Glass-Technology International

THE LEADING MAGAZINE FOR THE INTERNATIONAL FLAT GLASS INDUSTRY

April/May Year 37 • No. 2/2026

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- With "NorthGlass Tempering Cloud", customers can access remote technical support from our experts, download recommended recipes, and perform remote diagnostics on furnace's internal parameters (optional).

1 : When loading rate is below 80%.

2: Take the furnace data of B or E width as an example.

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China Glass

Visit us at our booth N1 055 and visit our partner Lijiang's booth N5-176 to find out how the scanners work.

LIJIANG GLASS

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The checkmate of defects

The IGU Scanner inspects finished **IG units** to detect defects across every sheet.
It also verifies the correct frame alignment, identifying positioning errors such as butyl residue left during the assembly process.

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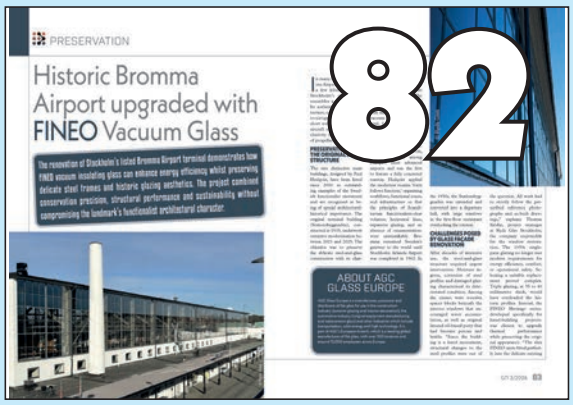

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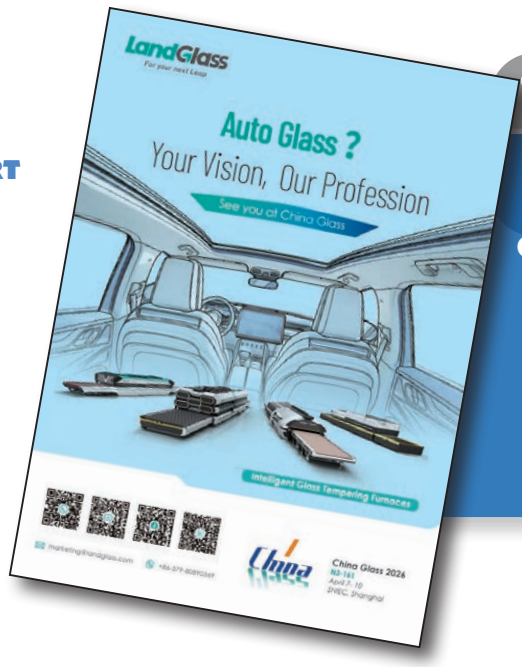

...in this issue of *Glass-Technology International* Advertisers are indicated in bold.

Productivity and flexibility at the highest levels

China Glass
Be our Guest
N1-258

BOTTERO

we cut glass

Bottero has always been committed to promoting the development and popularity of laminated glass by constantly researching and developing new technological solutions that are able to improve production, as well as increase its possible range of applications.

For over 25 years, Bottero has been and still is the only company in the world with the know-how and organisation required to manufacture both machines and lines for the production of laminated glass, and can therefore provide its customers with a unique experience, which turns into excellent processing results and extremely reliable solutions.

Bottero cutting lines for laminated glass are the final answer to the growing demand for productivity and flexibility that the market requires.

548LAM represents the point of reference in the cutting systems of laminated glass and it is available in a stand-alone version and a dual-line combined with a monolithic cutting table (**BKM**, **BCS** and **EVO** ranges).

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2026 TRADE FAIRS CALENDAR

The magazine will be distributed at the following Events

2026

FLATGLASS world directory

Editorial files: **16-01-2026**

Deadline Adv files: 20-01-2026

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FENSTERBAU FRONTALE | 24-27 MARCH | NUREMBERG - GERMANY

GLASS EXPO NORTHEAST | 25-26 MARCH | LONG ISLAND (NY) - USA

FEATURED CONTENT: FIRE-RESISTANT GLASS

Editorial files: **09-02-2026**

Deadline Adv files: 13-02-2026

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CHINA GLASS | 7-10 APRIL | SHANGHAI - CHINA

INTERNATIONAL GLASS MANUFACTURING SHOW | 21-23 APRIL | DUBAI - UAE

WINDOREX | 7-9 MAY | CAIRO - EGYPT

Editorial files: **02-03-2026**

Deadline Adv files: 06-03-2026

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GLASS-TECH POLAND | 26-28 MAY | WARSAW - POLAND

BIG 5 CONSTRUCT SOUTH AFRICA | 9-11 JUNE | JOHANNESBURG - SOUTH AFRICA

GLASSTECH MEXICO | 15-17 JULY | MEXICO CITY - MEXICO

Editorial files: **24-04-2026**

Deadline Adv files: 28-04-2026

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ICCG CONFERENCE & EXHIBITION | 15-17 SEPTEMBER | BERLIN - GERMANY

GLASSBUILD AMERICA | 23-25 SEPTEMBER | LAS VEGAS (NV) - USA

Editorial files: **27-07-2026**

Deadline Adv files: 30-07-2026

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GLASSTEC | 20-23 OCTOBER | DÜSSELDORF - GERMANY

All **GLASSTEC** exhibitors advertising in this issue also receive a free **GLASSTEC PREVIEW**

GLASSTECH ASIA | 10-12 NOVEMBER | KUALA LAMPUR - MALAYSIA

VETECO | 10-13 NOVEMBER | MADRID - SPAIN

Editorial files: **24-09-2026**

Deadline Adv files: 29-09-2026

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EURASIA GLASS | 21-24 NOVEMBER | ISTANBUL - TURKEY

ZAK GLASS TECHNOLOGY | 10-12 DECEMBER | DELHI - INDIA

Editorial files: **26-10-2026**

Deadline Adv files: 30-10-2026

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VITRO ARCHITECTURAL GLASS

Solarban Champane™ Low-e Glass

Vitro Architectural Glass' Solarban Champane™ low-e glass combines crisp, warm tones with the trusted and proven energy efficiency of Solarban® solar control, low-e glass, striking the ideal balance of sophistication and performance.

Delivering a warm-neutral aesthetic with low reflectivity, Solarban Champane™ low-e glass perfectly complements the soft, natural hues found in contemporary architectural colour palettes.

Solarban Champane™ low-e glass reflects warm, neutral champagne tones achieved through its innovative low-e coating, the first of its kind in the industry, rather than the glass itself, creating a distinctive aesthetic without impacting thermal performance.

Domestically Manufactured

Made exclusively at Vitro's Wichita Falls facility, in Texas, Solarban Champane™ low-e glass can be coated on clear glass and low-iron substrates: Starphire Ultra-Clear® glass and Acuity® glass by Vitro, and soon it will also be available on a range of tinted glass options by Vitro.

Solarban Champane™ low-e glass is available in sizes up to Titan™ glass (330 by 610 centimetres), and ships direct, ensuring a streamlined supply chain.

WWW.VITROGLAZINGS.COM

REGENCY GLASS

New facility walkthrough

Regency Glass, one of the UK's leading manufacturers of insulated glass units (IGUs), recently embarked on an exciting new chapter in its history following a significant strategic investment from business acquisition compounder CorpAcq, alongside a landmark relocation to a new 420,000 square foot facility at Omega Business Park, Warrington.

While much has changed since this footage was captured, a drone video now showcases the scale of Regency Glass' operation, including **Glaston** Ultra-Thin TPS production lines and the commissioning of one of the new **HEGLA** UK Galactic thin glass cutting tables.

WWW.GLASTON.NET - WWW.REGENCYGLASS.CO.UK - WWW.HEGLA.COM

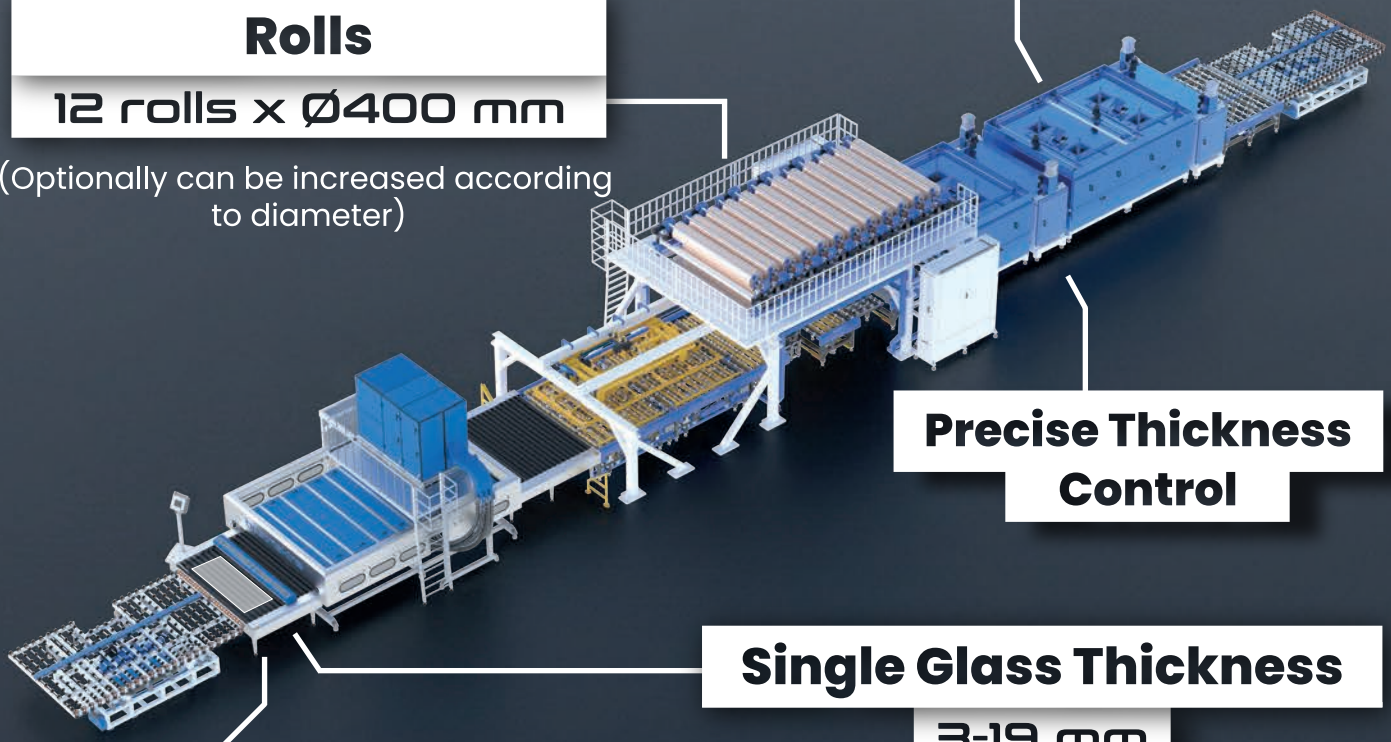
LAMINATED GLASS PRODUCTION LINE BLM

Precise Temperature Control

Rolls

12 rolls x Ø400 mm

(Optionally can be increased according to diameter)



Precise Thickness Control

Single Glass Thickness

3-19 mm

Max. Package Thickness

100 mm

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Common Language Of Glass World

*Image of the machine may vary according to selected options.

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DFI & NANOVEU

Partnership to advance global CSP energy market

Diamon-Fusion International (DFI), a global leader in protective glass nanocoatings and restoration technologies, recently announced its long-term strategic licensing partnership with **Nanoveu** Ltd.

The agreement grants Nanoveu exclusive rights to deploy DFI's flagship Diamon-Fusion® nanocoating technology in the concentrated solar power (CSP) energy sector, specifying a multi-year term and territory coverage for CSP projects worldwide. This move significantly expands both companies' global reach and accelerates the adoption of advanced surface protection solutions in one of the fastest-growing clean energy markets.

The concentrated solar power (CSP) industry was valued at USD 28.3 billion in 2023. It is projected to reach USD 552.3 billion by 2034, representing a compound annual growth rate (CAGR) of 34.6 percent. Supportive government policies, increased integration of energy storage, and rising demand for clean, dispatchable power are key drivers. CSP is rapidly becoming a cornerstone of 24/7 renewable electricity generation.

Through this partnership, Nanoveu will introduce DFI's proprietary super-hydrophobic, impact-resistant coating systems to CSP operators worldwide. These patented technologies are engineered to extend solar panel lifespan and improve power output. They also dramatically reduce maintenance and water consumption-key advantages for high-dust, water-scarce environments where CSP installations are commonly deployed.

"This strategic partnership with DFI represents a significant milestone for Nanoveu as we expand our presence in the global clean energy sector. By securing exclusive access to DFI's proven Diamon-Fusion nanocoating technology, we are uniquely positioned to deliver measurable performance improvements for concentrated solar power assets worldwide. The partnership enables us to enhance energy output, reduce water and maintenance requirements, and extend asset life-critical advantages as CSP continues to scale as a reliable, dispatchable renewable energy solution," said Mory Houshmand, Nanoveu's Head of Solar.

"DFI's global strategic partnership with Nanoveu reflects our shared innovation-driven DNA and a mutual focus on deploying high-performance solutions; this collaboration is focused on strengthening grid stability, increasing electricity generation, and enabling greater thermal storage after sunset, key fundamentals of next-generation concentrated solar power," explained Guillermo Seta, DFI's Vice President of Global Business Development.

WWW.DFISOLUTIONS.COM - WWW.NANOVEU.COM

GLASSOLUTIONS

Partnership revives Grade II landmark Tonwell Tower

A partnership between glass processor **Glassolutions** and **Specialist Glass Products (SGP)** has seen the successful renovation of a Hertfordshire, UK, water tower into a stunning four-bedroom home.

Constructed in 1964, Tonwell Water Tower was built to provide the village and the neighbouring Salcombe estate with clean water at constant pressure. It was bought for conversion in 2020 by the Grey family after falling into disuse over time.

The tower has now been transformed into a 160 square metre, four-bedroom, four-bathroom home with a combined living, kitchen, dining space that uses glass partitions to optimise the space and light. Tonwell Tower has a 360 degree exposure to the countryside around it and the goal for the renovation was to keep that connection to the surrounds through light and the views.

Glassolutions supplied its innovative VISIOSUN patterned glass for use throughout the interior of the property, providing partitions and privacy, whilst showcasing the listed building's retro style and incredible vistas.

VISIOSUN, which prioritises natural light whilst maintaining privacy and durability, was then further processed by SGP, which toughened each panel to ensure safety and durability while maintaining a 2 millimetre tolerance across dimensions. SGP also finished edges and delivered the glass to the logistically challenging site.

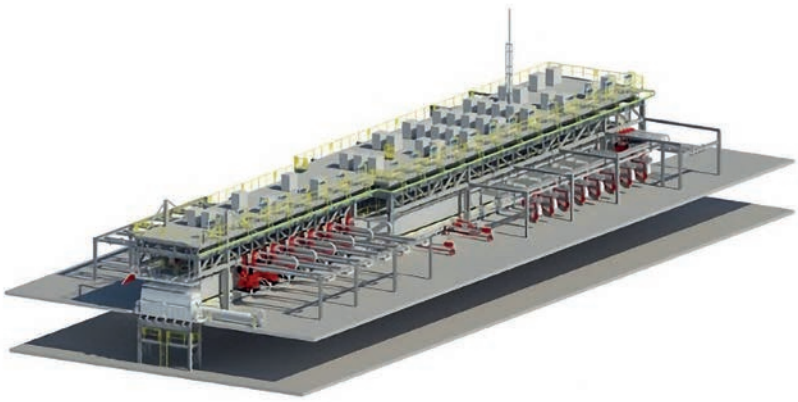
VISIOSUN's directional pattern can be used in either vertical and horizontal orientation, giving specifiers and installers the freedom to play with light and texture.

WWW.SAINT-GOBAIN.CO.UK - WWW.SPECIALISTGLASS.CO.UK

HORN GLASS INDUSTRIES

Float tin baths from an industry leader

HORN Glass Industries is the industry leader and a one-stop supplier in turn-key plants. From the first planning sketch to the finished production line, HORN stands by its customers all the way, offering Glass Plant Technology from A to Z.



Every float glass production line is made up of a tin bath, which is customised to fit each customer's needs. The HORN tin bath is the unit used to form float glass according to the highest geometrical and optical requirements.

HORN provides the complete tin bath package, including all the necessary components. Plant operation is optimised by an intelligent combination of equipment, in addition to design and construction. The manufacturing of all components of the plant is carried out in-house at the company headquarters in Germany - ensuring a seamless process and top-quality results.

WWW.HORNGLASS.COM

GUARDIAN GLASS

Launch of the new Bird1st™ UV glass

Guardian Glass recently introduced its new Bird1st™ UV glass, an advanced addition to its bird-friendly glass portfolio designed to meet new building requirements while helping to preserve views and to reduce IG unit costs. This product offers the least visible option to humans in Guardian's bird-friendly range and complies with New York City's Local Law 15 and other U.S. regulations requiring a Threat Factor ≤25.

Bird1st UV emphasises human visual comfort and façade aesthetics by applying a patterned UV-reflective coating on the exterior glass surface. This patented coating reflects up to 75 percent of UV light, which birds can see but remains nearly invisible to people. A laminated interlayer on the second surface absorbs over 99 percent of UV light outside patterned areas, enhancing contrast for birds without disrupting clear views for building occupants. The non-directional pattern is available in large sheet sizes - split jumbo (130 x 102 in.), jumbo (130 x 204 in) and super jumbo (130 x 240 in.) - help to improve fabrication yield and to lower glazing costs compared to the first-generation product.

Bird1st UV has been approved by the American Bird Conservancy (ABC) alongside various Guardian SunGuard™ low-E coatings, including SNX 70+, SNX 60+, SNX 62/27, SNX 51/23, SN 68 and Neutral 78/65. Available on both Guardian UltraClear™ low-iron and Clear glass substrates, it offers architects flexibility in energy performance, light transmission and aesthetics. The laminated glass also provides added security and sound control, making it a versatile glazing solution.

Compatibility with multiple European SunGuard coatings means Bird1st UV supports global project teams, enabling consistent performance across North American and international projects subject to local regulations.

Alan Kinder, Guardian Glass Director of Commercial Demand Creation, highlighted the growing demand for bird-friendly glazing driven by increased awareness of collision risks. He noted architects seek solutions that balance performance, design and stewardship, while meeting emerging local building codes.

Suresh Devisetti, Guardian Glass VP of Global Product & Sector Management, explained the technical challenge of developing a glass solution that meets building standards while maintaining transparency and aesthetic appeal. The broad range of coating and substrate options supports energy efficiency, code compliance and architectural intent.

WWW.GUARDIANGLASS.COM

IMMMES

The DTP system: a winning choice

Vetrotec has always associated its identity with strong values: excellence, reliability and customer centrality. So when the time came to select a water treatment partner, the choice was clear.

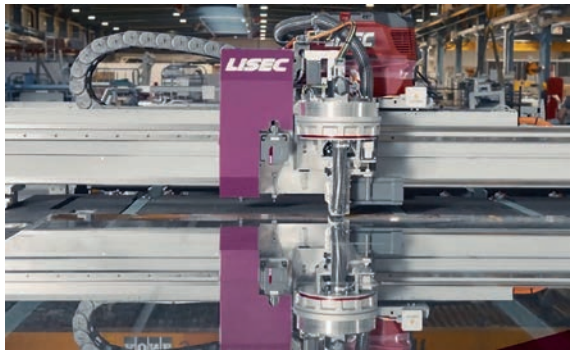
Immmes reflects the same values: product quality, a strong brand image and technology built on efficiency and sustainability.

A perfect match that led Vetrotec to choose the DTP system. "In Immmes' product we saw our same values of excellence and sustainability," said Davide Broccoli, CEO of Vetrotec.

WWW.IMMMES.COM - WWW.VETROTEC.COM

LiSEC

Precision meets performance in flat glass cutting



The **LiSEC** DSC-A glass cutting system combines state-of-the-art drive technology with decades of LiSEC expertise to ensure maximum precision, stability and efficiency in flat glass cutting.

A completely newly developed structure of the table as well as a new cutting bridge and a new cutting head improve the stability and precision of the cutting process.

A powerful low-e deletion system with grinding wheel in combination with a strong vacuum system for all common types of special coatings ensure a residue-free, fast and homogeneous low-e deletion result.

Highlights

- Automatic pressure control for cutting and grinding heads ensures perfect process parameters at all times
- 160 m/min cutting with an accuracy of ±0.2 mm thanks to LiSEC direct cutting technology
- 160 m/min Low-E edge delamination with 3500 rpm at maximum process reliability thanks to LiTEC Temperature Control – grinding wheel temperature is continuously monitored

WWW.LISEC.COM

AFRIGLASS 2027

Save the date: March 03-05, 2027 in Nairobi, Kenya

A new international exhibition dedicated to the glass industry in Africa, **AfriGlass 2027** was officially announced recently. Set to be held on March 3 to 5, 2027 in Nairobi, Kenya, the event will be organised by Y T International, an experienced organiser of professional B2B trade exhibitions.

AfriGlass 2027 is positioned as a specialised business platform for the architectural glass, container glass, glass processing, raw materials and production technology sectors. The exhibition aims to connect global manufacturers and suppliers with African buyers, distributors, project owners, and decision-makers.

As Africa's construction, infrastructure, packaging and industrial manufacturing sectors continue to expand, demand for high-quality glass products and advanced production technologies is growing rapidly. AfriGlass 2027 responds to this demand by creating a focused marketplace for product sourcing, technology exchange, and long-term partnership development.

The exhibition will feature a comprehensive range of solutions including architectural and processed glass, container glass, glass machinery and equipment, raw materials, accessories and innovative technologies supporting sustainable and energy-efficient production.

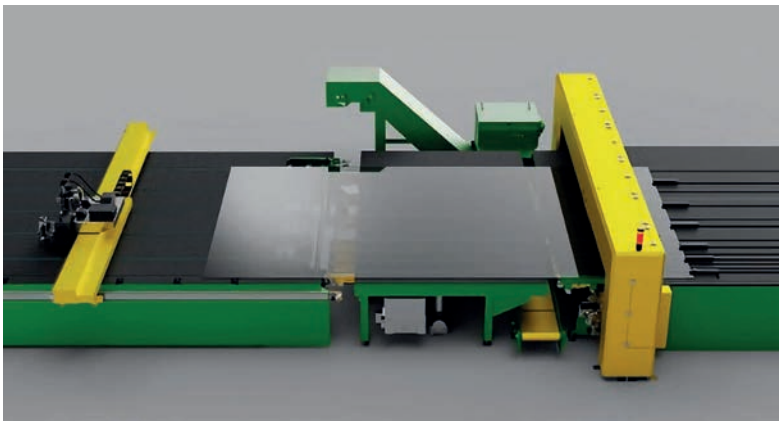
AfriGlass 2027 is set to become a key meeting point for stakeholders seeking to engage with Africa's evolving glass industry and explore new business opportunities across the continent.

WWW.EXPOAFRIGLASS.COM

HEGLA

ProLam Neo LSR - the new laminated safety glass cutting system

HEGLA has developed the new ProLam Neo specifically for the requirements of medium-sized businesses and the glass industry. In a perfect blend of forward-looking innovations, proven technologies and robust engineering, it combines decades of expertise with German quality.



Its high degree of automation and overlapping work processes make it a high-performance cutting machine for laminated safety glass.

With excellent edge quality and maximum throughput, it consistently delivers outstanding results, even under the most demanding conditions.

WWW.HEGLA.COM

CHONGZHENG SHENGDA GLASS

First 8 × 3.3m TPA line from LiSEC

By installing the world's first 8 by 3.3 metre insulating glass line with thermoplastic spacers (TPA) from **LiSEC**, **Chongzheng Shengda Glass** recently took an important step in developing its production technology further. The project did not just mark a world first in producing large-format TPS insulating glass. It also underlines the leading technological role that both companies are taking in implementing more innovative, efficient and sustainable production solutions.

Chongzheng Shengda Glass, part of the Shandong Chongzheng Group, is one of the leading manufacturers of energy-efficient functional glass in China. The company operates the most modern production systems in the high-tech industrial park in Zibo and focuses on high quality 4SG and low-E glass products for architecture, façades and structural engineering. By deciding for the LiSEC 8 by 3.3 metre TPA line, the company is continuing its consistent strategy of using technology as a lever for quality and sustainability.

The LiSEC TPA system (Thermoplastic Spacer Application) replaces conventional frame production with fully-automatic, direct application of the thermoplastic spacer material onto the glass sheet. The material is fed from a drum, heated up, applied precisely and then hermetically sealed at the corners using a compression system.

Clear advantages of the TPA technology:

- Seamless production process: No bending or installing frames - therefore, shorter cycle times and low risk of errors.
- Highest precision: Automatic edge sealing without visible joints or height deviations.
- Maximum flexibility: Seamless change between different insulating glass sizes and spacer widths without changeover times.
- Permanent sealing: Chemically stable connection between the glass, TPA material and the sealant ensures extreme durability of the insulating glass unit.
- Energy efficiency: Reduced material consumption, optimised drying cycles and up to 30 percent less energy consumption compared to conventional production methods.

WWW.LISEC.COM

KENSINGTON GLASS

Smarter building, with A+W Software

A company built on precision. **Kensington Glass Arts (KGa)** in Ijamsville, Maryland, USA is known throughout the Mid-Atlantic for elevating architectural glass, from commercial interiors to complex façade systems. KGa approaches every project with one simple guiding principle: it doesn't just cut glass, it delivers architectural intent. To protect that intent from order entry through fabrication, KGa relies on **A+W Software** as the digital backbone of their operation.

KGa's culture is grounded in four principles: precision, process, learning and accountability; and A+W supports that by adding structure and clarity across production.

New team members learn each workflow thoroughly before being introduced to faster methods. This helps them understand why each step matters and how it fits into the larger operation. With A+W reinforcing that structure, processes become more predictable and easier to scale as KGa grows.

A+W Business and A+W Production form the core system that keeps KGa's office and shop floor connected. Everything starts here -estimating, order entry, planning and scheduling- all flowing seamlessly into production with far fewer manual steps. Tools like A+W Excel Line Import and A+W EDI Import help eliminate retyping and reduce rework, ensuring jobs start clean before they ever reach the floor.

Once glass enters production, A+W becomes KGa's real-time tracking and coordination engine. A+W Smart Companion has also become a major asset on the floor, especially for quality checks. It gives KGa the mobility to inspect glass wherever it is, instead of waiting for pieces to reach a fixed workstation. In a fast-paced operation, that change saves significant time and reduces bottlenecks.

Behind the scenes, A+W's optimisation engine simplifies planning by managing the complex calculations needed to nest, sequence and cut efficiently. It reduces mental load on the team and helps KGa run more smoothly with fewer slowdowns, even during peak demand.

When asked which process depends most on A+W Software, Senior Vice President Jim Rathbone said, "Lamination, particularly of with tempered and patterned pieces. Tracking glass through multiple departments and having everything converge at one singular fabrication centre would be extremely difficult without A+W software solutions coordinating, tracking and helping us locate glass."

Lamination requires pieces to move through cutting, tempering, polishing, and specialty fabrication, with everything arriving in sync. A+W ensures no piece gets lost or delayed as jobs move through the facility. This is where the software shines: orchestrating dozens of variables, so teams can focus on craftsmanship rather than chasing information.

Labels printed using A+W Software

Asked how they would explain A+W's value to another fabricator considering new software, KGa said, "The cost can seem daunting at first, but the net effect on your business is absolutely worth the time and effort it takes to implement. There's no homemade or boxed software that considers the infinite possibilities of glass fabrication the way A+W does, and then turns that into solutions that streamline your production, resources and financial capabilities."

How can that answer help someone considering new software? They have seen first-hand how many variables: patterns, tempered pieces, specialty laminates, multiple departments, tight deadlines, have to line up perfectly to deliver a final product on time. What stands out here is that A+W accounts for this complexity in a way that simplifies the work rather than adding to it.

WWW.A-W.COM - WWW.KENSINGTONGLASS.COM

Pujol 100 PVB+ & full automatic lines

- Allows the lamination of PVB, EVA, and ionoplastics (SGP).
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GLASS FOR EUROPE

End-of-Life Vehicles Regulation moves forward

The European Parliament's ENVI and IMCO committees recently voted on the agreement of the new End-of-Life Vehicles Regulation.

For the flat glass value chain, two key aspects were of particular importance in this provisional agreement. First, the mandatory dismantling of at least 70 percent of glass from windshields, rear windows, side windows and glass rooftops. Second, the mandatory recycling of this dismantled glass into new glass.

These provisions shall lead to increased glass recycling, thus contributing to circularity in this sector and reducing energy use and CO2 emissions from glass production.

The text voted on also includes provisions requiring new vehicles to be designed for dismantling, thereby facilitating the application of the above-mentioned rules. Besides, Extended Producer Responsibility (EPR) schemes for vehicles are planned to address the costs inherent to the numerous new end-of-life treatment requirements.

Glass for Europe welcomes this vote and considers this compromise text as an excellent and balanced step forward for end-of-life automotive glass circularity in the EU.

A plenary vote in the European Parliament and formal adoption by the Council of the EU must now take place, after which the regulation will be published in the Official Journal of the EU and enter into force.

Most provisions will apply from 24 months after entry into force, with the dismantling obligations subject to a longer 36-month transition period.

WWW.GLASSFOREUROPE.COM

GLASTON

Partnership with Leadus to advance VIG manufacturing

Glaston recently entered into a cooperation with **Leadus**, a specialist in vacuum insulating glass (VIG) technology, to further develop advanced glass manufacturing solutions.

The two companies are teaming up to focus on integrated production solutions for VIG - an emerging glazing technology with significantly improved thermal characteristics.

Vacuum insulated glass consists of two glass panes separated by a vacuum gap, considerably reducing heat transfer compared to conventional insulating glass units while maintaining a thin, lightweight profile.

Glass flatness is critical for VIG manufacturing. Glaston is at the forefront of tempering technology, delivering world-class flatness in tempered glass, a key enabler for efficient and reliable VIG production.

By bringing together Glaston's tempering technology and Leadus's expertise in vacuum glass processing, the companies aim to push forward the development of VIG solutions and encourage adoption among glass processors.

The cooperation underlines Glaston's continued commitment to staying at the forefront of glass processing technology and supporting emerging applications that drive efficiency and sustainability in the built environment.

WWW.GLASTON.NET - WWW.LEADUSTECH.COM

SGP

A period of significant investment and growth

Yorkshire-based **Specialist Glass Products (SGP)** is positioning itself for long-term growth following significant investment across its operations.

Over the last 12 months, the company has invested heavily in its factory, machinery and a new digital platform to strengthen its capabilities in delivering complex, large-scale and sustainable glazing solutions.

Developed by Fishtank Agency, the new website communicates SGP's ability to deliver complex projects and showcases high-profile work.

Recent standout projects include the Botanic Gardens in Edinburgh, featuring 6,000 curved and flat laminated glass panels, supplying toughened glass for Top of the Rock in New York, and providing bespoke double glazing for the Flockton water tower transformation.

The website offers a virtual tour of the factory, products and team, giving visitors a clear understanding of the company's capabilities.

The launch follows a GBP 1.2 million investment in the UK's largest glass processing machine, enabling manufacture of glass up to 3,210 by 6,000 millimetres and processing up to 6 by 3.2 metres, including polishing, drilling, washing and jetting.

For the year ending March 2025, SGP reported a turnover of GBP 10.5M, supported by a workforce of 100 employees.

WWW.SPECIALISTGLASS.CO.UK

AGC

Next-gen insulating glazing for a new world of energy control

AGC is committed to developing products with better environmental performance to improve the energy efficiency of buildings and homes.

After joining forces with Panasonic, combining plasma screen technology expertise with AGC's glazing knowledge, a tailor-made production line was designed and constructed within six months at the Lodelinsart plant in Belgium.

The result is a double glazing unit made of two 3mm glass sheets, one coated with a super-insulating layer, separated by a 0.1mm vacuum space. Small cylindrical pillars prevent the sheets from touching due to external pressure.

This vacuum glazing, named **FINEO**, delivers the same energy performance as triple glazing while being four to five times thinner and one third of the weight. It integrates seamlessly into renovation and new-build projects.

FINEO has no visible evacuation port, features very slim edge seals, has obtained CE marking, holds a third-party verified Environmental Product Declaration, and carries multiple national certifications.

A second FINEO production line is scheduled to begin operations in Lodelinsart in the second trimester of 2026.

WWW.AGC-GLASS.EU - WWW.FINEOGLASS.EU

VAK

SANCO as new partner

The **SANCO Group** recently welcomed **VAK Insulating and Design Glass** from Slovakia as a new member of its Europe-wide network, strengthening its presence in Eastern Europe.

Founded in 1992, VAK supplies functional and design glass for building, façade and interior applications, producing approximately 37,000 square metres of insulating glass annually, primarily triple glazing.

In addition to insulating glass, VAK manufactures glass partition walls and other interior glass solutions, focusing on personal consultation, flexible solutions and close cooperation with small and medium-sized businesses and private customers.

The partnership provides access to knowledge transfer, test certificates and joint marketing activities within the SANCO network.

WWW.SANCO.DE/EN - WWW.VITRISO.COM

ŞIŞECAM

Completion of coated glass line investment in Italy

Şişecam recently commissioned a new coated glass line at its San Giorgio di Nogaro plant in Northern Italy, a EUR 25 million investment increasing capacity from 6 million to 12.5 million square metres.

This move strengthens Şişecam's position in the European glass industry and increases the share of value-added glass products in its portfolio.

Following the Italy investment, the company completed another coated glass line in Bulgaria with an annual capacity of 6 million square metres and plans to commission a further line in Tarsus, Türkiye, with 7 million square metres annual capacity.

With these additions, Şişecam's global coated glass lines will increase to seven, raising total production capacity to 48.1 million square metres.

WWW.SISECAM.COM

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MAIN FEATURES
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> Multifunction joystick and touch screen control
> Auto-diagnosis and remote assistance unit

GIMAV

Partnership with Messe Düsseldorf in support of the European glass industry

GIMAV has strengthened its partnership with **Messe Düsseldorf GmbH** and its Italian representative Honegger for the next edition of Glasstec, the leading trade fair for glass industry technologies.

GIMAV will host "Casa GIMAV," serving as its institutional headquarters and a networking space for member companies during the event.

Messe Düsseldorf will provide 50 free visitor vouchers to each exhibiting GIMAV member company, encouraging broad participation.

A joint communication strategy will promote Glasstec's role as a central platform for international glass technology dialogue and industry development.

This collaboration reinforces GIMAV's position as a platform representing and promoting the Italian glass industry within a structured international context.

WWW.GIMAV.IT - WWW.MESSE-DUESSELDORF.COM

LiSEC

HUB MEI drives growth and innovation

LiSEC has established the MEI (Middle East and India) HUB as part of its strategy to strengthen its presence in one of the world's most dynamic regions.

The HUB serves 23 countries including India, the United Arab Emirates, Saudi Arabia, Egypt and Turkey, covering markets of major economic importance.

LiSEC Turkey and LiSEC Middle East collaborate closely, sharing operational responsibilities such as customs clearance, spare parts processing and regional management coordination.

The HUB is pursuing an ambitious growth strategy through 2030, expanding sales and service teams and increasing market penetration with targeted product adjustments.

High-end solutions and entry-level products such as **LiTROS** support emerging markets experiencing strong construction growth, particularly in Dubai, Jeddah and Riyadh.

Demand for TPA spacers is rising, with multiple systems already sold in a short period.

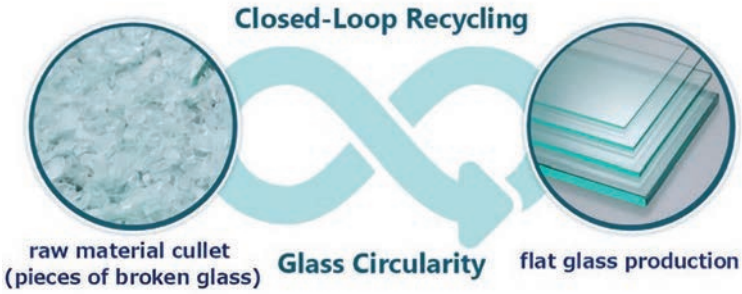
WWW.LISEC.COM - WWW.LITROS.COM

AGC & TRE

Demonstration of Horizontal Recycling of Window Glass

Recently, **AGC** and **TRE HOLDINGS CORPORATION** have jointly conducted a demonstration in Suwa City, Nagano Prefecture, where Shinshu Takeei (a member of the TRE Group) is based. This involved horizontal recycling of window glass attached to aluminium sashes (hereinafter "window glass waste"). The purpose of this demonstration was to regenerate window glass waste into glass of an equivalent quality to the original product, thereby promoting resource circulation and contributing to the reduction of industrial waste that would otherwise be sent to landfill.

In Suwa City and its surrounding areas, Shinshu Takeei collected and disassembled window glass waste generated at demolition sites. Subsequently, TRE GLASS CORPORATION, also part of the TRE Group, processed the glass portion into cullet (recycled glass scraps) and conducted quality checks. AGC then verified the process of manufacturing new flat glass using this cullet.



Roles of each company

- Shinshu Takeei: Collection and disassembly of window glass waste; cost analysis and logistics network study.
- TRE GLASS: Production of glass cullet and quality inspection.
- AGC: Process verification for manufacturing flat glass using cullet at the AGC Yokohama Technical Center (YTC).

In Japan, window glass waste generated from buildings is estimated to amount to at least 500,000 tonnes annually, and most of it is currently disposed of in landfills or reused for lower-quality applications through down-cycling.

This demonstration horizontally recycles window glass waste back into the same application of equivalent quality, aiming to reduce industrial waste. In addition, by increasing the ratio of cullet used in glass manufacturing, the initiative seeks to lower greenhouse gas (GHG) emissions and conserve natural capital by reducing consumption of virgin raw materials such as silica sand and soda ash.

While metal frames from discarded windows have typically been bought as valuable scrap, there has been little development of a reliable mechanism for purchasing the glass itself as a valuable resource, posing challenges to economic sustainability. In this demonstration, AGC and TRE calculated the costs of each step in the horizontal recycling process for window glass waste and verified the overall economics across the supply chain. Going forward, the two companies will evaluate the economic feasibility of glass recycling and aim to build a nationwide framework to promote resource circulation of window glass.

WWW.AGC.COM - WWW.TRE-HD.CO.JP

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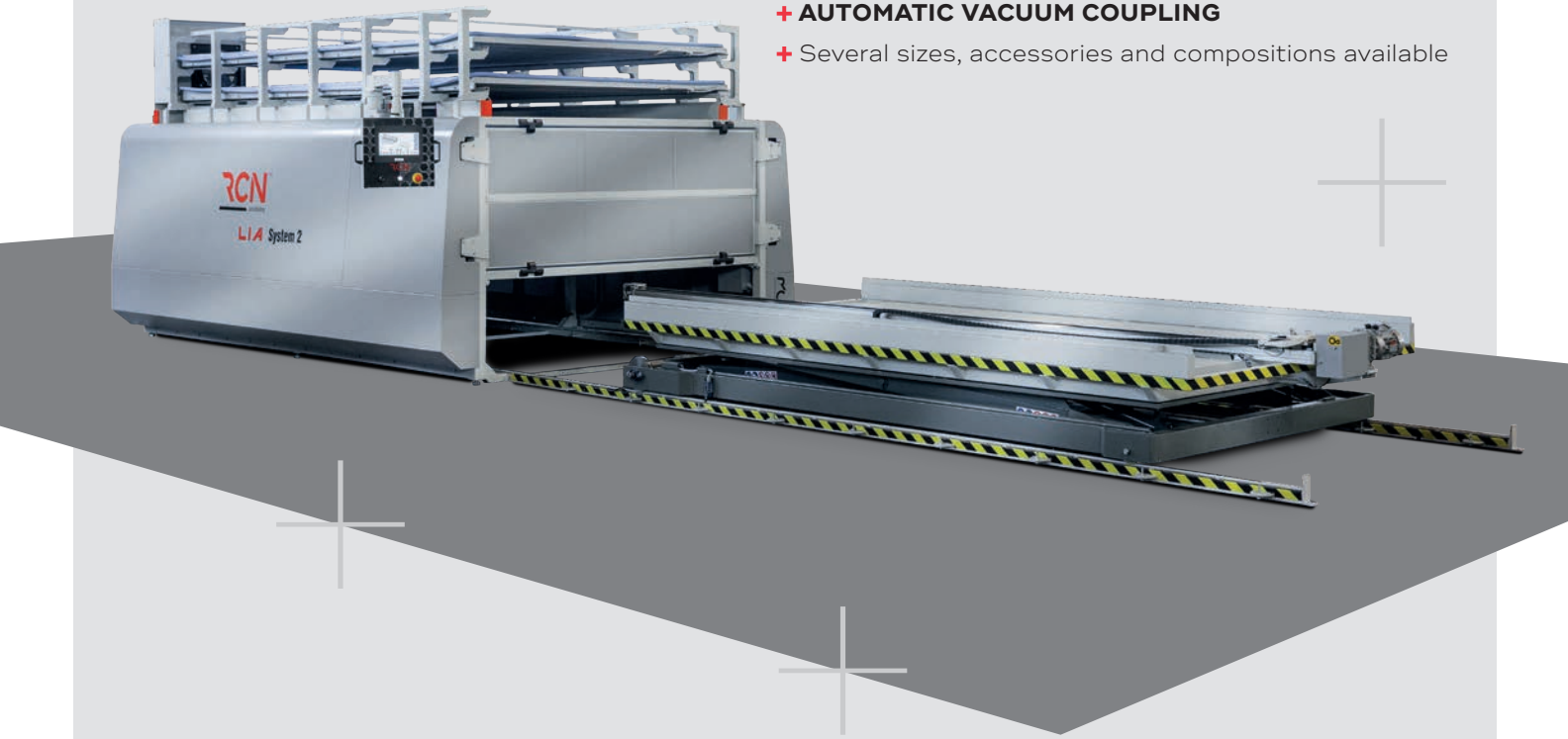


rcnsolutions.it

RCN solutions

Flexible manufacturing strategies shaped by RCN SOLUTIONS

Innovation, customisation and automation define RCN's approach to modern glass processing. From bending and chemical tempering to advanced lamination and IoT integration, RCN delivers flexible, energy-efficient systems designed for jumbo formats, thin glass applications and high-performance safety requirements across global markets.

The glass market is constantly evolving. From containers to safety glass, façades to highly specialised applications, the industry increasingly depends not only upon advanced machinery but on production solutions built around larger, automated and highly efficient systems capable of processing jumbo-size glass and beyond.

This demand is driven by applications that enhance building energy efficiency and reduce consumption, such as double glazing incorporating a third thin glass pane to lighten assemblies. Jumbo formats require accurate handling, cutting

and drilling, but above all systems that preserve glass integrity through tempering and lamination while minimising waste.

RCN Solutions addresses these requirements through three dedicated machine lines: bending kilns for prestigious projects, chemical tempering systems to increase resistance, and lamination solutions to ensure end-product safety. Available in automatic, semi-automatic or manual configurations, RCN machines are engineered for high output quality, energy savings, waste reduction and improved handling. Their durability is underscored by sustained demand in the second-hand market.

BENDING

Demand for curved glass has risen significantly in recent years, particularly for luxury boats, the rail industry and other high-profile applications requiring precise and flawless curves.

The ECO SPECIAL line operates through differentiated temperature distribution and control within a single chamber. For higher production volumes, the ROTARY system - featuring two self-excluding axes and four controlled working positions - manages loading, pre-heating at 500°C, bending at 650°C, forced cooling and unloading. The Rotary configuration enables the production of curved glass every two hours.

More recently, RCN introduced the FLOATING line, based upon two or more bending trolleys and a heating top that moves horizontally from one trolley to another. By alternately covering the trolleys during heating and bending cycles, the system

optimises workflow and efficiency.

TEMPERING

Chemical tempering is playing an increasingly central role in safety glass and specialised projects, including applications involving glass thinner than 0.5 mm. Manufacturers are focusing more upon thin glass solutions designed to lighten installations without compromising strength.

Chemically tempered glass offers higher mechanical resistance compared to glass subjected to other treatments. It can be processed after tempering and maintains excellent flatness without optical distortion. Unlike thermal tempering, the chemical process involves no rapid quenching and eliminates roll-wave distortion, delivering a uniform stress profile.

The process relies upon ion exchange between the glass surface and potassium salts, creating a consistent compression layer. Although the cycle time is approximately 16 hours -reducible to four hours with specific glass types- the system maintains controlled running costs. Once the tank is filled with potassium salts, it requires only periodic topping up when indicated by the machine. After the salts have melted, energy consumption stabilises at around 15 percent of installed power.

chemical tempering oven

The CT line, available in various sizes and configurations, meets diverse chemical tempering requirements, with customisation integrated into its design.

LAMINATION

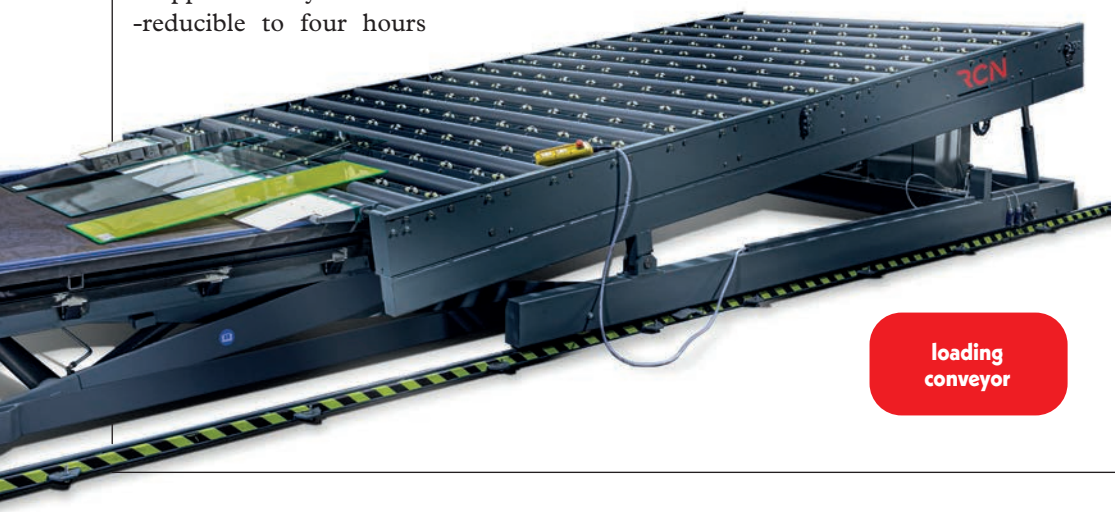
Effective lamination requires uniform heat distribution, flatness under heavy loads and energy efficiency. RCN's construction avoids aluminium components to ensure structural stability and maintain consistent flatness of laminated shelves.

The company's LIA - Laminating Integrated Automation system reduces operator intervention and streamlines handling processes. High-quality laminated glass also depends upon high-quality interlayers. RCN combines its machinery with REVA BF interlayer material, produced using fresh raw materials for each batch rather than recycled EVA, ensuring consistent product performance.

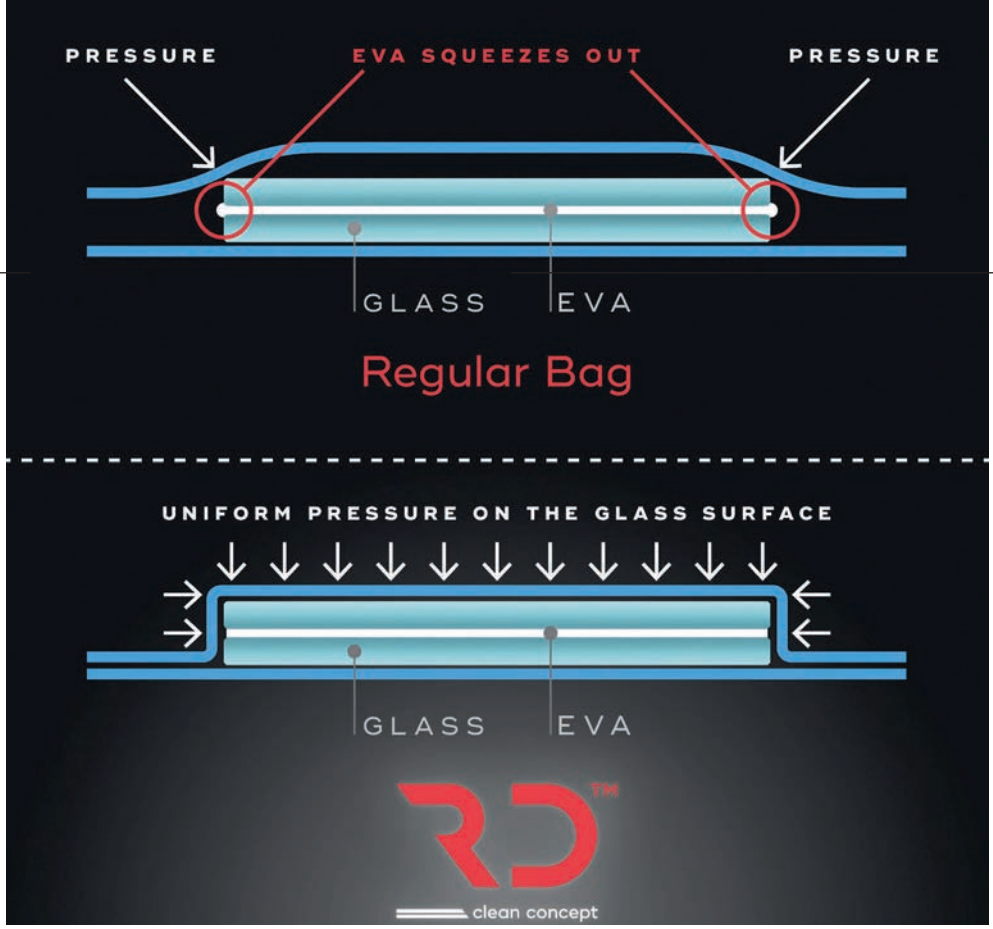
Additional equipment includes loading conveyors that release glass assemblies directly into the bag prior to lamination.

In 2022, RCN Solutions introduced RD CLEAN CONCEPT, a patented laminating bag designed to produce clean edges after lamination. Developed and manufactured by RCN, this solution reduces or eliminates excess interlayer material at the glass edges, removing the need for manual trimming with sharp tools and improving workplace safety.

The bag's two modules, with variable elasticity, ensure improved flatness compared to traditional systems that apply greater pressure at the edges, potentially causing surface distortion or thickness reduction near the perimeter. RD CLEAN CONCEPT has been adopted by companies worldwide seeking consistent, high-quality lamination results.



loading conveyor



Rotary bending system

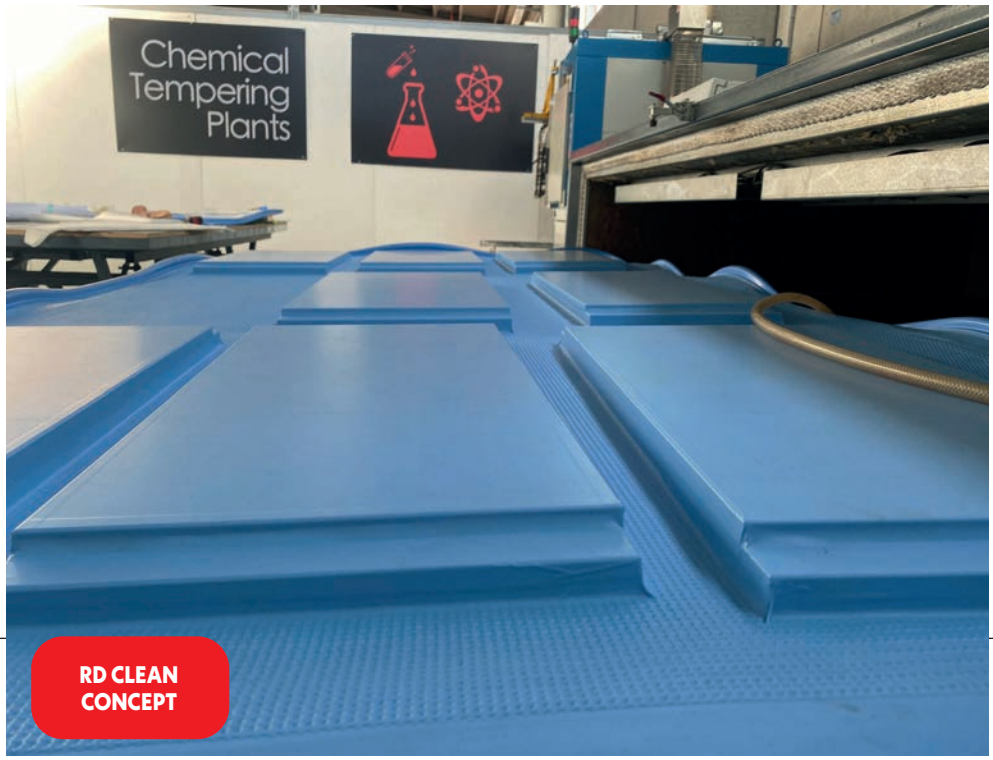
IOT AND INTEGRATION

The industry has entered the era of the Internet of Things (IoT), where interconnected systems enhance industrial automation, energy efficiency, waste reduction and process control within a human-centric framework.

For many glaziers, this transition presents challenges in terms of time and resources. RCN responds with an optional IoT communication package that integrates its machines with existing equipment and management software, or with proprietary RCN software customised to client requirements. Hardware configurations can also be structured according to the number of machines managed.

These operational and management packages provide structured data communication and support future production planning. Designed and produced in Italy, the automation systems are tailored to specific technical requirements.

Flexibility remains central to RCN's approach. In the past two years, the majority of machines produced have been customised. Remote control functionality, together with the RCN Easy App, enables production monitoring and recipe adjustments at any time. Each solution is designed to deliver measurable organisational and operational benefits.



RD CLEAN CONCEPT

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Automation ambitions redefine scale with new FOREL partnership

The story of NBS is, at its core, the story of a company shaped by a fundamental question: how should a glass factory operate today - and how must it evolve for tomorrow? The new East Japan facility emerged from this reflection. It was conceived not as a simple expansion of capacity, but as a fully fledged industrial project designed from the outset to process large-format glass sheets, integrate advanced automation and manage complex production flows - all while retaining the flexibility required for standard production. This vision took shape through close collaboration with FOREL.

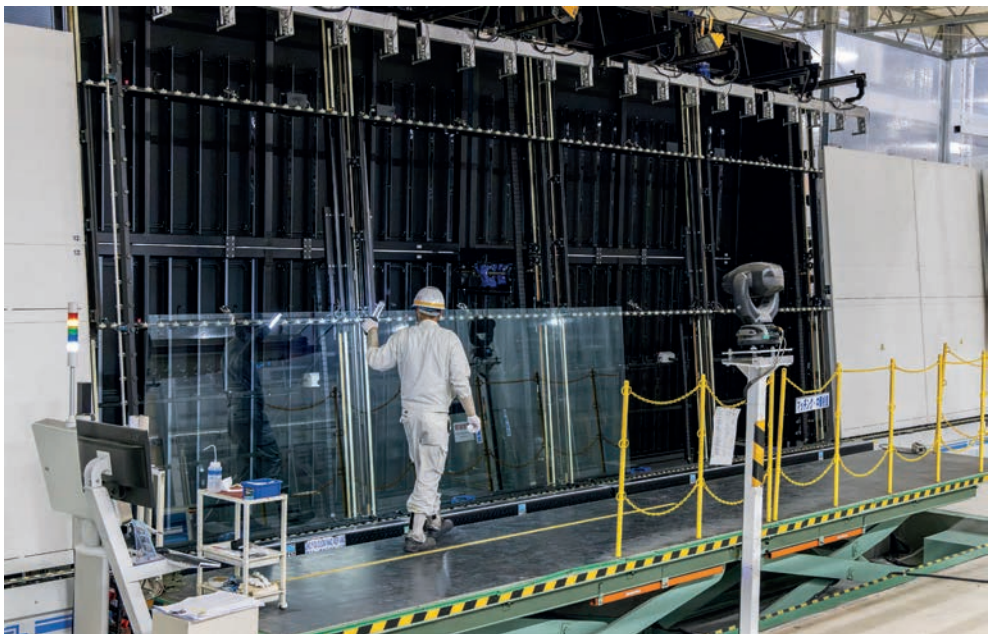
A VISION ROOTED IN EXPERIENCE

"Our story began in 1987," says Toshiaki Kato, CEO and Founder of NBS. "At the time, we were a glass delivery company." In the years that followed, NBS steadily expanded its role - from logistics to operational support and eventually to direct management of production activities. The company moved into tempered glass, then laminated glass, ultimately becoming a fully integrated glass manufacturer. "Everything has always been managed in-house, in a fully self-contained way," Kato explains. "This approach allowed us to control every stage, from materials and people to machinery." Today, at its East Japan facility, NBS produces large-format insulating glass and is recognised as one of the most structured players in the Japanese glass industry.

A strategic investment in automation and systemised production has enabled NBS to manufacture jumbo insulating glass up to 3,300 × 9,000 mm. Developed in close partnership with FOREL, the East Japan facility reflects a long-term vision that's focused upon competitiveness, safety and integrated large-format glass production.

FROM STANDARD PRODUCTS TO LARGE FORMATS

Before construction of the new plant, NBS focused primarily on standard products. Ongoing market analysis and close dialogue with customers, however, revealed a clear shift. "We realised that, particularly in the lower sections of buildings, glass sizes in Japan were becoming significantly larger," Kato notes. The company responded with a strategic decision: to build a factory capable of handling jumbo glass sheets up to 3,300 × 9,000 mm, without sacrificing efficiency, quality or cost competitiveness. "In construction, cost remains a decisive factor," he adds. "The real challenge was understanding how to combine large dimensions with competitiveness."



AUTOMATION AND THE SORTING SYSTEM: THE CORE OF THE PROJECT

To meet this challenge, NBS adopted a production model centred upon systemised processes and advanced automation. The objective was to ensure smooth access to every manufacturing stage - grinding, toughening and

insulating glass production – while integrating additional operations with minimal manual handling. The result is consistent quality, precision and enhanced safety, even when processing extreme formats. “When we saw the Sorting System in operation, we understood that systematic manufacturing was the right path,” Kato explains. “For Japan to remain competitive, we need to move beyond the limits of manual production.” During the project development phase, NBS visited other facilities and evaluated existing solutions. It was during this process that collabora-

tion with FOREL fully took shape.

WHY FOREL: A COMPLETE SYSTEM, NOT INDIVIDUAL MACHINES

Approximately 60 percent of the equipment installed at the new facility was supplied by FOREL. The decision was not driven by a single machine, but by the company's ability to deliver a fully integrated production flow. "FOREL's strength lies in covering the entire production chain," Kato explains. "From the Sorting System to edge processing and insulating glass production." In a plant of this scale, coordination between stages is critical. Cutting, intermediate processing and final assembly must function as a continuous, coherent system. Selecting a single partner capable of ensuring this level of integration proved decisive.

AUTOMATION WITH A HUMAN PURPOSE

At the East Japan facility, automation is not solely about productivity. Handling nine-meter-long glass sheets manually is neither feasible nor sustainable, in terms of safety or operational continuity. "Manually handling glass of this size is no longer an option," Kato states. With FOREL's solutions in place, operators now focus on supervision, quality control and process optimisation. The outcome is a safer working environment and a more stable, long-term production model.

A FACTORY DESIGNED FOR THE AGES

Today, the East Japan facility ranks among the largest and most advanced glass plants worldwide. It was designed around automation, systemisation and IoT integration to support production focused on high-value-added products. "When investing in a new factory, it's essential to be clear about what you want to achieve," Kato concludes. "If you are building a system, you need a partner capable of supporting it over time." With this foundation established, NBS looks ahead with clear objectives: to consolidate its competitive advantage and confirm its position as a national benchmark in large-format architectural glass production. A factory designed not only for today's demands - but for decades to come.

FOREL

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www.nbstk.co.jp

Transforming Glass Plant Maintenance with ZIPPE's zmart®360°

Digital transformation is reshaping glass manufacturing. Here ZIPPE's zmart®360° platform brings service and maintenance fully into the connected era. By integrating documentation, ticketing, QR-based access and optional AI-driven support, the system reduces downtime, accelerates problem resolution and enables smarter, data-informed plant management worldwide.

In today's fast-paced industrial environments, optimising the performance and reliability of glass plant equipment is more critical than ever. To meet this challenge, Zippe has developed zmart®360°, a comprehensive digital service and maintenance platform designed to transform how operating personnel interact with system data, documentation, and support services. The Zippe zmart®360° tool goes far beyond a digital filing cabinet. It is a fully integrated, interactive platform created to simplify service and maintenance workflows in glass production. By combining electronic documentation storage, maintenance planning, spare parts enquiries, real-time service communication, and historical tracking, zmart®360° enables plant teams to make faster, more informed decisions - anytime, anywhere. Whether addressing urgent repair needs, scheduling preventive maintenance, or accessing equipment documentation, zmart®360° functions as a constant digital assistant. The web-based platform is accessible 24/7 via PC, tablet, or smartphone, ensuring support is always within reach.

A SMARTER WAY TO MANAGE A PLANT

Time-consuming email exchanges, paper manuals, and delayed phone responses can hinder efficient plant management. With zmart®360°, teams gain immediate access to essential information within a single environment.

What zmart®360° Includes:

Electronic storage of system documentation - All essential files, including manuals, wiring diagrams, and repair instructions, are centrally organised and instantly retrievable.

- Maintenance plans - Scheduled maintenance tasks can be monitored and managed without manual tracking;
- Direct spare parts enquiry option - The correct parts can be identified and requested promptly, reducing ordering errors and delays;
- Direct service call enquiries - Service requests can be raised quickly and tracked directly within the platform;
- Service history tracking - A complete record of open and completed service cases supports analysis and informed decision-making.
- Electronic ticket function - Issues can be submitted and tracked, ensuring structured communication between plant teams and service experts.

WHY ZMART®360° IS AN EXCELLENT CHOICE

The objective behind zmart®360° is clear: streamline processes, reduce downtime, and increase productivity.

Key Benefits:

- Instant access to data - System-related information is available digitally at the touch of a button;
- Short response times - Issues can be reported and addressed quickly, minimising communication delays;
- Faster problem resolution - Comprehensive documentation and historical data improve troubleshooting efficiency;
- Paperless documentation - Electronic storage reduces administrative effort and potential manual errors;
- Reduced travel and effort - Mobile access eliminates unnecessary movement between machines and offices;
- Time savings and efficiency - Less time spent searching for information means more time focused on production;
- Minimised downtime - Faster issue detection and resolution help maintain continuous operation.

HOW IT WORKS - SIMPLE, SMART AND EFFECTIVE

Each relevant plant component is labeled with an individual QR code. When scanned via smartphone or tablet, the code provides direct access to real-time, component-specific information.

This includes:

- Current component status
- Past service history
- Maintenance checklists
- Spare parts lists
- Direct links to raise a ticket or order parts

All information is also accessible via a secure web portal, ensuring equal usability from the office. Data is updated in real time as service cases are opened, processed, and resolved.

INTEGRATED COMMUNICATION WITH ZIPPE EXPERTS

The integrated ticket function allows users to:

- Submit service enquiries

to specific departments
- Request support calls
- Enquire about or order spare parts
- Track ticket progress
- Receive documented feedback and updates

When maintenance or repair work is required, all relevant information is already stored within the platform, eliminating the need to search through emails or paper files.

AI SUPPORT TO SUPERCHARGE MAINTENANCE

To further enhance performance, zmart®360° includes optional AI-based features designed to support troubleshooting and plant operations.

AI-Driven Features:
- Natural language queries - Users can ask questions in plain language and receive precise answers;
- Multilingual support - The system supports 60 languages, automatically translating documentation and responses;
- Contextual problem solving - The AI prioritises plant-specific documentation and references previous service cases to recommend solutions;
- 24/7 availability - Immediate assistance is available at any time;
- Cited references in every answer - Responses include links to the exact document sections for further review.

Rather than functioning as a generic chatbot, the AI component continuously learns from plant data, enhancing its accuracy and relevance over time.

ONE PLATFORM, UNLIMITED POSSIBILITIES

For plant managers, maintenance technicians, and service engineers, zmart®360° centralises service and maintenance processes within a single digital environment. The result is faster decision-making, transparent communication, reduced operational stress, increased equipment uptime, and improved long-term planning.

zmart®360° represents a comprehensive digital transformation of service and maintenance workflows. By integrating automation, connectivity, and intelligent data access, it positions glass plants to respond more effectively to current operational demands while preparing for future maintenance strategies.

IN SHORT

Zippe's zmart®360° is a digital platform designed to streamline maintenance and service operations. Through QR code integration, digital documentation, ticketing and service history tracking, it simplifies workflows and enhances response times.

AI-driven features, including multilingual support and natural language processing, further extend its capabilities across diverse, global workforces. As the glass industry advances toward digital-first solutions, zmart®360° offers an adaptable and forward-looking approach to service and plant management.

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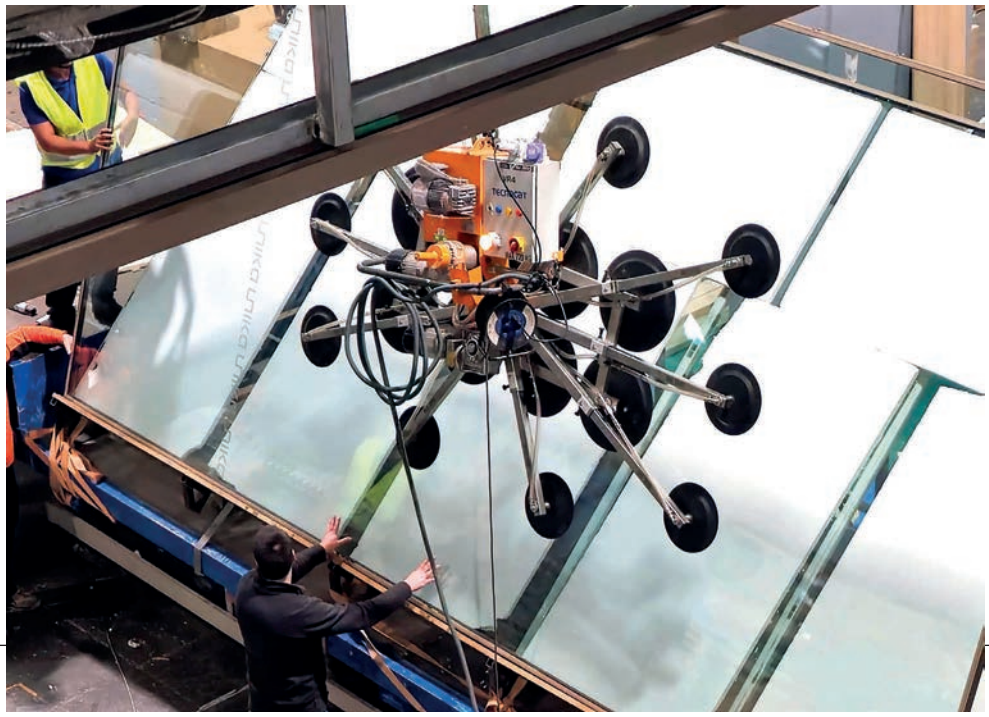
Designing long-term reliability with TECNOCAT engineering

Long-term performance in flat glass handling depends on durability, modularity and operational control. With nearly three decades of experience, TECNOCAT has evolved alongside industry demands - delivering equipment designed for sustained uptime, adaptable configurations and reliable lifecycle value across factory production and on-site installation environments worldwide.



EQUIPMENT BUILT TO LAST: RELIABILITY AND LIFECYCLE VALUE IN GLASS HANDLING

In flat glass handling, performance is measured over years-not merely by lifting capacity or cycle time, but by how consistently equipment delivers uptime, stable and safe handling, and reliable day-to-day operation under real working conditions. The objective is clear: minimise unplanned stoppages, reduce operational risk and maintain predictable productivity over the long term. The industry continues to evolve rapidly. Glass formats are expanding, production rhythms are accelerating and safety expectations are rising. As a result, companies across the sector are placing greater value on equipment capable of sustaining stable performance throughout extended service lifecycles. Within this context, Tecnocat has established a solid international reputation in flat

glass handling and lifting solutions. With nearly three decades of experience, the company develops equipment for both factory environments and on-site installation projects, focusing on controlled movement, operational safety and long-term reliability.

A TRACK RECORD SHAPED BY THE INDUSTRY'S EVOLUTION

Since 1997, the flat glass industry has undergone steady transformation. Panels have grown larger and heavier, applications more complex and

safety requirements more stringent. At the same time, production lines and installation sites face increasing pressure to raise productivity without compromising safety, precision or operational continuity - leaving virtually no margin for error.

Tecnocat has evolved in parallel with these demands, maintaining a clear specialization: engineering professional solutions that move glass safely, efficiently, and with full operational control. In many facilities, older-generation Tecnocat units continue to operate alongside current models, underscoring a simple reality: when engineering fundamentals are sound, reliability endures.

DURABILITY AS ROI

For glass processors and installers, durability is not a marketing feature; it is essential lifecycle value. Equipment that remains productive over many years reduces replacement cycles, limits unplanned stoppages, and supports operational stability. This continuity directly affects both cost control and output. Fewer interruptions sustain throughput, fewer incidents reduce rework, and predictable performance strengthens planning. On site, dependable equipment also supports safer execution in environments where precision is critical and conditions are less controlled. Reliability mitigates operational risk and helps teams maintain consistent standards across projects.

MODULARITY THAT ADAPTS TO CHANGING FORMATS

Another key driver of long-term value is modularity. Glass formats evolve, workloads fluctuate, and capacity requirements are rarely static. Modular, configurable equipment enables operators to adjust gripping surfaces, configurations and capabilities to match real-world applications-without multiplying machines for every new project or format. In its latest equipment generation, Tecnocat has reinforced this approach. Beyond safety and durability, updated designs provide greater adaptability to varying glass sizes and handling requirements. A single machine can be configured to cover a wide capacity range, supporting both lighter and heavier loads while maintaining operational control.

A LONG-TERM APPROACH BUILT ON ENGINEERING AND FIELD FEEDBACK

Sustained progress in this sector is driven by practical feedback from both factory operations and on-site installation projects. Tecnocat's international presence, strengthened through ongoing participation in key industry events, enables the company to remain closely aligned with market requirements, continuously refine its solutions and anticipate emerging handling challenges.

Ultimately, 'equipment built to last' is reflected in measurable daily results: safer handling, higher uptime and long-term lifecycle value - whether supporting high-cycle production environments or complex installation work.

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INTERNATIONAL GLASS MANUFACTURING SHOW

IGMS 2026

From Sand to Hand

DUBAI
21–23 April

Glass is more than a material — it is the surface that shapes our skylines, brightens our homes, and drives innovation in smart cities. From timeless façades to cutting-edge technologies, glass tells the story of progress.

The International Glass Manufacturing Show (IGMS 2026) celebrates this journey. Taking place in Dubai (21–23 April), IGMS is the onlyevent in the Middle East that brings together the entire glass industry — from raw materials and machinery to the latest in smart and sustainable solutions.

Exhibitors from around the world will showcase innovations, while architects, developers, and buyers discover the products shaping tomorrow's projects. It is a place where business meets inspiration, and where global opportunities connect with regional ambition.

At IGMS 2026, the journey of glass — from sand to hand — comes to life.

glass-show.com

Preventive maintenance excellence thanks to KERAGLASS innovation

Consistent glass quality depends upon process stability as much as technology. By integrating protected heating elements, advanced convection, automated roller cleaning and continuous sensor supervision, KERAGLASS furnaces transform maintenance into a preventive strategy that improves repeatability, reduces downtime - all while extending equipment lifespan.

Glass quality is not determined solely by installed technology, but by the continuity and stability of the production process. In tempering operations, preventive maintenance is a decisive factor in improving repeatability and ensuring consistent performance over time.

COMPONENTS THAT ENSURE PROCESS QUALITY AND RELIABILITY

Heating elements

Heating elements are the core of the furnace's heating system. An exclusive protection system developed by Keraglass for lower heating elements enhances radiation quality and delivers long-term reliability, with an operating lifespan exceeding 20 years.

THE CONVECTION SYSTEM

An exclusive air-generation system, based on turbines integrated into the furnace and operating automatically with filtered air, maintains exceptional cleanliness inside the heating chamber, preventing contamination and related glass-quality issues.

Accurate air-flow balancing ensures uniform heat distribution, making the convection system fundamental to homogeneous heating and stable, repeatable performance.

SYSTEMS AND COMPONENTS TO BE MONITORED

Rollers

Roller inspection and cleaning directly influence surface quality and the stability of glass movement inside the furnace. Scheduled maintenance reduces the risk of defects and unplanned downtime.

Keraglass has developed the RCK Machine, an automat-

ed roller-cleaning solution that eliminates the need for disassembly. The system reduces breakage risks, minimizes downtime, and lowers labour costs, while enabling faster, more efficient maintenance procedures.

Temperature sensors

Data is only as reliable as the sensor that generates it. Periodic calibration is therefore essential to ensure accurate measurement and precise process control. Dedicated software continuously monitors sensor status, alerting operators to anomalies and prompting routine maintenance activities needed to maintain high system performance.

Why preventive maintenance makes the difference:

- Greater process repeatability
- Reduced unplanned downtime
- Lower maintenance and intervention costs
- More consistent glass quality over time
- Extended equipment lifespan
- The Keraglass approach

Keraglass furnaces are engineered to simplify the monitoring of critical components and to support efficient maintenance planning. Advanced supervision solutions enable continuous status monitoring and timely intervention, transforming maintenance from a reactive necessity into a structured preventive strategy.

Looking ahead

Structured maintenance is the first step toward more efficient and reliable production. In an increasingly demanding market, integrating supervision and preventive practices into daily operations is no longer optional, but strategic.

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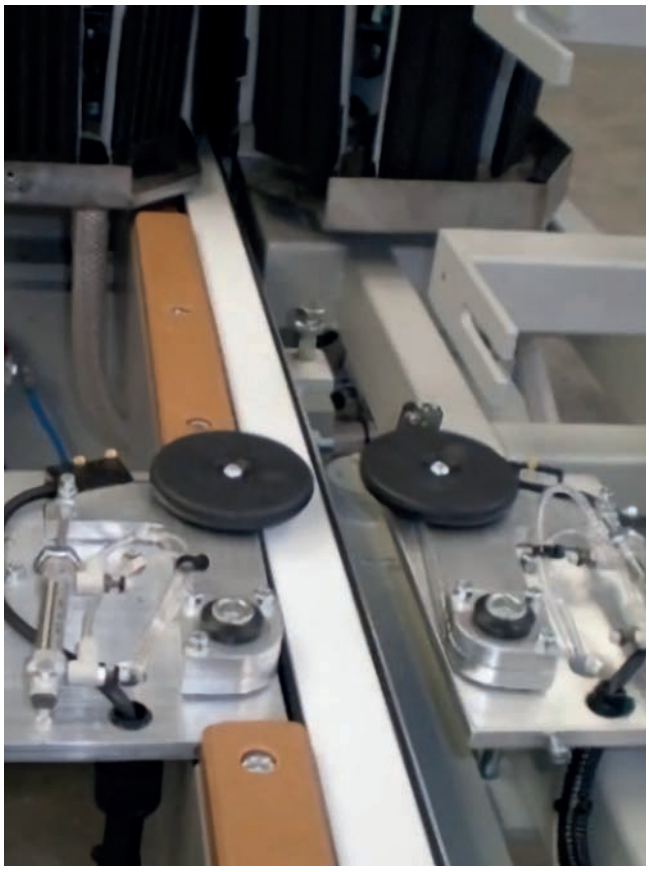
Configurable automation pathways developed with SCHIATTI ANGELO expertise



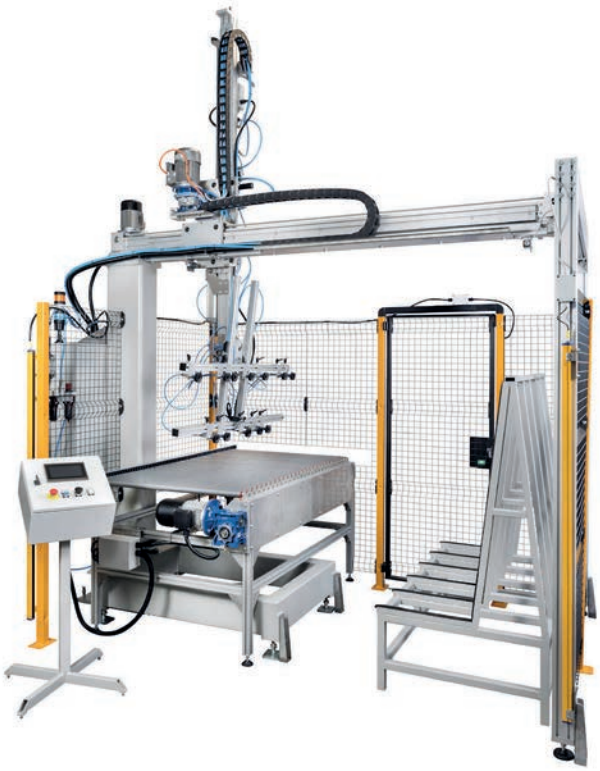
Automation in glass edging is not all-or-nothing. With a modular architecture, SCHIATTI straight-line systems allow processors to scale from manual operation to full automation - adding thickness control and loading solutions as needed. The result is measurable productivity gains aligned precisely with real production demands.

When investing in glass processing equipment, automation is not a binary choice. The real question is how much automation makes sense within a specific production context. Not every glass processor requires a fully automated line, yet every operation should retain the option to scale when the time is right. Schiatti Angelo's straight-line edging machines exemplify this

modular approach. Starting from a proven base model, the system can evolve into a complete turnover line -composed of four straight-line edgers and three turning tables- with automation introduced precisely where it adds value. The architecture remains consistent across configurations, allowing upgrades without replacing the entire system. Instead, processors add only the components that address specific bottlenecks.

LEVEL ONE: STANDARD CONFIGURATION

Manual thickness adjustment and operator-controlled loading define the entry configuration. It is a robust and reliable setup for shops managing moderate volumes or varied production runs where flexibility outweighs raw speed. The operator retains full control of the process, adjusting parameters as needed. For many processors -particularly those handling a wide range of glass types and sizes in smaller batches- this configuration offers a balanced combination of investment control and operational adaptability.



LEVEL TWO: AUTOMATIC THICKNESS READING

A sensor detects glass thickness and configures all machines in the line accordingly. When thickness changes, the system pauses the inlet conveyor, waits for all glass in process to complete its cycle, and then automatically resumes with updated settings. Manual adjustments are eliminated, along with the risk of processing glass with incorrect parameters. Transitions between batches become seamless. This level addresses one of the most common sources of errors and downtime in edging operations: manual setup during thickness changes. Operators can shift their focus from continual machine adjustment to quality control and supervision.

LEVEL THREE: AUTOMATIC LOADER

The automatic loader manages glass picking and feeding autonomously, freeing the operator from continuous manual loading. Intervention is limited to replacing empty racks with full ones, ensuring consistent cycle times regardless of shift length or operator fatigue. This configuration maximises throughput while reducing physical strain - an increasingly important consideration during extended production runs. Each level builds upon the previous one. Processors may begin with the standard version and upgrade later, or invest in full automation from the outset. The essential principle is to align configuration with actual production requirements rather than paying for unnecessary complexity. This is the 'Tailored Technology' philosophy in practice: the right automation, precisely where it delivers measurable results.

Electromechanical pressing revolutionised by ITECH engineering expertise

At VITRUM last year, ITECH Srl demonstrated how advanced automation, precision engineering and Industry 4.0 integration are all reshaping insulating glass production. From its award-winning Dual-Blade Profile Cutting Machine to the TAURO electromechanical press, the company presented technologies designed to streamline workflows, reduce errors and elevate manufacturing performance.

The 2025 edition of VITRUM, held at Fiera Milano Rho from September 16 to 19, once again gathered innovators, engineers and manufacturers from

around the world, offering a global stage for the latest technologies in flat and insulating glass production. Among the exhibitors, ITECH Srl reaffirmed its position in insulating glass machinery. The company's Dual-Blade Profile Cutting Machine, recipient of the Best Technological Innovation Award 2025, attracted strong interest from industry professionals, highlighting a sustained focus on automation, precision and sustainability in manufacturing processes. While the Dual-Blade Profile Cutting Machine was the centrepiece of ITECH's presentation at VITRUM 2025, the company's most recent development -the TAURO electromechanical press, introduced last year in late December- signals its forward-looking strategy for next-generation insulating glass production. Together, these solutions

reflect an integrated approach that combines advanced software, high-performance electromechanical systems and operator-focused design to enhance efficiency and process reliability.

REDEFINING SPACER PROFILE PROCESSING

The Dual-Blade Profile Cutting Machine addresses one of the most intricate stages in insulating glass production: the preparation and cutting of spacer profiles for standard, duplex and shaped units. Traditionally, this phase has required detailed manual calculations, precise measurements and constant operator oversight. Even minor inaccuracies could result in defective units or material waste, creating costly production bottlenecks. ITECH's system automates these complex tasks through the integration of advanced software and precision mechanics. Operators define grid layouts directly via a digital interface, entering height and width subdivisions with ease. The software then calculates the exact lengths of external and internal profiles, as well as overall assembly dimensions. By accounting for intersections, angles and complex geometries, the system eliminates manual calculations and significantly reduces the risk of human error. Consist-

ent, high-precision output is ensured - even for shaped glass units that previously required extensive manual intervention. For medium-sized manufacturers, the operational impact is substantial. By automating error-prone calculations, operators can focus on optimising efficiency and maintaining quality control. The workflow -from design to profile preparation and final assembly- becomes faster and more streamlined, increasing productivity without compromising the rigorous precision standards demanded by the market. Versatility further strengthens the machine's value proposition. Two selectable blades, an automatic cleaning and lubrication system, and compatibility with aluminum, plastic and steel profiles enable it to meet a broad range of production requirements.

CONNECTIVITY AND INDUSTRY 4.0 INTEGRATION

Another competitive advantage lies in ITECH's remote connectivity capabilities. Integrated PLC systems enable real-time technical support, allowing specialists to assist operators and resolve issues remotely, thereby reducing downtime and shortening service response times. Full integration with Industry 4.0 frameworks ensures seamless connectivity with digital factory management systems, granting access to real-time production data, performance monitoring and advanced operational analytics. This level of digitalisation enables manufacturers to optimise material usage, improve throughput and maintain precise control over each production stage. ITECH's presence at VITRUM 2025 extended beyond the display of machinery; it articulated a clear direction for the future of glass manufacturing. Visitors from more than 90 countries observed how automation and precision engineering can reshape production processes. Operational efficiency, reduced error rates and consistently high product quality resonated with established partners and new prospects alike, reinforcing the company's international standing.

TAURO: THE EVOLUTION OF ELECTROMECHANICAL PRESSING

Introduced at the end of December last year, the TAURO electromechanical press represents a significant advancement over traditional hydraulic systems.

Fully automatic, it ensures uniform pressure distribution across the glass surface while eliminating the variability typically associated with hydraulic technology. A brushless servo motor governs the pressing phase, delivering smooth, precise movements even at high operating speeds without sacrificing accuracy. Designed for versatility and performance, TAURO processes glass units up to 4000 × 2500 mm, including double, triple, shaped and structural configurations, with standard thicknesses up to 80 mm. The press offers an opening of up to 500 mm to facilitate cleaning and maintenance, and transport speeds of up to 34 meters per minute. An ergonomically positioned touchscreen interface guides operators step by step, minimising errors and simplifying complex workflows. The system also enables gas filling of insulating glass units with concentrations exceeding 90 percent, combining operational efficiency with enhanced thermal performance and environmental sustainability.

SHAPING THE FUTURE OF INSULATING GLASS PRODUCTION

As demand for automation, precision and data-driven manufacturing continues to grow, solutions such as the Dual-Blade Profile Cutting Machine and the TAURO press are establishing new industry benchmarks. By streamlining workflows, optimising material use and integrating into digital production ecosystems, ITECH equips manufacturers to compete in an increasingly intelligent and interconnected industrial environment. ITECH Srl's participation at VITRUM 2025 confirmed its role as a technological innovator in the flat glass sector. The Dual-Blade Profile Cutting Machine demonstrated how intelligent automation can simplify complex production stages, while the TAURO press underscores the company's commitment to next-generation electromechanical solutions. Through advanced software integration, precision engineering and operator-centred design, ITECH provides manufacturers with the tools to increase productivity, enhance product quality and advance toward smart, sustainable and data-driven glass manufacturing.

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TK Lamijet: Italian excellence, courtesy of TK's modular innovation

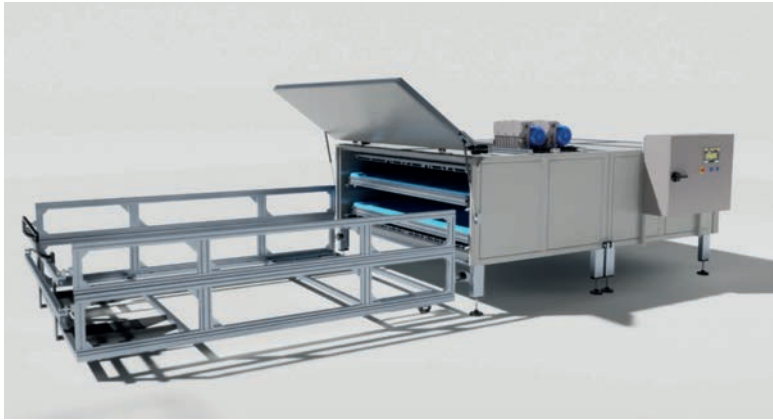
The TK Lamijet product range represents most consequential Italian industrial excellence in safety glass lamination, where the Made in Italy design meets the artisan-level engineering of the TK team based in Erba (Como). Every oven is a product of rigorous local craftsmanship, built exclusively with high-quality materials of Italian or European origin. This commitment to local sourcing ensures that each unit is not only a masterpiece of mechanical reliability but also a sustainable choice for modern glass processors.

MODULAR SCALABLE DESIGN

At the heart of the TK philosophy there is a unique approach to modularity that redefines factory evolution and production capacity. Every TK system is built on a scalable architectural concept that allows it to grow alongside a client's business. Starting from optimised predefined models, the TK team can realise specific layouts tailored for personalised production flows. From smaller configurations designed for processors starting their own business or with reduced processing volumes, to Jumbo versions handling oversized glass sheets, thus extending TK modular capability to a massive scale.

TAILORED SOLUTIONS

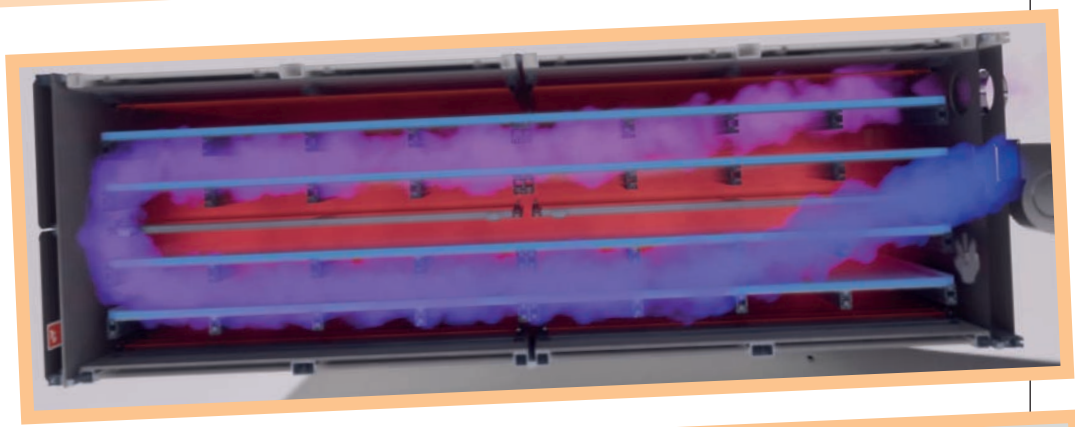
This spatial intelligence is particularly evident in how the system addresses factory constraints. Ovens can be configured with either front or lateral openings, ensuring a perfect fit even in restricted or unconventional layouts. Indeed it is precisely thanks to their unit-based construction and flexible modular concept that TK ovens are so easily handled and installed - being typically assembled directly onsite. This flexibility extends beyond physical dimensions into the very core of production efficiency.

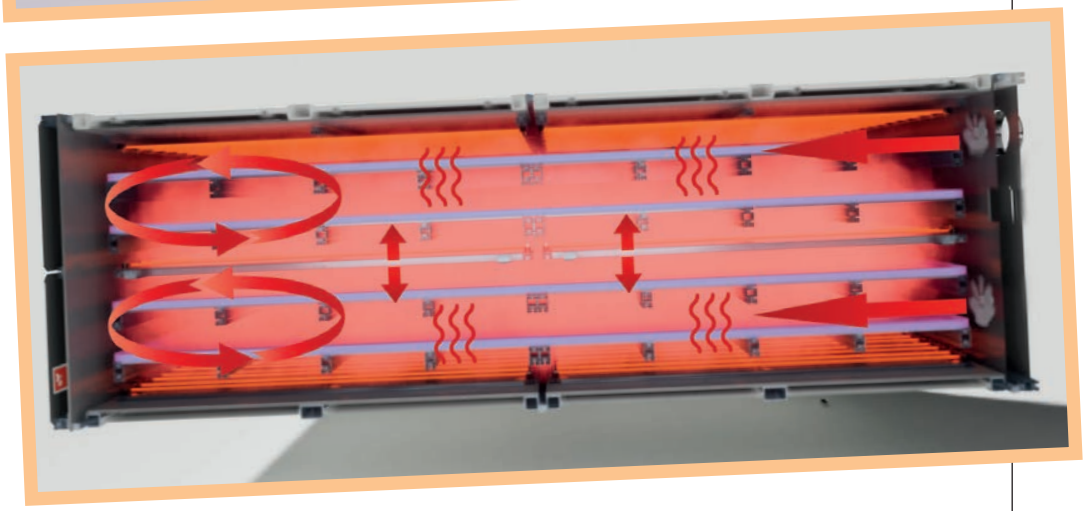


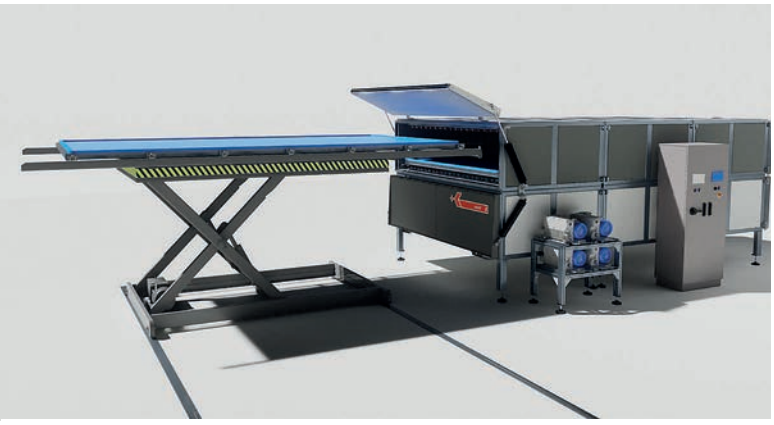
A high-performance alternative to traditional autoclaves, the TK Lamijet features hybrid radiant-convection technology, multizone thermal control, forced cooling and Industry 5.0 - ready connectivity - all to deliver energy efficiency, optical precision and flexible production growth.

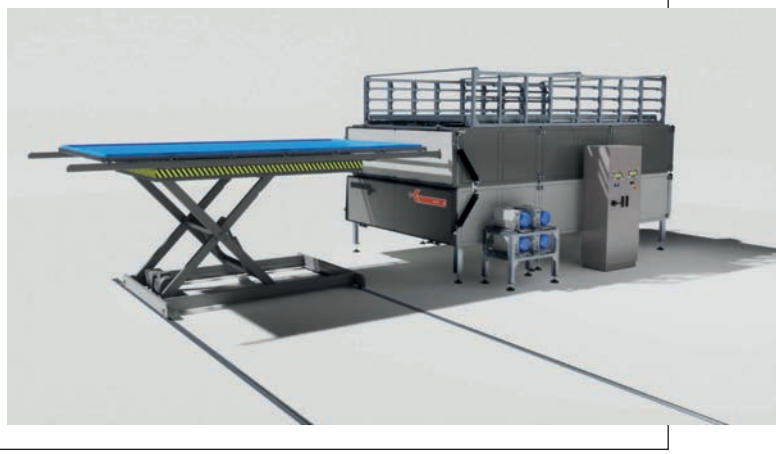
OPTIMISED PERFORMANCE VERSUS TRADITIONAL AUTOCLAVES

The TK Lamijet stands as a lean, high-performance alternative to traditional expensive autoclave systems, which often demand massive footprints and high operational overheads. By contrast, the TK system offers a significantly lower barrier to entry regarding both investment and energy consumption. One of its key operational advantages is its independence from full-load requirements. While autoclaves need to be filled to remain cost-effective, the TK system remains profitable even with small batches or single pieces, allowing for "just-in-time" production that responds instantly to market demands.









ADVANCED HYBRID TECHNOLOGY

The combined forced cooling system and heating radiation technology of TK Lamijet Hybrid ovens represent an advanced laminating solution that integrates controlled radiant heat combined with dynamic air management to deliver exceptional process performance. By uniting precise radiant heating elements with air agitators and optimised forced convection cooling system, TK Lamijet achieves perfect uniformity through highly accurate heat distribution across the entire glass surface, ensuring consistent thermal profiles essential for high-performance laminated glass. This hybrid configuration enables maximum speed, significantly reducing heating cycles compared to traditional infrared-only systems, thereby increasing productivity without compromising quality. The result is superior optical performance, as the controlled thermal balance eliminates common defects such as bubbles, haze, or distortions, producing crystal-clear, optical-grade laminated glass. In sum, the technical superiority of the system is driven by a hybrid heating technology that combines radiation and convection. This dual-system approach ensures process stability and flawless thermal distribution across all interlayer types, such as EVA, PVB, SGP, TPU making it an efficient and flexible solution for architectural, automotive and specialty glass applications. This thermal precision is managed by a sophisticated and energy saving multizone control system, where power is distributed through independent zones to maintain a maximised homogeneous temperature profile. To ensure the highest quality results, a forced cooling system shortens cycle times, which is vital for achieving the superior transparency and structural integrity required in high-end glass products.

TKONNECT 4.0

Integrating these mechanical capabilities into the modern digital landscape is the TKonnect 4.0 system that, combined with an intuitive PLC control, transforms the oven into a smart, data-driven hub, allowing operators to monitor and supervise production cycles remotely via smartphone or computer. Being fully Industry 5.0 ready and built with European components, the machine is perfectly compatible with the latest IoT requirements.

A FUTURE-PROOF INVESTMENT IN GLASS EXCELLENCE

The TK Lamijet redefines the standards of safety glass lamination, melting Italian savoir-faire with the human-centric innovation of Industry 5.0. By adopting a platform centred on agile scalability, glass processors can abandon the operational burdens of conventional autoclaves. TK Lamijet offers a future-proof ecosystem that scales with your ambitions, delivering personalised solutions from one-shot processing to global, jumbo-scale operations.

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Precision and speed combined in SKILL GLASS systems

In the following recent interview with our editorial team, SKILL GLASS Sales Director Paolo Reffo Scarso explained how advances by his company in vertical machining with the new Skill E-D are expanding hardware, services and automation. Exclusive features, enhanced processing flexibility and a continued commitment to operational simplicity all position the system at the forefront of efficiency-driven manufacturing.

Skill Glass presents the new release of the Skill E-D Vertical Machining Center, marking a further step in the technological evolution of its flagship range. Here Paolo Reffo Scarso, Sales Director of the Vicenza-based company, outlines the innovations and offers a preview of the features available on the new models.

EXPANDING THE BENCHMARK

"The new features will be officially presented at the next edition of Glasstec 26, the international reference exhibition for the sector," he explains. According to Reffo Scarso, the update goes beyond hardware improvements. It significantly expands the service package integrated into the new machines, setting new benchmarks in potential, performance and control capabilities. Among the most significant innovations are exclusive solutions such as Reverse Loading and the Automatic Output Height Adjustment function. The latter enables optimised unloading at different working levels, eliminating the need for complex modifications or costly systems.

UNLOCKING NEW PROCESSING POSSIBILITIES

Reffo Scarso also highlights the exclusive Extra-Size Option, which allows glass larger than the length of the roller conveyors to be processed, effectively expanding production possibilities. The Skill E-D -the flagship model in the range- is thus confirmed as one of the most advanced solutions in the field of vertical machining centers. Its design concept focuses on speed and process efficiency. Glass is moved by automatic vacuum belts located inside the processing cabin - an exclusive technological solution developed by Skill Glass and a well-proven technical choice offering tangible advantages:

- Much shorter movement and processing times during glass changeovers
- High processing precision
- Significant reduction in mechanical structures and related maintenance

AUTOMATION WITH OPERATIONAL SIMPLICITY

These features are complemented by a complete range of services and accessories that make the machine fully automatic and ready for integration with centralised loading, control and sorting systems, in line with the most modern automated factory models. Finally, Reffo Scarso underscores a distinctive aspect of the company's design philosophy: even as technologies and automation become increasingly advanced, operational simplicity remains a priority. This approach guarantees accessibility, rapid learning and ease of use - elements that are increasingly strategic for efficiency-oriented manufacturing companies.

High-performance IGU systems delivered by BEST MAKINA

A new collaboration strengthens Middle Eastern IGU manufacturing, as BEST MAKINA supplies advanced washing, gas-filling and sealing technologies to Gulf Glass Industries. The investment enhances automation, production capacity and consistent quality - reinforcing long-term growth ambitions in a region experiencing steadily increasing architectural glass demand.

With 26 years of engineering expertise and the proven trust of glass professionals worldwide, Best Makina has entered into a strategic collaboration with Gulf Glass Industries (GGI), one of the leading glass processors in the Middle East. As part of this project, two key pieces of machinery have been delivered to strengthen and enhance GGI's manufacturing capabilities.

- BWPG - Automatic Glass Washing and Combining Line with Servo Motor-Driven Gas Filling Press
- BLS-S - Automatic Two-Component Sealing Extruder with Servo Motor-Driven Pump

This investment reinforces GGI's technical capabilities across the region, supported by Best Makina's quarter-century of industry experience.

GULF GLASS INDUSTRIES: A GROWING PRODUCTION POWER IN THE REGION

Headquartered in the United Arab Emirates, Gulf Glass Industries stands among the region's established and innovative manufacturers in architectural and industrial glass processing. With high quality standards, modern production infrastructure, and a diverse product portfolio, the company serves markets across the Middle East and Africa (MEA). The new investment aligns with GGI's objective to expand production volume, increase automation levels, and ensure consistent quality to meet rising regional demand. Let us take a closer look at the machinery included in GGI's latest investment.

BWPG - AUTOMATIC GLASS WASHING AND COMBINING LINE WITH SERVO MOTOR-DRIVEN GAS FILLING PRESS

Integrated into GGI's production facility, the BWPG is a fully automatic, servo motor-driven, gas-filling IGU production line equipped with a servo motor-controlled press panel and high-speed production capability. These features elevate production quality across the entire workflow.

Key Highlights:

- Low energy consumption
- Optimized gas filling
- High efficiency with minimal operator intervention
- Low operational and maintenance costs thanks to long-lasting components
- Strong performance-to-investment cost ratio

This IGU line enables Gulf Glass to expand its insulated glass production capacity while ensuring sustainable quality—an essential requirement for modern architectural applications.

BLS-S - AUTOMATIC TWO-COMPONENT SEALING EXTRUDER WITH SERVO MOTOR-DRIVEN PUMP

Completing the project, the BLS-S is a fully automatic two-component sealing robot that plays a critical role in accelerating and automating Gulf Glass's production processes.

The system delivers superior speed and consistent application quality during secondary sealing - an essential stage in IGU manufacturing.

Key Advantages:

- Precise axis control through servo motor drives
- Digital metering system
- Long-lasting components
- Heavy-duty mechanical structure designed for continuous industrial operation

As the final stage of IGU production, the BLS-S ensures a flawless sealing process, increasing pro-

duction capacity while enhancing overall product quality.

THE EXPANSION OF BEST MAKINA'S PRESENCE IN THE MIDDLE EAST

This collaboration marks another significant step in Best Makina's expansion across the Middle Eastern market. Its user-friendly and cost-effective production technologies align closely with GGI's capacity growth objectives, creating a strategic synergy between the two companies.

LOOKING AHEAD

The partnership between Best Makina and Gulf Glass Industries extends beyond the delivery of IGU production systems. It reflects a long-term cooperative approach grounded in shared commitments to technology, quality, and sustainable manufacturing. By closely following industry trends and the evolving needs of IGU buyers, Best Makina will continue to support the growth and development of IGU manufacturers worldwide.

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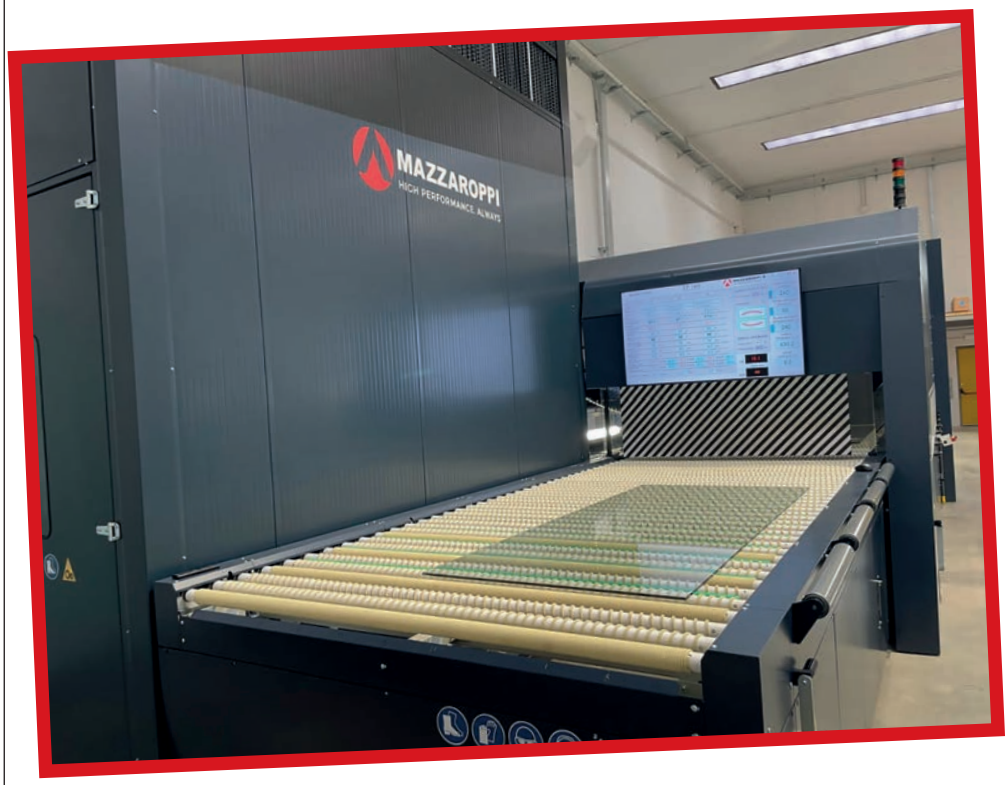
Reducing anisotropy with MAZZAROPPI ENGINEERING advanced control



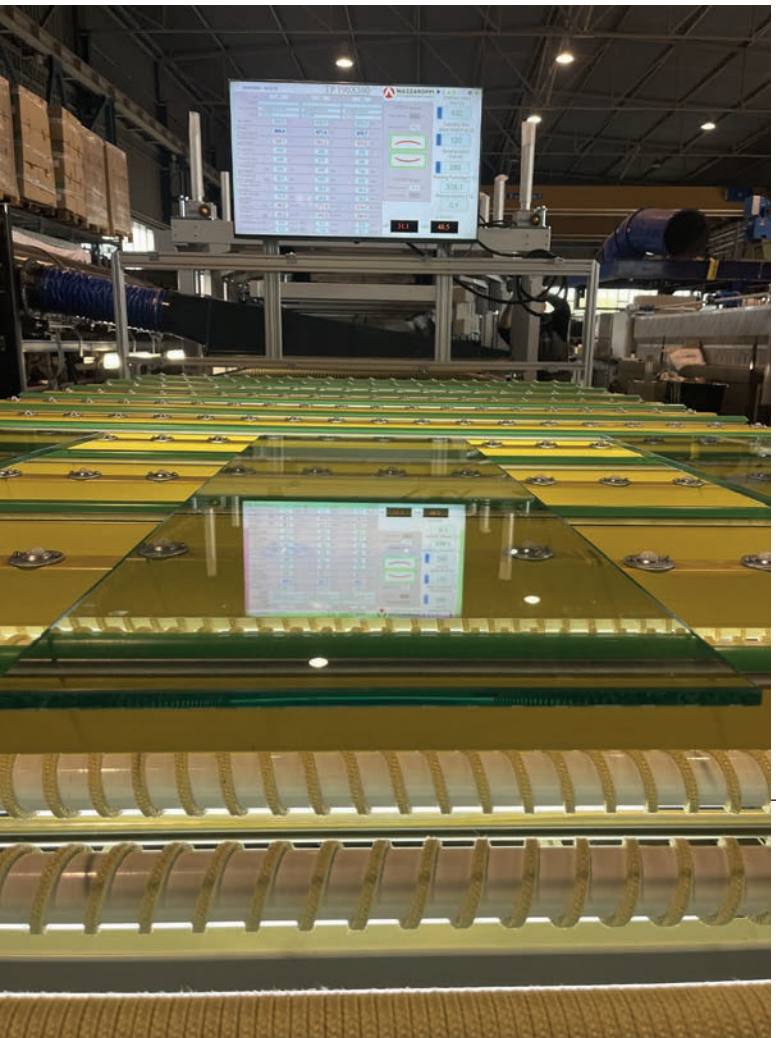
How do Mazzaroppi furnaces achieve their guaranteed performance? The answer lies in intensive research and development that has resulted in advanced tempering technologies focused upon measurable outcomes. Mazzaroppi furnaces rank among the most energy-efficient in their category, with energy consumption up to 70 percent lower than traditional systems. Yet efficiency alone is not the company's objective. Based in Aprilia, the manufacturer has developed targeted solutions to improve tempered glass quality, minimising-or where possible eliminating-the primary process defects. "Everyone promises excellent tempering results," says Antonio Mazzaroppi, CEO. "What matters is demonstrating with concrete data how this is achieved. When we say our systems make tempering simple, we mean that this ease of use is supported by advanced design capable of automatically managing the most critical process variables."

HOW WE AVOID DISTORTIONS

At the core of the system is intelligent control software that coordinates temperature management, sheet handling and the cooling phase in real time. The software continuously self-regulates according to the characteristics of the glass being processed, optimising parameters such as transport speed, heat distribution and quenching sta-

Advanced tempering technologies developed by MAZZAROPPI combine intelligent process control, segmented heating and optimised quenching to reduce energy consumption by up to 70 percent whilst minimising distortions and anisotropy. Real-time optical monitoring ensures consistent quality - supporting sustainable, high-performance glass production worldwide.

bility. "The transport of glass in our furnaces is designed to minimise phenomena such as roller wave," explains Federico Mazzaroppi, Marketing Manager. High-precision servomotors control acceleration and speed with exceptional accuracy, automatically adapting to the thickness and dimensions of each sheet. This approach limits stress while the glass is in a plastic state, significantly improving flatness and optical quality. Handling alone, however, does not determine quality. Cooling is equally critical. During quenching, maintaining an even and balanced airflow across the entire sheet surface is essential, as even minimal variations can generate uneven stresses and deformations, including bowing, warping and edge lifting. Mazzaroppi furnaces are engineered to distribute cooling air uniformly and consistently across the glass surface, ensuring balanced tensioning and enhanced geometric stability in the finished product. The company's technologies also significantly reduce typical tempering defects such as edge lifting, bowing and warping. A highly segmented, multi-zone heating system delivers extremely uniform thermal balance across the entire surface of the glass. This precise temperature control directly reduces anisotropy. Combined with optimised convection and intelligent transport management, it minimises the temperature differences that generate internal stresses and birefringence. The result is a reduction in anisotropy intensity of up to 97 percent, delivering excellent visual quality in finished tempered glass.



REAL-TIME QUALITY CONTROL

To maintain consistently high standards, furnaces can be equipped with optical control systems at the outlet, including the zebra panel, which immediately identifies any sheet distortions. These systems can be integrated with the latest-generation automatic scanners capable of monitoring flatness and optical quality in real time, making process control increasingly accurate, objective and repeatable. Extensively tested technologies now enable hundreds of glassworks and companies worldwide to achieve high performance and low consumption daily, supporting more sustainable tempering from both environmental and business perspectives.

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Architectural glass reliability strengthened SYSTRON engineering

With the increasing use of magnetron-sputtered coatings on architectural and insulating glass -such as solar control and thermal insulation (Low-E) layers- edge deletion is becoming ever more critical. These predominantly multilayer functional coatings significantly enhance the energy performance of glass, while simultaneously imposing higher demands on downstream processing. In many applications, particularly in the insulating glass sector, selective removal of the coating in the edge area is essential. It ensures a permanently suitable bonding surface for sealants, supports the long-term stability of the edge seal, and fulfills structural or aesthetic requirements where glass edges remain visible.

TECHNICAL BACKGROUND: ADHESION, MOISTURE, AESTHETICS

Magnetron coatings are applied to float glass using the PVD (Physical Vapor Deposition) process through magnetron sputtering. They comprise multiple functional layers, often incorporating one or more silver layers as a core component.

These high-performance 'soft-coat' systems deliver excellent energy values but are more sensitive to mechanical stress and moisture exposure. In the edge zone, they are generally not designed to function as defined bonding substrates for primary or secondary sealants.

Drawing on practical experience, Florian Temper, Operations Manager at Eckelt Glas, notes:

"Without edge deletion, there is fundamentally a risk of adhesion problems between the coated glass pane and sealants such as butyl, silicone, polysulfide or polyurethane."

Beyond sealant adhesion, edge deletion is decisive for the durability of the edge seal. Temper adds:

"If the coating is not removed in the edge area, depending on the coating system used, there is a possibility of undercutting within the layer structure. Over time, this may impair the long-term stability of the edge seal, for

Edge deletion with the systron proMD

Process-reliable edge deletion is essential for ensuring adhesion, durability and aesthetics in coated architectural and insulating glass. Through practical experience and validated testing on demanding coating systems, SYSTRON technology demonstrates how precise parameter control enables consistent removal of functional layers while safeguarding long-term edge seal performance.

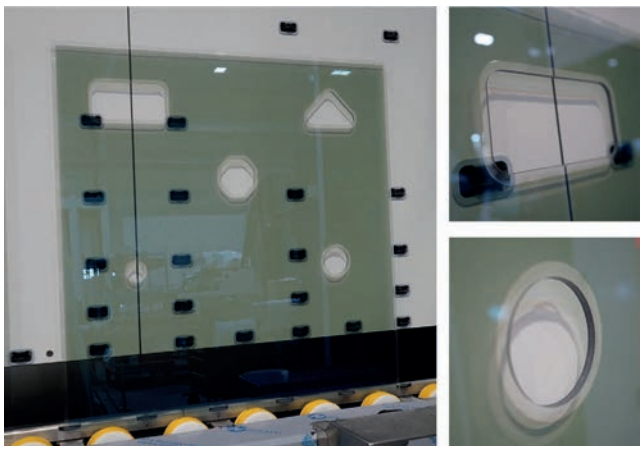
example through corrosion of the functional layers or reduced adhesion strength."
Edge deletion may also be required for aesthetic reasons, such as in stepped insulating glass units at building corners. In projects at Eckelt, edge areas are often coloured or sealed with tinted silicone to achieve a clean, uniform appearance. To stabilise the edge zone against moisture ingress and ensure lasting bonding quality, laminated safety glass units at Eckelt are also edge deleted in defined lamination configurations and coating systems.

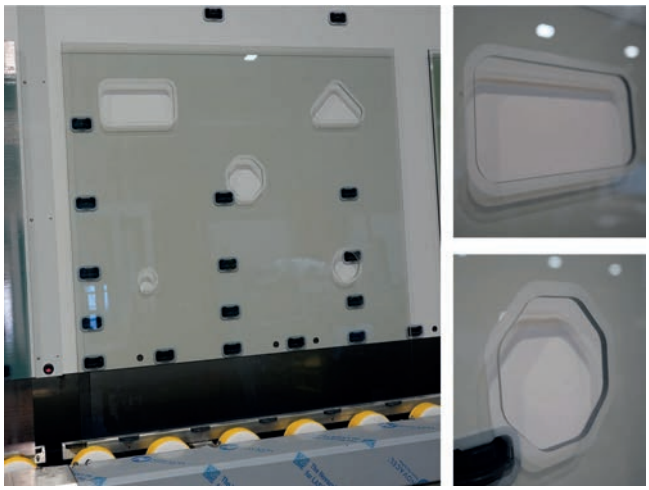
WIDTH, PARAMETERS AND COATING DIVERSITY

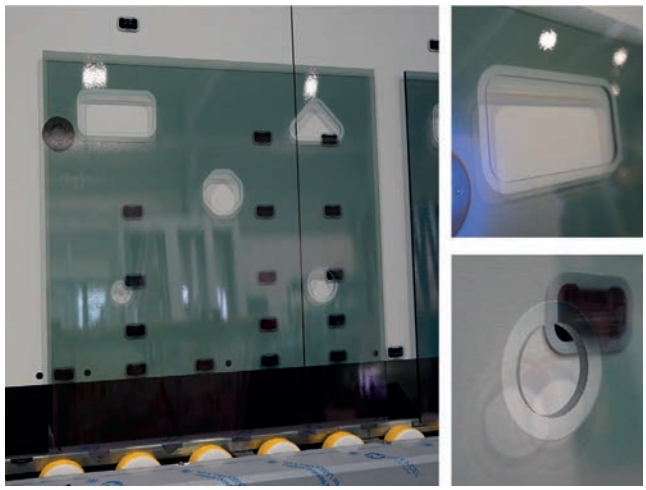
The required deletion width is typically determined by the geometry of the primary seal of the insulating glass unit and the position of the spacer bar with its butyl seal. In practice, it usually ranges between 10 and 12 mm, although it may be specified individually by the customer - particularly in structural glazing (SG) applications or frameless glass façades. A further challenge lies in the broad diversity of coating systems available on the market. Varying layer structures and protective systems, such as EasyPro or TPF foils, demand precise adjustment of processing parameters.
Temper highlights an often underestimated factor:
"It is important to verify adhesion between the deleted zone and the sealant on a system-specific basis. Certain bonded resins in the tooling may leave residues - which can be counterproductive and, in unfavorable cases, lead to reduced adhesion strength."

EDGE DELETION IN INSULATING GLASS PRACTICE WITH A SYSTRON MACHINE

Practical implementation of edge deletion on a systron system can be seen at Bojar Glass in Poland. The company operates a systron 3527proHD and recently retrofitted the edge deletion option to its existing line. The function was introduced primarily for application-specific requirements, as Commercial Director Krzysztof Harasimowicz explains:
"We recently implemented the edge deletion option on our systron 3527proHD. The function works very reliably."
The principal motivation was the preparation of insulating glass units with cut-outs for door-handle cassettes and rotulas in elevator shafts:
"In these applications, it is essential to remove the Low-E coating in order to ensure a permanently tight bond between the butyl and the glass."







TESTS AND MATERIAL VALIDATION IN PRACTICE

In addition to customer experience, in-house tests were successfully conducted on various glass types, including:

- 6 mm float, SGG COOL-LITE SKN 165 II
- 6 mm float, SGG COOL-LITE SKN 154 II EP
- 6 mm float, Pilkington XIV II
- 6 mm float, Guardian SunGuard eXtraSelective SNX 60

The results demonstrate that process-reliable edge deletion can be reproducibly achieved - even on demanding coating systems- provided that parameters are correctly adjusted.

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Real-time glass line protection by CUGHER Ink Detection System

With IDS-Ink Detection System, CUGHER introduces an integrated detection solution that identifies ink residues in real time, protects downstream handling systems and supports PLC-driven process control - all while contributing to improved stability, reduced scrap and optimised production efficiency.

THE NEED FOR AN INVISIBLE YET STRATEGIC CONTROL

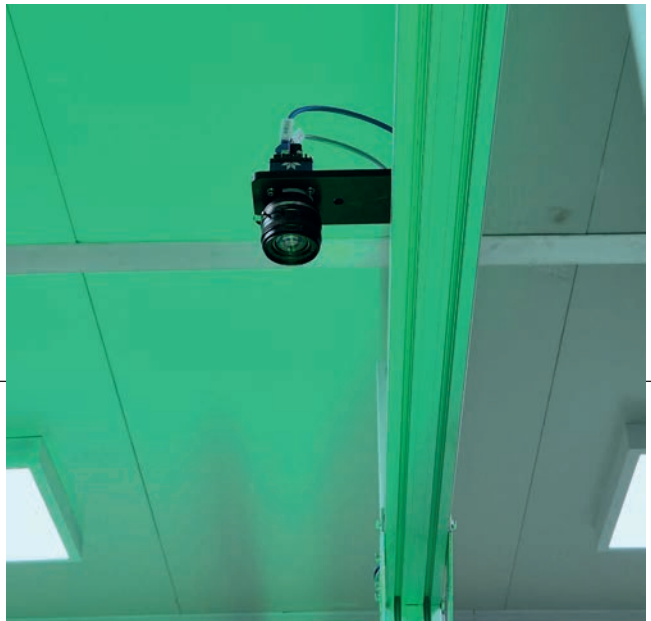
In digital and screen printing processes on flat glass, attention is traditionally focused on print quality. Yet a less visible factor can decisively influence the efficiency of the entire line: the presence of ink residues. Even minimal contamination can transfer to downstream handling systems after the printing machine, compromising overall line integrity. This can lead to recurring defects on subsequent glass sheets, increased cleaning requirements, unplanned machine downtime, and potential deterioration of final product quality. The IDS-Ink Detection System was developed to address this challenge through a proactive approach: detecting contamination at an early stage and providing immediate feedback on process conditions before the issue propagates along the line.

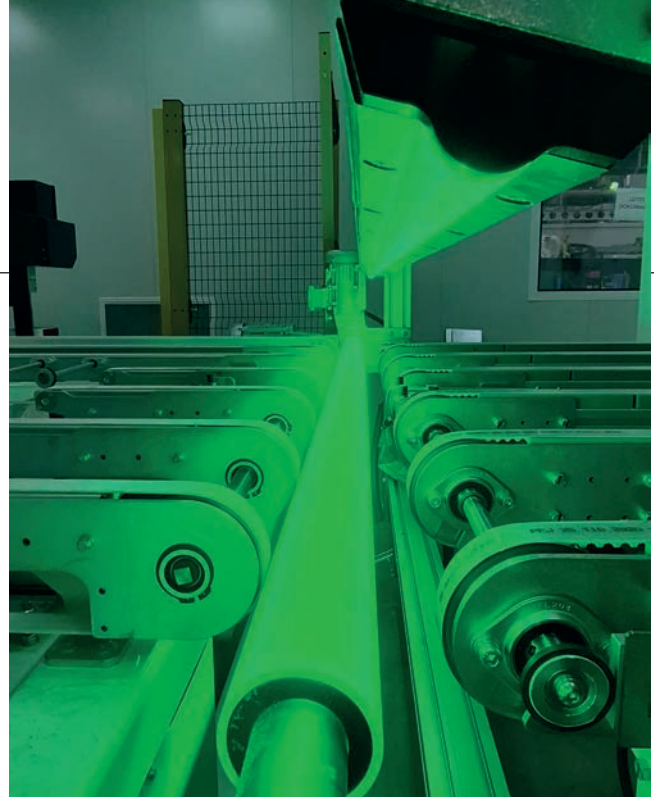
INTEGRATED ARCHITECTURE AND DETECTION PRINCIPLE

The IDS (Ink Detection System) is engineered for direct integration into the line conveyor, operating fully automatically during normal glass transfer. It requires no additional process phases and does not slow the production cycle, becoming an integral element of continuous line flow. At the core of its operating principle is a white roller that functions as a reference surface. During sheet transfer, any ink residues present on the underside of the glass are transferred onto the roller. Inspection is then performed by analysing the traces left on this surface. The roller may be integrated into a dedicated support structure within the IDS unit or configured as the first roller of the conveyor, offering flexibility for both new installations and retrofits of existing lines. Analysis is carried out through an industrial vision system based on high-resolution 4K line-scan cameras and focused green illumination. This configuration is optimised to maximize contrast and clearly highlight black and silver inks, even in very small quantities. The system can detect ink droplets with a diameter of 1 mm (0.785 mm²) across an inspection width of up to 2000 mm, ensuring uniform control over the entire usable surface. Captured images are continuously processed by dedicated software that identifies contamination and determines the result according to configurable criteria aligned with process specifications.

PLC INTEGRATION AND PROCESS CONTROL

One of IDS's defining characteristics is its direct integration with the line PLC. The system goes beyond visual reporting to become an active element of the overall production control logic. When contamination is detected, the operator immediately receives a message on the main application screen: 'Processing result: Fail!' Simultaneously, a FAIL signal is transmitted to the PLC, which can trigger automatic procedures such as alarms, glass marking, or a controlled line stop. In the absence of contamination, the system displays 'Processing result: Good' and sends a GOOD signal to the PLC, confirming process integrity. This mechanism not only protects handling systems but also enables early identification of potential issues within the printing process, including suboptimal settings, out-of-specification parameters or application anomalies. IDS therefore functions as a continuous monitoring tool, contributing to process stability, scrap reduction, and protection of overall plant investment.





SMART PREVENTION TO SAFEGUARD THE LINE

The IDS - Ink Detection System introduces a proactive approach to contamination control, transforming a potential critical issue into a monitored, real-time process parameter. By promptly detecting even minimal ink traces, the system helps safeguard line components, reduce the risk of recurring defects, and limit unplanned maintenance interventions. At the same time, IDS enhances overall printing process control by delivering objective feedback on line operating conditions. It represents a further step toward increasingly integrated and reliable systems designed for maximum production efficiency, fully aligned with CUGHER's technological approach.

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You Belong Here: Women Shaping the Future of the GLASS INDUSTRY

Across the United States and Europe, the glass industry is evolving structurally and culturally. As demand rises, persistent gender imbalance remains. Against this backdrop, MAPPI combines innovation in glass tempering with an inclusive leadership approach, recognising that technical excellence and diversity together define sustainable industrial progress today.

Across the United States and Europe, the glass industry is undergoing both structural and cultural transformation. Conversations around inclusion and leadership are becoming central to the evolution of a sector long defined by technical specialisation and industrial heritage.

GROWTH AND IMBALANCE

The glass manufacturing industry is far from marginal. Globally, its value is expected to exceed 200 billion dollars by 2026, driven by demand for high-performance glass in construction, advanced architectural systems, and technological applications. In Europe, the flat glass market continues to expand, supported by investment in energy-efficient buildings and increasingly complex façade solutions.

Yet growth and innovation coexist with persistent imbalance. In the United States, women account for less than a quarter of employees in glass manufacturing roles and remain underrepresented in technical and production positions. Whilst women represent just under 30 percent of the broader U.S. manufacturing workforce, in glass production that figure drops below 23 percent. Comparable structural gaps are visible across many industrial environments globally.

Nancy Mammaro - CEO

The metaphor of the 'glass ceiling' resonates powerfully in this context. Glass embodies strength and transparency, precision and structural integrity. Similarly, reshaping industrial culture requires clarity of vision and the determination to remove invisible constraints that limit opportunity.

LEADERSHIP AND REPRESENTATION

Across the industry, women are increasingly contributing to technical leadership, production management, research, and strategic roles. Their growing presence reflects a broader shift in how manufacturing excellence is defined: not solely by machinery and output, but by the diversity of skills, perspectives and leadership styles that inform decision-making.

In Europe, while comprehensive sector-specific data remains limited, the broader manufacturing landscape underscores ongoing efforts to increase female representation in skilled industrial positions. Given the strategic importance of glass in sustainable construction, renewable energy, and high-performance architecture, talent inclusion becomes not only a social objective but an economic necessity.

INDUSTRY RESPONSIBILITY

For MAPPI, a company of the Voilàp Group, this discussion aligns directly with its industrial philosophy. Innovation in glass tempering is inseparable from the people who design, operate, and continuously refine these technologies. As part of Voilàp Glass, MAPPI contributes to a broader industrial ecosystem in which engineering precision, process stability, and long-term reliability are core values. Within this framework, diversity is not a narrative choice but a structural dimension of modern manufacturing.

Nancy Mammaro, CEO of MAPPI, emphasises that leadership in today's glass industry is built upon discipline, teamwork, and collaboration. These principles are not abstract ideals; they define how industrial organisations grow sustainably. Technical excellence remains fundamental, but it must be accompanied by inclusive cultures capable of recognising and developing talent across all roles.

As international discourse around inclusion in manufacturing evolves, the glass sector faces both responsibility and opportunity. Ensuring that competence, commitment, and diversity coexist within industrial environments is essential to shaping a future that reflects the complexity and ambition of the markets it serves. This is not merely a reflection on representation. It is an invitation to the industry to consider how talent, engineering culture, and inclusive leadership together define the next chapter of glass manufacturing. The future of the glass industry will be shaped by those who choose to lead it. To every woman contributing to this sector today, and to those considering entering it, competence, perspective and determination are not only welcome, they are essential.

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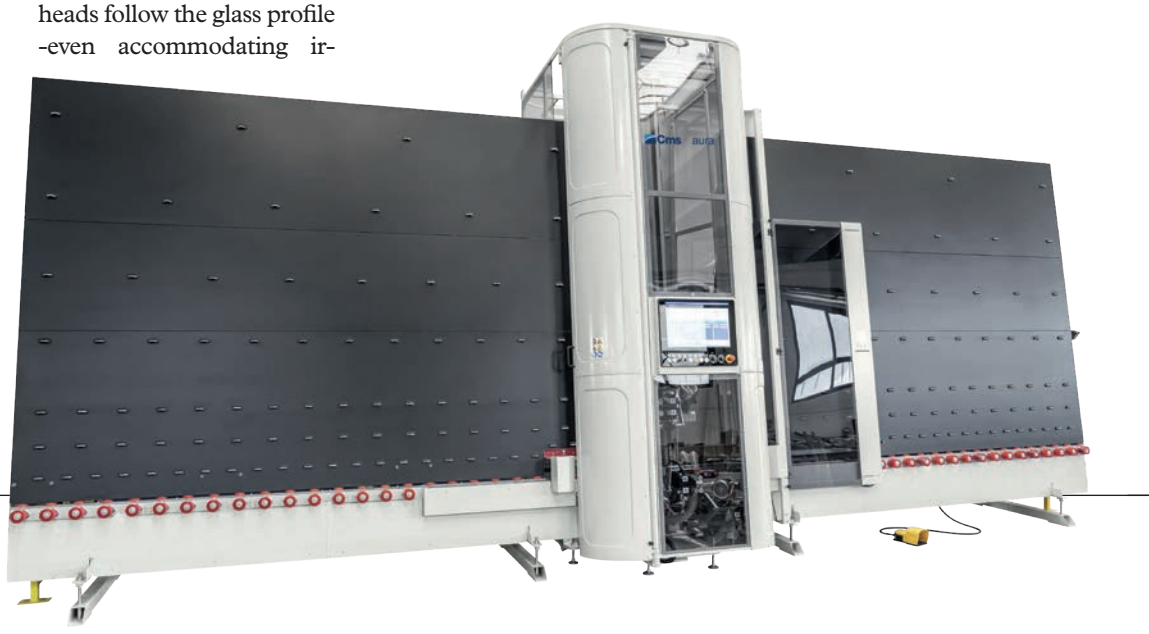
Precision edge processing achieved using CMS

CMS Glass Technology is an industry leader in curved and flat glass processing, delivering technologically advanced solutions that include CNC machining centres, cutting tables, waterjet cutting systems and seaming machines. Among its most successful product lines are its horizontal and vertical seaming machines, now installed worldwide. These systems have been developed specifically for edge processing of float, laminated and low-emissivity (low-e) glass in square or rectangular formats. Designed to ensure precision and consistency, they respond to the evolving requirements of fabricators seeking reliable performance with reduced operating complexity. Aura and Proxima are CMS automatic seaming machines engineered to process glass edges dry, without the use of water. Both models address customer demand for ease of use, rapid installation, reliability and low system management costs.

AURA: VERTICAL DRY SEAMING MACHINE

Aura is the CMS vertical dry seaming machine. It can operate as a stand-alone unit, integrate seamlessly with a washer and fits efficiently into insulated glazing production lines, where suitability for three-shift operation is essential. With CMS Aura, the operator simply loads the glass and starts the cycle. The machine automatically measures height, length and thickness, adapting its operating units to the glass dimensions. Processing heads follow the glass profile -even accommodating irregularities- to ensure constant, homogeneous material removal along the entire edge. Whether monolithic, laminated or low-e coated, the result remains precise, clean and consistent over time. The absence of water in the process delivers cost savings while maintaining

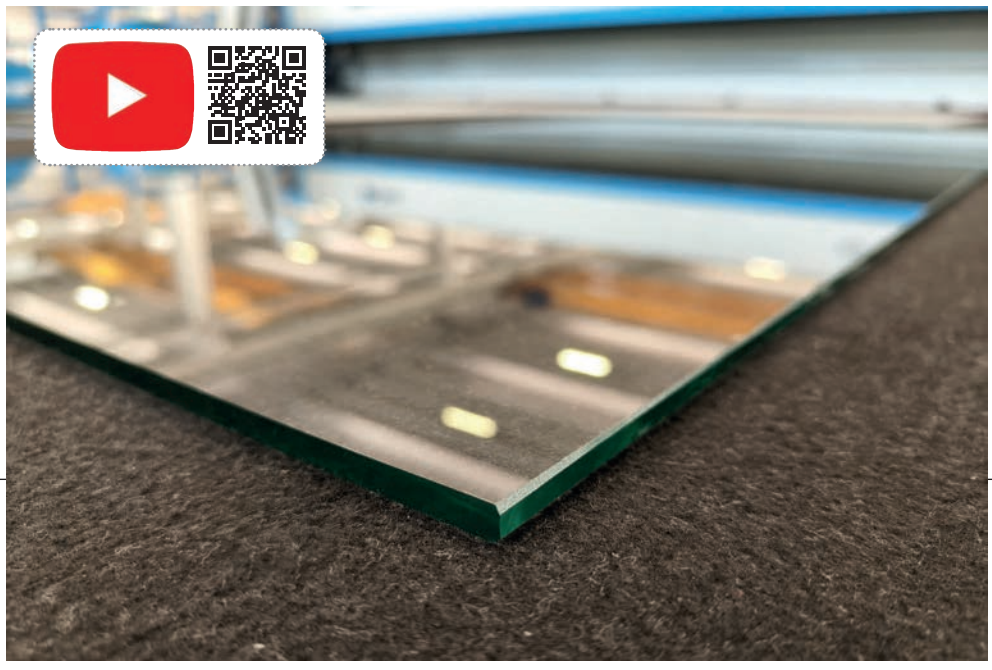


Across global markets, CMS dry seaming machines deliver automated, water-free edge processing for float, laminated and low-e glass. With vertical and horizontal solutions designed for productivity, cost control and clean operation, CMS technology supports consistent quality in both high-volume and compact glass manufacturing environments.

operating speeds of up to 25 m/min, supporting continuous three-shift production. Automatic management of varying thicknesses ensures full process control, and complete extraction of processing dust promotes safety and cleanliness. CMS Aura's dry technology offers a compact, ready-to-use solution for optimising processing time, costs and quality. For rectangular glass seaming, it stands out as a cost-effective alternative.

PROXIMA: THE SIMPLE AND COMPACT DRY HORIZONTAL SEAMING MACHINE

CMS Proxima is an automatic dry horizontal seaming machine developed for small to medium-sized glassworks aiming to optimise production without significant capital investment. Compact and straightforward to install, Proxima integrates effectively with tilting cutting tables for both monolithic and laminated glass. Distinctive in its class, Proxima enables glass edge seaming directly on the cutting table, eliminating additional handling. Its compact footprint allows stand-alone use with a simple support table where required. Installation is quick and can be carried out independently. Once operational, the machine requires minimal maintenance and automatically adapts to the length and thickness of the glass. Dry processing combined with dust extraction removes the need for water and sludge disposal, significantly reducing operating costs. Suitable for low-emissivity coated glass (Low-E), Proxima supports operator safety while ensuring that processed glass does not require immediate washing. The result is a practical system designed to streamline workflows, reduce costs and enhance productivity.



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Technology leadership expands as PUJOL targets Asia

From April 7 to 10, 2026, Pujol Group will once again be taking centre stage in the global glass industry with its participation at China Glass 2026 in Shanghai. The company is using the event to reaffirm its strategic commitment to the Asian market and its continued investment in technological innovation for safety and decorative glass. For the group, this edition represents a clear statement of intent: more efficient technologies, more sustainable processes, and solutions designed to meet the demands of an increasingly exacting global market.

HORNOS PUJOL: INNOVATION THAT TRANSFORMS PROCESSES

At its stand, the Hornos Pujol team will present solutions aimed at improving productivity, reducing energy costs, and raising safety standards in glass production. Visitors will be able to explore technologies for laminated glass, tempered glass, and Heat Soak Testing, supported directly by specialists from the Pujol Group team. Particular attention will be given to several key systems:

LAMINATION

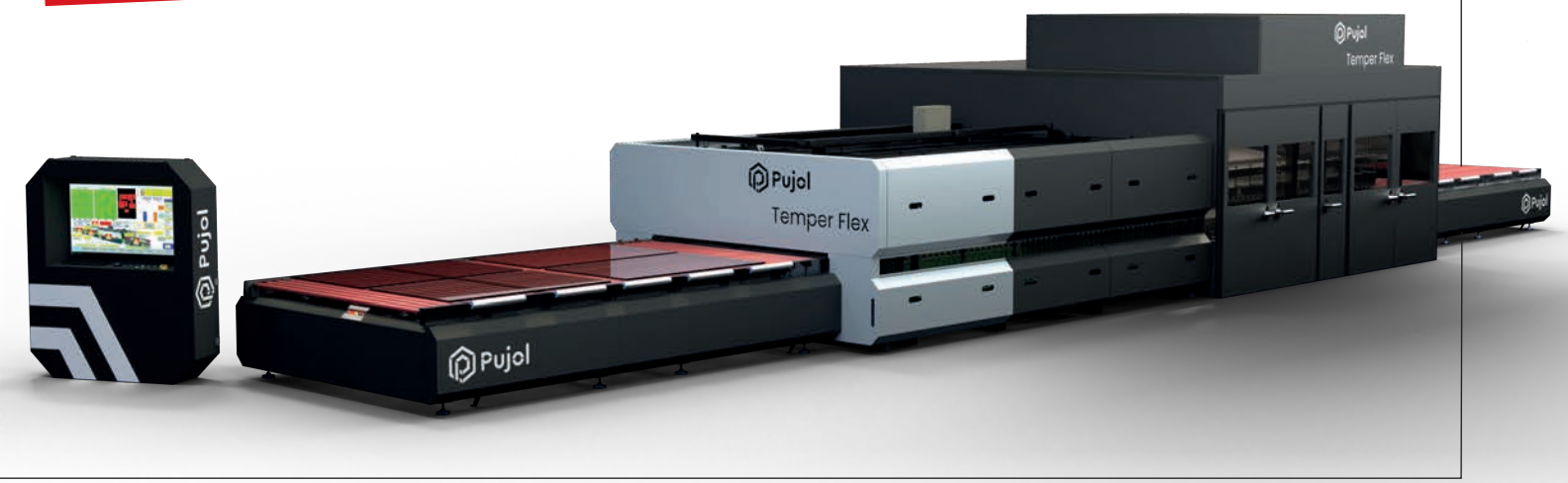
Lam Pro is a high-performance oven designed for the lamination of flat and curved glass, depending on the model, without compromising product quality. Conceived for highly professional operations with demanding productivity targets, it combines independent chambers and fast cycles with rapid, uniform cooling. Its HMI software monitors variables in real time, while a dual radiation and convection system ensures temperature uniformity within ±3°C. Ergonomic design supports safe, efficient operation, optional bending capabilities allow lamina-

At China Glass 2026 in Shanghai, PUJOL will present advanced lamination, tempering and Heat Soak Testing technologies alongside EVALAM interlayers. The showcase will be underscoring the Group's commitment to efficiency, safety, sustainability and deeper engagement with the Asian market and global glass professionals.

tions up to 500 mm, and reduced energy consumption is achieved without sacrificing performance. PUJOL 100 PVB+ is an autoclave-free lamination system introduced 15 years ago that has since become a global reference. Designed to laminate PVB, EVA, and SGP interlayers without humidity or temperature control, it offers fixed energy costs independent of production volume and greater energy efficiency than traditional autoclaves. The system delivers high precision and reliability, reduces material use through fewer required layers, eliminates the need for a pre-lamination line, and minimises plant footprint. Operation is straightforward, with limited operator intervention and consistently high production rates.

TEMPERING

Tempering technologies also form a central part of the presentation. Temper Flex, described as the first glass tempering oven on the market combining high productivity with high installed power, is engineered to adapt to lower energy consumption and reduced installed power when required. The system addresses five essential criteria for professionals: return on investment, savings and profitability per square metre produced, final product quality, production flexibility and reduced maintenance costs. The TQ System represents an advanced chemical tempering technology capable of treating glass of virtually any thickness and shape, including ultrathin



glass unsuitable for thermal tempering. Through a precise ion-exchange process, it produces glass with absolute optical clarity and enhanced mechanical strength. The result is distortion-free transparency, improved break resistance, thinner and lighter structural solutions, optimised laminated glass with fewer layers, high flexural strength to absorb permanent and variable loads, and exceptional scratch resistance. Visitors will also be introduced to the company's Heat Soak Test (HST) process. Designed to ensure maximum safety and quality in tempered glass, HST detects critical impurities such as nickel sulfide, a principal cause of spontaneous breakage. The process supports compliance with EN 14179 in Europe, integrates optimisation software to ensure correct parameters, and contributes to faster cycles and improved energy efficiency. High-quality insulating materials and efficient loading and unloading further enhance production reliability while reducing risks, associated costs, and potential claims.

EVALAM: INTERNATIONAL REFERENCE IN ARCHITECTURAL AND DECORATIVE EVA

Sharing the stand, EVALAM will present its latest developments in EVA interlayers for architectural and decorative applications. EVALAM VISUAL is designed for lamination specialists seeking high-value products. Its transparency, strong adhesion, acoustic insulation properties, and

high crosslinking performance make it suitable for applications where optical clarity and durability are critical, including railings, stairs, canopies, and curved glass. The product offers moisture resistance to prevent delamination, UV protection to safeguard interiors and occupants, certified impact and intrusion safety, structural strength against wind and snow loads and fire resistance for high-temperature exposure scenarios. EVALAM COLOR is available in 18 colours across transparent, translucent, and opaque versions. Developed for lamination temperatures around 120°C, it avoids edge discolouration and ensures long-term colour durability, outperforming thermoplastic materials processed at lower temperatures. AB-AR, a post-break structural interlayer, is engineered for public spaces and high-load applications. It surpasses structural ionomers in mechanical strength and maintains performance even above 36°C. Typical applications include structural façades, glass floors and stairs, skylights, glass ceilings and environments exposed to vandalism risks.

ASIA AS A STRATEGIC FOCUS

Participation in China Glass 2026 underscores Pujol Group's determination to strengthen its presence in Asia and consolidate its global technological leadership. The event provides a platform to reinforce relationships with clients and partners, explore new business alliances, and present its latest innovations in laminated and tempered glass to an international audience.

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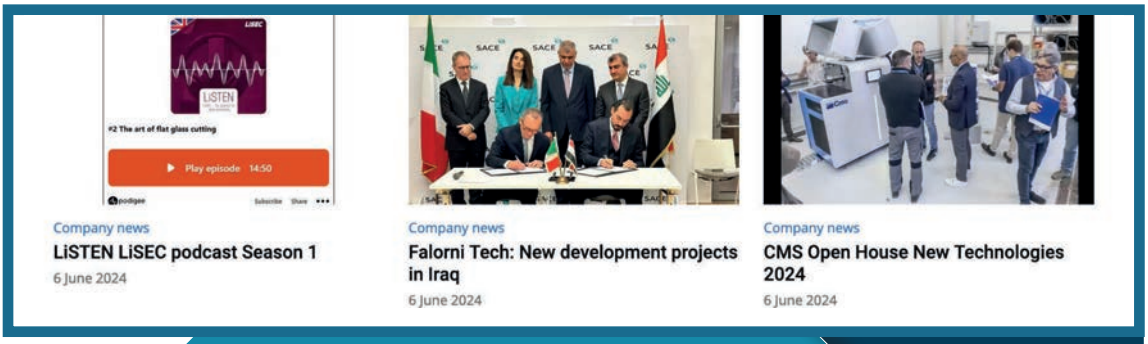

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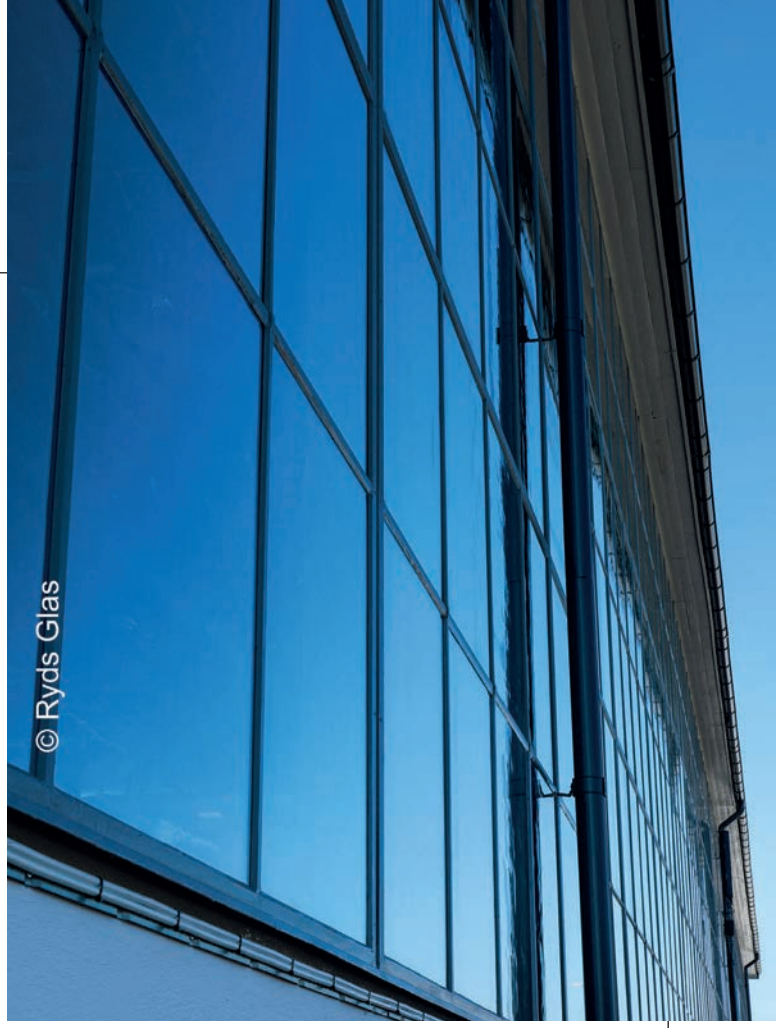
Historic Bromma Airport upgraded with FINEO Vacuum Glass

The renovation of Stockholm's listed Bromma Airport terminal demonstrates how FINEO vacuum insulating glass can enhance energy efficiency whilst preserving delicate steel frames and historic glazing aesthetics. The project combined conservation precision, structural performance and sustainability without compromising the landmark's functionalist architectural character.

In many respects, Bromma Airport, located just a few kilometres from Stockholm's city centre, resembles a time capsule. Its authentic 1930s architecture, compact and easy-to-navigate terminal, and short walks from apron to aircraft still evoke the exclusivity of the golden era of propeller aviation.

PRESERVATION OF THE ORIGINAL STEEL STRUCTURE

The two distinctive main buildings, designed by Paul Hedqvist, have been listed since 2000 as outstanding examples of the Swedish functionalist movement and are recognised as being of special architectural-historical importance. The original terminal building (Stationsbyggnaden), constructed in 1935, underwent extensive modernisation between 2023 and 2025. The objective was to preserve the delicate steel-and-glass construction with its characteristic ribbon windows while meeting contemporary standards for comfort and energy efficiency. The single-pane glazing installed in the 1950s was replaced with state-of-the-art FINEO vacuum insulating glass. In total, 1,270 glass elements measuring 1,100 by 750 millimeters were exchanged across a façade area of approximately 850 square meters.When it opened in 1936, Bromma ranked among Europe's most advanced airports and was the first to feature a fully concreted runway. Hedqvist applied the modernist maxim 'form follows function,' organising workflows, functional zones, and infrastructure so that the principles of Scandinavian functionalism-clear volumes, horizontal lines, expansive glazing, and an absence of ornamentation-were unmistakable. Bromma remained Sweden's gateway to the world until Stockholm Arlanda Airport was completed in 1962. In the 1950s, the Stationsbyggnaden was extended and converted into a departure hall, with large windows in the first-floor restaurant overlooking the runway.

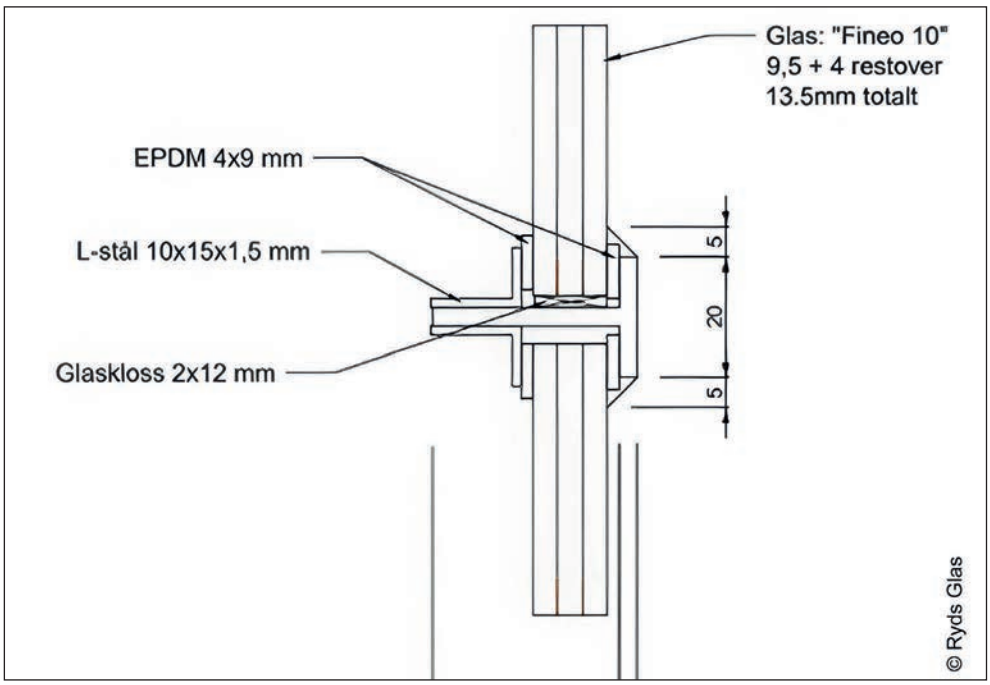


CHALLENGES POSED BY GLASS FAÇADE RENOVATION

After decades of intensive use, the steel-and-glass structure required urgent intervention. Moisture ingress, corrosion of steel profiles and damaged glazing characterised its deteriorated condition. Among the causes were wooden spacer blocks beneath the interior windows that encouraged water accumulation, as well as original linseed oil-based putty that had become porous and brittle. "Since the building is a listed monument, structural changes to the steel profiles were out of the question. All work had to strictly follow the prescribed reference photographs and as-built drawings," explains Thomas Sjödin, project manager at Ryds Glas Stockholm, the company responsible for the window restoration. The 1950s single-pane glazing no longer met modern requirements for energy efficiency, comfort, or operational safety. Selecting a suitable replacement proved complex. Triple glazing, at 35 to 40 millimeters thick, would have overloaded the historic profiles. Instead, the FINEO Heritage series-developed specifically for listed-building projects-was chosen to upgrade thermal performance while preserving the original appearance. "The slim FINEO units fitted perfectly into the delicate existing

ABOUT AGC GLASS EUROPE

AGC Glass Europe is a manufacturer, processor and distributor of flat glass for use in the construction industry (exterior glazing and interior decoration), the automotive industry (original equipment manufacturing and replacement glass) and other industries which include transportation, solar energy and high technology. It is part of AGC's European branch, which is a leading global manufacturer of flat glass, with over 100 locations and around 13,000 employees across Europe.



frames. They also satisfied conservation requirements because they reproduce the optical qualities and texture of the historic glass," Sjödin notes. The slightly irregular surface texture and characteristic reflections mirror those of the 1950s panes. This effect was achieved by laminating 4-millimeter restoration glass from SCHOTT onto a 9.7-millimeter FINEO 10 unit, resulting in a total thickness of just 13.5 millimeters. The insulating units comprise two panes of extra-clear Clearvision glass from AGC, offering particularly high light transmission. Energy performance was equally decisive. "Even with a minimum thickness of just 6.7 millimeters, FINEO achieves U-values of 0.7 W/m²K-performance otherwise associated with triple glazing," says Ivar Nilsson, International Building Project Manager for AGC/FINEO, Nordic/Baltic Area. "This opens new possibilities for improving the energy performance of sensitive historic buildings." He outlines the principle: "The functional core of FINEO vacuum glazing is a 0.1-millimeter vacuum cavity between two glass panes. Unlike conventional vacuum glass, there is no evacuation opening; the glass edge is hermetically fused. This ensures permanent tightness without maintenance, improves transparency, and preserves the façade's delicate historic character."

ABOUT FINEO

FINEO by AGC is the latest generation of insulating glass - combining an ultra-slim design with exceptional thermal and acoustic insulation properties. Manufactured in Belgium using a revolutionary process, FINEO guarantees maximum energy efficiency and sustainability, in line with current building regulations. It does not compromise on aesthetics or performance. FINEO is a reliable and proven solution for professionals seeking the highest standards of technical excellence and environmental responsibility - whether for restoration, renovation or new construction projects.

EXECUTION UNDER OPERATIONAL AND SUSTAINABILITY DEMANDS

For the Bromma project, vacuum glazing also met structural requirements for the large-format ribbon windows of the departure hall. Greater available glass thicknesses ensured stability for larger pane sizes without modifying the existing steel profiles. Solar, UV, and acoustic protection were integrated without compromising the façade's historic appearance. "FINEO Heritage was developed in close collaboration with leading suppliers of restoration glass manufactured using the traditional Fourcault process. Using five glass types, we can reproduce typical glazing from the 1880s to the present day," explains Clément Lemoine, Product and Market Manager at FINEO by AGC.

RENOVATION AND GLASS REPLACEMENT DURING ONGOING OPERATIONS

Renovation of the steel-and-glass façade began with complete rust removal from the existing profiles, followed by recoating with specialised corrosion-protective paint. The Ryds Glas team removed more than 3,500 rusted screws, replacing them with stainless-steel fasteners. Because the façade lies directly adjacent to the runway, cranes could not be used. Each pane was therefore lifted into position by winch or by hand.

From a sustainability perspective, vacuum glazing also proved advantageous. It contains no noble gases and, due to its slim design, uses significantly less material than conventional double or triple glazing. AGC is the first manufacturer to obtain both CE marking and general construction approval from the DIBt for FINEO. It is also the first and only VIG product with a third-party verified Environmental Product Declaration (EPD), achieving a low-carbon value of 18.9 kg CO_2 equivalent per square meter in its Low-Carbon version. Long-term testing demonstrates thermal and acoustic performance exceeding sixty years.

"Projects such as the renovation in Stockholm show that historic buildings can significantly improve their energy performance with this technology without losing their character," Lemoine concludes.

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Avenue Jean Monnet 4
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BELGIUM
info@fineoglass.eu
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Advanced float technology from GUARDIAN GLASS

Guardian Glass has introduced Guardian Nexa™, a lower-carbon float glass, to the European market following successful pilot production runs. Developed through research and development, technical innovation and manufacturing expertise, Guardian Nexa can be used across a wide range of building façade applications. It is designed to help reduce the embodied carbon of the built environment while maintaining the performance and aesthetics expected of conventional float glass.

CARBON REDUCTION AND TRANSPARENCY

Guardian Nexa can serve as a base glass or laminated glass for the company's high-performance coated products, including the Guardian SunGuard and Guardian ClimaGuard ranges.

When compared with standard float glass production, Guardian Nexa offers:

- More than 30 percent lower embodied carbon, to approximately 7.0 kg CO2e/m² for 4 mm float glass
- Increased cullet content from both internal and external sources
- Comparable performance and aesthetics to Guardian ExtraClear

The stated embodied carbon reduction is based on a comparison between the estimated value for 4 mm Guardian Nexa glass and 4 mm Guardian ExtraClear glass produced in Europe. Embodied carbon data are expressed as CO2 equivalent (kg/m²) emitted during the A1-A3 production stages and calculated using a standard 4 mm thickness. The calculation is an estimate derived from the material's Embodied Carbon Factor (ECF), based on a regional Environmental Product Declaration (EPD) that has been independently verified by a third party. The A1-A3 stages include raw material extraction and processing, transportation of raw materials to the manufacturing site, and product manufacturing.

A lower-carbon float glass has entered the European market thanks to GUARDIAN GLASS' launch of its Guardian Nexa™. Developed through R&D and manufacturing innovation, the product reduces embodied carbon by more than 30 percent compared with standard float glass - all while maintaining its performance, and with an EPD that was expected back in 2024.

ENVIRONMENTAL STEWARDSHIP

Guardian Glass continues to focus on improving the environmental performance and efficiency of its manufacturing processes and products while reducing resource consumption. This includes attention to raw material sourcing and furnace efficiency.

Guus Boekhoudt, Executive Vice President at Guardian Glass, described the launch as the result of coordinated efforts between R&D and operations teams, combining ongoing manufacturing innovation with optimised cullet use. He noted that the development aligns with the company's Environmental Stewardship priorities, including enhanced energy efficiency, reduced air emissions and responsible resource management.

ENVIRONMENTAL PRODUCT DECLARATION AVAILABILITY

Detailed environmental data for Guardian Nexa will be documented in an Environmental Product Declaration, currently under development and expected in Q2 2024. Since 2021, the scope of EPDs for Guardian Glass products in Europe has been expanded to include CO2 emissions generated during production processes, increasing transparency for customers.

GUARDIAN GLASS
2300 Harmon Road
Auburn Hills - MI 48326 - USA
Tel.: +1-248-340-1800
glassinfo@guardian.com
www.guardianglass.com

SUPPLIERS GUIDE Yellow Pages

COMPANY	website
BANDO KIKO	www.bandoj.com
BEST MAKINA	www.bestmakina.com
BOTTERO	www.bottero.com
DELTAMAX AUTOMAZIONE	www.deltamaxautomazione.it
FILTRAGLASS	www.filtraglass.com
FOREL	www.forelspa.com
HEGLA	www.hegla.com
ITALCARRELLI	italcarrelli.eu

COMPANY	website
KERAGLASS	www.keraglass.com
PUJOL GROUP	www.pujolgroup.net
LANDGLASS TECHNOLOGY	www.landglass.net
NORTH GLASS TECHNOLOGY CO., LTD	north-glass.com
R.C.N. SOLUTIONS	www.rcnsolutions.it
TALAMONI	www.talamoni.com
ZIPPE	www.zippe.de/en

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
Tecnocat 21
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
Tecnocat 21
Torgauer Maschinenbau
Turomas

HANDLING ROBOTS

Bavelloni
Bottero
CMS
ECOL
GPM Automation
Hegla
IOCCO Group
Lisec Group
Neptun
Schiavo
Studio 1 Automazioni
Tecnocat 21
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
Tecnocat 21
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
Tecnocat 21
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
Itech
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

PORTABLE 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
Pujol Group
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
Pujol Group
Keraglass
Landglass Technology
Mappi International
Mazzaroppi Engineering
R.C.N. Solutions
Satinal
Taifin
Tekno Kilns/Pujol
Torgauer Maschinenbau

Bending

BENDING FURNACES (ARCHITECTURAL GLASS)

Pujol Group
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
Pujol Group
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
Pujol Group
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
Pujol Group
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
Pujol Group
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
Pujol Group
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
Unelko

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
Unelko

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 MSYSTEMS
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

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KICC - Nairobi - Kenya

MARCH 03-05, 2027

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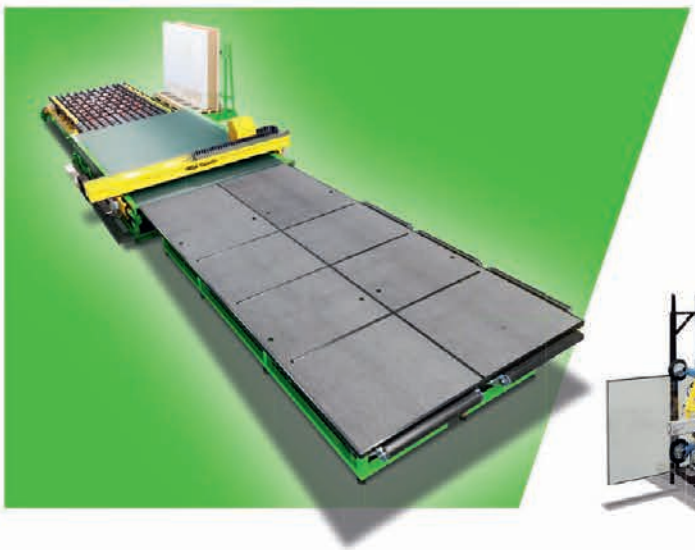

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