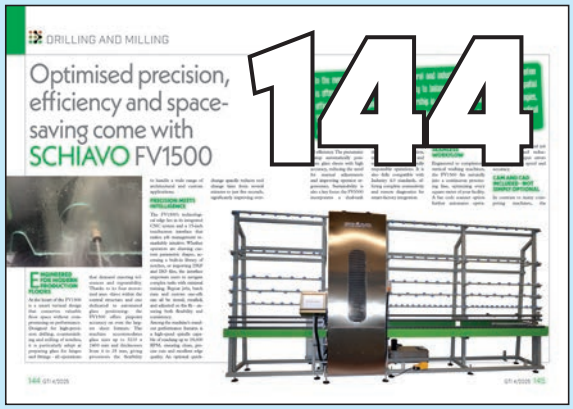

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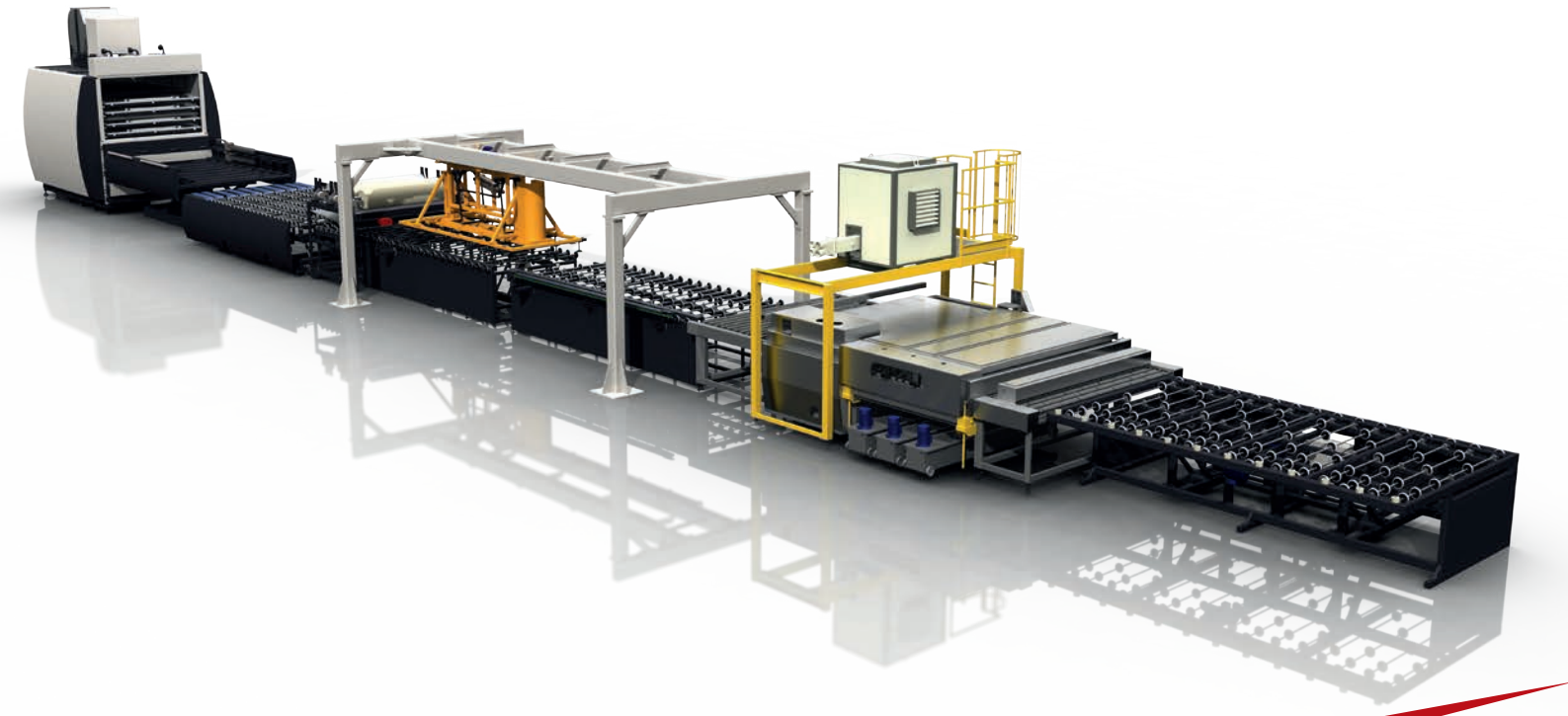

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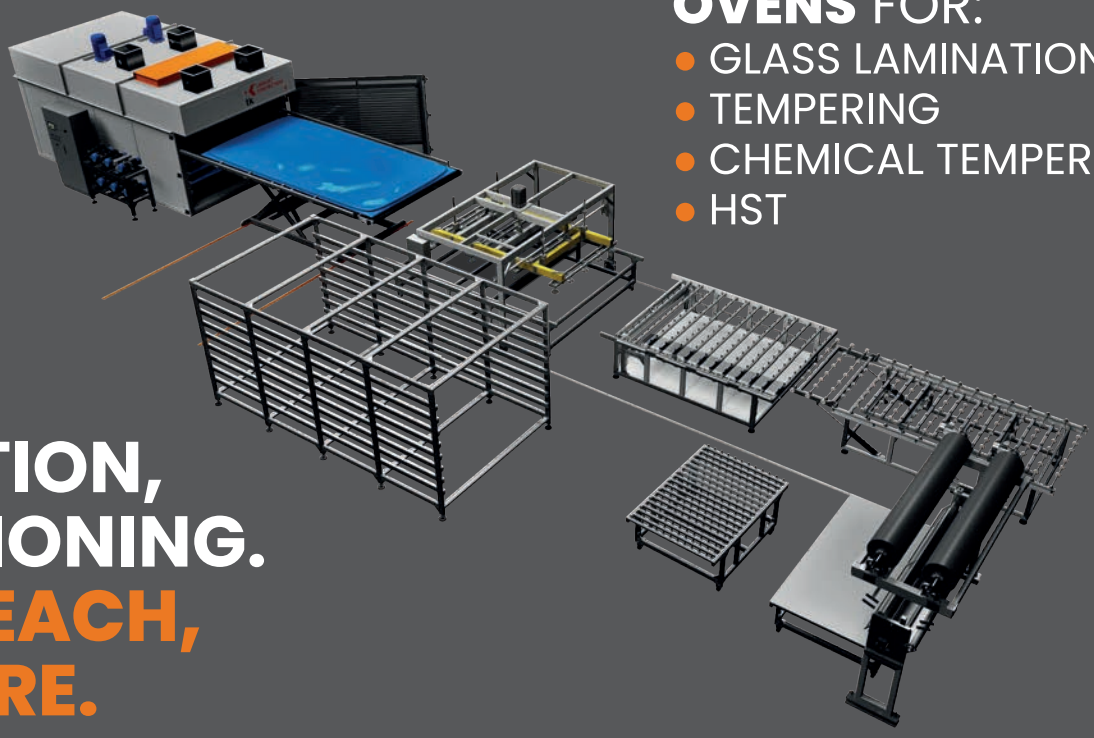

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2025 TRADE FAIRS CALENDAR

The magazine will be distributed at the following Events

issue	exhibition/conference	date	venue	deadlines
2025	FLAT GLASS 2025 world directory			Editorial files: 31-01-2025 Deadline Adv files: 10-02-2025
2025 1	AUTOMOTIVE GLASS FORUM 3rd EDITION	16 April	BOLOGNA Italy	
	FIT SHOW	29 April 1 May	BIRMINGHAM United Kingdom	Editorial files: 14-03-2025 Deadline Adv files: 21-03-2025
	GLASS TEXPO	7-8 May	SAN ANTONIO (TX) USA	
2025 2	GLASSTECH CANADA	14-15 May	TORONTO Canada	
	CONSTRUMAT	20-22 May	BARCELONA Spain	Editorial files: 11-04-2025 Deadline Adv files: 18-04-2025
	CHINA GLASS	26-29 May	BEIJING China	
2025 3	GPD - GLASS PERFORMANCE DAYS	10-12 June	TAMPERE Finland	Editorial files: 16-05-2025 Deadline Adv files: 21-05-2025
	GLASSTECH MEXICO	16-18 July	MEXICO CITY Mexico	
2025 4	GLASS SOUTH AMERICA	3-6 September	SAO PAULO Brazil	
	GLASSPRO INDIA	10-12 September	MUMBAI India	
	VITRUM	16-19 September	MILAN Italy	Editorial files: 23-07-2025 Deadline Adv files: 31-07-2025
	ALL VITRUM EXHIBITORS ADVERTISING IN THIS ISSUE ALSO RECEIVE A FREE VITRUM PREVIEW			
2025 5	GLASSBUILD AMERICA	4-6 November	ORLANDO (FL) USA	Editorial files: 22-09-2025 Deadline Adv files: 26-09-2025
	GLASSTECH ASIA	6-9 November	JAKARTA Indonesia	
2025 6	EURASIA GLASS	15-18 November	ISTANBUL Turkey	Editorial files: 15-10-2025 Deadline Adv files: 20-10-2025
	ZAK GLASS TECHNOLOGY	4-7 December	MUMBAI India	

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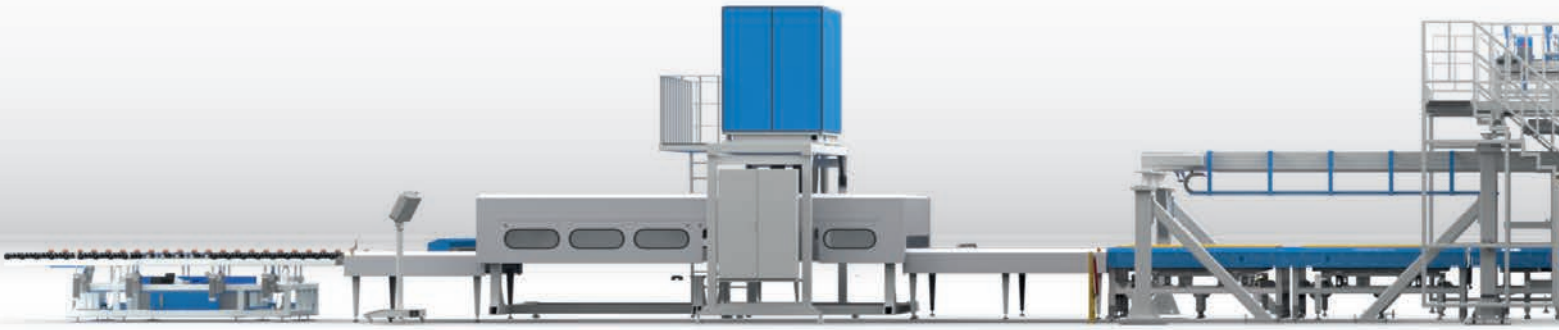

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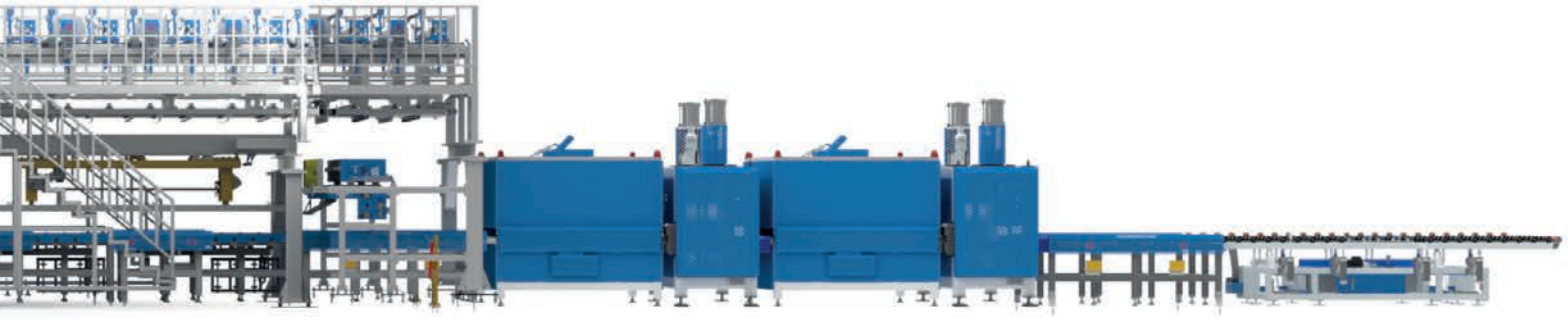

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CLEARVIEW

Yorkshire window manufacturer celebrates 15 years of growth

A Yorkshire-based window manufacturer in the UK, **Clearview** is celebrating its fifteenth year of operation. The firm is one of the region's leading manufacturers and installers of high-quality doors, windows and roofing systems, with showrooms in both Huddersfield and Leeds.

The company has experienced significant growth within its team, originally formed with three members of staff, it has now grown to a 21-strong team. The past 15 years have also seen Clearview expand to larger premises to align with the company's continued growth.

Clearview began manufacturing in 2010 from a 3,500 square foot unit within the Meltham Mills Industrial Estate. After three years, the firm outgrew this unit, moving to an 8,800 square foot premises, facilitating the company's ability to grow further. Today, the windows and door manufacturer is based in a modern 20,000 square foot building in Slaithwaite, on the outskirts of Huddersfield.

Over the past 15 years, Clearview has made key investments in machinery, workshop upgrades, and a CRM system to improve production and customer management. The company also supports employee development through apprenticeship programmes and expanded with a second showroom in Leeds in 2022. Other contributing success factors include new product lines, investments in the Leeds and Huddersfield showrooms, and regular exhibitions at Home Building and Renovating shows.

Paul Oxley, Managing Director of Clearview, said, "To mark this milestone anniversary, we'll be celebrating with a special evening out with our team, including a fantastic curry at one of the best restaurants in the area, 'Destination' in Slaithwaite. Beyond that, we remain focused on continually improving and refining our operations to stay ahead of the competition and uphold our industry-leading standards. Looking ahead to the future, the main aim will be to continue to grow financially through our existing reputation within the industry and the introduction of new product lines. We will also be looking at prioritising certification and staff training as areas to develop within the company."

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VITROPOR

Investment in digital glass printing with Tecglass technology

Vitropor Sociedade Portuguesa de Vidro Temperado - was established in 1990 in the municipality of Valongo, district of Oporto, Portugal. With more than 30 years of know-how and background experience, Vitropor distinguished itself above all in the manufacturing of laminated glass and tempered glass for the domestic market. In a strategic move to expand its decorative glass capabilities, the **Tecglass** Vitro-Jet Digital Printing System has been selected by Vitropor to enhance its production portfolio beyond traditional methods like screen printing. This cutting-edge technology enables high-definition, durable designs directly on glass, offering greater flexibility and creativity in architectural and interior applications. Tecglass is proud to support Vitropor in this new chapter of digital transformation and thank them for their trust in Tecglass and its solid partnership.

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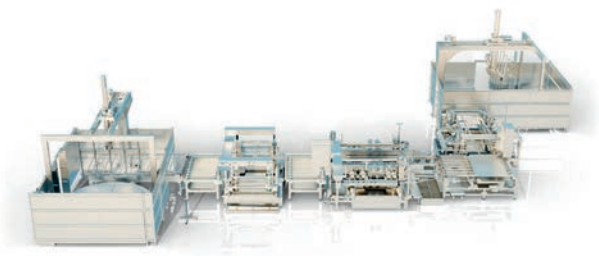

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TUROMAS GROUP

New branch opens in Mexico

Turomas is to open a new branch in Mexico. This launch marks a major milestone in the company's expansion into the Latin American market, reinforcing its commitment to service and proximity to its Mexican customers.

The new branch, strategically located in Mexico City, will allow Turomas Group to provide faster and more personalised service to clients in the region, ensuring quick and efficient responses to local market needs. In addition, this new centre will serve as a key hub for the distribution of both Turomas and Distecglass products, as well as for the provision of technical and maintenance services. Turomas Mexico offers a wide range of stock, including spare parts and consumables from Turomas, and products from Distecglass—one of the group's companies specialising in supplies for façades and double glazing. The branch is staffed by a team of five highly qualified professionals with in-depth technical knowledge of the group's product range, who are dedicated to providing commercial and technical support with the speed customers require.

The new offices and spare parts and supplies warehouse of Turomas Mexico are located in Col. Agrícola Oriental, Iztacalco, CP

08500, Mexico City. Contact: +52-56-1991-6987 or email info@turomas.mx.

Turomas first arrived in Mexico in November 2012 and quickly expanded across the country, reaching the leading glass processors throughout the republic.

"I believe that Turomas' family-business approach, our specialisation in glass cutting (and the resulting reliability of our products), along with the close and effective service that has always characterised us, were the main reasons for our rapid and successful acceptance," said Álvaro Tomás, CEO of Turomas Group. Thanks to the warm reception and the strong results achieved over these past twelve years, along with the personal bonds we've built with our clients -many of whom we are proud to call friends- we've been driven to reach one of the most important milestones in Turomas' 40-year history: making Turomas Mexico a reality."

The grand opening ceremony will be held next July in conjunction with the Glasstech Mexico fair and will be attended by prominent representatives of the glass industry, as well as clients and strategic partners of TUROMAS Group.

WWW.TUROMAS.COM

CARDINAL GLASS INDUSTRIES

War declared on carbon emissions

Cardinal Glass Industries is leading the charge in sustainable glass manufacturing with its bold commitment to decarbonisation. In an industry-first initiative, Cardinal is partnering with Padova, Italy-based K2-CO2, a global leader in CO2 capture systems, to achieve an extraordinary 95 percent CO2 capture rate in its glass production process. This milestone follows years of rigorous research and technological exploration with K2-CO2 and its licensor, Giammarco Technologies, positioning Cardinal as a trailblazer in environmental responsibility. With this advancement, the company is poised to set the standard for carbon removal in the glass industry, delivering the most sustainable, low-carbon glass for the future. "This CO2 capture technology builds upon our long-standing commitment to environmental leadership," said Roger O'Shaughnessy, CEO & President of Cardinal Glass Industries. "We have achieved minor source status across all Cardinal Float Glass Plants, maintaining the lowest NOx and SOx emissions. Now, with this revolutionary CO2 capture system, we are further cementing our role as a global leader in environmental sustainability."

As the world's largest producer of Low-E energy-efficient glass, Cardinal Glass Industries continues to drive meaningful change in the industry. To illustrate the significance of this initiative, the annual CO2 captured by a single system surpasses the amount that would be sequestered by planting 1.6 million trees and growing them for a decade. With this groundbreaking commitment to sustainability, Cardinal Glass Industries is paving the way for a future defined by innovation, environmental responsibility, and industry leadership.

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SAINT-GOBAIN GLASS

Partnership with VEKA Recycling

Saint-Gobain Glass recently forged a ground-breaking partnership with **VEKA Recycling** that represents a major advancement in sustainable construction and post-consumer glass recycling in the UK fenestration industry.

This collaboration addresses one of the sector's longstanding challenges: the lack of infrastructure to efficiently collect and recycle post-consumer glass from glazing projects.

Together with VEKA Recycling -a company with over 30 years of expertise in PVCu recycling- Saint-Gobain is working to close the loop and significantly reduce the amount of valuable glass waste that ends up in landfill. At the heart of this initiative is the deployment of Saint-Gobain's patented ICG Recycling Machine, which efficiently separates annealed and toughened glass from spacer bars. The glass can then be processed and reintroduced directly into float glass production. By enabling VEKA Recycling to collect fully glazed frames -without the need for deglazing on-site- the partnership is helping to create a more efficient and cost-effective solution for recycling post-consumer glazing materials. This collaboration is currently focused on a 100-mile radius around VEKA's Wellingborough facility, which recently underwent a GBP 15M investment to increase its processing capacity and technological capability. Michael Butterick, Marketing Director at Saint-Gobain Glass, said, "We are thrilled to be partnering with VEKA Recycling to offer a solution for post-consumer glass recycling. The potential of this initiative is vast - by addressing the current gap in infrastructure and leveraging key partnerships, we can achieve our sustainability goals." Tim Taylor, Commercial Director at VEKA, said, "This marks a monumental step on our journey towards creating a circular economy within the UK. For the fenestration industry, ensuring that materials can be collected, recycled and then manufactured into new products without needing to leave the country is instrumental in meeting sustainability goals. "By combining our infrastructure with Saint-Gobain's innovative glass recycling technology, we are confident that we can overcome current challenges to significantly increase the rate of post-consumer glass recovery in the UK."

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NSG GROUP

New solar array in Ottawa, Illinois

NSG Group recently held an opening ceremony for its newest 2.0 MWp photovoltaic solar array at its Ottawa, Illinois, USA, facility which will supply about 3.9 GWh's of renewable electricity annually. The new array, owned and operated by SolAmerica, based out of Atlanta, GA, will provide energy to the facility for the next 15 years under a power purchase agreement. The build is powered by over 5,000 advanced thin film Series 7 solar modules manufactured by First Solar using NSG Group's solar energy glass products. NSG Group has several solar energy projects around the world. In North America, in addition to this newest solar array in Ottawa, there is a 0.25 MW solar array in Northwood, Ohio, commissioned in February 2011 and a 1.4 MW solar array in Rossford, Ohio, commissioned in April 2022.

WWW.NSG.COM

SVT GLOBAL

Pyroguard joins new umbrella brand Saverto

A leading provider of passive fire protection solutions, **SVT Group** is restructuring its international brand architecture by introducing **Saverto** as its new umbrella brand, under which **Pyroguard** will now operate. This strategic move reinforces Pyroguard's global position in the sector of fire safety glass and establishes a cohesive, future-oriented brand landscape for passive fire protection across international markets.

The name Saverto is derived from 'to save' and 'to avert,' encapsulating the core values of the product division: safety, reliability and structured solutions. The new brand architecture enhances Saverto's international visibility, providing customers with clear orientation, a distinct market position, and direct access to trusted product brands across all segments. As a specialist for fire safety glass, Pyroguard contributes over 40 years of expertise to the Saverto brand network and assumes a central role as a core brand. As part of the rebranding, its affiliation with the new brand architecture will be subtly reflected—such as through an additional design element in the logo. Pyroguard will continue to operate in the market with its existing portfolio, familiar contacts, and established services. The former holding company, Technical Fire Safety Group, will now operate under the name Saverto UK Ltd.

Said Jens Reiners, CEO of Saverto and svt: "With Saverto, we are establishing a strong and cohesive platform for our portfolio of product brands. The new structure enhances visibility and provides our customers with clear orientation." To this, COO of Saverto Glazing Neil Tilsley added: "The introduction of the unified umbrella brand Saverto marks a significant step forward. By bringing together well-established brands, we are creating new opportunities for our customers and laying the foundation for continued, sustainable growth."

WWW.SVT-GLOBAL.COM

NSG GROUP

Transfer of Vietnam Float Glass equity interest

NSG Group recently announced that it has completed the transfer of all of its equity interest in Vietnam Float Glass Co., Ltd. (VFG), a subsidiary manufacturing architectural glass in Vietnam, to its joint venture partner.

Established in 1995, VFG was Vietnam's first float glass manufacturing company, and the company has subsequently supplied architectural glass mainly to the Vietnamese domestic market. In recent years however, competition in the commodity architectural glass market in South East Asia has intensified, and therefore the Group has decided to complete this transfer, consistent with its strategy of focusing on the manufacture of high-value-added products. Going forward, VFG will continue its operation under the umbrella of Viglacera Corporation - JSC, a local joint venture partner of the company since its establishment.

NSG Group has set its medium-term plan, '2030 Vision: Shift the Phase', aiming to expand profits in high-value areas that contribute to the sustainable development of society. The decision is part of that strategy. In South East Asia the Group continues to produce glass for solar panels in Vietnam, NSG Vietnam Glass Industry Co., Ltd., and Malaysia, Malaysian Sheet Glass SDN BHD, and including these products, it will further accelerate the shift to high-value-added businesses.

WWW.NSG.COM

NGA

New glass technical resource on circularity and glass recycling

The **National Glass Association (NGA)** recently announced the publication of a new technical resource, Overcoming Challenges of Circularity and Architectural Glass Recycling. This five-page Glass Technical Paper (GTP) reviews the types of glass that can be recycled, clarifies misconceptions about recycling glass, details benefits and value creation that comes from glass recycling and outlines end-use products. Because of the potential for expanded value, increased cullet use has been cited as a key strategy towards long-term sustainability goals for many types of glass industries. "Cullet is becoming an ever more important raw material in the landscape of U.S. glass manufacturing," said Kyle Sword, task group chair and R&D Director at NSG Pilkington. "Increasing the availability and cleanliness of cullet in the U.S. will take some collaboration and infrastructure creation, but there is clearly a path ahead of us that yields a clean, economically viable product for the glass industries." This GTP explains the challenges and risks that come with glass recycling currently within North America, references broader global activities around cullet reuse and proposes proactive steps to maximise the value of cullet reuse. By expanding circular practices in the field of architectural glass, opportunities to strengthen local labour markets and enhance the glass industry's reputation as an effective and sustainable solution will grow. NGA thanks the task group members who developed this resource for the industry.

Task Group Members

- Kyle Sword, NSG|Pilkington - Chair
- Gin Benner, Agnora
- Rob Carlson, Tristar Glass
- Patrick Elmore, Infinite Recycled Technologies
- Kyle Faron, Permasteelisa North America
- Jon Griggs, Guardian Glass
- Michael Hammond
- Matt Manning, Oldcastle BuildingEnvelope
- Adam Mitchell, Agnora
- Jeff Skaza, Eastman Chemical Company
- Aaron Thompson, Viracon
- DJ Weil, Trulite Glass & Aluminum Solutions
- Stanley Yee, Infinite Recycled Technologies
- Nick Yule, Viracon
- Andrea Zani, Permasteelisa North America

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LISEC

Expansion of local support in Mexico

LiSEC recently announced two personnel changes in South America. Starting June 2025, Eduardo Cortes will be the new LiSEC sales representative for the Mexico area, replacing Manuel Castellanos. Enrique Lopez will take over responsibility for LiSEC After Sales in Mexico. Through this strategic initiative, LiSEC is strengthening its Sales and Service presence in Mexico, reaffirming the company's commitment to being closer to its customers.

Closer to the customer - A strategic focus

By having a dedicated sales and service contact in Mexico, LiSEC aims to enhance responsiveness, provide more personalised service and build even stronger partnerships with customers. Cortes and Lopez will serve as a direct link between the customers and the full range of LiSEC's expertise, ensuring that every solution is aligned with their specific requirements. This local presence is a vital part of LiSEC's strategy to build stronger, more personal relationships with the customers and to provide on-the-ground support throughout every phase of their projects.

Innovative solutions

Over the past few years, LiSEC has invested heavily in research and development to bring cutting-edge technologies to the flat glass processing market. From individual machines and tailor-made automation systems to fully integrated production lines featuring state-of-the-art robotic solutions, LiSEC is proud to offer a comprehensive portfolio that meets the needs of the customers. LiSEC products are designed to help flat glass processors increase efficiency, reduce waste and stay competitive in a rapidly evolving market. LiSEC looks forward to a successful collaboration with the customers in the Mexico area and to continuing its mission of delivering excellence in glass processing technology.

WWW.LISEC.COM

KERAGLASS

Acquisition of 100 percent AVG Automazioni stake

A leading company in the industrial glass processing machinery sector, owned by **Voilàp** S.p.A. and the Spezzani Family, Keraglass recently announced the completion of its acquisition of 100 percent stake in **AVG Automazioni S.r.l.**

Founded in 1978 by Mauro Bagni, Graziano Omar Incerti, Marco Cesana and Tiziano Vandelli, AVG is renowned for its expertise in designing and manufacturing of industrial control cabinets, automation and software. This acquisition consolidates the strategic technology integration process started by **Keraglass**. Graziano Omar Incerti and Marco Cesana, two of the four founding partners, will guarantee continuity to the growth path by managing the company's operations. The acquisition was supported by Deloitte for financial services, PedersoliGattai for legal matters and PPI & Partners for fiscal consultancy. AVG Automazioni received fiscal and legal support from SGB & Partners.

Stefano Spezzani, Founder and President of Keraglass, commented, "This acquisition, which builds on the success of many years of partnership, represents a crucial step in our growth. It strengthens our commitment to integrating know-how and strategic technologies, and to delivering innovative and high-quality solutions to our customers. I would like to thank the founders of AVG Automazioni for their many years of professional cooperation." Graziano Omar Incerti expressed his pride in joining Keraglass: "I am confident that this acquisition will lead to important developments not only for Keraglass, but also for Voilàp Group, market leader in offering solutions for Smart Cities."

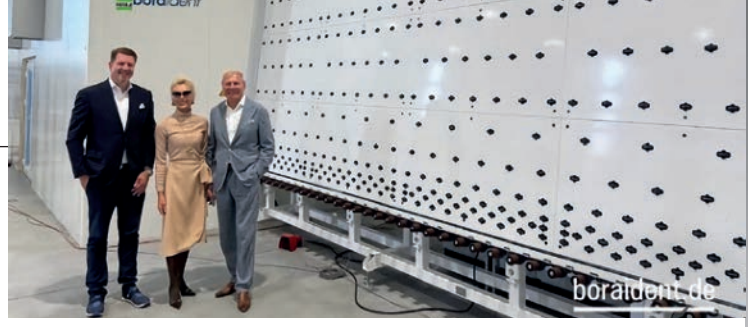
WWW.KERAGLASS.COM

FGIA

Update to two documents pertaining to secondary storm products

The **Fenestration and Glazing Industry Alliance (FGIA)** has released updated versions of two specifications related to secondary storm products. AAMA 1002-25, Specification for Secondary Storm Products for Windows and Sliding Glass Doors, and AAMA 1102-25, Specification for Side-hinged Secondary Storm Doors, are now available for purchase in the FGIA online store. These documents were last updated in 2011. In previous versions of these two specifications, secondary storm products were referred to as combination storm windows and sliding glass doors or insulating storm products for windows and sliding glass doors. The specifications were used primarily for use within the AAMA Certification Program. "Due to increased awareness and interest in these energy saving products by the Department of Energy and manufacturers alike, they have been included in the scope of the North American Fenestration Standard, starting with the 2011 edition of NAFS," said Rich Rinka, FGIA Technical Manager, Fenestration Standards and U.S. Industry Affairs, and staff liaison for the FGIA Secondary Storm Products Task Group. The purpose of AAMA 1002 is to establish recognised criteria of performance and quality for secondary storm products for windows and sliding glass doors. The purpose of AAMA 1102 is to establish recognised criteria of performance and quality for side-hinged secondary storm doors. Manufacturers may use these specifications to test, rate and certify these types of products to a recognized standard, laboratories may use this specification to develop test plans and conduct testing to assess product performance quality against the criteria within the specification, and specifiers may use this specification as an aid in specifying products.

WWW.FGIAONLINE.ORG



HEGLA BORAIDENT

From order to final acceptance

A large Laserbird was recently commissioned by **HEGLA boraident** at **Glassbel Group** in Lithuania. HEGLA boraident reported its satisfaction with the successful Final Acceptance Test (FAT) and the start of production, during which Managing Director Jochen Hesselbach and Thomas Rainer were on site in Klaipeda. Glassbel Group can now process glass up to seven metres long into bird protection glass, decorative glass and communication glass via HEGLA boraident's advanced laser technology.

HEGLA boraident thanked Dmitri Sobolevski and Larissa Sobolevski, owners of Glassbel.

WWW.HEGLA-BORAIDENT.COM

NORTHGLASS

Environmental practices advanced on multiple fronts

Tianjin **NorthGlass** actively responded recently to the "Six-Zero Green Building Materials Day" initiative jointly launched by the China Building Materials Federation and leading industry players. During the site visit, guests toured NorthGlass' sun-room, modern production workshops and innovative technology product exhibition area, gaining an in-depth understanding of how NorthGlass integrates green concepts throughout product design, manufacturing, and project implementation.

In the sun-room, attendees experienced first-hand the glass' comprehensive performance in insulation, lighting, and energy saving; in the tempered glass workshop, guides detailed the fully automated and energy-efficient processes enabled by the 24-metre ultra-large tempering furnace; at the product exhibition, visitors learned about landmark projects domestically and internationally that utilise NorthGlass glass, cast glass, and light-stone to create diverse transparent, semi-transparent, and opaque curtain wall solutions. In front of the 15-metre ultra-large coated glass, attendees enthusiastically signed their names and took photos as a memento enterprises, successfully hosting a 'Public Open Day.'

The event attracted numerous representatives from window and curtain wall industry associations, renowned companies, and media guests to engage in discussions on the development trends of green building materials, technological innovation, and low-carbon transformation.

Li Chunchao, Deputy General Manager of NorthGlass Processed Glass BU, stated that green development is a core strategy of the company. NorthGlass not only continuously invests in renewable energy utilisation, wastewater and exhaust gas treatment, and waste recycling, but also embeds green concepts throughout the entire product design and manufacturing process to drive high-quality and low-carbon growth.

The company's three major production bases generate a combined annual photovoltaic power output of up to 19 million kWh, serving as a testament to their green initiatives. Meanwhile, NorthGlass constantly pursues craftsmanship at the level of 'artworks,' rigorously implementing 127 stringent control standards to ensure each glass piece delivers outstanding performance and durability. This foundation supports the long-term reliable operation of green products while reducing resource consumption.

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GLASS FUTURES

Revolutionary furnace lit for the first time

June 2025, **Glass Futures** marked a major milestone by lighting its cutting-edge furnace for the first time.

The world first at the GBP 54M Global Centre of Excellence in St Helens, United Kingdom, heralds the start of international trials aimed at creating sustainable, lower-carbon glass and other materials. In a dedicated ceremony, Steve Rotheram, Mayor of Liverpool City Region, lit the 30-tonne-a-day furnace putting the town centre stage in the global push for sustainable glass manufacturing. One of a kind, the furnace is able to use low-carbon fuels including green electricity, hydrogen and biofuels (such as used cooking oils), reaches temperatures of 1600°C and can produce over two miles of flat glass a day -the equivalent of a double decker bus of stacked sheets each week- in addition to the production of container glass.

Justin Kelly, CEO of Glass Futures, said, "Following the Prime Minister's visit last month, today marks a defining moment - not just for Glass Futures, our members and St Helens but for the entire global glass and foundation industries. There is no other facility in the world capable of producing both flat and container glass using such a wide range of sustainable fuel sources, including electric melting. This isn't just about decarbonising glass - it's about working with our membership to transform global manufacturing.

"We were profiled in the government's Industrial Strategy this week for our work in translating and commercialising new technologies and processes such as using sustainable fuels to develop new materials. By hosting trials for manufacturing partners and members from across the UK, Europe and internationally, we're set to influence production standards worldwide, reducing emissions and supporting other energy intensive sectors like ceramics and steel."

WWW.GLASS-FUTURES.ORG

CMS

Appointment of new General Manager Cosimo Capuzzello

A company of the **Scm Group** and a global leader in technologies for composite materials, plastic, glass, stone and metal processing, **CMS** recently announced the appointment of Cosimo Capuzzello as General Manager.

Capuzzello brings over 15 years of executive experience at Datalogic -the Bologna-based global leader in automatic data capture and industrial automation- where he most recently held the position of Executive Vice President of the Industrial Automation division.

His appointment as General Manager of CMS was made official Wednesday July 2, by the company's Board of Directors.

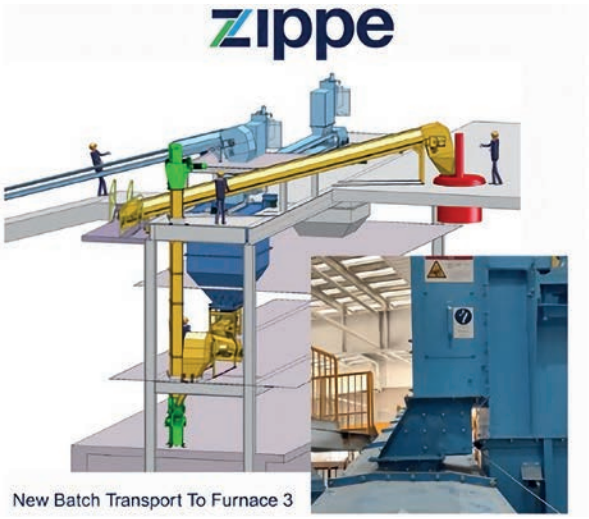
WWW.CMS.IT

ZIPPE

Batch Plant Extension commissioned at Nanjing Electric Glass

Zippe recently announced the successful commissioning of a batch plant extension at **Nanjing Electric Glass** in China. To support a new furnace installation, Zippe expanded the existing batch plant by upgrading the weighing technology and adding a dedicated batch transport line to the new furnace. This marks the third phase of expansion at the site - a testament to the trust and long-term partnership with customers. The project was delivered in close collaboration between the Zippe Ltd. team in China and Zippe's headquarters in Germany, ensuring seamless execution and quality. As a global expert in batch and cullet systems, Zippe reports that it continues to support the glass industry with tailored, high-performance solutions.

WWW.ZIPPE.DE



BOLD LASER AUTOMATION

Cost-effective precision measurement systems

A developer of advanced laser processing and metrology systems, **Bold Laser Automation** recently announced two new precision measurement platforms designed for fast, accurate, non-contact inspection in cleanroom and high-tech manufacturing. The LJS1820S Manual 3D Static Measurement System and CDM1820S Confocal Differential Static Measurement System offer manufacturers economical, operator-friendly tools for critical quality control and contamination detection.

"Many manufacturers struggle to get high-accuracy measurements without complex or expensive systems," said Todd Lizotte, CEO and co-founder of BOLD Laser Automation. "We believe in delivering high performance without over-engineering - systems that are designed to solve real problems without turning into million-dollar solutions."

The LJS1820S is designed for 3D contamination detection and surface inspection using dual Keyence LJ-S snapshot sensors. It captures full-area scans to identify particulates, defects, and residues - ideal for cleanroom use. A static, ESD-safe platform and optional footswitch allow hands-free operation.

The CDM1820S, integrated with dual Keyence CL Series confocal sensors, performs precision non-contact thickness measurements on thin films, foils, glass, fabrics, and sensitive materials (10 microns to 35 mm, depending on the sensor). It offers real-time display, configurable reporting, and an intuitive interface for QA/QC applications.

"These systems focus on usability - manual positioning, clean UI, data export, and traceability are all built in," added Lizotte. "The CDM1820S redefines what's possible for manual thickness measurement when accuracy and safety matter most."

Applications include:

Measuring thickness of composites, films, glass, textiles, food packaging, aerospace and automotive materials

Offline sampling or coupon testing to support QA and reduce material waste

Both systems are built in the USA and comply with cleanroom and safety standards. They feature ergonomic design, robust mechanical enclosures, and integrated computing systems to support installation, operation and regulatory compliance. Reporting tools ensure smooth integration into QA workflows.

The launch of these systems reinforces Bold Laser Automation's commitment to accessible, high-performance solutions for modern manufacturing.

WWW.BOLDLASERAUTOMATION.COM

CDM1820S Confocal Differential Static Measurement System (material thickness)

LJS1820S Manual 3D Static Measurement System (surface defects)

Close-up view of the CDM1820S Static Measurement System

AGC

Faster laser glass processing jointly achieved with University of Tokyo

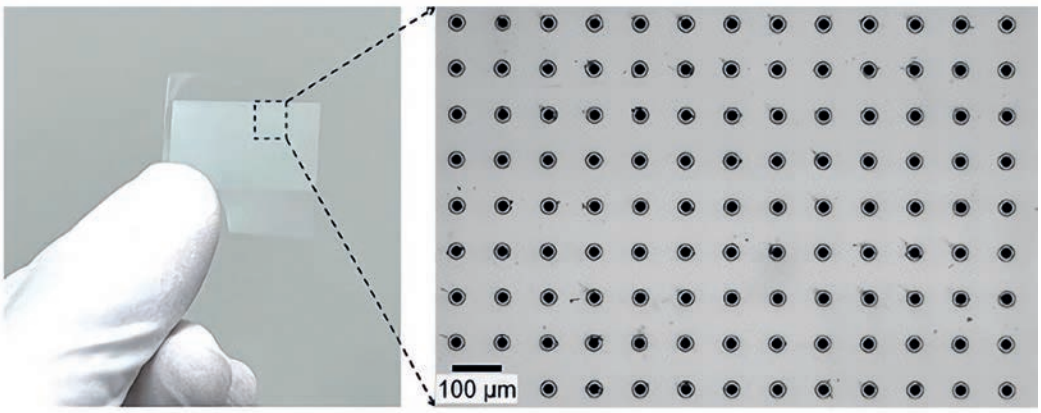
AGC recently established a joint research programme within the Graduate School of Engineering at the University of Tokyo in 2015 to conduct collaborative research aimed at creating cutting-edge glass technologies. Recently, a research team led by Lecturer Yusuke Ito, and Project Research Associate Yanming Zhang from the University of Tokyo in collaboration with a research group from AGC, have invented a new technique (a joint patent application has been filed by the University of Tokyo and AGC) that enables laser processing of transparent materials such as glass at a speed one million times faster than conventional methods. This achievement was published online in the US scientific journal 'Science Advances' on June 11, 2025.

In recent years, the amount of information processing has increased with the spread of generative AI, and faster and more power-efficient semiconductors are now required. As a result, there is a growing trend toward using glass substrates as mounting substrates for semiconductor chips, which offer excellent rigidity and flatness.

Currently, glass substrates are mainly processed by laser ablation or laser modification and etching processes. However, the former is slow in processing time, while the latter has a large environmental impact, such as waste liquid disposal.

In this joint research, by irradiating two types of lasers with different pulse widths simultaneously and from oblique directions to the glass surface, the team succeeded in increasing the processing speed by a million times compared to laser ablation processing. This method, which enables high-speed processing of glass substrates using only lasers, is more efficient and has a lower environmental impact than existing processing methods and is expected to be put to practical use in the semiconductor field in the future.

WWW..AGC.COM



GLASTON

Latest technology showcased at GPD 2025

As part of GPD 2025, **Glaston** recently welcomed the global glass community on a series of exclusive demo tours at its facilities in Tampere, Finland.

Tempered glass production

The highlight of the tempering demo was Glaston's FC Series E tempering line, featuring the industry-leading Autopilot. Autopilot impressed visitors with its ability to eliminate operator dependency, stabilise quality, reduce waste and increase overall efficiency. The tour also introduced other automation innovations like Batch Optimization, a robotised solution for automatic and optimised furnace loading, Online Stress Calculation, which provides a highly reliable way to monitor hardening results in real time, and a new Glass Temperature Imaging system that ensures reliable Low-E glass temperature monitoring.

Laminated glass production

Visitors were introduced to the ProL SPEED - a very fast and user-friendly laminating line for mixed glass production. The line features advanced convection control, which ensures extremely high yield and fully automatic operation - even for complex laminates. The robot building a laminate sandwich attracted much attention. Its gentle handling is especially valuable for thin glass applications. In addition, the automatic foil trimming feature demonstrated how automation supports accuracy and efficiency.

Insulating glass production

At the Rakla Tampere factory, participants viewed high-performance insulating glass production with Glaston's JUMBO TPS® line. The demo emphasised the role of automation in creating sustainable, high-quality insulating glass units with maximum productivity.

Automotive glass production

The tours also covered Glaston's automotive glass solutions, including MATRIX EVO, a modular line for bending challenging modern windshields and sunroofs. The line has proven especially effective for borosilicate glass, providing a more durable and lightweight solution than normal soda lime glass. Another highlight developed in collaboration with Glaston was the latest innovation from Miru, a Step Change company present at the latest two Glass Performance Days (GPD) events. The company's dynamic electrochromic windows (eWindows) feature a controllable glass tint level. During the tours, visitors got a glimpse of the high-tech production process behind the technology. Since GPD 2023, the Glaston-Miru collaboration has evolved into a solution to transform automotive glazing.

WWW.GLASTON.NET

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PLUS

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> Automatic functions
> Low maintenance
> LED travel indicators

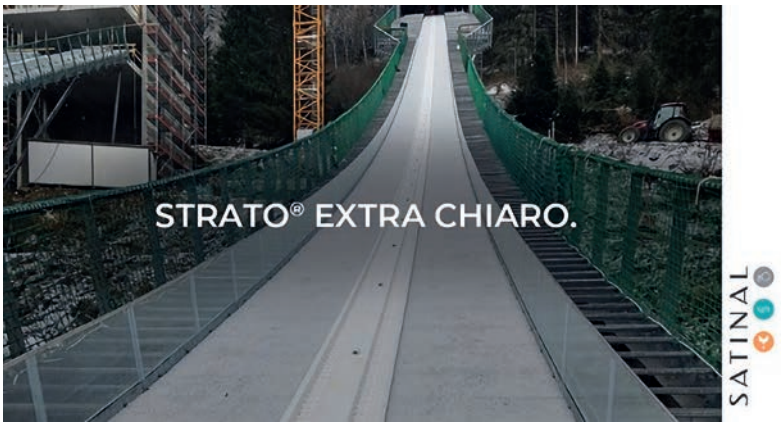
SATINAL

STRATO® Interlayers chosen for 2026 Milano-Cortina Winter Olympics

STRATO® EVA EXTRA CHIARO interlayers have been selected for a crucial role at the 2026 Milano-Cortina Winter Olympic Games. This selection is a testament to the superior qualities of STRATO® EVA EXTRA CHIARO. Known for its exceptional transparency, this interlayer ensures unobstructed views for athletes and spectators alike, allowing for a truly immersive experience of the breathtaking ski jumping events. Beyond its crystal-clear aesthetics, STRATO® EVA EXTRA CHIARO offers extreme resistance and safety in case of breakage. This makes it an ideal material for a high-stakes environment like an Olympic ski jump. Its robust nature ensures reliability in all weather conditions, a vital factor for outdoor installations in the Dolomite mountains. This project highlights STRATO® EVA EXTRA CHIARO's versatility and suitability for a wide range of applications, both indoor and outdoor. This has had **Satinal** reporting gread pride at its contribution to the safety and visual excellence of such a significant international event.

The unseen strength behind Olympic transparency - STRATO® EVA EXTRA CHIARO

The grandeur of the Olympic Games often lies in the visible spectacle - the athleticism, the architecture, the snow-capped peaks. Yet, beneath the surface of these iconic venues, unsung heroes of engineering and material science play a vital role. For the upcoming 2026 Milano-Cortina Winter Olympics STRATO® EVA EXTRA CHIARO, Satinal's specialised interlayer, has been entrusted with the critical task of forming the railing for the ski jumping facility in Cortina.



Why transparency matters on the slopes

Imagine a ski jumper launching themselves into the air, soaring against the majestic backdrop of the Dolomites. For both the athlete and the audience, an unhindered view is extremely important. Any visual distortion or obstruction would detract from the intensity of the moment. This is where the 'EXTRA CHIARO' designation of 'EVA interlayer comes into play. It signifies a great level of transparency, ensuring that the railing, while structurally present, virtually disappears from the visual field.

Ski jumpers rely on clear sight-lines for their approach, take-off and landing. A transparent railing minimises distractions, allowing them to concentrate solely on their performance.

Beyond beauty: the imperative of resistance and safety

While transparency is a key feature, it's the underlying strength and safety of STRATO® EVA EXTRA CHIARO that truly secured its place at the Olympics. A ski jumping facility is subject to immense forces, environmental challenges and the constant need for occupant protection. Indeed, the railing will face diverse and demanding conditions, including harsh winter temperatures, heavy snowfall, ice and strong winds. STRATO® Indeed EVA EXTRA CHIARO is engineered to withstand these elements without compromising its structural integrity. Its robust composition ensures that the laminated glass remains durable and reliable throughout the Games and beyond. Moreover, in the unlikely event of impact or breakage, the interlayer plays a crucial role in maintaining safety. Unlike monolithic glass which shatters into dangerous shards, STRATO® EVA EXTRA CHIARO laminated glass holds the fragments securely in place. This significantly reduces the risk of injury from falling or sharp glass, providing an essential layer of protection for athletes and spectators.

A legacy of Italian innovation and trust

Satinal's commitment to innovation and Italian quality is reflected in the trust placed in STRATO® EVA EXTRA CHIARO for the 2026 Milano-Cortina Winter Olympics. This project is more than just an installation; it's a testament to the rigorous testing, advanced manufacturing processes and deep understanding of material science that goes into every STRATO® interlayer.

WWW.SATINAL.IT

LANDGLASS

Octagon tempering furnace debuts at China Glass Exhibition

LandGlass unveiled its revolutionary Octagon Series Tempering Furnace globally at the 34th China Glass Exhibition, establishing a new paradigm for intelligent glass processing. Addressing stringent demands for optical quality and shape precision in high-end architecture, vehicles and electronic displays, the Octagon Series redefines quality standards through comprehensive enhancements to eight core technologies:

- System Structure
- Heating Performance
- Heating Control
- Airflow Design
- Tempering Technology
- Intelligent Cooling
- Process Control
- Cloud-Based Services

With these integrated innovations, the new Octagon Series seeks to empower customers with dual breakthroughs: improved product quality and easy operation.

WWW.LANDGLASS.NET

FRATELLI PEZZA wows with remote programming and design precision

GTI: MICHELA, FOR THOSE WHO MAY NOT KNOW FRATELLI PEZZA WELL, CAN YOU BRIEFLY INTRODUCE YOUR COMPANY AND ITS MISSION?

Michela Pezza: Fratelli Pezza has been at the forefront of glass surface treatment technology since 1970. We are known worldwide for our **automatic sandblasting machines, glass marking systems, and protective coatings.** With over 5,000 machines installed globally, we support a wide range of customers - from small workshops to large industrial groups. Our mission is to deliver reliable, innovative, and user-friendly solutions. We also stay actively connected to the glass industry by participating in the sector's leading trade shows and events.

GTI: VITRUM 2025 presents itself in a new format. How is Fratelli Pezza approaching this edition?

MP: We're excited about the new format of VITRUM. The event is evolving from a traditional trade show into a dynamic hub for exchanging ideas, skills, and innovation. This vision matches our mission perfectly: providing not only machines, but also solutions, training, and inspiration to support the growth of the glass industry.

GTI: What are the most significant innovations you'll be showcasing at VITRUM 2025?

MP: Among our highlights is the new **MultiShading** function for our Mistral EV+ sandblasting machines. This advanced feature allows multidirectional shading, vertical gradients and intricate patterns without rotating the glass panel - expanding creative and functional possibilities. We're also introducing **MistralApp**, a web-based platform for remote programming that supports SVG file uploads and real-time previews - helping users streamline production and improve accuracy.

> We're excited about the new format of VITRUM. The event is evolving from a traditional...

GTI: Energy efficiency is becoming a top priority. How is Fratelli Pezza contributing there?

MP: Our machines already offer the lowest compressed air consumption on the market, but we're not stopping there. We are continuously developing new technologies - such as **OptiAir**, the built-in system in our automatic sandblasters that further reduces compressed air usage. Our goal is to help glass processors minimize their environmental footprint. For us, sustainability has always been a commitment, not just a passing trend.

As FRATELLI PEZZA continues to shape the future of sandblasting and marking technology, CEO Michela Pezza met up recently with GTI Senior Editor Nick Fouché for the following exclusive interview -ahead of VITRUM 2025- when the two discussed her company's pursuit of innovation, sustainability and creativity in glass surface treatment.

GTI: How do you aim to inspire visitors at VITRUM 2025?
MP: Inspiration is as important as innovation. That's why we're creating an **Inspirational Gallery**, showcasing real-life sandblasting applications: bird-safe glass, anti-slip finishes, artistic works, branding, photovoltaic solution, and more. It's a creative space designed to spark ideas and show how sandblasting can become a powerful tool for designers, architects, and manufacturers. We want visitors to leave VITRUM not just impressed by our technology but also inspired to apply these ideas in their own work.

GTI: Training seems to be another key area for your company.
MP: Indeed. That figures once you factor in that owning a great machine is NOT enough - it is necessary to know how to use it effectively. Many companies today are facing staff turnover or generational shifts and hands-on learning is becoming harder to guarantee. That's why we offer **tailored training programmes**, helping operators fully understand the potential of the equipment.

GTI: Your new communication campaign focuses on 'standing out.' What is the key message behind your new communication campaign?
MP: Our new marketing campaign encourages glass professionals **not to be invisible**. Too often, total transparency and minimalism have replaced creativity and identity. Our campaign promotes the idea that sandblasting is a strategic tool - powerful, sustainable, and versatile. Whether through decoration or permanent marking, it allows companies to create impactful, recognizable glasswork that truly stands out.

GTI: Michela, we look forward to seeing you at VITRUM 2025.
MP: Us too! It'll surely be a great opportunity to connect, share and grow together. See you there !

> Our campaign promotes the idea that sandblasting is a strategic tool - powerful...

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Revolutionizing Lamination: IOCCO Sets a New Standard with Vacuum Bag Technology

The automotive glass sector is experiencing significant growth, driven by increasingly stringent safety regulations, the spread of electric and premium vehicles as well as demand for comfort and sustainability. In an industry characterised by growing cost pressures and an increasingly complex market, IOCCO has recently achieved a milestone that is truly revolutionising the world of automotive glass de-airing and lamination. This achievement is the result of more than two years of intensive research and development, during which the company has integrated advanced digital twin technologies and powerful artificial intelligence algorithms, radically optimising the operating parameters of the Vacuum Bag Furnace (VBF).

AUTOMOTIVE GLASS MARKET TRENDS

The global automotive glass market is estimated at USD 36.48 billion in 2024 and is expected to reach USD 48.02 billion by 2034 (Grand View Research), with a compound annual growth rate (CAGR) of 4.5 percent. The segments driving this growth include:

- Smart glass (electrochromic, PDLC, SPD): compound annual growth of 12.8 percent until 2030, driven by light modulation, privacy and display integration features.
- Panoramic roofs and sunroofs: CAGR of 10.2 percent until 2030, thanks to adoption in premium and electric vehicles to improve aesthetics and interior lighting.

The main market drivers include:

1. Safety regulations and ADAS: the requirement for laminated windshields and shatter-resistant glass is increasing demand for high-performance glass.
2. Lightweighting: thin multilayer glass reduces weight, improving EV range and reducing emissions.
3. Electrification and thermal comfort: large glass surfaces with thermal coatings limit the cooling load, optimising electricity consumption.
4. Flexible and just-in-time supply chain: OEMs require suppliers capable of handling variable batches and fast deliveries to minimise inventory and storage costs.

This market environment requires technologies that combine high performance, energy efficiency and opera-

In today's volatile automotive glass market, IOCCO's Vacuum Bag Furnace stands out as the only truly viable solution, proven through tangible results. Combining outstanding stability, resilience, and economic sustainability with AI, digital twin technology and advanced automation, it revolutionises de-airing and lamination – delivering superior efficiency, energy savings, and unmatched flexibility to meet the industry's evolving demands.

tional flexibility.

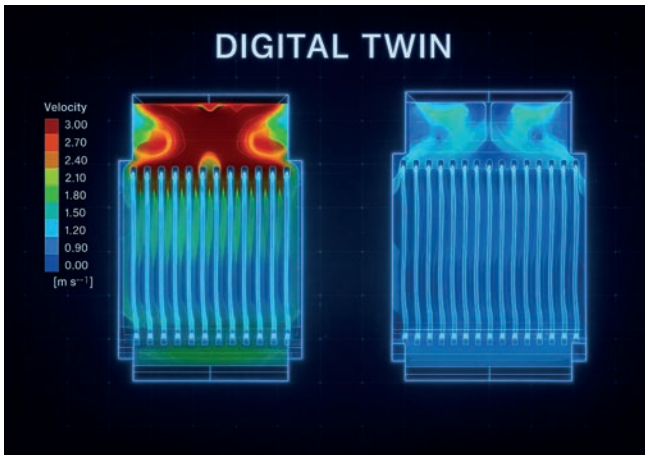
VACUUM BAG FURNACE TECHNOLOGY: THE IOCCO SOLUTION

To respond to these trends, IOCCO has transformed its VBF by integrating:

- Digital twin and AI: continuous monitoring of five plants operating at 100 percent production capacity (windshields and moonroofs) for six months, with parameter optimization leading to a 30-35 percent reduction in energy consumption.
- Advanced automation: user-friendly interface and almost fully automated processes, drastically reducing labour dependency and ensuring significant cost savings.
- Backup devices: backup devices in critical areas of the thermodynamic process to ensure operational continuity and resilience in the event of anomalies.
- Intelligent software: support for operators during setup with suggestions for optimal parameters and automatic interventions to recalculate settings and maintain the set process curve.

These innovations make IOCCO's VBF an extremely reliable, efficient and flexible system, capable of handling complex lamination cycles, from ultra-thin multilayer glass to smart glass with integrated sensors.

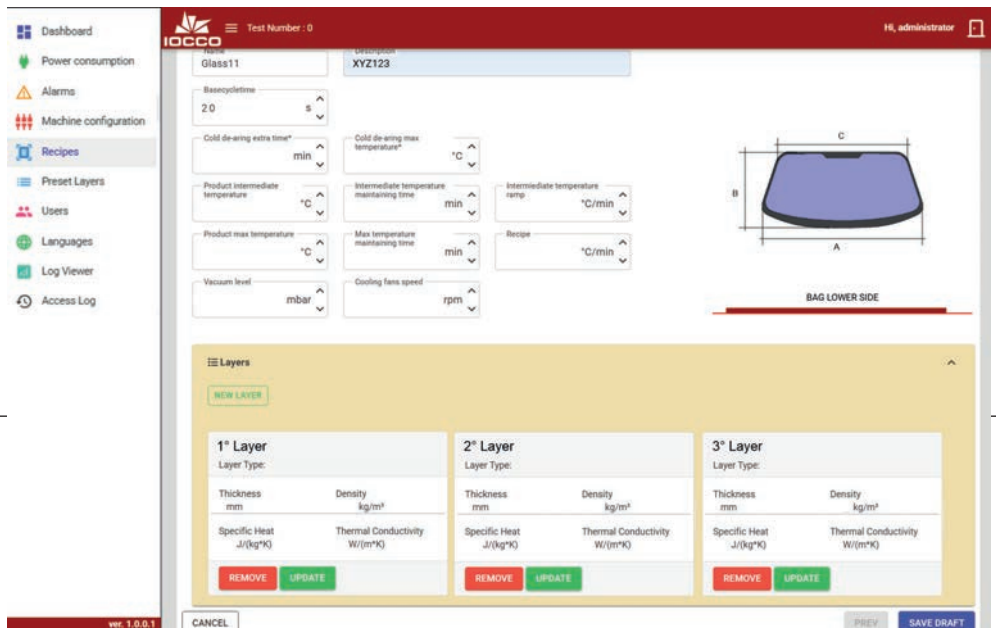
Thanks to this combination, IOCCO has been able to radically optimise the operating parameters of the Vacuum Bag Furnace (VBF), leading to a reduction in energy consumption of around 35 percent and labour costs of around 80 percent compared to previous versions. This has been certified by an analysis carried out by monitoring five plants operating at 100 percent production capacity, dedicated to the production of windshields and sunroofs, for a continuous period of six months. This result was



achieved not only through the technical optimisation of the process parameters, but also thanks to the system's extreme ease of use and the drastic reduction in labour dependency, which converts into enormous economic savings resulting from the total automation of the process, ensuring stable, repeatable operation that is immune to the variability typical of manual operations.

The new VBF also stands out for the presence of backup devices in the most critical areas of the thermodynamic process, which ensure operational continuity and exceptional resilience even in the event of anomalies.

Another key element of this evolution is the intelligent



software developed by IOCCO, which guides operators during setup, suggests the optimal thermodynamic parameters based on the characteristics of the glass to be laminated and, above all, intervenes automatically in the event of anomalies, recalculating and applying new parameters to ensure compliance with the initially set process curve.

The Vacuum Bag Furnace (VBF) is a concrete advancement toward a sustainable, intelligent, and human-centric production model, perfectly aligned with the principles of Industry 5.0 and the growing demands for Environmental, Social, and Governance (ESG) performance.

THE VACUUM BAG FURNACE

The Vacuum Bag Furnace comes as an immediate response to the technological developments required by regulations and automotive manufacturers. IOCCO's Vacuum Bag Furnace currently stands out conspicuously as a solution that allows laminated glass manufacturers to anticipate and quickly meet all new technological specifications imposed by regulations and car manufacturers with competitive advantages.

Thanks to this technology, it is possible to meet, without compromise, the market trends in automotive glass, which see the production of ultra-thin multilayer glass, with laminations that include PDLC (Polymer Dispersed Liquid Crystal), PVB, SPD, XIR and EVA: components that are now central to strategies for reducing vehicle weight, increasing passenger safety and comfort, and improving performance in terms of solar shading.

The Vacuum Bag Furnace, with its extremely stable, automated and flexible process, is therefore the ideal partner for addressing market trends that aim to reduce weight, increase passenger safety and comfort, and reduce internal thermal loads, thereby optimising the energy efficiency of vehicles. These are key factors that contribute to significantly extending the range of modern electric and hybrid vehicles, while ensuring the ability to respond quickly and competitively to the ongoing challenges of the automotive industry.

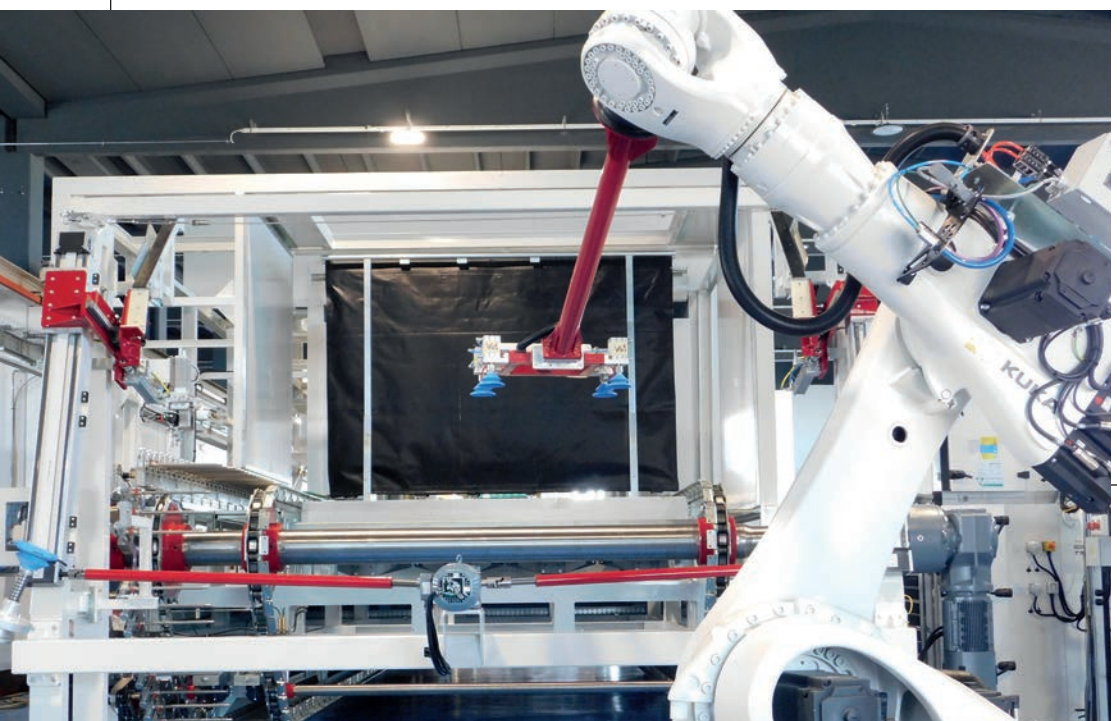
VACUUM BAG FURNACE VS VACUUM RING FURNACE: THE FUTURE OF AUTOMOTIVE LAMINATION IS ALREADY WRITTEN

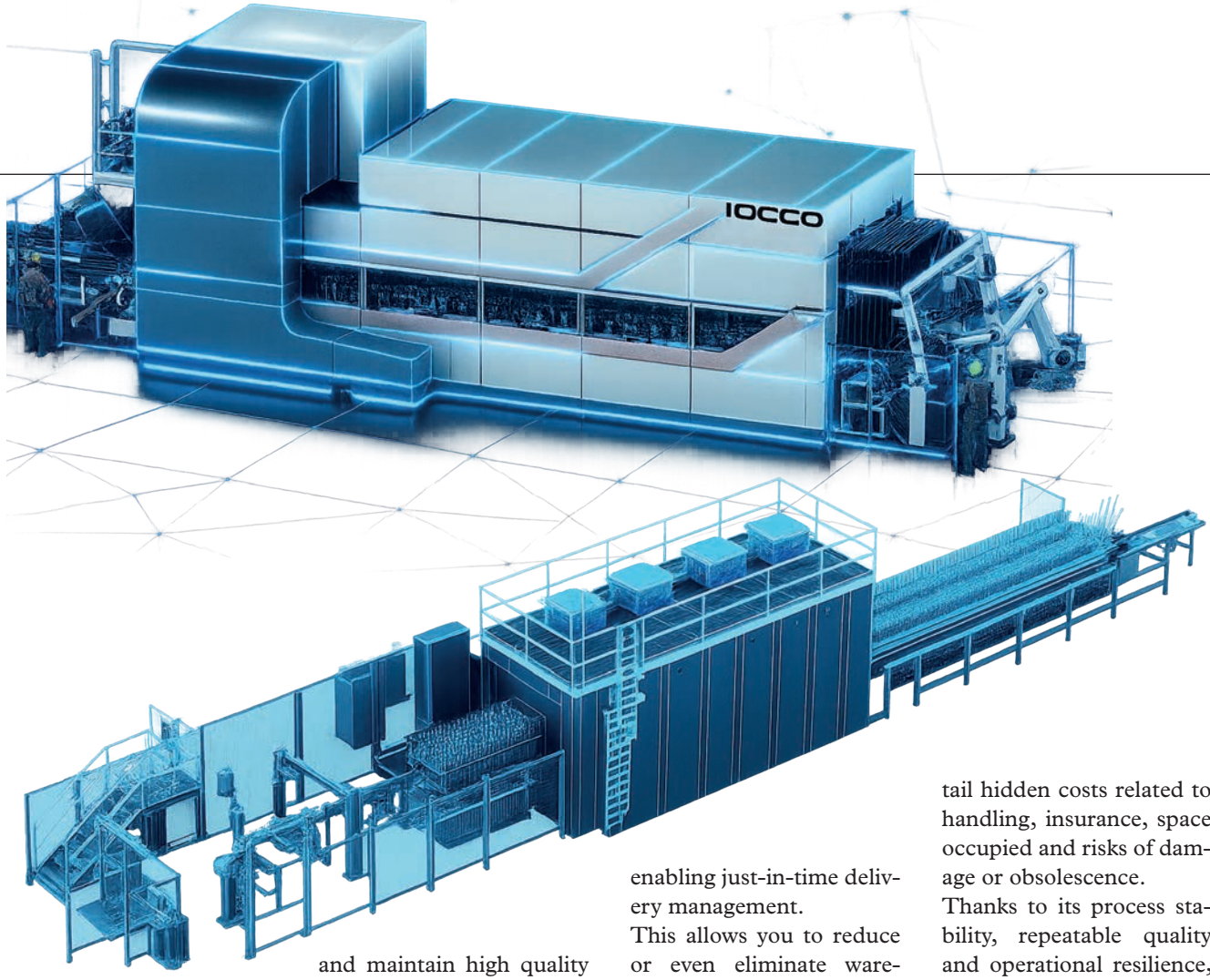
In a direct comparison between the Bag Furnace and the Ring Furnace, the verdict is becoming increasingly clear: the Bag Furnace is a winning technology that's truly capable of meeting the needs of an industry which is looking for increasingly lighter, more complex and higher-performance glass. The Ring Furnace, on the other hand, remains anchored to traditional production methods, with higher operating costs, less flexibility and quality that is heavily dependent on labour, all of which make it increasingly uncompetitive in the current scenario.

The indicators confirm this: significantly faster return on investment, lower unit product costs from the very first production cycles and a unique ability to support just-in-time strategies that eliminate the need for costly inventory. In a global market where every percentage point of efficiency can mean the difference between success and failure, the Ring Furnace appears to be a technology of the past, destined to give way to advanced solutions such as the Bag Furnace, designed to ensure efficiency, resilience and competitiveness in an increasingly selective industry.

TWO BREAK-EVEN POINTS THAT SPEAK FOR THEMSELVES

Simulations based on a 20-year operating projection conducted by IOCCO highlight two crucial aspects: the first break-even point, relating to the total cumulative cost of the investment, shows how the VBF compensates for the higher initial CAPEX after just a few years, guaranteeing net savings over time compared to traditional VRF solutions. The second, referring to the average cost per single laminated glass produced, shows how VBF manages





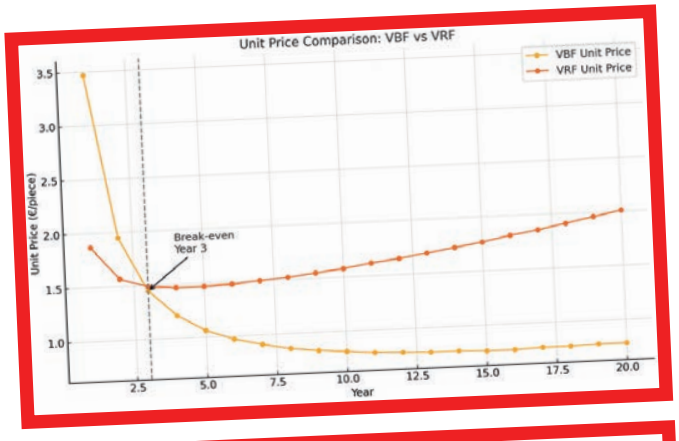
to maintain a significantly lower unit cost right from the start, thanks to its superior efficiency and intelligent process management capabilities. The two graphs below show the two curves referring to the bag furnace and ring furnace, where the break-even point is clearly visible on the first and the product cost over 20 years on the second. It should be noted that the input data are deliberately conservative.

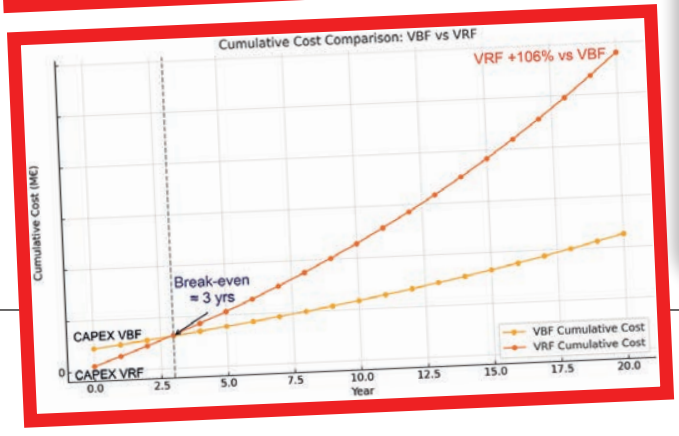
JUST-IN-TIME MANAGEMENT AND STOCK REDUCTION: A DIRECT COMPETITIVE ADVANTAGE

In a context that rewards flexibility, the ability to manage variable batches and maintain high quality standards, choosing IOCCO's VBF means investing in a system that also transforms production logistics, enabling just-in-time delivery management.

This allows you to reduce or even eliminate warehouse stock, avoiding tying up capital in finished products, which would entail hidden costs related to handling, insurance, space occupied and risks of damage or obsolescence.

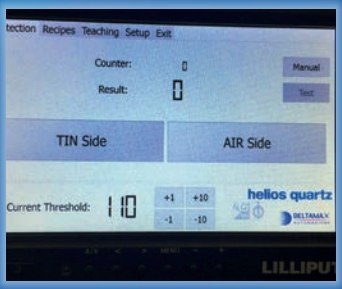
Thanks to its process stability, repeatable quality and operational resilience, VBF allows you to produce to order with the certainty of meeting deadlines and specifications, drastically reducing safety buffers and freeing up liquidity for strategic investments. In such a complex market, this is indeed a most viable path for those who want to consolidate margins and competitiveness in the long term.

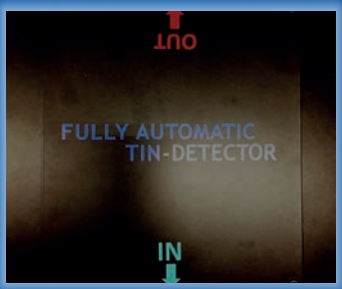


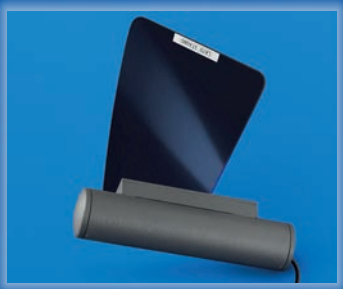


GLASS INDUSTRY

INFRARED AND UV SOLUTIONS FOR EVERY APPLICATION







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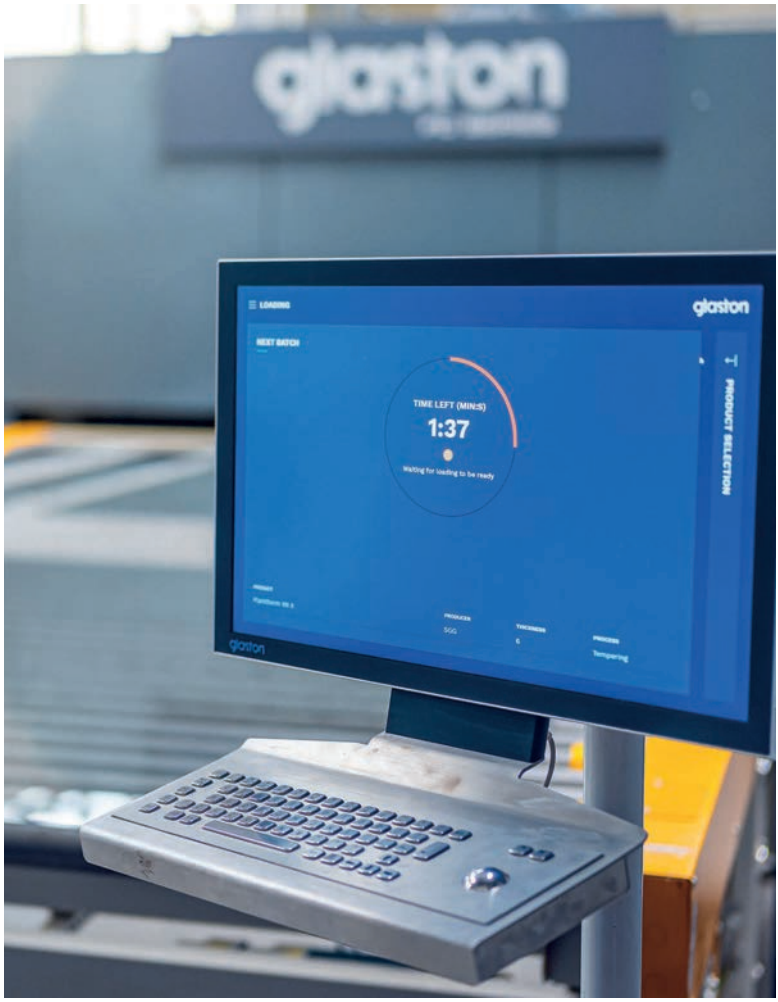
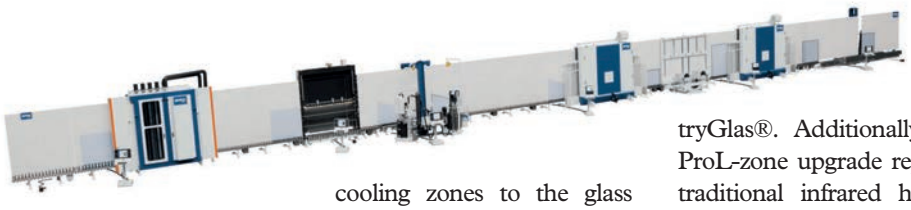
VITRUM 2025 to have GLASTON exhibiting both intelligence and efficiency

All set to present its comprehensive range of smart technologies and integrated solutions at VITRUM 2025, GLASTON will be showing how it is redefining glass processing across the tempering, laminating insulating and mobility glass sectors. Here the focus will be on automation, energy efficiency and superior product quality.



GLASS TEMPERING

At the heart of Glaston's offering is its next-generation FC Series E tempering line. Combining the advanced Bora convection system with enhanced energy management, it achieves precise heating across all glass types. This line introduces a higher degree of automation, enabling a consistently high-quality output, while its Roller Heat Control (RHC)



guarantees uniform roller temperatures - minimizing defects and reducing energy use. Among the company's latest breakthroughs in tempering is Autopilot, the first and only fully automated system for mixed production. It dynamically adjusts heating and cooling parameters based on glass type, size and load - eliminating operator dependency while maximizing efficiency. Further enhancing quality assurance is Online Stress Calculation, which delivers real-time, data-backed insights into hardening results. Glass Temperature Imaging will likewise be on display - a sophisticated tool for controlling Low-E glass temperatures without compromising production efficiency. In terms of optical performance, Anisotropy Control takes center stage by reducing anisotropy levels by up to 50 percent using intelligent airflow and heating management. Meanwhile, Adaptive Quench technology automatically adapts cooling zones to the glass load, significantly reducing energy consumption and carbon footprint. All these features are available as retrofit upgrades, underlining Glaston's commitment to sustainable innovation.

GLASS LAMINATING

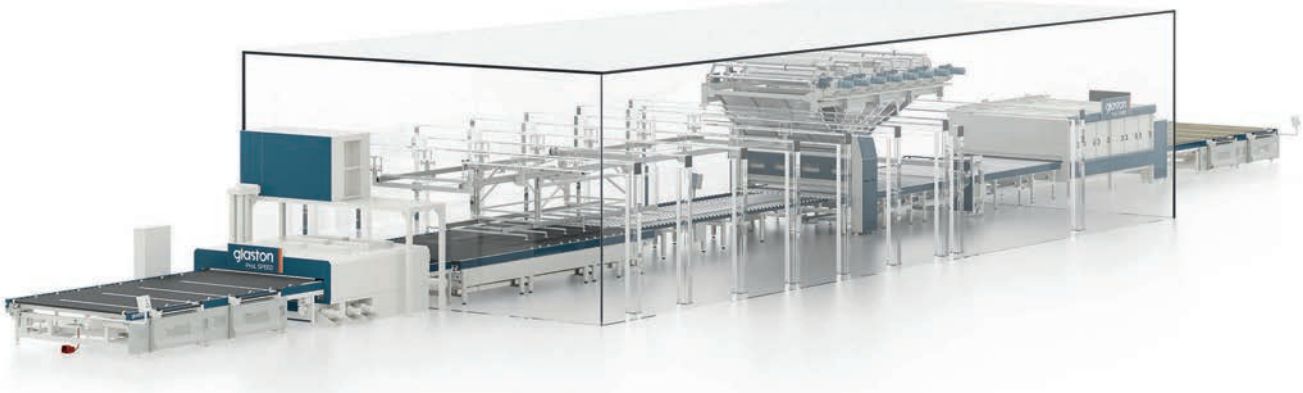
Glaston's ProL lamination line remains a benchmark in flexibility, especially for mixed production runs. Its convection heating chamber simplifies transitions between glass types, improving workflow. The newly introduced ProL SPEED edition boosts throughput by up to 40 percent and includes full automation for handling, foil placement and trimming. Enhancing structural performance, the patented ProL Convection Control ensures top-quality output even with robust laminates like SentryGlas®. Additionally, the ProL-zone upgrade replaces traditional infrared heating with convection, slashing energy consumption by at least 50 percent.

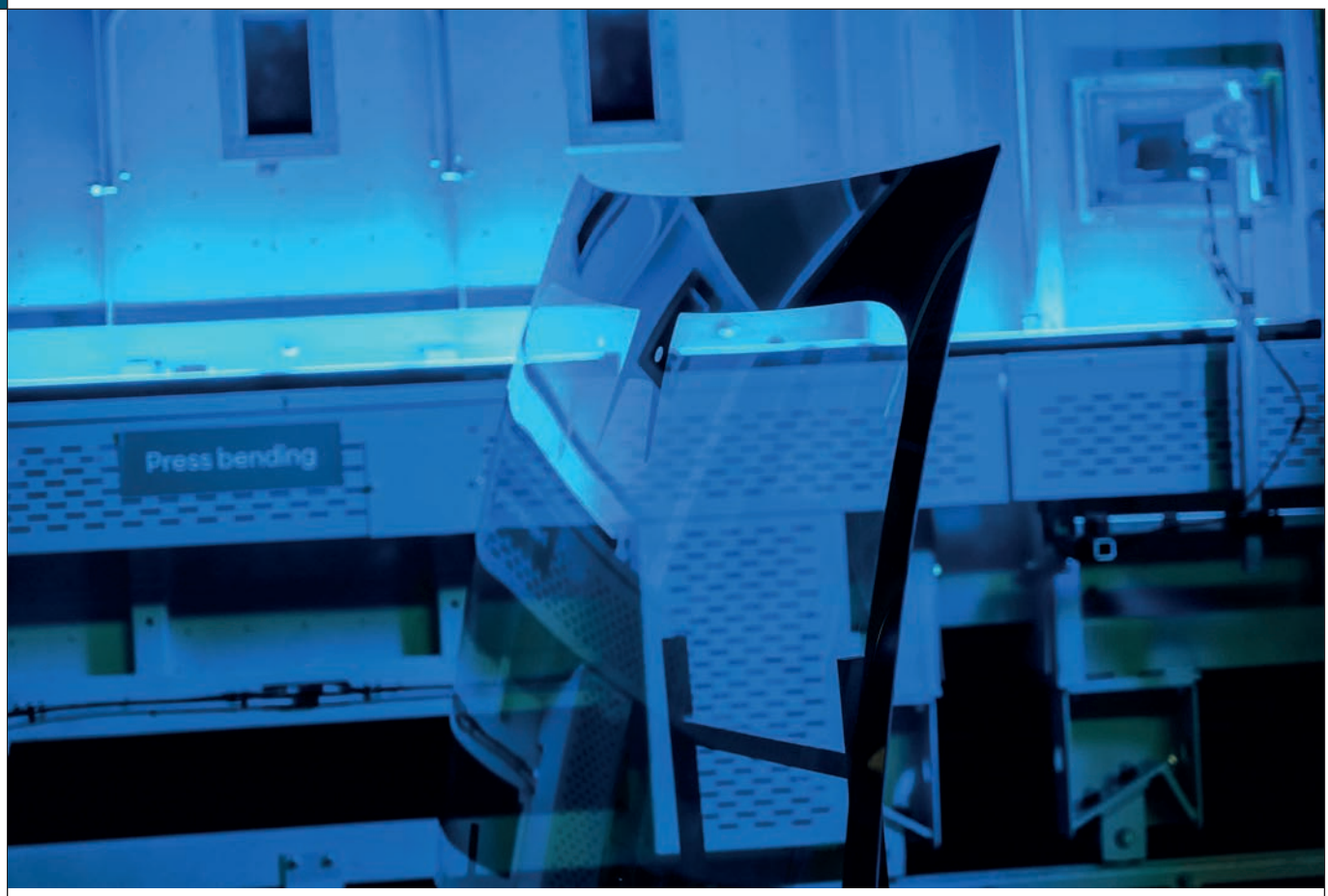
INSULATING GLASS MANUFACTURING

In insulating glass, Glaston sets new standards with its ULTRA TPS® line. Utilizing a patented method, the system can produce ultra-thin triple IGUs with a center lite just 0.5 mm thick - offering superior thermal insulation while maintaining the overall thickness of standard double units. This innovation benefits both new constructions and retrofit projects through improved light transmission and material efficiency. The line is also capable of producing quadruple IGUs with similar precision. The MUNTIN'MASTER complements this by automating muntin bar placement, removing manual steps whilst enhancing both productivity and accuracy.

MOBILITY GLASS PROCESSING

Glaston's automotive solutions include the CHAMP EVO for precise pre-processing, featuring energy-efficient drives and rapid changeover capabilities. The new MATRIX EVO automatic bending furnace ensures premium optical quality for complex mobility glass applications such as ADAS and HUD. Its modularity and active convection system support both energy savings and processing of advanced materials like borosilicate glass, prized for its strength and reduced weight.





AUTOMATION AND LIFECYCLE SERVICES

Automation extends beyond individual machines. Glaston Batch Optimization deploys robotics to create intelligent batch patterns, maximizing furnace bed utilization and throughput. These automation tools are tightly integrated with Glaston's mechanical systems and process intelligence, optimizing every production phase. To ensure long-term reliability, Glaston offers a full suite of upgrades and lifecycle services - helping customers retain peak performance, extend machine lifespans and keep operations aligned with evolving industry standards.

GLASTON AT VITRUM 2025

Industry professionals will be invited to explore these innovations firsthand at Booth #D13 E12 in Hall 9. Here Glaston's experts will be on hand throughout VITRUM 2025 to provide consultations and insights into the future of smart glass processing.

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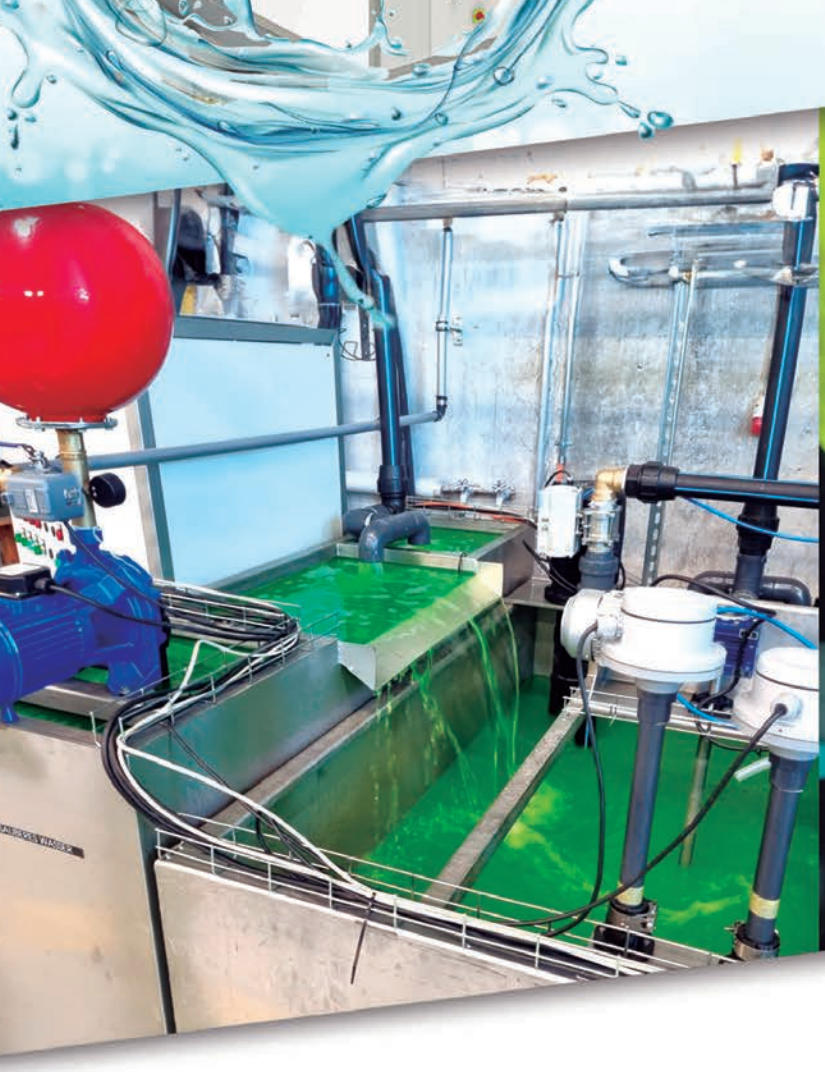

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As companies like STUDIO 1 AUTOMAZIONI INDUSTRIALI are consistently reminding us, robotics and automation are hardly just a random bet on the future. Instead they represent today's competitive advantage. Should it come as any surprise, therefore, that a whopping 97 percent of companies that adopted automation are believed to have scaled rapidly ever since - precisely 'because' they introduced it?

THE STRATEGIC EDGE OF INTEGRATED AUTOMATION

Over time, industrial automation has led to various developments, mostly facilitated by the ever-evolving relationship between humans and machines and by digitalization. Integrated automation specifically involves a type of vertical or horizontal interconnection: while the former involves the relationship between the production chain and business sectors, the latter involves the interaction between machines. Furthermore, all information and management systems related to the production process are integrated, allowing the various data to be monitored, digitized, and made immediately available. Integrated automation also enables improvements in processes and company production thanks to the collaboration between robots and the environment. New integrated automation techniques are also available, specifically for those seeking optimal and innovative solutions.

HUMAN-MACHINE COLLABORATION AND EVOLVING WORKFLOWS

To ensure even more effective integration and business improvement, both machines and human operators must complement each other, and all data must be processed securely. Furthermore, the work environment must ensure safety, and human operators must not perform back-office tasks, but rather creative tasks that can provide added value for the company. Robots, on the other hand, are designed to perform processes that are very demanding for human operators, involving repetitive and constant procedures, which often lead to a higher error rate. They can also be used in the logistics sector to address issues related to hazards. Integrated automation can also involve the use of innovative and relatively recent technologies, and not just the use of robots for the most demanding and dangerous physical tasks. Furthermore, all data, usually related to production status and business processes, can be guaranteed in real time. Integrated automation also offers various benefits, such as optimizing business processes, eliminating waste, and offering a higher-quality product or service to end consumers. Workflows aimed at improving the company are also implemented: it is often mistaken to think that leaving everything unchanged within a company will guarantee an optimal organizational structure, but on the contrary, the company must be modernized to guarantee better products and services to the end customer. The main advantage of integrated automation is time savings: some processes can be delegated directly to technological tools or software, the machines do the hard work and the humans act as supervisors.

TAILORED SOLUTIONS AND FUTURE-READY TECHNOLOGIES

Studio 1 Automazioni Industriali has designed and manufactured industrial automation since 1985 for several sectors. That long-term experience affords the company extraordinary flexibility today - making it an ideal partner for customers which need tailored solutions that can provide total support for building plants and equipment: from layout optimization to new equipment and integration of existing stand-alone equipment. Besides the engineering and realization of the mechanical parts, the company's internal department is dedicated to the design and construction of electrical systems and control panels. This includes an R&D department that's dedicated to the development of PC/PLC - HMI software on industrial automation machines, as well as programming anthropomorphic robots. Such software is created ad hoc and customized to each individual machine/system - all based upon important know-how acquired through the creation of multiple special systems jointly with specific needs expressed by the customer. Here Studio 1 Automazioni Industriali offers a complete suite of Industry 4.0 and 5.0 software solutions that are technologically-advanced and can be integrated with any ERP system - all to increase both the efficiency and effectiveness of production processes whilst bearing past experiences in mind and keeping an eye on the future demands posed by leveraging AI.

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CATALOGUE

Strategic vision drives KERAGLASS' innovative processing technology

Founded by Stefano Spezzani, Keraglass has embodied a pioneering spirit right from the outset - becoming a benchmark in the glass industry in just a few years. Underlying that success is a lucid entrepreneurial vision fuelled by a strong vocation for innovation - an integrated approach to design and constant attention to market needs.

GROWTH DRIVEN BY KNOW-HOW AND STRATEGIC SYNERGIES

Back in 2014, with the aim of expanding its technological expertise and production capacity, Keraglass entered into a strategic partnership with the Voilàp Group of Soliera (MO), a multinational and market leader in offering Smart Industry and Smart City solutions. This synergy has been an important accelerator for development, strengthening the company's position on a global level.

A beacon of Italian excellence within the international panorama of flat and curved glass processing, KERAGLASS continues to evolve as a company that's consistently distinguished itself in competently analyzing complex and diversified markets - all to propose technologically-advanced solutions for tempering and lamination of flat and curved glass as well as traditional screen printing and enamelling, digital printing, handling and storage.

KERAGLASS AT VITRUM 2025

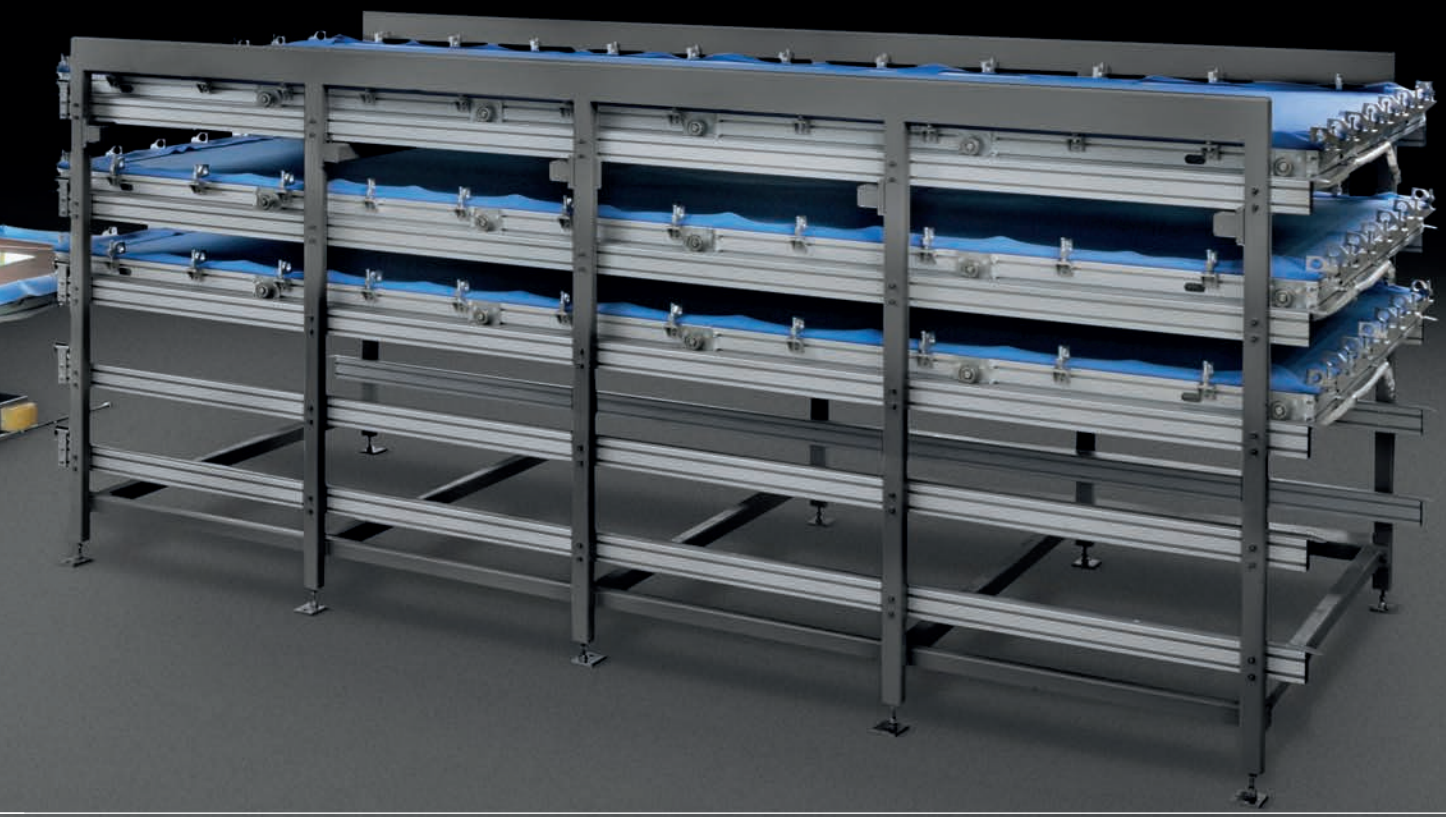
Keraglass will be exhibiting at Vitrum 2025, the international glass industry trade fair, bringing all its experience and innovative capabilities to a 208 sqm exhibition area in Hall 9P. The company will present a complete state-of-the-art range of glass tempering and laminating solutions, along with traditional screen printing and enamelling machines, digital printing systems, and handling and storage solutions, designed to meet the challenges of an ever-changing market.

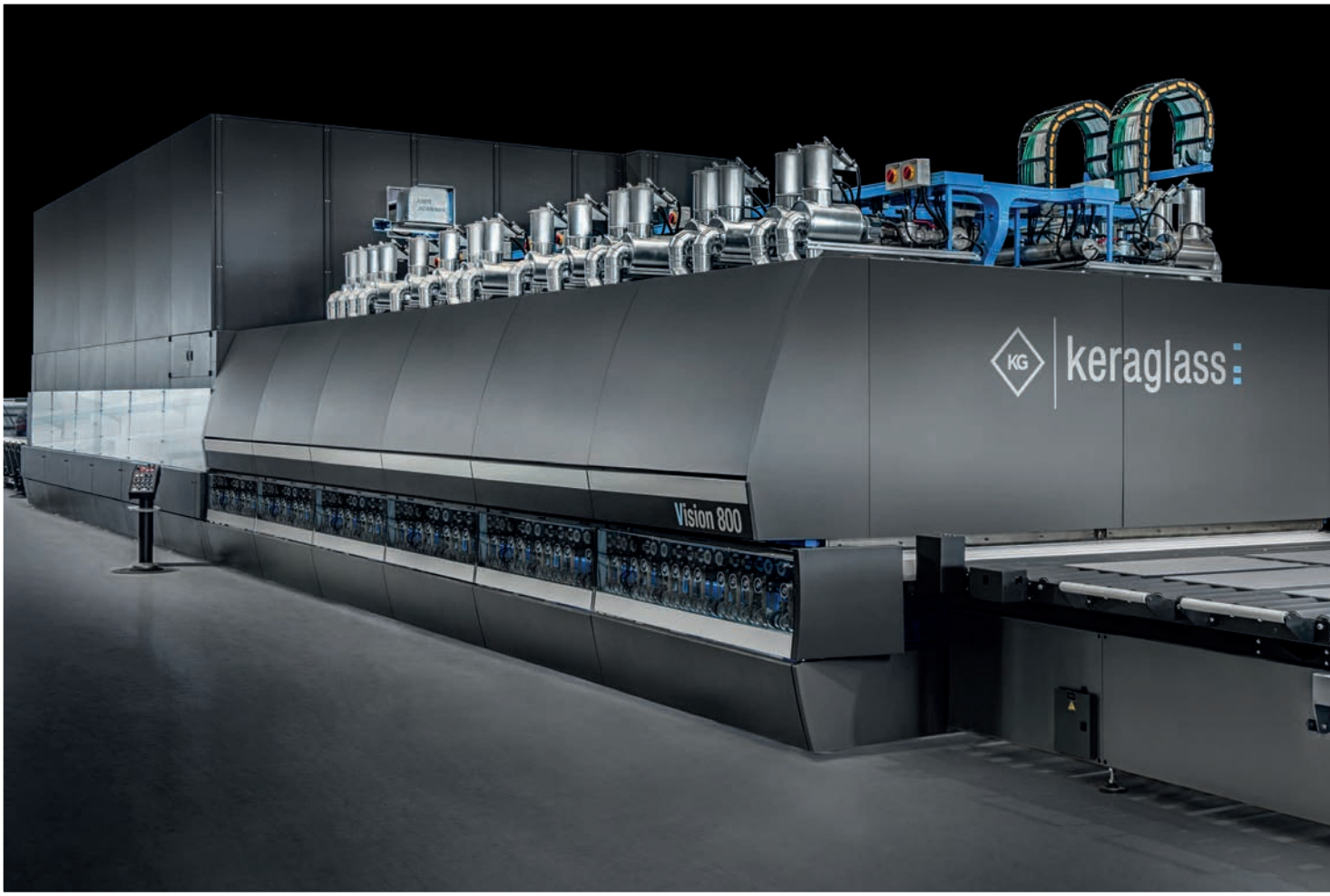
VISION 800: EXCELLENCE IN TEMPERING FLAT GLASS

Among the stars of the stand is Vision 800, the tempering furnace that represents the pinnacle of Keraglass technology. Designed to meet the needs of medium-large production facilities, it guarantees high performance in the processing of latest-generation LOW-E glass (up to e = 0.01), thanks to a convective system with air preheated to 700°C. Fully adjustable and connected to company IT systems according to 4.0 and 5.0 requirements, Vision 800 ensures superior optical quality, energy efficiency and maximum reliability. Ideal for the architectural sector, it offers tailor-made solutions, reduces consumption and guarantees a perfect finished product with extended warranty and low maintenance costs.

SUPERVISION INTELLIGENT: PRODUCTION WITHOUT SURPRISES

In support of Vision 800, Keraglass introduces Supervision Intelligent, the advanced control and monitoring system that el-





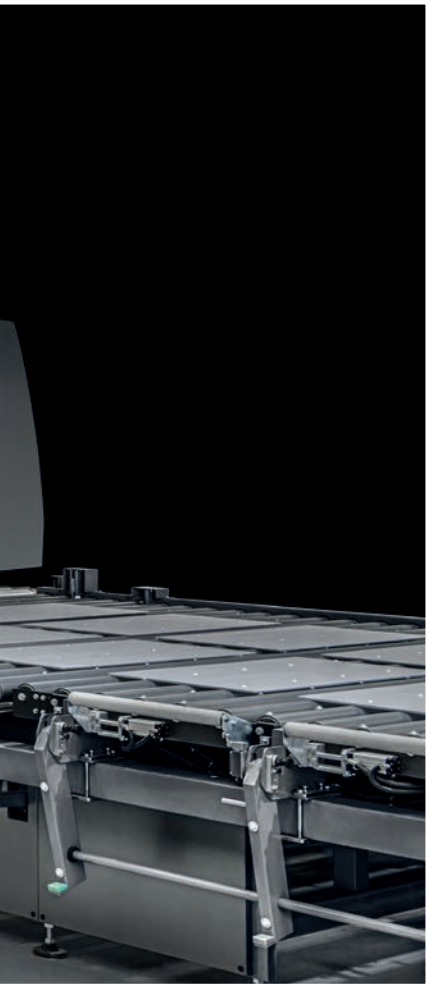
evates the efficiency of the system. Thanks to a high-resolution touch screen monitor, the operator can view every process step in real time, create customized recipes and monitor energy consumption per batch or charge.
Equipped with automatic diagnostics and proactive maintenance notifications, the system reduces downtime and extends the life of the system. Remote management and full integration with Industry 4.0 and 5.0 requirements make Supervision Intelligent an indispensable tool for precise control and uninterrupted production.

RCK: MAINTENANCE BECOMES EFFICIENT

Simplicity and efficiency also characterise RCK, the automatic roller cleaning machine, which operates directly on the system without the need for dismantling. Thanks to the modular system with interchangeable pads for abrasion, aspiration and polishing, it reduces intervention times and improves operational efficiency. An option allows automatic switching from one roller to another - making it compatible with any type of furnace.

COMBI: FLEXIBLE AND CUSTOMISED LAMINATION

The Combi, the laminating system that introduces a new dimension of production flexibility, completes the overview. The independent chambers allow differentiated cycles for different thicknesses, shapes and materials (even glass/ceramic or glass/marble combinations), with the use of EVA or PVB films. The double-height chamber expands application possibilities, while automatic cycle management, intelligent pre-configuration and remote control optimize the entire process. Low energy consumption, PLC interconnection and compliance with Transition 4.0 and 5.0 requirements complete a system designed for those



seeking quality, versatility and sustainability.

INNOVATION, SERVICE, STRATEGIC VISION: THE KERAGLASS MODEL

The heart of the Keraglass model is represented by a strongly customer-oriented approach. Each system is born from careful listening to specific needs and is translated into tailor-made solutions, developed through a comprehensive design approach and continuous research and development.

At the basis of this path there is also an evolved after-sales service, which is not limited to technical assistance, but includes consultancy, operator training, software updates and remote intervention, exploiting the full potential of digital technologies.

MADE IN ITALY AS A RECOGNISED VALUE IN THE WORLD

Keraglass fully embodies the values of 'Made in Italy': quality, creativity, attention to detail and strict controls. Each phase of the production process is supervised by highly qualified personnel, with the aim of guaranteeing high standards in terms of precision, reliability and durability of the equipment. At Keraglass, every gesture, every procedure, every innovation is designed to offer the highest possible quality. A strategic vision that turns challenges into opportunities - always putting technology at the service of ideas, beauty and functionality.

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Vitrum return to punctuate TUROMAS' 40-year anniversary celebrations

Following a milestone year marking four decades in business, TUROMAS has confirmed its participation at Vitrum 2025 - the upcoming international glass industry exhibition from September 16 to 19 at Fiera Milano, where the company will be exhibiting at stand M01-N04 in Hall 1.

After commemorating a winning legacy on September 12 at its headquarters in Rubielos de Mora (Teruel), Turomas is due to set off for Vitrum 2025. The pre-show gathering is to be a moment of celebration and gratitude, bringing together employees, partners, customers and institutions - all of whom have played a key role in the company's growth and evolution.

INNOVATIONS ON DISPLAY NEW LAM 600 LAMINATED GLASS CUTTING LINES

At Vitrum, Turomas will continue the rollout of its LAM 600, a high-performance laminated glass cutting line first unveiled during the 40th anniversary event. Designed for companies seeking maximum automation, versatility, and top-quality cuts, the LAM 600 supports thicknesses from 2+2 up to 12+12 and

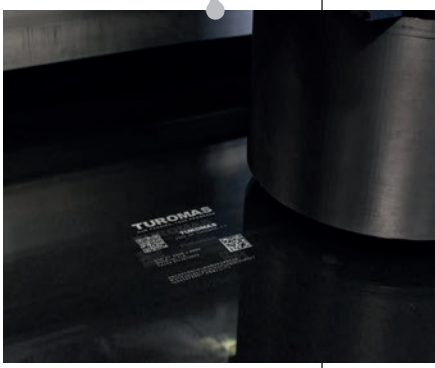
offers a cutting length of 6000 mm. The system integrates the new Turomas scoring and separation unit - reducing each cutting cycle by 10 seconds. It enables scoring with slightly heated butyral for improved quality, and the entire process -from loading to cutting to unloading- is fully-automated in a single line. Advanced mechanical stops allow for quick, precise straight and railing cuts without complex configurations.

NEW TUROMAS UV LASER MARKING SYSTEM

Expanding its range of smart solutions, Turomas will also showcase a UV laser marking system for monolithic glass cutting tables. This system allows for high-resolution marking of logos and identification codes without altering the glass surface - even on Low-E coatings. Featuring IP54 protection, RAF cooling, and vibration compensation, the system is built for stability in industrial environments. Its intuitive interface supports dynamic field management, enabling seamless integration of quality control and product customization.

EXPANDED SMART STORAGE SOLUTIONS

Turomas will also present updates to its portfolio of Smart Glass Storage Systems - including the LA, SR, and LR automated systems and the SG smart storage solution. These systems automate the storage, loading and internal transportation of glass sheets and remnants, adapting to different facility sizes and production needs. Their high level of customization helps boost efficiency, traceability and safety across all cutting and handling operations. Throughout this four-day event, the company's technical and commercial teams will be available to discuss new projects, answer inquiries and explore potential collaborations. Here Vitrum 2025 affords attendees new opportunities to stay abreast of the real needs of the market while responding with efficient, adaptable and scalable solutions.



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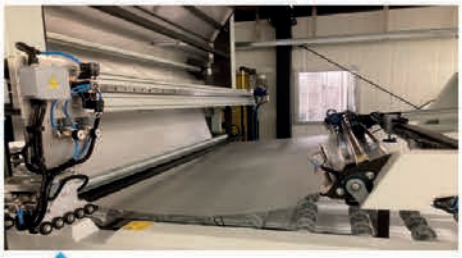

AUTOMATIC PVB FEEDING AND APPLICATION

AUTOMATIC PVB TRIMMING

MODEL	MAX GLASS SIZE	SHAPE
LPA 2651	2600 x 5100 mm	STRAIGHT, U, Z
LPA 2860	2800 x 6000 mm	STRAIGHT, U, Z
LPA 3360	3300 x 6000 mm	STRAIGHT, U, Z
LPA 3390	3300 x 9000 mm	STRAIGHT, U, Z
LPA 33120	3300 x 12000 mm	STRAIGHT, U, Z

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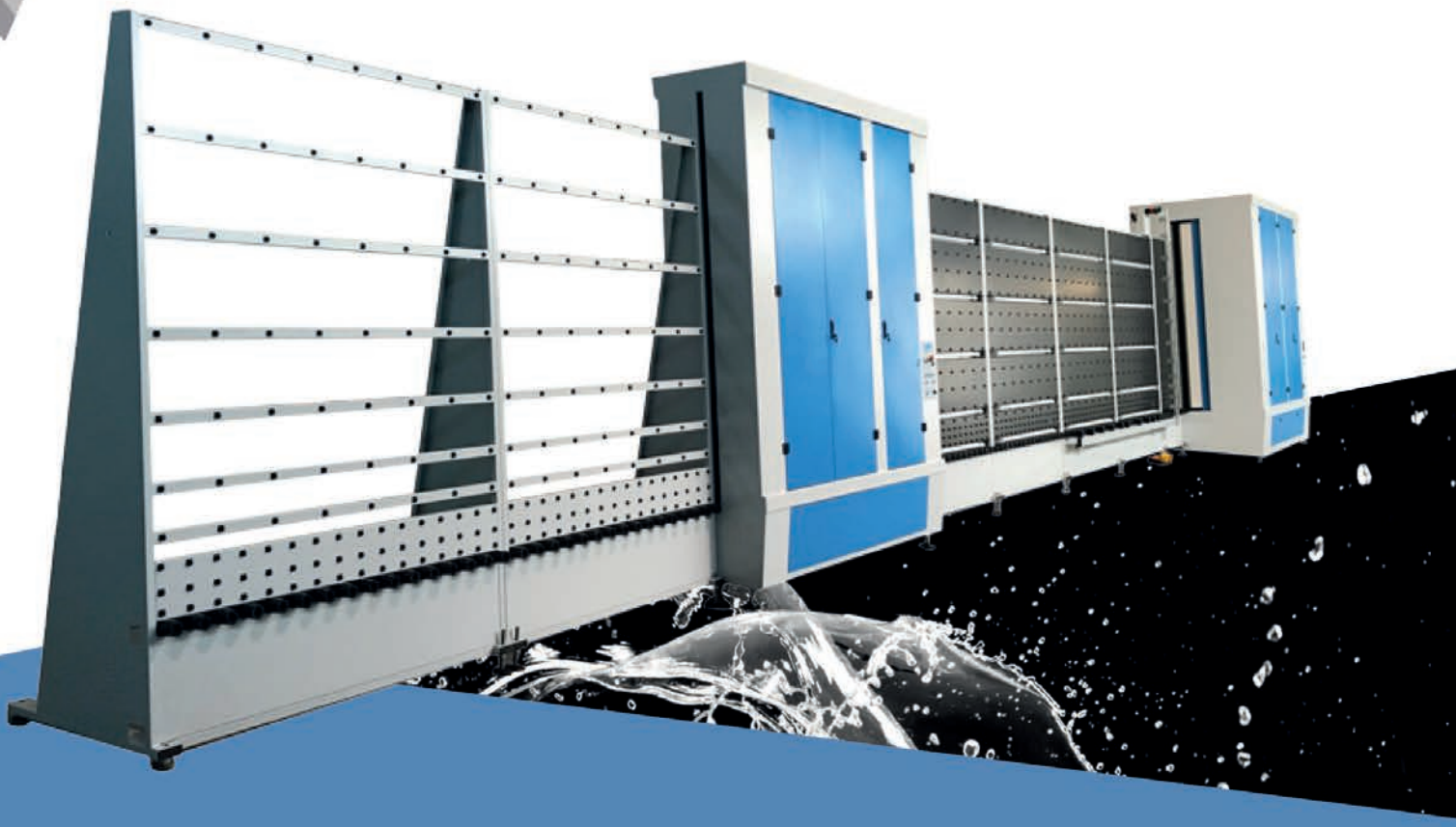

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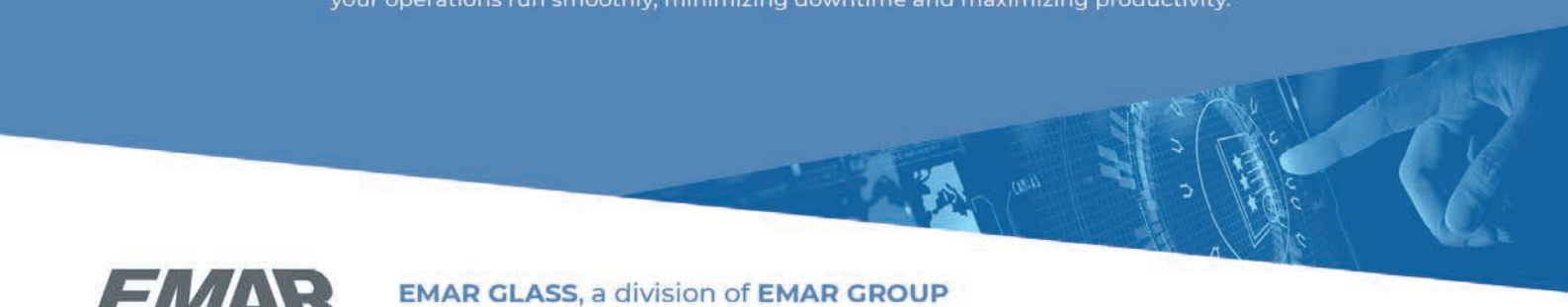

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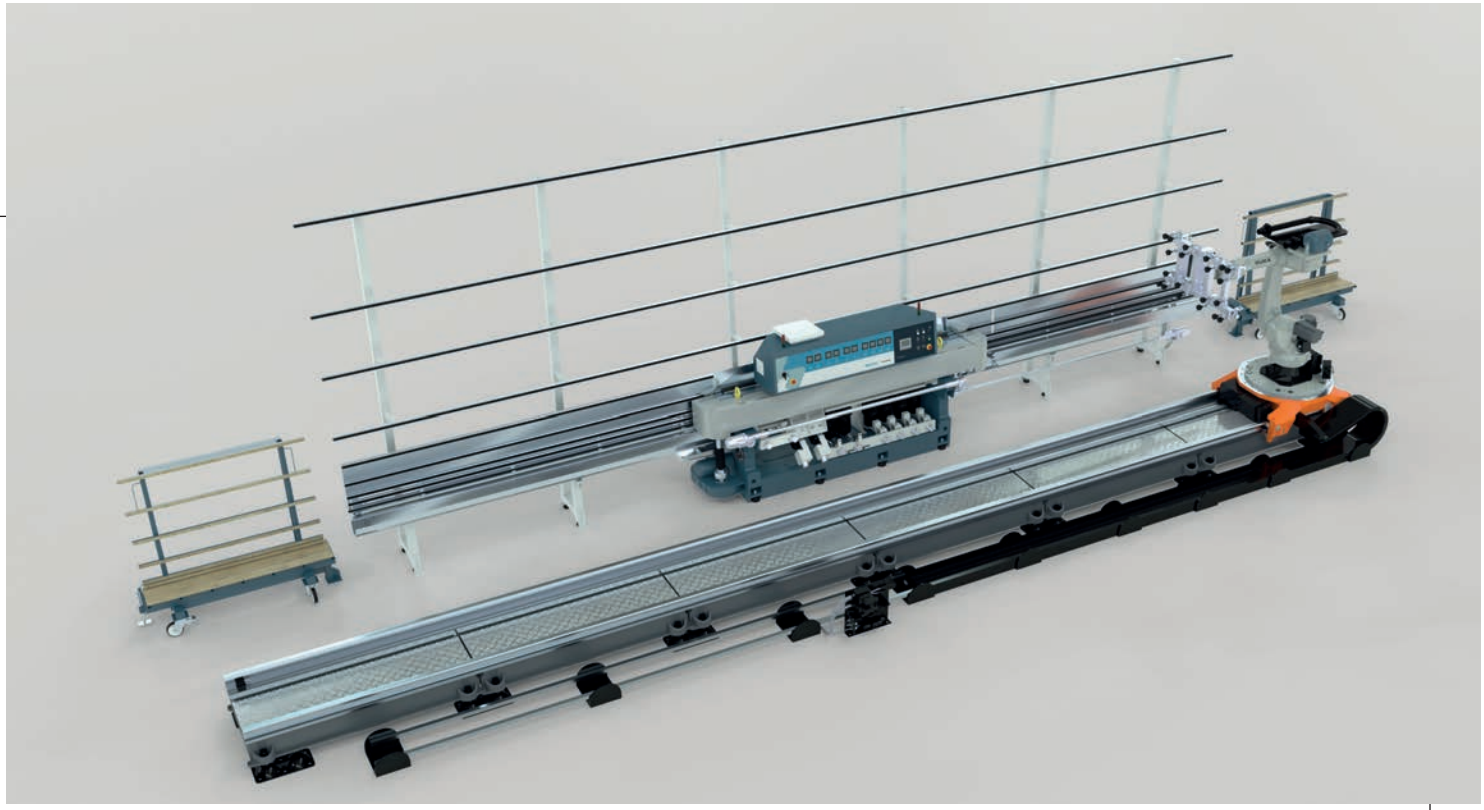
Next-level automation sees BOVONE raising the bar - again

Poised as ever to reaffirm its commitment to more sustainable glass processing, BOVONE is now all set to showcase three cutting-edge solutions at Vitrum: the EVATHERM lamination oven, ELB fully-automatic edgers and a compact 7-axis robotic system - a stellar trio of smart technologies that blends precision, efficiency and reliability to meet evolving industry demands with tangible results.

As Vitrum approaches, Bovone presents a selection of technologies that effectively expresses the company's vision: an approach focused on practical application, structural quality and continuous process improvement. The highlights include three key developments: the new EVATHERM oven for EVA film lamination, the ELB Fully Automatic edging machine range and the 7-axis robotic system for automated grinding. These three solutions, while addressing different process stages, share a common design philosophy - reliability, operational simplification and the ability to respond effectively to the daily needs of glass processors. Technologies developed to ensure productivity, operational continuity, safety, lower running costs and increasingly accurate quality control.

EVATHERM: SIMPLICITY AND EFFICIENCY IN EVA FILM LAMINATION

Bovone's new EVATHERM oven is designed to opti-



mize EVA film lamination through meticulous engineering and advanced thermal cycle control. Available in models 3.2 and 2.2, it features two independent chambers that can run different lamination cycles in parallel - ideal for flexible management of orders and production demands. The forced air convection heating system ensures even heat distribution across the load surface, delivering consistent results even with decorative inserts or complex laminated glass. A digital vacuum gauge with a light indicator provides precise control during the air extraction phase, improving film adhesion and reducing error margins. The oven is operated through a user-friendly 10" HMI touch screen, allowing real-time configuration, monitoring and adjustment of the heating and cooling curves. EVATHERM has been engineered with a strong focus on energy efficiency: with an installed power of just 45 kW, well below market averages, it significantly reduces consumption while maintaining productivity and quality. Its working area (up to 3200 x 2200 mm), internal height of 430 mm and load capacity of up to 700 kg per chamber make the oven extremely versatile and suitable for a wide range of applications, including curved glass lamination. The growing use of EVA film -valued for its adhesion, moisture resistance and ability to incorporate functional or decorative inserts- finds in EVATHERM a reliable and easy-to-use platform, aligned with the needs of today's glass processors.

THE 7-AXIS ROBOTIC SYSTEM: FLEXIBILITY, PRECISION AND COMPACTNESS

Among the innovations Bovone is focusing on for future development is the new 7-axis robotic system for automated edge processing. At the heart of the system is an anthropomorphic robot mounted on a linear track (the seventh axis), allowing smooth and accurate movement along the production line. The cell can be configured with a high-performance straight-line edger, dedicated loading/unloading stations and a BVR vertical washing machine for a complete cycle. The setup is designed to deliver a compact, scalable and high-productivity system, easily adaptable to new or existing layouts. In addition to dynamic movement along the linear axis, the system is designed to serve multiple machines - reducing downtime and optimizing both manpower and machine usage. Its modular architecture supports future expansion while the compact footprint saves valuable floor space.

Key benefits here include:

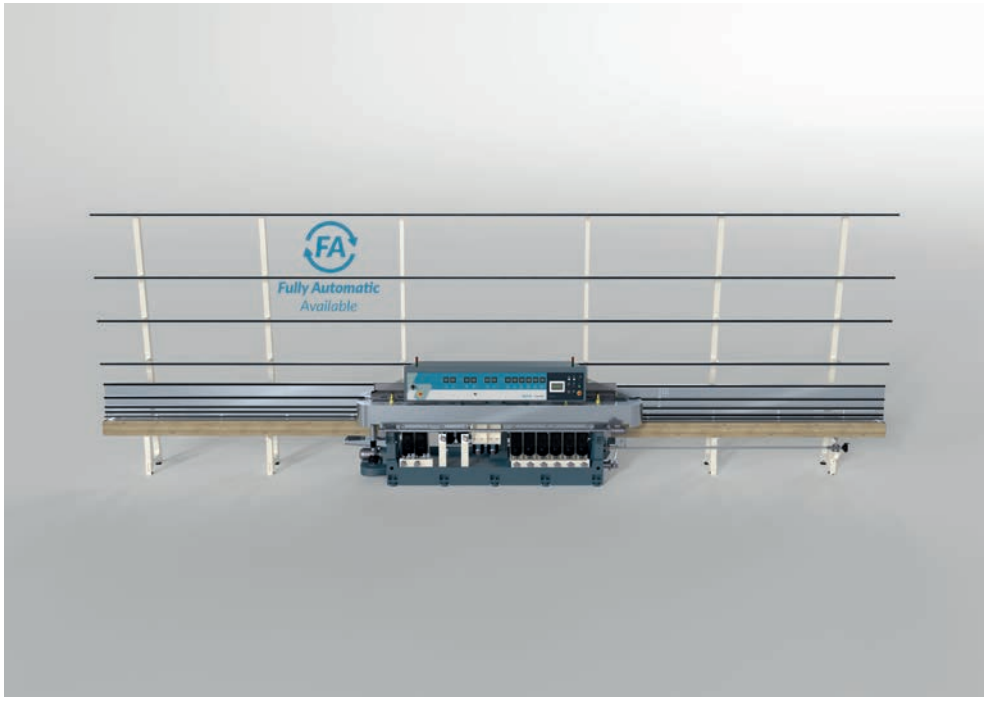
- Full automation of the edge processing cycle;
- High precision and consistent quality;
- Optimized layout and reduced footprint;
- Lower operational costs and enhanced operator safety;
- Scalability and integration flexibility.

This robotic cell provides a concrete solution for improving workflow, increasing quality and lightening the operator's workload - particularly in repetitive tasks or in applications involving potentially risky handling.

ELB FULLY AUTOMATIC: ADVANCED CONTROL AND CONTINUOUS PRODUCTIVITY

Bovone's ELB Fully Automatic machine range was developed to meet the rising demand for automation, standardi-

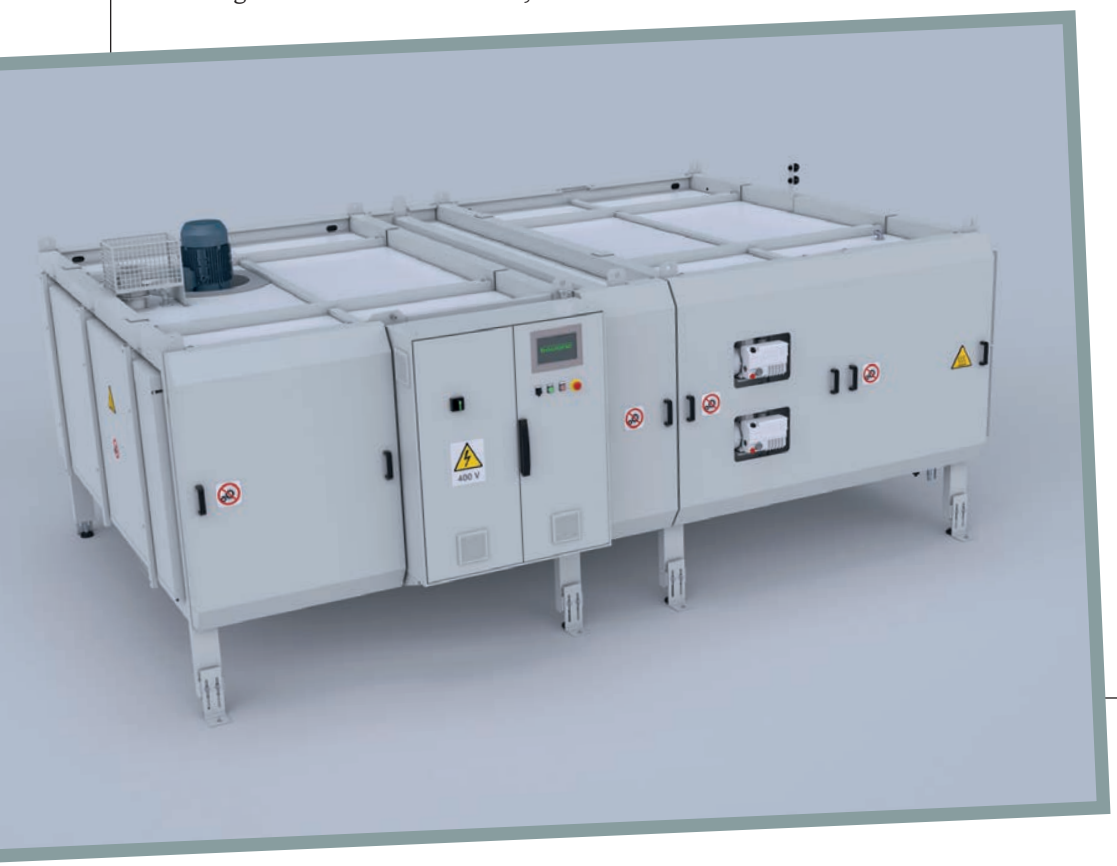
zation and streamlined glass edge processing. Combining robust mechanical design with advanced software control, the ELB FA series introduces smart features to improve edge quality, reduce manual intervention and enhance overall efficiency.



THESE INCLUDE:

- Automatic grinding wheel wear compensation, with motorized spindle adjustment based on configurable parameters (linear metres, electric absorption, or both);
- Intelligent tool replacement alert system, which notifies the operator in advance to avoid unscheduled downtime;
- Simplified wheel change, with automatic spindle lowering and return to position without sample glass;
- Fast setup, thanks to quick recall of stored recipes.

The ELB FA series suits a variety of production contexts, both as stand-alone machines and integrated into Bovone's BRS robotic systems for fully-automated, high-throughput work cells. The vertical integration between machine and software helps reduce human error, ensures production continuity and simplifies the management of mixed or variable batches.



TOWARD A MORE CONCRETE AND INTELLIGENT GLASS INDUSTRY

With EVATHERM, the ELB Fully Automatic range and the 7-axis robotic system, Bovone is not merely launching three new machines - it's also sharing an industrial vision that's tailored to the real needs of glass professionals: reliability, control, cost optimization and ease of use.

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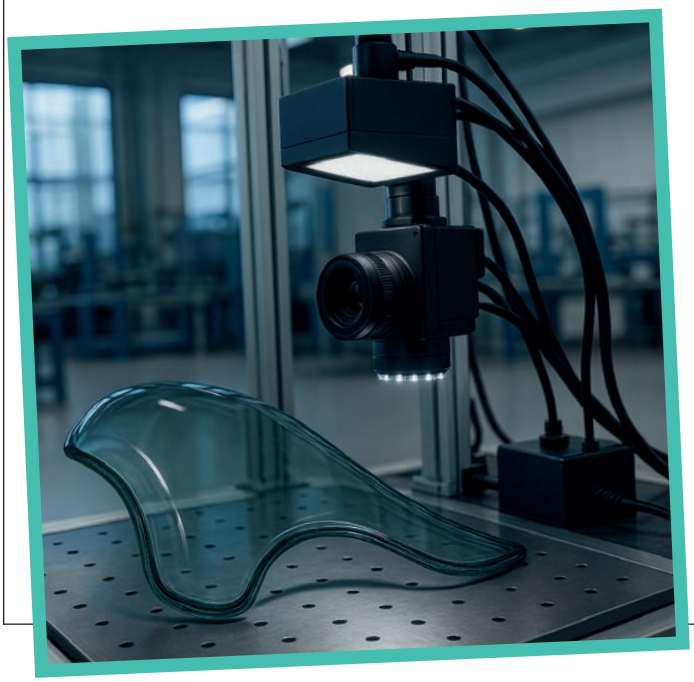
Glass inspection leaps ahead with ZETAMOTION's synthetic data

With the onset of a new era in glass manufacturing that's characterised by customization, complexity and increasingly stringent quality demands, shop floor manufacturers are expected now to switch from one custom order to the next with hardly a pause - sometimes making only a handful of identical panels, or even a single bespoke piece, before the recipe changes again. At the same time the glass itself is becoming smarter: Low-E and IR-reflective coatings vary by layer; micro-textures suppress glare; photovoltaic cells, antennas and even OLED pixels are embedded between lites.

As glass products grow smarter and more customized, ZETAMOTION now offers a solution that's revolutionizing quality control - giving AI the much-needed labelled training and precision to enable faster, more accurate defect detection across variants - all to radically transform today's bottleneck inspection into a competitive advantage.



Each tweak alters how defects look under the camera, and the first-generation vision systems that learned on thousands of near-identical flat plates quickly lose confidence after a variant switch. Because conventional deep-learning models are extremely data-hungry, their performance tends to plateau around an insufficient 80 percent detection accuracy unless they are fed with an ever-growing mountain of correctly labelled examples.

THE DATA DROUGHT IN DEFECT DETECTION

Collecting that mountain is unusually hard in glass. True fault events -sub-surface inclusions, coating delamination, edge chips- are thankfully rare, so weeks can pass before enough samples appear. And when they do, transparency, double reflections and parallax make manual labelling uncertain; two experts may disagree on exactly where the defect ends. By the time a statistically useful set is gathered, the product design or layout may have changed again. This is a problem shared across industries. As Elon Musk quipped in a recent discussion on AI training, industry is 'running out of real-world data' and must top up the tank synthetically. That is precisely the route research institutes such as Fraunhofer and several leading OEM consortia are taking. High-fidelity renderers now replicate the optics of multilayer glass, coating stacks and embedded electronics with millimetre-wave precision. Virtual 'defect injectors' add scratches, bubbles, inclusions or haze at controlled depths and orientations, while lighting, camera position and spectral filters are all varied programmatically.

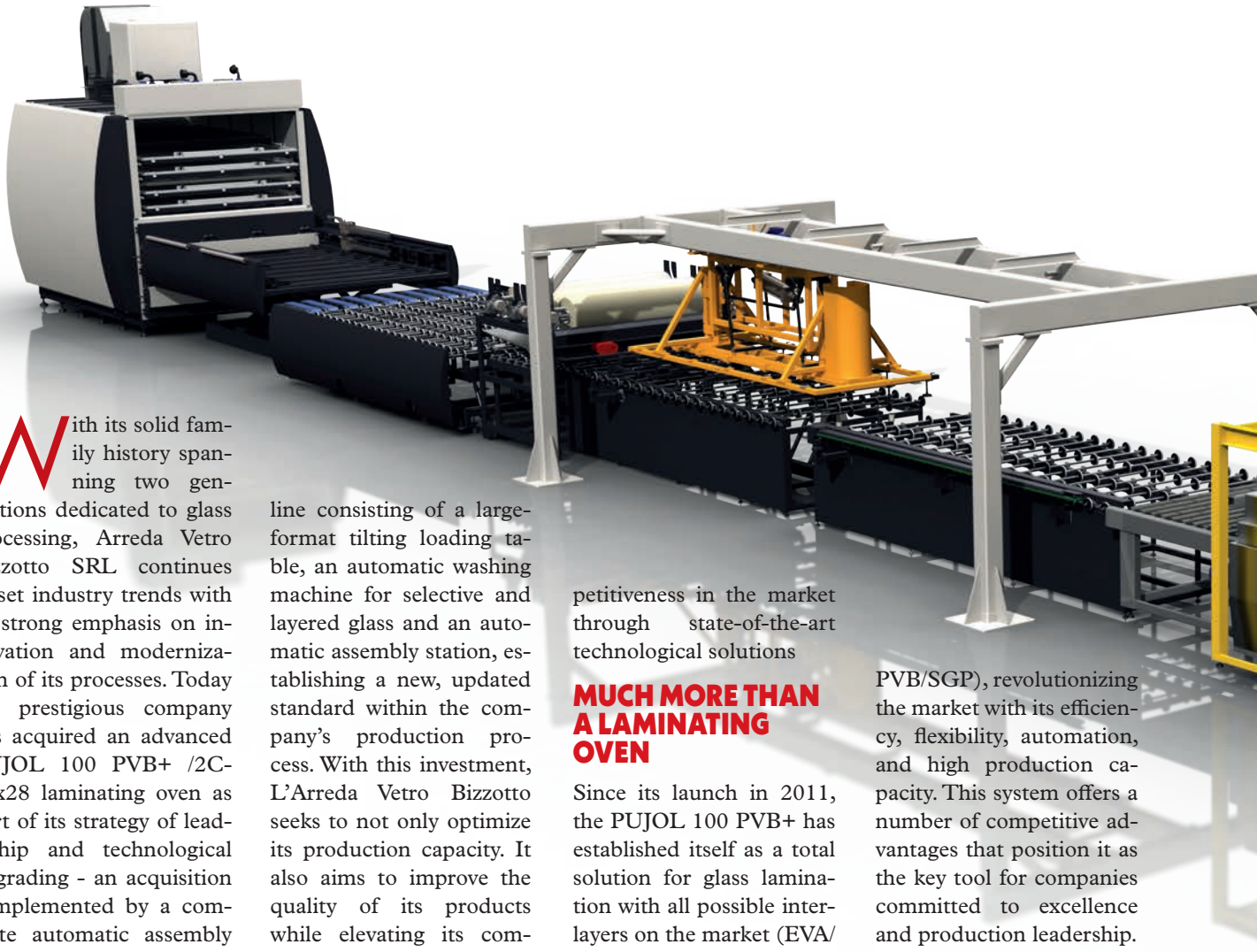
BUILDING A VIRTUAL GLASS TWIN

Every synthetic image arrives with a perfect pixel-level ground-truth map and a full recipe of how it was generated - an auditor's dream. A single night of GPU time can yield a defect library that would take months to collect by hand, and the process is repeatable whenever the product, coating or lighting rig changes. In specialty glass manufacturing -aviation glass is a prime example, with its complex shapes and uncompromising safety standards- synthetic data is already transforming quality control. Zetamotion recently helped one aerospace supplier cut inspection time from more than 20 minutes per panel to just a few seconds - delivering sizable annual labour savings and a measurable boost in production yield.

FROM RESEARCH BREAKTHROUGH TO FACTORY-READY

This same approach can benefit any producer facing a growing mix of product variants and inspection rules. Synthetic datasets let vision systems scale quickly, slashing time-to-market, while data-driven analytics support faster corrective actions, cleaner defect classification and an easier hand-off between automated tools and human experts. That being said, synthetic data is not a silver bullet; real glass still has the last word. But in a market where variants multiply faster than operators can label them, it supplies the missing feedstock that lets modern AI keep pace with agile manufacturing. Faster deployments, robust detection across coating and geometry changes and a traceable digital twin of every inspection scenario are shifting synthetic data from an interesting research topic to a practical necessity for competitive glass production. Indeed, synthetic data lets inspection systems learn from thousands of perfectly labelled glass variants - boosting defect detection even as shapes and coatings change.

Advanced PUJOL 100 PVB+ Laminating System sold to ARREDA VETRO BIZZOTTO



With its solid family history spanning two generations dedicated to glass processing, Arreda Vetro Bizzotto SRL continues to set industry trends with its strong emphasis on innovation and modernization of its processes. Today the prestigious company has acquired an advanced PUJOL 100 PVB+ /2C-50x28 laminating oven as part of its strategy of leadership and technological upgrading - an acquisition complemented by a complete automatic assembly line consisting of a large-format tilting loading table, an automatic washing machine for selective and layered glass and an automatic assembly station, establishing a new, updated standard within the company's production process. With this investment, L'Arreda Vetro Bizzotto seeks to not only optimize its production capacity. It also aims to improve the quality of its products while elevating its competitiveness in the market through state-of-the-art technological solutions

MUCH MORE THAN A LAMINATING OVEN

Since its launch in 2011, the PUJOL 100 PVB+ has established itself as a total solution for glass lamination with all possible interlayers on the market (EVA/PVB/SGP), revolutionizing the market with its efficiency, flexibility, automation, and high production capacity. This system offers a number of competitive advantages that position it as the key tool for companies committed to excellence and production leadership.

Enhancing its efficiency, sustainability and automation, ARREDA VETRO BIZZOTTO has recently purchased a PUJOL 100 PVB+ laminating system. This cutting-edge technology reduces energy use, space and labour needs while boosting production quality. A one of its kind in Italy, it marks a strategic leap ahead for the industry.

HIGH FLEXIBILITY AND MAXIMUM VERSATILITY FOR EFFICIENT PRODUCTION

Pujol 100 PVB+ has been designed to offer total adaptability to market demands, allowing efficient and competitive work with all the major interlayers on the market today: including PVB, EVA, Ionoplastics (SGP), and AB-AR—all without the need for complex changes or downtime. Pujol 100 PVB+ allows you to optimize production without compromising quality, easily adapting to different product requirements, thicknesses, and compositions. It is an ideal solution for both large volumes and customized, fast-service production, always maintaining very low energy consumption and extremely low production costs without compromising high productivity.

ENERGY EFFICIENCY AND SUSTAINABILITY

One of the most notable aspects of the system is its low energy consumption compared to the complex and high costs associated with a traditional solution such as an autoclave. This is achieved thanks to its state-of-the-art technology, which eliminates the need for energy-intensive equipment in a traditional autoclave plant, such as the white chamber with dehumidifier, the air conditioning system, or the calendering equipment prior to the autoclave. Pujol 100 PBV+ reduces energy consumption by up to 70 percent compared to conventional autoclave systems, promoting more environmentally friendly and efficient production.

REDUCTION IN INSTALLED ELECTRICAL POWER

Another highlight of Pujol 100 PBV+ technology is its low installed power to achieve high production volumes and operation. In this case, the 50x28 model only requires 90 kW installed, compared to the approximately 800 kW required by a complete autoclave installation of equivalent glass format and production capacity.

LOWER INVESTMENT, HIGHER PROFITABILITY

Pujol 100 PBV+ stands out for requiring a considerably lower initial investment, being a highly efficient, profitable, practical, functional, and easy-to-implement solution. Its practicality and functionality are due to a

series of advantages that allow for cost reduction without sacrificing quality or performance, such as the elimination of the need for complex environmental controls, calender furnaces, and high-power transformers. This translates into a simpler infrastructure with lower energy consumption and reduced operating costs. In addition, it facilitates implementation by not requiring complex or costly civil works and by optimizing the use of available space.

LABOUR REDUCTION

Thanks to its high level of automation, Pujol 100 PBV+ allows processes such as part placement, loading/unloading optimization, and component handling to be streamlined, reducing the need for operator intervention to manually load and unload complex and heavy manual loading racks, increasing the accuracy and efficiency of the process through automatic tray load transfer tables. An automatic line can be easily operated by just two operators, achieving laminated glass production of 250 m2/day-8h.

REDUCTION IN RAW MATERIAL COSTS

Thanks to the uniform pressure exerted by the bag on the edges of the glass during the lamination process and the high level of control that this system allows, it is possible to reduce the number of layers required in laminated tempered glass. This means that films as thin as 1.14 mm can be used, instead of the traditional 1.52 mm used in autoclave processes. The result: a significant reduction in waste, without compromising strength, safety classification, or the quality of the final product.

REDUCTION IN MAINTENANCE COSTS

Another aspect to highlight compared to other high-production solutions is the almost zero maintenance costs and time associated with the PUJOL-100

PVB+ double vacuum system, which is limited to changing the filters and oil of the entire set of high-capacity vacuum pumps installed, eliminating the high maintenance and safety costs associated with an Autoclave system.

SPACE REDUCTION

Finally, another advantage to highlight is the lack of space in the factory. The difficulty of implementing a high-productivity system such as the one in question is a major challenge or impossible with traditional autoclave amination systems. With the PUJOL-100 PVB+ solution, space is optimized and requires 40 percent less space than a traditional autoclave system to achieve the same production levels.

A STRATEGIC DECISION WITH A MAJOR IMPACT IN ITALY

Joaquín Pujol, commercial director of Hornos Industriales Pujol, highlights the significance of this recent transaction:

"This sale has a very special meaning for us, as it is the first Pujol 100 model unit installed in Italy, a strategic market for our company. Furthermore, it represents the 75th unit worldwide since the launch of this technology in 2011, a milestone that coincides with our company's centenary. We are convinced that this will be the first of many installations in the country. We are proud that it has been acquired by a family-owned company with a long tradition in glass such as L'Arreda Vetro Bizzotto, with whom we share a common vision of the business and values oriented towards innovation and excellence. The incorporation of Pujol 100 PVB+ technology represents a decisive step in the modernization process of their plant, allowing them to optimize production capacity, reduce operating costs, and strengthen their position as a leader in the glass sector. Visitors to Vitrum 2025 will have the opportunity to discover more about Pujol 100 and other innovative technological solutions that are transforming the safety glass sector. We will be at stand P11 E01."

Paris Pathé Palace rocks thanks to EDGETECH's Super Spacer®

With applications ranging from automated large-scale production and structural glazing to organic shapes and monument protection, Quanex Company EDGETECH now proudly flags its flexible Super Spacer® for any ambitious building project - even the most challenging.

Besides increasing energy efficiency and room comfort, with the rising demand for outstanding aesthetics, processing quality and production-related advantages, warm-edge spacers begin to fulfil many more functions today. It explains why they were 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.

SUCCESSFUL TRANSFORMATION OF AN ICONIC FILM VENUE

Paris' Pathé Palace at the intersection of Boulevard des Capucines and Rue de la Chaussée d'Antin has been

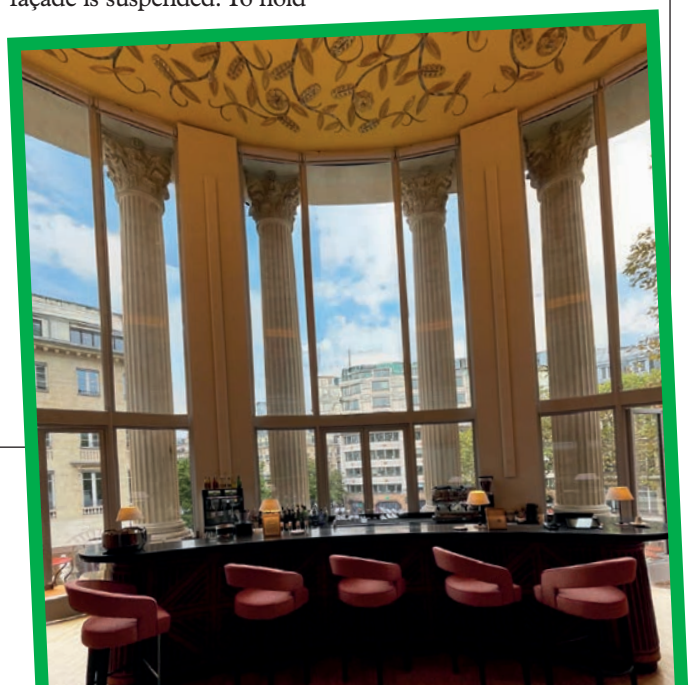
a cultural landmark for over 150 years now. Originally opened in 1869 as a vaudeville theatre, it was converted into a cinema by Paramount in 1927 and later transformed into a luxurious film palace by Renzo Piano on behalf of the Pathé Group. The new Pathé Palace boasts seven state-of-the-art auditoriums with LED screens and heated, adjustable leather seats. 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 neoclassical columns, is the Art Deco-style bar. Designed by Jacques Grange, a conspicuously renowned interior designer, it offers a breathtaking view of the vibrant theatre district in Paris' 9th arrondissement.

LIGHT AND TRANSPARENCY - AN INTIMATE DUO

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.

As Sales Manager at Döring Glass Martin Lenz 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 optimum 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. Says Christoph Rubel, technology expert at Edgetech: 'Super Spacer® has several key properties that make it ideal for clean corner forma-

© Nadia Kozlowski-Bourgade

tion 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.'

THE BOULEVARD DES CAPUCINES SEEN THROUGH DOUBLE-CURVED XL GLASS

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 Martin Lenz.


© Josef Gartner GmbH

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.'

ABOUT EDGETECH EUROPE GMBH

Edgetech Europe GmbH, located in Heinsberg, Germany, is a fully-owned subsidiary of Quanex Building Products Corporation, (NYSE: NX) a global, publicly traded manufacturing company primarily serving OEMs in the fenestration, cabinetry, solar, refrigeration and outdoor products markets. Edgetech Europe GmbH services markets in continental Europe with a total of 490 employees and 17 extruders. The company prides itself in being 'A Part of Something Bigger' by improving the performance and aesthetics of end products through continuous innovation, helping customers achieve greater production efficiencies and giving back to communities where we operate.

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- Full range of equipment for IG production.

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Stefiglass provides a qualified and rapid after-sales service, thanks to a network of expert and constantly updated technicians who are available to guarantee valid support for every need.

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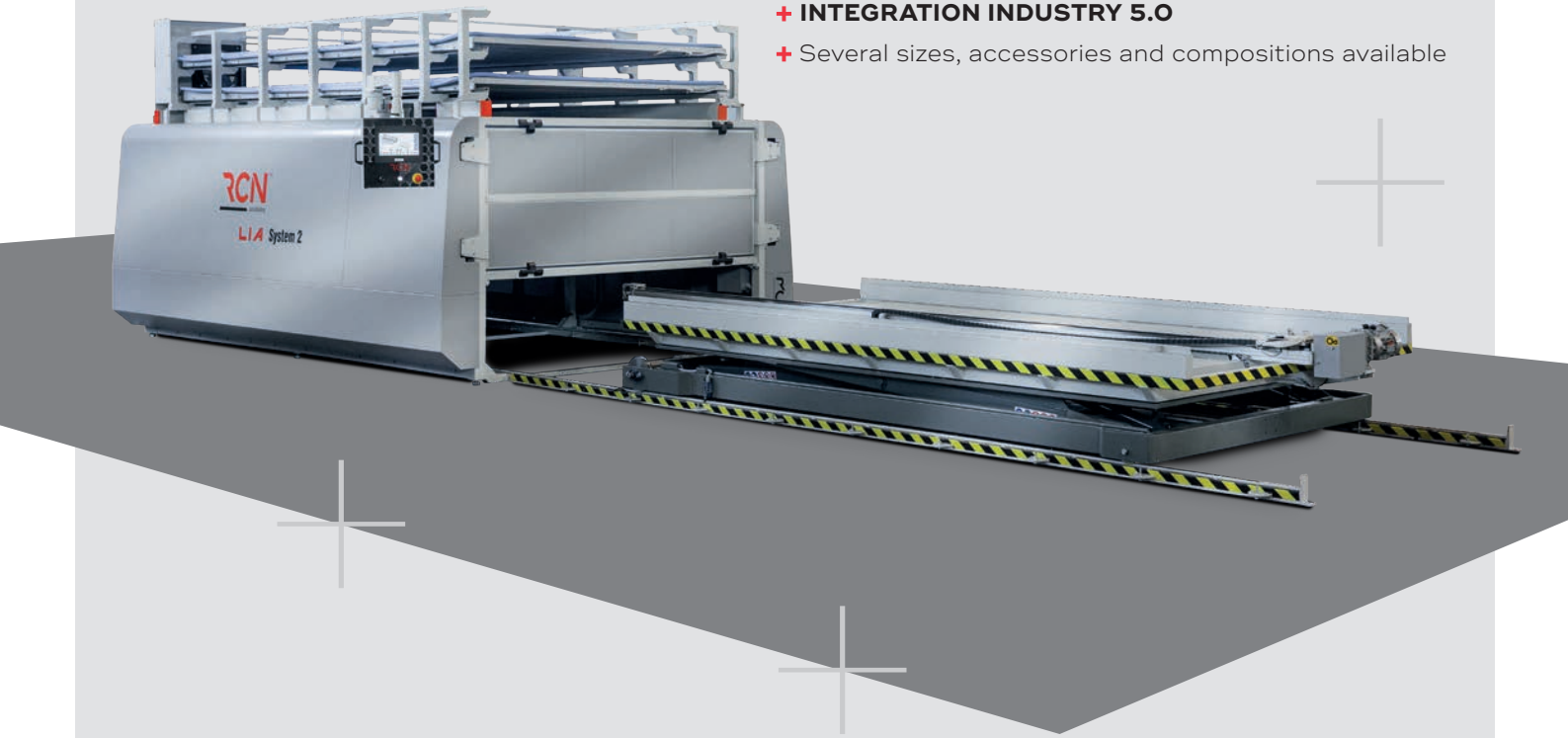

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BED line efficiency maximization - courtesy of CUGHER

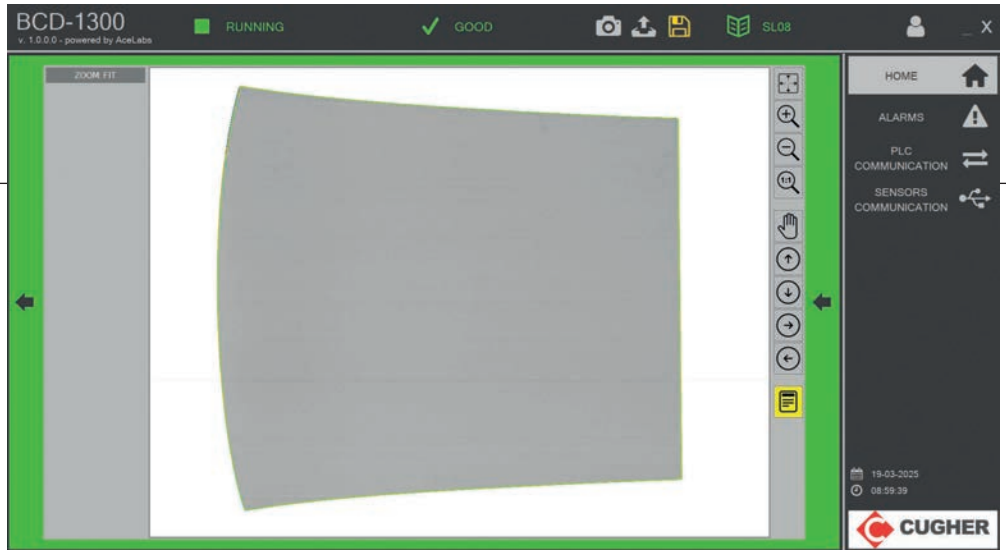
Developed with Acelabs, CUGHER's BED system delivers real-time edge defect detection for flat glass panels. It combines precision vision technology with smart software, ensuring top-tier quality control, seamless integration and production continuity - all of which renders it indispensable for automotive and appliance glass manufacturing lines.

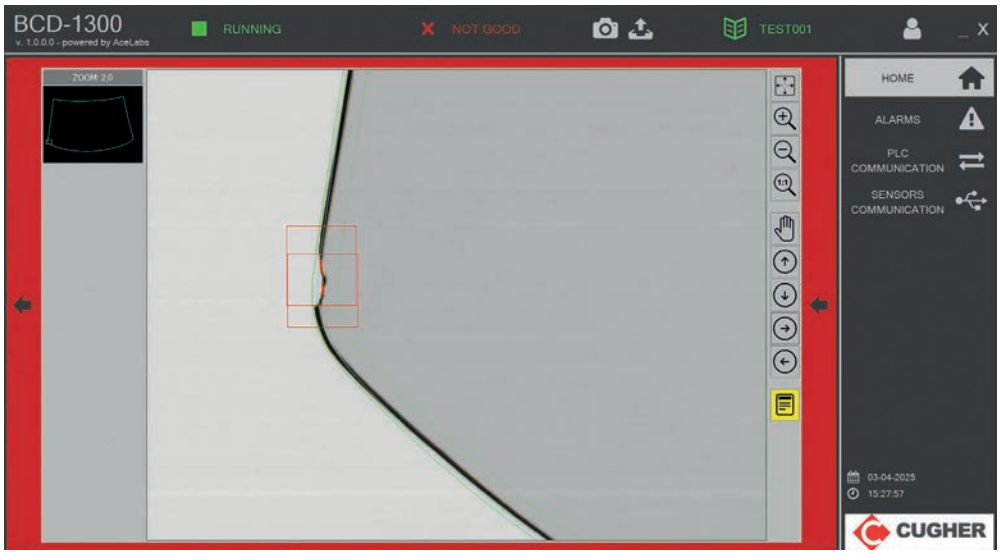
In such high-precision industries as automotive and home appliances, edge quality in flat glass panels is no longer just a visual matter. It's a fundamental requirement for performance, safety and downstream processing. Here, ensuring the integrity of each panel before it reaches critical production steps is key to maintaining high-quality standards. This is precisely where the BED - Broken Edges Detector comes into play. Cugher Glass, a company renowned worldwide for its expertise in the automation of flat glass screen printing processes, has joined forces with Acelabs, a specialist in advanced vision systems, to bring to market a highly reliable solution to this challenge. An advanced detection system has been developed to accurately and rapidly identify edge defects, ensuring consistent glass quality and seamless production continuity. Engineered as an advanced vision system, BED is specifically designed to detect edge and corner defects on flat glass panels. Installed just after the washing station, it provides real-time quality control, helping manufacturers eliminate defects before they affect processes like printing, bending, or tempering.

TECHNICAL HIGHLIGHTS AT A GLANCE

BED combines high-resolution imaging with intelligent software to deliver fast, accurate and actionable inspection data:

- Real-time inspection powered by an 8192-pixel line scan camera (0.17 mm/pixel resolution);
- Optimized lighting via green LED backlighting





for maximum contrast on edge defects;
- User-friendly software interface with full recipe management functionality.

The system is designed to detect several critical defect types, including chips and broken corners, which can weaken the panel's structure. It also identifies grinding anomalies, inclusions such as air or tin and surface contamination that may affect the glass's quality and performance. The BED system is not just about precision. It's about usability, empowering operators with the intuitive features for smooth integration into daily operations that follow here:

- Automatic training system for fast calibration when switching glass types;
- Seamless communication with the line PLC, enabling synchronized process control;
- Instant defect visualization through pan and zoom functions on real-time images;
- Comprehensive recipe management, allowing duplication, editing and protection of profiles across shifts and batches.

FAST, SEAMLESS INSTALLATION AND ADAPTABILITY

Delivered as a compact, enclosed cabinet, BED includes all essential components for quick deployment directly onto the production line. Custom sizes are available to suit various glass widths and conveyor layouts, making integration straightforward - even for complex line configurations.

OPTIONAL ADVANCED CAPABILITIES

For manufacturers aiming to achieve an even higher level of quality control and traceability, the BED system can be enhanced with a range of upgrade options. These include the integration with surface inspection systems, such as GQVS, to ensure complete control over the glass quality. The system also allows for defect image capture and metadata logging, enabling full traceability across the production process. Additionally, it offers remote diagnostics and support via a dedicated interface and provides extended recipe management and production reporting for deeper performance analysis. Finally, thanks to defect-based classification, it supports automated rejection logic using actuators or stackers, ensuring only compliant panels proceed through the line. BED is not merely an inspection tool. It's a comprehensive solution for ensuring process reliability and product conformity. Engineered to seamlessly integrate into modern production lines, it enables manufacturers to maintain stringent quality standards, reduce nonconformities and optimize downstream operations. With its advanced detection capabilities and scalable architecture, BED represents a strategic investment in precision, efficiency and traceability within flat glass manufacturing.

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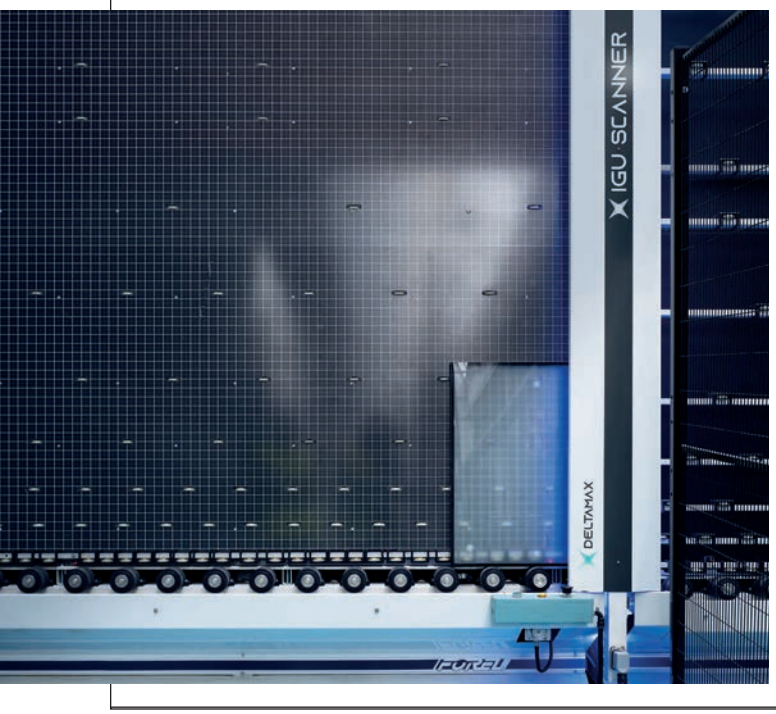
Game-changing inspection technology, courtesy of DELTAMAX

An Italian company specializing in flat glass inspection since 2010, DELTAMAX will be introducing its IGU scanner at Vitrum 2025. This advanced system ensures quality control throughout glazing production, detecting defects like misalignments and bubbles - all while integrating easily into production lines as it supports customizable, cloud-based data reporting.



Founded back in 1989 as a spin-off from a research centre located in Trento, Italy, Deltamax initially had a different name - SIPAR. In 1992, the company installed the first inspection system in a float glass production line for Pilkington at its Porto Marghera plant. Ever since 2010, Deltamax has been focusing its activity on quality control of flat glass, with several solutions with an extremely attractive price-performance ratio and a worldwide footprint - all thanks to its reliable sales network.

DELTA INFORMATICA GROUP

The company has been part of Delta Informatica since 2018 - a group which, with more than 160 employees, boasts an aggregate turnover of more than EUR 20M. It forms a solid base - ensuring the growth path that characterizes Deltamax, which is ever more present in flat glass processing companies. In modern production processes, considering the increasingly narrow margins applied to individual products, attention to quality is an increasingly topical and indispensable issue to guarantee the delivery of defect-free

items to the end customer, avoiding complaints or even worse replacements.

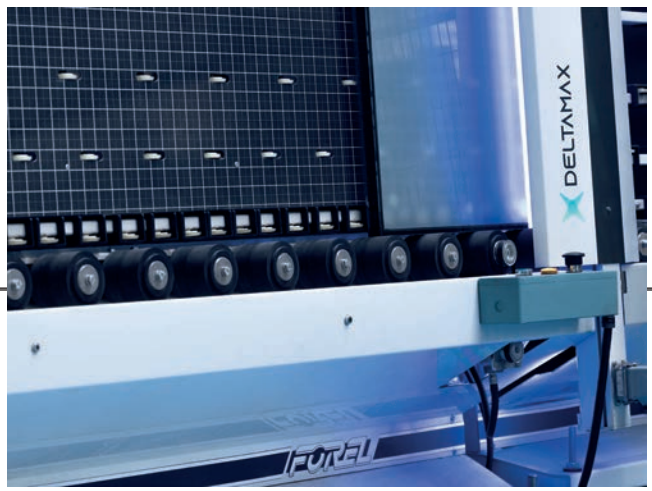
THE IGU SCANNER

To satisfy all its customers in the best possible way, Deltamax has developed different solutions that can be used at any point in the production process. Among these, its 'end-of-line' control is hard to miss - something that definitely tops the wish list of any manufacturer in any sector. At the upcoming Vitrum exhibition, Deltamax will be officially presenting its IGU scanner - a system that's capable of controlling the quality of the finished glazing unit, before or after sealing. While retaining the distinctive features of all Deltamax solutions, from compactness to positioning behind the line (in order to avoid getting in the way of the operators' work), to modularity to ease of installation (which generally asks no changes to the production line), this new system allows precise and punctual checks - identifying non-conformities in the transparent area or in the application of the channel.

- Defect control in the transparent area: IGU scanner's performance in detecting non-conformities in the transparent area of glass is comparable to that of its 'parent', namely the GlassInspector. As such, it can detect the presence of bubbles, inclusions and scratches, as well as the presence of foreign bodies or butyl residue on each of the glass units.
- Spacer inspection: in this case IGU scanner allows for discrepancy detection during spacer installation - regardless of spacer type. That means out-of-squareness or misalignments in the positioning along the sides can be detected, as can non-conformities in the corners.

The IGU scanner has already been installed by several customers:

- in double-glazing production lines: installed immediately after the press, which is interfaced with the line, the system allows non-compliant double-glazing to be stopped before it gets sealed.
- in a dedicated line: Deltamax has also created control islands equipped with a loading/unloading area and washing machine, which allow each insulating glass unit to be checked after sealing.



- Data collected by the system can then be managed by the Production Analyzer software, developed to allow statistical checks and to collect images of defects, which includes automatic reporting of the results of the check - made available to customers with cloud-based solutions too.

CUSTOMER-CENTRICITY THROUGH INSPECTION PRECISION

Like all the products produced by Deltamax, the IGU scanner allows the company's clients to customize inspection - rendering it more or less restrictive depending upon the customer, product type, etc. The IGU scanner completes the range of solutions for quality control in IG production lines, which today consists of the GlassInspector (a next generation scanner that checks the most common defects), the innovative Q+ (which guarantees the best price/quality ratio among scanners on the market, with optimum defect detection performance) and OPT, a revolutionary system for detecting defects before cutting the large sheet.

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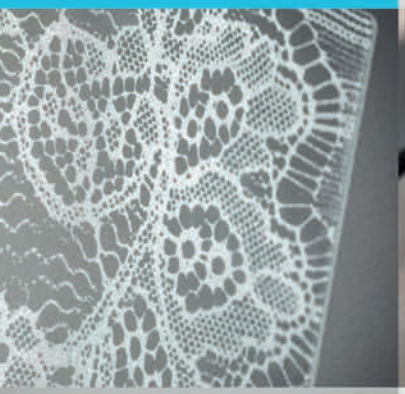

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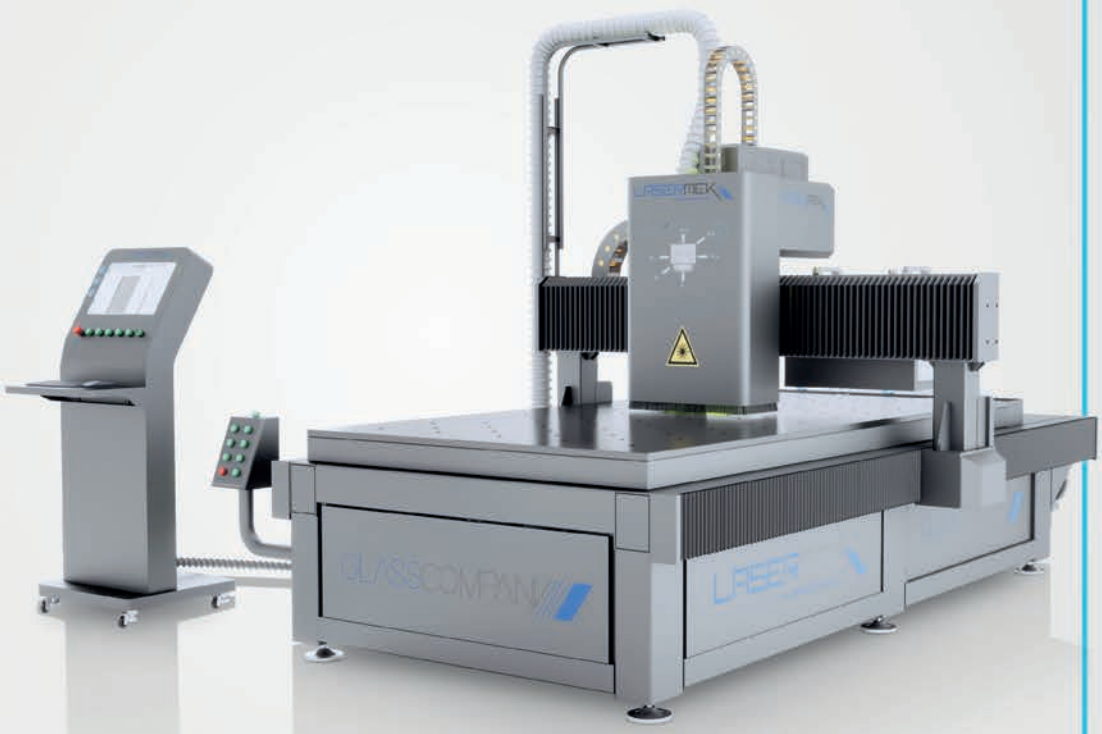

LASERMEK

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Nanotech excellence soars after UNELKO team-up with AGC GLASS

Widely recognized for its pioneering work in surface protection and nanotechnology, Unelko Corporation has entered into a new sales partnership with AGC Glass, one of the world's largest and most respected glass manufacturers. This collaboration brings Unelko's advanced protective coatings -including Invisible Shield®, Glass Scrub® and Repel®- to AGC's global

With the recent announcement of its sales partnership with global glass leader AGC GLASS to offer Invisible Shield®, Glass Scrub® and Repel® products through its online platforms, UNELKO CORPORATION has flagged a strategic alliance to enhance global access to its high-performance glass protection and easy-clean surface care solutions.

e-commerce platform, expanding access to high-performance glass care technologies for producers and fabricators worldwide.

EXPANDING INNOVATION THROUGH GLOBAL E-COMMERCE

AGC Glass is well known for its strong commitment to innovation. It operates in more than 30 countries and serves a wide range of sectors - from architecture to automotive. The company's growing online presence now includes Unelko's surface protection solutions, offering glass professionals a convenient and direct way to source best-in-class coating and maintenance products. AGC's online store provides a streamlined purchasing channel for customers seeking durable, hydrophobic coatings and glass restoration systems.

SHARED VISION FOR GLASS LONGEVITY AND PERFORMANCE

The alignment between AGC and Unelko is a natural one. Both companies are deeply invested in technological advancement and share a vision for raising the standard of care and longevity in architectural and commercial glass. For Unelko, the partnership represents more than just expanded distribution—it reinforces the growing recognition of the Invisible Shield® product line as a top-tier performer in the protective glass coatings category. Invisible Shield PRO 15, along with its companion products Repel® and Glass Scrub®, are engineered to protect glass from wear, stains, mineral buildup, scratching and environmental damage. These products also make maintenance faster and more efficient, reducing the need for harsh chemical cleaners or frequent restoration. In high-performance buildings and demanding industrial settings, this "easy clean" benefit translates directly into time and cost savings.

A LEGACY OF TRUSTED SOLUTIONS AND STRATEGIC GROWTH

Unelko's coatings are already trusted by thousands of glass companies and millions of end users across more than 60 countries. Their commercial lineup is designed to support manufacturers, processors, distributors and installers by preserving the original clarity and appearance of glass, while also extending its lifespan. These benefits have earned the products praise for their performance, value and ease of use - especially when compared to other, more expensive coatings in the category. Heather Ohlhausen-Lyons, Unelko's Marketing Manager, believes that seeing is believing. "Invisible Shield represents the best combination of application ease, durability and long-term value in glass coatings," she says. "We strongly encourage producers and fabricators to compare our products side-by-side with other options and witness the 'easy clean' difference for themselves." With over 50 years of innovation in hydrophobic coatings, dual-action cleaners, antimicrobials and hard water restoration systems, Unelko continues to lead the way in advanced surface care. The company remains open to strategic alliances that support its mission of elevating performance standards in glass protection across the globe.

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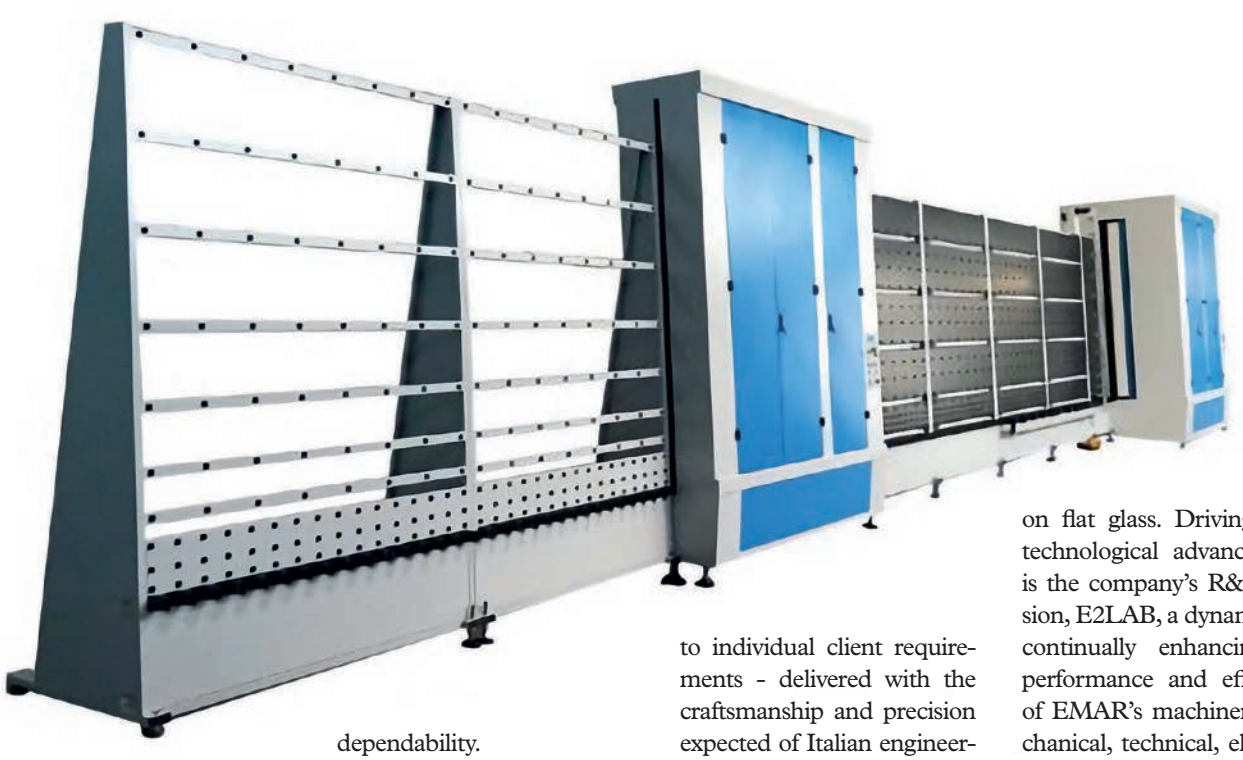
Sustainability in motion: inside EMAR's manufacturing commitments

Blending Italian engineering with cutting-edge innovation that's reshaping glass processing, EMAR enjoys a global reach - all while offering real-time support as it commits itself to a robust ethos of sustainability. Here we examine the technology, philosophy and future-focused impact of a group that's earned its name for providing tailored, high-performance solutions to empower glass manufacturers the world over.

A LEGACY OF PRECISION AND GLOBAL REACH

EMAR Group stands as a pillar of Italian engineering excellence in the design and manufacture of machinery for flat glass and insulating glass unit (IGU) processing - a shining beacon on the industry landscape that's been visible for over three decades now. Renowned for its commitment to innovation and customer-centric support, the company continues to set benchmarks in performance, precision and reliability. Operating out of a modern production facility spanning more than 4,000 square metres, EMAR has cultivated a global presence that today reaches over 50 countries, accounting for 90 percent of its total business activity. Founded on the principles of innovation and uncompromising quality, EMAR Group has consistently invested in research and development as a strate-



gic pillar. This long-term vision has resulted in cutting-edge machines that not only meet evolving production standards but also anticipate future industry demands. Across its history, EMAR has produced over 5,000 machines and systems, many of which have found homes in the most advanced insulating glass production lines worldwide. The company's international reach is built on a robust network of carefully selected distributors, all of whom are trained through rigorous technical programmes to provide seamless and professional support. In Italy, EMAR operates directly with its own expert personnel and proprietary equipment, ensuring service interventions within 24 hours - an operational benchmark that continues to enhance its reputation for dependability.

TAILORED ENGINEERING AND DIVERSIFICATION

Tailored manufacturing is one of EMAR's most distinctive qualities. A large share of the company's machinery is custom-designed for foreign and domestic dealers seeking to expand or complete their production systems. The result is an ecosystem of solutions that adapts fluidly to individual client requirements - delivered with the craftsmanship and precision expected of Italian engineering. Specialisation extends beyond glass processing. EMAR has also developed and supplied sophisticated systems tailored for the photovoltaic industry, including machinery built to client specifications for the production of solar panels. This diversification reflects the brand's ability to evolve with the broader energy and architectural landscapes, while maintaining its core focus on flat glass. Driving these technological advancements is the company's R&D division, E2LAB, a dynamic hub continually enhancing the performance and efficiency of EMAR's machinery. Mechanical, technical, electrical and electronic aspects of machine design are perpetually refined, with particular attention paid to both usability and aesthetic design. From operator safety to visual clarity and intuitive interfaces, every detail is considered to align with both functional and visual excellence.

ENGINEERING EXCELLENCE AND GLOBAL EXPORT

Premium materials are selected for each build, ensuring that every EMAR machine delivers durability and performance without compromise. This commitment to craftsmanship, combined with attentiveness to market and customer needs, results in machinery that offers exceptional value - both in terms of operational efficiency and return on investment. Since its inception in 1990, the company has designed and produced high-performance machines for flat and insulating glass with a distinct passion. More than 90 percent of these machines are exported globally, supporting businesses in over 50 countries. The portfolio includes horizontal and vertical washing machines, complete production lines and auxiliary units - each proudly bearing the hallmark 'Made in Italy.' A testament to EMAR's ecological commitment is EMAR Solar, a dedicated division focused on sustainable energy. This arm of the company handles the complete lifecycle of photovoltaic systems - from design and installation to grid integration and post-deployment optimization. Clients also benefit from a dedicated online portal, where real-time monitoring tools provide continuous insight into the performance of their solar infrastructure.

CONNECTED SUPPORT AND SCALABLE SOLUTIONS

But EMAR offers more than machinery; it offers enduring partnerships through a connected support philosophy. All automatic lines are engineered to maintain continuous connectivity with the Group's technical team via a standard internet connection. This capability allows real-time diagnostics, immediate assistance and consistent operational uptime - ensuring clients remain productive, safe and supported. With its 'always by your side' approach, the company provides peace of mind to its clientele. Remote monitoring enables technicians to troubleshoot and even bypass certain sensors to maintain workflow during critical moments, effectively minimizing downtime and maintaining production momentum regardless of geographic location.

TAILORED SOLUTIONS FOR EVERY BUDGET

Catering to a diverse market, EMAR Group offers an extensive portfolio that includes advanced automatic lines, semi-automatic machines and the accessible Eco series. This range enables businesses of varying scales to access high-quality machinery suited to their specific financial and operational needs. The Eco series, in particular, represents an ideal balance between affordability and uncompromised performance - ideal for companies seeking to optimise their production capabilities while maintaining budget discipline.

INTELLIGENT LINES FOR A SMARTER FUTURE

Among its most recent technological achievements is EMAR's suite of modular automatic lines tailored for double-glazing applications. These lines feature integrated panel presses, gas loading systems and remote monitoring capabilities, designed to accommodate units up to 2500 mm in height.

ALWAYS CONNECTED

Customisable by nature, the lines are composed of 4-metre modules, allowing precise configuration for a broad spectrum of production requirements. Anti-cut rollers with integrated friction components promote smooth glass handling while prioritising operator safety. The washing system, built in powder-coated stainless steel, measures 2.9 metres and is constructed for longevity and corrosion resistance. With six 160 mm brushes rotating on steel shafts and aluminium supports, the washing performance is thorough and reliable. The three-zone water management system features independent tanks, pumps and stainless-steel internal parts - engineered to minimise consumption by recycling wastewater across compartments. Thermostat-regulated heating elements are standard across the entire series. Energy conservation is further enhanced with a drying fan housed in an insulated casing that includes a damper for airflow control, reducing energy usage during machine idle states. Fully adjustable working speeds are maintained via an electronic control system that ensures consistent torque, regardless of glass weight or thickness. This is complemented by an inverter-controlled transport mechanism that shortens glass transition times, thereby enhancing productivity. An integrated LED inspection lighting system enables operators to detect even the most minute defects in real-time. In addition, laser sensors manage profile alignment, while oil-dampened pneumatic pistons adjust automatically based on glass thickness. These features allow groove positioning to occur seamlessly without manual adjustments, regardless of dimensional variations. The system's measurement module instantly calculates necessary parameters for gas volume, streamlining an often complex stage of production. The 3.6-metre panel press incorporates anti-cut rollers and a mobile surface that operates on recirculating ball bearings for smooth motion. Spiral clamps connected by a high-precision belt ensure exceptional alignment, even for large-format glass. Pressing operations are managed electronically, using a brushless motor to apply micro-adjustments in torque. The result is precise force modulation based on dimensional feedback - monitored and managed through intelligent, self-regulating software. User interaction is facilitated through the EASY TOUCH control panel, a touchscreen interface designed for intuitive navigation. Operators can oversee every stage of the production process, fine-tune machine parameters and monitor performance metrics with ease. The fixed exit module, stretching four metres in length, carries glass on anti-cut rollers secured to friction systems. This zone also features a self-learning mechanism that automatically measures pane dimensions, adjusting gas loading operations accordingly. The control panel offers further configurability and the entire system is engineered for modular integration with additional equipment.

INNOVATION AND SUSTAINABILITY: A FUTURE-FOCUSED PARTNER

By integrating innovation, customisation and responsive service, EMAR Group has positioned itself as a trusted partner for companies striving to modernise their glass processing operations. Whether deploying fully automated lines or streamlined entry-level systems, clients benefit from the company's enduring commitment to precision, performance and adaptability. Real-time connectivity features help to ensure production never falters, while eco-conscious design elements -from water-saving mechanisms and thermal management systems to energy-efficient motors and inverters- underscore the company's commitment to sustainability. In doing so, EMAR not only reduces the environmental impact of glass production but also lowers operating costs for end-users. From its foundations in Italian manufacturing excellence to its present role as a global innovator in flat glass technology, the company continues to deliver robust, reliable and forward-thinking solutions. For those seeking a partner grounded in technological prowess, environmental responsibility and unwavering customer focus, EMAR Group offers an exceptional path forward in the evolving world of glass production.

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Global diamond tool industry honed to Italian ADI precision

Uniting Italian precision, advanced technology and sustainable practices to deliver high-performance diamond and polishing tools worldwide, ADI, VINCENT and RBM ITALIA all come together to jointly ensure tailored solutions, seamless tool sequences and expert support - empowering industries with integrated, future-ready systems for cutting, edging and finishing excellence.

In the world of advanced material processing where accuracy and efficiency are essential, Italian companies ADI SRL and RBM Italia have carved out a distinctive space. Specializing in high-performance diamond and polishing tools, the company blends innovation with craftsmanship to deliver custom-engineered solutions - all to meet the evolving demands of industries working with glass, ceramics, natural stone and composite materials. Founded on a commitment to quality, innovation and reliability, ADI operates with a distinctly global outlook. Proudly part of Surfaces Group, ADI—together with sister brands VINCENT and RBM Italia—offers a complete suite of diamond and polishing tools, including grinding wheels, cutting discs, milling, and polishing systems. These solutions are all designed to enhance performance across every phase of the production process.

As part of Surfaces Group—a global leader in surface treatment and finishing solutions—ADI benefits from a technologically advanced and synergistic environment. This strategic alliance strengthens the compa ny's global presence and enhances its ability to deliver innovation, quality, and comprehensive process solutions to customers worldwide, supporting continuous improvement in both products and services. It is a strategic alliance that strengthens the company's global presence while supporting continuous improvement in products and services. In this way ADI can offer its complete suite of diamond and polishing tools, which includes grinding wheels, cutting discs, milling and polishing systems - all designed to enhance performance across every phase of the production process.

CUSTOMISED SOLUTIONS FOR EVERY INDUSTRIAL NEED

What distinguishes ADI is its tailor-made approach.

Whether for a small artisanal workshop or a fully-automated production facility, ADI tools are customized to meet specific technical requirements. This dedication to precision ensures not only better performance but also faster delivery times, consistent quality standards, and dedicated pre- and post-sales support. The company doesn't just manufacture tools - it collaborates with clients to develop intelligent solutions.

CUTTING-EDGE TECHNOLOGIES AND CONTINUOUS INNOVATION

A core strength of ADI lies in its integrated industrial model and forward-thinking R&D department. Continuous investment in new materials, automation and manufacturing technologies allows ADI to anticipate market shifts and maintain a technological edge. Each tool undergoes careful material selection, precision engineering, and strict quality control. The result: longer tool life, reduced machine downtime and superior processing outcomes. Today, ADI products are trusted by clients in over 60 countries - representing Italian quality on a truly global scale. Through its extensive commercial network, the company combines international reach with the responsiveness and flexibility typical of 'Made in Italy' excellence.

SUSTAINABILITY AND INDUSTRIAL RESPONSIBILITY

Sustainability is another pillar of ADI's identity. Together with RBM Italia, the company has implemented production practices that reduce environmental impact. These include optimized energy usage, waste recycling and the elimination of hazardous substances. In an era where green credentials matter, ADI is positioning itself as both a technological innovator and a responsible industrial partner.

WHY CHOOSE ADI AND RBM ITALIA?

There are compelling reasons why industry leaders consistently choose ADI and RBM Italia as their trusted tooling partners. At the core is a commitment to high customization, with diamond and polishing tools precisely engineered to meet the unique demands of each production process. This is paired with guaranteed quality, ensured through rigorous material selection and batch-by-batch quality control. The company's strength in advanced technology -driven by continuous R&D and patented innovations- keeps clients ahead in performance and productivity. Equally important is the comprehensive technical support provided by qualified specialists before and after purchase, ensuring smooth implementation and long-term reliability. With a global presence and efficient worldwide distribution, ADI and RBM deliver consistent service across markets. Their expertise in designing the perfect tool sequence further optimizes every stage of cutting, edging and finishing - making them essential partners in high-precision manufacturing. In a competitive and fast-changing market, ADI S.r.l. and RBM Italia jointly stand out as strategic allies for companies seeking to optimize their cutting, edge processing and finishing operations. With deep industry expertise, cutting-edge solutions and Italian manufacturing excellence, the two are helping shape the industries of the future - one precision tool at a time.

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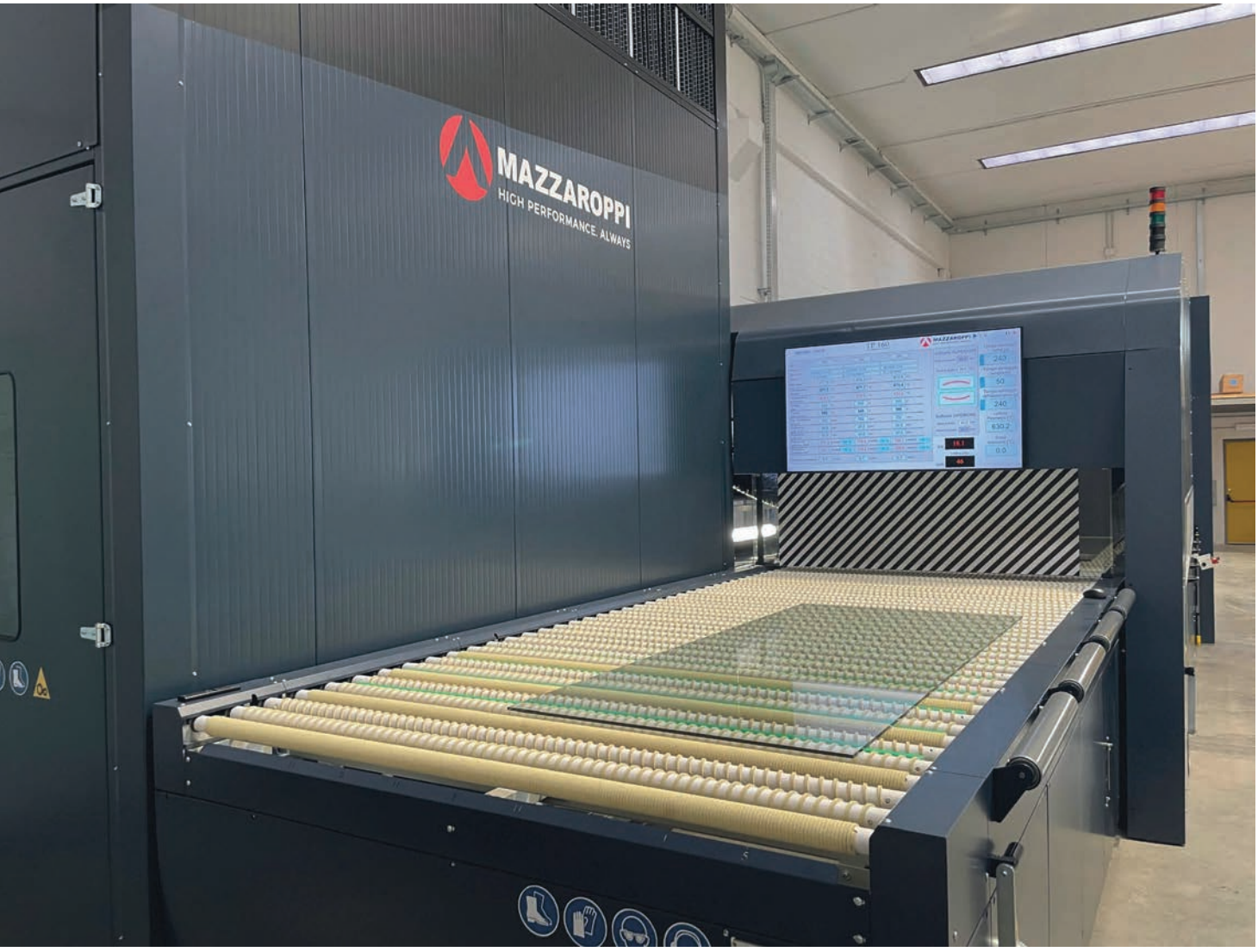
Great energy scale-back characterises MAZZAROPPI ENGINEERING glass tempering

In the world of high-performance glass tempering, where sustainability meets precision, Mazzaroppi Engineering stands as a pioneering force. The Italian company, nestled in Aprilia just beyond the gates of Rome, has redefined what is technically possible in energy efficiency. Now led by the third generation of the founding family, Mazzaroppi continues to set global benchmarks in innovation - significantly reducing the energy demands of tempering processes by as much as 70 percent when compared to conventional solutions.

ENVIRONMENTAL FOOTPRINT REDUCTION

At the heart of Mazzaroppi's technological renaissance lies a single, compelling mission: to optimise glass processing performance while dramatically lowering environmental impact. This commitment has led to the development of a new generation of tempering furnaces capable of operating at previously unthinkable levels of efficiency. In practical terms, this means glass can now be tempered to the highest standards using as little as 180 kW - an achievement that eliminates the need for a dedicated electrical cabinet altogether. Such performance not only slashes operational costs but also simplifies the overall infrastructure requirements of glass manufacturing facilities. What enables this leap forward is a suite of proprietary innovations, meticulously designed and

Revolutionizing glass tempering with furnaces that reduce energy consumption by up to 70 percent, today's MAZZAROPPI ENGINEERING solutions feature patented Efficiency 5.0 software as well as Start&Stop ignition. The company's systems offer high performance, fast restart times and user-friendly operation - setting a new standard in sustainable glass manufacturing.



rigorously tested by Mazzaroppi's in-house engineering team. At the core of this transformation is the company's newly patented Efficiency 5.0 software. This intelligent platform introduces advanced peak containment algorithms, allowing the furnace to modulate energy usage with extraordinary precision. By controlling consumption dynamically, Efficiency 5.0 minimises spikes and ensures that every kilowatt contributes directly to the tempering process.

M START&STOP - JIT IGNITION TECHNOLOGY

Complementing this is the M Start&Stop - JIT Ignition technology, a breakthrough that challenges long-held assumptions about furnace operation. Unlike traditional systems that require continuous power or lengthy shutdown-startup cycles, Mazzaroppi's furnaces can be turned off entirely at the end of the workday and reignited in under an hour the following morning. This radical reduction in idle consumption not only enhances sustainability but also frees operators from the rigid constraints of round-the-clock operation.

USER-FRIENDLY SOLUTIONS

Equally notable is the accessibility of Mazzaroppi's systems. Despite their technical sophistication, these furnaces are designed with intuitive interfaces and streamlined workflows, ensuring that operation does not demand highly specialised personnel. This user-centric approach lowers the barrier to adoption and facilitates seamless integration into production environments of varying scale and expertise.

SUSTAINABILITY

Underpinning these innovations is a portfolio of patents that safeguard Mazzaroppi's leadership in energy-efficient tempering technology. Each solution reflects a philosophy rooted in practical excellence and long-term performance - where sustainability is not a trade-off, but a built-in advantage. As the glass industry increasingly pivots toward greener production practices, Mazzaroppi's contributions are not only timely but transformative. Visitors to upcoming international trade fairs like VITRUM will have the opportunity to experience firsthand the power and simplicity of these next-generation furnaces. Mazzaroppi's presence will be more than a showcase-it will be a statement: that excellence in glass tempering is no longer just about speed and precision. It's about doing more with less.

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Fine-tuning CMS service success via breakthrough partnerships

With more than 30 years of experience in the sector, Oliviero Ghisalberti is engineering manager of the Stone, Glass and Metal Business Units at CMS - all of which play a strategic role in developing advanced technological solutions for glass fabrication. Our GTI editorial team spoke to him recently about the engineering department he leads - which was created years ago to work in synergy with the company's Glass Business Unit.

GTI: Oliviero, with every career path having its own peculiar story, what's yours? How did you discover the world of machine tools and what led you to this point in your career?

Oliviero Ghisalberti: When I started looking for work as a boy, I was lucky enough to find a job in Zogno, at CMS Brembana which is now known as CMS SPA. It produced machine tools. I started as a wiring electrician, and after a year and a half they gave me the chance to join the customer service team, which was always responsible for following installations and training courses. I've been in that role ever since, which now numbers

Oliviero Ghisalberti

many years. The passion for working with machine tools in this way made me stay. The company has grown and so have I - and I'm now head of the engineering department.

GTI: Speaking of the engineering department: when was it created and what was its original purpose?
OG: The Cms engineering department was set up in 2004 due to the need for a relationship with customers that lies between sales and technical department - acting as a bridge. Since Cms stands for 'Costruzione di Macchine Speciali' (special machine construction), we felt the need to support customers with high technical expertise from the outset. This allowed us, and it still does, to propose and develop solutions tailored to our customers' needs. The "customer service" department is now called commissioning and, within Cms, engineering is an important bridge between the sales offices and those who test and install machines. Suffice it to say we're the ones who agree to the various acceptance tests for special projects with customers.

GTI: Looking at the present, how are you structured today? And how many people work in engineering?
OG: There are nine people in total. The team is divided into two specialist areas that work together in synergy: process engineering and product engineering.

GTI: What is process engineering exactly?
OG: This area is dedicated to research and development to continue expanding and deepening process expertise. Our experts are also responsible for producing custom estimates, times and demonstration processes to meet customers' specific needs. The team is composed of highly qualified people with vertical expertise in technological processes and CMS glass machines. To give you a practical example, when a customer needs to develop a custom process, the solution comes from a combination of their needs and our experience. Among the various examples, I'll tell you about a customer that processes curved glass. In particular, it needed to rework the edge of the glass after bending it, but due to the limits of the bending process, the actual geometry of a curved workpiece often deviates from the theoretical one. It was therefore necessary to find a solution that would allow the machine to know what the actual 3D geometry was before processing, in order to complete it accurately. We therefore developed a curved glass prober that would allow us to measure the actual geometry of the workpiece before processing. We also developed dynamic tool wear correction for tools that work in 3D space, something that didn't exist before then, or rather, was only possible when working on flat surfaces. With this function, we have given the customer the ability to automate curved workpiece polishing, making the process faster and more reliable.

GTI: Tell us about product engineering.
OG: It's the CMS atelier: this team focuses on design and is responsible for supporting the sales department in proposing customized stand-alone machines or automated systems conceived to meet the specific needs of customers who turn to CMS.

GTI: This is another aspect one should hardly

take for granted. Any example project you can mention?
OG: Yes, of course, there are many, actually. For example, a large customer working in the white appliances sector was expanding its production, and needed to design a new glass grinding and drilling system for the refrigerated display cases they produce. They turned to CMS and gave us the target cycle times they needed to achieve for their higher volume parts. They showed us drawings of the parts and the layout of the space they had available in the new factory they were building. Based on this data, we proposed a fully automated system, with a Speed horizontal machining center with two spindles and a rotary table, which met the customer's productivity and layout goals. We put the glass fabrication phase in parallel with loading, unloading, handling and washing. The customer only took care of bringing the stands with the unprocessed glass to a special station and retrieving those with the finished glass from another station. Equipped with an electronic controller and two six-axis robots the CMS system managed everything else independently.

GTI: How do you see the future of engineering and can you identify any upcoming challenges?
OG: Engineering is certainly one of CMS's vital organs. The people in CMS must first have passion and then be very eclectic and willing to put themselves to the test. We range from research and development to customer relations and special component design. In terms of process expertise, we're also an important reference for the entire company. We must continue to study and work enthusiastically to improve. I've always been aware that innovation is not just something the market, and therefore the company, needs, but has always been something people need. Conveying this to my collaborators is essential to ensure that CMS remains at the forefront and is always able to give its customers added value.

High TEMPERATURE GASKETS

Texpack srl is a manufacturer of various products for the protective coating of rolling rollers in tempering furnaces in the flat glass industry and conveyor belts. For example:

1200N
Aramtex® discontinuous filament tapes
Aramtex® tapes are produced using 100% pure paraaramid yarns with discontinuous filaments, which are usually woven in several layers.

1210N
Aramtex® continuous filament tapes
Aramtex® tapes are produced using 100% pure paraaramidic yarns with continuous filaments, that are usually woven in several layers,

Texpack also produce textiles for the glass industry: roller coatings for tempering furnaces in flat glass production, as well as coverings for molding dies or handling clamps for hot glass.

1200C
Aramtex® discontinuous filament sleeve
The Aramtex® sleeve is produced using 100% pure aramid yarns with discontinuous filaments that provide it with greater softness and good mechanical resistance at a lower cost compared to sleeves made with continuous filaments.

1210C
Aramtex® continuous filament sleeve
The Aramtex® sleeve is produced using 100% pure aramid yarns with continuous filaments that give it better mechanical properties than discontinuous filament sleeves.

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STRATO® interlayer: a SATINAL revolution in global technical support

A premier Italian company, SATINAL stands at the forefront as a solutions provider for the glass manufacturing industry. It is also a proud manufacturer of STRATO® EVA interlayers - confirming its reputation as a key player in global customer support.

In the world of safety glass, STRATO® is not just a product; it is a paradigm shift. This advanced interlayer for glass lamination is engineered to deliver superior performance, durability, and -most critically- enhanced safety. But the commitment to excellence does not stop at the product itself. A comprehensive global technical and professional assistance service ensures that users worldwide can maximize STRATO®'s potential.

WHAT MAKES STRATO® STAND OUT?

STRATO® interlayers are designed to bond multiple

panes of glass together, creating a laminated glass unit that offers significantly improved safety characteristics compared to monolithic glass. Indeed in the event of breakage, the STRATO® interlayer holds the glass fragments in place, thus preventing dangerous shards from scattering. This is crucial for applications ranging from architectural facades and automotive windshields to security glazing and balustrades.

THE BACKBONE OF SUCCESS: GLOBAL TECHNICAL AND PROFESSIONAL ASSISTANCE

The true value of an innovative product like STRATO® is unlocked when it is properly understood and expertly applied. This is where a dedicated global technical and professional assistance service becomes indispensable. This service is not just about troubleshooting; it is a support system designed to guide clients through every stage of their project.

PRE-SALES CONSULTATION AND PROJECT PLANNING

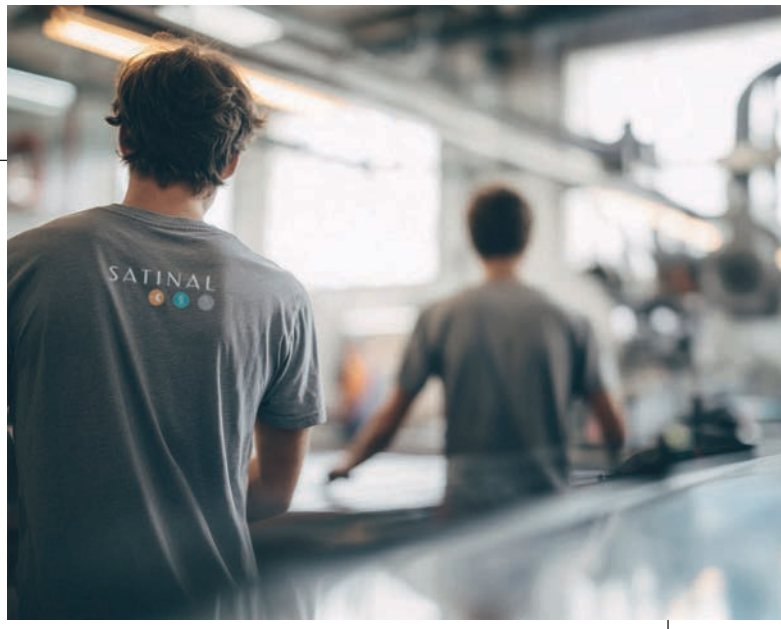
Before a single sheet of glass is cut, technical experts assist clients in selecting the most appropriate STRATO® product for their specific application, considering factors like performance requirements, environmental conditions and regulatory standards. This includes guidance on glass types, thicknesses, and lamination processes.

ON-SITE TRAINING

For manufacturers and fabricators, hands-on training sessions are essential. These cover best practices for storing, handling, cutting, and laminating STRATO® interlayers, ensuring optimal processing and minimizing waste.

TROUBLESHOOTING AND PROBLEM-SOLVING

Despite careful planning, challenges can arise. The global support team acts as a rapid response unit, providing expert diagnosis and solutions for any issues encountered during the lamination process or in the field. This involves both remote assistance and on-site visits.



PRODUCT DEVELOPMENT AND CUSTOMIZATION SUPPORT

As industries evolve, so do demands for specialized solutions. The technical team collaborates with clients to develop custom STRATO® formulations or application methods to meet unique project specifications.

REGULATORY COMPLIANCE AND CERTIFICATION GUIDANCE

Navigating international building codes and safety standards can be complex. The assistance service provides up-to-date information and guidance to ensure that laminated glass units utilizing STRATO® comply with all relevant regulations, facilitating certification processes.

POST-INSTALLATION PERFORMANCE REVIEW

Even after installation, support continues, offering advice on maintenance and assessing long-term performance to ensure the longevity and effectiveness of the laminated glass.

The global technical and professional assistance offered by Satinal creates a partnership between the manufacturer and the user. It transforms a high-performance product into a comprehensive solution, backed by expertise and a commitment to ensuring safety, durability, and customer satisfaction worldwide. This robust support system is what truly elevates STRATO® from a mere interlayer to a complete and reliable solution for the demanding world of safety glass.

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Training by VITROSEP pilots fresh toolkit of industry know-how

For over a decade now, VITROSEP has cultivated knowledge-sharing through its acclaimed VITROSEP Training - Level 1, an intensive, hands-on introduction designed for customers, representatives, service technicians, and professionals in the glass industry. In 2025, the company elevated its commitment to professional development with the debut of VITROSEP Training - Level 2, a specialised programme meticulously-crafted for both seasoned glass processors and technical experts who are actively engaged in production environments.

VITROSEP TRAINING - LEVEL 1: A TECHNICAL FOUNDATION

Level 1 has grown into an essential forum for exploring VITROSEP's particle separation technologies and their transformative role in modern glass manufacturing. Tailored for a broad professional audience, these sessions offer a structured introduction to core technologies, strategic maintenance protocols, and enhancements in production quality. Participants gain a foundational understanding of system architecture, supported by technical documentation and practical guidance aimed at optimizing process efficiency. As VITROSEP prepares to host the 15th edition of Level 1 following the summer period, this milestone underscores the company's enduring commitment to fostering technical excellence and industry-wide education.

INAUGURAL EDITION OF LEVEL 2: EXPERTISE BEYOND THE BASICS

The first edition of VITROSEP Training - Level 2 marked a significant step forward in advanced technical training. Hosted over two intensive days along the picturesque Costa Brava, the event assembled top-tier glass professionals and engineers from around the globe in a setting designed for in-depth learning and exchange. Here the programme explored a selection of advanced topics highly relevant to today's production challenges:

- Anisotropy in Tempering - Understanding and mitigating optical distortions.
- Problems in Glass Cutting - Common challenges and

Elevating sector-specific competences with the launch of its Level 2 Training, VITROSEP new advanced programme is tailored to experienced glass professionals. Featuring expert-led sessions on the most salient industry topics out there, the event fosters technical mastery within the evolving landscape of glass manufacturing and processing.

expert solutions.

- Solutions with Interleaving Powders - Optimizing protection and handling.
- Stains in Glass - Causes, prevention, and removal techniques.
- Laser in Glass - Innovations and applications for precision processing
- New VITROSEP Solutions- The latest advancements in glass particle management.

Each module was delivered by distinguished international figures whose expertise added considerable depth to the programme. Among the speakers were Jorma Vitkala, a visionary in glass innovation, Dr Michael Emonds, whose research bridges chemistry and process design, as well as Peter Pokoern and Reinhold Senft - both renowned authorities in applied glass technology. Their collective insights enriched the event and elevated it to a benchmark in technical instruction.

A COMMUNITY OF KNOWLEDGE AND INNOVATION

The format of Level 2 was deliberately participative, inviting attendees to delve into real-world case studies, contribute their professional experiences, and engage in dialogue with the VITROSEP technical team and fellow specialists. This collaborative environment encouraged critical thinking, peer learning, and the cross-pollination of ideas across international markets. The resounding success of this inaugural edition has already paved the way for a second iteration, currently in development for the coming year. The initiative seeks not only to advance technical knowledge but also to cultivate a thriving network of professionals dedicated to the evolution of glass manufacturing.

FOSTERING CONNECTIONS AND COLLABORATION

In addition to its technical merits, VITROSEP Training - Level 2 offered invaluable opportunities for networking. Informal sessions, breaks and group activities all allowed participants to exchange perspectives, discuss operational challenges and form collaborative relationships that promise to enhance future projects and partnerships.

LOOKING AHEAD WITH GRATITUDE AND VISION

VITROSEP has reported its sincere appreciation to all who contributed to the success of the first Level 2 training, having expressed great satisfaction with their engagement and trust - both instrumental in shaping an event that seamlessly blended educational excellence with strategic foresight. This landmark initiative signals the beginning of a new era in specialized training - one defined by rigorous content, meaningful collaboration and a steadfast investment in the future of the glass industry. In this way, VITROSEP continues its journey: innovating, educating and inspiring progress across the global glass community.

VITROSEP

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Cooperation agreement between NOVASKLO, HORN, ZIPPE and BOTTERO

With HORN GLASS INDUSTRIES AG (Germany), ZIPPE INDUSTRIEANLAGEN GmbH (Germany) and BOTTERO S.p.A. (Italy) all met together with global glass industry leaders at the recent Ukraine Recovery Conference (URC) in Rome, the three signed a cooperation agreement that now establishes the foundation for a strategic partnership to deliver NOVASKLO, Ukraine's largest float glass production project.

As neo partner signatories, a leading trio of European glass equipment manufacturers has agreed to collaborate on engineering, project management and equipment supply preparation for NovaSklo, Ukraine's first high-tech float glass manufacturing plant. The project attracts over EUR 240M in investment and is implemented at the initiative of the investment company EFI Group with sup-

port from UkraineInvest and Ukraine's Ministry of Economy. The glass manufacturing plant is planned to be built in the Kyiv region by 2028. "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," shared Igor Liski, CEO of NovaSklo and founder of EFI Group.

HORN GLASS INDUSTRIES

NovaSklo serves as the project's lead developer and is responsible for coordinating all phases and integrating partners' contributions into the plant's development strategy. Horn Glass Industries, Bottero and Zippe have already begun providing engineering and project services, including technical design, equipment configuration and engineering expertise in their respective areas. "We are proud to participate in this innovative project. NovaSklo Project meets our standards of innovation and quality, and we are ready to contribute our experience in creating the most efficient float glass production solutions," stated Stephan Meindl, CEO of Horn Glass Industries.

BOTTERO

The NovaSklo project will become the epicenter of transformation for related industries and strengthen Ukraine's industrial development. The plant will 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 square metres of glass per year. The plant will utilize 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. "With 60 years of experience across all glass industry sectors and a unique specialization in production process automation make us a reliable partner. I am confident that our expertise will help create a world-class plant that will become a catalyst for the development of the entire glass industry in the region," noted Alberto Masoero, Executive Director Sales, Marketing & After Sales - Flat Glass Bottero.

ZIPPE

This multilateral agreement provides for technical consulting, engineering support and equipment

ABOUT NOVASKLO

NovaSklo is a Ukrainian company implementing the project to create Ukraine's first high-tech float glass manufacturing plant in Kyiv region. The project is supported by EFI Group and implemented in partnership with leading European float glass equipment manufacturers.

configuration development during the plant's planning and design phases. Final terms for equipment and technology supply will be outlined in separate commercial agreements. "As a global leader in equipment manufacturing for batch and cullet processing with over 100 years of experience, we see NovaSklo as an ideal opportunity to demonstrate our automation expertise. We have united into a professional team of partners to create one of the most efficient plants in Europe and continue developing our industry," added Philipp Zippe, CEO of Zippe.

Olha Batova, CEO of the investment company EFI Group, also noted that the team has already secured a technical partnership agreement with a strategic partner, one of the world`s top three float glass manufacturers and expects to sign the agreement in the near future.

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VITRUM to highlight RCN automation and precision

At VITRUM, RCN will be unveiling its advanced glass processing solutions - including IoT-integrated systems, automated lamination with LIA, precision bending with ROTARY and high-performance chemical tempering. All these emphasize customization and innovation - reaffirming the company's role as an industry leader that's shaping the future of glass.

Embracing 'At the Heart of Glass' as its motto, the upcoming VITRUM exhibition is to herald a renewed era for the industry. In that sense, this year's edition will be departing from tradition as it adopts a more dynamic and forward-looking format to spotlight the key drivers of transformation - namely automation, sustainability, digital integration, safety and emerging markets. In perfect alignment with this progressive spirit, RCN Solutions is set to make a compelling statement at VITRUM - presenting a portfolio of high-performance technologies that embody innovation, precision and customization.

IOT-BASED MANAGEMENT SYSTEMS

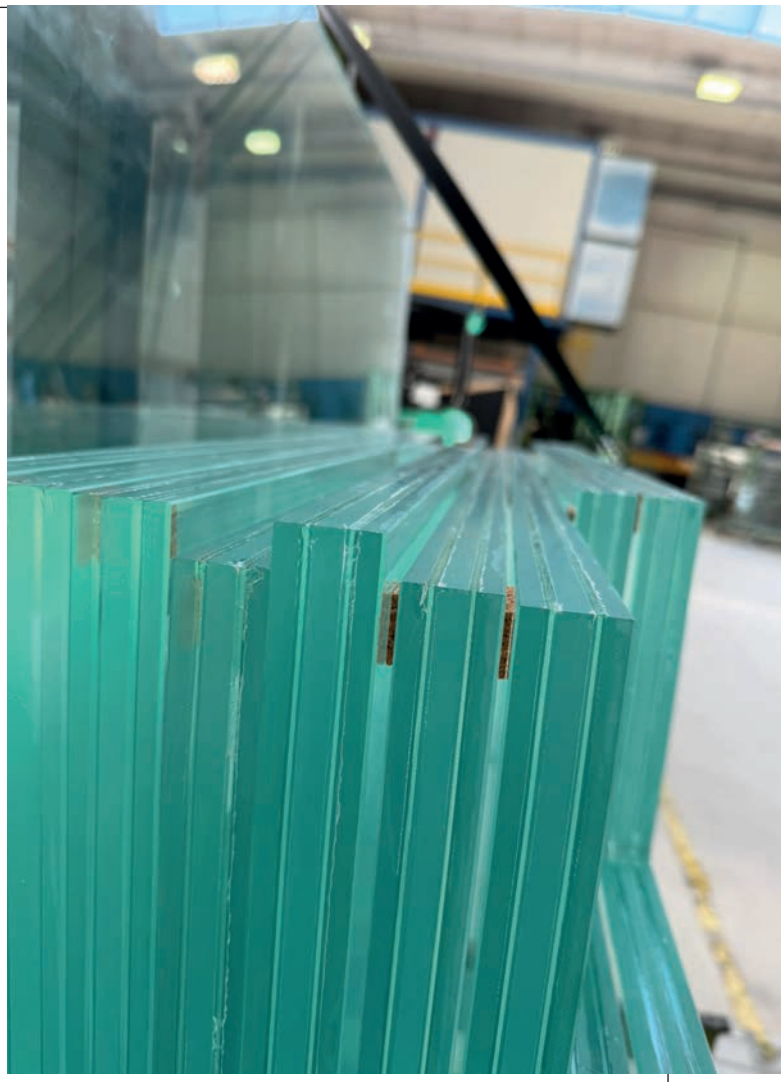
At centre stage will be IoT-based management systems, designed to elevate productivity and operational insight. These all-inclusive solutions integrate data transmission, diagnostics and interface capabilities -developed entirely in Italy- and are adaptable to a wide range of production environments. RCN's engineering team will be available onsite to tailor solutions to specific customer needs.

LAMINATION INTEGRATED AUTOMATISM

A major highlight, LIA (Lamination Integrated Automatism) is a fully-autonomous system that boosts output through intelligent automation - particularly during unattended night cycles. Available in automatic and semi-automatic versions, LIA minimizes manual labour while enhancing efficiency. When combined with RD CLEAN CONCEPT vacuum bags and REVA BF, RCN's proprietary interlayer film, the system forms a complete and high-performing solution. RD CLEAN CONCEPT has been nominated for the prestigious Vitrum Best Tech Awards in the Components category.

ROTARY

Also commanding attention will be ROTARY, a



twin-axle bending machine with four independent working positions. In synergy with the ECO SPECIAL line, it delivers unparalleled precision and versatility for the production of complex curves - especially valuable for sectors like marine glazing and automotive manufacturing.

CT CHEMICAL TEMPERING

Completing the lineup is the CT Chemical Tempering Line, renowned for its ability to temper ultra-thin glass -down to 1.5 mm- without surface distortion, whilst ensuring exceptional mechanical strength. This technology is particularly suited for high-end, weight-sensitive applications. During the show, RCN will also be opening the doors of its production facility to interested visitors by appointment - offering a behind-the-scenes look at machines in construction, which includes a large-scale chemical tempering unit. In sum, with a strong emphasis on customization and agile manufacturing, the company continues to demonstrate how adaptability and innovation are essential to thriving in today's ever-evolving glass industry landscape.

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HYDRO
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HTL
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FV1000
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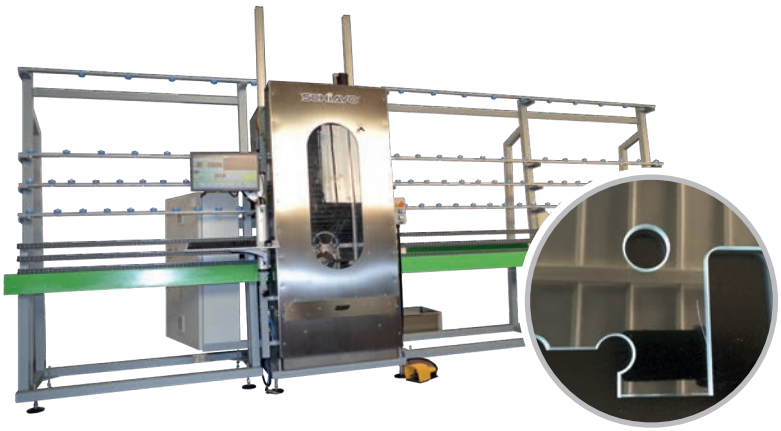

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GLASTON

TPS® IG line and RC Series tempering furnace for Fenergic

Fenergic has been a well-known name in window and door manufacturing since Léo Beauchesne founded the company in 1953 in Warwick, Canada, 135 kilometres from Quebec City. In 1984, his son Pierre took over the company and doubled production capacity.

"Until recently, we were still producing about 50 percent of our glass by hand. That's really time consuming, and the final thickness was never consistent. But we knew that the market was shifting to triple glazing," said Véronique Bouladier, Public Relations & Marketing Coordinator at Fenergic and Pierre's wife, who joined the company in 2007.

"At glasstec 2022, we were shopping for something else - but then saw the Glaston TPS® line. It was exactly what we needed," she continued.

Based on early experience with a thermoplastic gasket (TPG) system used for doors and windows in the '80s, Fenergic felt that they'd gone that road before unsuccessfully. The **Glaston** team explained why their earlier solution had failed, summing up, "This is not your grandfather's TPS."

About six months after the glasstec visit, Fenergic made the final decision. They ordered both the TPS® IG line from Glaston Germany and the RC Series tempering line from Glaston Finland. Luckily, Fenergic owned enough land to construct a new building to house the new equipment.

Tempering was something completely new for Fenergic. "We saw the RC Series line being put together at our facility, and we participated in all the tests that were run on the tempering line," she said.

The IG line was installed first, followed by training for the operators. After the fourth day of running smoothly, none of the operators wanted to go back to work on the old line.

"We actually were up and running six months earlier than we thought because operating the line was so simple," Véronique said.

Today, the operators have a lot more free time to work on other projects. "We've reorganised the way they work, and the same five guys can operate everything at once. Now, they're telling us to send in the orders. 'We're ready!'"

Earlier, the company supplied about 10 percent tempered glass. Now they are looking at producing 60 percent tempered glass. Triple glazing accounted for about 10 percent before, too. Now it's rising to 50-60 percent, and the goal is to reach over 80 percent.

WWW.GLASTON.NET - WWW.FENERGIC.COM

BRITISH GLASS

Statement released on Industrial Strategy

British Glass has welcomed the uplift in the Network Charge Compensation from 60-90 percent provided in the Industrial Strategy from 2026, which will give UK glass sector a similar electricity cost to its EU competitors. British Glass also welcomed the focus on connection reforms, which can act as a barrier to members accessing grid connections to facilitate decarbonisation through electrification or hydrogen assets. British Glass has expressed disappointment that it did not see a commitment to similar electrification business models, given that comparable Carbon Contracts for Difference schemes for energy-intensive industries are already in place in the EU. Even with the support announced recently in the Industrial Strategy, the statement by British Glass expressed the belief that this would not address the disparity between fossil fuels and electricity, or incentivise essential decarbonisation investment in the electrification of glass furnaces in the UK relative to other EU countries, such as France and Germany.

WWW.BRITGLASS.ORG.UK

KURARAY

Interlayers dominate at annual awards

Kuraray's Advanced Interlayer Solutions (AIS) Division recently announced that its class-leading interlayer solutions feature in five of the 10 projects that topped their respective categories in this year's 'US Glass Magazine' Design Awards.

The Structural Glass Façade category was won by Le Visionnaire - Espace François Dalle, in Paris, an ovoid-shaped glass roof, which comprises 188 unique double-curved, fritted, insulating glass panels, laminated using Trosifol® UltraClear, a highly transparent PVB film that offers the industry's lowest yellowing value and proven long-term stability. The laminator in this project was sedak and the contract glazier was Bellapart Group.

The award for Structural Glass Floors and Stairs went to the Pasarela Diamante, a 45 m-long skywalk and eight storey observation tower sited 1 kilometre above the city of Baos de Agua Santa in Ecuador. Crucial to both the functional and aesthetics capabilities of the 32 millimetre panels, the SentryGlas® ionoplast interlayer used in their construction has a global application footprint thanks to the possibilities delivered by its outstanding structural capabilities. The glazier in this project was FAIRIS.

The High-rise Construction category was won by One Za'abeel, a fascinating two-block development, connected to each other at a height of 100 metres by a link bridge - the world's longest in an occupied cantilevered building. The high-performance multi-layered glass cladding features both Sound Control PVB films and SentryGlas® interlayers, for sound attenuation and post-breakage performance respectively, with both contributing to the building's outstanding aesthetics. The laminator in this project was the Al Abbar Group.

For the Low-rise Construction category, the award went to the Oman Across Ages Museum, which uses the SentryGlas® interlayer in steel-coloured glazing panels that are designed to enhance the visual appeal of the building and maximise natural light. The panels' multi-layer construction provides excellent insulation, enhancing energy efficiency and sustainability. The laminator in this project was Future Architectural Glass.

The Podium Space winner was Two Manhattan West, a 58-storey office complex in New York. The lobby's first-of-its-kind curved cable wall utilises a number of innovative functional and design features that help maintain a clean and transparent façade unencumbered by mechanical fixings. The glazed panels in the cable wall system use the SentryGlas® interlayer for its excellent transparency and post-breakage performance. The architect in this project was Eckersley O´Callaghan and the laminator was sedak.

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LISEC

Laminated glass cutting increased performance with retrofits

Unlocking the potential of existing machines by using **LiSEC**'s innovative retrofits, five features now allow for the benefit of a continuous development - all while making LiSEC machines future-proof.

Better edge quality and edge strength

The special cutting head developed for the latest generation of VSL-A laminated glass cutting is also available for existing VB (VB-33, VB-45, VB-60) systems.

The sophisticated design of the cutting head reduces maintenance work by preventing cutting fluid from entering the guides. Low-friction guides ensure that the cutting pressure remains very constant, resulting in high-quality cut edges and preventing glass splinters.

Higher break quality

The use of the 'anti-stress' suction bar reduces stress on the laminated glass, minimising breakage. This ensures that breakage quality remains at the highest level even with varying material quality.

More output due to shorter heating times

With the SIR heating retrofit kit, you can significantly reduce the heating times for foil separation. The 900 millimetre segmented infrared technology heats the foil optimally. This not only reduces energy consumption but also increases the efficiency of your production through higher output, as heating a 44.2 glass no longer takes 25 seconds but less than 10 seconds.

Remnant plate removal without production interruption

The 'Cut remnant plate first' software upgrade allows the remnant plate to be prioritised during cutting and separated from the storage plate. This keeps the glass loading and cutting process continuous without the remnant blocking the glass storage area. Removing the remnant does not affect the cycle time.

The upgrade significantly increases efficiency when there is a high proportion of Z cuts. By performing the Z cuts together with the X cuts, the operator can start manually breaking the Z cuts immediately after the Y cuts have been automatically broken, while the machine is already preparing the next subplate.

LiSEC's innovative retrofits offer significant advantages for optimising existing machines. Improved edge and breakage quality, increased output rates, and more efficient cooperation between humans and machines not only make production future-proof, but also significantly more efficient.

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GLASS FOR EUROPE

EU Council agrees on a general approach for the ELVR

This week, the EU Council adopted its General Approach on the End-of-Life Vehicles Regulation (ELVR), introducing key measures to support the recovery and recycling of automotive glass by demanding:

The mandatory removal of at least 70 percent of the total glass from windscreens, side and rear windows, as well as rooftop glass installations.

The removed glass should be recycled into glass.

Glass for Europe welcomes the recognition of automotive glass as a valuable material and the clear push to improve its recovery and recycling at the end of a vehicle's life. These measures, if kept in the final ELVR text, would represent a step toward reducing the environmental footprint of glass production, and consequently, that of vehicle production.

Based on 2021 data on vehicle-related waste and its treatment, Glass for Europe evaluated that ensuring a minimum of 70 percent dismantling and recycling of all glass parts could help reduce up to 75,000 tonnes of CO2 annually in the EU.

To ensure that the future ELVR can boost recycling activities across the glass value chain, it is now of prime importance that the EU Parliament also enshrines the mandatory removal and recycling of glass parts in its report.

Alignment among the Commission, Council, and Parliament on glass recycling is crucial to ensuring the final ELVR delivers tangible progress. "We urge MEPs to match or exceed the Council's 70 percent recycling obligation for automotive glass," said Justin Loup, Technical Regulations and Product Policy Manager at Glass for Europe. "It would boost recycling rates, which are currently very low (below 10 percent), while offering the necessary flexibility to stakeholders in glass recycling."

The vote in the European Parliament committees (ENVI and IMCO) is expected later this summer, and the vote in the Parliament plenary is currently planned in September. This will then be followed by inter-institutional negotiations (Trilogue) to agree on the final text.

For more information on this topic, readers can check Glass for Europe's position papers and joint statements:

- Joint statement on reuse and recycling from end-of-life vehicles
- Joint Statement on the Commission's End-of-Life Vehicles Regulation Proposal
- Dismantling automotive glass is a mandatory step to increase the recycling of end-of-life vehicles
- A revised End-of-life Vehicles Directive that supports greater recycling of automotive glazing

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SCHIATTI ANGELO

New BFP35 double edging machine line installed

A new **Schiatti Angelo** double edging machine line model BFP35 -a glass processing machine among the most chosen by the European and non-European markets for its versatility- was recently installed for a client. In particular, the outgoing line of edging machines has operating dimensions of 4,500 by 2,800 millimetres, and is designed to optimise production processes in the flat glass and technical ceramics sector.

Technical features of the BFP35 edging machine

The new configuration of the BFP35 double edger represents a major step forward in industrial automation for glass processing, integrating cutting-edge technology to guarantee maximum precision and productivity:

Advanced edging system

- Oscillating diamond wheels on both machines for a superior polished edge finish
- Integrated dubbing devices on the second machine for complete corner processing
- Optimised glass transport system with single transfer to reduce cycle times

Safety and automation

- CE-compliant perimeter safety fences
- Optic barrier at the entrance of the tilting table for operator protection
- Automatic inlet tilting table directly connected to the machine to ease the loading of the glasses

Production versatility

- Processing of pieces with minimum dimensions of 200 by 200 millimetres
- Possibility to process sheets up to 4,500 millimetres long
- Suitable for monolithic and laminated glass of different thicknesses (up to 35 millimetres)

Industry 4.0 Integration

The BFP35 line was designed accordingly to Industry 4.0 principles, with a focus on connectivity and data management:

- Control computer directly connected with the customer's company database
- Remote monitoring system for real-time technical assistance

- Intuitive software interface to manage processing parameters and optimise production

Environmental sustainability

Schiatti Angelo confirms its commitment to sustainability with the integration of:

- Collection tanks connected to the water treatment and recirculation system
- Reduction in water consumption of up to 70 percent compared to traditional systems ➜

• Energy optimisation of latest-generation brushless motors

Competitive advantages for glassworks

Investment in the BFP35 double edging line offers numerous advantages:

- Increased productivity: processing capacity of up to thousands of linear metres per day
- Consistent quality: oscillating diamond wheels guarantee an even finishing along the entire length of the glass
- Reduction of operating costs: less tool consumption and reduced downtime.
- Production flexibility: quick changeover for different production batches

Assistance and training

In keeping with Schiatti Angelo's tradition, the installation of the BFP35 line includes:

- Complete training for the operating personnel
- Specialised after-sales technical assistance
- Remote assistance for rapid remote intervention
- Supply of guaranteed original spare parts

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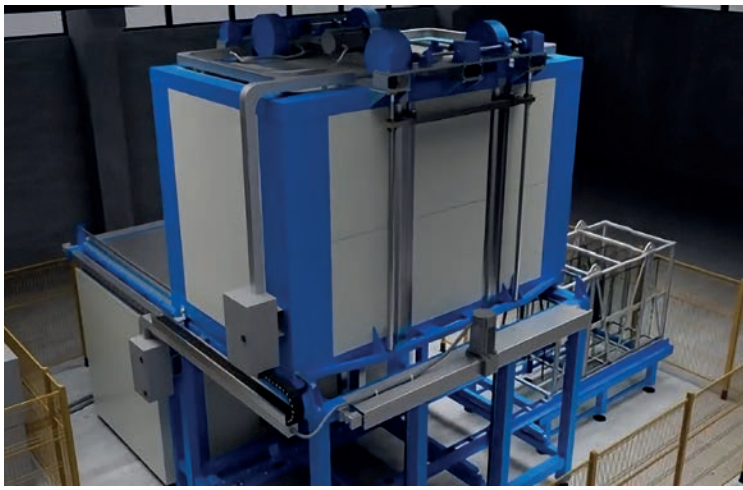
RCN SOLUTIONS

Some considerations on chemical tempering of glass

According to **RCN Solutions**, the ideal customer for chemical tempering is every glazier who looks at the future of special products. There is now a lot of literature available on chemical tempering and more knowledge on the process. Back in 2017, RCN promised to promote chemical tempering as an important job in the production of safety glass. At that time, it was clear that chemical tempering had the peculiarities to offer higher breakage and impact resistance than other treatments, but the approach of the glaziers was prudent, as if this system was just for big companies. The latest news in matters of glass are reporting a trend to find technical solutions to lighten some installations, and the focus turned on thin chemical tempered glass for its high flexibility. Glass thicknesses as 0.5 millimetre or 0.7millimetre can be tempered and used as stronger glass laminated in between others to have a strong and safe product granting the features required by the regulations. Currently under the spotlight, chemical tempering is something many glaziers are considering, and it is suitable for several jobs. There's no need for specialised personnel or for HST, or to change potassium salts frequently; just add some when the level is reduced. Energy consumption is low, with pre-heating at 300 degrees Celsius and processed into the bath at 450 degrees Celsius. Once the temperature is reached the machine uses just 15 percent of the total installed power. The role of the potassium salts is fundamental and the use of a product without impurities determines the quality of the temper. RCN's potassium salts are 99 percent pure, guaranteed by certified analysis. The future of glass lies in new perspectives, and RCN reports that it is ready to respond with the right systems.

WWW.RCNSOLUTIONS.IT



PILKINGTON UK

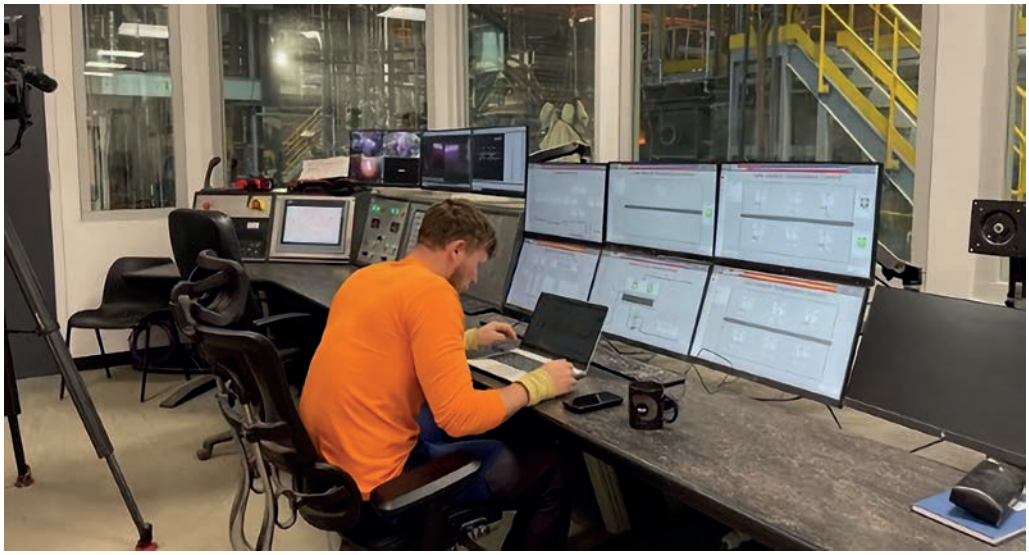
New glass production line opened in St Helens

Pilkington UK, part of the **NSG Group**, has launched a new glass production line at its Greengate Works site in St Helens as part of a multi-million-pound investment to safeguard the future of rolled texture glass manufacturing in the UK.

The new rolled glass production line manufactures Pilkington UK's Texture by Pilkington glass range, featuring 21 original designs and textures used for privacy and style in interior design.

Production of the range has moved to Greengate Works from nearby Watson Street Works, which stopped production last year after two centuries of pioneering glassmaking.

Moving the production of Texture by Pilkington will enable the company to save 15,000 tonnes of CO2e annually, with Pilkington UK now manufacturing all glass from one furnace in the town, instead of the two between Greengate Works and Watson Street Works. Pilkington UK are supporting the council with plans to transform the Watson Street site.



Investing in the new line supports Pilkington UK's wider sustainability goals, which include a 30 percent reduction in greenhouse gas emissions by 2030 compared to 2018 levels and achieving net zero by 2050. The upgrade received GBP 3.7M in funding through the UK government's Industrial Energy Transformation Fund (IETF), which supports industrial decarbonisation efforts.

Pilkington UK's Greengate Works in St Helens continues to pioneer the future of glassmaking globally. In recent years, it hosted a number of global firsts in hydrogen-fired glass production, achieving key milestones in reducing emissions across the sector following the move to Greengate Works.

Neil Syder, Managing Director of Pilkington UK, said, "Texture by Pilkington has been manufactured by our team in St Helens since 1852 and we're proud to continue that legacy with this new rolled glass line. It represents a meaningful step forward, not just in securing the future of texture glass manufacturing, but in significantly lowering the carbon footprint of the range.

"Its construction was an incredible feat of engineering too. To build the new line, our team needed to break into the side of a live glass furnace, constructing a canal that takes glass away from our current float line to the new rolled glass line in a separate building. This work now enables us to manufacture all our glass from one furnace, which saves us 15,000 tonnes of CO2 per year: the equivalent of taking over 8,800 cars off the road for a year.

"By investing in our Greengate Works site, we're building on nearly 200 years of glassmaking heritage and innovation while positioning ourselves to meet the changing needs of our industry as it decarbonises."

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WORLD LEADER IN GLASS MEASUREMENT

ZENITH

Marposs offers gauging components and dedicated solutions for dimensional measurement and control of automotive glass.

The ZENITH is the new reference of chromatic confocal controller that allows measuring with great precision, without contact, shapes and thickness of any transparent layer.

All application requirements can be met thanks to the wide range of products.

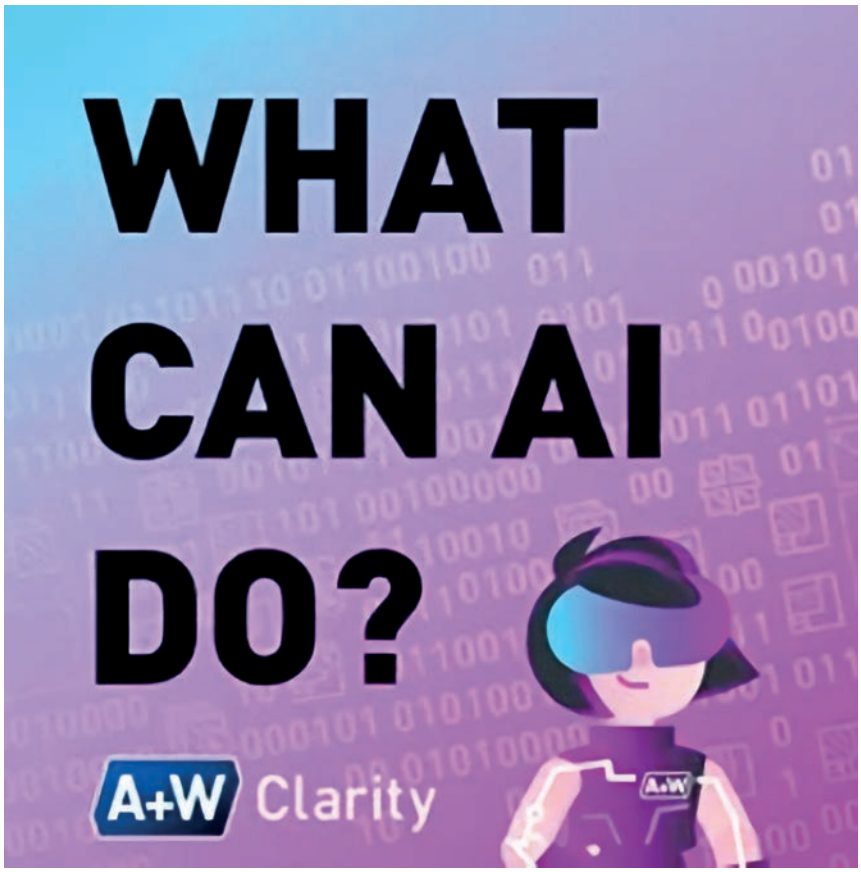
MARPOSS

A+W

AI for flat glass processors

In glass quality control, manual processes are increasingly being replaced by AI-based systems. Using modern deep learning algorithms, AI can detect defects such as scratches or inclusions. This significantly increases the precision and speed of quality control.

AI can also support process optimisation, as it can analyse large amounts of data from production processes. Inefficient workflows can be identified, which ultimately not only saves time and resources but also reduces CO2 emissions.



As a software company, **A+W** sees it as its duty to take a conscientious approach to the topic of artificial intelligence. As a first step, A+W looks at the beginning of every order - order entry. Order entry can sometimes be exhausting. An email here, a note there, mistakes happen and time passes. A+W wants to optimise this process with the help of artificial intelligence.

Imagine having an extra colleague in the office who can take care of routine tasks for you. That's what A+W Order Entry AI does, using AI MIRA. Mira can understand and interpret texts and enter them into your order entry system. A major advantage is Mira's seamless integration into A+W's existing products. Employees can work with the software as usual and only need to check and approve Mira's entries. Mira learns from any corrections made during this approval process. This makes her smarter and less prone to mistakes, similar to trainees.

No AI works perfectly right away. Any AI based on probability forecasts is prone to hallucinations. Mira therefore first needs a basic understanding of glass. A+W teaches her this together with a customer. Specific training then takes place at a company to ensure that she understands processes perfectly. Mira will continue to support customers in many other areas in the future, including in the A+W Smart Factory.

Who is MIRA?

MIRA (Multifunctional Intelligent Response Assistant) is A+W's AI. You can think of Mira as an additional employee who will soon make your everyday work easier with her overview of company data. Last year, A+W asked its customers how they would like to use AI. The consensus was that direct integration into systems is more effective than a voice assistant or similar. Mira made her first big appearance in a webinar on March 19, 2025.

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Clean edges, clear results: **HEGLA boraident's** LEA 300 is a new type of gentle edge decoater for float glass and laminated glass. Achieve scratch-free, crystal-clear surfaces and material-friendly results that satisfy even the highest aesthetic and visual standards. The laser(s) automatically decoat edges or around holes to the fire polishing, resulting in a residue-free surface.

Laser-supported solution for gentle decoating

Whether it's structural glazing, insulated glass or any other applications where the glass edges are visible, the LEA with its innovative laser technology impresses as a stand-alone system or as part of a production line. The glass is processed without changeover times and the machine features easy, user-friendly operation. When fully networked, the decoating specifications can be copied from PPS or ERP software or called up or input manually at the machine.

Features

- Flexible, non-destructive edge decoating of float glass or laminated glass with a laser
- Ultra-thin removal of the coating without damage to the glass surface
- High edge quality without scratches or adverse mechanical effects
- High process reliability
- High precision for all dimensions (maximum size 25,000 by 3,600 millimetres)
- Can be fully networked as part of a line configuration or stand-alone system Intuitive HMI (based on 4.0)
- Flexible use for single pieces or series production

Functional description

After the glass to be decoated is automatically transferred to the LEA or manually placed in the vertical processing plane, the glass is transported into the system. The laser is precisely positioned and decoats the glass in accordance with specifications. Without any changeover time, one or more lasers (depending on the configuration) decoats the glass. LEA 300 means less broken glass, less waste and more quality in the production of laminate and insulated glass.

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CANADIAN PREMIUM SAND

Operational update

Canadian Premium Sand (CPS) provided an operational update on development of its solar glass manufacturing plans.

US Project

CPS continues to advance development of its proposed southern US pattern solar glass manufacturing facility (the "US Project") anticipated to produce 4GW equivalent pattern solar glass annually. The company has selected Toledo Engineering and Bottero to advance pre-construction engineering, working with Green City Glass as the Owner's Engineer. The pre-construction engineering effort will result in a refined capital cost and construction schedule to support the Company's construction financing efforts.

Selkirk, Canada, Project

With annual domestic solar panel manufacturing capacity in the US at 52GW, demand for solar glass has reached a new high. While the Company continues to pursue financing options for its proposed vertically integrated Canadian pattern solar glass manufactur- ➜

ing facility in Selkirk, Manitoba (the "Selkirk Project"), the uncertainty related to announced US import tariffs on Canadian goods as well as the potential for Canadian counter tariffs has resulted in a challenging financing environment for a Canadian project. Stability in the Canada-US trade relationship will be key for CPS to advance the Selkirk Project. As such, the company's near-term focus is on advancing the US Project to prepare for construction financing.

Changes to policy impacting the North American solar market

In addition to the US and Canadian tariff uncertainty impacting the Selkirk Project, legislative amendments proposed to the previously enacted Inflation Reduction Act (the "IRA") passed by the US House of Representatives on May 21, 2025 creates uncertainty related to the sustainability of the IRA and associated incentives for domestic production. The company continues to advance both the US and Selkirk Projects and is closely monitoring legislative actions in the US, the impact of proposed legislation to IRA incentives and ongoing trade matters, particularly between Canada and the US. Further, Canadian Premium Sand awaits clarity on Canadian domestic economic policy following the April 28, 2025 Canadian federal election. The outcome of these actions and policies will influence the company's strategy and timeline of securing financing for its projects.

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AGC GLASS EUROPE

Sustainability update 2025

All the details and figures of **AGC Glass Europe**'s decarbonisation journey in 2024 can now be found in the updated Sustainability section of the corporate website.

Leading the glass industry to decarbonise

The AGC Group's sustainability objective is to reduce the company carbon footprint by 30 percent in 2030 (FY2019, scope 1+2+3) and achieve net zero carbon (scope 1+2) by 2050. To contribute to this objective, AGC Glass Europe set out a carbon reduction roadmap that takes all parts of the value chain into consideration. AGC Glass Europe monitors its carbon footprint on a yearly basis. According to GHG calculations, it is estimated that in 2024 the Carbon Footprint of AGC Glass Europe was 2.6 million tonnes of CO2 equivalent, which marks a gradual progress in its net-zero trajectory.

AGC Glass Europe's 2024 carbon footprint report highlights its commitment to sustainability through key initiatives, including the procurement of low-carbon electricity sources, the Recycle Glass service, the ISO 50001 certification of its operations and pioneering projects such as Volta. The impact of these initiatives is also reflected in the gradual improvement of the total quantities of CO2 emissions (Scope 1, 2, and 3) generated due to AGC Glass Europe's activities, calculated relative to the melted tonnes.

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SYSTRON's Jumbo Expertise bolsters VANDAGLAS ECKELT glass excellence

Thanks to SYSTRON's 9333proHD, VANDAGLAS ECKELT is redefining global standards in architectural glass. This state-of-the-art jumbo processing solution enhances precision, flexibility and scale - all of which is now equipping the Austrian industry leader to deliver ultra-large, high-performance glass for iconic projects from Vienna to Tokyo.

With precision at vandaglas Eckelt GmbH well beyond a standard, having become a consolidated mindset, the global leader in architectural glass processing has been synonymous with high-performance glazing solutions in XL dimensions for over a century now. Located in Steyr, Austria, responding to customer demand is about tailoring unmet needs to meet the most demanding design and quality requirements. In January last year, the company took a major step forward by integrating the systron 9333proHD glass processing centre, complete with washing, drying and inspection zones. This state-of-the-art solution enables the efficient processing of glass panels up to 9 x 3.3 metres - combining speed, flexibility, and accuracy on a large scale.

JUMBO GLASS FROM STEYR CONTINUES TO GO GLOBAL

"Here in Steyr, we specialize in complex and demanding façade projects with glass sizes up to 8 x 3.21 metres," explains Florian Temper, COO of vandaglas Eckelt. "Our glass is featured in some of the most iconic buildings worldwide - from the DC Tower in Vienna and the BMW Welt in Munich to major projects in London, New York and Tokyo." With a production area of over 33,000 m², a highly specialized machinery setup, and around 160 employees, vandaglas Eckelt is a full-range provider for tempered, laminated and insulating glass in oversized formats - and a true pioneer in architectural glass innovation.

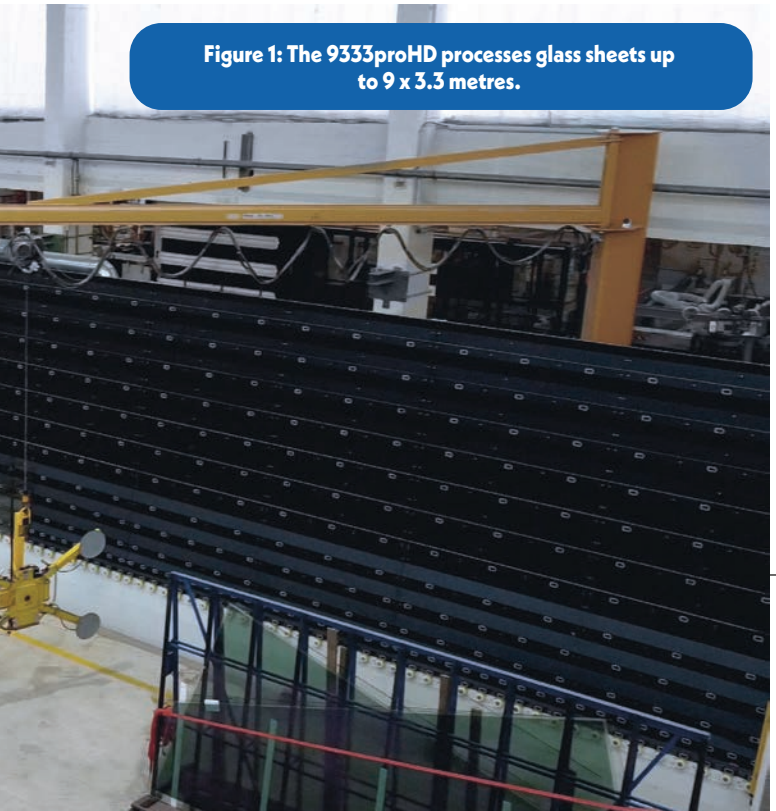


Figure 1: The 9333proHD processes glass sheets up to 9 x 3.3 metres.

A QUANTUM LEAP IN JUMBO GLASS PROCESSING

The requirements for the new system were clearly defined: maximum flexibility, high throughput, and the ability to handle jumbo lengths up to nine metres. "After a thorough evaluation, we chose the systron 9333proHD +WM - one of the most advanced systems on the market," says Temper. "Its compact, vertical design with a single processing tower fits our layout perfectly. The fact that systron is based nearby also contributed to our decision."

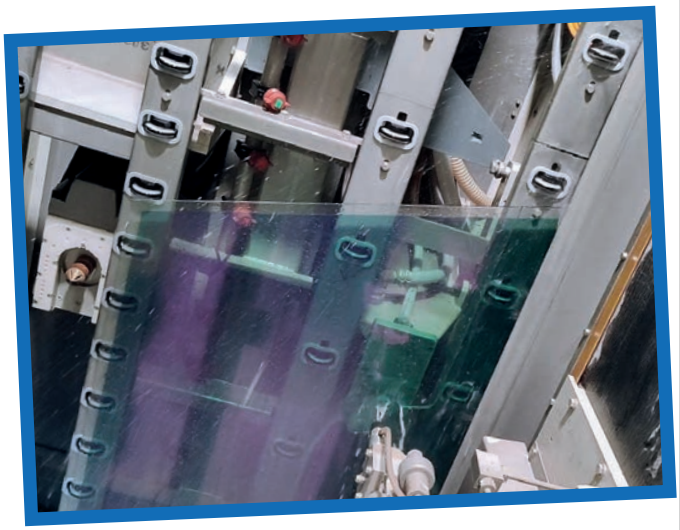
RAPID INTEGRATION, RELIABLE PERFORMANCE

Commissioning was fast and smooth, thanks to systron's experienced team. "Installation and setup were

extremely professional," notes Temper. "Challenges were handled flexibly and quickly – exactly how you want a modern partnership to work." One unique detail: the machine was given a name -"BEAte"- chosen by the team in an internal contest. The name is both a creative nod to its function (Bearbeitungszentrum) and a symbol of positive team spirit ("the happy one"). Says Temper, speaking to that: "The best technology only shows its full potential through the people who operate it."

IN FULL OPERATION: HIGH-SPEED GLASS PROCESSING WITH BEATE

Since commissioning, the proHD has been running in two- to three-shift operation, primarily for overlength sheets starting at six metres, custom models with complex cut-outs and high-precision edge work like beveled edge and step grindings. "The system runs reliably without any unplanned downtime. Its performance has fully met our expectations," continues Temper. The integration into the existing FeneVision ERP system was also smooth and efficient - further contributing to a successful first year of operation. A key advantage here is systron's vertical water cushion technology, specifically developed for coated glass. "It allows contact-free processing and prevents surface damage - a clear benefit over traditional mechanical systems."



LOOKING AHEAD: AUTOMATION, SUSTAINABILITY & GLOBAL REACH

Vandaglas Eckelt continues to invest in modernization, automation and sustainable products. Demand is growing for dynamic glazing solutions and CO_2-reduced materials, driven by architects and designers focused on energy performance and innovation. With over 80 percent of production exported worldwide, the company places high demands on its machinery. "Every detail matters when you're supplying to global projects," says Temper. "That's why we rely on systron's proHD - a system that performs with absolute reliability." Despite a cautious market outlook for 2025, Temper remains confident: "We expect an upswing from mid-2026 - and with systems like the proHD, we're perfectly equipped to meet it."

systron GLASS TECHNOLOGIES

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Good products for everyone: LiSEC launches LiTROS

Upon recently entering the glass processing industry, LiTROS came facilitated by the motto 'Good products for everyone' with a well thought-out portfolio. Part of the LiSEC Group, the new brand combines decades of expertise in the sheet glass industry with a fresh, dynamic identity.

THE BRAND PROMISE: EASY. SCALABLE. ACCESSIBLE.

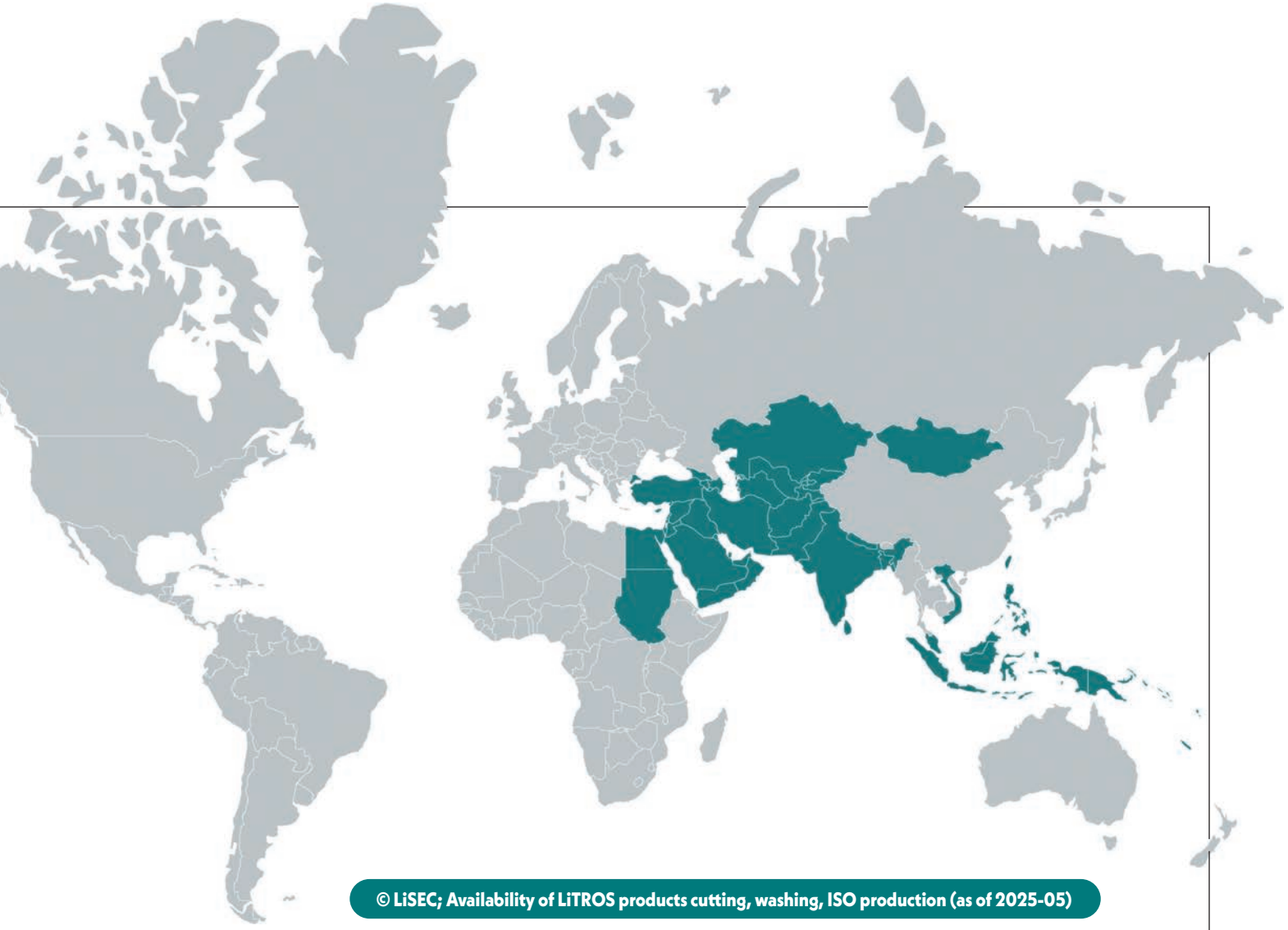
LiTROS is aimed at companies wishing to switch from manual processes to semi-automated, software-supported production. The brand is synonymous with robust, practical machine solutions, simple operation and scalable solutions. LiTROS is positioning itself as a reliable partner for sustainable growth by offering regionally aligned services.

ACCESS TO THE FUTURE: PRODUCT AND SERVICE PORTFOLIO

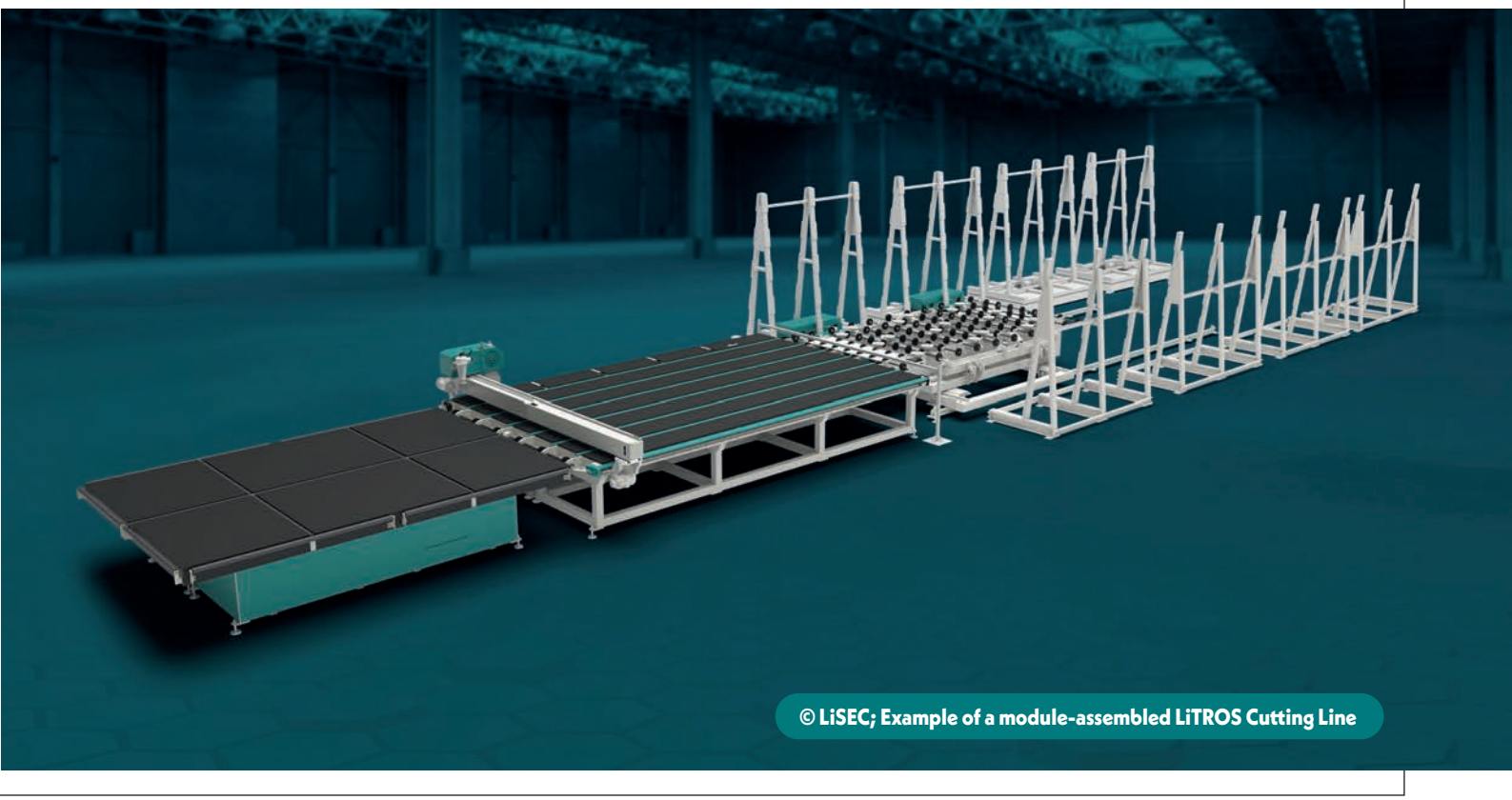
When it comes to washing, the LiTROS Horizontal Washer stands out as a high-performance glass washing and drying system capable of being used as a stand-alone machine.

The LiTROS Float Cut as well as the Float Cut-Tilt version with tilting elements are available for cutting and decoating float glass. Manual breaking of glass cuttings is performed on the LiTROS Float Break. The cutting process is supplemented by LiTROS Load, a double-sided removal station for raw glass sheet uncut plates. An individual LiTROS Cutting Line can be assembled from these modules.

LiTROS offers a wide range of solutions for insulating glass production: The vertical LiTROS IG Line Rigid and IG Line Rigid-Seal lines facilitate the production of insulating glass units with rigid spacers, with and without integrated sealing. This is supplemented by manual and automatic systems for filling with desiccant (IG Desiccant Manual and Automatic), for applying butyl hot-melt adhesive (IG Butyl Semi Automatic) and for manual sealing (IG Seal Manual). LiTROS sees service as a growth driver. Personal support, straightforward maintenance and a global service network mean reliable support - from commissioning through to strategic development. The focus lies on



© LiSEC; Availability of LiTROS products cutting, washing, ISO production (as of 2025-05)



© LiSEC; Example of a module-assembled LiTROS Cutting Line

© LiSEC; LiTROS IG Line Rigid

© LiSEC; LiTROS IG Line Rigid-Seal

PRODUCT AVAILABILITY

The LiTROS products have been available in the following regions, effective from June this year:
MIDDLE EAST
Bahrain, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen
CENTRAL ASIA
Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
SOUTH ASIA
Afghanistan, Bangladesh, India, Nepal, Pakistan, Sri Lanka
SOUTH EAST ASIA & EAST ASIA
Singapore, Taiwan, Vietnam, Mongolia
AFRICA
Egypt, Sudan, South Sudan, Mauritius
EUROPE & NEIGHBOURING REGIONS
Turkey

providing hands-on advice, efficient support and sustainable customer success. This portfolio ensures that LiTROS covers all essential steps in glass processing -from the raw glass sheet stock plate to the finished insulating glass- and thereby offers an ideal introduction to semi-automated production.

ROADMAP

The cornerstone of the LiTROS product portfolio consists of the three central categories of insulating glass production, glass cutting and washing. Yet this is just the beginning: LiTROS has a clear growth strategy aimed at continuously expanding its portfolio. Further solutions are already under development that specifically address the needs of growing markets and new customer segments.

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Unleashing performance: MAPPI introduces its FOX EVO furnace

Transforming tempering with smart energy management, advanced control and intuitive design, MAPPI's new FOX EVO delivers measurable savings, maximum efficiency and unmatched adaptability. Behold here the future of glass tempering - all engineered for precision, power and sustainability.

With quality alone being hardly enough in today's glass industry, it must go hand in hand with efficiency and control. Here's why MAPPI is presenting its FOX EVO within a production environment where every kilowatt, every minute and every single glass sheet matters. No wonder, therefore, that the enhanced evolution of this compact tempering furnace is engineered to deliver outstanding performance, remarkable flexibility and measurable energy savings.

SOME KEY PRODUCT SPECS

A brand-new 24-inch display paired with a fully-redesigned software interface transforms the user experience - offering an even more intuitive, complete and accessible control system that puts every aspect of the tempering process at the operator's fingertips. Yet the real breakthrough is in energy management and production adaptability. Thanks to its intelligent architecture, FOX EVO can adjust power output dynamically based upon actual production needs - thereby optimizing each cycle, reducing waste and ensuring maximum efficiency without compromise. It's all about delivering what's needed, when it's needed - no more, no less. FOX EVO is now fully-compatible with the MEC - Mappi Edge Computing ecosystem, a platform designed to provide real-time insights into production.

With MEC INSPECTOR, operators can monitor all critical parameters, identify improvement areas and make quick, informed decisions - all to enhance both productivity and quality control.

DESIGN FEATURES

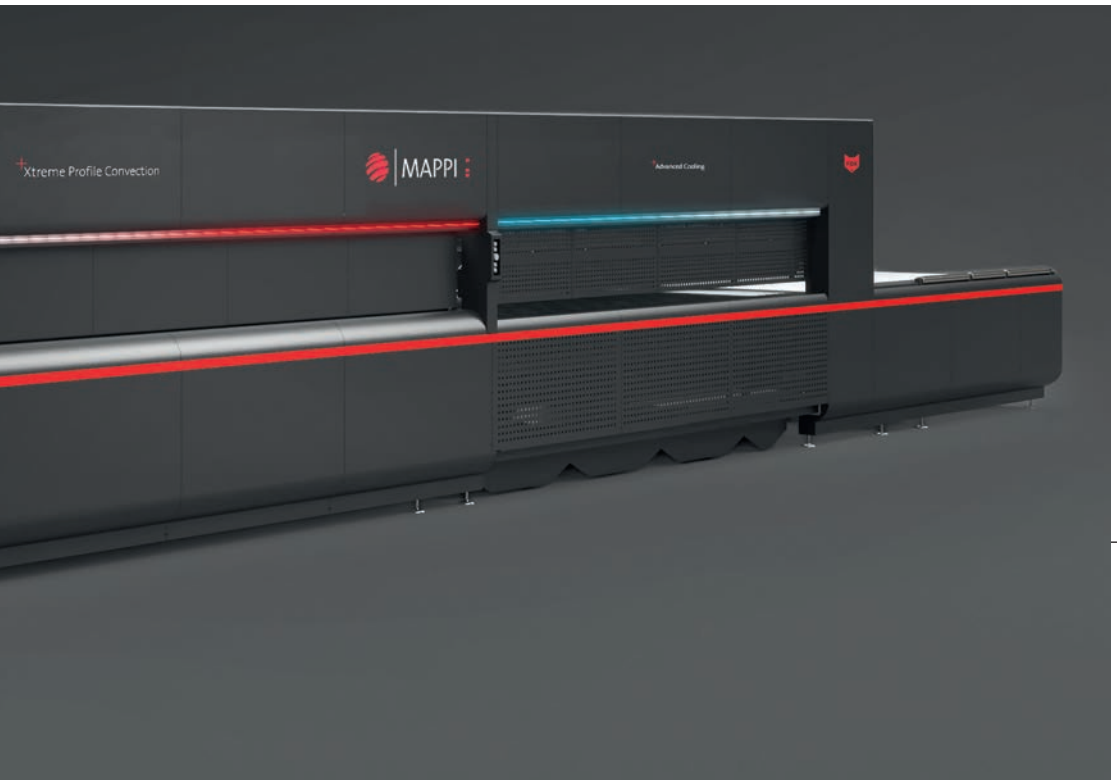
The new design of FOX EVO is not just about aesthetics. Instead it reflects MAPPI's commitment to offering the most effective and user-friendly solutions, especially when it comes to maintenance. While visually refined, it's primarily focused on simplifying every maintenance operation - ensuring less downtime and a smoother workflow. With FOX EVO, MAPPI reaffirms its commitment to a future of intelligent, sustainable and user-friendly glass tempering. It's not just about making tempered glass - it's about doing it smarter.

ATS 4.0 - VERSATILITY MEETS PRECISION

The ATS 4.0 series is the most versatile MAPPI line, with models ranging from 1500×3800 mm to 2500×5000 mm. Built for medium-to-large glass processors, ATS 4.0 combines power, uniformity and flexibility across a wide range of thicknesses and coatings - including low-E glass with emissivity down to 0.01. Thanks to features like Supertemper, Syncro Transmission and Intelligent Heating System, ATS 4.0 delivers perfect results with lower energy usage, shorter cycles and maximum repeatability.

MTH MONOLITH – THE BENCHMARK FOR LARGE FORMATS

MTH Monolith is the high-performance solution for extra-large glass, with working sizes from 2500×6000 mm up to 3300×6000 mm. Designed for architectural applications or big production cycles, it ensures thermal uniformity, reduced optical distortion and top-level mechanical strength.MTH Monolith is equipped with smart thermal management and advanced cooling control. It's also MEC-ready and supports the integration of intelligent sensors, turning big scale production into a process that is fast, efficient, easy and extremely accurate. Visitors to VITRUM 2025 can meet FOX EVO and all other MAPPI tempering furnaces at our stand - HALL 11 , BOOTH B01 E06 - to discover how the company is shaping the next generation of tempering technology.



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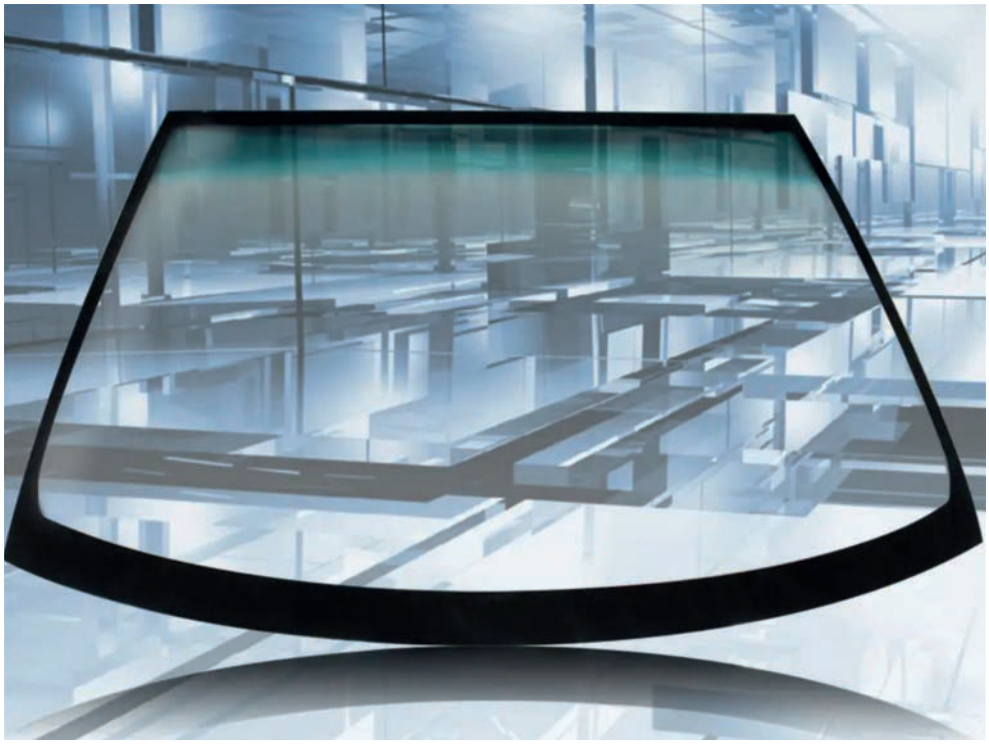
Automotive glass meets SAATI's signature screen printing excellence

Chairing this year's Automotive Glass Forum industry discussion at E-Tech Europe, Glass Technology International was delighted to glean key insights from SAATI B.U. Printing Sales & Tech Manager Pietro Giuliani, MECCANICA H7 Operations Director Alessandro Amadio and IOCCO Technical Director Ludovico Iasci on April 16 in Bologna as the trio considered innovations they're developing that are impacting automotive glass. This first of our series of three parts dedicated to the event covers Pietro Giuliani's presentation on the technological synergy between his company and CUGHER GLASS

Thanks to its precision in glass screen printing as a leading global supplier of meshes, chemicals and tapes, Saati enjoys a robust collaboration with Cugher today in a partnership that, according to Saati B.U. Printing Sales & Tech Manager Pietro Giuliani, has been taking screen and stencil preparation to the



next level. A Milan-based manufacturer of industrial screen printing equipment and automation systems for flat glass, Cugher enjoys over 50 years of expertise in crafting tailored machines for automotive, appliances, building and solar.

Back in 2023, a GlassPrint conference partnership between the two companies saw a joint presentation by professionals from either side emphasizing the same winning synergy they now enjoy. Says Giuliani: "Since then Saati has shared its insights on mesh selection, emulsion use, tensioning, coating and frame positioning while Cugher has succinctly detailed how machine controls must align with those prepared screens to ensure consistent, repeatable results. In sum, while Saati creates fabrics and emulsions for producing the well-known stencil used for printing on glass in general, Cugher develops the automated machinery that uses those stencils to print on automotive windshields, among other glass solutions." Today the two support a fully-integrated production chain that's upheld by shared know how and coordinated workflows in industrial glass decoration.

SERIES J

In the ever-evolving world of industrial glass processing, automation, precision and reliability are all crucial. Here Cugher, now a benchmark name in advanced screen printing technologies, has developed the Series J fully-automatic Silk Screen Printing Machine to meet the exacting demands of high-performance production environments. Designed with both structural integrity and operational intelligence, this series represents a harmonious blend of mechanical excellence and user-oriented innovation.

THE ART OF SYNCHRONY

At the heart of the Series J is a robust construction that integrates seamlessly with the production line. The machine consists of an entry conveyor with pre-alignment capabilities, a central printing unit and an exit conveyor synchronized to ensure continuous, stable handling of

glass sheets. Every segment is engineered to function in flawless coordination, minimizing manual intervention and maximizing output quality. The working table, crafted from specially treated aluminium, offers durability and stability, essential for consistently accurate printing on delicate glass substrates.

SQUEEGEE DESIGN

The transport system features precision belt movement and auto-centering, allowing each sheet to enter the print zone perfectly aligned. Within the printing unit, the squeegee and flood bar assembly operates with remarkable finesse. Mounted on tempered guides, this group benefits from proportional pressure regulation and independent speed control, enabling it to accommodate a wide range of glass sizes and ink types with minimal adjustments. Both the squeegee and the flood bar embody thoughtful design: the squeegee allows use of both Vulkollan edges before re-sharpening and the flood bar, constructed from stainless steel AISI 304, includes side wings to optimize ink management during the stroke.

PRODUCT SPECS THAT STAND OUT

What sets the Series J apart is its commitment to operational efficiency and reduced downtime. The screen can be fully extracted without losing positional reference, which means no time is wasted on re-registration when swapping or cleaning the screen. Automatic adjustments further elevate the machine's sophistication. Screen height, peel-off and printing stroke length are all managed automatically, with the system learning and adapting to new job parameters. This intelligent setup allows manufacturers to store a customized number of print recipes, ensuring rapid job changes and streamlined production cycles.

With a working table height set at a comfortable 950 mm (adjustable ±25 mm) and high-grade components throughout, the Series J is built for endurance and ease. The use of superior materials not only enhances print quality but also drastically reduces maintenance requirements - an essential advantage in high-volume operations. As a result, glass manufacturers can rely on the Series J to deliver impeccable prints with minimal operator involvement, even in demanding, round-the-clock production scenarios.

Cugher's Series J stands as a symbol of precision automation in silk screen printing. It embodies the company's deep experience in industrial glass processing and its continuous commitment to delivering technology that anticipates the needs of tomorrow's glass printers - reliable, intelligent and ready for the challenges of modern manufacturing.

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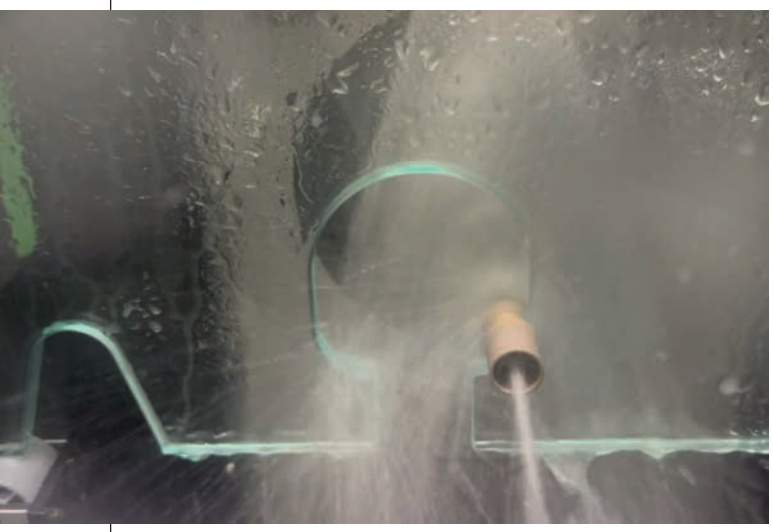
Optimised precision, efficiency and space-saving come with SCHIAVO FV1500



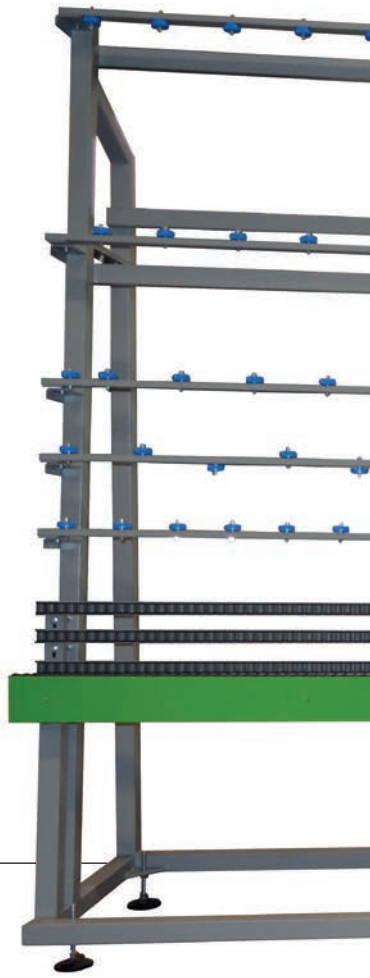
ENGINEERED FOR MODERN PRODUCTION FLOORS

At the heart of the FV1500 is a smart vertical design that conserves valuable floor space without compromising on performance. Designed for high-precision drilling, countersinking and milling of notches, it is particularly adept at preparing glass for hinges and fittings - all operations that demand exacting tolerances and repeatability. Thanks to its four motorized axes -three within the central structure and one dedicated to automated glass positioning- the FV1500 offers pinpoint accuracy on even the largest sheet formats. The machine accommodates glass sizes up to 3210 x 2400 mm and thicknesses from 4 to 25 mm, giving processors the flexibility to handle a wide range of architectural and custom applications.

PRECISION MEETS INTELLIGENCE

The FV1500's technological edge lies in its integrated CNC system and a 15-inch touchscreen interface that makes job management remarkably intuitive. Whether operators are drawing custom parametric shapes, accessing a built-in library of notches, or importing DXF and ISO files, the interface empowers users to navigate complex tasks with minimal training. Repeat jobs, batch runs and custom one-offs can all be stored, recalled, and adjusted on the fly - ensuring both flexibility and consistency.

Among the machine's standout performance features is a high-speed spindle capable of reaching up to 18,000 RPM, ensuring clean, precise cuts and excellent edge quality. An optional quick-change spindle reduces tool change time from several minutes to just five seconds, significantly improving over-



In the ever-evolving world of architectural and industrial glass processing, innovation is often measured by a machine's ability to balance accuracy, productivity and spatial efficiency. Long recognized for its leadership in advanced glass fabrication technologies, SCHIAVO has achieved just that with the introduction of its FV1500 - a next-generation vertical drilling and milling solution that's compact in footprint yet expansive in capability.

all efficiency. The pneumatic clamp automatically positions glass sheets with high accuracy, reducing the need for manual adjustments and improving operator ergonomics. Sustainability is also a key focus: the FV1500 incorporates a dual-tank water recycling system with decanting and filtration, minimizing water waste and supporting environmentally responsible operations. It is also fully compatible with Industry 4.0 standards, offering complete connectivity and remote diagnostics for smart-factory integration.

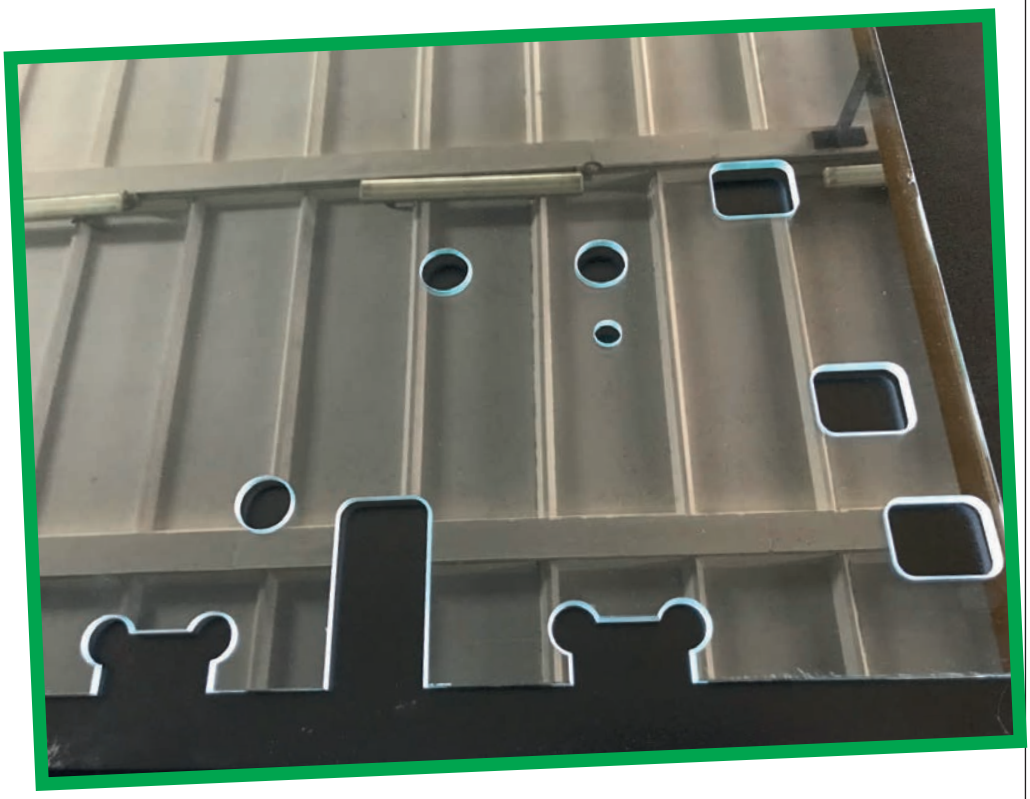
DESIGNED FOR SEAMLESS WORKFLOW

Engineered to complement vertical washing machines, the FV1500 fits naturally into a continuous processing line, optimizing every square meter of your facility. A bar code scanner option further automates operations by enabling rapid job identification and reducing operator input errors - boosting both speed and accuracy.

CAM AND CAD INCLUDED - NOT SIMPLY OPTIONAL

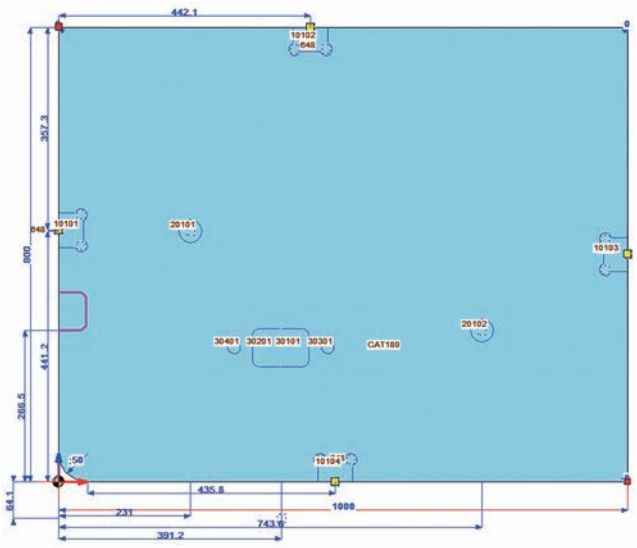
In contrast to many competing machines, the

FV1500 comes bundled with powerful CAM and CAD software. The CAM suite enables automatic recognition of holes and notches, supports drag-and-drop layout design, and manages up to 1000 parametric shapes, allowing complex jobs to be configured quickly and intuitively. The included CAD software offers full DXF and DWG compatibility, making it easy to design and edit freeform geometries or create custom hole and notch patterns directly from the operator's workstation, eliminating the need for third-party design tools.



A CLEAR COMPETITIVE EDGE

What sets the FV1500 apart is not only its versatility but also the superior efficiency and control it brings to advanced glass processing. It supports drilling for holes greater than 8 mm in diameter with integrated countersinking and it can mill external notches on all four edges of a glass sheet. The machine includes office-installed CAM and CAD software for centralized design management and remote preparation of jobs. With the optional fast-change spindle, tool changes take just five seconds - significantly minimizing downtime. Combined with a fully-integrated water recycling system and optional barcode automation, the FV1500 is engineered to deliver superior throughput and reduced operational complexity.



FUTURE-READY INVESTMENT

The Schiavo FV1500 isn't just a piece of equipment - it's a future-focused asset for glass processors who aim to reduce downtime, increase accuracy and remain competitive in a digitally connected manufacturing environment. With its precise mechanics, compact vertical form and user-first software interface, the FV1500 redefines the possibilities of glass drilling and milling. In sum, for companies seeking a smarter, leaner, and more agile production workflow, the FV1500 stands as a clear choice: where performance meets innovation - and productivity meets precision.

Take a glance at details enhancing the living spaces!

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Defining the FENIX experience, NORTHGLASS designs to lead

In a striking fusion of art, architecture and engineering, the FENIX Migration Museum's iconic 'Tornado' viewing platform pierces a dazzling curved glass roof that's crafted by NORTHGLASS - all inventively empowering a visionary design that sees glass becoming both a structural marvel and a poetic storyteller.

Recently opened to the public, the FENIX Migration Museum on the Maas River in Rotterdam has transformed a historic warehouse into a contemporary architectural landmark. At the heart of the design is the dramatic 'Tornado' double-helix viewing platform, created by acclaimed architect Ma Yansong. Piercing a complex 3D curved glass roof,

this spiral structure offers visitors a dynamic journey both physically and emotionally.

ENGINEERING THE CURVED GLASS CANOPY

NorthGlass manufactured the bespoke curved glass roof, made up of 255 one-of-a-kind panels featuring single curves, spherical curves, concave bends and torus inner arc surface. Each panel combines laminated IGU with double silver Low-E coating, delivering excellent energy performance and structural safety. The project required extreme precision, with edge tolerances within ±4 mm and step deviations under 2 mm, pushing the limits of manufacturing processes and quality stability.

MEETING EXTREME DESIGN DEMANDS

Drawing on its deep experience in complex curved glass fabrication, NorthGlass provided technically robust and high-quality solutions for the project. Each panel was precisely matched to the design requirements and perfectly integrated with the structural system, delivering outstanding visual impact and physical performance. As a core component of the viewing platform, the 'Tornado' staircase is not only functional but also infuses the space with a strong artistic presence. Natural light pours through the glass roof, reflecting off the stainless steel panels of the spiral structure to create a dynamic interplay of light and shadow.

A STORY IN LIGHT AND GLASS: THE MIGRANT'S JOURNEY

The museum embodies the rich history of Rotterdam as the departure point for millions of European migrants bound for the New World. The glass roof, crafted by NorthGlass, stands as a symbol of modern technological achievement and serves as a unique storyteller of this migration epic. As visitors ascend the spiraling 'Tornado,' the shifting views framed by NorthGlass glass evoke the migrant's journey - the opening of new horizons, the pursuit of the unknown, and the intersection of individual destinies with the tides of history. NorthGlass' successful delivery of high-precision curved glass solutions for the FENIX project demonstrates its ability to integrate technological innovation with architectural and cultural narratives. With world-class quality and craftsmanship rooted in 'Created in China,' NorthGlass helps global landmarks tell their unique stories.

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How CORNING's glass innovations are transforming modern architecture

A pioneer in the use of boro-aluminosilicate glass in architectural glazing with its ultra-thin glass innovations, CORNING consistently delivers lighter, more durable and higher-performance IGU solutions - all to help architects and builders meet modern demands in energy efficiency, safety and smart functionality.

New glass innovations are increasingly required in the architecture industry to provide higher performance solutions for architects, designers and builders. Glass compositions, which are almost infinite in number, can be selected by designers to achieve required performance levels in a variety of end-use applications. While soda lime silicate is the most commonly-used glass in architecture, other glass families such as borosilicates and aluminosilicates are now being utilized. Considered a 'new' composition in the architecture space, boro-aluminosilicate glass is well-suited for architectural applications with high resistance to thermal stress, bending stress, scratches and chemical corrosion. The utilization of boro-aluminosilicate ultra-thin glass, with a thickness ranging from 0.5 to 0.7 mm, has facilitated the development of innovative insulated glazing units (IGUs). These new constructions offer enhanced performance, occupant comfort and reliability compared to IGUs constructed solely with soda-lime glass - all while being also lighter. Ultra-thin glass is now being integrated as the central panes in triple and quad IGUs, as well as being laminated to soda-lime glass to improve safety and impact-resistance, reduce sound transmission and enable smart window functionality.

CORNING'S FUSION DRAWS ADVANTAGE

Known for its long-standing expertise in glass, companies like Corning Incorporated are developing boro-aluminosilicate glass compositions to offer customers solutions in the architectural space for advanced triple and quad pane applications. The company's architectural glass offers a variety of benefits for centre pane glass versus soda lime alternatives. To start, it is formed through the company's proprie-

tary fusion draw process. Through this process, the glass surfaces are not touched by a molten tin bath or rollers - enabling a pristine surface and reducing the chances of flaws within the glass - hence increasing its mechanical properties during post processing and final use.

ENHANCED PERFORMANCE WITHOUT HEAT STRENGTHENING

Corning's architectural glass also has an inherently lower Coefficient of Thermal Expansion (CTE) than soda-lime glass, because of its boro-aluminosilicate composition. This means that Corning's glass has lower thermal stress under temperature gradients, so it does not need to be heat strengthened, like soda lime glass. Heat strengthening is recommended with soda lime glass to prevent its inherently higher risk of thermal field failure with its high CTE.

EVOLVING MANUFACTURING CAPABILITIES

While there are a variety of benefits for utilizing a boro-aluminosilicate composition for thin triple applications, there are fundamental equipment and process differences for handling, cutting and manufacturing of architectural glazing and laminates with fusion-drawn boro-aluminosilicate glass versus thicker soda lime silicate glass alternatives. However, over the last few years, comprehensive solutions for the processing of half-jumbo size ultra-thin boro-aluminosilicate glass (below one millimetre in thickness) for architectural glazing manufacturing are now available throughout the industry. Innovations in ultra-thin glass and the enabling process equipment are helping to enable a bright future for glass in the architecture industry.

CORNING

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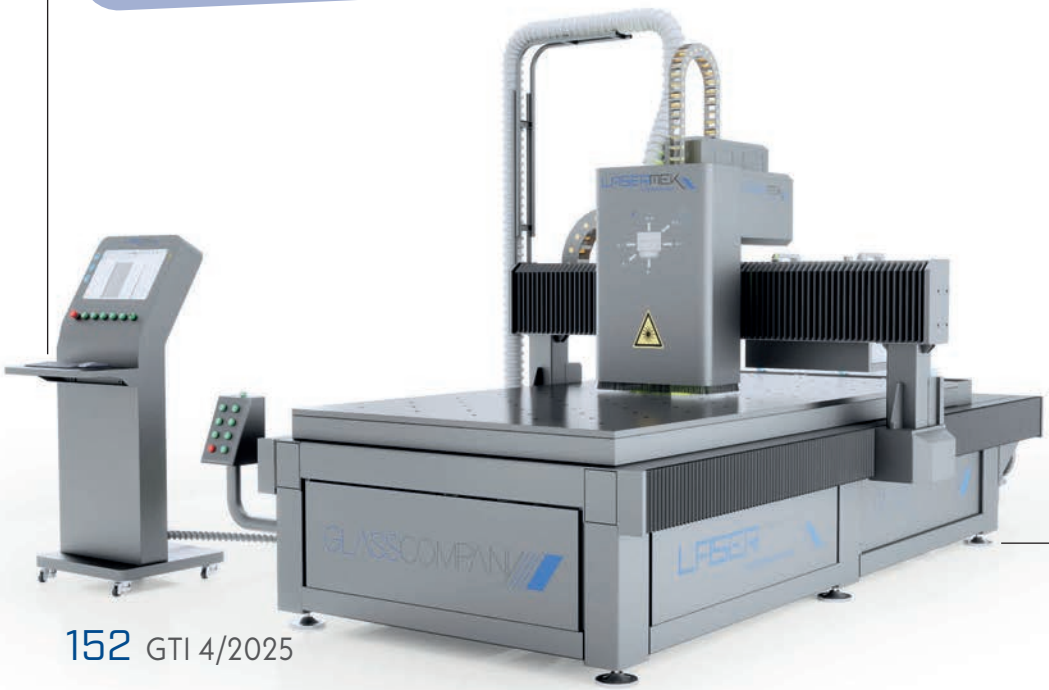
Shaping tomorrow's industry with GLASS COMPANY expertise

For over a quarter of a century, GLASS COMPANY has so far combined vision, precision and innovation to shape the future of glass processing. Today, from Pesaro to the world, its cutting-edge solutions in laser systems, fire-resistant glass and smart coatings all continue to define new standards for technology, customization and industry performance.



Based in Pesaro, Glass Company finds itself in a rapidly-evolving global industry landscape that's driven by the same technological innovation by which it continues to establish itself as a valuable reference point in glass processing. Active now for over 25 years, the Italian company still proudly upholds a manufacturing philosophy that's centered upon quality, research and customization. Despite maintaining a modest size, Glass Company Srl is now recognized worldwide as a partner for the design and manufacturing of highly specialized, technologically advanced systems. Its solutions are in demand not only across Europe but also in emerging markets in South America, Asia and the Middle East.

LASER SYSTEMS FOR ABLATION, SANDBLASTING, CUTTING AND DRILLING

The LASERMEK range forms the core of the company's technological offerings. These laser systems support a variety of processing operations, including functional and decorative coating ablation, laser sandblasting, shaped and linear cutting, and precise geometric drilling. The 'All-In-One' model consolidates ablation, sandblasting, and drilling into a single, compact, modular system. LASERMEK machines are engineered to meet the demanding needs of sectors such as furniture, automotive, technical glass and architectural construction. The laser sources employed enable selective processing of Low-E coatings, functional coatings, painted and silvered glass, leaving the underlying glass fully transparent or achieving an opaque, satin/sandblasted finish. The processes are clean, precise and repeatable - even on large formats. In particular, LASERMEK DRILL integrates the capability to produce holes of any shape and very large diameters, with micrometric control over the working area on glass up to 25 mm thick. Meanwhile, LASERMEK CUT ensures perfect straight or shaped cuts with excellent edge quality. These LASERMEK systems can reduce energy consumption by up to 70 percent compared to conventional technologies and eliminate tools and consumable needs.

FIRE & BALLISTIC-RESISTANT GLASS: DUAL PROTECTION

IN ONE SOLUTION

One of Glass Company's most ambitious projects is FIREMEK, a comprehensive system for manufacturing fire-resistant glass in E, EW and EI classes. A recent innovation involves the integration of ballistic protection transforming the final product into a multifunctional glass capable of providing dual barriers against fire and ballistic impacts. The system encompasses not only production lines but also proprietary chemical formulations such as an exclusive super-transparent intumescent dispersion based on silica along with fire-resistant consumables. This turnkey approach allows full process control and ensures certifiable results according to international standards. This solution is ideal for public buildings, critical infrastructure, military environments and high-traffic spaces where safety must coexist with aesthetic transparency.

VISIONMEK: TOTAL TRANSPARENCY WITH FULL VISION INSULATING GLASS FOR REFRIGERATION, ARCHITECTURE AND INTERIOR DESIGN

The VISIONMEK line represents one of the most appreciated innovations in commercial refrigeration and architectural glazing. It is an integrated system for Full Vision insulating

glass production, with no black spacers edge using transparent glass spacers and a fully automated process. Glass Company Srl developed every stage of this line internally: from glass spacers manufacturing to sealing, plasma treatment, humidity and temperature-resistant adhesives and gas filling management, including heated glass option. Full Vision IG is widely used in refrigerated display cases, internal partitions and panoramic fenestration.

SOFTMEK: A FLAGSHIP FEATURE

SOFTMEK is a calculation system for heated glass that can be integrated into the production process to ensure consistency between dimensions, transparency and energy performance.

DECORATIVE AND FUNCTIONAL APPLICATIONS: SMART COATINGS AND PAINTS FOR ENHANCED PERFORMANCE

Glass Company Srl offers systems for the paints and functional coatings controlled application on flat glass, enabling aesthetic customization combined with technical performance (lacquering, silkscreen printing, UV protection, antibacterial properties, electrical conductivity, etc.). These solutions are tailored for the furniture, contract, and high-tech architectural glazing industries.

MEASUREMENT AND QUALITY CONTROL INSTRUMENTS: EXCELLENCE IN EVERY DETAIL

To ensure the reliability of glass processing processes, Glass Company Srl also offers advanced measurement and control tools for glass quality assurance. These include systems for verifying the flatness and overall quality of tempered glass, optical surface inspection devices, residual stress measurement solutions and more. These instruments are seamlessly integrated with the company's proprietary production lines, creating a comprehensive ecosystem that spans from manufacturing to final certification of the processed glass.

A DYNAMIC TEAM WITH 25 YEARS OF EXPERIENCE

Glass Company Srl deems itself to be much more than the sum of its technologies, instead envisioning itself as a dynamic environment where a multidisciplinary team tackles the challenges of glass processing every day with creativity and technical expertise. In a market where speed is everything, the company demonstrates that innovation isn't the sole preserve of large corporations. The company works with a tailored approach: every project is unique, every machine can be customized, every customer is listened to. This adaptability, combined with a constant drive for improvement, has enabled the company to earn trust and recognition worldwide. Now, powered by the motto "our strength lies in our vision", Glass Company Srl is well-primed to showcase its latest innovations at VITRUM 2025, where it will be inviting visitors to discover firsthand how a small Italian enterprise can speak to the world with a clear, solid and technologically-advanced voice.

GLASSCOMPANY
Via Brigata Garibaldi, 33
61122 Pesaro (PU) - ITALY
Tel.: +39-0721-283519
info@glasscompany.com
www.glasscompany.com

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Largest curved electrochromic glass installation spotlights CHROMOGENICS

Combining dynamic solar control with architectural elegance, CHROMOGENICS recently delivered the world's largest curved electrochromic glass installation to Boverket's new climate-certified HQ in Karlskrona. The project sets a new benchmark for sustainable office design - integrating ConverLight® technology into an innovative, energy-efficient glass façade.

Swedish proptech company ChromoGenics has delivered the world's largest installation of curved electrochromic glass to the new climate-certified head office of Sweden's National Board of Housing, Building and Planning (Boverket). The project merges advanced solar control with architectural freedom - reducing the building's climate impact whilst enabling innovative design. Developed by Skanska and designed by leading architecture firm Sandell Sandberg

The new headquarters of Sweden's National Board of Housing, Building and Planning in Karlskrona, featuring curved dynamic glass from ChromoGenics – the world's largest installation of its kind.

Curved glass cassettes lined up in the production facility. The units are prepared for delivery and installation at the new headquarters of Sweden's National Board of Housing, Building and Planning.

for property owner Vacse, the building sets a new standard for sustainable offices of the future.

WHERE DESIGN MEETS TECHNOLOGY

The curved glass façade features large, rounded panels - a technical challenge in itself. ChromoGenics developed a tailored solution using its proprietary electrochromic technology, ConverLight®, integrated into specially engineered, curved glass cassettes. "ConverLight® dynamically adapts to solar conditions, improving indoor comfort and energy efficiency - while preserving full architectural design freedom. Achieving this at scale with curved dynamic glass is a clear technological breakthrough," says Fredrik Fränding, CEO of ChromoGenics.

A MODEL FOR TOMORROW'S SUSTAINABLE OFFICES

The headquarters serves as a national pilot project with ambitious climate targets. Early life cycle analyses showed that façade glass represented a significant share of the building's total embodied carbon. Instead of a planned double-skin façade, the project team chose a single-skin glazing system featuring ConverLight - reducing material use and emissions, while improving energy performance. The technology dynamically regulates light transmission, reducing cooling demand in summer while allowing beneficial daylight and solar heat during colder months.

SEAMLESS INTEGRATION AND INSTALLATION

The four-story building includes a distinct glass band on the third floor, reinforcing its curved architectural identity. Installation was carried out by UBA, subcontractor to Skanska, with ConverLight fully integrated into Schüco's structural glazing system. "Working with ConverLight was smooth and efficient. Each unit integrates seamlessly with the building's control system, ensuring optimal solar regulation without complicating the installation," says Fredrik Liliedahl, CEO of UBA.

NOW OPEN - A SMART, CLIMATE-CONSCIOUS WORKPLACE

Now handed over from Vacse to Boverket, the building will accommodate more than 250 employees - showcasing how advanced glazing technologies can reduce climate impact, optimize occupant comfort and support cutting-edge design in commercial buildings.

ChromoGenics
Ullforsgatan 15
SE-75228 Uppsala - SWEDEN
Tel.: +46-18-4300430
info@chromogenics.com
converlight.com/

Interior of the new headquarters of Sweden's National Board of Housing, Building and Planning in Karlskrona, featuring curved dynamic glass from ChromoGenics. The glazing adjusts light transmission in real time, creating a comfortable indoor environment.

SUPPLIERS GUIDE Yellow Pages

COMPANY	website
A+W SOFTWARE	www.a-w.com
ADELIO LATTUADA	www.adeliolattuatda.com
BANDO KIKO	www.bandoj.com
BEST MAKINA	www.bestmakina.com
BOTTERO	www.bottero.com
BOVONE	www.bovone.com
CUGHER GLASS	www.cugher.com
DELTAMAX AUTOMAZIONE	www.deltamaxautomazione.it
EDGETECH EUROPE	www.superspacer.com
EMAR GROUP	www.emar.it
FILTRAGLASS	www.filtraglass.com

COMPANY	website
FOREL	www.forelspa.com
FRATELLI PEZZA	shop.fratellipezza.com
LUOYANG FUCHONG MACHINERY	www.fuchongglass.com
GIARDINA FINISHING	www.giardinagroup.com
GLASS COMPANY	www.glasscompany.com
GLASTON	www.glaston.net
GPM AUTOMATION	www.gpmautomation.com
HEGLA	www.hegla.com
HELIOS QUARTZ	www.heliositalquartz.com
IDROTECNICA	www.idrotecnica.com
IOCCO GROUP	www.ioccogroup.com

SUPPLIERS GUIDE Yellow Pages

COMPANY	website
ITALCARRELLI	www.italcarrelli.eu
ITALMATIC PRESSE STAMPI	www.italmatic.eu
ITALMOLE SRL	www.italmole.com
ITECH SRL	www.itechsrl.it
KERAGLASS	www.keraglass.com
MAPPI INTERNATIONAL	www.mappi.it
MARPOSS	www.marposs.com
MARVAL	www.marval.it
MAZZAROPPI ENGINEERING	www.mazzaroppi.com
MOLE MORESCHI SRL	www.molemoreschi.com
NEPTUN	www.neptunglass.com
NORTHGLASS TECHNOLOGY CO., LTD	www.northglass.global
HORNOS INDUSTRIALES PUJOL	www.hornospujol.com
RATH AG	www.rath-group.com
R.C.N. SOLUTIONS	www.rcnsolutions.it
SATINAL STRATO - TK	www.satinalgroup.com
SCHIATTI ANGELO	www.schiattiangelosrl.com
SCHIAVO	www.schiavotech.it
SCHRAML	www.schraml.com
SKG - SKILL GLASS	www.skillglass.it
STEFIGLASS	www.stefiglass-international.com
STUDIO 1 AUTOMAZIONI	www.studio1srl.it

SUPPLIERS GUIDE Yellow Pages

COMPANY	website
SYSTRON	www.systron.at
TALAMONI	www.talamoni.com
TEXPACK	texpack.it
TRIULZI	www.triulzi.com
TUROMAS	www.turomas.com
VITROSEP	www.vitrosep.com

Glass manufacturing and Processing

FLOAT GLASS
Sisecam

PROCESSED SHEET GLASS
Emar

Stocking, handling and movement

COMPLETE STOCKING LINES / ENGINEERING
Biesse Group
Cugher Glass
ECOL
Glaston Group
Hegla
IOCCO Group
Keraglass
Lisec Group
North Glass Technology
Schiavo
Studio 1 Automazioni
Torgauer Maschinenbau
Turomas

COMPLETE HANDLING AND MOVEMENT LINES
Biesse Group
Bando Kiko
Bottero
Cugher Glass
CMS
ECOL
Glaston Group
GPM Automation
Hegla
IOCCO Group
Keraglass
Lisec Group
North Glass Technology
Schiavo
Studio 1 Automazioni
Torgauer Maschinenbau
Turomas

MACHINES FOR HANDLING GLASS SHEETS
Bando Kiko
Bavelloni
Bottero
CMS
ECOL
Forel
Glaston Group
GPM Automation
Hegla
IOCCO Group
Italcarrelli
Keraglass
Lisec Group
Lovati
Schiavo
Studio 1 Automazioni
Torgauer Maschinenbau
Turomas

HANDLING ROBOTS
Bavelloni
Bottero
CMS
ECOL
GPM Automation
Hegla
IOCCO Group
Lisec Group
Neptun
Schiavo
Studio 1 Automazioni
Torgauer Maschinenbau
Turomas

HANDLING EQUIPMENT FOR FLOAT GLASS
Bovone
Bottero
ECOL
Glaston Group
Hegla
IOCCO Group
Itech
Italcarrelli
Lisec Group
Schiavo
Torgauer Maschinenbau
Turomas

TROLLEYS AND CLASSIFIERS
Biesse Group
CMS
Forel
Hegla
Lisec Group
Schiavo
Torgauer Maschinenbau
Turomas

TRANSPORTATION SYSTEMS/TRUCKS
Hegla
Italcarrelli
Lisec Group
Schiavo
Tecglass

VACUUM LIFTING EQUIPMENT
Bottero
CMS
ECOL
Fenzi
Forel
Glaston Group
Hegla
Lisec Group
Schiavo
Si.Ste Trading
Studio 1 Automazioni
Torgauer Maschinenbau

Turomas

CRANE SUCTION CUPS FOR LARGE SHEETS

Bottero
Fenzi
Glaston Group
Hegla
Lisec Group
Schiavo
Turomas

TRANSPORTATION TONGS

Bottero
Fenzi
IOCCO Group
Schiavo
Turomas

SUCTION CUPS

ADI - Surface Group
Bottero
CMS
Fenzi
Glaston Group
Hegla
Itech
Schiavo
Si.Ste Trading
Turomas

CONVEYOR BELTS

Cugher Glass
ECOL
Glaston Group
Schiavo
Studio 1 Automazioni
Tecglass
Turomas

PACKAGING MATERIALS AND SYSTEMS

ECOL
Hegla
Schiavo
Vismara

ACCESSORIES

Bottero
CMS
Fenzi
Hegla
Helios Quartz
Mole Moreschi
Schiavo
Studio 1 Automazioni
Turomas

Straight-edge and shape cutting

COMPLETE STRAIGHT-EDGE LINES

Bando Kiko
Bavelloni
Biesse Group
Bottero
CMS
Glaston Group
Hegla
Lisec Group
Neptun
North Glass Technology
Schiavo
Schiatti Angelo
Teknik Elmas
Tesir Makine

COMPLETE SHAPE CUTTING LINES

Bando Kiko
Bavelloni
Biesse Group
Bottero
CMS
Glaston Group
Hegla
Lisec Group
North Glass Technology
Schiavo
Teknik Elmas
Tesir Makine
Turomas

AUTOMATIC CUTTING MACHINES FOR AUTOMOTIVE GLASS

Bando Kiko
Bottero
CMS
Glaston Group
IOCCO Group
Lisec Group
Schiavo

LOADING AND TILTING MACHINES

Bando Kiko
Bavelloni
Biesse Group
Bottero
CMS
ECOL
Forel
Glass Company
Glaston Group
GPM Automation
Hegla
IOCCO Group
Lisec Group
Neptun
Schiavo
Studio 1 Automazioni
Turomas

CUTTING TABLES

Bando Kiko
Bavelloni
Biesse Group
Bottero
CMS
Fenzi
Forel
Glaston Group
Hegla
IOCCO Group
Lisec Group
Schiavo
Tekno Kilns/Pujol
Triulzi
Turomas

CUTTING OPTIMIZERS

Bando Kiko
Bavelloni
Biesse Group
Bottero
CMS
Deltamax Automazione
Forel
Glaston Group
Hegla
IOCCO Group
Lisec Group
Optima
Schiavo
Turomas

CUTTING PATH OPTIMIZERS

Bando Kiko
Bottero
CMS
Glaston Group
IOCCO Group
Lisec Group
Optima
Schiavo

CAD SYSTEMS

Bavelloni
CMS
Lisec Group
Prodim
Schiavo

ARMOURED AND LAMINATED GLASS CUTTING MACHINES

Bando Kiko
Bavelloni
Bottero
CMS
Glaston Group
Hegla
Lisec Group
Schiavo
Turomas

ROUND OR SHAPE CUTTING MACHINES

Bando Kiko
Bavelloni
Bottero
CMS
Fenzi
Glaston Group
Hegla
Lisec Group
Schiavo
Turomas

CUTTING ACCESSORIES

ADI - Surface Group
Ayrox
Bando Kiko
Bottero
Fenzi
IOCCO Group
Schiavo
Si.Ste Trading
Softeco
Talamoni
Teknik Elmas
Tesir Makine
Turomas

SAW MACHINES

Schiavo

AUTOMATIC SAWS FOR CUTTING LAMINATED AND BULLET-PROOF GLASS

CMS
Schiavo

BREAKING SYSTEMS

Bando Kiko
Bavelloni
Bottero
CMS
Glaston Group
Hegla
IOCCO Group
Lisec Group
Schiavo
Teknik Elmas
Tesir Makine
Turomas

CUTTING MACHINES WITH BREAKING AND EDGE DELETING DEVICES

Bando Kiko
Bottero
CMS
Glaston Group
Hegla
IOCCO Group
Lisec Group
Schiavo
Teknik Elmas
Tesir Makine
Turomas

GLASS CUTTING FLUIDS

Schiavo
Si.Ste Trading
Turomas

ACCESSORIES

Schiavo
Schiatti Angelo

Si.Ste Trading
Talamoni
Teknik Elmas
Tesir Makine
Turomas

Edging and bevelling

COMPLETE EDGING LINES

Adelio Lattuada
B Solution
Bando Kiko
Bavelloni
Biesse Group
Bottero
CMS
Forel
IOCCO Group
Lovati
Neptun
Schiavo
Schiatti Angelo
Schraml
SKG - Skill Glass
Systron

CROSSBELT ARRISERS

Best Makina

COMPLETE BEVELLING LINES

Adelio Lattuada
Bando Kiko
Biesse Group
Bottero
CMS
IOCCO Group
Lovati
Schiavo
Teknik Elmas
Tesir Makine

COMPLETE AUTOMOTIVE GLASS EDGING AND BEVELLING LINES

Adelio Lattuada
Bando Kiko
Bavelloni
Biesse Group
Bottero
Glaston Group
IOCCO Group
Schraml
SKG - Skill Glass
Teknik Elmas
Tesir Makine

DOUBLE-EDGE GRINDING MACHINES

B Solution
Bando Kiko
Bavelloni
Biesse Group
Bottero
CMS
IOCCO Group
Schiatti Angelo
Teknik Elmas
Tesir Makine

VERTICAL-EDGE GRINDING MACHINES

Adelio Lattuada
B Solution
Bando Kiko
Bavelloni
Bottero
Forel
Glass Company
Glaston Group
ItechItech
Neptun
Schiavo
Schiatti Angelo
SGM - Special Glass Machinery
North Glass Technology
Schraml
SKG - Skill Glass
Systron
Tesir Makine

GRINDING SPINDLES

Schiavo
Teknik Elmas
Tesir Makine

BEVELLING MACHINES FOR ROUND AND SHAPED GLASS

Adelio Lattuada
Bando Kiko
Bavelloni
Biesse Group
CMS
Lovati
Schiavo
Teknik Elmas
Tesir Makine

STRAIGHT-EDGE BEVELLING MACHINES

Adelio Lattuada
Bando Kiko
Bavelloni
Bovone
CMS
Glass Company
Schiavo
Schiatti Angelo
Teknik Elmas
Tesir Makine

BEVEL POLISHING MACHINES

Adelio Lattuada
Bando Kiko
Bavelloni
Biesse Group
Bovone
CMS
Lovati
Teknik Elmas
Tesir Makine

STRAIGHT-EDGE ENGRAVING MACHINES

Bavelloni
Biesse Group
Bottero
CMS
Schraml
SKG - Skill Glass
Teknik Elmas

SHAPED GLASS ENGRAVING MACHINES

Bavelloni
Biesse Group
Bottero
CMS
Lovati
Teknik Elmas
Tesir Makine

CORNER GRINDING MACHINES

Adelio Lattuada
B Solution
Bavelloni
Biesse Group
CMS
Lovati
SGM - Special Glass Machinery
Schraml
SKG - Skill Glass
Teknik Elmas
Tesir Makine

SHAPED GLASS GRINDING MACHINES

Adelio Lattuada
Bando Kiko
Bavelloni
Biesse Group
Bottero
CMS
Forel
Glass Company
Lovati
Systron
Teknik Elmas
Tesir Makine

BELT GRINDING MACHINES

Adelio Lattuada
Best Makina
Fenzi
IOCCO Group

LATHES - VERTICAL AND HORIZONTAL

CMS
Fenzi
Teknik Elmas
Tesir Makine

EMBOSSING MACHINES

CMS
Fenzi

PORTABL E MACHINES

Fenzi
Helios Quartz

DIAMOND TOOLS

Adelio Lattuada
ADI - Surface Group
Bando Kiko
Bovone
Bottero
Diamut - Biesse
Fenzi
Glaston Group
Marrose Abrasives
Mole Moreschi
Neptun
Schiavo
Si.Ste Trading
Talamoni
Teknik Elmas
Vetrolux

DIAMOND BELTS

Mole Moreschi

SEAMING LINES

Best Makina

POLISHING WHEELS

Adelio Lattuada
ADI - Surface Group
Bando Kiko
Bovone
Diamut - Biesse
Dogo
Fenzi
Glaston Group
Italmole
Marrose Abrasives
Mole Moreschi
RBM Italia - Surface Group
Schiavo
Si.Ste Trading
Teknik Elmas

POLISHING AGENTS AND OXIDES

ADI - Surface Group
Bovone
Fenzi
Schiavo
Si.Ste Trading
Teknik Elmas

POLISHING BELTS

Fenzi
Schiavo
Si.Ste Trading

COOLANTS

Adelio Lattuada
Bovone
Fenzi
Schiavo
Si.Ste Trading

GLASS GRINDING AND BEVELLING COOLANTS

Schiavo
Si.Ste Trading
Teknik Elmas

SEPARATORS FOR GLASS-SOLIDS

Dieffe Macchine
Filtraglass
Immmes
Schiavo
Vitrosep

ACCESSORIES

ADI - Surface Group
CMS
Fenzi
Helios Quartz
IOCCO Group
Mole Moreschi
Schiavo
Schiatti Angelo
Si.Ste Trading
Teknik Elmas

Washing

HORIZONTAL WASHING MACHINES

Bando Kiko
Bavelloni
Best Makina
Bovone
ECOL
Emar
Forel
Glass Company
Glaston Group
GPM Automation
IOCCO Group
Itech
Lisec Group
Neptun
Schiavo
SGM - Special Glass Machinery
Tecglass
Triulzi

VERTICAL WASHING MACHINES

Adelio Lattuada
Bavelloni
Best Makina
Emar
ECOL
Forel
Glass Company
Glaston Group
GPM Automation
IOCCO Group
Itech
Lisec Group
Neptun
Schiavo
SGM - Special Glass Machinery
Stefiglass
Systron
North Glass Technology
Tecglass
Teknik Elmas
Tesir Makine
Triulzi

WASHING MACHINES FOR AUTOMOTIVE GLASS

Bando Kiko
ECOL
Glaston Group
IOCCO Group
Tecglass
Tesir Makine
Triulzi

WASHING PURIFICATION SYSTEMS

Best Makina
Dieffe Macchine
Emar
Forel
Glass Company
Glaston Group
Immmes
IOCCO Group
Itech
Schiavo

LIQUID WASHING CONCENTRATES

Schiavo
Si.Ste Trading

ACCESSORIES

Helios Quartz
Emar
Idrotecnica
Neptun
Schiavo

Mirror production

COMPLETE PLANTS & CONVEYORS FOR MIRROR PRODUCTION

Bovone
IOCCO Group
Triulzi

PAINTING EQUIPMENT

Fenzi
IOCCO Group
Triulzi

DRYING OVENS

Bovone
CMS

AUTOMOTIVE MIRROR BENDING FURNACES

Bovone
Marposs
Tecnosens

MANUAL SILVER- SPRAYING EQUIPMENT

Fenzi
Glass Company

PAINTS AND CHEMICAL PRODUCTS

Fenzi

ACCESSORIES

Fenzi
Helios Quartz

Insulating glass

COMPLETE INSULATING GLASS LINES

Bavelloni
Best Makina
Emar
Forel
Glass Company
Glaston Group
Itech
Marval
Neptun
Schiavo
SGM - Special Glass Machinery
Thermoseal Group
Triulzi

AUTOMATIC SEALING LINES

Bavelloni
Best Makina
Easy Automation
Emar
Forel
Glaston Group
Itech
Lisec Group
Marval
Teknik Elmas
Tesir Makine

AUTOMATIC SPACER BENDING MACHINES

Bavelloni
Best Makina
Emar
Fenzi
Forel
Glaston Group
IOCCO Group
Lisec Group
Marval
Schiavo
Thermoseal Group

DESICCANT SALT FILLING MACHINES

Bavelloni
Best Makina
Emar
Fenzi
Forel
Glaston Group
Itech
Lisec Group
Marval
Neptun
Schiavo
Thermoseal Group
Triulzi

SPACER CUTTING SAWS

Bavelloni
Best Makina
Emar
Fenzi
Forel
Itech
Lisec Group
Marval
Neptun
Schiavo
Tesir Makine
Thermoseal Group

BUTYL EXTRUDERS

Bavelloni
Best Makina
Emar
Forel
Glaston Group
Itech
Lisec Group
Marval
Neptun
Schiavo
Thermoseal Group
Triulzi

HOT-MELT EXTRUDERS

Bavelloni
Best Makina
Easy Automation
Emar
Fenzi
Forel
Itech
Lisec Group

Marval
Neptun
Schiavo
Thermoseal Group
Triulzi

POLYURETHANE EXTRUDERS

Bavelloni
Best Makina
Easy Automation
Emar
Fenzi
Forel
Glaston Group
Itech
Lisec Group
Marval
Schiavo

POLYURETHANE ENCAPSULATION

Emar
Glaston Group
Lisec Group
Marval
Schiavo

SILICONE EXTRUDERS

Best Makina
Emar
Fenzi
Forel
Glaston Group
Itech
Lisec Group
Marval
Schiavo
Triulzi

POLYSULPHIDE SEALANT EXTRUDERS

Best Makina
Emar
Fenzi
Forel
Glaston Group
Itech
Lisec Group
Marval
Schiavo
Triulzi

GAS FILLING EQUIPMENT

Emar
Fenzi
Forel
Glaston Group
Itech
Lisec Group
Marval
Neptun
Schiavo
Sparklike
Thermoseal Group

DESICCANT SALTS

Emar
Fenzi
Neptun
Schiavo
Thermoseal Group

SPACERS/PROFILES

Edgetech Europe
Fenzi
Schiavo
Thermoseal Group

GEORGIAN BARS

Hegla
Thermoseal Group

BUTYL

Fenzi
Thermoseal Group

POLYSULPHIDE SEALANTS

Fenzi

HOT MELT

Fenzi
Thermoseal Group

OTHER SEALANTS

Fenzi

PANTOGRAPHS

Fratelli Pezza

ACCESSORIES

Deltamax Automazione
Forel
Helios Quartz
Schiavo
Si.Ste Trading
Sparklike
Tesir Makine
Triulzi

Tempering

TEMPERING FURNACES (ARCHITECTURAL GLASS)

Glass Company
Glasstech Inc.
Glaston Group
Hornos Industriales Pujol
Jinglass
Keraglass
Landglass Technology
Lisec Group
Luoyang Fuchong Machinery
Mappi International
Marposs
North Glass Technology
Schiavo
Tecnosens
TK
Tekno Kilns/Pujol
Texpack

TEMPERING FURNACES (AUTOMOTIVE GLASS)

Glass Company
Glasstech Inc.
Glaston Group
Jinglass
Keraglass
Landglass Technology
Luoyang Fuchong Machinery
Mappi International
Marposs
Mazzaroppi Engineering
North Glass Technology
Satinal
Taifin
Tecnosens
Texpack

CHEMICAL TEMPERING EQUIPMENT

Glass Company
R.C.N. Solutions
TK

ROBOT FOR CLEANING SILICA ROLLERS

Eurotech Way

ACCESSORIES

Deltamax Automazione
Fenzi
Glass Company
Glaston Group
Helios Quartz
Hornos Industriales Pujol
Keraglass
Landglass Technology
Mappi International
Mazzaroppi Engineering
R.C.N. Solutions
Satinal
Taifin
Tekno Kilns/Pujol
Torgauer Maschinenbau

Bending

BENDING FURNACES (ARCHITECTURAL GLASS)

Hornos Industriales Pujol
Jinglass
Keraglass
Luoyang Fuchong Machinery
Mappi International
Marposs
Mazzaroppi Engineering
R.C.N. Solutions
Tecnosens
Tekno Kilns/Pujol
TK
Texpack

BENDING FURNACES (AUTOMOTIVE GLASS)

Glass Company
Glasstech Inc.
Glaston Group
Jinglass
Keraglass
Luoyang Fuchong Machinery
Mappi International
Marposs
Mazzaroppi Engineering
R.C.N. Solutions
TK
Taifin
Tecnosens
Texpack

ACCESSORIES

Ayrox
Deltamax Automazione
Glass Company
Glasstech Inc.
Glaston Group
Hornos Industriales Pujol
Itech
Keraglass
Mappi International
Satinal
Softeco
Tekno Kilns/Pujol
TK

Laminated glass production

COMPLETE PLANTS

Best Makina
Bovone
Bottero
Forel
Glass Company
Glaston Group
GPM Automation
Hornos Industriales Pujol
IOCCO Group
Italmatic
Lisec Group
Mazzaroppi Engineering
R.C.N. Solutions
Texpack
TK
Triulzi

LAMINATED WINDSCREEN BENDING FURNACES

ECOL
Glass Company
Glasstech Inc.
Glaston Group
Keraglass
Mappi International
Marposs
Taifin

Texpack

AUTOCLAVES

Glass Company
Glaston Group
GPM Automation
Hornos Industriales Pujol
Italmatic
Lisec Group
Triulzi

CLIMATIC CABINS

Forel
Glaston Group
GPM Automation
IOCCO Group
Lisec Group
Triulzi

INFRARED OVENS

ECOL
Forel
Glass Company
Glaston Group
GPM Automation
Hornos Industriales Pujol
IOCCO Group
Lisec Group
TK
Triulzi

MANGLES

GPM Automation

PRESSES/BENDING MACHINES

Forel
IOCCO Group
Lisec Group
Triulzi

RESIN LAMINATING MATERIALS AND EQUIPMENT

IOCCO Group
Satinal
Teknik Elmas
Torgauer Maschinenbau

EVA (ETHYLENE VINYL ACETATE)

Satinal
Si.Ste Trading
Tecnosens

PVB

Everlam
Kuraray - Trosifol
Marposs
Si.Ste Trading
Tecnosens

PVB - SHAPING AND CUTTING EQUIPMENT

Ayrox
ECOL
Forel
Glaston Group
GPM Automation
IOCCO Group
Lisec Group
Softeco

PVB - WIRING TECHNOLOGY FOR HEATABLE LAMINATES

Ayrox
Easy Automation
ECOL
Softeco

ACCESSORIES

Ayrox
Bottero
Deltamax Automazione
Eurotech Way
Glaston Group
Helios Quartz
Hornos Industriales Pujol
IOCCO Group
Lisec Group
Satinal
Si.Ste Trading
Softeco
Taifin
Triulzi

Drilling

AUTOMATIC DRILLING LINES

B Solution
Bando Kiko
Bavelloni
Biesse Group
Glaston Group
IOCCO Group
Neptun
Schiatti Angelo
Schraml
SKG - Skill Glass
Systron
Teknik Elmas
Tesir Makine
Vismara

MULTI-SPINDLE DRILLING MACHINES

B Solution
Bando Kiko
Bavelloni
Biesse Group
CMS
Glass Company
Glaston Group
IOCCO Group
Neptun
Schiavo
Schiatti Angelo
Schraml
SKG - Skill Glass
Systron
Teknik Elmas
Tesir Makine
Vismara

DRILLING MACHINES WITH OPPOSITE DRILLING HEADS

B Solution
Bando Kiko
Bavelloni
Bottero
CMS
Fenzi
Glaston Group
IOCCO Group
Lovati
Neptun
Schiavo
Schiatti Angelo
Schraml
SKG - Skill Glass
Systron
Teknik Elmas
Tesir Makine
Vismara

COLUMN DRILLING MACHINES

B Solution
Bottero
Fenzi
Neptun
Schiavo
Tesir Makine
Vismara

PORTABLE DRILLING MACHINES

CMS
Fenzi
Schiavo
Si.Ste Trading
Teknik Elmas
Tesir Makine

DRILLING AND MILLING MACHINES

Bavelloni
Bottero
Biesse Group
CMS
IOCCO Group
Lovati
Neptun
Schiavo
Teknik Elmas
Tesir Makine
Vismara

DIAMOND DRILLS

ADI - Surface Group
Bovone
Diamut - Biesse
Fenzi
Glaston Group
Mole Moreschi
Neptun
Schiavo
Si.Ste Trading
Teknik Elmas
Tesir Makine
Vetrolux

ACCESSORIES

CMS
Fenzi
Neptun
Schiavo
Si.Ste Trading
Teknik Elmas

Other equipment and plants

TURNKEY PLANTS / ENGINEERING - FOR BUILDING GLASS

Bando Kiko
Biesse Group
Bottero
Cugher Glass
Glaston Group
Horn
IOCCO Group
Keraglass
Lisec Group
Marposs
Torgauer Maschinenbau

TURNKEY PLANTS / ENGINEERING - FOR AUTOMOTIVE GLASS

Bando Kiko
Biesse Group
Bottero
Cugher Glass
Easy Automation
Horn
Glaston Group
IOCCO Group
Marposs

KEY PLANTS / ENGINEERING - FOR DISPLAY GLASS

Bando Kiko
Cugher Glass
Marposs
Torgauer Maschinenbau

EDGES ROLLER COATING MACHINE

Eurotech Way

WORK CENTRES - CNC CONTROLLED

Bando Kiko
Bavelloni
Biesse Group
Bottero
Glass Company
Glasstech Inc.

Glaston Group
Hegla
Neptun
Schraml
SKG - Skill Glass
Systron

FLOAT PLANTS/ LINES (EQUIPMENT & ACCESSORIES)

Bovone
Horn
IOCCO Group

CULLET HANDLING SYSTEMS

ECOL

COMPLETE BATCH PLANTS

Zippe

VACUUM COATING EQUIPMENT AND PLANTS

Giardina Group Glass Division
Glass Company
North Glass Technology

ENAMELLING EQUIPMENT AND PLANTS

Giardina Group Glass Division
Glass Company
Rollmac division of GeMaTa

DRYERS AND ENAMELING FURNACES

Giardina Group Glass Division
Tecglass

SPRAYING TECHNOLOGY

Giardina Group Glass Division

HOT- AND COLD-END COATING SYSTEMS AND MATERIALS (CVD, ROLLERS, CURTAIN COATERS)

Giardina Group Glass Division

SANDBLASTING SYSTEMS, EQUIPMENT AND PLANTS - OPTIMIZERS

Fenzi
Fratelli Pezza
Glass Company
Schiavo
Schraml
SKG - Skill Glass

DIGITAL INKJET PRINTERS

Glass Company
System Ceramics
Tecglass
TecnoFerrari

SCREEN PRINTING EQUIPMENT AND PLANTS

Ayrox
COMSS
Cugher Glass
Deltamax Automazione
ECOL
Eurotech Way
Glass Company
Keraglass
North Glass Technology
Rollmac division of GeMaTa
Softeco
Studio 1 Automazioni
TecnoFerrari

SCREEN PRINTING FRAMES

COMSS

SCREEN PRINTING DRYING SYSTEMS

COMSS
Cugher Glass
Glass Company
Rollmac division of GeMaTa
Studio 1 Automazioni

EDGES ROLLER COATING MACHINE

Giardina Group Glass Division

ACIDING GLASS EQUIPMENT AND PLANTS

Lisec Group
Rollmac division of GeMaTa

LASER DECORATING MACHINES

Glass Company

Artistic glass production

CERMAMIC INKS

Glass Company
Tecglass

CHAMBER ELECTRIC KILNS

Glass Company
Keraglass
Tekno Kilns/Pujol

ACCESSORIES

Deltamax Automazione
Helios Quartz
TK

Miscellaneous

ADHESIVES FOR GLASS BONDING

Si.Ste Trading

AUTOMATION

Easy Automation
Horn
IOCCO Group
Marposs
Studio 1 Automazioni
Tecnosens
Torgauer Maschinenbau
Zippe

AUTOMOTIVE GLASS APPROVAL SERVICES

Ayrox
Marposs
Softeco
Tecnosens
Teknik Elmas

AUTOMOTIVE GLASS QUALITY CONTROL

Ayrox
Bando Kiko
Cugher Glass
Deltamax Automazione
Glaston Group
IOCCO Group
Marposs
Softeco
Tecnosens

CE MARKING - QUALITY CONTROL EQUIPMENT FOR GLASS IN BUILDING

Ayrox
Softeco

COLOURS & ENAMELS - OTHER APPLICATIONS

Ayrox

CUTTERS

Si.Ste Trading

CUTTERS WHEELS

Si.Ste Trading

DEIONIZING AND WATER SOFTENING EQUIPMENT

Fenzi
Forel
Glass Company
Idrotecnica
Itech
Lisec Group
Triulzi

DEIONIZING AND WATER SOFTENING EQUIPMENT

Immmes

DIAMOND ROUTER EQUIPMET - PORTABLE

Teknik Elmas
Tesir Makine

DISTRIBUTORS

Si.Ste Trading

FLAT GLASS QUALITY CONTROL DEVICES

Ayrox
Deltamax Automazione
Forel
IOCCO Group
Marposs
Softeco
Tecnosens

FURNACES

Glass Company
Horn
Texpack

FURNACES / HYDROGEN GENERATORS (WATER ELECTROLYSERS)

Nel Hydrogen

GLASS COATING AND TINTING

Glass Company
Rollmac division of GeMaTa

GLASS TREATMENT FILMS

Glass Company

HEATING EQUIPMENT - STANDARD (GAS FIRING, BURNERS, AIR GAS MIXERS, SAFETY DEVICES, ELECTRICAL RESISTORS)

Horn
Keraglass
Texpack

INSPECTION INSTRUMENTS & INTENSIMETERS

Marposs
Tecnosens

INFRARED TUBES

Helios Quartz
Deltamax Automazione

KILNS

Glass Company
Keraglass
Lisec Group
Tekno Kilns/Pujol
TK
Fenzi

METAL ACCESSORIES

Si.Ste Trading
Teknik Elmas

Tesir Makine

METALLIC SECTIONS

Fenzi
Tesir Makine

NUMERICAL CONTROL SYSTEM (CNC) FOR ALL GLASS PROCESSING MACHINES

Glass Company
IOCCO Group
Prodim

OPTICAL DISTORTION ANALYSERS FOR AUTOMOTIVE GLASS

IOCCO Group
Keraglass
Tecnosens

OPTICAL INFRARED THERMOMETERS

Optris GMBH

POWDER OR LIQUID APPLICATION SYSTEMS FOR PROTECTING FLOAT GLASS

Cugher Glass
Glass Company

PUMPING AND APPLICATION SYSTEMS (AUTOMOTIVE GLASS)

IOCCO Group

PURIFIERS FOR REFLUENT WATER

Dieffe Macchine
Immmes

PUTTIES AND SEALANTS

Fenzi

QUARTZ EQUIPMENT

Helios Quartz

REFRACTORIES

Rath

SHAPE CHECKING DEVICES

Easy Automation
IOCCO Group

SHOWER ENCLOSURES

Si.Ste Trading
Vismara

SIC HEATERS

Helios Quartz

SOFTWARE SYSTEMS FOR PRODUCTION CONTROL

A+W Software
CMS
Cugher Glass
Deltamax Automazione
Edgetech Europe
Forel
Lisec Group
Optima
Prodim

SOLDERING EQUIPMENT FOR ELECTRICAL CONNECTORS FOR WINDSCREENS AND BACKLITES

Ayrox
Easy Automation
Softeco

SORTING SYSTEMS

Glaston Group
GPM Automation
Lisec Group
Studio 1 Automazioni

SURFACE STRESS MEASUREMENT INSTRUMENT

Ayrox
Glass Company
Tecnosens

WINDSCREEN STRESS MEASUREMENT INSTRUMENT

Tecnosens

WINDSCREEN AND BACKLITES

Marposs
Tecnosens

TESTING FOR SOLDERINGS

Ayrox
Easy Automation
Softeco

TESTING DEVICES OF BACKLITES

ELECTRICAL HEATING

Ayrox
Easy Automation
Softeco

THERMAL IMAGING SYSTEMS

Glass Company
Easy Automation
Optris GMBH

TIN FLOAT BATH FURNACES

Horn
IOCCO Group

TIN FLOAT BATH SIDE DETECTION DEVICES

Tecnosens

UV ADHESIVES

Si.Ste Trading

UV LAMPS

Helios Quartz

UV PORTABLE MACHINES

Helios Quartz

WATER REPELLENT SPRAY COATING MACHINES

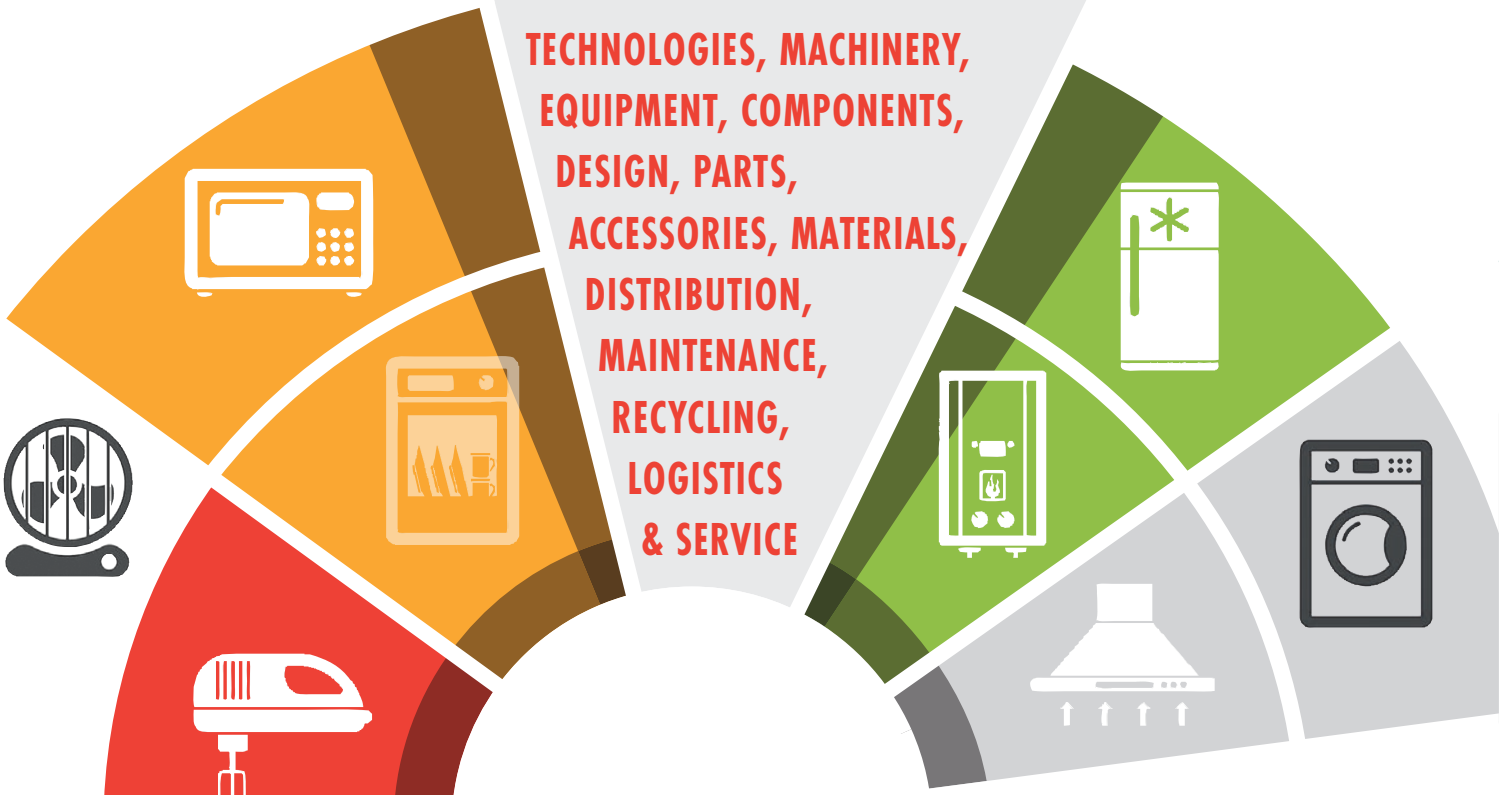
Best Makina

APPLITECH

INTERNATIONAL EXHIBITION & CONFERENCE

FOR THE SUPPLY CHAIN AND MANUFACTURING OF DOMESTIC, PROFESSIONAL, INDUSTRIAL APPLIANCES & CONSUMER ELECTRONICS

TECHNOLOGIES, MACHINERY, EQUIPMENT, COMPONENTS, DESIGN, PARTS, ACCESSORIES, MATERIALS, DISTRIBUTION, MAINTENANCE, RECYCLING, LOGISTICS & SERVICE



5-7 NOVEMBER 2025

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UNDER THE PATRONAGE OF

CONFCOMMERCIO AIRES · ANIMA · APPLiA ITALIA Associazione Produttori Elettrodomestici · APPLiA Home Appliance Europe · CONFAPI INDUSTRIA ANCONA · SBA SMART BUILDINGS ALLIANCE FOR SMART CITIES · OPTIME

CO-LOCATED WITH

REFRIGERA 2025

FORTRONIC ELECTRONICS FORUM

PROJECT AND MANAGEMENT

Q151 · senaf MESTIERE FIERE

IN COLLABORATION WITH

Bologna Fiere · bianco&bruno · ha factory household appliances

WWW.APPLITECH.SHOW

Preview

The following pages offer readers a useful guide to advertisers of this issue that are exhibiting at Vitrum 2025

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BOVONE	9	B09-C11
CUGHER GLASS	9	N29
DELTAMAX AUTOMAZIONE	9	L01-M04
EDGETECH EUROPE	11	M17
FILTRAGLASS	9	J29-L28
FOREL	11	M01-S14
FRATELLI PEZZA	9	N01-P06
FUCHONG GLASS MACHINERY	11	J08
GLASS COMPANY	11	E15-G18
GLASTON GERMANY	9	D13-E12
GPM AUTOMATION	11	G10
HEGLA	9	A21-E26
HELIOS QUARTZ	11	F12
HORNOS INDUSTRIALES PUJOL	11	E01
IDROTECNICA	9	J21-L22
ITALMATIC	11	F06

COMPANY	HALL & STAND	
ITALMOLE	9	J11
ITECH	11	G13
KERAGLASS	9	E11-H18
MAPPI INTERNATIONAL	11	B01-E06
MAZZAROPPI ENGINEERING	11	J02-J04
MOLE MORESCHI	11	D09-E10
NEPTUN	9	S12
NORTHGLASS TECHNOLOGY INDUSTRIAL	97	M05-N10
RCN SOLUTIONS	11	B19-D24
SCHIATTI ANGELO	9	P01-T04
SKILL GLASS	11	D13-E14
SYSTRON	9	H15-J20
TALAMONI	11	E09
TK - STRATO - SATINAL	11	J49
TRIULZI -TC SPECIAL EQUIPMENTS	9	N13-S20
TUROMAS	9	M01-N04
VITROSEP	9	L16

Pick up your free copy:
Hall 11 - Stand G28

Glass-Technology International
THE LEADING MAGAZINE FOR THE INTERNATIONAL FLAT GLASS INDUSTRY

VITRUM 25

ADELIO LATTUADA Srl

preview

hall 11 / stand J01/M14

People to contact at our stand

ADELIO LATTUADA OWNER
NICOLA LATTUADA SALES DEPARTMENT
OUR TECHNICAL AND COMMERCIAL STAFF

LATTUADA +ADDING VALUE

Lattuada offers solutions for glass, stone and automation.

All Lattuada edgers can be equipped with:

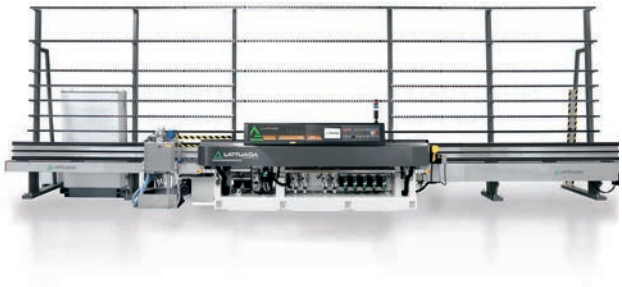
• **A-WR System** (fully automatic wheel adjustment management). At the beginning of the shift/day, the operator push the TEACH-IN button: the machine stops the inlet conveyor, lowers all spindles and sets the diamond/resin wheels spindles at the pre-set height with a 0,01 mm tolerance. No test glass needed. The system also calculates the inlet conveyor belt wear for a greater accuracy.

• **i-AL package** (fully automatic management of all processing parameters): the operator only sets the thickness and all other parameters are automatically set by the system and are fully customizable, depending on the production and quality required.

Lattuada, with its partner Knittel Glass, offers robotic solutions for every need and application.

At Vitrum, a LIMITED EDITION fully automatic grinding machine, model TLR 12 C PC, in front of a Kuka robot moving on seventh axis will be displayed.

This line can reach a productivity of up to 130 m/h considering, for example, a speed of 3 m/min and glass panes with dimensions: 1600x600x8 mm and 1000x2000x8 mm.



A new feature is a device to control the correct position of the edge of the glass. The customer can load the glasses on the rack even without using a reference/zero point, just roughly in the middle of the rack. So, when turning it 90° the bottom edge can be a little bit higher or lower compared to the standard zero line. This is the task of this new device: to check, before loading the glass, the real position of the edge to have a safe and smooth loading.

A very interesting option is an advanced, state-of-the-art vacuum technology, which saves around 85% of energy compared to standard systems.

Compared to other lines, the robot that moves the glass is not fixed to the floor but runs at very high speed on a dedicated track. The special design of the track allows the robot to reach a maximum speed of 2.35 m/s.

The line can only be operated by one operator who only has to load a rack and start the line; all the glass will be automatically processed on all four sides and unloaded onto another rack or sent into a washing machine. The line can also communicate with the operator via a pager.

This solution combines the full automation usually offered by a closed cell with 2 edgers and 2 robots, but with a smaller footprint and reduced budget. It can almost match the same productivity, but with the advantage that no operator must handle the glass manually.

Product Range

- ELECTRONIC OR PC CONTROLLED STRAIGHT-LINE EDGING MACHINES FOR FLAT EDGES OR WITH VARIABLE ANGLE
- ELECTRONIC OR PC CONTROLLED STRAIGHT- LINE BEVELLING MACHINES
- ROBOTIC SOLUTIONS
- VERTICAL EDGE POLISHERS (PETRA)
- VERTICAL WASHING MACHINES
- AUTOMATIC CORNER-GRINDING MACHINES
- HORIZONTAL DRILLING MACHINES

www.adeliolattuada.com • www.lattuada-na.com

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LATTUADA NORTH AMERICA
6967 Wales Road, Suite F, Northwood OH. 43619 - USA
Tel.: +1-567-2494486 - E-mail: info@lattuada-na.com

VITRUM 25

BOTTERO S.P.A.

preview

hall 11 / stand G01

People to contact at our stand

PAOLO ALBERTO SARDANO GENERALE MANAGER - FLAT GLASS

Bottero at Vitrum 2025: innovation, vision, and new opportunities for the glass industry

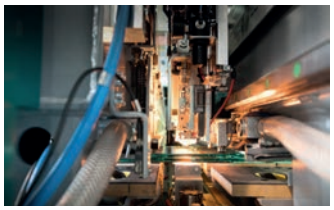
The **Bottero Group** continues its path of growth and innovation, and will take center stage at **Vitrum 2025** with major new developments for the glass industry. Throughout the event, visitors will have the exclusive opportunity to attend **live demo sessions and technical workshops** at the company's **headquarters in Cuneo**, accessible via a **dedicated shuttle bus**, with a special focus on **flat glass and ceramics processing**.

Technology, sustainability, and automation: Bottero's strategic roadmap

Bottero S.p.A. is proud to unveil the latest technological solutions in the fields of flat glass and hollow glass, offering a preview of its **development roadmap** and the **key strategic projects** currently underway.

The company's growth strategy is built on two key pillars:

- **Sustainability**: Respect for resources, a people-centered approach, environmental protection, and strong stakeholder engagement are at the core of Bottero's values. This commitment has recently been recognized through the achievement of **ISO 26000 certification**.
- **Automation**: Significant investments in **R&D** aim to revolutionize glass processing through **cutting-edge technologies, system integration, data analytics**, and **artificial intelligence**.



A prime example is **GlassForm. AI**, a joint venture between **Bottero and Tiama**, focused entirely on developing AI-based solutions for the glass industry. With a team of more than 30 dedicated engineers, GlassForm.AI develops systems that **optimize forming processes, enhance energy efficiency, reduce manual intervention, and preserve critical industrial know-how**.

From stand-alone machines to smart factories

Bottero is leading the transformation of the glass industry towards fully **automated and scalable production models**, in line with the principles of **Industry 5.0**. From individual machines to the complete automation of entire factories, the company delivers **flexible and modular solutions** tailored to every production need.

One tangible example is the collaboration with **3Sun**, a company of the **Enel Green Power Group**, which selected Bottero technologies for its new **3 GW Gigafactory** in **Catania**, dedicated to the production of solar panels. A flagship project showcasing the synergy between **advanced automation and renewable energy**.

New acquisitions, new opportunities

As part of its expansion strategy, Bottero recently acquired – through its subsidiary **E2Pack Srl** – a business unit from the **EMS Group** in Montecchio Emilia, specializing in **end-of-line and packaging systems**. This acquisition extends Bottero's offering to include packaging solutions for the **food, beverage, pharmaceutical**, and **hollow glass** sectors, reinforcing its position as a **global supplier of complete systems**.

A global group with engineering at its core

With over **800 employees** – 25% of whom are involved in R&D and technical services – **Bottero** generates nearly **€300 million in annual revenue** and operates manufacturing facilities in **Cuneo, Montecchio Maggiore, Rovereto**, and **China**.

"With over **60,000 active installations worldwide**," says **CEO Marco Tecchio**, "we continue to invest in **intelligent and sustainable solutions** to drive the transformation of the glass industry."

www.bottero.com

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Tel. +39-0171-310611 - Fax. +39-0171-401611
E-mail: bottero@bottero.com

VITRUM 25

hall 9 / stand B09/C11

BOVONE Srl preview

BOVONE MADE IN EXCELLENCE

BDT BOVONE DIAMOND TOOLS

INTEGRATED TECHNOLOGIES FOR MORE EFFICIENT, AUTOMATED AND SUSTAINABLE GLASS SHOPS

At Vitrum 2025, Bovone will showcase solutions that embody its vision for the future of the glass industry: more automated, sustainable, flexible, and connected. Taking center stage is the new **EVATHERM oven**, developed for EVA film lamination—a smart, reliable technology designed to meet today's production demands.

EVATHERM: SMART, SUSTAINABLE AND CUSTOMIZED LAMINATION

Simplicity, efficiency, and versatility are the core values behind EVATHERM. Available in 3.2 and 2.2 models, the oven features **two independent chambers** that can operate simultaneously with different cycles—ideal for managing multiple orders, materials, or custom batches.

The **forced convection heating system** ensures uniform heat distribution across the load surface, improving consistency even in complex laminations with inserts. A **digital vacuum gauge** with light signals provides precise control of the air extraction phase, improving EVA film adhesion and reducing the risk of defects.

The **10" HMI touchscreen** allows operators to easily set and manage heating and cooling curves. Recipe storage further streamlines operations, cutting setup time and minimizing error.

Designed with sustainability in mind, EVATHERM has an **installed power of just 45 kW**, significantly below the market average. This means high productivity with reduced energy consumption—an essential advantage for glass shops looking to lower operational costs and their environmental footprint.

With a **usable area up to 3200 x 2200 mm, internal height of 430 mm, and 700 kg load capacity per chamber**, EVATHERM is ideal for large formats and curved glass. Its design maximizes the potential of EVA film, increasingly popular for its moisture resistance, adhesion, and ability to include decorative or functional inserts.

Bovone has translated everyday glass shop needs—simplicity, flexibility, energy efficiency, and consistent quality—into a reliable, future-ready machine.

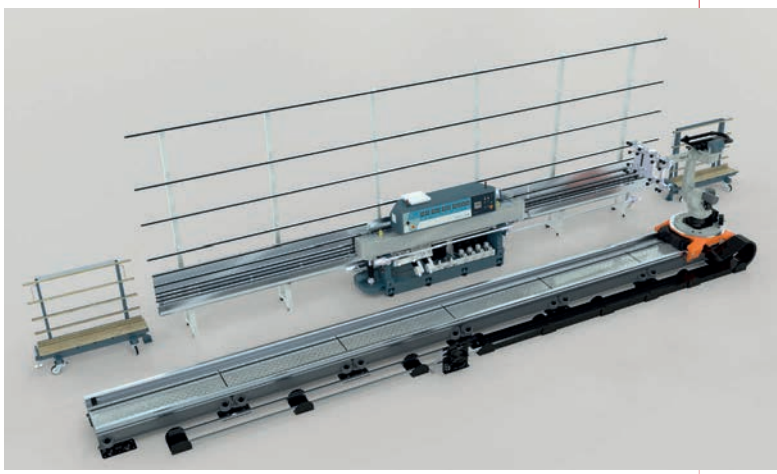
ELB FA SERIES AND 7-AXIS ROBOT: AUTOMATION AND QUALITY WITHOUT COMPROMISE

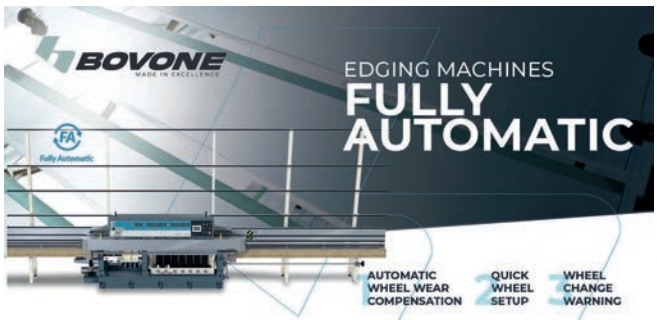
Alongside EVATHERM, Bovone will present the **ELB Fully Automatic series** and the new **7-axis robotic system** for automated edging.

The **ELB FA series** integrates advanced features that reduce manual intervention while ensuring quality and continuity. **Highlights include automatic grinding wheel wear compensation, smart alerts for tool replacement, and fast setup with recipe recall.**

The **7-axis robot,** featuring an anthropomorphic arm on a linear track, services multiple machines in a compact, modular layout. **It automates the entire edging process, delivering high precision, layout flexibility, reduced operating costs, and improved safety**.

These solutions help glass shops move toward smarter, more efficient, and more sustainable production.





www.bovone.com

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Tel.: +39-0143-837511
E-mail: sales@bovone.com

VITRO 25

CUGHER GLASS Srl

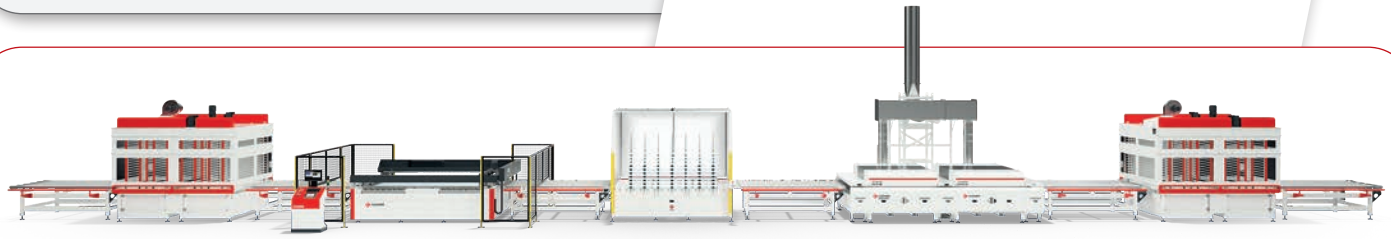
preview

hall 9 / stand N29

People to contact at our stand

BARBARA MAZZA	GENERAL MANAGER
MARINO BONETTI	CHIEF SALES OFFICER
PAOLO BARDOTTI	CHIEF ENGINEERING OFFICER
ANDREA ZORZITTO	PROJECT MANAGER OFFICER
MARIANNA CROCI	MARKETING MANAGER
SILVIA VIVA	SALES ACCOUNT
DEA CIZMJA	MARKETING ACCOUNT
PAOLO MORETTI	PURCHASING DEPARTMENT

CUGHER
Plants and machinery customer oriented



Product Range

- SILK SCREEN PRINTING MACHINES
- IR & UV DRYERS
- HANDLING
- ROBOT APPLICATION
- COMPLETE AUTOMATIC LINES
- ORDER MANAGER INDUSTRY 4.0
- VISION SYSTEMS & QUALITY CONTROL

At this year's event, **Cugher Glass will showcase** two of its most advanced technologies: the **Compact 4C Printing Machine** and the **Print Quality Vision System (PQVS)** — a powerful combination designed to elevate the standards of glass printing.

Relying on Cugher technologies ensures:

- **Maximum Flexibility in Production**
  Our solutions are engineered to adapt seamlessly to different production scenarios, offering outstanding versatility across various formats and applications.
- **High Precision Printing**
  Cutting-edge engineering guarantees sharp, detailed, and repeatable print results, even for the most complex designs.
- **Real-Time Quality Control**
  The integrated PQVS system continuously monitors the printing process, detecting defects as they occur to reduce waste and ensure consistent product quality.
- **Productivity and Reliability**
  Cugher machines deliver high-speed performance without compromising on quality, helping manufacturers optimize output and maintain production continuity.
- **Cross-Sector Adaptability**
  Designed to meet the needs of multiple industries — from home appliances to automotive and architectural glass — our technologies offer broad operational compatibility.

Choosing Cugher means more than selecting high-performance machinery — it means choosing a trusted partner.

Our value lies in a personalized approach based on **custom-engineered solutions**, strong investment in **research and development**, and a continuous commitment to work **side by side with each customer**. With Cugher, you get more than machines — you get a complete, tailor-made system built for your success.

THE CUGHER METHOD

Identification of specifications › Exchange of knowledge › Development of layout › Examination and changes › Final solution

www.cugher.com

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VITRUM 25

DELTAMAX AUTOMAZIONE Srl

preview

hall 9 / stand L01/M04

People to contact at our stand

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ELENA PETROVA - SALES&MARKETING
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DELTAMAX
INSPIRING AUTOMATION

Since its founding in 1989, **Deltamax Automazione** s.r.l. has gained extensive experience in developing artificial vision solutions for quality control in the industrial sector.

By 2010, we had been devoting ourselves to flat glass quality control by developing cutting-edge solutions for all processing lines through continuous investment in R&D.

OPT is one of the latest Deltamax innovations, patented in EU and USA and already successfully in operation with some of our customers.

Installed before the cutting table, OPT anticipates the identification of unrecoverable defects on unwashed sheets to increase the benefits of waste reduction on the line.

Deltamax Automazione s.r.l. has achieved this very ambitious goal with the design of OPT, the innovative scanner destined to revolutionize flat glass processing.

Product

- **OPT** is an advanced scanner for quality control of unwashed sheets, designed to detect non-recoverable defects before they impact your production line. This cutting-edge, patented technology not only identifies structural flaws but also re-optimizes the cutting process, enhancing efficiency throughout your entire production cycle. With OPT, you gain not just a boost in productivity but also significant environmental benefits, making your processes more sustainable and forward-thinking. Discover how OPT can transform your production and set a new standard in quality control
- **Q+** is a revolutionary innovation in quality control systems for insulating glass lines. It sets a new benchmark in the industry with its superior ability to detect low-contrast defects, such as halos, that other systems miss. This state-of-the-art technology ensures unparalleled precision, minimizing defects and maximizing product quality. With Q Plus, you're not just improving your inspection process—you're leading it. Discover how Q Plus can elevate your quality standards and give you a competitive edge in the market.
- **GlassInspector:** often referred to as a "scanner," is the Deltamax Automazione solution designed for detecting defects on insulating glass (IG) lines. Its modular design allows it to easily adapt to any production line, and it is quick to install without the need for extensive maintenance—just regular cleaning. The user-friendly Graphical User Interface (GUI) is intuitive and straightforward, making it accessible for any operator to use effectively for quality control without altering the production process.
- **IGU:** The IGU scanner enables the inspection of finished insulating glass units (IGUs), regardless of whether they are made up of two, three, or four glass sheets. This advanced technology ensures consistent precision in detecting defects across the transparent sections of all panes within the IG unit, providing a thorough and reliable final inspection.
- **FROG** offers reliable and high-performance glass fragmentation analysis with customizable controls. It allows users to set parameters based on safety standards or specific needs. The system supports two analysis methods: a single image or multiple images of different areas. It provides real-time results on the graphical interface, showing the number of fragments, compliance with rules, the area of the largest fragment, and fragment size distribution.
- **Profiler** is Deltamax's solution for template recognition and glass measurement. Unlike other Deltamax solutions for double glazing lines, Profiler includes a special espalier tailored to ensure precise measurements. The size of this espalier varies according to the maximum size of the glass to be inspected, providing the necessary accuracy for different glass dimensions.

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VITRUM 25

hall 11 / stand M17

EDGETECH EUROPE GmbH

preview

Edgetech
A Quanex Building Products Company

Edgetech Europe will be exhibiting at Vitrum 2025

From 16 to 19 September 2025, Edgetech Europe will be showcasing its product range at Vitrum 2025. The theme of the exhibition stand is 'Efficiency has many dimensions'. The international fair team will be discussing the specific advantages of the flexible Super Spacer® system for efficient and forward-looking insulating glass production with visitors, for example in terms of energy efficiency, process reliability and automation.

The insulating glass line for 'Skinny Triples' with Super Spacer is ready for market

One of the main topics is the application in thin triple insulating glass, a growth market that has been emerging over the past few years due to stricter energy efficiency standards, rising energy prices, and growing environmental awareness. Until recently, technical production challenges and, above all, high investment costs and new system technology prevented widespread implementation. "Following an update, they can now be produced on Forel's fully automated High Speed Line alongside the standard profile systems and sealing solutions, as well as our flexible Super Spacer, without requiring an additional investment of millions," explains Mike Moran, Vice President of Sales at Edgetech/Quanex.

"The fact that Super Spacer® can be applied with such precision to the thin pane in the centre is a key feature during assembly in the insulating glass line. "The tight tolerances of well under one millimetre ensure quality in production, and the Skinny Triples can give you a competitive edge, particularly in private sector window renovations," adds Mike Moran.

The latest trend in the contract sector is grey

The second focus of the trade fair presentation is commercial glazing. The flexible spacer bar, produced in Germany and the United Kingdom, is popular with architects and discerning clients thanks to its high-quality appearance. It is increasingly specified by architects in grey to support the desire for maximum transparency in glass facades. The Super Spacer® T-Spacer™ SG was developed for challenging structural glazing projects. Its special design ensures maximum precision in terms of parallelism and tolerances, particularly for large, multi-pane insulating glass units. The result is a robust system that meets the growing demands of commercial construction while optimally combining aesthetics and functionality.

Mike Moran is looking forward to the Vitrum exchange: 'When Edgetech launched Super Spacer in 1989, it became synonymous with the commercial breakthrough of warm edge spacers. Today, our history encompasses much more than just excellent Psi values. Whether it's energy efficiency, indoor comfort, automated production or aesthetics, our "pioneer" is incredibly versatile and future-proof."

Edgetech Europe is at VITRUM on stand M17 in hall 11P

www.superspacer.com

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VITRUM 2025

hall 9 / stand J29/L28

FILTRAGLASS SL preview

FILTRAGLASS WATER TREATMENTS FOR GRINDING TECHNOLOGY

FILTRAGLASS RETURNS TO VITRUM 2025 WITH ITS OWN STAND

This is one of the first international trade fairs in which the brand participated and, edition after edition, it reaffirms its commitment to the glass sector.

Vitrum has become an essential event for glass professionals worldwide. And **Filtraglass**, true to its history, will once again be present with its own stand at the edition to be held **from 16 to 19 September in Milan (Italy).**

Filtraglass's presence at Vitrum is not new. In fact, it was one of the first international trade fairs in which the company participated when it began to expand outside Spain. Since then, it has maintained a constant presence at this biennial event, consolidating its position in the sector as a benchmark in sustainable solutions for water treatment in the glass industry.

Filtraglass has been designing and manufacturing water recycling systems for glass production lines for almost twenty years. Its goal: to help make this industrial activity cleaner, more efficient and more environmentally friendly. For this reason, trade fairs such as **Vitrum** are the ideal setting to showcase its commitment to sustainability and technological advancement in the sector.

At this year's event, the company will once again have its own stand, where it will present its wide range of water filtration systems. Solutions designed to adapt to the needs of each customer and minimize the environmental impact of the glass production process. It is not just about technology, but also about a way of understanding the industry: more responsible, more innovative and forward-looking.

Anyone wishing to find out more about its water recycling systems will find them in **Hall 9, Stand J29 L28**. Here, the **Filtraglass** team will welcome anyone interested in its technology, attending to them personally to answer any questions or queries and explain the advantages of its solutions in terms of sustainability, productivity and savings.

Beyond its different ranges of water treatment systems, what **Filtraglass** seeks to convey at **Vitrum 2025** is a work philosophy. A way of understanding business growth based on efficiency and respect for natural resources. Thanks to its systems, companies in the glass sector around the world are already enjoying benefits such as reduced water consumption and maintenance downtime, and a significant improvement in overall production performance.

Vitrum is a highly important trade fair for the glass industry and is positioning itself as a platform for dialogue and development, with an eye on the future and the challenges of ecological transition. It is a space where leading manufacturers and experts in the sector come together to share experiences, innovations and solutions. **Filtraglass**' participation in this trade fair is therefore not only a commercial opportunity, but also a statement of intent: to continue contributing to a more sustainable glass industry that is prepared for the challenges of the present and the future.

With its presence at **Vitrum 2025, Filtraglass** reaffirms its commitment to the glass sector and to the development of technologies that make a difference. Because recycling water is not just a necessity: it is a shared responsibility. And in Milan, this idea will once again take centre stage.

www.filtraglass.com

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VITRUM 25

FOREL SpA

preview

hall 11 / stand M01/S14

People to contact at our stand

CARLO ZUCCARELLO SALES AREA MANAGER

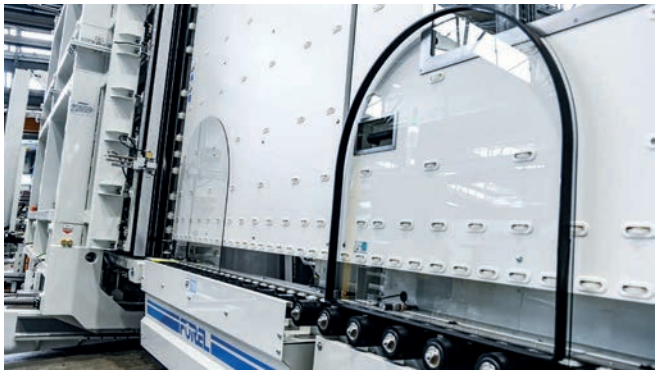
At Vitrum 2025, Forel will highlight its high-tech insulating glass production line and its cutting-edge solutions for vertical glass edge processing. These automated platforms demonstrate Forel's ongoing commitment to innovation, performance, and quality in the industry.

Within the insulating glass unit segment, Forel will present its latest technology for the extrusion and placement of thermoplastic spacer, specifically designed for advanced IGU's. Protected by an international patent, this innovative solution allows for the extrusion of profiles exceeding 20 millimetres and marks a significant step forward in the production of high-performance insulating glass. The new extrusion technology and technique ensures a stable and secure process, which eliminates the risk of the profile from deforming and guarantees consistent product quality. This advancement directly addresses the increasing demand for insulating glass with enhanced thermal and acoustic performance capabilities.

The focus will also be on the latest innovations in vertical glass edge processing as we present a newly configured machine that offers superior performance in operation and output. This new module can easily interrogate with IGU production lines, as well as automatic glass sorting and handling systems. Designed for **high-speed operation** this platform can easily be **integrated** into **automated glass productions, insulating glass lines** or simply **standalone** as part of a glass processing solution.

The Sorting System for completed IGU panels will also take part in our display, this automated system represents an effective response to the logistical downstream challenges of insulating glass production. Thanks to intelligent handling, this smart Sorting System can unload, transport and organize finished units without the need for any manual intervention. This directly translates into greater efficiencies reducing time, cost and management associated with internal logistics, as well as minimizing the risk of product damage.

As always, Forel continues to drive a strong path to growth through innovation as just in the past year alone, we have filed multiple new patents and expanded our manufacturing base with a 9,000 square meter extension to our production space.



Forel also inaugurated its new **Northern Europe** headquarters in Mönchengladbach, Germany. With this move, Forel North Europe confirms its geographic commitment to serving and supporting our customers directly.

Vitrum 2025 is a moment that Forel will consolidate its role as a **reference point in flat glass innovation**, showcasing relevant and tangible solutions that are already transforming glass businesses around the world. The Forel commercial and technical teams will be on hand during the exhibition for live demonstrations, technical discussions, and customisable solutions.

www.forelspa.com

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VITRUM 25

FRATELLI PEZZA SRL

preview

hall 9 / stand N01/P06

FPE FRATELLI PEZZA

People to contact at our stand

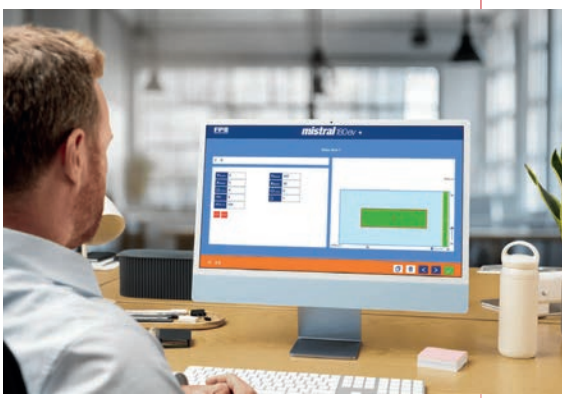
MICHELA PEZZA	CEO & PRESIDENT
FABIO GABRIELI	TECHNICAL DIRECTOR
PAOLO DE BORZATTI	SALES MANAGER

Fratelli Pezza brings advanced solutions for sandblasting, marking, and surface protection to VITRUM 2025

At VITRUM 2025, Fratelli Pezza will present its latest innovations in surface treatment for glass, offering practical, reliable and high-performance solutions that meet the evolving needs of the international glass industry. Visitors will find at the booth a complete overview of the company's expertise in **automatic sandblasting, glass marking, and protective coatings** — all tailored to the real needs of today's glass professionals.

Key innovation on display will include **MultiShading**, the exclusive multidirectional sandblasting technology developed for the MISTRAL EV+ series. It enables vertical gradient effects and optimized execution of circular or partial designs — ideal for applications such as parapets, LED mirrors and architectural glass. MultiShading allows operators to reduce cycle time, increase accuracy and lower operating costs, while keeping the glass stable on the long side. Another key feature is **OptiAir**, an integrated system designed to optimize compressed air usage during secondary phases of the sandblasting cycle. This innovation reduces energy consumption and operating costs, improving environmental performance without compromising on quality or productivity. We will also present **MistralApp**, our web-based application that lets users program sandblasting cycles remotely — without interrupting the process. The app supports SVG file upload for scaled previews of the design and planning of shaded areas, helping optimize each step of production even outside the factory floor. In addition, Fratelli Pezza will showcase its **glass marking systems** for both artisan and industrial applications, and provide hands-on samples for visitors. Completing the offering is our line of **protective coatings**, developed to enhance durability, cleanliness and aesthetics of both sandblasted and untreated surfaces. Attendees can register on-site for **free technical micro-sessions** to become certified Coating Experts.

Fratelli Pezza also offers **custom training programs** for sandblasting operators, supporting companies facing personnel changes or generational transitions.



Product Range

- SANDBLASTING MACHINE FOR GLASS AND MIRROR
- MARKING EQUIPMENTS FOR GLASS AND MIRROR
- COATINGS FOR SANDBLASTED, FLOAT AND ACID ETCHED GLASS

www.fratellipezza.com

Via Ing. V. Balduzzi, 29 24023 Clusone, Bergamo (Italy)
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E-shop: shop.fratellipezza.com

VITRUM 25

hall 11 / stand J08

LUOYANG FUCHONG MACHINERY CO., LTD. preview

FULL-TIME

Luoyang Fuchong to Present Precision Tempering Systems at Vitrum 2025

Luoyang Fuchong Machinery, an innovative and steadily growing Chinese manufacturer, specializing in advanced custom machinery for glass tempering, is excited to announce its participation in Vitrum 2025 (Milan, Italy; September 16–19). Attendees can experience Fuchong's industrial-grade tempering technologies at Hall 11 Stand J08, where the team will demonstrate validated production solutions that enhance efficiency and precision in glass production.

At Vitrum 2025, Luoyang Fuchong will showcase its latest innovations including advanced curved glass tempering lines, reinforcing its Italian market presence with two reference furnaces continuously operating since 2017 and 2018. These solutions - refined through the founder's 34-year expertise and 17 years of certified manufacturing - have earned repeat orders from over 400 global manufacturers, with many clients purchasing 5 to 10 successive systems for their production expansions. The company's R&D-driven engineering and cost-optimized production ensure reliable performance complying with international standards.

"We look forward to connecting with clients and partners at Vitrum," said Wang Shu Guo, CEO of Luoyang Fuchong Machinery. "This event provides a prime opportunity to demonstrate how our technologies can optimize production workflows and support sustainable growth in the sector."

About Luoyang Fuchong Machinery:
Headquartered in Luoyang, China, the company specializes in the design and manufacturing of precision glass machinery for tempering. Its products serve architectural, automotive and appliance glass manufacturers worldwide, backed by stringent quality certifications.

For inquiries or to schedule a meeting at Vitrum 2025,
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VITRUM 25

hall 11 / stand E15/G18

GLASS COMPANY Srl

preview

GLASSCOMPANY

People to contact at our stand

CLAUDIO BERNABUCCI — MANAGING DIRECTOR
HICHAM ERMICHI — SALES ASSISTANT

In a continuously evolving European landscape where sustainability, automation, and digitalization increasingly shaping with aesthetics and functionality, Glass Company Srl emerges as a forward-thinking partner in the glass sector. Based in Pesaro, the company presents at VITRUM 2025 a tangible and already operational vision of the future of glass, founded on flexible, smart, and efficient production processes.

LaserMek: A standard laser system that operates on the glass surface. It enables multiple processing functions such as sandblasting effect or any kind of coating ablation which leaves the glass fully transparent to create intricate designs even on large formats. Thanks to the Scanner technology and dedicated HG SOFTMEK software, LaserMek offers precise engravings even on Low-E coatings, ideal for anti-fog heated glass.

LaserMek ALL-in-ONE: An advanced version of LaserMek that with one only laser head combines both the previous functionalities with an additional drilling capability for the creation of any geometric shape holes within a 150x150 mm area on monolithic glass up to 25 mm thick. The LaserMek ALL-in-ONE will be showcased at the Glass Company booth during the fair.

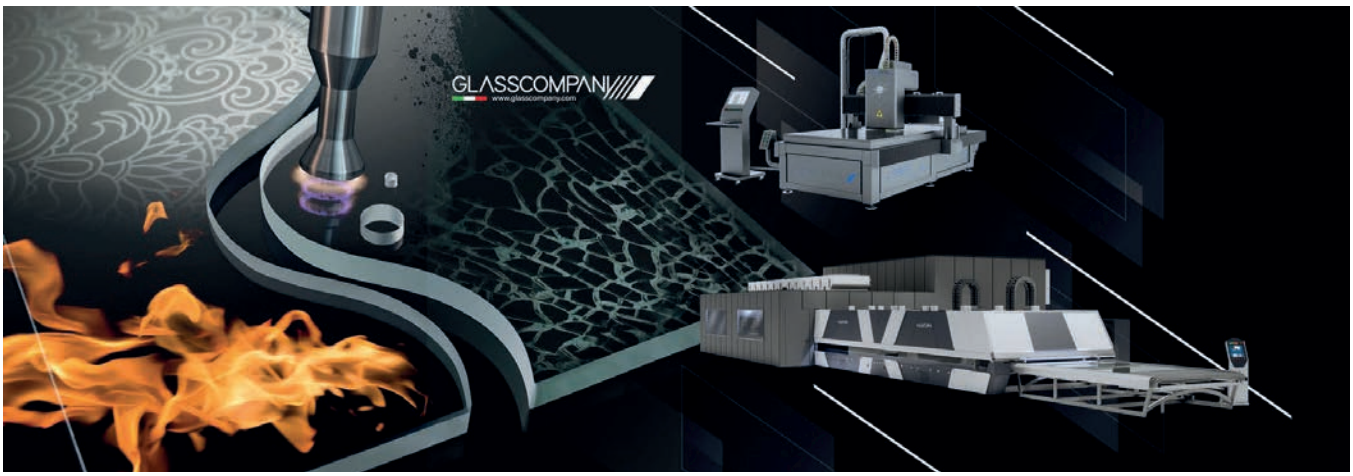
LaserMek Cut: Specializes in glass straight and shaped cutting, utilizing filamentation technology. It can cut large-format glass sheets and is also integrable into the VisionMek line for "Glassspacer" cutting.

VisionMek for Full Vision Insulating Glass Production: Represents the latest trend in industrial refrigeration, now expanding into construction and interior design, for manufacturing glass with transparent spacers: "Glassspacer". We offer a complete system that produces glass spacers and the machinery to automatically assemble insulated glass units. The final product is a fully transparent, black-perimeter-free glass FULL VISION.

FireMek: A cutting-edge technology for producing fire-resistant and ballistic-resistant glass. For the production of fire-resistant glass in classes E, EW, and EI, Glass Company has developed a sophisticated, technologically advanced process: FireMek. At the Pesaro facility, the company not only manufactures the machinery but also provides a turnkey system, including proprietary chemistry for producing ultra-transparent intumescent silica-based dispersions essential for this type of glass. FireMek has evolved to combine fire resistance with ballistic protection.

CoatMek: A standalone or integrable solution for applying functional nanocoatings such as Easy to Clean. Fully configurable it enables precise, efficient and reproducible treatments across various glass formats.

Tempering and Glass Break Alert: To address the issue of glass breakage during tempering, Glass Company has developed (patent pending) a system called "Glass Break Alert." This system detects glass breakage during tempering and cooling phases allowing rapid identification of the blow-off zone where the break occurs, thus resolving issues without critical delays especially when tempering cycles are very short. The Glass Break Alert system can be integrated with Vulcan, the new intelligent glass tempering furnaces generation that utilize the innovative control system software iTemper for a fully automated glass tempering managing. Also Glass Break Alert can be integrated in any other Jinglass or other brand tempering furnace.



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VITRUM 2025

GLASTON GROUP *preview*

hall 9 / stand D13/E12

glaston
seeing it through®

People to contact at our stand

AT VITRUM, OUR EXPERTS WILL BE AVAILABLE TO PROVIDE YOU WITH RECOMMENDATIONS AND SOLUTIONS FOR ANY OF YOUR GLASS PROCESSING CHALLENGES. COME ASK US MORE!

GLASTON@VITRUM 2025 – ADVANCING GLASS PROCESSING WITH INTELLIGENCE AND EFFICIENCY

At VITRUM 2025, Glaston showcases its latest innovations in glass processing, emphasizing smart automation, energy efficiency, and production flexibility.

Glass Tempering

The new **Glaston FC Series** E introduces advanced energy efficiency and flexibility, featuring the Glaston Bora circulated-air convection system for precise heating. Built on proven technologies, it handles all glass types with high efficiency and integrates state-of-the-art automation for reliable production.

Glaston Autopilot is a unique, fully automated solution for tempering glass in mixed production environments. It intelligently adjusts heating and cooling settings based on the glass type, size, and load, eliminating the need for manual operator input. This automation reduces waste, enhances production efficiency, and ensures consistently high-quality tempered glass.

Glass Laminating

The ProL lamination technology offers exceptional flexibility for mixed production. Its convection heating chamber simplifies switching between glass types. The new **Glaston 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. The line also supports quadruple IGUs and improves light transmission while reducing material use. **Glaston MUNTIN'MASTER** automates muntin placement, eliminating manual steps and increasing precision and cost-efficiency.

Automation and Upgrades

The **Glaston Batch Optimization** uses robotics to create efficient batch patterns, maximizing furnace use. Glaston's automation solutions integrate mechanical systems with process intelligence, optimizing every production step. A full range of upgrades and lifecycle services ensures long-term equipment performance and compliance with evolving industry standards.

Visit Glaston at **Booth #D13 E12 in Hall 9** to explore these innovations firsthand.

Product Range

- FLAT TEMPERING FURNACES
- BENDING AND TEMPERING SYSTEMS
- FLAT LAMINATING LINES
- INSULATING GLASS MANUFACTURING LINES
- MOBILITY GLASS PREPROCESSING LINES
- HANDLING EQUIPMENT
- GLOBAL SERVICES
- UPGRADES OF EXISTING EQUIPMENT

www.glaston.net

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VITRUM 25

GPM AUTOMATION Srl

preview

hall 11 / stand G10

People to contact at our stand

ALESSANDRO GRANDO	**OWNER**
LORIS GRANDO	**OWNER**

GPM automation

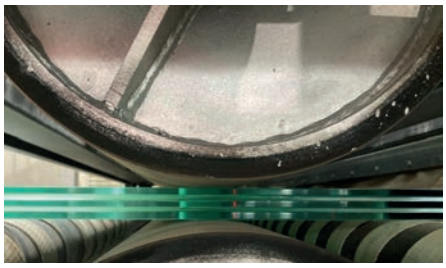
ITALIAN EXCELLENCE

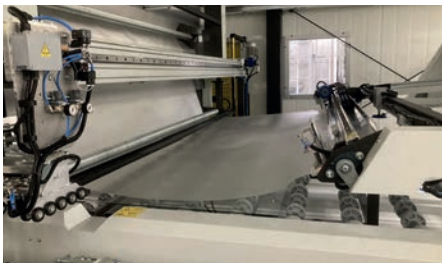
GPM automation is committed to providing innovative solutions in the glass automation and laminated glass production.

GPM automation operates in two main business areas:

1 glass processing machineries: turnkey laminated glass plant; PVB trimming lines after autoclave; horizontal and vertical washers;

2 automation: sorting and stocking systems for glass, window, stone and ceramic tiles; robotic solutions for loading/unloading of third parties lines as insulating glass line, double edger, painting line, vertical CNC line, tempering furnace.





Laminated glass lines with electric press with servo drives, forced air convection ovens, fully automatic PVB application, cutting and trimming

Horizontal washer and tilt table

Harp racks and shuttle for IG line loading

Robot and conveyors for IG line unloading

Robot for ig loading

Robot and conveyors for double edger loading/unloading

Product Range

- LAMINATED GLASS LINE, INCLUDING CLIMATIC ROOM AND AUTOCLAVE
- HORIZONTAL AND VERTICAL WASHERS
- ROBOTIC LINE FOR LOADING/UNLOADING: DOUBLE EDGERS, IG LINE, CNC, TEMPERING FURNACE AND OTHER PROCESSING LINES
- SORTING SYSTEM FOR GLASS AND IG UNITS
- HARP RACKS AND SHUTTLE FOR AUTOMATIC GLASS LOADING/UNLOADING INTO HARP
- ROBOTIC LINE FOR THE TRIMMING OF PVB AND IONOPLAST INTERLAYER ON LAMINATED GLASS AFTER AUTOCLAVE CYCLE

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VITRUM 25

hall 9 / stand A21/E26

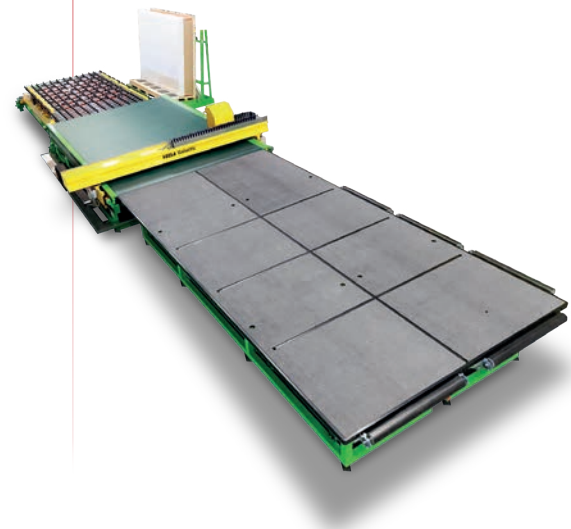
HEGLA GMBH & CO. KG

preview

The **HEGLA Group** focuses on solutions that maximize the potential of existing productions to improve efficiency, conserve resources, and create added value. Among its innovations is a technology that upgrades standard glass into bird protection glass, enhancing its functionality.

Thin glass slims down triple insulated glass units

Triple insulated glass units (IGUs) with thin glass as the central pane offer reduced weight and a significantly smaller overall thickness. They are suitable for both renovation projects and new buildings. Since Glasstec 2024, this slim IGU variant has attracted growing interest. HEGLA provides automated solutions for handling and precise cutting of thin glass. The material, made of borosilicate glass, offers high durability and heat resistance, with typical thicknesses ranging from 0.5 to 2 mm. Special equipment – including flat conveyor belts, adapted suction systems, sensors, and custom cutting heads – ensures safe processing. With optional features, even conventional float glass up to 12 mm can be cut. Cutting tables in the Galactic TG series deliver high edge quality and cutting precision, ensuring safe transport and further processing. Automated handling, including transfer to specially designed harp racks, enables smooth in-plant logistics. When combined with TPS spacers from Glaston, thin-glass IGUs can achieve comparable U-values while reducing material usage, overall thickness, and CO_2 emissions.



High and constant throughput in LSG cutting

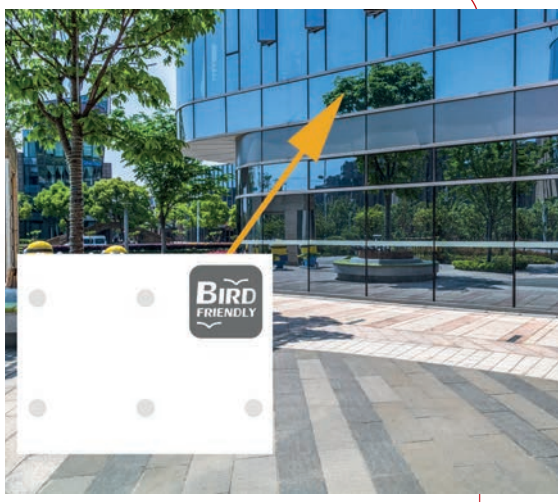
At Vitrum, HEGLA will once again have one of the largest booths at the show, presenting a variety of systems in live operation – including the new cutting line for thin glass. Another highlight will be the presentation of a newly developed system for laminated glass cutting. Inspired by the best and most robust HEGLA systems, a new generation of machines that combines the best technologies in one system. The result is a high automated cutting line that offers enhanced user-friendliness and ensures a consistently high and stable throughput. This new development marks an evolutionary step in laminated glass processing. It sets new standards in terms of performance, automation and production efficiency. Visitors to the booth will be able to see the innovative system live.

Added value: sustainable bird protection

HEGLA boraident's BIRDFriend mobile offers a portable solution for adding bird protection patterns to windows and facades, even after installation. The laser printing process transfers ceramic particles from a transfer strip onto the surface. This creates a uniform geometry of dots that is barely visible to the human eye. However, birds will register it as an obstacle that they simply cannot overlook. To ensure maximum protection, the print is applied to the outside of the glass (Position 1). The pattern works in three ways: the distance between the spots indicates an area that cannot be flown through. It also breaks up reflections of nature, while the change in the way the light is reflected acts as an additional signal.

New ERP system: greater data transparency, more add-ons

Several clients are already using the new HEGLA-HANIC ERP system, which will be showcased at Glasstec. The system represents a major advance, combining the strengths of the existing software with Microsoft Dynamics 365 Business Central. Users will experience familiar interfaces, while the software is compatible with all devices and can scale across different operations and locations. Additionally, Dynamics AppSource offers various add-ons, including full integration with Excel, Outlook, and other Office 365 tools.



Product Range

- FLOAT GLASS CUTTING TECHNOLOGY
- GLASS STORAGE AND PREPARATION SYSTEMS
- LASER MARKING AND LASER FINISHING OF GLASS
- INDIVIDUAL SOFTWARE SOLUTIONS FOR GLASS
- COMBINED FLOAT AND LAMINATED GLASS CUTTING MACHINES
- CONVEYOR SYSTEMS
- LAMINATED GLASS SEPARATION TECHNOLOGY
- DYNAMIC STORAGE SYSTEM FOR RESIDUAL SHEETS
- AUTOMATIC BREAKING SYSTEMS
- SORTJET - AUTOMATIC SORTING SYSTEMS AFTER BREAKOUT
- SOLUTIONS FOR INTERNAL AND EXTERNAL GLASS LOGISTICS

www.hegla.com

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VITRO 25

hall 11 / stand F12

HELIOS QUARTZ preview

helios quartz®

People to contact at our stand

LUIGI GASTALDO CEO
LORENA DE LUCA PROJECT MANAGER

Helios Quartz is now an international player and a reknown supplier for Quartz Glass processing and the manufacturing of Infrared Emitters and Ultraviolet Lamps. Helios Quartz also produces Specialized Equipment for Industrial, Scientific and Medical applications.

TÜV certified, Helios Quartz is a very flexible and dynamic group which is deeply oriented towards internationalization and which is living a strong and stable growing phase with great momentum: in the last 10 years, Helios Quartz has opened commercial branches in USA (Helios Quartz America), in

China (Shenyang Helios Tech) and Hong Kong (Helios Quartz Asia).

Thanks to its experience in different fields and to its **cutting-edge testing laboratory** located in the historical Helios Italquartz S.r.l. plant in Cambiago (Italy), **Helios Quartz can advise customers and provide them with the best solution for every specific application.**

The key of all HELIOS QUARTZ companies is to be a partner for their customers, not only a regular supplier.

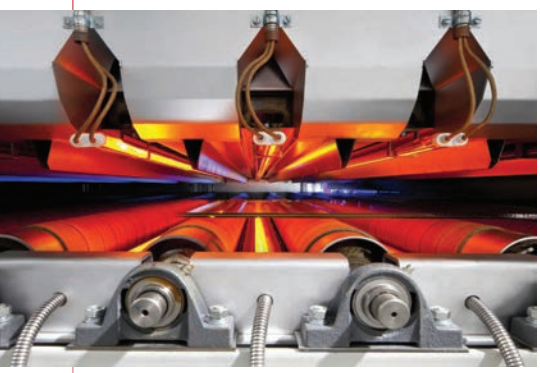
Helios Quartz product range for the glass industry includes:

• **QUARTZ INFRARED HEATERS in short-, medium-, and fast medium wavelength**, in single- and twin tube, with or without gold reflector for:
- Laminating lines (plastic film coupling)
- Screen printing lines
- Bending furnaces
- Fusion furnaces
- Laminated glass cutting tables

• **INFRARED MODULES:** complete infrared solutions, designed and customized according to customers' needs and ready to be integrated in existing machines and production lines;

• **UV POLYMERIZATION EQUIPMENT:**
UV high and medium pressure lamps for drying screen printing of reactive inks, paints, coatings and adhesives for the decorating and furnishing sector;

• **TIN DETECTOR EQUIPMENT:**
UV black light devices which are able to detect the tin coated side of the float glass even under high brightness conditions. This kind of detection is crucial before processes like laminating, mirroring, printing and decorating. Helios Quartz offers two type of device:
- MANWOOD 25-N: manual equipment.
- AUTOMATIC TIND SIDE DETECTOR: compact automatic version of this device. It can be fixed directly on the glass transportation line, before the production process, in order to check each and every piece of glass. A user-friendly PLC helps the operator in calibrating and managing the different recipes.



Product Range

- INFRARED HEATERS
- INFRARED MODULES AND SYSTEMS
- FULLY AUTOMATIC TIN DETECTOR
- MEDIUM AND LOW PRESSURE UV LAMPS
- UV POLYMERIZATION EQUIPMENT
- UV BLACK LIGHT EQUIPMENT
- PHOTOCHEMISTRY
- QUARTZ GLASSWARE

www.heliosquartz.com

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VITRUM 25

HORNOS INDUSTRIALES PUJOL, S.A

preview

hall 11 / stand E01

Pujol Group

People to contact at our stand

OUR STAFF WILL BE AT YOUR SERVICE THROUGHOUT THE SHOW.

Pujol Group, a fourth-generation family company with over 110 years of history, offers efficient, reliable, and globally competitive solutions tailored to meet the demands of today's professional glass industry. The company's offering is based on a strong and complete range of products aimed at meeting all the needs of the laminated, tempered, and decorative glass market. These include lamination ovens, tempering ovens, and Heat Soak Test systems. At Vitrum 2025, Pujol will present the following highlights:

HORNOS PUJOL:

TEMPER FLEX: A cutting-edge tempering oven that combines high productivity and installed power with the ability to operate at low consumption and low installed power when required. Ideal for companies that alternate between large-scale and small-batch production without compromising quality or energy efficiency. TEMPER FLEX is designed to provide real solutions to current industry demands and is built around five core principles:

1. Fast return on investment
2. Cost savings and profitability per square meter
3. Consistent finished product quality
4. Production flexibility
5. Low maintenance costs.

Pujol 100 PVB+: Since its launch in 2011, this lamination oven has become a benchmark in the industry due to its ability to work with all types of interlayers (EVA, PVB, and SGP), transforming the market with its high efficiency, flexibility, automation, and large production capacity. The Pujol 100 PVB+ reduces energy costs by up to 70% compared to traditional autoclave systems. Other key advantages are:

1. High flexibility and maximum versatility for efficient production.
2. Energy efficiency and sustainability.
3. Lower installed electrical power.
4. Lower investment with greater profitability.
5. Reduced labor needs.
6. Lower raw material consumption.
7. Reduced maintenance costs.
8. Optimized space usage.

LAM-PRO: A high-performance lamination oven engineered for companies requiring high productivity and technical precision. Available in flat and curved glass models, its advantages are:

1. Independent chambers for operational flexibility
2. Automated, fast-cooling system
3. Advanced software with customizable HMI
4. Dual-layer distributed radiation system for uniform heating
5. Ergonomic design for improved working conditions
6. Modern, lightweight yet robust structure
7. Curved glass chamber with a standard 500 mm arc (other sizes optional)
8. Full Industry 4.0 integration with Pujol e-Connect
9. Fast cycles and intelligent control that reduce environmental impact

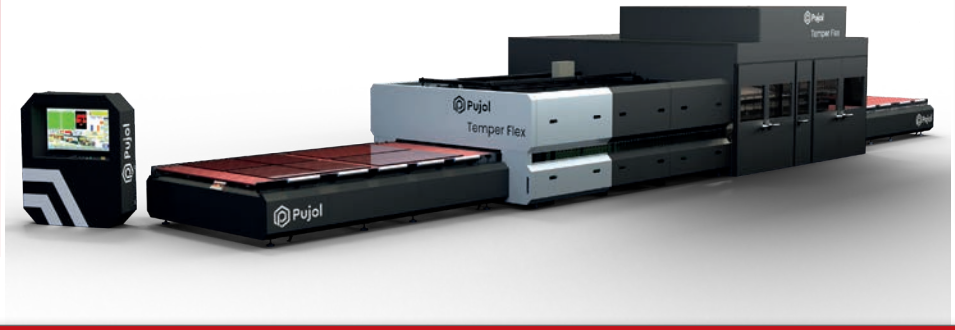
EVALAM, Pujol Group's interlayer brand, will present its full range of high-performance EVA and decorative films. Recognized worldwide for their quality and innovation, EVALAM products are ideal for both architectural and decorative applications.

VISUAL: Offers exceptional transparency, strong adhesion, and superior acoustic insulation. Its high crosslinking index makes it the perfect solution for expert laminators looking for a premium, high-value product.

AB-AR: A structural post-breakage interlayer, ideal for public spaces and high-load applications. It outperforms structural ionomers in mechanical resistance and maintains its properties even at temperatures above 36°C, where others fail.

EVALAM COLOR: A decorative solution with excellent durability and color uniformity. Now available in five new colors, giving architects and designers even more flexibility for creative applications.

I-ON by Pujol: A laminated glass using PDLC technology, designed for modern architecture. It offers switchable transparency. Compatible with home automation, and can be controlled remotely. Fully compliant with CE regulations, it's suitable for both interior and exterior use, combining functionality with aesthetic value.



Product Range

- LAMINATION OVENS
- TEMPERING OVENS
- HEAT SOAK TEST
- TRANSPARENT EVA FILMS
- STRUCTURAL POST-BREAKAGE INTERLAYER.
- COLOR EVA FILMS
- PDLC LAMINATED GLASSES.

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VITRUM 2025

hall 9 / stand J21-L22

IDROTECNICA Srl

preview

IDROTECNICA
Water Purification Systems

People to contact at our stand

FEDERICO MARCENARO — **SALES TECHNICIAN**

New products showcased at Vitrum 2025

Idrotecnica will be a participant at Vitrum Milano 2025, presenting its complete line of water demineralization systems, which is specifically engineered for the glass industry.

The most widely-adopted models from the IDRO RO range will be on display. These are available in capacities of 130, 300, 1,450 and 6,000 litres per hour. The quartzite and activated carbon filter **WSE Filter** series will also be featured. Renowned for their compact design, efficiency and ease of maintenance, this trio of qualities has consistently driven its growing success in the market.

Thanks to their modular design, WSE Filters are ideally suited for a wide variety of closed-loop applications within flat glass washing machines - whether integrated into an IG line or positioned downstream from an edge processing unit.

Visitors will be afforded the added opportunity of discovering the **IDRO RO DPS** series - two-stage demineralizers that are designed to produce ultra-pure water which meets the most demanding quality and precision requirements in secondary glass processing.

This new series does not replace existing product lines, but rather expands the range, offering greater flexibility to meet specific needs.

Here Idrotecnica will be recommending and configuring the most reliable, tailored solution, based upon:

- The type of secondary processing (automotive, low-E, laminated, coated, tempered, etc.);
- The operating conditions of the glass processing machinery;
- The characteristics of the feed water.

The exhibition will further include Idrotecnica's proven Industry 4.0-ready solutions, enabling remote monitoring and control of demineralization systems. With advanced sensor integration and **Industry 4.0 PLC** technology, these systems offer intelligent diagnostics that support predictive maintenance and anomaly prevention.

The Idrotecnica team looks forward to welcoming visitors to their stand at Vitrum 2025. Our sales department will be available to assist with configuring new demineralization systems, while our service team will provide technical support and guidance to the many current users of Idrotecnica demineralizers out there.

www.idrotecnica.com

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VITRO 25

hall 11 / stand F06

ITALMATIC PRESSE STAMPI srl

preview

People to contact at our stand

ROBERTO FREDIANI	**MANAGING DIRECTOR**
ADRIANO FREDIANI	**CEO**
MASSIMO GHITTURI	**MEMBER OF BOARD OF DIRECTORS**

italmatic®
AUTOCLAVES OVENS & PRESSES

NEW AUTOCLAVES FOR CURVED GLASS AND WINDSHIELD

ITALMATIC, leader in the research, design and construction of autoclaves for various applications, has developed a new generation of advanced and innovative machines for the treatment of curved glass and windscreens.

These autoclaves, the result of research, development and experience acquired over the years, have been designed with the aid of the most sophisticated structural and thermodynamic calculation programs, such as the new dynamic flow simulator C.F.D. (Computational Fluid Dynamics).

In the design, particular attention was paid to energy saving - adopting innovative materials for thermal insulation, high efficiency motors controlled by inverters, heating systems (electric, diathermic oil or steam) with infinitesimal control, as well as new control systems capable of managing power and flow distribution, thus allowing significant reductions in operating costs.

The machine can also be made with two doors, one on each side, to allow the automatic and/or manual introduction and unloading of the glass holder carriages, thereby speeding up the loading and unloading operations, especially for continuous production of both 24/24h and 7/7g.

For a better internal chamber uniformity, according to the different loads and positioning of the glass under treatment, the motor fan units have been positioned in the upper part in direct contact with the heating and cooling exchangers.

This innovation has made it possible to work for defined areas within the chamber, managing each area according to the load and with the best uniformity.

Orientation and modulation of the ventilation, with variation of the fluid transfer speed on the products, ensures that glass quality conforms to even the most restrictive market requirements.

The control system, called **ICS** *(Italmatic Control System)*, allows you to program, supervise and have complete traceability of production batches - both automatically and manually, in order to allow for analysis of all process cycles.

The control system meets every industry 4.0 requirement and can also be interfaced with the company MES.

ITALMATIC has developed and patented an Energy Recovery System IRS® (Italmatic Repower System) that allows the thermal energy removed from the autoclave during cooling to be stored, with the possibility of reusing it in subsequent work cycles.

- Integrated and dedicated Management and Supervision software with real-time measurement of energy savings
- Compliant with **REPowerEU and Industry 5.0 investments**
- Closed circuit cooling system, without water replenishment and or chemical additives

Possibility to further make the system more efficient with the production of domestic hot water

www.italmatic.eu

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VITRUM 2025

hall 9 / stand J11

ITALMOLE SRL

preview

People to contact at our stand

COMPANY STAFF

Italmole is an Italian manufacturer of polishing wheels for all types of machines and has more than 45 years of activity and experience in the glass industry.

The company is able to offer a complete range of polishing wheels with binder, grit, standard and custom machining for different uses in glass processing.

Since 1978, Italmole has continued to renew its products to ensure the best polishing quality for all customers.

In recent years, through careful research, two new product lines have been created: the peripheral polishing wheel called ASTRA, which is quieter and super polishing, suitable for vertical CNC machines such as VERTMAX, CMS and SKILLGLASS, as well as horizontal machines such as MASTER, CMS and BOTTERO-BIMATECH.

Another new entry is in the cup wheel group, the **ALFA** line. Produced in all grits, with all fixing for all machines, it is available with rigid plastic plate and J40. On request with sectors for laminated glass.

Both types are having great success and excellent results. This is one more confirmation for Italmole, which, over the years, has been able to combine experience and innovation to give pre- and post-sales service and technical support to all its customers.

Visitors to Vitrum 2025 will have the opportunity to learn about the ASTRA and ALFA line and other famous and no less important products.

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VITRUM 25

hall 11 / stand G13

ITECH SRL

preview

People to contact at our stand

ANDREA PETTENÒ SALES MANAGER

ITECH SRL — Where Technology Meets Craftsmanship Excellence
Innovation and Reliability in the Insulating Glass Industry

ITECH Srl traces its roots back to 1991, when Mr. Andretta and Mrs. Panizzon founded a new business specializing in the design and installation of electrical systems, PLC programming, and control logic development for machine automation panels. Driven by their passion for technology and a forward-looking vision for the glass industry, they established ITECH Srl in 2001, a company dedicated to the design and production of tailor-made machinery for insulating glass units.

Through customized, efficient, and long-lasting solutions, ITECH quickly established a solid presence in the Italian market, later expanding its reach internationally. Over time, the company evolved while preserving the family spirit of its origins. The next generation — Matteo, Alessandro, and Aurora — gradually joined the business, taking on strategic roles and contributing their expertise and fresh perspectives.

Among ITECH's flagship products is the latest innovation, the **Apus Dry Seaming Machine** — an ITECH-patented solution designed for all types of glass, including Low-E, that eliminates the need for water in edge processing.

Another highlight is the **Tauro Line** for insulating glass production. Specifically designed for small and medium-sized glassworks, the **Tauro IG Line** includes a glass washing machine, a press with gas-filling system, and an automated sealing robot — a compact, cost-effective solution that delivers high-quality production with maximum flexibility.

Product Range

- COMPLETE RANGE OF EQUIPMENT FOR INSULATING GLASS PRODUCTION
- APUS DRY GLASS SEAMING MACHINE — PATENTED BY ITECH
- IGU VERTICAL GLASS WASHING MACHINES AND FLAT COUPLING PRESSES (WITH OR WITHOUT GAS INJECTION SYSTEM)
- IGU AUTOMATED SEALING ROBOT
- COMPLEMENTARY EQUIPMENT: BUTYL EXTRUDERS, TWO-BLADE SPACER CUTTING MACHINE

www.itechsrl.it

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E-mail: sales@itechsrl.it

VITRUM 25

KERAGLASS SRL

preview

hall 9 / stand E11/H18

People to contact at our stand

STEFANO SPEZZANI	FOUNDER, PRESIDENT
MAICOL SPEZZANI	CO-CEO, SALES & MKT DIRECTOR
PAOLO RIGHI	TECHNICAL & SERVICE MANAGER
ADRIANO BRAGA	SALES MANAGER USA & CANADA
SIMONE CECI	AREA MANAGER
ANDREA BUGADA	AREA MANAGER
ALEXANDER KOCHEN	AREA MANAGER
PATRIZIA DURIAVIG	SALES SUPPORT
ORIETTA GUALTIERI, ALESSIA FERRARI	MARKETING DEPARTMENT
GIULIA FERRARI	INSTALLATION, AFTER SALES AND PLANNER
GIANLUIGI RUFFALDI	SALES SPARE PARTS
MARCO ASTOLFI, RODRIGO ALARCON	TECHNICAL SUPPORT

keraglass

a **voilàp** company

Keraglass brings the evolution of glass to Vitrum 2025

At Vitrum 2025, the international glass industry exhibition, Keraglass will be present with a 208 m2 stand in Hall 9P, displaying its most advanced technologies. An ideal showcase to confirm its leadership in the sector and its ability to anticipate market evolutions.

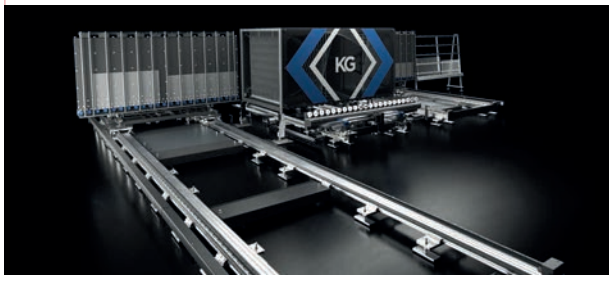
On the one hand, Keraglass will be exhibiting **Vision 800,** the glass tempering furnace that combines power, precision and reliability. Designed to meet the most advanced production requirements, it also processes the latest generation of glass such as LOW-E, guaranteeing high quality results and optimised consumption. It is the ideal choice for those looking for a high-performance, efficient system ready to sustain intense production rhythms.

The heart of the furnace is the **Supervision Intelligent** system with live-sight control, which allows the operator to clearly see and precisely monitor each stage of the process. With an intuitive interface and advanced diagnostic functions, it simplifies plant management and allows constant monitoring, even remotely. A true digital ally for improving efficiency and minimising downtime and waste.

The innovative **RCK**, roller cleaning machine, will also be shown on the rollers of the furnace. Easier and faster maintenance, it acts directly on the system, without requiring rollers disassembly. It reduces intervention times, improves efficiency and guarantees essential production continuity in the most demanding industrial environments.

The Vitrum exhibition floor will be also a worthy stage on which to showcase **Combi**, the versatile and compact laminating kiln. Designed to adapt to different materials and thicknesses, it allows independent cycles and flexible configurations, even in special combinations such as glass/ceramic or glass/marble. With automatic management, remote control and low consumption, it is the ideal solution for customised, efficient and sustainable production.

Underlying the Keraglass model is a clear strategic vision and a constant drive for innovation. Each system is born from a careful analysis of the customer's needs and is custom-developed, with an after-sales service that is not limited to technical assistance, but includes training, digital updates and remote support. An approach that fully embodies the values of Made in Italy: quality, creativity, attention to detail and reliability.



Product Range

- OSCILLATING AND CONTINUOUS FURNACES FOR THE TEMPERING OF ARCHITECTURAL GLASS, HOUSEHOLD APPLIANCE GLASS, SHOWER DOORS AND FURNITURE GLASS
- BENDING AND TEMPERING FURNACES
- HANDLING SOLUTION
- HEAT SOAK TEST FURNACES
- SILK-SCREEN PRINTING MACHINES
- DRYERS • STACKERS
- LAMINATING LINES WITH PVB
- MULTI-LEVEL LAMINATING KILN WITH EVA
- DIGITAL PRINTING MACHINE
- ROLLER-COATING MACHINES
- GLASS STORAGE SYSTEM

www.keraglass.com

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VITRUM 25

MAPPI INTERNATIONAL Srl

preview

hall 11 / stand B01/E06

MAPPI
BEYOND GLASS PERFECTION

MAPPI SUPERTEMPER™

MEC MAPPI EDGE COMPUTING

People to contact at our stand

NANCY MAMMARO	**CEO**
ERMANNO PETITTI	**SALES MANAGER**
GIANMARCO MORESCO	**SALES ACCOUNT**
ANTENORE TOSELLI	**SERVICE MANAGER**
GIULIO DALLA COSTA	**TECHNICAL DIRECTOR - R&D**
MICHELE CATALANO	**MARKETING MANAGER**

MAPPI: power, intelligence, and simplicity. All in one furnace.

Mappi flat glass tempering furnaces are built around one clear principle:
no compromise between performance — in terms of both quality and quantity — and real, measurable energy savings on every production cycle.
We call it intelligence applied to heat. It means giving our customers powerful, precise, yet intuitive tools that adapt to their needs, accelerate productivity, and reduce waste — not just on paper, but in everyday operation.

That's why we design and manufacture every furnace entirely in-house, integrating proprietary technologies such as **GHBS, ATI, MHS,** and **AC**, as well as the advanced **MEC – Mappi Edge Computing** ecosystem and **MEC INSPECTOR** for real-time process control, data traceability and automation. Each MAPPI furnace is also ***"Powered by Siemens"*** and ready for full Industry 4.0 integration.

FOX EVO – Compact size, outstanding performance
The new FOX EVO is the natural evolution of our **compact and smart flat glass tempering furnace**, FOX, available in sizes from 1050×2300 mm to 1500×3200 mm.
Fully **ready to connect with the MEC** – Mappi Edge Computing ecosystem, **FOX EVO optimizes every production cycle, reduces waste, and delivers real, measurable energy savings.**
A brand-new design and completely redesigned software interface come together with the hallmark **quality, flexibility, and efficiency that define every MAPPI furnace.**

ATS 4.0 – Versatility meets precision
The ATS 4.0 series is the most versatile MAPPI line, with models ranging from 1500×3800 mm to 2500×5000 mm.
Built for medium-to-large glass processors, **ATS 4.0 combines power, uniformity and flexibility across a wide range of thicknesses and coatings** — including low-E glass with emissivity down to 0.01. Thanks to features like **Supertemper, Syncro Transmission**, and **Intelligent Heating System**, ATS 4.0 delivers perfect results with lower energy usage, shorter cycles, and maximum repeatability.

MTH Monolith – The benchmark for large formats
MTH Monolith is the **high-performance solution for extra-large glass**, with working sizes from 2500×6000 mm up to 3300×6000 mm.
Designed for architectural applications or big production cycles, it ensures **thermal uniformity, reduced optical distortion and top-level mechanical strength.**
Equipped with smart thermal management and advanced cooling control, MTH Monolith is also **MEC-ready** and supports the integration of intelligent sensors, **turning big scale production into a process that is fast, efficient, easy and extremely accurate.**

MAPPI: power, intelligence, and simplicity. All in one furnace.
In flat glass tempering, **choosing MAPPI means choosing measurable savings, real efficiency, and full control quality.**
Our furnaces — from the compact FOX to the large-format MTH Monolith — combine advanced technologies with unmatched ease of use. Proprietary systems like GHBS, ATI, MHS and the optional MEC ecosystem ensure precision, speed, and thermal stability with optimized energy use. Like a modern electric car, a **MAPPI furnace uses energy only when needed** — delivering power on demand or maintaining performance with minimal waste. **No compromise between quality, efficency, and savings: just smart heat, applied with intelligence.**

Product Range

- **HORIZONTAL TEMPERING FURNACES:**
- **FOX EVO FROM 1050X2300 TO 1500X3200**
- **ATS 4.0 FROM 1500X3800 TO 2500X5000**
- **MTH MONOLITH FROM 2500X600 TO 3300X6000**
- **SUPERTEMPER FIRE RESISTANT GLASS TEMPERING FURNACES**
- **LAMINATING PLANTS**
- **HEAT SOAK TEST PLANTS**

www.mappi.it • www.mappi.us

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VITRO 25

MAZZAROPPI ENGINEERING Srl

preview

hall 11 / stand J02/J04

People to contact at our stand

ANTONIO MAZZAROPPI	GENERAL MANAGER
ORSOLA ABBATE	ADMINISTRATION MANAGER
MARIAELENA PICCOLO	SALES DEPARTMENT
FABIO ZUCAL	SALES MANAGER
FEDERICO MAZZAROPPI	MARKETING MANAGER
CHIARA MAZZAROPPI	MARKETING SPECIALIST
GLAUCO BELLINI	SERVICE DEPARTMENT

MAZZAROPPI
HIGH PERFORMANCE. ALWAYS

Mazzaroppi: How to reduce energy consumption for glass tempering by 70%.

Boost performance and reduce consumption: Mazzaroppi Engineering's mission is simple, but the results achieved with its glass tempering furnaces are extraordinary.

The Italian company, which is based in Aprilia (just outside Rome) and is now in its third generation, has specialised its technologies over the years to reduce energy requirements, achieving **consumption levels up to 70% lower than competing solutions.** The result? With a Mazzaroppi furnace, it is **possible to temper glass to perfection with just 180 kW, eliminating the need for a dedicated electrical cabinet.**

Come and discover the fair!

- **The new patented Efficiency 5.0 software** with its intelligent peak containment technology.
- **M Start&Stop** - JIT Ignition technology enables the oven to be turned off every evening and restarted the next morning in less than an hour, **eliminating unproductive consumption.**
- **The simple management and operation** of Mazzaroppi ovens, which does not require specialised operators.
- **All the patents and technologies** that guarantee the lowest consumption and performance on the market.

www.mazzaroppi.com

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VITRUM 2015

hall 11 / stand D09/E10

MOLE MORESCHI SRL

preview

MoleMoreschi
Diamond Wheels since 1921

1921-2021 NEVER GIVUP 100+4

People to contact at our stand

MARCO MORESCHI	**OWNER**
BARBARA DODA	**SALES MANAGER**
MICHELE CESARETTI	**SALES MANAGER**

MORESCHI is, and has been, one of the leading companies in the production of diamond wheels for glass processing machines for 104 years. The company can offer a complete range of diamond and polishing wheels for all types of glass processing, with different bond and grit to be used for float glass and laminated glass. The wheels are made for high production and long life, the best partners for processing of all types of glass.
Our wheels have greater process stability than the wheels on the market, improving efficiency and reducing cost of glass processing Moreschi can offer sets of wheels for all types of grinding and polishing: polished edge, ground edge, industrial edge and polishing with cerium oxide.
Depending on the quality of the edges, the wheels can be combined with or without polishing.

The routers are available in different types with diameters, and each type is available with different bonds for the best quality.
Moreschi give its customers the possibility to have the best technology and the best tools.

At **Vitrum**, **Moreschi** will be in **Hall 11 Stand D09/E10** with the following products on show:

- New bond for high speed CNC vertical machines
- New bond for double edger peripheral
- New ring construction available from diameter from 100 to 200
- New Patented refrigeration system
- New wheels for laminated glass
- New countersinks without vibrations and free cutting

www.molemoreschi.com

via Palazzetti, 5
40068 San Lazzaro di Savena (BO) Italy - Tel.: +39 051 625 5919
Fax: +39 051 625 5952 - Email: info@molemoreschi.com

VITRUM 25

hall 9 / stand S12

neptun
ADVANCED PROCESSING SYSTEMS

People to contact at our stand

MATTEO ROLLA	**SALES DIRECTOR**
STEFANO BAVELLONI	**TECHNICAL DIRECTOR**
FABIO PALELLA	**SALES OFFICE**

VITRUM 25: A showcase for Neptun's NC technology

Neptun will present the new Quick-T10 Series 3 CNC vertical milling and drilling machine at the vitrum 2025 trade show.

The new QUICK incorporates the features that have made it a success over the years, such as flexible glass working direction, absolute precision in axis positioning, and consistency over time thanks to the exclusive dual motor and linear encoder system.

Additional strong point is milling with the glass stationary and the suction cup always positioned close to the work area, ensuring processing speed and precision, especially during grinding, that other CNC machines that move the glass cannot.

The patented **DCS system** optimizes drilling performance based on the quality of the tool, allowing even less experienced operators to maximize results.

The new series stands out for its more robust modular structure and other solutions such as:

- Spindle-mounted rotary magazines with 10+10 positions for quick tool changes in under 8 seconds.
- New more powerful liquid-cooled spindle with ISO 40 cones for uncompromising performance on thick glass.
- Larger work area and lower minimum workable dimension than the previous series.
- Increased use of stainless steel and anodized aluminum to eliminate any risk of rust over time.
- Powerful OMRON industrial CNC control unit with 15" touchscreen.
- This is a reliable solution over time compared to commercial PCs, which are less stable and have outdated operating software.
- The electrical cabinet is integrated into the output module to reduce floor space.

The T10 series is available with working heights of 170, 220 and 280 cm and various lengths.

Also on display is the **new Quickmill 100-22** Series 2, a single-head CNC milling/drilling machine ideal for less intensive production and automation needs.

Compact stainless steel construction, the key feature remains stationary glass milling with all the associated advantages of the high-end Neptun machines.

Following the great success of the first series, we have made this machine even more efficient and flexible thanks to the 'relativity' of the zero point in tool positioning.

Although built for industrial use and with performance close to that of higher-end models, the Quickmill 100-22 meets even the thightest budgets.

Our **Showroom** will also feature the **Rock11 AWA** edger for automatic management of all wheels, simplifying operator's work and ensuring the highest quality with reduced wheel consumption.

Horizontal and vertical washing machines are all available for customer demos.

www.neptunglass.com

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Email: sales@neptunglass.com

VITRUM 2015

LUOYANG NORTH GLASS TECHNOLOGY CO., LTD. preview

hall 9 / stand M05/N10

People to contact at our stand

**NORTHGLASS SINCERELY WELCOMES YOU TO OUR STAND.
FOR MORE INFORMATION KINDLY VISIT OUR WEBSITE
FOR BUSINESS CONTACTS.**

NorthGlass®

About Us

Founded on May 18, 1995, by Chairman Mr. Gao Xueming, Luoyang NorthGlass Technology Co., LTD., commonly referred to as "NorthGlass," is a pioneering force in the glass industry. Located in the Luoyang National High-Tech Industrial Development Zone, we specialize in the research, design, manufacturing, and sales of glass processing equipment and processed glass products. In 2011, NorthGlass made its mark on the global stage by successfully listing on the Shenzhen Stock Exchange (Stock Code: 002613).

Our Products

At NorthGlass, we believe that "innovation knows no limits, and success comes through perseverance," NorthGlass has consistently developed products that stand at the forefront of the industry. Our portfolio ranges from glass tempering furnaces and coating lines to high-end deep processed glass, setting new standards in various sectors including automation and new material development. Our commitment to expanding the boundaries of technology extends to the development of automated glass processing lines, glass cutting equipment, glass storage systems, and the innovative Triturbo Fan technology. Moreover, our strategic investment in incubating the Light Stone industry marks our entry into the modular green building materials market, showcasing our leadership in environmental sustainability and innovation.

NorthGlass has solidified its leading position in the glass industry through continuous innovation and excellence in the manufacturing of advanced glass processing equipment. Our flat and curved glass tempering furnaces have dominated the market for 23 consecutive years, with over 6,000 units operational worldwide. Our in-house developed coating production lines have also become one of the mainstream manufacturing solutions in the

global glass coating industry.

Our advanced processed glass products form another cornerstone of our industry, gracing iconic architectural landmarks all over the world, Google Bay View (USA), 2050 M Street (Washington, USA), Oracle Headquarters (Austin, USA), Azabudai

Hills Mori JP Tower (Japan), the Leadenhall Building (UK), Abu Dhabi International Airport , New Performing Arts Venue (Brisbane, Australia). These landmarks include national Olympic venues such as the Bird's Nest, the Water Cube, and the Ice Ribbon, National Center for the Performing Arts(China), National Convention Center(China), Beijing Daxing International Airport(China), "Sun Valley" & "Shiliupu

Pier" of EXPO 2010 Shanghai(China), Beijing Library(China), Shanghai Tower(China), Nike Shanghai 001(China), XRL Topside West Kowloon(Hong Kong, China), Two Taikoo Place(Hong Kong, China), Huawei Global Flagship Store(China), OPPO Headquarters(China), and flagship stores of Hermès/ Louis Vuitton/ GUCCI/ Givenchy among many other notable buildings. Furthermore, NorthGlass is proud to be one of the two main suppliers of architectural glass to a world well-known tech company, providing glass for its flagship stores world-

wide and its headquarters in Silicon Valley, underscoring our global reach and the trust prestigious clients place in our products.

NorthGlass products are all over the country and exported to more than 110 countries and regions such as the U.S., the U.K., Germany, France, Japan, India, Brazil, Saudi Arabia, Egypt, Turkey, supported by a comprehensive domestic and international sales and service system.

Product Range

- GLASS TEMPERING FURNACE
- GLASS AUTOMATION SYSTEM
- GLASS STORAGE SYSTEM
- GLASS CUTTING MACHINE
- COATING MACHINE
- PROCESSED GLASS
- GENERAL FAN

FACEBOOK TWITTER NORTHGLASS ONLINE

No. 20, Binhe Road, Hi-tech development zone, Luoyang, Henan, P. R. China
Tel.: +86 21-57858658
E-mail: contact@northglass.com

www.northglass.global

FLAT GLASS

2025 world directory

Suppliers • Yellow Pages • Sales Network • Data Sheets

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VITRUM 25

R.C.N. SOLUTIONS Srl

preview

hall 11 / stand B19-D24

People to contact at our stand

ELENA CALVI	**CEO & OWNER**
DAVIDE RICCHI	**OWNER AND R&D MANAGER**
SIMONE VECCHI	**SALES & TECHNICAL MANAGER**
GIANFRANCO RIVAROLI	**CHEMICAL TEMPERING CONSULTANT**
ROBERTA COMETTI	**INTERNATIONAL DEPARTMENT & PUBLIC RELATIONS MANAGER**

RCN™ solutions

RD™ clean concept

REVA BF INTERLAYER FILM

Since 2024, the company has focused its energy in the production of machines for safety glass and digitalization, developping automatic machines with net connectivity, to facilitate data collecting and exhange, according to the regulation of Industria 5.0 too.

In the context of IoT, Internet of Things, RCN has issued operating and management packages together with systems for data transmission: an all-inclusive service, a full and friendly interface in the view of future new regulations of the industrial plan. An absolute Italian choice for engineering and production of business automation systems, that can be customized according to precise technical specifications.

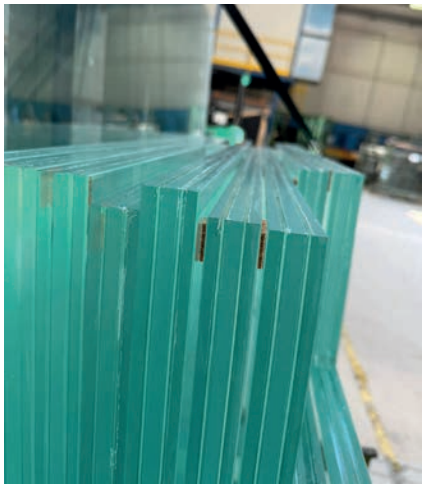
RD CLEAN CONCEPT, the RCN's patented system for clean edges in lamination that has solved many other problems, one of which the glass flatness, often compromised by regular bags pressing mainly on the edges is top of the range. Though it seems a minor aspect, major pressure on the edges can thinner the interlayer causing the rejection of the laminated glass in some installations if the thickness of the interlayer is under the nominal value. RD CLEAN CONCEPT is now a must in several companies who do not want to do without this product. There is no need to replace the entire bag at the end of the service, only the top part should be changed. Thus the initial investment is justified by the later cost of replacement.

The same, **LIA** – lamination integrated automatism – the laminating machine that can work in complete autonomy increasing the number of cycles, especially the night runs, offers several advantages among which the possibility of operating a storage with up to 10 shelves. This machine in two versions - automatic or semi-automatic - can reduce labour by enhancing production, without wasting of time. LIA complete with RD CLEAN CONCEPT bags is a winning product for every glazier who wants to invest in the future.

A focus on special bending system, the **ROTARY** one - a self-excluding twin-axled machine, equipped with four working positions – that in combination with the **ECO SPECIAL** line offer all the possible solutions for production of complex and perfect curves for the most challenging industries, such as nautical or automotive.

In the context of safety products required by the glass market, looking for features that make the glass less likely to break, the chemical tempering of the glass, **CT** line, has a fundamental role for its several benefits, among which the absence of surface distorsion and the high mechanical resistance. Thin glass can be tempered, less than 1.5mm too, to lighten some special installations as in the nautical industry.

During Vitrum, the RCN's production site will open the doors to all who want to visit it. By appointment you can see machines in construction, especially a chemical tempering one, in an interesting size. RCN's premsis are a few minutes car from the exhibition centre and transportation will be available for round trip. A booking form will be provided on RCN's website soon. Appointments can also be booked by sending an email to office@rcnsolutions.it mentioning date and hour of preference, or to come directly to RCN's booth, during show hours, and plan your visit with the team.



RCN is in constant evolution and production is going accordingly. The new manager generation is bringing new digital systems, automation and new projects, with an eye on past tradition and experience. Developments are moving fast: the last RCN's innovations have marked the transition from a craft enterprise to a more industrial, structured one. It has been a few years since RCN has made flexibility and customization its guide principle and strategy, combined with a quality service, which led to a rapid growth and especially to an unexpected preference on the market.

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www.rcnsolutions.it

VITRUM 25

hall 9 / stand P01/T04

SCHIATTI ANGELO
TRADITION, EXPERIENCE, INNOVATION

People to contact at our stand

ALESSANDRO SCHIATTI — PRODUCTION MANAGER
CINZIA SCHIATTI — SALES MANAGER
COMMERCIAL AND TECHNICAL STAFF

SCHIATTI ANGELO: Innovation and Tradition at Vitrum 2025

Technology that looks to the future, quality that stands the test of time

Schiatti Angelo Srl is set to showcase at Vitrum 2025 a selection of technologies that perfectly embody our company philosophy: machines built to last, with solid foundations in tradition and a constant eye on innovation.

At our stand (Hall 9 – Stand P01 T04), visitors will discover three outstanding technological solutions: the new **TFV1600** vertical drilling and milling machine, the versatile **SME10** straight-line edger, and the innovative **FPS20RS** featuring automatic diamond wheels.

TFV 1600: Superior Performance Vertical Drill

The latest model of our well-established and widely-used vertical drill arrives even lighter and more powerful. The TFV1600 is designed to drill sheets up to 85 mm in diameter with thicknesses from 3 to 19 mm.

Thanks to the automatic tool changer (optional), you can combine drilling and milling operations in a single work cycle. The new version stands out for:

- Upgraded speed and operational autonomy
- Redesigned tool changer positioning
- Increased capacity: 10+10 tools (up from 8+8 in the previous version)
- Enhanced spindle stiffness for superior machining quality

SME10: Precision and Versatility

The SME10 is a straight-line edger for flat edge that delivers exceptional precision, with variable angle processing from 0° to 45°.

The model on display at Vitrum will feature special configurations including:

- **50 x 100mm minimum workpiece processing** (compared to the standard 80 x 80mm)
- **Industry 4.0 ready** for integration into modern production systems
- **Diamond wheel ammeters** for the precise monitoring of processing parameters

FPS20RS: Automation at the Service of Productivity

This year's real innovation is the fully automatic FPS20RS. This straight-line edger represents a quantum leap in process automation:

- **Automatic diamond wheel management** directly from the PLC, eliminating the need for manual adjustments
- **Automatic wheel zeroing** on every machine restart, ensuring consistent precision without operator intervention
- **Maximum production efficiency** with reduced setup times

Why Visit Schiatti at Vitrum

Our presence at Vitrum offers the perfect opportunity to experience first-hand technologies that embody our company's core values:

Heritage: Machines designed with solid materials, built to last for decades. It's not uncommon for our customers to return after 30 years to purchase a new machine, often requesting the same model updated – proof of the reliability of our solutions.

The Future: Smart automation that simplifies operator tasks, optimizes production processes, and delivers superior speed and precision whilst reducing errors and downtime.

Modularity: Every Schiatti machine combines the base model with extensive customization possibilities, allowing you to adapt the technology to specific production needs and create fully integrated production lines.

www.schiattiangelosrl.com
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E-mail: info@schiattiangelosrl.com

VITRUM 25

hall 11 / stand D13/E14

SKILL GLASS preview

SKILL GLASS made for glass
VERTICAL CNC CENTERS

OVER 25 YEARS Since 1999

People to contact at our stand

OUR STAFF WILL BE AT YOUR SERVICE THROUGHOUT THE SHOW

SKILL GLASS The Italian specialist in Vertical Numerical Control machines

Skill Glass will be present at the 2025 edition of VITRUM at stand D13-E14.

Get in touch with our specialists in the world of glass processing machines. We will be happy to present our entire range, divided into four main families:

1. Full CNC – E-D Range in both SKILL E-D and E-D 101 configurations
2. Drilling and milling machines – DRILL Range with 4 models to suit all your needs
3. Edge processing – SFILL Range with 3 super-fast and super-competitive models
4. Washing machine – WASH Range to complete your processing lines

Dozens of unique solutions, designed to give your machines great reliability, precision in processing, and reduced maintenance requirements.

Text regarding the machines = same text as Glasstec 2024

- E-D 101 is a vertical machining center that enables a variety of machining operations with extreme speed and precision.

E-D 101 (joined)

The machine makes it possible to perform any machining on both shaped and straight flat glass sheets and combines in itself all the technology of vertical drilling and milling with the features of a vertical grinding machine.

MILL 1600 (joined)

- MILL 1600 is an automatic numerically controlled vertical milling machine for milling on rectangular sheets of flat glass that, thanks to management by cad/cam software, is able to perform milling and internal machining completely automatically.

- SKILL WASH is a vertical washing machine for automatic washing and drying of flat and shaped glass sheets with a thickness from 4 to 30 mm. The machine is completely made of stainless steel and consists of a 4 brushes washing section (also available in a 6-brush version) and a pair of high-pressure blowers in the drying stage.

SKILL WASH (joined)

- DRILL 1600FF is a 5-axis numerically controlled vertical drill for drilling holes, inserts and countersinks on flat glass sheets with a thickness from 3 to 20 mm. The machine consists two electro spindles: the latter, mounted opposite each other, allow working with a tailstock system for perfect glass drilling.

DRILL 1600FF (joined)

This vertical unit is capable of operating with extreme speed and precision thanks to the management of all machining by numerical control and thanks to the support of dual tool changers. Milling with this machine is a quick and easy operation, and thanks to multiple tools, an insert can be milled and ground in seconds.

www.skillglass.it

Via Egidio Gregori, 2 - 36015 Schio (VI) - Italy
Tel.: + 39-0445-500-202 - Fax:+ 39-0445-500-203

VITRUM 25

hall 9 / stand H15/J20

SYSTRON preview

People to contact at our stand

THOMAS HAAN	**SYSTRON GMBH**
MIROSLAW KWIATKOWSKI	**SYSTRON GMBH**
SIMONE SALA	**SI.STE TRADING**

systron GLASS TECHNOLOGIES

One Machine. Endless Possibilities: The NEW systron proMD

With the brand new systron proMD, systron introduces the next generation of vertical glass processing. As the consistent advancement of the successful systron PRO series, the proMD delivers even greater power. "MD" stands for Milling & Drilling, and this machine is optimized precisely for that: fully automated seaming (rough edge), grinding, polishing, drilling, countersinking, milling – and optionally even waterjet cutting – in a single clamping process.

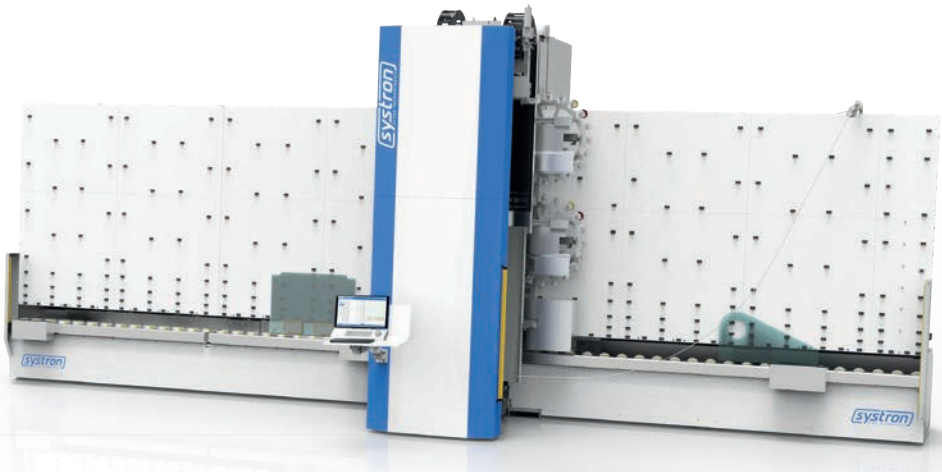
Inner and outer contours are machined directly one after the other without the need for reclamping or additional steps. This streamlines handling, reduces cycle times, and increases precision throughout the entire production flow.

The reduced number of axes ensures a compact footprint and lower investment costs – while improving processing speed and maintaining maximum stability.

A key innovation is the patented water cushion system, which presses the glass evenly against the roller wall. This eliminates vibration, prevents chipping – even with delicate surfaces – and ensures consistent tool cooling, parallel seaming, and reduced wear. The result: brilliant edge quality and maximum process reliability.

Additional highlights include:

- Optional waterjet module for maximum flexibility
- Double-sided drilling and countersinking – also usable as pilot holes for waterjet cutting
- Fully automatic EASY MODE for rectangular glass
- Integrated tool measurement and sharpening as well as profiling and dressing device for polishing tools with no cycle time loss
- Tool capacity of up to 80 positions



The systron proMD is a powerful all-in-one vertical processing solution for manufacturers who demand top-tier quality, efficiency, and long-term production security.

Visit systron at VITRUM in Milan – Hall 9, Booth H15 J20

Product Range

- **SYSTRON PRO** CNC EDGE PROCESSING CENTRE
- **SYSTRON PROHD** CNC CENTRE WITH WATERJET
- **SYSTRON PROMD** CNC CENTRE WITH MILLING & DRILLING (NEW)
- **SYSTRON LOOP** EDGE PROCESSING WITH CUP WHEELS
- **SYSTRON ESX** SEAMING & GRINDING MACHINE
- **SYSTRON WM** WASHING & DRYING STATION
- **AUTOMATION SOLUTIONS** WITH ROBOT, PORTAL LOADING, STORAGE, HARP RACK

www.systron.at

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Tel.: +43 664 88 22 70 21
E-mail: sales@systron.at

VITRUM 25

TALAMONI SRL

preview

hall 11 / stand E09

TALAMONI
YOUR PARTNER FOR GLASS CUTTING

30th ANNIVERSARY

People to contact at our stand

TOMASINO TALAMONI	**OWNER**
ROSELLA MITIDIERI	**EXPORT MANAGER**

Showcasing Italian precision in glass cutting tools, Talamoni returns to Vitrum for the 14th time

For its 14th edition, Talamoni will be exhibiting once again at Vitrum, with the company's owners present at the stand throughout all four days of the show.

An Italian manufacturer of cutting wheels and cutting heads for glass, Talamoni has built its reputation upon consistency, quality and innovation. While our tools may appear simple at first glance, the tungsten carbide cutting wheel remains the most widely used tool on the glass cutting bench today.

With machines becoming increasingly advanced and precise -offering speed and flawless cutting solutions- cutting heads must evolve in step with the performance demands of modern cutting tables.

At **Talamoni**, extensive testing has been conducted to optimize wheel edge finishing in order to guarantee clean, precise scoring. A range of edge roughness levels has been developed to offer professionals the most suitable tool for achieving the ideal result: **a sharp, clean cut**.

We have also invested in research to identify the most **effective carbide blends**, ensuring extended wheel life and minimizing the need for frequent tool changes-a key time-saving advantage for glass processors-without increasing product costs.

At Vitrum 2025, Talamoni will be presenting:

- New Wheel Holders

Designed and manufactured entirely in-house, our wheel holders are user-friendly and affordably priced. The latest additions -the **CP** and **B50** models- simplify wheel replacement and are easily mounted on the cutting table.

- DSG Cutting Wheel Finish

A **newly-developed wheel** finish, created and tested in collaboration with major Italian and international glass manufacturers. The **DSG finish** enhances the cutting of laminated, stratified, and coated glass, delivering precision and ease in breaking glass sheets. This finish is now available across the entire Talamoni cutting wheel range.

- Updated Glass Cutters

Our line of glass cutters has been completely renewed. Improvements in the cutter head materials allow for smoother wheel movement.

The company will also be showcasing:

- **VB CUT** and **OSCUT**, featuring ergonomic plastic handles;
- SICUT, with a metal handle, suitable for cutting glass from 1 to 10 mm;
- **SICUT GP**, designed for thicker glass from 12 to 19 mm;

All four models come equipped with the **Diamond** wheel, available in different finishes according to the intended application.

Cutting Oils

Completing the Talamoni product range are four specialized cutting oil formulations:

- T-OIL3125 - slow evaporation oil
- T-OIL3130 - medium volatility oil;
- T-OIL3133 - complete evaporation oil;
- T-OIL3132 - specifically formulated for low-E and coated glass cutting.

Special Vitrum 2025 Promotion

Talamoni will be offering a special promotion on the **DSG S** automatic cutting wheel line and on our **manual cutting** tools. We invite visitors to experience firsthand the quality and value of our Made in Italy products - where innovation meets tradition.

www.talamoni.com

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VITRUM 25

hall 11 / stand J49

TK - STRATO® preview

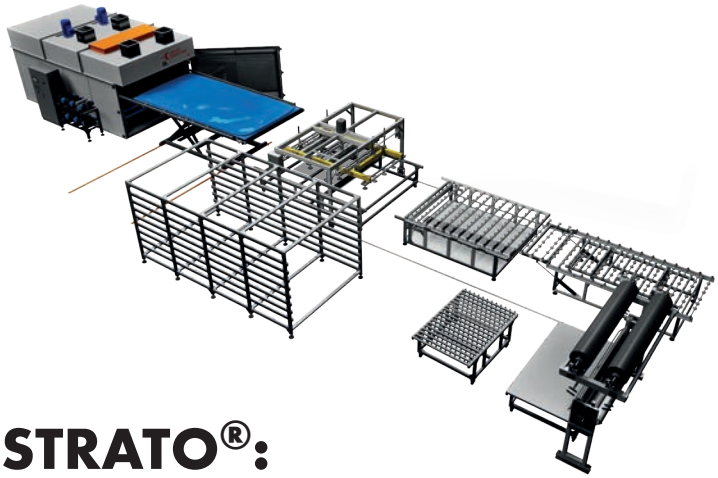
tk pura tecnologia italiana

STRATO

TK:

TK is an Italian Company specialise in the design and construction of ovens for glass lamination, tempering, chemical tempering and Heat Soak Test.

TK machines are intended for small, medium and large companies that need to start up production or increase their production capacity and improve the quality performance of the finished product.
Working in close collaboration with customers, TK relies on the best Italian technology and European components to meet quality standards and requirements. Each project is structured according to the customer's needs. To provide the most appropriate and customised solutions, TK applies its own time-tested methodology which mainly includes alignment with customer requirements and tailor-made solutions. Thanks to deep expertise and international partnerships built up over the years, TK is present in more than 60 countries worldwide and provides delivery, installations, staff training, on-site and remote after-sales support.

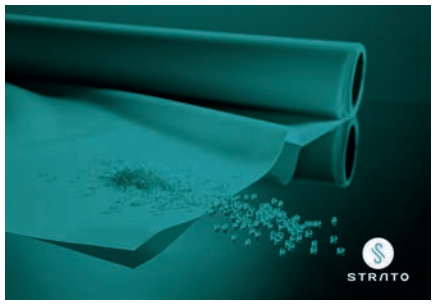


STRATO®:

STRATO® is an innovative and versatile 100% made in Italy range of interlayers for safety glass lamination. It has been designed mixing mechanical and strength properties with aesthetical features as a source of inspiration for new architectural solutions. STRATO® product range is certified according to European (UNI EN ISO) and American (ANSI-SGCC-ASTM) standards.

STRATO® CarbonLight™ is the latest, highly innovative product range of interlayers manufactured through an entirely sustainable raw material supply chain and eco-friendly production process with which STRATO® achieved ISCC+ certification (International Sustainability & Carbon Certification).

STRATO® CarbonLight™ expresses the renewed focus on aspects such as the reduction of greenhouse gas emissions, the protection of natural biospheres and an increase in social sustainability, throughout its production process. The commitment is to guarantee to customers traceability along the entire value chain: the result is a new, green and sustainable product with a limited impact on the environment.



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SATINAL

VITRUM 25

hall 9 / stand N13/S20

TRIULZI CESARE SPECIAL EQUIPMENTS Srl

preview

TRIULZI
You name it, We'll do it.

People to contact at our stand

TRIULZI QUALIFIED TEAM

PREVIEWED AT OUR BOOTH AN INNOVATED DESIGN FOR THE BEST PERFOMANCE

LOW-E HORIZONTAL WASHER
- ENERGY EFFICIENCY WASHER
WATER SAVINGS

- Made entirely of stainless steel
- Working width 3,300 jumbo size
- Heated water tanks
- Conductivity water sensor for water control, cascaded water flow
- Auto water tanks cleaning (option)
- Antistatic bar fitted to exit of upper drying section
- Remote control
- Bevel gear transmission
- Very silent operations

POLISHING WASHER , *PATENTED*
MODEL NEW DESIGN
MAXIMUM PERFORMANCE
AT HIGH SPEED

- Made entirely of stainless steel
- Working width 1,800 mm
- Easy maintenance
- Batch Loading
- Bag Filter for prewash section
- Evoluted remote control

VERTICAL CLOSED TOP
- HEAVY STRONG THICKNESS

- Made entirely of stainless steel
- Working height 3,300 mm - to be integrated in line
- Automatic thickness adjustment
- Low Emissivity glass detection with frequency control
- Complete with high pressure prewash section with tank
- Heated water tanks
- Controlled by PLC and touch screen operator panel
- Very silent operation
- scanner control integration (option)

LOW CONSUMPTION
MAXIMUM YIELD

Product Range

- OPEN AND CLOSED TOP VERTICAL WASHERS
- HORIZONTAL WASHERS FROM MINI TO JUMBO SIZE
- AUTOMATED SYSTEM FOR CURVED GLASS
- WET POWDER APPLICATION SYSTEM FOR AUTOMOTIVE
- ULTRASONIC BATH GLASS WASHING EQUIPMENT
- FIREPROOF GLASS WASHING EQUIPMENT
- LAMINATING GLASS LINES
- INSULATING GLASS LINES
- CUSTOMIZED SOLUTIONS FOR ANY GLASS PROCESS

www.triulzi.com

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E-mail: triulzi@triulzi.com

VITRUM 25

hall 9 / stand M01/N04

TUROMAS preview

TUROMAS
OUR PASSION, YOUR PROGRESS

TUROMAS drives glass cutting and storage automation with new solutions

With 40 years of experience, TUROMAS offers comprehensive solutions for the glass industry, including smart storage systems, float and laminated glass cutting machinery, and advanced software to optimize production.

Among its latest innovations is the LAM 600 laminated glass cutting line, designed for companies requiring high output with maximum automation. This model enables loading, positioning, cutting, and unloading of laminated glass in a single, compact line, reducing cycle times while ensuring high-quality cutting for thicknesses up to 12+12 mm. It incorporates the new TUROMAS scoring and separation system, which reduces each cutting cycle by 10 seconds, along with mechanical stop positioning systems for straight and railing cuts, optimizing precision and reducing setup times.

TUROMAS has also introduced a UV laser marking system for float glass cutting tables, enabling high-resolution marking of identification codes and logos without altering the glass surface, even on Low-E coatings. This system enhances traceability, customization, and quality control on the production floor.

In the area of smart storage, TUROMAS offers its LA, SR, LR systems and SG smart storage solutions, designed to automate the handling, storage, and loading of glass, adapting to different spaces and production needs. These systems improve material flow in the plant, reduce handling times, and strengthen safety across all stages of the process.

Additionally, TUROMAS complements its machinery range with software for managing and optimizing glass cutting and storage processes, enabling real-time planning, monitoring, and control of production. This improves traceability, reduces waste, and supports strategic decision-making at every stage of the process.

With these solutions, TUROMAS helps customers achieve new levels of productivity, efficiency, and quality in glass processing, maintaining its commitment to providing robust, scalable technology that adapts to the real needs of the industry.

Following a year marked by the celebration of its 40th anniversary, TUROMAS has confirmed its participation at Vitrum 2025, taking place from September 16-19 in Milan, at Stand M01-N04, Hall 9.

Product Range

- SMART GLASS STORAGE AND LOADING SYSTEMS
- FLOAT GLASS CUTTING SYSTEMS
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VITRO25

hall 9 / stand L16

VITROSEP, S.L. preview

VITROSEP

People to contact at our stand

JOSEP SAIS — GENERAL MANAGER
ALEIDA GUINART — SALES DEPARTMENT

Water treatment and sustainable development

In a world in constant change and climate emergency, a large part of the measures adopted or demanded are the reduction of water consumption.

Water recycling in the glass industry and quality assurance are key to achieving optimal use and contributing to the conservation of the planet.

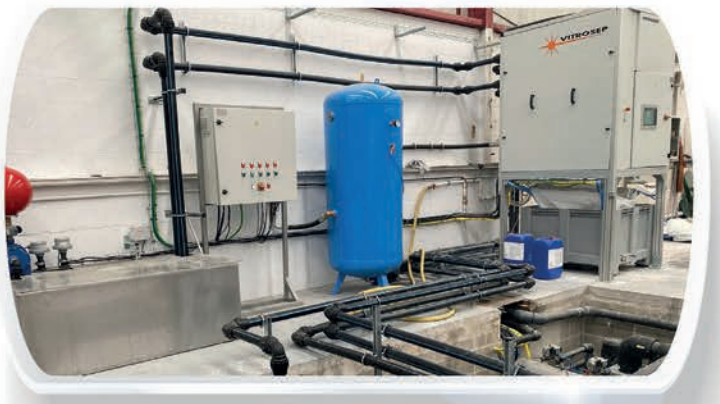
The VITROSEP water treatment and solutions portfolio is one of the most technologically advanced and specialized available in the glass market. In addition to offering a wide range of particle separators based on filtration processes, VITROSEP brings innovations in the field of optimization and control of water treatment parameters.

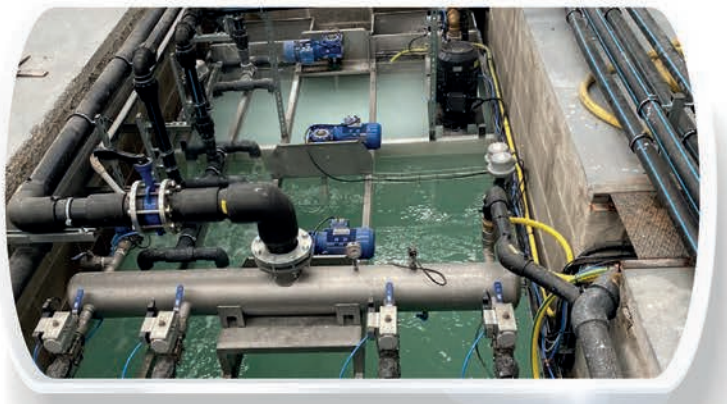
Digitization technologies such as new computer processors, sensors and the internet of things are indispensable for data collection. They help to ensure good water management and provide information in real time, allowing a broader view of the operation of infrastructures. Consequently, this type of technology makes it possible to proactively control and operate in front an action or technical problem reducing consumption and costs.

Another benefit of data management and analysis of the installations is the minimization of water losses due to leaks and high consumption of additives. VITROSEP helps the customer to make the systems, both in the use of resources and in the impact on the environment, providing a sustainable and quality service to all its customers.

In this regard, VITROSEP's commitment to sustainability will be on full display, with a dedicated area showcasing their eco-friendly water treatment processes, aimed at reducing the environmental impact of glass production.

VITROSEP will be located in Hall 9, Stand L16. There you will find all the new products including the CC11-900 glass particle separator, the most compact of the range in terms of size and performance. VITROSEP's booth will also be a hub of knowledge exchange, where industry professionals can engage with VITROSEP's team of experts and gain invaluable insights into the latest trends of the glass sector.





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GLASS MACHINERY PLANTS & ACCESSORIES is a bi-monthly periodical with about 100 pages of product news, current world news, focus on..., technical articles and dossiers, worldwide exhibitions, glassworks in the world, Yellow Pages, etc.

1989

Glass-Technology International

GLASS-TECHNOLOGY INTERNATIONAL is the leading international magazine for professionals involved in the flat and bent glass industry, from building to automotive, and from furniture to household appliances. **G-TI** is useful for those working in float glass plants as well as glass processors/fabricators, glazing contractors, automotive glass installers, window and door manufacturers, glass merchants, wholesalers, etc. With about 100 pages per issue, it is the bi-monthly tool for keeping abreast of new technology, new products, company life and all innovations in the world of flat and bent glass.

Annual Guides

1990

Glass Industry Directory 2025

The **GLASS INDUSTRY DIRECTORY** is a unique international annual guide which gives a complete overview of international glassworks and suppliers involved in hollowware and special glass manufacturing. About 300 pages of complete company profiles: addresses, management, sister companies, plants, number of employees, turnover, banks, year of company foundation, capital, trademarks, areas of activity, innovations, product-by-product and country-by-country breakdowns. The **GLASS INDUSTRY DIRECTORY** is the annual reference point for the international glass manufacturing industry comprising bottles and containers, domestic glassware, tubing, vials and ampoules, lighting glassware, technical and industrial glassware, scientific, laboratory and medical glassware and much more.

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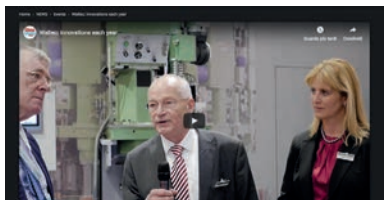

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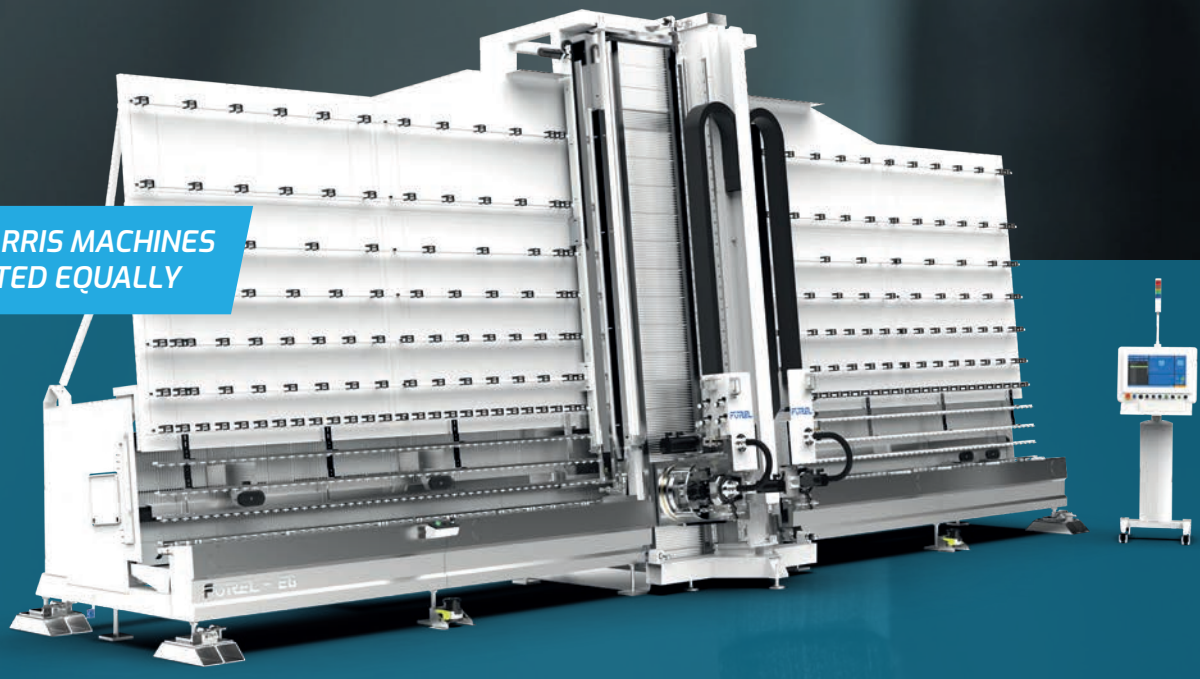

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