

Glass-Technology International

THE LEADING MAGAZINE FOR THE INTERNATIONAL FLAT GLASS INDUSTRY

November/December • Year 35 • No. 6/2024

bsolution
ON THE PLUS SIDE



SPEED ARRIS

Vertical arrossing-rough grinding machine



SPEED EDGE

Vertical polish grinding machine

Via L. Spallanzani, 6 - 24061 Albano Sant'Alessandro (BG) - Italy
T. (+39) 035 4521234 - sales@bsolutionsrl.it | www.bsolutionsrl.com



INNOVATION AND SUCCESS DEFINE
TUOMAS'S GLASSTEC
COMEBACK

TRIUMPH AT
KERAGLASS AFTER
A WINNING
DÜSSELDORF EVENT

WINNING PRODUCTS
HAVE **PUJOL** AND
EVALAM MAKING
THEIR MARK
AT GLASSTEC

AN ESSENTIAL
DIMENSION OF
SUSTAINABLE
BUILDING:
EDGETECH'S
SUPER SPACER®

FIVE YEARS OF
GUARDIAN GLASS
HYBRID VACUUM
IG™ SUCCESS

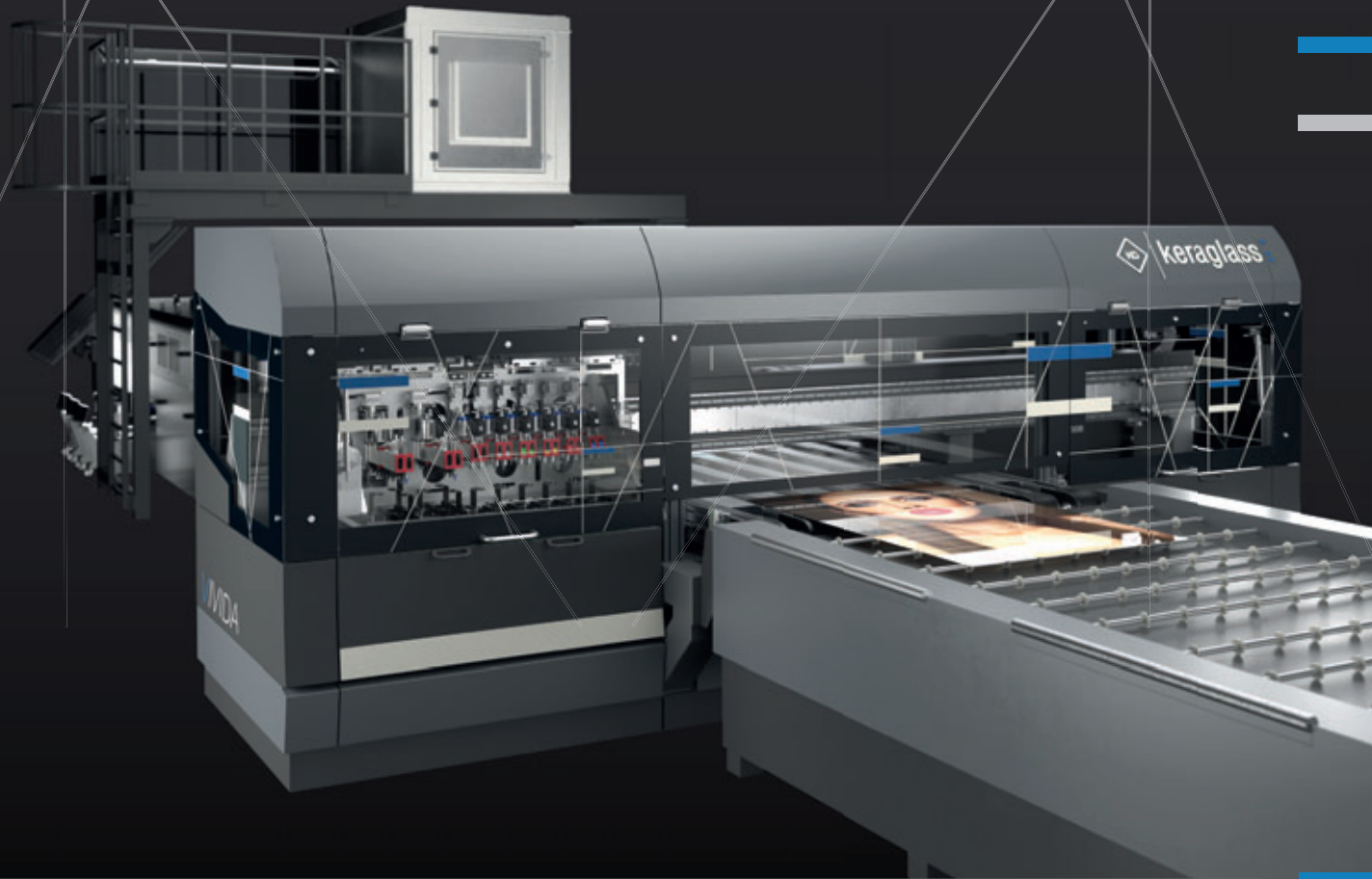


THE MOST FLEXIBLE AND
ACCURATE DIGITAL PRINTING

VIVIDA

Automatic high-definition
digital printing line

flushdesign.it



A
AUTOMATION

T
TEMP

D
DECO

L
LAMI



- + NEW DESIGN PERFORMANCES
- + EXCELLENT RESOLUTION
- + AUTOMATIC GLASS CENTERING
- + EXTREMELY PRECISE DEFINITION OF DETAILS
- + QUICK COLOR CHANGING
- + COLOUR STABILITY
- + FLEXIBILITY AND HIGH-SPEED IN SIZE AND GRAFIC CHANGES
- + IN-LINE DRYING



www.keraglass.com



keraglass

Thermoplastic Frame Alignment Station

Our patented technology, showcased at Glasstec 2024, pushes the boundaries of thermoplastic extrusion. Now you can create IGU's with spacer widths **exceeding 20 mm**, unlocking new possibilities for your business.

at the ForeFront of Glass Automation

JOIN US AT



December 11-13, 2024
Ho Chi Minh City, Vietnam
HALL A2 STAND B11



www.forelspa.com



Glass Company Srl
www.glasscompany.com
info@glasscompany.com



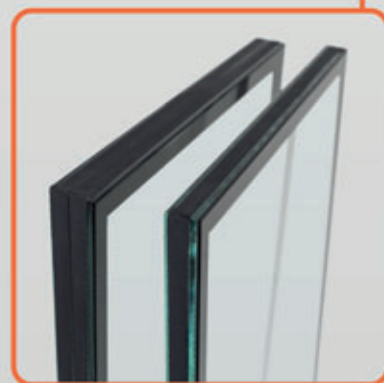
GLASSCOMPANY

SPECIALIST IN INNOVATION

F
I
R
E
M
E
K



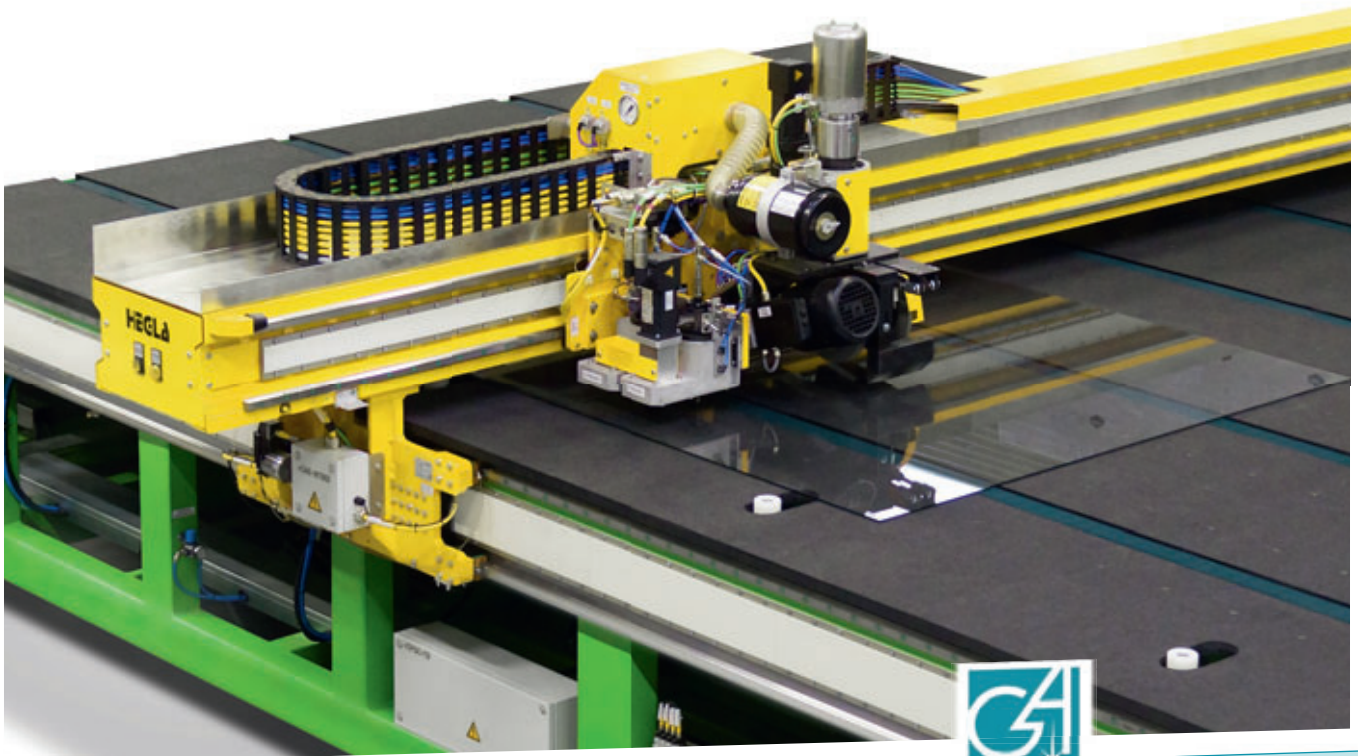
FIRE RESISTANT GLASS PRODUCTION EQUIPMENT
E - EW - EI 30, 60, 90, 120
FOR SMALL AND LARGE GLASS SIZE



FOR **FLAT** AND **BENT** GLASS

High-Speed Float

Automation Precision Low-Maintenance



11.-13. Dec. 2024
Ho Chi Minh City, Vietnam

The High-Speed Dimension for Float Glass

Fully automated processes and outstanding acceleration and motion dynamics make our Galactic a high-performance solution for cutting float glass. With its adaptability to customers' specific needs and precise, low-maintenance linear drives, the system knows how to impress with superior performance on simple and complex cutting lines.

- High performance due to low-maintenance linear drives
- Precise scoring results for shapes and straight cuts
- Customer-specific configuration with, for example, laser marking, edge decoating and Upgrind for TPF and EasyPro



GLASSDRIER IR



IR drier for float glass sheets

- > High efficiency drying
- > Energy saving

Rollmac is a division of Gemata S.p.A.
rollmac.it

 **Rollmac**®



Looking to reach the highest quality for all types of laminated glass?

Here are three reasons why **Glaston ProL technology** is your best choice:

1. Unmatched yield and output
2. Lowest operating cost – highest profitability
3. Lifetime business growth

> **How to avoid common mistakes and succeed in the glass lamination business –**

Download **THE LAMINATING LINE BUYER'S GUIDE** here www.glastory.net



Visit us at
GLASSTECH ASIA 2024
Dec 11-13
Ho Chi Minh City, Vietnam
Booth E-08

glaston
seeing it through®

Machinery, services and solutions designed with the future in mind for the architectural, mobility, display, solar and appliance industries.

info@glaston.net | glaston.net | glastory.net | gpd.fi

C CONTENTS

articles | articles | articles

- 34** INNOVATION AND SUCCESS DEFINE **TUROMAS's GLASSTEC COMEBACK**
- 38** TRIUMPH AT **KERAGLASS** AFTER A WINNING **DÜSSELDORF** EVENT
- 42** EXCELLENCE IN **BSOLUTION's** GLASS ARRISING, GRINDING MACHINES
- 46** WINNING PRODUCTS HAVE **PUJOL** AND **EVALAM** MAKING THEIR MARK AT **GLASSTEC**
- 50** AN ESSENTIAL DIMENSION OF SUSTAINABLE BUILDING: **EDGETECH's SUPER SPACER®**
- 56** ENERGY-SAVING TECHNOLOGIES EXHIBITED AT **GLASSTEC** BY **MAZZAROPPI**
- 58** AGAIN THIS YEAR AT **DÜSSELDORF**, **FILTRAGLASS** rocks!
- 60** INSTALLATIONS BY **GPM AUTOMATION** AT GLASS MANUFACTURING LEADER **FACILVITRUM**
- 64** NEW HEIGHTS IN GLASS DRILLING: THE **OMV VISMARA** SENSATION
- 66** FULL VISION GLASS FROM **GLASS COMPANY** SPARKS ATTENTION
- 69** AN INDUSTRY CONVERSATION BETWEEN **FLABEG, MARPOSS** AND **OLYMPIAS - PART 3 -**
- 74** ENTER **LUMESO**: THE SOFTWARE OVERHAULING FLAT GLASS DATA
- 76** FIVE YEARS OF **GUARDIAN GLASS** HYBRID VACUUM **IG™** SUCCESS
- 80** UNIQUE **IOCCO** SOLUTIONS BOLSTER AUTOMOTIVE GLASS TRANSFORMATION
- 84** **NEOM**: A LUCRATIVE OPPORTUNITY FOR THE GLASS INDUSTRY



LAMINATING OVENS

Installations by GPM AUTOMATION at glass manufacturing leader FACILVITRUM

GPM AUTOMATION has recently installed 1000mm wide laminating ovens at the new production line of the glass manufacturing leader FACILVITRUM. The new installations will ensure consistent and high quality glass laminations.

60

LASERS

Full Vision Glass from GLASS COMPANY sparks attention

Advancing its technology in full vision laminating and the resulting glass solution, GLASS COMPANY has recently installed a laser cutting system at its production facility. The new system will ensure consistent and high quality glass laminations, and will also provide a modern production glass solution.

66

INDUSTRY 5.0

Unique IOCCO solutions bolster automotive glass transformation

IOCCO is a leader in the automotive glass industry, providing innovative solutions for the automotive sector. The company's expertise in glass laminating and processing has led to the development of unique solutions for the automotive glass transformation.

80

OPPORTUNITIES

NEOM: A Lucrative Opportunity for The Glass Industry

NEOM is a new city in Saudi Arabia, and it is a great opportunity for the glass industry. The city is being built from scratch, and it will require a large amount of glass for its buildings and infrastructure.

84

WINDSHIELDS

An industry conversation between FLABEG, MARPOSS and OLYMPIAS - PART 3 - SMART GLASS FORUM 2024

69

Glass-Technology International

Year 35
No. 6 (2024)

BI-MONTHLY MAGAZINE
PUBLISHED BY



Via Antonio Gramsci, 57 - 20032 Cormano (Milan) - Italy
Tel.: +39-02-66306866, Fax: +39-02-66305510

E-mail: publications@glassonline.com • www.glassonline.com

PUBLISHING DIRECTOR: Arcangelo Altamura

EDITOR-IN-CHIEF: Marco Pinetti

ASSOCIATE EDITOR

Nicolaas François Fouché | nick.fouche@glassonline.com

CONTRIBUTORS

Alexander Roe, Jennifer Pressman, Alison David, Zoë Elaine Whitten

ADVERTISING

ITALY: Maurizio Lozza | maurizio.losza@glassonline.com

WORLDWIDE: Luciano Molina | luciano.molina@glassonline.com

GRAPHIC DESIGN

Sonia Previato | sonia.previato@glassonline.com

Cristiano Guenzi

PRINTED BY: BICIDI ARTI GRAFICHE - Via San Felice N° 37d
16138 Genoa (Molassana) - Italy

BACK COPIES: € 29 air mail included | Italy: € 15

Entire contents © 2024 by A151 S.r.l. All rights reserved. Reproduction even partially in any form is strictly prohibited unless written permission has first been obtained from the Publisher. The magazine is open to collaboration with all, but no manuscripts or photographs will be returned. The editor's office accepts no responsibility for opinions expressed in signed articles. The Court responsible is Milan. Publication registered at no. 208 of the Milan Court Records Office on 24.3.1990 - ROC no. 34927 - **ISSN 1126-8573**

GLASS-TECHNOLOGY INTERNATIONAL, N.202, ANNO 35, 2024 - PERIODICO BIMESTRALE.

regular features | regular

08 OUR 2025 TRADE FAIR CALENDAR

10 ADVERTISERS INDEX
& COMPANIES MENTIONED

12 BUSINESS NEWS

88 SUPPLIERS GUIDE - Yellow Pages

BSOLUTION
ON THE PLUS SIDE

SPEED ARRIS
Vertical arrising-rough grinding machine

SPEED EDGE
Vertical polish grinding machine

Via L. Spallanzani, 6 - 24061 Albano S. Alessandro (BG) - Italy
T (+39) 035 4521234 - sales@bsolutionsrl.it www.bsolutionsrl.com

cover advertiser

BSOLUTION SRL

Via L. Spallanzani, 6

24061 Albano S. Alessandro






- BG - ITALY

Tel.: +39 035.4521234

sales@bsolutionsrl.it

www.bsolutionsrl.com

The magazine will be distributed at the following Events

issue	exhibition/conference	date	venue	deadlines	
2025	 			Editorial files: 31-01-2025 Deadline Adv files: 10-02-2025	
2025	1	AUTOMOTIVE GLASS FORUM - 3rd EDITION	16 April	BOLOGNA Italy	Editorial files: 14-03-2025 Deadline Adv files: 21-03-2025
		FIT SHOW	29 April 1 May	BIRMINGHAM United Kingdom	
		GLASS TEXPO	7-8 May	SAN ANTONIO (TX) USA	
2025	2	GLASSTECH CANADA	14-15 May	TORONTO Canada	Editorial files: 11-04-2025 Deadline Adv files: 18-04-2025
		CONSTRUMAT	20-22 May	BARCELONA Spain	
		CHINA GLASS	26-29 May	BEIJING China	
2025	3	GPD - GLASS PERFORMANCE DAYS	10-12 June	TAMPERE Finland	Editorial files: 16-05-2025 Deadline Adv files: 21-05-2025
		GLASSTECH MEXICO	16-18 July	MEXICO CITY Mexico	
2025	4	GLASSPRO INDIA	10-12 September	MUMBAI India	Editorial files: 23-07-2025 Deadline Adv files: 31-07-2025
		VITRUM	16-19 September	MILAN Italy	
		<p>ALL VITRUM EXHIBITORS ADVERTISING IN THIS ISSUE ALSO RECEIVE A FREE VITRUM PREVIEW   </p>			
2025	5	GLASSBUILD AMERICA	4-6 November	ORLANDO (FL) USA	Editorial files: 01-10-2025 Deadline Adv files: 06-10-2025
		EURASIA GLASS	date to be announced	ISTANBUL Turkey	
2025	6	GLASSTECH ASIA	date to be announced	SOUT EAST ASIA	Editorial files: 27-10-2025 Deadline Adv files: 31-10-2025
		ZAK GLASS TECHNOLOGY	date to be announced	NEW DELHI India	



The 4th Generation Advanced Series (A Series) Tempering Furnace



- Professional version of NorthGlass Heating & Temperature Control system with global adaptive overheating function¹: With global restriction of total installed power, call idle power for local overload heating, to improve the efficiency of installed power use and the heating speed with the same installed power.
- The newly designed chiller ensures higher quenching and cooling efficiency, greater energy savings, better stress distribution, and reduced anisotropy.
- 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).
- Quenching fans designed with triturbo (three-dimensional impeller) technology deliver superior efficiency and extended service life, while substantially lowering energy consumption and noise output.
- New partition of heaters, 50% more finer than that of 3G A(Advanced)-series furnace², for more accurate heating temperature control and better quality of finished glass.
- The newly designed HMI pre-configured with comprehensive set of recipes offers significantly enhanced functionality that greatly simplify the furnace's operation with a more user-friendly interface.

1: When loading rate is below 80%.

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



FACEBOOK



TWITTER



LINKIN

Luoyang North Glass Technology Co., Ltd.

No.20, Binghe Road, High-tech Development Zone, Luoyang City, Henan
Tel: +86-21-57858658 Fax: +86-21-57858667

Mail: sales@northglass.com Web: www.northglass.global

NEW PRODUCTS: NORTHGLASS LIGHTWEIGHT MICROCRYSTALLINE STONE UNIT CURTAIN WALL

- Lightweight Microcrystalline Stone Unit Curtain Wall, Factory Processing, Convenient Installation.
- Suitable for all kinds of height floors, frame structure building wall.
- Various material and texture choices, which can make the building appearance diverse.
- Recyclable materials, green and environmental protection.



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

COMPANY NAME PAGE No.

A
 A+W Software..... 12
 Apogee Enterprises 13
 ACG Glass Europe 24-25

B
B Solution Front Cover, 42-44, 88-95
 Bavelloni 14
Bando Kiko..... 31, 88-95
Best Makina Back Cover, 88-95
Biese Group.....14, 15, 88-95

C
China Glass96

D
 Dow 28-29

E
 Edgetech Europe..... 50-54
Eurasia Glass83
 Evalam..... 46-49

F
 Facilvitrum..... 60-62
 FeneTech 30
Filtraglass 21,58-59, 88-95
 Flabeg 69-71
Flat Glass Directory Back Inside Cover
Forel First Page, 88-95
 Forvet 14
 Fuyao Group 30

G
Glass Company..... 2, 66-68, 84-92
Glassonline.....86
 Glasstec..... 30, 96-99
Glasstech Asia.....87
Glasstech Canada72
Glasstech Mexico.....73
Glaston 5, 26, 88-95
 GPM Automation 60-62
 Guardian Glass 76-79

H
Hegla 3, 16, 88-95
Helios Quartz 23, 88-95

I
 Iocco Group 80-82
 Isra Vision..... 18

K
Keraglass Front Inside Cover, 38-40, 88-95

COMPANY NAME PAGE No.

L
Landglass 17, 28, 84-995
 Lumeso 74-75

M
 Mappi International.....25
 Marposs 85-87
Mazzaroppi Engineering..... 55, 56-57, 88-95

N
NorthGlass9, 88-95
 NSG Group29, 32
 NSG Pilkington..... 14

O
 Olympias..... 69-71

P
Pujol Hornos Industriales45, 46-49, 88-95

Q
 Quanex Building Products 50-54

R
 RCN Solutions22
Rollmac - Gemata 4, 88-95

S
 Saint-Gobain 20
 Satinal - TK - Strato 20
 Schott..... 18-19
Schraml 13, 88-95
Sisecam11, 24, 88-95
 Smart Glass Forum 69-71

T
 Teknik Elmas..... 19
 Tesir Makine..... 19
 Tristar Glass 34-37
Tuomas..... 33, 34-37, 88-95

U
UzGlass.....63

V
Vitrosep 27,88-95
 Vismara OMV..... 64-65

Z
Zak Glass..... 41

TOGETHER. IN THE PURSUIT OF FUTURE.

Investment in three new coated glass production lines in Turkiye, Italy and Bulgaria.



A+W **glasstec**
REVIEW

Glasstec 2024: Focus on digital innovations and automation

Digital technologies and automation were among the top topics at glasstec 2024. From October 22-25, 2024, visitors had the opportunity to learn more about A+W Software's innovations in glass processing. There were also numerous new features to discover at the A+W Software booth. The innovation corner was bustling with activity, offering visitors the chance to explore some special highlights. On large touch-screens, visitors could marvel at and even try out A+W Glass Lab – a 3D factory that explains the workings of the A+W Smart Factory in great detail.



With A+W Glass Lab, A+W aims to analyze and improve the benefits of its products. Furthermore, there is the opportunity to expand the model to eventually use it as a digital twin for customer productions. Many visitors also saw the potential of using it as a training tool to explain glass processing in detail.

Another visitor magnet was the design prototype of A+W Smart Companion Dispatch. Developed in collaboration with customers, this app promises to simplify the shipping process and will enter development in early 2025.

Here racks can be packed and sent off without accompanying physical paperwork. To demonstrate this concept, A+W presented a model to facilitate understanding, which stimulated visitor excitement and questions.

The entire A+W Smart Companion product family can expect not only new features in 2025, but also a complete redesign, including a dark mode or high contrast mode. With the next update, users will have optimal visibility even in difficult lighting conditions, allowing for less eye strain.

In addition to the new products, there was also significant interest in existing products, such as A+W Business, A+W Production, and A+W iShape – a digitalization solution for templates. Visitors could also test the webshop (a.k.a. e-commerce) solution A+W iQuote at a terminal. Similar to the A+W Smart Companion, this A+W Clarity product will undergo a comprehensive redesign in 2025.

“Overall, we are satisfied with the trade fair. The visitors gave us fantastic feedback on our innovations, which is a clear sign for us that our developments are future oriented and customer focused,” said Sebastian Dick, Manager A+W Clarity Innovations.

WWW.A-W.COM

APOGEE ENTERPRISES

Acquisition of UW Solutions

Apogee Enterprises recently announced that it has completed the previously reported acquisition of UW Interco, LLC ("UW Solutions"), a vertically integrated manufacturer of high-performance coated substrates used in graphic arts, building products and other applications, for USD 242M in cash.

Ty R. Silberhorn, Apogee's Chief Executive Officer, said: "I am excited to welcome the UW Solutions team to Apogee. This acquisition expands the capabilities and market opportunity of our Large-Scale Optical segment, leveraging the combined strengths of both businesses to create a new engine for growth."

In fiscal year 2025, the company expects the acquisition

to contribute incremental net sales of approximately USD 30M and a decrease in adjusted diluted EPS of approximately USD 0.10, primarily due to increased interest and amortization expense. In fiscal year 2026, the acquisition is expected to be accretive to adjusted diluted EPS, contributing approximately USD 100M of revenue with an adjusted EBITDA margin of approximately 20 percent.

WWW.APOG.COM - WWW.UWSOLUTIONS.COM



Our full range for vertical glass processing



MODULAR



FLEXIBLE



POWERFUL



- **Processing** - as a stand-alone device for internal processing or external machining (GLX or RX or M-RX)
- **Tool change** - with manual or with automatic tool change (8fold, 10fold, 12fold)
- **Waterjet** - RX or M-RX processing machines with or without high-pressure waterjet
- **Loading** - for manual loading or in combination with buffer storage or robot loading

BAVELLONI

Forvet merger



Volvera, Turin, Italy plant of the company Forvet.

Up to the date of signing of the deed customers will receive the documentation in the name of Forvet. After the signing and therefore from January 1, 2025 all open orders with Forvet will be transferred and consequently processed by Bavelloni.

WWW.BAVELLONI.COM - WWW.BIESSE.COM

The transaction to incorporate Forvet into Bavelloni -both companies are part of the Biesse Group- is underway and the merger deed is expected to be signed in December 2024. In consideration of this, the merger will take effect from January 1, 2025. Therefore, starting from this date, every document, correspondence, delivery note, invoice, collection, payment, etc. is being made with the incorporating company Bavelloni, which will take over all the rights and obligations, active and passive relationships of the incorporated company Forvet.

In the period prior to the signing of the deed, suppliers may already receive orders from the company Bavelloni with delivery to the

NSG GROUP

glasstec
REVIEW

3rd Glass in Architecture edition at Glasstec

NSG Pilkington, part of the NSG Group, released the third edition of its prestigious Glass in Architecture book at this year's Glasstec trade fair, October 22 to 25 in Dusseldorf.



The book, originally launched in 2011, showcases some of the most prestigious architectural projects worldwide, from public buildings to private homes. It is inspired by the most creative uses of glass in buildings today and focuses

on those where architects have combined functionality and sustainability with design.

All of the projects in this edition are unique. They range from La Terrazza in the heart of Milan, an exceptional terrace of extraordinary all-round beauty, where the architect created a completely transparent, minimalist-style home - seemingly in the open air - one that allows all-round enjoyment of its unique character and surroundings, to the Mirror Ball at the Blackpool Promenade in the UK. Here, the corrosion-resistant mirror glass scatters rays of sunshine or floodlight across the beach front at any time of day.

Glass in Architecture also features several public spaces, where glass has been used to create welcoming environments for visitors. From the K11 Art & Cultural Centre in Hong Kong to the La Samaritaine in Paris, France. In each situation, the glass incorporated into the architect's design serves a variety of functions that help enhance the aesthetics of the building, as well as its overall sustainable performance.

WWW.NSG.COM

Glass mastery

We design and manufacture integrated lines and machines for the machining of glass to simplify the production process for customers in the furniture, construction and automotive industries.



Insulating glass sorted continuously and in sequence

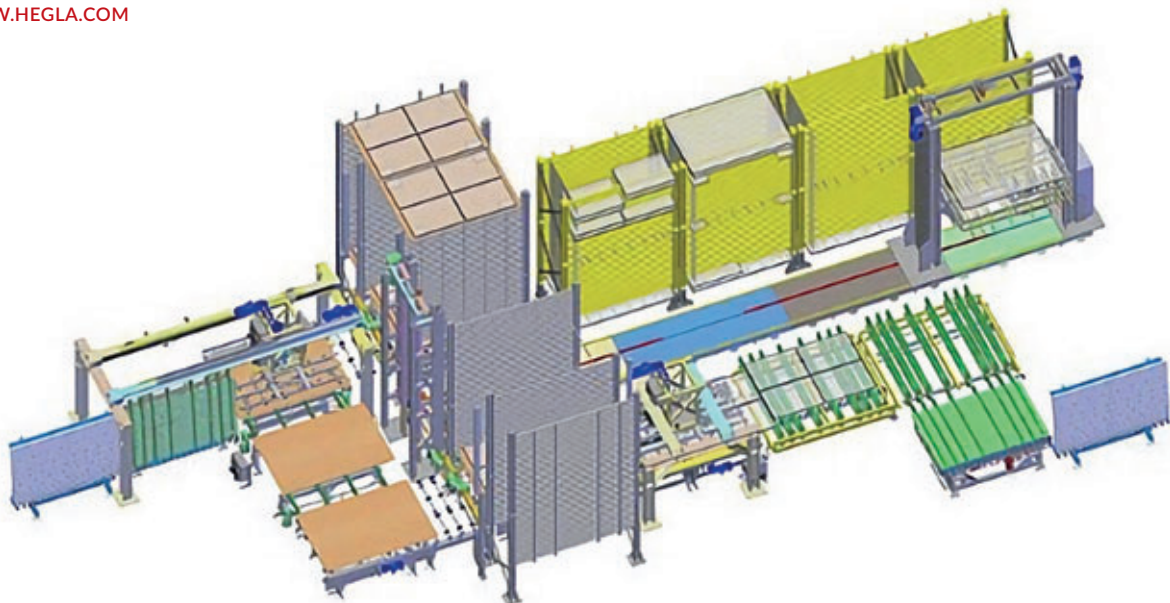
An order is only transferred to the racks when all IGUs are ready in the sorting system. Consolidation and continuous provision of insulating glass units in shipping order is at the centre of a sorting system that **Hegla** presented for the first time at Glasstec 2024. The new concept simplifies the introduction and post-production of missing or damaged units. In addition, the strict dependency between dispatch and production is resolved. This pushes a previous principle of production to its limits and opens up additional opportunities for optimisation: the dispatch sequence is no longer the dominant factor for IGU production. The order batch is usually organized in descending order from large to small formats so that the units can be transferred to the available A or L racks in shipping order and without restacking. If post-production is then required, for example due to scratches in the glass, this sometimes leads to the dispatch process being cancelled and the glass racks are positioned in another area of the hall, which is both time-consuming and labour-intensive. Alternatively, the subsequent units are placed on additional racks, so that the desired order has to be restored later by employees.

The compact solution consists of combined drying and sorting compartments for finished insulating glass units. By buffering the manufactured insulating glass units, the new SortJet IG sorting system decouples the processes between production and dispatch, reducing direct dependency: the loading of the racks only begins when all units of an order have been produced. To achieve this, up to four insulating glass units are automatically transferred to a transfer plate immediately after completion on the line and stored in a drying tower. Depending on the configuration, they are removed after curing and transferred to a horizontal sorting store.

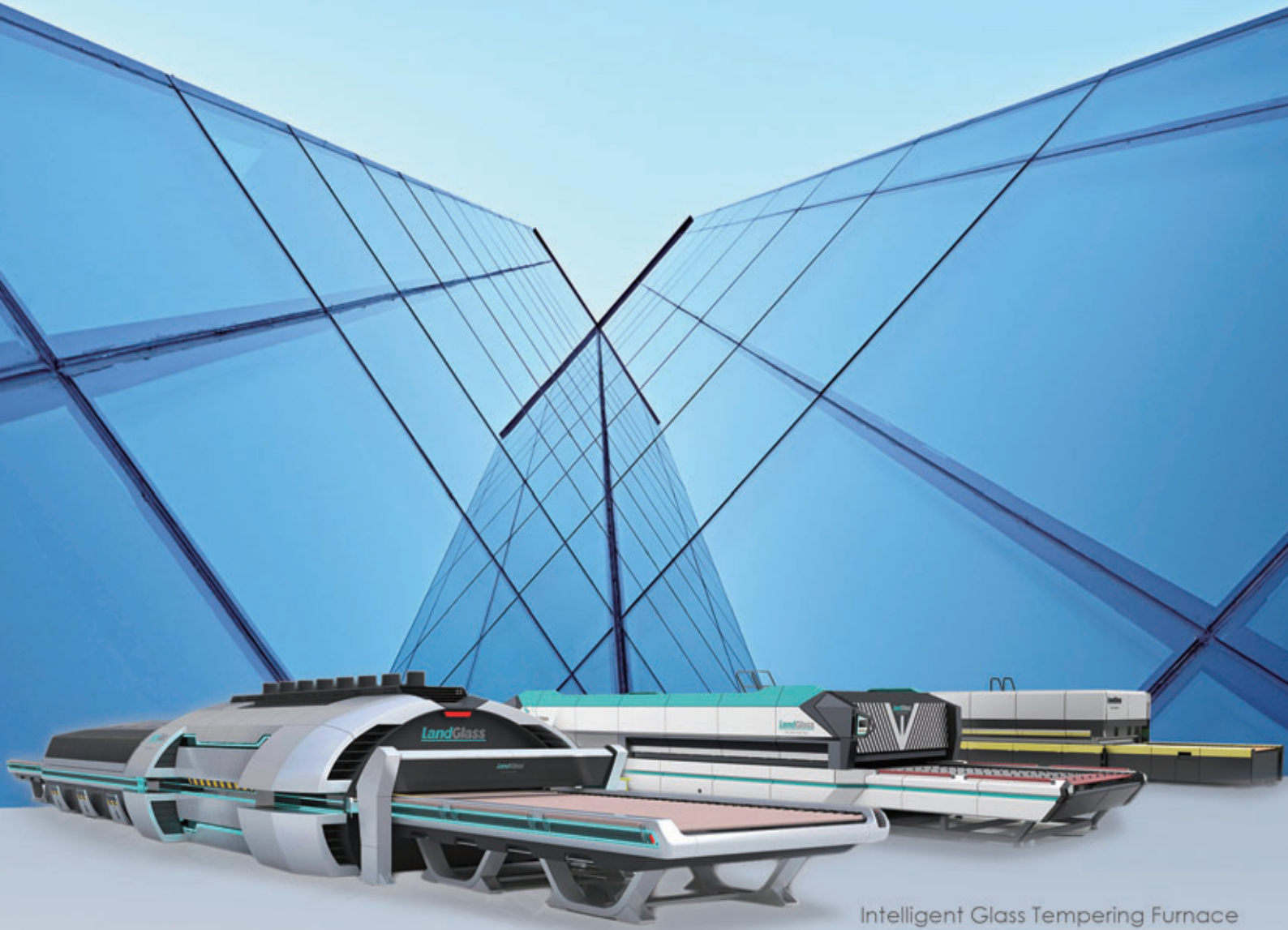
Once a customer batch is complete and ready for dispatch, the operator or the software triggers the provisioning process and all panes are ejected in the required sequence. Finally, intermediate storage and optimized merging also create a reliable glass transfer in sequence, which makes the use of robots possible as a further expansion step to relieve personnel.

Once the production requirements between the insulating glass line and the dispatch provision have been relaxed, there is further potential for optimisation. Depending on the customized equipment of the insulating glass line, for example, it is advantageous in terms of set-up times to produce single-variety double or triple glazing. Furthermore, batches with the same gas filling or sealing compound can also lead to improved processing times.

WWW.HEGLA.COM

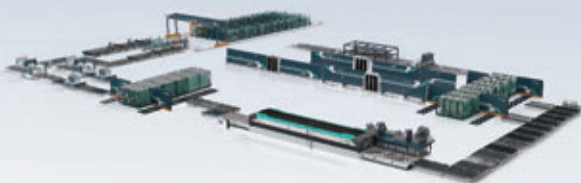


Seize the Momentum to Create a Brighter Future Together

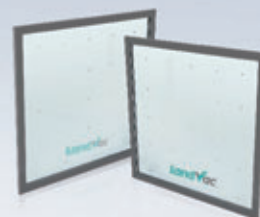


Intelligent Glass Tempering Furnace

LandTiger Smart Factory Solutions



LandVac Vacuum Insulated Glass



ISRA VISION

glasstec
REVIEW

New FPM-Smart system presented at glasstec

ISRA VISION presented its new “all-in-one” surface inspection system “FPM-Smart” at glasstec 2024, which enables complete optical defect detection and classification at line speed. The non-contact conveying of the glass ensures speed. Because the compact system combines a large number of inspection channels and measures light deflection in transmission and reflection, as well as inspecting in light and dark field, it can detect and classify defects more precisely and draw valuable conclusions for the continuous optimization of production.

FPM-Smart is an “all-in-one” inspection system that has been specially developed for the inspection of finished or prefabricated parts such as ultra-thin cover glasses, UTG folding glasses and highly developed transparent films. Glass or film structures consisting of several layers can also be inspected and even viewed separately.

Algorithms also enable the inspection of free-form surfaces and intelligent multi-zone inspection. An ultrasonic sonotrode, which vibrates at 35,000 Hz, generates a standing wave and thus creates an overpressure that causes the glass to float at a controllable height of between 10 and 100 micrometres – 10 micrometres is one hundredth of a millimetre.

The camera structure of the compact system uses a large number of inspection channels: In the TBF (Transmission Bright Field), the inspection beam is set so that the camera looks into the light source – defects appear dark. In the RBF (Reflection Bright Field), the new ISRA VISION system also inspects light deflection for the first time.

Compact and powerful

FPM-Smart combines the different systems in one compact system measuring just 1,300 mm long x 844 mm wide and 1832 mm high. It reliably detects all defects such as scratches, spot and etching defects, inclusions, bubbles, edge chipping, fingerprints, dirt, dents and dings. The conveying speed is 2.5 to 9 metres per minute, depending on the translucency of the glass to be tested. Test specimens with a light transmission of 80 percent or higher benefit from the maximum speed; darker variants, which are used as backsheets, for example, require a little more time. ISRA VISION is already working on a future extension: additional superstructures (FPM-SmartEdge) will allow the edges of the glass to be viewed again at a much higher resolution in order to detect micro-scratches, for example.

WWW.ISRAVISION.COM

SCHOTT

Termofrost® Inmotion improves performance of supermarket chillers

Enabling an ideal view of good, easy installation and reduced energy consumption thanks to full glazing, narrow gaps, and wide doors, the new SCHOTT Termofrost® Inmotion door system reduces the energy consumption of chiller cabinets and is easy to install. Developed by SCHOTT, a patent-pending hinge makes a new generation of glass door systems possible. SCHOTT Termo-

frost® Inmotion has significantly smaller gaps than previous solutions, resulting in wider doors and a larger insulation area. It also offers an improved gasket design. Together, these features provide up to 35 percent better energy efficiency compared to conventional chiller door solutions. But that's not all: With three-axis adjustability, the hinge simplifies installation and customization while also providing greater safety preventing collisions. The new product was on display for the first time at Chillventa, the world's leading trade show for refrigeration technology, from October 8 to 10, in Nuremberg, Hall 9, Stand 308. As the name suggests, the new hinge for the SCHOTT Termofrost® Inmotion door solution brings movement and performance to glass door systems for chiller cabinets. The mechanism developed by SCHOTT ensures that →



← the doors close gently and automatically, with self-regulating closing force and door stops – and that the gaps between the doors on both the hinge and handle sides are significantly reduced. The technology allows the use of better sealing solutions and wider glass doors, resulting in a clearer view of the stored goods. Narrow gaps and a new sealing concept improve the energy performance of chiller cabinets.

Specially designed for best performance

The main benefit of the SCHOTT hinge and door system is a significantly improved energy performance. Chiller cabinets equipped with SCHOTT Termofrost® Inmotion consume 10 percent less electricity than conventional solutions with sealing lips and around 35 percent less than doors without sealing lips. In a comparative test with a four-door refrigerator, the innovation from SCHOTT consumed 10.26 kilowatt hours per day, compared to the 11.3 kWh of a typical door system with conventional sealing lips. Addi-



tional features show that the improvements are not limited to energy efficiency. For example, the glass door can be adjusted along three axes to ensure it is always perfectly aligned with the cabinet, and to compensate for unfavourable geometric conditions. Termofrost Inmotion will be available in various designs and for heavy duty or high humidity environments.

WWW.SCHOTT.COM

TESIR MAKINE

glasstec
REVIEW

Teknik Elmas steals the spotlight at Glasstec

Tesir Makine captivated the global glass industry at Glasstec 2024, held from October 22 to 25, by unveiling its latest advancements in glass processing technology.

In the vibrant halls of Düsseldorf, Tesir Makine brought innovation to life, showcasing its industry-renowned vertical seaming, grinding and polishing machines and introducing its powerful new vertical CNC machine. The live demos drew impressive crowds, offering attendees an up-close look at Tesir Makine's technological precision, speed and versatility—all essential for meeting today's complex glass processing demands.

Interest soared from the first day of the fair, and the Vertical CNC machine quickly became a star attraction. Designed to perform an array of operations, including seaming, grinding, polishing, drilling, milling and chamfering, this CNC innovation exemplifies the company's commitment to pushing boundaries. Tesir Makine expressed great satisfaction with the overwhelming interest shown by partners, distributors and customers from around the world.

Alongside these state-of-the-art machines, Tesir Makine also displayed a comprehensive tooling line-up under the Teknik Elmas brand, showcasing high-tech diamond tools that embody durability and precision. **Teknik Elmas** tools are critical to enhancing machine performance, and they drew attention from companies across industries, reinforcing Tesir Makine's status as a complete glass processing solution provider.

Visitors from Europe, North and South America, Eastern Europe, the Middle East and Africa were welcomed to Tesir Makine's dynamic booth, where the company fostered promising new partnerships and engaged with industry leaders.



Beyond generating exciting new business and collaboration opportunities, Tesir Makine strengthened its existing relationships, solidifying its role as a global leader in glass processing technology.

As Glasstec 2024 concluded, Tesir Makine looked ahead with optimism, eager to bring even greater innovations to the world of glass processing.

WWW.TESIRMAKINE.COM

SATINAL **glasstec**
REVIEW

Success at Düsseldorf

Satinal, a leading innovator in the glass processing industry, has announced a resounding success at the recent Glasstec exhibition in Düsseldorf. The event provided a platform for the Company to showcase its latest advancements and connect with industry peers.

A particular highlight of Satinal's presence at Glasstec was the overwhelming interest in the new STRATO® EVA Colour Collection, as well as in the sustainable STRATO® Carbonlight™ product range, 100 percent Made in Italy interlayers for safety glass lamination.

Visitors were drawn to the innovative design and versatility of this latest product line. The collection generated significant buzz and fostered numerous discussions with potential customers and partners.

In addition to the STRATO® product range, TK Lamijet 02 lamination oven showcased garnered considerable attention. The cutting-edge Italian technology and superior performance of TK Lamijet 02 oven for glass lamination captivated industry experts and generated a high level of interest among attendees.

The Glasstec exhibition reinforced Satinal's position as a frontrunner in the glass processing industry. The Company is excited to build upon this momentum and continue delivering innovative solutions to its customers worldwide.

WWW.SATINAL.IT



SAINT-GOBAIN

Start of cold repair at Barevka plant

The existing furnace for manufacturing patterned glass in Barevka, Czech Republic, has been halted for scheduled cold repair. The line will undergo major revamping to accommodate brand-new furnace design, aiming to reduce direct CO2 emissions by 75 percent.

As announced in 2023, in the frame of this joint development project, **Saint-Gobain Glass** and AGC have combined their best available complementary technologies to design the best possible hybrid furnace of the future for flat glass manufacturing. This innovative technology will be tested in Barevka, Czech Republic, and aims to create a high-performing, state-of-the-art production line that is 50 percent electrified and 50 percent powered by a combination of oxygen and gas.

The plant designated for the project is currently undergoing a significant revamping to host the new technologies. Most of the studies and procurement processes have already been completed, and the team is actively coordinating the various professionals working on-site



to construct the new furnace.

While the revamp continues, preparations for production start-up are in progress. This includes a comprehensive and detailed commissioning and testing plan for all equipment and process components to ensure the proper start-up of the new furnace. Additionally, it involves thorough training for the production team, who will be operating an entirely new industrial tool.

The new furnace is expected to be operational by early 2025.

WWW.SAINT-GOBAIN.COM



Water filtration systems for all types of glass industries

At Filtraglass we manufacture water filtration systems for all types of glass industries, thus covering a wide sector including the solar panel and automotive industries and the transformation of flat glass in general. The function of our machines is to filter and extract the particles of glass that are found in the water used in glass treatment processes, thus obtaining clean, reusable water on one hand and dry, recyclable solid waste on the other.

www.filtraglass.com



RCN SOLUTIONS

glasstec
REVIEW

A satisfying Glasstec event

With Glasstec now over, RCN Solutions has since reported results that have proven above and beyond its expectations. Four days of intense work in which the RCN team was busy welcoming all visitors, willing to give their utmost attention to everyone who crowded the booth, signalling a great opportunity to listen and talk about machines, construction choices and philosophy in lamination as well as to explain the company's flexibility in meeting a customer's requirements.

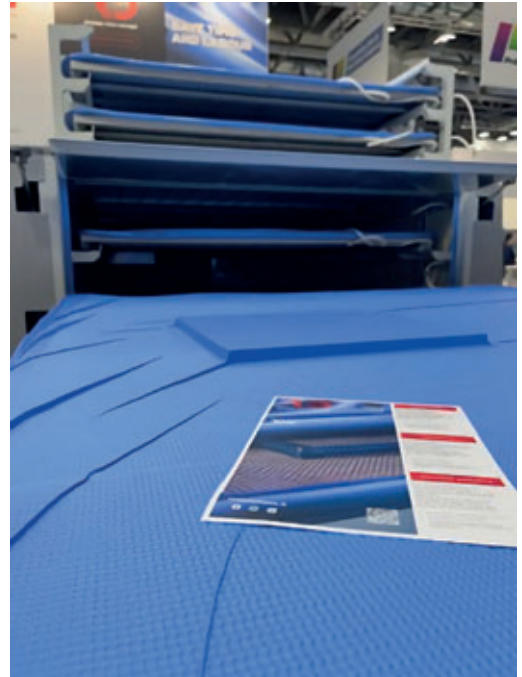
The two-shelf semi-automatic glass laminating machines displayed at glasstec, with an active size of 3600 by 2100 millimetres, equipped with RD CLEAN CONCEPT, met with great approval, and the audience was impressed by the system. Visitors appreciated the possibility to verify the strength, durability and performance that differentiate all of RCN's machines.

RCN's world-wide reputation has grown throughout the years, thanks to its commercial policies involving new products and the project, started in 2021 with RD CLEAN CONCEPT—the patented system for clean edges in lamination—aimed to facilitate logistics in production with less work for operators, which means reduced costs and time.

Moreover, RCN's customer-centric programme has been awarded with a wide audience and great interest in its products. Companies came to visit RCN's stand submitting their projects and expecting solutions involving quality products and assistance, which are two aspects RCN fervently cultivates.

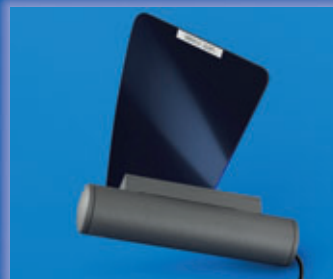
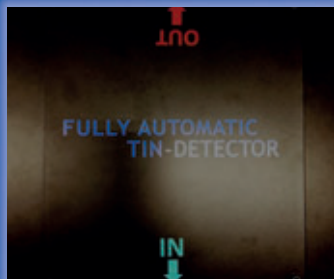
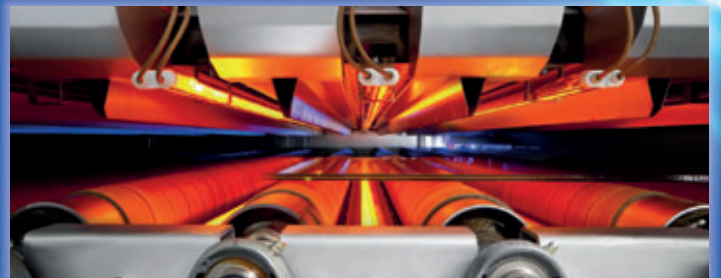
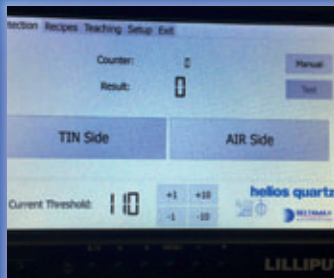
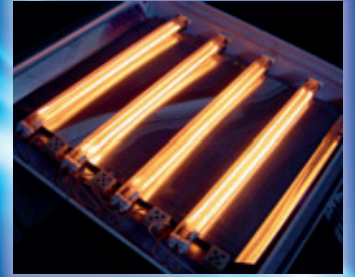
Visitors understood RCN is working hard to keep the promise of a reliable partnership. The portfolio of orders the company brought back from Glasstec is the response to the work made before and during the show, based on professional explanations, demonstrations and significant teamwork: professional, empathic, committed and working in harmony.

WWW.RCNSOLUTIONS.IT



GLASS INDUSTRY

INFRARED AND UV SOLUTIONS FOR EVERY APPLICATION



IR medium wave twin tubes emitters for:

- laminating lines
- mirroring lines
- dry screen printing lines

IR medium wave single tube emitters for:

- bending furnaces
- fusion furnaces

IR fast medium wave twin tube emitters for:

- laminated glass cutting machines

Helios Quartz also produces cutting edge equipment for the glass industry such as **manual and automatic tin side detectors and UV polymerization units.**

helios quartz®



www.heliosquartz.com

Helios Quartz Group SA

Via Roncaglia 20 6883 Novazzano - Switzerland
Tel. +41 (0) 919233555/6 Fax +41 (0) 919233557
swiss@heliosquartz.com

Helios Italquartz S.r.l.

Via delle Industrie 103/A 20040 Cambiagio - Milano - Italy
Tel. +39 02 95 34 93 18 Fax +39 02 95 34 50 85
italy@heliosquartz.com

Your partner, not a simple supplier



Leadership in shaping the future of the glass industry

Şişecam introduced its Plant of the Future platform at Glasstec 2024. The platform is established with a vision of digitalization and sustainability at the core. Bringing together Şişecam's nearly 90 years of expertise with the competencies of suppliers and technology providers, the initiative aims to foster collaboration and innovation in the industry. Operating under a call-based open innovation model, the Plant of the Future will generate tangible solutions from innovative ideas.

Şişecam CEO Görkem Elverici shared his thoughts on the Plant of the Future platform: "Our industry has many suppliers offering innovative solutions. Being the only global glass player that is active in all segments of glass production with almost 60 furnaces, we believe that in order to envision, design, discover, innovate and implement the solutions of the future, we must move forward together. In our rapidly changing world, industries that rely on traditional/conventional methods must adapt to this transformation. We believe that Plant of the Future will not only transform Şişecam's production operations and processes but also offer significant opportunities for advancing the industry. With contributions from our business partners, we aim to build a future-ready industry, which can even be extended to a "as-a-service" model in the upcoming future. As we progress toward our goals of operational excellence, optimization, digitalization and sustainability, this platform will generate practical, well-designed and innovative solutions. In doing so, it will create an ecosystem where we envision together, design together, implement together, operate together and in return grow together, paving the way for collective development with all of our stakeholders. "We are aware that tomorrow's needs must be addressed today, which is why we are committed to building the future of the glass industry now. I invite all our business partners to join us in this great transformation. We sincerely believe that the key to progress lies in the collaborations we establish."

Initially, the Plant of the Future platform will focus on glass packaging and flat glass production operations and processes. Şişecam will test development projects submitted in the identified focus areas at facilities where appropriate capacity can be created. It will then swiftly expand successful solutions across the entire production network

WWW.SISECAM.COM



Saflex™ LiteCarbon™ to be used in Stratobel Glass

AGC Glass Europe recently announced a new collaboration with Eastman to integrate the innovative Saflex™ LiteCarbon™ Clear interlayer into its low-carbon Stratobel laminated

safety glass. This collaboration underscores the growing interest in and recognized value of low-carbon products, which helps industries reduce their carbon footprint and support their sustainability objectives.

A step further in sustainability

The integration of Eastman's Saflex™ LiteCarbon™ Clear interlayer into AGC's Low-Carbon Stratobel Glass represents a significant step forward in reducing the embodied carbon of laminated glass →

← products. This combined solution offers window manufacturers a high-performance sustainable option that does not compromise on quality or safety. The product ensures excellent transparency and meets stringent safety standards, making it suitable for residential windows and a wide range of applications.

Low-carbon Stratobel Glass offers a reduced global warming potential

Saflex™ LiteCarbon™ Clear is a 0.76 mm PVB interlayer with a reduced Global Warming Potential (GWP) of 2.4 kilograms CO₂ equivalent per square metre. This aligns perfectly with AGC's Low-Carbon Glass, which features a GWP of 5.5 kg CO₂ equivalent per square metre for 4 millimetre float glass. Together, these components create an ideal synergy, offering an option going further in the reduction of the carbon footprint of laminated glass solutions.



As the construction industry continues to prioritize carbon emissions reduction, this initiative provides a timely and effective solution for glazing manufacturers seeking to minimize their impact on climate change while maintaining high standards of performance and safety.

WWW.AGC-GLASS.EU

MAPPI & GLASS INSPECTOR

glasstec
REVIEW

Entry of MEC INSPECTOR quality control system

Mappi International, a global leader in the manufacturing of glass tempering furnaces, announced the launch of its innovative MEC INSPECTOR in partnership with Glass Inspector at Glasstec 2024. The MEC (MAPPI EDGE COMPUTING) INSPECTOR is an advanced quality control system designed to ensure optimal performance in Mappi's glass tempering plants.

The cutting-edge system results from a close collaboration between Mappi and Glass Inspector and represents a significant advancement in technological innovation and the quality of tempered glass. By integrating state-of-the-art visual inspection algorithms and real-time data analysis, MEC INSPECTOR provides a customized, exact solution for monitoring glass quality throughout the tempering process.

"We are excited to present the MEC INSPECTOR at Glasstec 2024. This new technology demonstrates our ongoing commitment to innovation and quality," said Nancy Mammaro, CEO of Mappi INTERNATIONAL. "The MEC INSPECTOR will enable our customers to implement stringent quality control measures, optimizing production processes and reducing waste, which leads to increased efficiency and sustainability."

Developed in collaboration with Glass Inspector, the MEC INSPECTOR delivers detailed and accurate glass inspections, identifying defects and imperfections in real time to ensure that every piece of tempered glass meets the highest quality standards. Leveraging MAPPI EDGE COMPUTING technology, data processing is performed locally, reducing response times and enhancing system reliability.

Mappi International and Glass Inspector have also signed a joint agreement for the global commercialization of the MEC INSPECTOR, offering an exclusive solution to the market. This collaboration between two industry leaders marks a significant breakthrough in the quality and efficiency of tempered glass production.

The MEC INSPECTOR was available for demonstration and official launch at Mappi International's booth during Glasstec 2024, the world's largest event dedicated to the glass industry, taking place in Düsseldorf from October 22 to 25.

WWW.MAPPI.IT



GLASTON

ProL SPEED: the future of flat lamination

The Glaston ProL SPEED version takes laminating efficiency to a new level. Lightning-fast, precise movements with the highest automation and most advanced heating technology allow you to increase output in any production scenario to a completely new level. The convection system provides accurate and optimized heat transfer, giving you consistently superb glass quality and an up to 100 percent capacity increase compared to traditional infrared heating.

Furthermore, the patented convection control feature allows a completely new level of productivity to be reached with complex laminates with, for example, a visible increase in output and yield with multilayer SentryGlas laminates.

The ProL SPEED offers:

1. Unmatched yield and output

- Easiest mixed production in the market – now over 40 percent faster
- No changeover time between products

Precision and efficiency throughout the line

2. Lowest operating cost – highest profitability

- Lowest energy consumption – up to 50 percent in energy savings
- Lowest maintenance needs, highest uptime
- Lowest waste

3. Lifetime business growth

- Capacity and automation levels to match your specific needs
- Modular design, easy to upgrade
- Future-proof choice with ever-evolving Glaston technologies and services

WWW.GLASTON.NET

Glaston ProL SPEED
The future of flat lamination





Why Choose **VITROSEP** ?

Customized Solutions

Tailored to meet the specific needs of the glass and optical glass industry.

Advanced Glass Particle Separator

Effectively separates all particle sizes, ensuring clean water and dry waste.

Cost-Effective and Energy-Efficient

Operates in a closed circuit with no water losses, reducing costs in diamond tools, energy, and maintenance.

Minimized Downtime

Keeps production running smoothly and efficiently.

Eco-Friendly

Supports sustainable production processes.

Discover the **VITROSEP CCT1** Our small big system

Compact and Easy to Install

Completely self-installable in its standard version.

Versatile Connections

Ideal for 1 or 2 grinding machines or a combination of 1 grinding machine and 1 CNC.

Flexible Detention Elements

Available in sizes S, L, and X to suit different flow requirements.

100% Eco-Friendly

Clean water, dry waste, low volume a solution as clear as crystal!

Choose VITROSEP for a crystal-clear solution to all your grinding water treatment problems!

SUSTAINABILITY

RECYCLING

CLEAN WATER

DRY WASTE

LANDGLASS

Cyclone glass tempering machine operating smoothly in India

LandGlass recently announced that its Cyclone Series Flat and Bent Glass Tempering Machine, model A3060C60U, is now fully operational in India. This successful installation highlights the company's unwavering commitment to delivering cutting-edge solutions that meet the highest industry standards.



The Cyclone Series machine represents the peak of precision processing and offers a range of advanced features designed for both flat and bent glass tempering. Here are some of the key benefits it brings to the market:

- Superior quality: built to meet the strictest requirements in glass tempering with exceptional precision.
- Advanced technology: packed with innovative features to temper both flat and bent glass with unmatched efficiency.
- Reliable performance: designed for consistent operation, ensuring optimal results for a wide range of client needs.

LandGlass has extended its sincere gratitude to its customers in India for their ongoing trust and support, reporting that their confidence fuels the company's continuous pursuit of innovation and excellence. As LandGlass moves forward, the company has reported that it remains dedicated to offering industry-leading glass tempering solutions while fostering strong relationships with its partners across the globe.

WWW.LANDGLASS.NET

DOW **glasstec** REVIEW

Expansion of technology portfolio for insulating glass

Exhibiting at Glasstec 2024, Dow presented an expanded range of organic technologies to address the performance, productivity and quality needs of the façade and window segments. The new materials complement the company's highly successful portfolio of structural glazing, insulating glass, weatherproofing and fire safety bonding options for building façades.



← “For over five decades, silicone sealants from Dow have helped inspire unique architectural possibilities for glass façades,” said Jean-Paul Hautekeer, Global Strategic Marketing Director, Building & Infrastructure at Dow.

“Dow is excited to announce an expansion of its technology range with DOWSIL™ Organics for Insulating Glass to offer a comprehensive edge-sealing solution consisting of silicone and organics. This introduction underpins our position as a leading global materials science supplier and will allow customers to conveniently secure their sealing requirements from one source.

“This development also reinforces Dow, a backward integrated company, as a reliable supplier for formulated products with increasing requirements on circular and low carbon feed-stock.”

Highlights

At Glasstec Dow spotlighted the following technology sealant options that address key needs in façade applications:

- DOWSIL™ 336 Soft Butyl Sealant, for primary sealing of insulating glass units manufactured with flexible spacers.

- DOWSIL™ 250 Polysulfide Insulating Glass Sealant for secondary edge sealing
- DOWSIL™ 993 Structural Glazing Repair Kit for factory and on-site bonding
- DOWSIL™ 375 Construction & Glass Embedding for securing frameless glass balustrades
- DOWSIL™ PanelFix System, now approved by the German Institute for Building Technology (DIBt)

Dow’s carbon-neutral silicones service for structural glazing, insulating glass and weather sealing projects for high-performance façades were also featured.

Live dialogues

With four live dialogue sessions at its booth, Dow’s experienced specialists discussed all these hot topics at glasstec. Of these, two took place daily on October 23 and 24 at 11:00 and 15:00, respectively entitled “Silicones & their role in sustainability explained” and “Expanded technologies & advanced engineering expertise.”

WWW.DOW.COM

NSG

Halt to production at float line in Gladbeck, Germany

NSG Group has announced the decision to cease production at one of its two float glass lines at Gladbeck, Germany, from January 2025.

This decision is a direct consequence of a review of the current and medium-term weak demand situation in the German and wider European glass market, and adds to the previous announcement, made in March this year, notifying the early closure of one of the Group’s float lines in Weiherhammer, Germany.

The Group is confident the European markets will recover over the medium-to-long term, however the exact timing of a potential restart of the line will be decided at a later date.

This measure will result in a reduction of the workforce at the site of more than 100 employees. The Group’s subsidiary in Germany, Pilkington Deutschland, is in continuous contact with employee representatives to implement this process in a fair and transparent manner.

As a result of this decision, the Group expects to record an exceptional cost of approximately JPY 1.7 billion for the financial year ending 31 March 2025, representing redundancy and other one-off costs. The Group’s full-year forecast for the financial year ending 31 March 2025, including this exceptional cost together with the positive resulting impact of an improved level of capacity utilization, will be disclosed after review.

WWW.NSG.COM



FENETECH **glasstec**
REVIEW

Innovative software solutions presented at Glasstec



FeneTech presented its innovative software solutions for the glass processing industry at this year's Glasstec in Düsseldorf. FeneTech's cutting-edge technology helps glass industry professionals streamline production processes and enhance business efficiency.

Product presentations of the FeneVision software

FeneVision is a comprehensive software package developed specifically for the glass, window and door industry. The software helps companies to optimize their business and production processes, reduce costs and increase efficiency, covering the entire process chain – from configuration and quotation creation to order, material and production management, invoicing, shipping and supplier management. Attendees at Glasstec could discover firsthand how this system addresses current market challenges like incomplete material deliveries or delays. Indeed FeneTech's solutions help eliminate order entry issues and efficiently manage multiple incomplete orders in a single price.

Presentation of the new product Storefront Designer

StorefrontDesigner streamlines the planning and ordering of shop windows and interior partitions, saving you valuable time. This innovative software automates CAD drawings and price calculations for maximum efficiency and precision. The flexibility of a personalized design tool can be used to customize any type of system – whether for top brands or your own designs. Thanks to dynamic parts lists and customizable tools for fittings and movements, users can have every opportunity to tailor their projects perfectly to their customers' needs, optimizing the ordering process while inspiring their customers at the same time.

WWW.FENETECH.COM

GLASTON

Orders for automotive pre-processing lines from Fuyao Group

Glaston has received orders from **Fuyao Group** in China. The orders include several Glaston CHAMP EVO automotive glass pre-processing lines, and are booked in Glaston's Q3 and Q4 2024 order book. The CHAMP EVO lines will be delivered in the second and third quarters of 2025.

Fuyao Group ranks among the top companies in the global automotive industry and the company continuously develops production automation, intelligent manufacturing and quality. Fuyao's products are used and highly rated by the world's leading automotive manufacturers and OEMs.

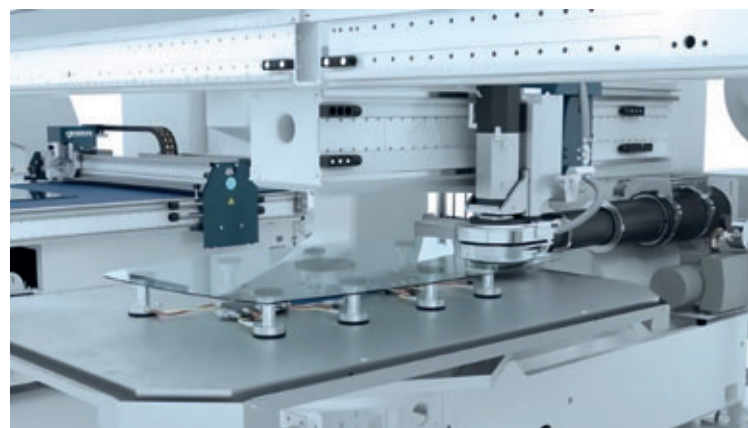
The customer will use Glaston's CHAMP EVO pre-processing lines for cutting and grinding automotive wind-shields and sidelites. Also, some of the lines for sidelite production include the drilling function.

In addition to grinding quality, high efficiency and precision in cutting, short changeover times between glass batches and a high degree of repetition accuracy were capabilities the customer was looking for.

The ordered Glaston pre-processing lines will add new production capacity for Fuyao Group's factory sites in the Anhui and Fujian provinces. Fuyao Group's new plant in Anhui is considered to be one of the largest automotive safety glass processing plants in the world.

"We have worked a long time with Fuyao and are happy that our products support their position as a high-quality automotive glass processor. These orders also demonstrate that providing locally produced machines close to customers in the growing mobility market is well received and will support our strategic growth plans in the mobility market," said José Yepes, SVP Mobility, Display & Solar at Glaston Corporation.

WWW.GLASTON.NET





Seeing the customer with Bando's eyes
Feel the customer with Bando's heart

YOUR DREAM REALIZED BANDO TECHNOLOGIES



ADVANCED EDGE QUALITY



INDUSTRY 4.0



SATELLITE NON-TEMPLATE BREAKOUT



AUTOMATIC GRINDING VACUUM CUP CHANGE



IoT

FACTORY AUTOMATION FOR AUTOMOTIVE, FPD, SOLAR PANEL,
ULTRA THIN GLASS AND SPECIALTY GLASS



Intertek

ISO9001:2015 認証取得
ISO14001:2015 認証取得
ISO45001:2018 認証取得



CE • ISO 9001, ISO 14001, ISO 45001 certified

Tel:+81-88-664-5280

Fax:+81-88-664-5282

2-4-60 Kanazawa, Tokushima 770-0871-Japan

E-mail: global@bandoj.com

www.bandoj.com

NSG GROUP

glasstec
REVIEW

HomeComfort range introduced at Glasstec 2024

Known for its Pilkington glass products, NSG Group introduced its new HomeComfort range at Glasstec 2024. At the fair these products, designed to enhance home comfort, were highlighted alongside NSG Group's ongoing makechange™ sustainability initiatives.

Balancing sustainability with comfort

As pioneers of the float glass process, NSG Group is committed to improving both the sustainability of its products and the comfort of living and working environments.

HeatComfort: Sustainable heating solution

One of the key products in the HomeComfort range is HeatComfort, a heated insulating glass solution featuring the electrically conductive NSG TEC™ coating.

During colder months, HeatComfort not only minimizes heat loss but also ensures a more stable and comfortable indoor climate. While it doesn't alter the U-value, this technology can boost a home's energy efficiency, combining comfort with sustainability.

LuxComfort: integrated sun protection

Another product in the HomeComfort range is LuxComfort, which integrates blinds within the glass panes. This solution protects against solar heat and light, making it suitable for energy-efficient building projects. In warmer months, LuxComfort blocks sunlight to prevent overheating, while in colder periods, the integrated blinds can be raised to allow more sunlight in, reducing heating costs by utilizing natural solar heat.

Year-round climate control with HomeComfort

The HomeComfort range offers year-round climate control that is easy to manage, whether at home or on the go. When paired with HubComfort, users can control their products remotely.

The purpose behind HomeComfort

"As remote working becomes more common, creating a home environment that balances comfort and efficiency has never been more important," said Alderlan Vitalino, Global VA and Marketing Director Europe Architectural Glass SBU. "HomeComfort was developed to meet this need, offering glass solutions that make living and working spaces more comfortable, energy-efficient, and adaptable."

NSG Group plans to expand the HomeComfort range in the future, further enhancing living comfort with a focus on sustainability.

Other Innovations

In addition to the HomeComfort range, NSG Group showcased other products at Glasstec 2024, where visitors could explore Pilkington Mirai™, the lowest embodied carbon glass in the market, and Pilkington AviSafe™, designed to improve bird safety while maintaining visibility.

WWW.NSG.COM



Smart Glass Storage, Loading and Cutting Machinery

TUROMAS
OUR PASSION, YOUR PROGRESS

SMART STORAGE



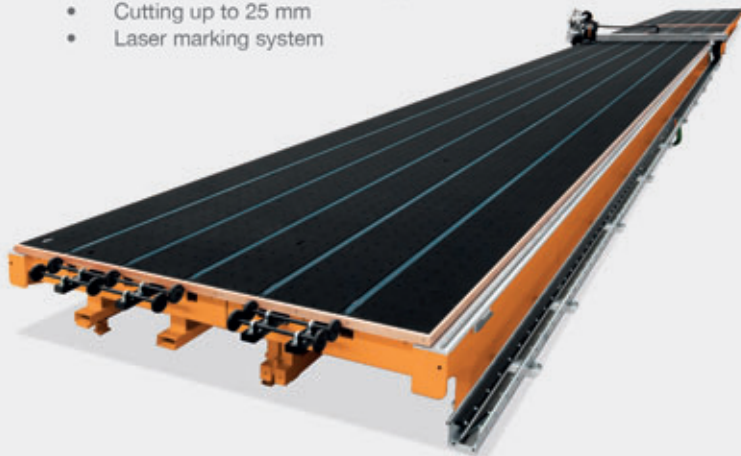
TUROMAS
Software

The comprehensive solution for the interpretation and management of your company's production data.

RUBI SERIES

Monolithic glass cutting

- Transmission system with linear motors
- Cutting head with 4 tools
- Low-E, TPF and easypro glass coating
- Printer with automatic label applicator
- Cutting up to 25 mm
- Laser marking system



LAM SERIES

Laminated glass cutting

- Automatic glass rotation
- Low-E glass coating
- Cutting up to 12+12 mm
- Straight shapes & Balustrade Glass Cutting
- Additional side lamp
- Automatic glass positioning



www.tuomas.com

Carretera Estación Km. 15,8 CP 44415
Rubielos de Mora - España

Follow us on our networks!





Innovation and success define **TUROMAS's** Glasstec comeback

Tristar Glass, a leading architectural glass manufacturer in the U.S., has strengthened its production capacity at its Dallas plant by acquiring smart machinery from Spanish manufacturer, Tuomas. This strategic partnership, driven by high demand and the need to improve operational efficiency, includes the installation of two RUBI 517C cutting tables and an SR-07 storage system.

DUSSELDORF SUCCESS

This year Tuomas returned to Glasstec, the premier trade fair for the flat glass industry. The event provided the perfect stage for presenting the

latest innovations in glass storage, loading and cutting machinery. As such it gathered together 1,257 exhibitors from 50 countries and welcomed nearly 32,000 visitors from 121 nationalities who came to experience the latest trends

and innovations across the entire glass production and processing value chain. With a 600 m² stand in Hall 15 - B24, Tuomas made its own impressive impact by showcasing a comprehensive range of state-of-the-art machinery, automation systems and intelligent glass-cutting solutions that captivated visitors. The blend of advanced technology, live demonstrations and direct interaction with company experts contributed to a highly successful event for the company. In addition to highlighting cutting-edge developments, innovations and trends, Tuomas strengthened valuable business relationships.

AN EXPERT TEAM COMMITTED TO CUSTOMER SERVICE

Representing Tuomas were key figures: Miguel Tomás, President; Álvaro Tomás, CEO; José Luis Escriche, COO; and Antonio Ortega, CFO. Regional sales were handled by Álvaro Doñate, area manager for Spain and Portugal;

Oriol Llorens, area manager for Europe; Santiago Blasco, area manager for Africa and the Middle East; Eduardo Nieto, head of the Chile and Argentina delegation; Juan Dávila, head of the Colombia delegation; Bonifacio Cuadros, head of the Mexico delegation; Teresa Catalán, marketing head; and Teresa Salvador, after-sales service. On the technical side, Miguel Ángel Guillén, R&D Manager; Ángel Silva, Software Manager; José Solsona, Prototyping Manager; and Daniel Gimeno, Technical Office Manager were all in attendance. 2024 also marked the first Glasstec participation of Alfonso Lafaja, General Manager of Distecglass, a Tuomas group company specialising in distributing and advising on products and consumables for glass processing, such as those used in IGU manufacturing, light façades, glass fittings and glassware tools. With Glasstec now over, Tuomas and Distecglass are all set to appear at Veteco 2024 in Madrid from

November 5 to 8, at stand #10E08, for which they have jointly extended their gratitude to the dedicated Turomas sales and distribution network, which has contributed to a strong team presence - offering personalised and enhanced customer service throughout the fair.

Turomas's 26-year history at this event. It has not only created new business opportunities and commercial alliances. It has also solidified significant agreements with leading companies on five continents. Glasstec 2024 has, without a doubt, marked a turning point for Turomas."

scrap management. Hundreds of visitors came to our stand, attended to by nearly 30 members of our sales network, in our typical professional and personalised style. Given the positive outcomes, we are optimistic about seeing the results of our efforts at Glasstec 2024 unfold in the coming weeks."

and yielding results beyond expectations. I'd like to extend thanks to all the customers and friends who visited, especially those from Spain and Portugal, who support us in establishing Turomas as a market reference."

Oriol Llorens,
Europe Area Manager

"The event was a resounding success for the European market, drawing numerous familiar customers and resulting in highly productive meetings that further solidified our position and prestige."

CUTTING-EDGE MACHINERY UNVEILED

At Glasstec, Turomas introduced its main technological advancements in smart storage, loading and automatic glass cutting, along with its new software suite. Live demonstrations were customised for each customer, ensuring a unique and close experience.

LR-07

This automatic glass loader boasts a patented Turomas arc loading system that greatly increases production efficiency over traditional loaders. It handles both standard and Jumbo glass of varying heights, low-emission layers and thicknesses from 1.8 mm to 25 mm. Configured for integration with the SG - SaveGlass system,

Miguel Ángel Guillén,
R&D Director

"Returning from Glasstec, we are filled with satisfaction and excitement, having shared these days with the industry, our customers, the commercial network and our team. After 26 years of participation, we proudly regard this as one of Turomas's most successful editions."

Teresa Catalán,
Marketing Manager

"A heartfelt thank you goes to everyone who made this event possible: customers, suppliers, the sales network and especially the incredible Turomas team across production, R&D, software, after-sales, administration, marketing, sales and management. Each person's hard work and passion were essential to our success. Thank you!"

Álvaro Doñate,
Spain and Portugal Area Manager

"This was the most intense fair I've experienced in my 20 years at Turomas, reflecting our investment



Impressions of TUROMAS' management

Here follow some useful take-aways from various key members of the Turomas booth team at Glasstec:

Álvaro Tomás,
CEO

"With Glasstec behind us, we can now confidently state that this has been one of the best editions in

José Luis Escriche,
COO

"The standout feature for me was the enthusiastic response from customers worldwide to our solutions on display -, including cutting tables for laminated and monolithic glass, new software applications and automation for storage and

it features a grid that facilitates 90° remnant entry and exit. Every component in contact with the glass is chosen to prevent damage, designed with advanced technology for autonomous operation on both standard and Jumbo sheets.

SG-06

The SaveGlass system allows remnant storage without damage risk, providing exact location, measurements and glass type for later use. It operates independently or integrates seamlessly into any Tuomas storage system (SR or LA) and its flexible design can be customised to fit the client's space and needs.

RUBI 517C

This high-performance monolithic glass cutting line employs magnetic linear motor technology introduced by Tuomas nearly 20 years ago. It achieves a maximum speed of 310 m/min and an acceleration of 19 m/s². Equipped with the 4-Tool system for an adaptable, perfect cut on various glass thicknesses, this table is also integrated with the ACR advanced stripping system, a patented feature that removes Low-E coatings and plastic protections in a single pass. The system includes innovations to enhance stripping, such as a cooling system and a two-stage process that prevents

peeling. Additionally, a high-flow vacuum removes all residues from the surface. A laser marking system allows identification and traceability of each glass piece, offering high-speed, precision marking within an engraving area of 100x100 mm.

cycle time by 10 seconds and heating the butyral improves cut quality. The fully automated process from loading to unloading, aided by MCC belts and a specially designed measuring trolley, maximises efficiency. An advanced system facilitates



LAM 405

This cutting line for laminated glass, with a versatile, automatic design, cuts glass from 2+2 to 10+10 in thickness, featuring a 4.7 m cutting length and 3.3 m system length. Tuomas's new cutting and separation system reduces

quick, precise positioning, particularly for laminated safety glass cutting. Additionally, Tuomas set up a dedicated totem for its software applications, where visitors interacted with digital tools like StockGlass, Cutting TV and SmartGlass, show-



casing the transformative power of digitalization and automation in the glass industry.

SALES AND VISITOR INTERACTION

Throughout the fair, Turomas's stand saw a continu-

ous influx of visitors from Europe, Latin America, Australia and the Middle East, resulting in significant deals in countries like Portugal, Argentina, Mexico, South Africa and Saudi Arabia. Feedback from visitors was overwhelmingly positive, underscoring not only the technical quality of the machinery but also Turomas's dedication to innovation and after-sales support. These interactions bolstered the company's reputation as a reliable and high-quality provider, drawing both long standing customers and new potential clients.

THE FUTURE AFTER GLASSTEC 2024

Glasstec 2024 has reinforced Turomas's position as a leading global player in glass industry technol-

ogy. With new business agreements and encouraging feedback, the company looks to the future with optimism. Glasstec has always been a vital platform for Turomas, underscoring the importance of anticipating market needs as the industry evolves. Going forward, Turomas remains committed to innovation, aiming to develop more efficient and sustainable solutions aligned with industry demands.

TUROMAS
OUR PASSION, YOUR PROGRESS

Carretera Estación Km. 15, 8
44415 Rubielos De Mora
Teruel - SPAIN
Tel.: +34-978-804158
info@turomas.com

www.turomas.com



The future of TUROMAS after Glasstec 2024



SUCCESS STORY

Triumph at **KERAGLASS** after a winning Düsseldorf event



KERAGLASS has reported great satisfaction following its recent participation at Glasstec 2024, at which the company saw its industry leadership reinforced. The event attracted numerous professionals, partners and potential customers who were able to view live demonstrations that fostered productive interactions - all paving the way for future growth and new market opportunities.

to the company's latest developments, with new products receiving considerable interest. Its live demonstrations proved especially popular, giving visitors a real-time look at the flexibility, precision and quality of Keraglass products and technological solutions. These interactive sessions gave attendees a close-up view of the benefits of our solutions, resulting in an engaging and extremely informative experience for all. Many of the company's existing customers dropped in to try out products and hold direct discussions with the stand team. The interac-

Participation at this year's Glasstec turned out to be a great success for Keraglass in late October - providing yet another confirmation of the company's industry protagonism. Its stand welcomed a large number of visitors - all drawn by the company's innovative solutions and the high quality of the products on show. Attendees to the event displayed a significant level of interest. A large number of glass sector experts visited the stand, keen to take a look at the latest developments and receive more information on the possibilities offered by Keraglass's technologies.

ANSWERING UNMET NEEDS

Interactions with potential customers proceeded very smoothly, thanks to an open and constructive dialogue that afforded the team a chance to have a

comprehensive understanding of the needs out there while proposing tailored solutions. Visitors were particularly attentive





tive sessions that ensued, as well as practical demonstrations and detailed presentations all attracted a high level of interest, engendering even greater trust in Keraglass's offering. There was no shortage of positive feedback from customers, who clearly understood the benefits and capabilities of the solutions on offer - opening the way towards new opportunities for mutual collaboration.

SERVICE EXCELLENCE

The excellent customer service available from the company's team proved to be a key aspect of its

success at the exhibition. Indeed its proactive approach, backed by solid expertise and readiness to answer visitor questions all produced a positive and professional atmosphere on the stand. This attention to detail meant the team was not only able to meet customer expectations, but also to gain a fuller understanding of their needs - resulting in full-spectrum conversations on how Keraglass' solutions can best match their requirements. The event closed on a note of absolute enthusiasm, with extremely promising outlooks for the future. With the interest generated

and contacts collected at the exhibition, the team now feels fully justified in adopting an optimistic view of the future.

LOOKING AHEAD

Keraglass has since expressed its commitment to continue working in close contact with customers to understand their needs more completely - offering tailored solutions and building enduring business relationships. Here the company's participation at Glasstec acts as a springboard to strengthen its relations with customers, also allowing it to explore new market opportunities. Indeed thanks to Kerag-

lass's high quality products, innovative approach and customer-service focus, it has laid solid foundations for the continuous growth and consolidation of its leadership role in the sector. Enthusiastic for all that the future may hold, Keraglass now looks forward to continuing this path of growth side by side with businesses.



keraglass:

Via Sassogattone, 13/A
42031 Baiso (RE) - ITALY
Tel.: +39-0522-993027
info@keraglass.com
www.keraglass.com

**BLOCK
YOUR
DATES**

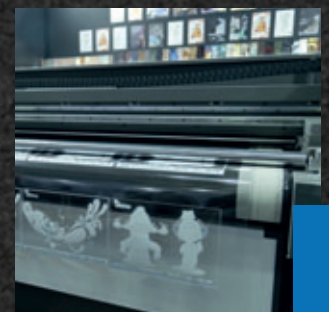
ENVISIONING URBAN AESTHETICS
WITH LATEST TRENDS IN
**GLASS PROCESSING
TECHNOLOGIES**

21ST INTERNATIONAL TRADE FAIR ON
**GLASS PRODUCTION, PROCESSING,
TECHNOLOGIES & PRODUCTS**






5-7 DEC 2024

**PRAGATI MAIDAN
NEW DELHI**



 www.zakglasstech.com | [#zakgte](https://twitter.com/zakgte)

  [/zakglassexpo](https://www.instagram.com/zakglassexpo) |  [/zakgte](https://www.linkedin.com/company/zakgte)

Engineering excellence in **BSOLUTION**'s glass arrising, grinding machines

Designed for precision and efficiency, BSOLUTION's machines optimize glass finishing processes - delivering fast, safe results of optimum quality. No surprise, therefore, that the company team greatly impressed booth attendees at Glasstec in October - exhibiting Speed Edge's innovative suction technology, which ensures stability, alongside Speed Arris, which boosts productivity in pre-tempering applications.



B Solution was delighted again to participate in October at Glasstec - the leading global event for the glass industry, which was held in Düsseldorf. With its wide range of glass arising and grinding machines, the company stands as a trusted partner for companies seeking efficiency, precision and reliability in their production processes.



It showcased its flagship products, including Speed Arris, the high-productivity edging/grinding machine and Speed Edge, the vertical edger that's designed to meet current industry demands with advanced technology that improves efficiency while reducing processing times. Crafted to the most elevated technological standards, both machines offer tailored solutions for high-performance glass production,

optimizing quality and speed.

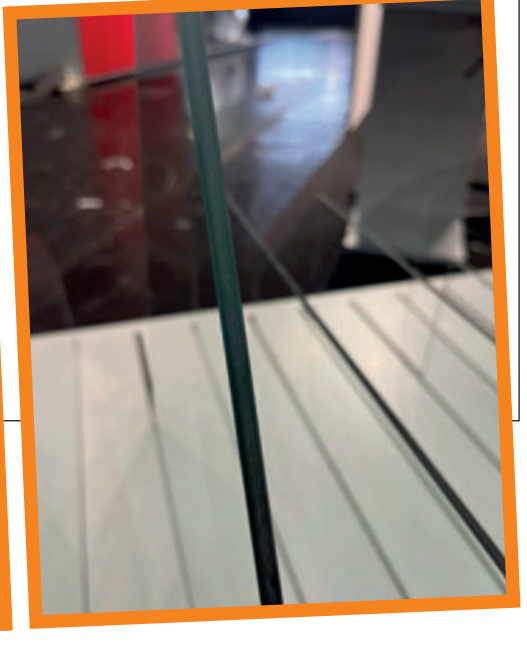
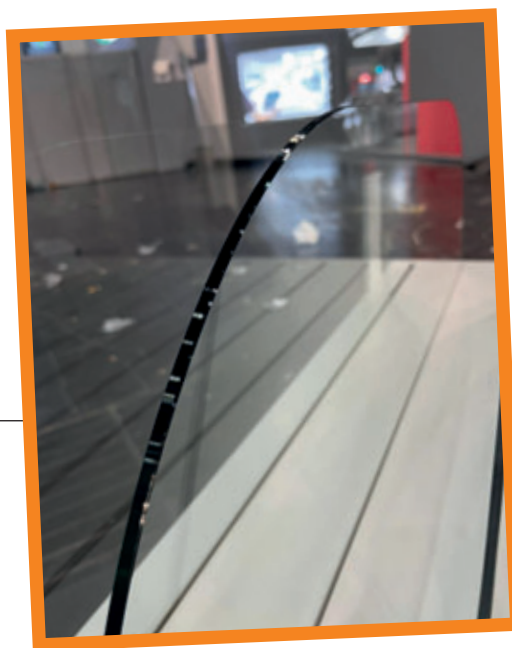
INNOVATION AND QUALITY: POLISHED EDGE GLASS AND SPEED EDGE TECHNOLOGY

In the world of glass processing, obtaining high quality finishes is essential on an ever-more demanding market. Here polished edge glass is one of the most sought-after finishes as it merges great aesthetics and outstanding

safety on a single product. B Solution understands the importance of this process, which is why it offers such edge processing solutions as the Speed Edge vertical glass edging machine - all to ensure optimum results.

SPEED EDGE PLUS

An innovative system, its suction cups allow it to lock the entire plate that must be worked - thereby ensuring a higher working speed than





traditional machines, an absence of vibrations, precision in squaring and respect for the dimensions of the glass that's being worked. Indeed the Speed Edge machine is designed to be applied either to existing glass processing lines or to work independently. Here the compact system integrates loading and unloading with additional space reduction in a single solution.

ADVANTAGES OF USING SPEED EDGE FOR POLISHED GLASS

More specifically, the Speed Edge vertical glass edging machine gives customers the following advantages:

- Shorter processing times, thanks to a high-speed grinding system
- Uniform, high-quality finishes that meet rigorous safety and aesthetic standards
- Flexible control of glass size/thickness, ensuring outstanding versatility

Investing in the right technology is an essential competitiveness factor in the glass processing industry. The Speed Edge vertical glass edging machine is an excellent example of how innovation can transform manufacturing, raising both output capacity and customer satisfaction.

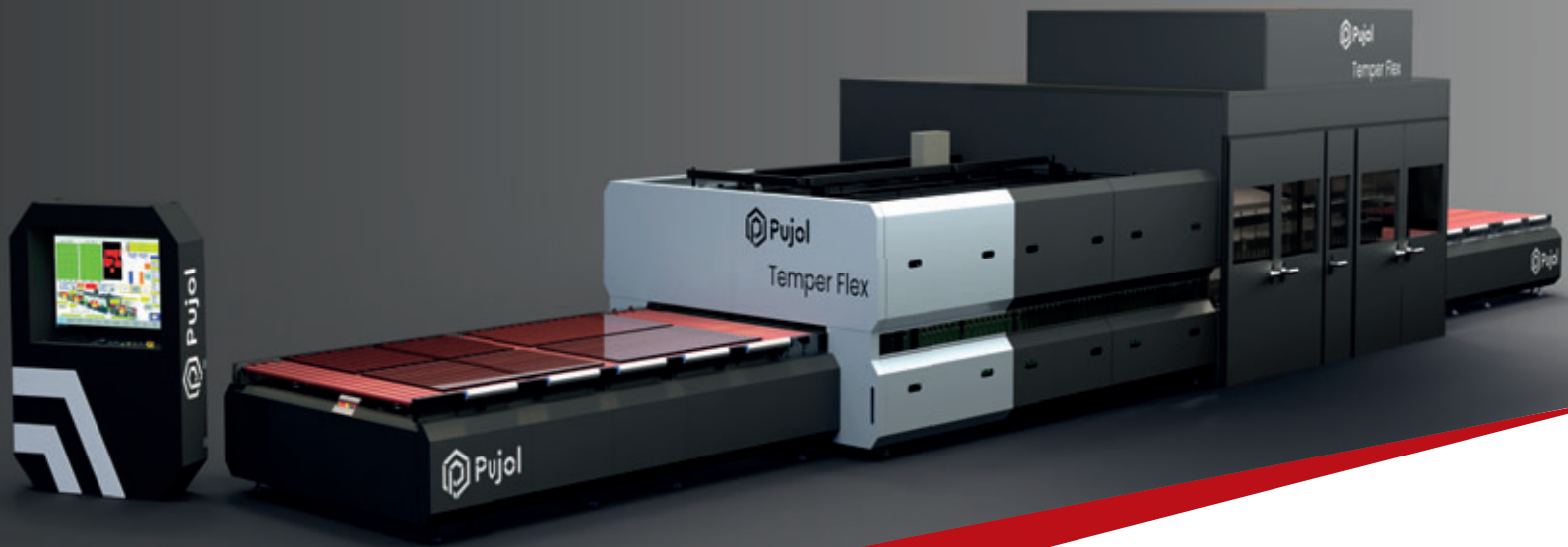
B SOLUTION'S SPEED ARRIS TECHNOLOGY

The Speed Arris machine is dedicated to both arri- s- ing and rough-grinding,

thus illustrating two fundamental glass-working processes. The machine combines these two essential techniques to optimize the glass production process - enhancing both efficiency and safety. Designed using state-of-the-art technology, the company's solutions ensure precision arri- s- ing and effective rough grinding, reducing processing times and extending the lifespan of finished products. In particular, arri- s- ed glass represents one of BSolution's specialties. Through refined techniques, the sharp edges of the glass are removed, transforming them into elegant, safe edges. This process not only enhances the aesthetic appearance of the glass but also increases its impact resistance, significantly reducing the risk of breakage. By delivering high productivity in vertical arri- s- ing, high productivity in vertical rough-grinding and seamless integration into IGU lines, Speed Arris arri- s- ing/rough-grinding machine will optimize the pre-tempering process - for enhanced safety and efficiency.

B Solution
ON THE PLUS SIDE

Via L. Spallanzani, 6
24061 Albano S. Alessandro -
BG - ITALY
Tel.: +39 035.4521234
sales@bsolutionsrl.it
www.bsolutionsrl.com



Pujol Temper Flex

engineered by **Teknokilnet**

TEMPER FLEX. The first glass tempering oven on the market with high productivity and high installed power, able to adapt to produce with low energy consumption and low installed power if the customer requires it.

- ◆ High flexibility.
- ◆ High quality of the finished product.
- ◆ Higher profits per square meter of glass produced.
- ◆ Low maintenance costs.
- ◆ Better return on investment.

Winning products have **PUJOL** and **EVALAM** making their mark at Glasstec

Showcasing its industry leadership in an impressive, 420-square-metre exhibition space, PUJOL presented its extensive range of solutions for the safety glass sector at Dusseldorf this year - meeting diverse market demands while demonstrating the company's commitment, jointly with EVALAM, to advancing its innovative offer to the industry.



Evalam Color, whit the new 4 colors (caribbean blue, cement grey, copper & bronze)

Glasstec 2024 saw Temper Flex being numbered among the groundbreaking technologies displayed by Pujol. It's the first glass tempering oven on the market with high productivity and high installed power. Temper Flex can work at a double range of installed power and at a double speed "ECO" or "PRO". This innovative system can adjust its power consumption to align with customer needs and enable precise energy control for varying production requirements, reducing overall consumption.

More specifically, the Temper Flex offers the following unique benefits:



AB-AR a post-breakage structural interlayer of EVALAM



General view of the stand



Evalam Visual

- High production flexibility: designed to adapt to fluctuating production needs.
- Superior product quality: delivers high-quality finishes with exceptional flatness and minimal anisotropy.
- Cost savings and profitability: reduces energy costs per square meter and provides a rapid return on investment.
- Low maintenance requirements: minimizes downtime and maintenance expenses, maximizing operational efficiency.

Pujol also introduced the Pujol 100 PVB+, an oven tailored for the efficient lamination of PVB glass without the need for costly air-conditioned facilities, additional calendaring equipment, or accessories for humidity control. This disruptive technology has proven its value, with 52 units already installed across 28 countries over the past 11 years.

KEY ADVANTAGES OF THE PUJOL 100 PVB+ INCLUDE

- Versatile lamination: capable of processing PVB, EVA, and ionoplast (SGP) interlayers.
- Humidity and temperature independence: no climate control is required, reducing operational costs.
- Elimination of pre-laminating requirements: operates without a calendaring system or high-power compressors.
- Energy efficiency: achieves up to 70 percent energy savings compared to traditional autoclave systems.
- High thickness capacity: supports up to 40 mm in a single tray or up to 60 mm in smaller glass units.
- Uniform heating: uses a dual-sided heating plate system for consistent temperature distribution.
- Space optimization and productivity: while one load is processed, the oth-



General view of the stand



Lam-Pro Oven

er is prepped, optimizing cycle times.

- High output with minimal staffing: enables efficient high-volume production with a reduced labor footprint.

Also on display was the LAM-PRO series, designed for companies seeking high performance with lower investment. This series balances quality with efficiency, making it ideal for firms

aiming to maintain top-notch results without compromising on budget.

ADVANTAGES OF THE LAM-PRO SERIES

- Production flexibility: independent, isolated working chambers.
- Eco-friendly design: minimizes environmental impact.
- High productivity: features an automatic rapid cooling

- system.
- Industry 4.0 compatibility: equipped with Pujol's e-Connect technology for advanced connectivity (model dependent).
- Uniform heating: features a double-layer radiation system with air homogenization.
- Quality control: the vacuum bag in Omega enhances glass quality.
- User-friendly software: includes customizable pro-

gramming functions.

- Ergonomic design: built to improve productivity and reduce operator fatigue.

Additionally, Pujol introduced Talgo Bending - ARKTK, a specialized oven for producing 5x3x1.2-metre curved gravitational glass. This technology allows for the creation of large, distortion-free curved glass, expanding possibilities in architectural applications. Evalam, a division of the Pujol Group, highlighted its expertise in EVA and other interlayers for architectural and decorative glass, showcasing products that have cemented Evalam's reputation as a global leader in inter-layer solutions. Products featured by Evalam included:

EVALAM VISUAL

Distinguished by its superior transparency, unmatched adhesion, excellent acoustic insulation, and a high crosslinking index, Evalam Visual is the ideal choice for projects where optical clarity and durability are paramount. Evalam Visual provides numerous benefits:

- High transparency



- 87 percent cross-linking
- Edge stability: maintains integrity at open edges.
- UV filtering
- Strong adhesion
- Acoustic insulation
- Safety protection
- Fire resistance

EVALAM COLOR

Designed for architects and interior designers, Evalam Color offers durability, colour uniformity, and an expanded palette. With recent additions like caribbean blue, cement grey, copper and bronze, this product line meets the demand for vibrant, lasting colours. Evalam Color is engineered for durability under high temperatures, without tonal

degradation, thereby ensuring vibrant colour longevity.

Key advantages of Evalam Color include:

Temperature tolerance:

- Operates up to 120°C without colour loss.
- Extended longevity: maintains colour quality over time, outperforming other brands.
- Certified for outdoor use: four shades of white and one black meet European outdoor standards.
- Vast colour range: offers over 300 colour variations for customized solutions.

AB-AR

Evalam also introduced

AB-AR, a structural inter-layer developed for high-safety applications in public spaces or areas requiring support under high linear loads. AB-AR provides a higher degree of post-breakage safety, essential for tempered glass installations in high-traffic environments.

Advantages of AB-AR include:

- Post-breakage performance: ensures structural stability after glass breakage.
- Impact resistance: withstands forceful impacts in crowded areas.
- Temperature resilience: performs reliably above 50°C.

- UV protection
- Enhanced safety
- No air-conditioning needed: reduces maintenance complexity.

I-ON BY PUJOL

Another highlight from the Pujol Group was I-ON, a PDLC laminated solution allowing seamless transitions between transparent and private glass, fully integrable with home automation systems. This technology offers broad applicability in residential and commercial settings, providing flexible privacy control with aesthetic appeal. Pujol and Evalam's continued innovation, evident at Glasstec 2024, reflects their commitment to pushing the boundaries of glass technology. From energy-efficient laminating solutions to vibrant inter-layer options and privacy-enhancing systems, Pujol Group's offerings address the evolving needs of the architectural glass sector. This year's exhibition solidified Pujol's position as a leader in glass processing technology, underscoring the company's dedication to sustainable, high-performance solutions for global markets.



C/ del Pla
108-110 Sant Feliu del Llobregat
08980 Barcelona - SPAIN
Tel.: +34-936 855-672
www.pujolgroup.net



An essential dimension of sustainable building: **EDGE**TECH's Super Spacer®

FLEXIBLE WARM EDGE IN TWO OF BIG'S MOST RECENT PROJECTS

Renowned Danish architect Bjarke Ingels Group (BIG) believes there is

no single answer to what sustainable buildings of the future will look like. The eye-catching new BIG headquarters in the port of Copenhagen is largely made of

CO₂-reduced concrete, though the group chose cross-laminated timber when designing Skypark Business Centre at Luxembourg Airport. At first glance this may seem

contradictory, yet the two buildings share some common qualities - high standards of sustainability, resource conservation and energy efficiency, and both feature insulating glazing with Super Spacer® spacers.

PURE BRUTALISM AT BIG HEADQUARTERS IN NORDHAVN, COPENHAGEN

Copenhagen has completely overhauled the former harbour area of Nordhavn, transforming it into a sustainable urban district - a connected area for 40,000 people and a testing ground for cutting-edge green technologies. When BIG presented plans for its new headquarters at the top of Sundmolenpier in Nordhavn, they were initially rejected by the city council. Decision makers considered the proposed 27-metre-high concrete



© Laurian Ghinitoiu

Bjarke Ingels Group (BIG) has integrated flexible warm-edge technology from Edgetech's Super Spacer® in recent projects, so it's hardly surprising that its concrete-centric Copenhagen HQ and its timber Skypark Business Centre in Luxembourg both use the advanced spacers to enhance insulation, energy efficiency and durability.

HIGH PERFORMANCE DOUBLE GLAZING COMBINES THERMAL INSULATION, SOLAR CONTROL AND LIGHT TRANSMISSION

Eiler Thomsen Alufacader manufactured the mullion-transom glass façade from extruded raw aluminium. Glaseksperten A/S supplied approximately 500 units, up to 2.8 metres high, for the floor-to-ceiling triple glazing, as well as a three-metre high glass sliding door and glass fire doors. The U value of the façade is 0.18 W/(m²K), the U_g

value of the glazing is 0.6 and the U_w value of the windows is 0.8 W/(m²K). The Pilkington Suncool 70/40 used in the insulating glass units is a high performance coated glass that combines excellent thermal insulation with solar control and high light transmittance - important properties for the low light Scandinavian winters and long sunny summer days. The glazing experts chose Edgetech's Super Spacer® T-Spacer™ Premium Plus as the project's warm edge spacer. Marketing Manager Louise Præsthølm comments: 'The Super Spacer is very efficient

tower too unattractive for the green showcase city, which aims to be carbon neutral by 2050. At first glance, the neo-brutalist aesthetic -marked here by massive exposed concrete beams- appears to honour an environmentally high-impact material rather than sustainable design. With no plaster or cladding, the structure highlights the pure contrast of concrete supports and floor-to-ceiling glass. From roof to pier, each story ends in a diagonal balcony connected by a circular staircase, offering unique views of the Öresund. Yet, closer inspection reveals the high performance components making this a sustainable construction project.



© Rasmus Hjortshøj

in production due to its flexible, metal-free composition, which simplifies installation and reduces the need for manual labour. Its structural flexibility also allows for an extremely precise fit, reducing the stress on the glass. Super Spacer also contributes to the energy efficiency and durability of the end product by improving thermal performance and minimising condensation.’

70 PERCENT OF CONCRETE MADE WITH REDUCED CO₂ CONTENT

After the building application was rejected, BIG entered into discussions to explain the sustainability concept in detail. In order to achieve the best possible lifecycle carbon footprint as part of the DGNB Gold certification, around

70 percent of the concrete used for Sundmolenpier was carbon-reduced. Since 2017, when the initial plans for the new headquarters were drawn up, the team had been in dialogue with Danish cement manufacturer Aalborg Portland, which was researching a CO₂-reduced cement. The resulting material, now marketed as FUTURECEM®, produces up to 30 percent less CO₂ emissions than conventional Portland cement, as 35 percent of the energy-intensive clinker is replaced with limestone and calcined clay. FUTURECEM® is more viscous than less sustainable alternatives, meaning special production and formwork procedures had to be developed in collaboration with the shell manufacturer LM Byg A/S and the concrete sup-

plier Unicon to enable the walls to be cast in-situ. The beams, which are approximately 3.6 metres high and 20 metres long, are a sandwich construction of 500 millimetres of load-bearing reinforced concrete, 350 millimetres of insulation and 100 millimetres of fair-faced concrete. But why concrete and not timber? The location’s harsh, salty environment is tough on any material, but the BIG team felt that challenges of corrosion and moisture would have been much more difficult to solve with a timber structure. In addition, the building had to accommodate materials from the surrounding port buildings. BIG headquarters is heated and cooled solely by concrete core activation and passive ventilation, taking full advantage of FUTURECEM®’s heat storage capacity to

regulate temperature. Energy piles are used as a heat source and the heat pump is supplied with electricity from the building’s own photovoltaic system. There are reasons beyond aesthetics for leaving surfaces untreated. Over the years, exposed concrete can reabsorb climate-damaging CO₂ through carbonation. The carbon dioxide reacts with the calcium hydroxide in the concrete to form calcium carbonate, or limestone. This effect also has a small impact on the ecological balance.

SKYPARK BUSINESS CENTRE SOUTH WITH POWERFUL TIMBER HYBRID CONSTRUCTION

The Skypark Business Centre South at Luxembourg’s Findel Airport, also designed by the Bjarke Ingels Group,



stands in stark contrast to the concrete minimalism of the BIG headquarters. While the underground areas of the low-energy building are mainly made of reinforced concrete, the 30.5-metre-high superstructure is one of the largest timber constructions in Europe. Instead of a single, elongated body, the building, which consists of two three-storey structures, meanders along the airfield over a length of 365 metres. The design not only optimises usable space, but the geometric zig-zag grid also creates separate, light-flooded courtyards for maximum daylighting. The upper structure is rotated 180 degrees, creating lush green roofs and terraces on three levels. The artificial biotopes provide space for flora and fauna, collect rainwa-

ter, reduce the building's cooling load and improve the microclimate and air quality.

DOUBLE-GLAZED FAÇADE TO REDUCE HEAT, NOISE AND GLARE

Skypark has been designed with a remarkably energy efficient double-glazed façade. The outer layer consists of a zigzag of transparent and opaque elements to provide noise and wind protection. The inner triple-glazed mullioned face provides additional thermal insulation, and the space between the façades is fitted with individually controllable blinds. The ground floor has a structural glazing look and acts as a light, transparent base for the upper floors. As with the rest of the building, the edges of the ground floor are rounded to allow uninterrupted panoramic views. The storey-high, concave and convex curved insulating glass units for the corners of the glass façade were manufactured by the Münsterland-based glass processor Finiglas on behalf of the façade constructor Kyotec Luxembourg. Each corner consists of four panes measuring 2999 x 4861 millimetres with a radius of 7698 millimetres. Installation specialist Heavydrive was on site



with its VSG 1300 KR vacuum suction system and Konter 3000 counterweight system to install the curved units under an overhang of 2602 millimetres. The required glass performance and a U_g value of less than 0.5 W/m^2K could only be achieved with triple glazing and specific thermal and solar control coatings. The pane construction, using Guardian Ultra Clear as the base glass, consists of 13.52 millimetre laminated safety glass with various solar control coatings on the weather side, a thermal insulation

coating on the 6 millimetres thick centre pane and a 17.52 millimetres laminated safety glass pane, partly with an acoustic interlayer.

'The units are not inserted into a frame, but are fixed in the edge seal using the Siltal joint, which is common in the Benelux. The glass façade is actually designed as structural glazing, since the bonding is done through the edge seal and only the laminated safety glass pane on the interior side is mounted on the mullion,' says Mirko Heeringa, project manager at Finiglas.



© WEIDart.lu



THERMAL EFFICIENCY



PRODUCTION AND PERFORMANCE AMONG SUPER SPACER® BENEFITS

Although Finiglas production is designed for large formats, triple-glazed units are something special. Each of the more than 160 curved triple insulating glass units that Finiglas supplied to Luxembourg weighs more than 1300 kilograms. The requirements for reproducibility and handling were particularly high for this project. We had five individual panes, each weighing up

to 600 kilograms, hanging from the crane for the assembly of the 130 units, which had to be precisely laminated and insulated. Given the weight and size of the panels, we adapted our processes accordingly. For example, we designed special tools and handling equipment,” Heeringa continues. Finiglas used the 16 mm Super Spacer® TriSeal™ Flex black’ from Edgetech/Quanex as a spacer. ‘The Flex has several advantages for us in insulating glass production,’ confirms Heeringa, and continues: ‘It is



a little stronger than the Super Spacer products we normally use, so it always remains stable and precisely in position when the second and third panes are placed.’ Christoph Rubel, European Technical Manager at Edgetech Europe GmbH in Heinsberg, emphasises the properties of the

Super Spacer® within the insulating glass unit: ‘Wind and climatic loads can work quite hard in a 16 millimetre gap between the panes. This is where a spacer made of structural silicone foam really comes into its own thanks to its flexibility and 100 percent resilience. The elastic silicone material



ABOUT EDGETECH EUROPE GMBH, A PART OF SOMETHING BIGGER

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

keeps the edge seal intact and thus guarantees the energy efficiency and durability of the insulating glazing.’



Gladbacher Strasse 23
52525 Heinsberg
GERMANY
Tel.: +49-2452-964910
info@edgetech-europe.com

www.superspacer.com

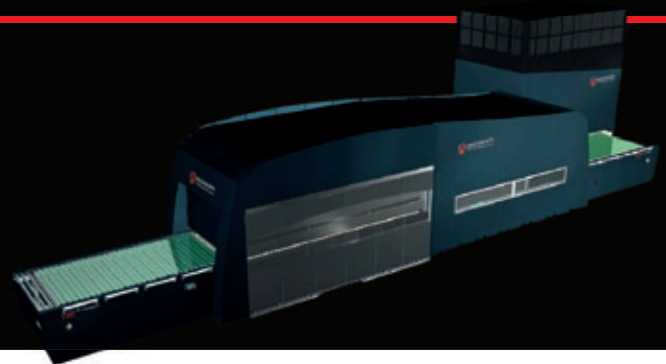


70% 
ENERGY SAVING

YOU CAN SEE THAT IT IS COMPACT. NOW FIND OUT HOW FAST IT IS, TOO.

TP Compact by Mazaroppi is the glass tempering furnace
small in size and big in performance.

- + START&STOP TECHNOLOGY
- + FROM 0 TO 680° IN 1H
- + NO UNPRODUCTIVE CONSUMPTION
- + NO BUILDING WORK REQUIRED
- + NO OVERSIZED ELECTRICAL CABIN



Scan the QR code and find out
how much you can save
with a Mazaroppi furnace:



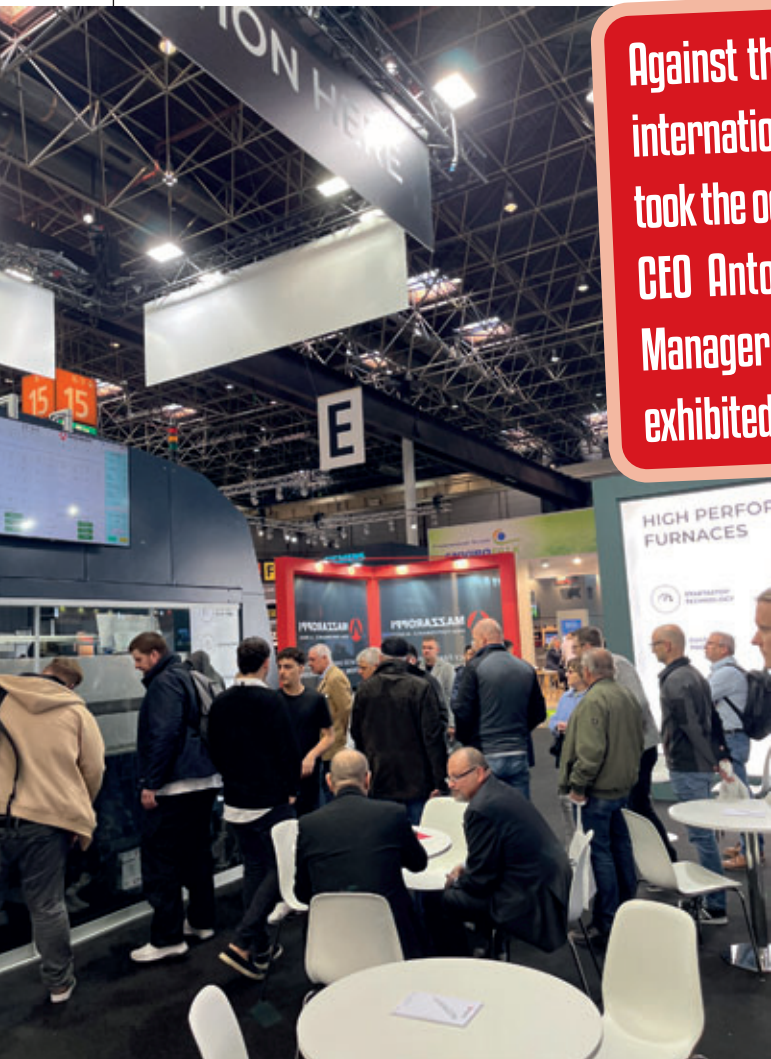
www.mazaroppi.com

 **MAZZAROPPI**
HIGH PERFORMANCE. ALWAYS

THE MOST ENERGY-EFFICIENT SOLUTIONS IN GLASS TEMPERING



Energy-saving technologies exhibited at Glasstec by **MAZZAROPPI**



Against the backdrop of the glass industry's leading international trade fair for 2024, our editorial team took the occasion to speak in Düsseldorf to MAZZAROPPI CEO Antonio Mazzaroppi and company Marketing Manager Federico Mazzaroppi on the products they exhibited this year at the company stand.

GTI: ANTONIO, HOW CAN YOU ENSURE UP TO 70 PERCENT LESS CONSUMPTION IN COMPARISON TO OTHER TEMPERING FURNACES OUT THERE?

Antonio Mazzaroppi: Mazzaroppi Engineering has brought a fully functional furnace here to Glasstec to demonstrate how easy it is to use its TP Compact

model. Indeed for an Italian company with sixty years of experience in glass tempering, Glasstec 2024 has signalled an opportunity for us to convince even the most sceptical onlooker of the performance of its highly efficient furnaces. Today, Mazzaroppi Engineering offers optimised energy-efficient solutions for glass tempering to the market. That commitment translates into furnaces that are affordable even for smaller glassworks,



which can quickly recoup their investment - all thanks to not only increased productivity but also significant energy cost savings.

GTI: Why did you choose to exhibit the TP Compact here at Glasstec?

AM: Designed to meet the needs of companies and small glassworks, this furnace is an important statement for us. This is because it allows glass to be tempered in-house, with reduced energy consumption - all in a limited space and even without the need for any brickwork or for extending the electrical cabinet. We know

that many people still find it difficult to believe that it's possible to achieve the kind of performance we guarantee. That's why we wanted to give a concrete demonstration here at the fair.

GTI: Federico, how exactly do you achieve energy savings of 70 percent compared to competing solutions?

FM: To optimise the consumption of our furnaces we are constantly innovating our technologies. If I had to sum up in three points how savings are generated for companies I would say that, firstly, Mazaroppi furnaces reduce consumption dur-

ing production. Secondly, they eliminate unproductive consumption that's typically caused by leaving the oven on when it's not in use - for example, at night. Finally, they do not require extension of the electrical cabinet, which doesn't need to be replaced.

GTI: Here at the show you're also presenting the upgrade of two of your flagship technologies, namely M Efficiency 5.0 and M Opticonvection. Can you speak to these?

FM: Continuous technological development is essential to taking the perfor-

mance of our furnaces to the next level. In particular, these two proprietary technologies have been developed by our R&D team to allow maximum optimisation: M Efficiency 5.0 ensures the containment of energy peaks, and M Opticonvection allows hot air to be used only in the part of the furnace where the glass is located, adapting it to the percentage of space occupied in order to obtain a higher tempering quality with incredibly low consumption.

GTI: Any chance those who didn't see the TP Compact here will be able to view it live elsewhere?

FM: Sure. Those who weren't at the trade show can contact us anytime. We'd be delighted to arrange a meeting so they can view the furnace and answer any questions they may have about its performance, technology and consumption. Bear in mind that though Mazaroppi's headquarters are in Italy, just outside Rome, the company's vocation has always been international, with agents all over the world.



MAZZAROPPI
HIGH PERFORMANCE. ALWAYS





MAZZAROPPI
HIGH PERFORMANCE. ALWAYS

Via Cagliari 49
04011 Aprilia (LT) - Italy
Tel.: +39-06-92854602
sales@mazaroppi.com
www.mazaroppi.com

Again this year at Düsseldorf, **FILTRAGLASS** rocks!

Returning from Düsseldorf some days ago with the satisfaction of knowing that their water treatment systems will enjoy a bright future in the glass industry, the show's Filtraglass booth team concluded this year's Glasstec presence charged with positivity. Being the world's reference trade show of the sector, Glasstec gathers thousands of visitors from every corner of the world at each successive edition, making it an essential event for industry professionals. Over its four day duration, the show surpassed the numbers of its previous edition, with over 32,000 visitors from 121 countries and 1,257 exhibitors from 50 different countries. Notably, 75 percent of the visitors came from other European countries, namely France, Poland, the Netherlands and Italy among others, as well as from the United States and China.

SUSTAINABILITY AT CENTRE STAGE

Here Filtraglass made a strong commitment by presenting its highest flow rate

Closing Glasstec 2024 with a bang last October after the company had showcased its high-capacity water filtration system XtremFlow 820, FILTRAGLASS garnered substantial interest for its sustainability-focused water recycling solutions, which offer reduced downtime and up to 85 percent water savings — all critical for a more eco-friendly glass industry.





berto Medina, Commercial Director of Filtraglass.

AN EXPANDING MARKET WITH INCREASING DEMAND FOR EFFICIENCY

Market figures for the glass industry show an upward trend. In the last five years, the industry has doubled its value and a projected annual growth rate of 5.4 percent is expected until 2028, according to data from the Glass and Glass Products Global Market Report. This forecast is mainly attributed to initiatives in green building and increased interest in electric vehicles and energy-efficient solutions such as solar panels, among others. With these forecasts, it is logical that the glass industry seeks solutions that allow it to be more efficient and productive, and this is precisely what Filtraglass offers. Its water filtration systems stand out for key aspects such as reducing downtime in the production line and machine maintenance, saving up to 85 percent in water consumption and significantly improving the quality and appearance of the manufactured glass.

water filtration system to date, the XtremFlow 820, and the result has been a major success. The company from Vilamalla (Girona) reported much delight at the warm reception its water recycling systems enjoyed, as well as the great interest shown by visitors to the booth. “Sustainability is a concern, and we’ve seen that over these days at Glasstec. Companies are looking for innovative so-

lutions that help them improve productivity, become more efficient and sustainable, and most importantly, adapt to their needs. This is why our water recycling systems have generated so much interest,” explains Filtraglass International Sales Manager Zoran Skoric. Glasstec has not only been the best showcase for Filtraglass’s water treatment systems but has also become a space for reconnecting with clients, sales representatives and

friends, replete with conversations about the future of the glass industry and the challenge of achieving a cleaner and more sustainable operation. “We are very happy with the success achieved these days. We want to thank everyone who visited us and showed interest in the solutions we offer. Their support and commitment to the environment is the best reward for our work. We are convinced that we have a long trajectory within the glass industry,” said Al-



Carrer Riu Fluvià, 19, 17469,
Vilamalla, Girona
Spain
Tel.: +34-972-505815
info@filtraglass.com
www.filtraglass.com

Installations by **GPM** **AUTOMATION** at glass manufacturing leader **FACILVITRUM**

GPM AUTOMATION has elevated **FACILVITRUM**'s laminated glass production in Badalona, Spain, by installing energy-efficient ovens and a precision press, which feature hybrid heating and servo-driven controls. This advanced technology reflects both companies' dedication to high-quality glass manufacturing.

Badalona-based premier glass manufacturer Facilvitrum recently enhanced its laminated glass production line thanks to advanced ovens and a precision press from GPM Automation. Known for its commitment to high-quality laminated glass, the company undertook this upgrade last August with a view to increasing production speed and reducing energy consumption - all while maintaining exceptional quality.





ADVANCED HEATING TECHNOLOGY FOR OPTIMISED LAMINATION

As for the new GPM Automation equipment, it uses hybrid heating technology to meet the specialised demands of modern glass manufacturing. Indeed each oven module features top and bottom fans with a forced air convection system - providing uniform heating across various glass types, including soft-coated, reflective, painted and heavy-thickness glass panes. Infra-red heating elements enable rapid adjustment during the lamination process, optimising results for clear and extra-clear glass of varying thicknesses.

ENERGY EFFICIENCY AND ENHANCED PRESS PRECISION

Here a key benefit of GPM's advanced system is its energy efficiency. Thick insulation and the forced air convection system contribute to substantial energy savings, while also ensuring



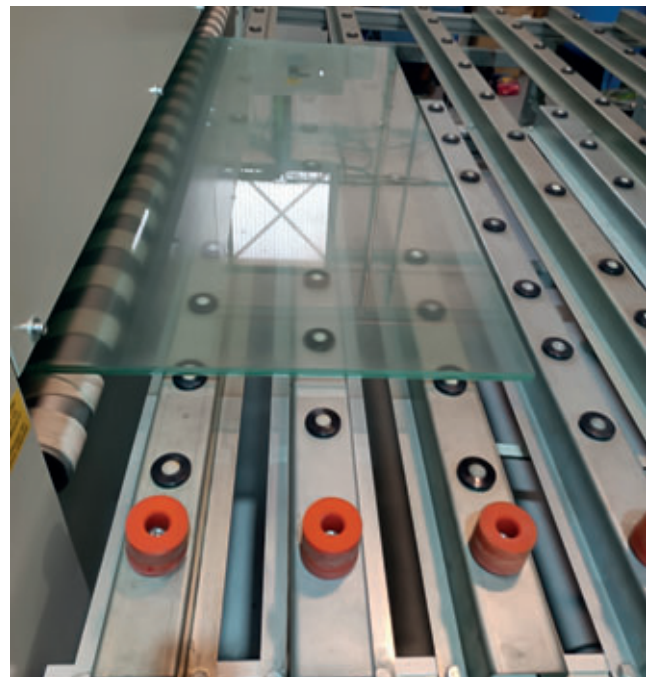
ABOUT GPM AUTOMATION

With a team backed by decades of experience, GPM Automation specialises in providing highly-customised, innovative solutions tailored to the specific needs of customers in the glass machinery industry. The company's product portfolio includes high-payload hydraulic loading and unloading tilting tables, with options for fully-automated systems using robotic or gantry loaders and unloaders. For glass assembly, GPM provides advanced solutions, including automatic glass squaring and PVB application, cutting and trimming. It also offers specialised PVB unwinders with overhead structures supporting up to 24 rolls, ideal for high-capacity operations. GPM's advanced ovens incorporate hybrid heating systems with infrared lamps and forced air convection, ensuring optimal heating efficiency through specifically designed airflow channels. Additionally, the company's shuttle systems streamline autoclave rack handling with automated loading and unloading options, significantly enhancing production workflow. GPM Automation stands out in the glass machinery industry through its commitment to quality, innovation and complete customization.



that all types of glass and interlayers are processed using the most efficient parameters. The newly installed press also represents a significant technological advancement. Powered by servo motors on an electric axis and guided by specialised software, the press continuously monitors the flatness of the top roll via servo-drives. This ensures precise and uniform pressure distribution across all glass sizes, thereby eliminating the need to centre glass pieces on the press bed. The system's

precision also allows for seamless processing of shaped glass, thus protecting delicate corners during pressing. Facilvitrum has already reported notable improvements in quality - particularly with stiff interlayers, as well as increased production speed and simplified parameter setup. The easy, accurate recipe management provided by GPM's system is an asset to consistent, high-quality production - underscoring GPM Automation's commitment to innovation and customer-focused design in the flat glass industry.



ABOUT FACILVITRUM

A company specialised in the transformation, manufacturing and distribution of high-performance flat glass, Facilvitrum's seasoned professionals bring extensive experience in the glass sector - leveraging both expertise and innovation to deliver exceptional products. The company's business philosophy centres upon its commitment to offering glass solutions that stand out for their innovation, differentiation, quality and service. By its strong focus on personalised client support and a dedication to quality, Facilvitrum aims to be the top choice for all who see glass that truly makes a difference.



Via Tommaso Salsa, 9
31030 Carbonera TV - ITALY
Tel.: +39-0422-606015
info@gpmautomation.com
www.gpmautomation.com

27-29

November , 2024

UZ EXPO CENTER

TASHKENT, UZBEKISTAN

Develop Your Market with Us!

Book Your space



Web : www.uzglass.com
Email : info@uzglass.com



The First Professional Glass expo
in Central Asia

Organized By:



Y T International
Enterprise Inc



Media Partner:





New heights in glass drilling: the **OMV VISMARA** sensation

By exhibiting its groundbreaking glass drilling and milling technology at Glasstec 2024, OMV VISMARA has introduced a versatile, automated machine with rapid tool changes and CAD-CAM integration for optimized workflows. Equipped with optional accessories, intuitive controls and robust after-sales support, the company's solutions enhance efficiency and flexibility - all while reinforcing its prominence in glass processing innovation.

INNOVATIVE DRILLING AND MILLING TECHNOLOGY

OMV Vismara has once again unveiled remarkable advancements in glass drilling and milling at Glasstec 2024. This year's highlight was a cutting-edge drilling and milling machine that's designed to streamline and optimize every stage of the process. Featuring a rapid, automatic tool change and an eight-position revolver tool magazine installed on the spindle, the machine integrates a dedicated CAD-CAM system that's specifically tailored for glass drilling and milling - all via





ing communication and solutions that are tailored to exceed client expectations. The company's deep industry experience allows it to best support enterprises - offering a comprehensive range of vertical and horizontal drilling and milling machines available in both single-head and multi-head configurations. This variety ensures that it can meet the diverse production demands of its clients with maximum flexibility. The 2024 Glasstec fair provided the ideal venue for exploring all of Vismara's innovations and experiencing firsthand the potential it brings to those involved in glass processing. The booth team demonstrated how the company's technologies can significantly enhance operational efficiency, positioning it as an invaluable asset for companies in the flat glass sector. Here's why this year's Glasstec not only highlighted Vismara's advancements. It also strengthened its dedication to delivering cutting-edge solutions that continually support and empower the glass industry.

Vismara
 Via Giacomo Puccini, 15
 20853 Biassono MB
 ITALY
 Tel.: +39-039-471735
 omv.sales@omvismara.com
www.omvismara.eu

a software that meticulously manages every detail of the workflow while significantly reducing manual intervention as it boosts both precision and operational efficiency.

ENHANCED FLEXIBILITY AND AUTOMATION

The machine can be equipped with a wide variety of additional accessories, enhancing its versatility and efficiency yet further. Among these are glass washers, automatic loaders to streamline workflow and an automatic unloading system that's equipped with protective paper applicators - all tools selected according to the specific production requirements of each customer. With advanced automation technology, Vismara ensures high-quality, efficient results while supporting operators with an

intuitive, user-friendly programme that simplifies the entire process. This begins from a recognition of the critical need to optimize production processes while reducing the manual workload for operators. Thus, through automatic loading and unloading and the addition of washers, productivity is maximized, thereby minimizing the need for human intervention and achieving faster processing times. Here the goal is to provide solutions that make Vismara a trusted partner for all glass processing needs - ensuring top-tier quality standards and lasting durability.

CUSTOMIZED SOLUTIONS AND AFTER SALES SUPPORT

To that end, the company's internal design team is always available to create custom machine layouts -

guaranteeing that each installation meets the client's spatial and operational requirements precisely. The offering includes high-tech products built for longevity, supported by an outstanding post-sale service that's available both remotely and on-site. Here Vismara's on-line assistance programme is a key asset - ensuring the seamless operation of the machinery by minimizing downtime and inefficiencies. Indeed the system enables continuous monitoring of the machine's status - allowing prompt interventions to optimize performance and reduce costs associated with unplanned halts.

COMMITMENT TO INDUSTRY EXCELLENCE

In sum, Vismara remains committed to supporting clients beyond the initial purchase, providing ongo-

Full Vision Glass from GLASS COMPANY sparks attention

Accentuating its technologies in full vision insulating and fire-resistant glass systems, GLASS COMPANY impressed its stand attendees at Glasstec 2024. Headed by Claudio Bernabucci, this year the Pesaro-based company showcased outstanding specialized machines - all tailored to niche applications that meet high demands for both quality and precision in modern architectural glass solutions.

E XCEEDING EVERY EXPECTATION

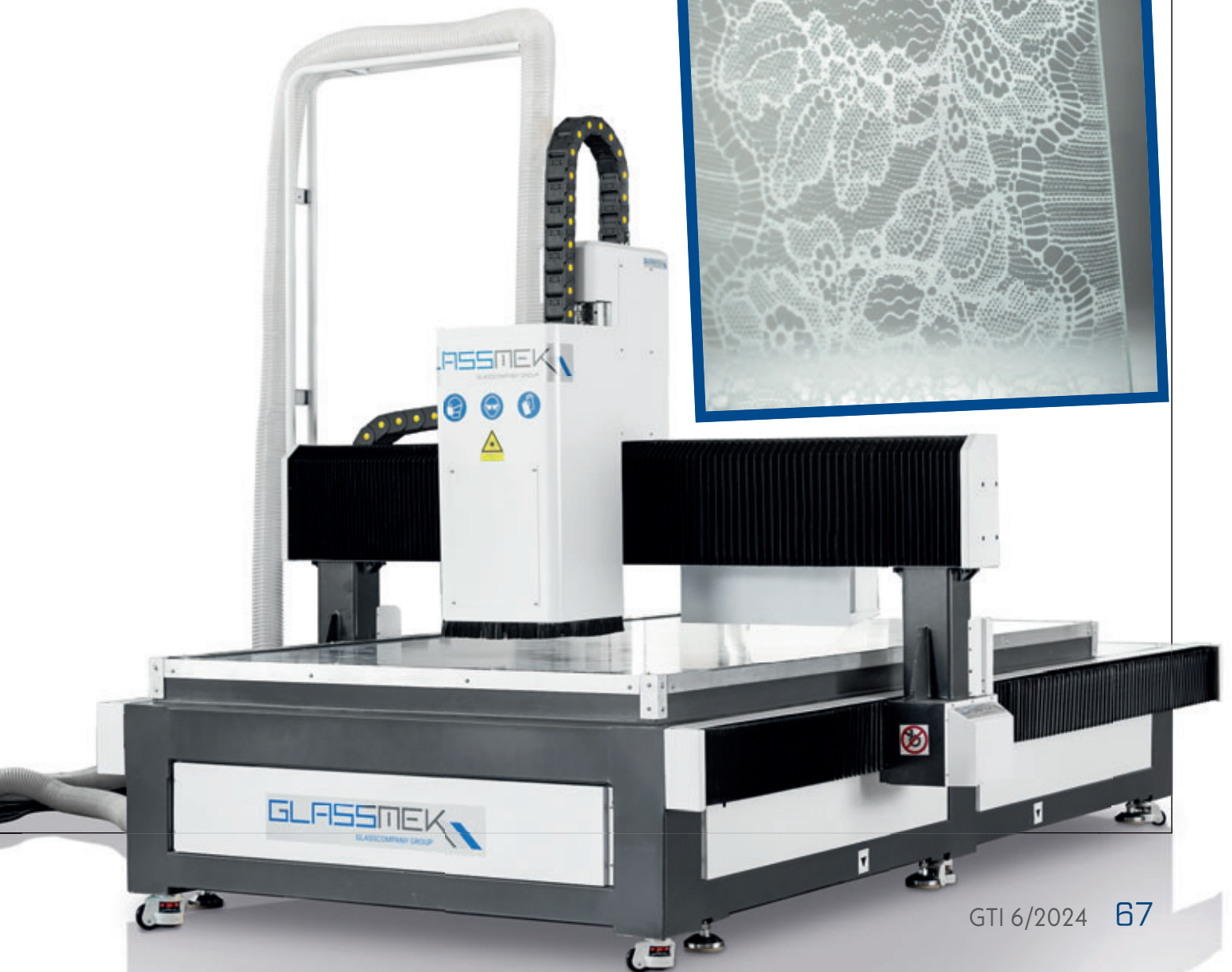
Glass Company achieved remarkable success at Glasstec, captivating attendees with its innovative products. The Pesaro-based company showcased cutting-edge advancements, particularly in Full Vision insulating glass, fire-resistant glass machinery in classes E, EW, EI, and laser technology equipment. Said founder of Glass Company Claudio Bernabucci: "Our positive market feedback

stems from meeting the needs of niche glassmakers who require specialized products rather than mass-market items. This is especially evident in our major 2024 innovation: the Full Vision insulating glass line with transparent glass spacers, developed for unique applications in refrigeration and to meet architects' demands for unobstructed views."

Glass Company manufactures its transparent glass spacer processing machine and dual-glazing assembly machine in Pesaro - and patent applications are

currently underway. The company's pioneering approach also addresses sectors that were traditionally niche or dominated by large manufacturers. A notable example is its fire-resistant glass solution, which is applicable for flat and curved glass alike. A turnkey solution, its Fire-Mek system encompasses both machinery and the specialized chemistry for producing ultra-transparent, silica-based intumescent dispersions. When surface processing, cutting or shaped drilling is required, Glass Company's LaserMek provides an op-





imum solution. The LaserMek technology is highly adaptable - designed for various operations that meet diverse industry demands.

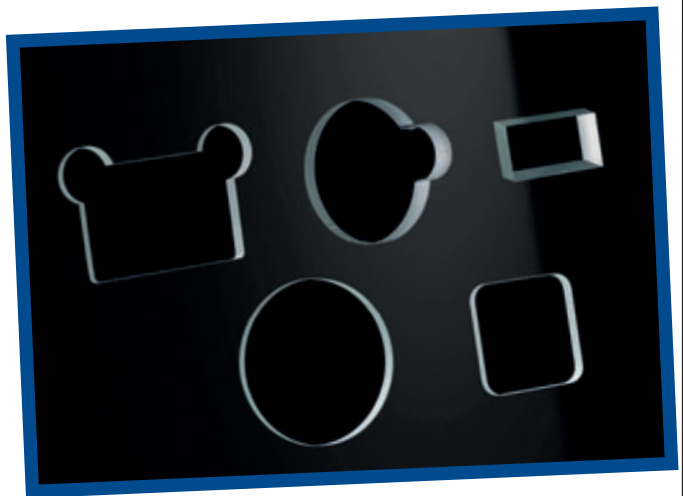
PRODUCT RANGE

As Bernabucci explains, the laser product range is organized into the following key models:

- **LaserMek Standard:** This machine performs intricate surface designs, large-format engraving, Low-E coating removal for complete transparency and can also create heating glass. It can work on large glass surfaces, making it versatile for detailed artistic and functional applications.
- **LaserMek All-in-One:** Equipped with a single laser head, this model supports multiple operations, including sand-

blasting on both float and mirrored glass, ablation that renders silvered or painted glass fully transparent, and service drilling capable of producing various geometric hole shapes within an 80x80 mm area.

- **LaserMek Drill:** An advanced version focused solely on drilling, capable of creating geometric holes up to 150x150 mm in monolithic glass up to 25 mm thick. This precision ensures flexibility for architectural and struc-



- **LaserMek Cut:** Designed exclusively for linear and shaped cutting, this model employs filamentation technology to handle large glass sheets with efficiency and precision - addressing needs for large-scale architectural projects.

Though these flagship technologies were showcased at Glasstec, Glass Company offers far more. Indeed besides its primary products it supplies essential equipment that supports high-quality finished glass products. These include portable and digital polariscopes, glass and

insulating glass thickness gauges, as well as advanced digital spectrophotometers and microscopes with measurement grids. Such solutions are all technologically advanced, innovative and versatile - underscoring Glass Company's commitment to supporting glassmakers who seek excellence in finished products for demanding markets.



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



An industry conversation between FLABEG, MARPOSS and OLYMPIAS - PART 3 -



SMART GLASS FORUM 2024

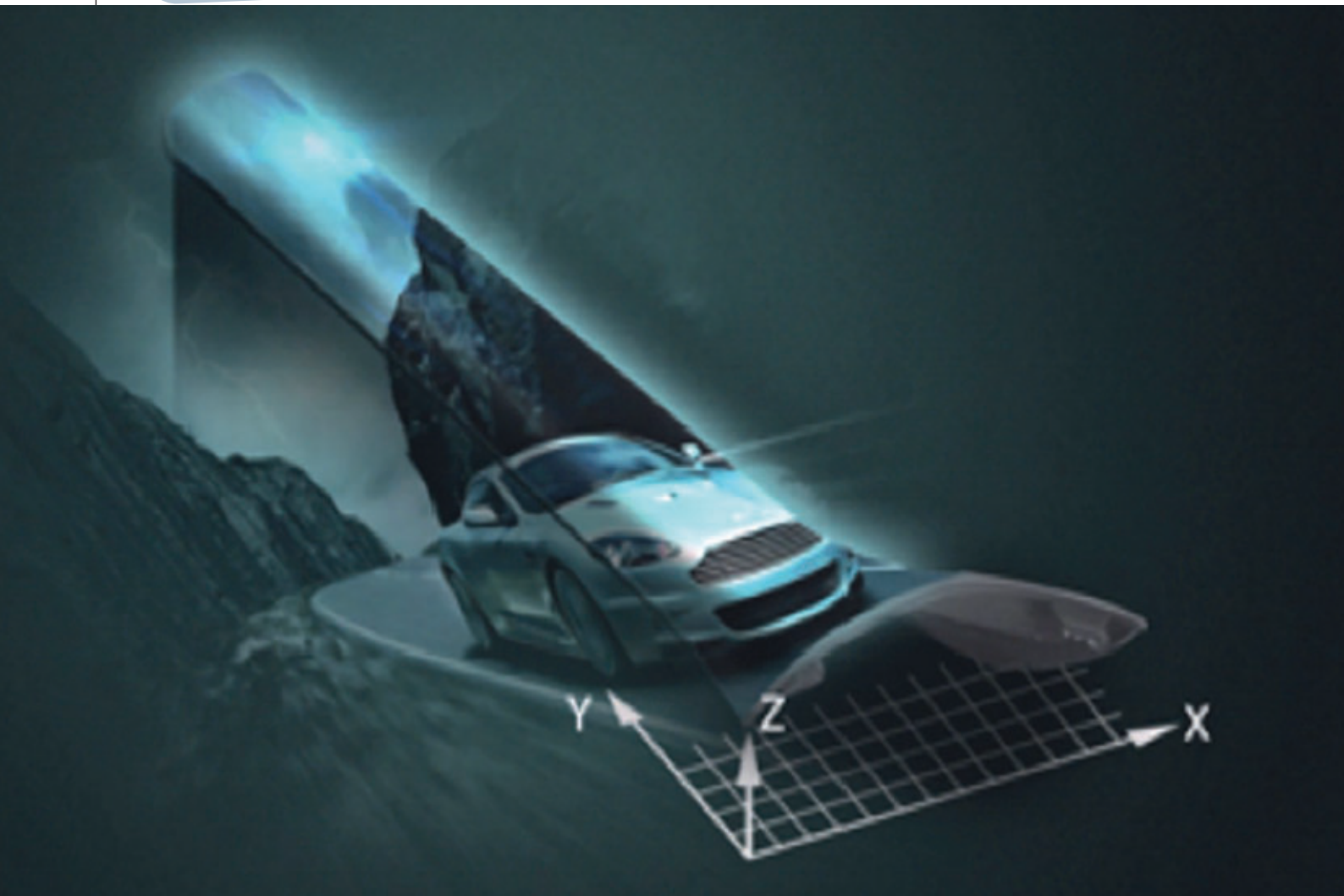
With passenger safety being a paramount concern in modern automobile design, every aspect of vehicle construction today aims to minimise injuries during accidents. Here the A-pillars (front pillars) play a crucial role in that they are essential for maintaining the structural integrity of the passenger cabin during collisions, housing airbags, and providing roof support. However, A-pillars can create blind spots, which can pose significant safety risks.

Introducing the Panoramic Windshield System (PWS)

The Panoramic Windshield System (PWS) is a technological breakthrough designed to eliminate the blind spots caused by A-pillars in passenger



Moderating on May 8 at the Automotive Smart Glass Forum at E-Tech Europe 2024 in Bologna, Glass Technology International was happy to hear key insights from Drs Matthias Schiller, CTO at FLABEG Germany, Luca Bruni, Automotive Glass, Group Industry Manager at MARPOSS and Agamemnon Varonos, CEO of OLYMPIAS as the trio discussed how their latest smart windshield innovations are impacting the automotive industry. In this third of our series of three parts dedicated to the event, we cover the presentation of Olympias's Dr Varonos.



vehicles. By making the A-pillars virtually transparent, the PWS significantly enhances road safety for both passengers and pedestrians. This innovation is not limited to conventional passenger vehicles but also benefits special-purpose vehicles like ambulances, taxis, and vans, by improving their safety features.

Cutting-Edge technology: OLCD and OLED displays

At the heart of the PWS is an embedded flexible screen utilising either Organic Liquid Crystal Display (OLCD) or Organic Light-Emitting Diode (OLED) technology. This advanced system renders the A-pillars on both the driver and passenger sides fully transparent, providing an unobstructed view behind the conventional blind spots. The PWS is built on a patented combination of a camera, processor, view controller and flexible display - all seamlessly integrated into the A-pillar trim.

Panorasis: Driving innovation

As the company behind the PWS, Panorasis focuses on developing innovative solutions through sophisticated technology. By collaborating with tier-one part producers and car manufacturers, Panorasis aims to integrate the PWS into passenger cars. The com-

pany has already established initial contacts with renowned car manufacturers, which will be crucial for future commercialization of the product.

Patented technology

The PWS is backed by multiple patents, validating its methodology and scientific rationale. International patent references include EP3186109B1, WO 2016103043A1, US9654687B2, and several others, all based on the robust US IP System. These patents provide extended claims and stronger IP protection, ensuring the unique aspects of the PWS are well-guarded.

Roadmap to commercialization

Panorasis has outlined several stages for the full commercialization and development of the PWS:

- Concept and Intellectual Property: Completed
 - Prototype Development: In progress, targeted for completion around 2023
 - Secured Financing: Ongoing
 - Company Set-up: Ongoing
 - Negotiations with Car Manufacturers, Material Vendors, and Major Part Manufacturers: Ongoing
 - Definition of Product Standards: Ongoing
 - Customization, Testing, and Licensing: Ongoing
- Currently, Panorasis is actively working on prototype development and



securing financing while identifying potential Original Equipment Manufacturers (OEMs), Tier I Producers and vendors for collaboration.

Objectives of Panorasis

- Panorasis aims to:
- Commercialise and sustainably develop the Panoramic Windshield System.
 - Collaborate with OEMs, Tier I Suppliers, and vendors to meet business and technical criteria, quality requirements, testing and safety targets and achieve full production and commercialization of the PWS.
 - Maximise shareholder portfolio value - ensuring a return on investment and long-term growth.

A safer future for automotive industry

With its groundbreaking technology and unwavering commitment to passenger safety, Panorasis is set to revolutionise the automotive industry. The Panoramic Windshield System promises to create a safer and more enjoyable driving experience for all, thereby marking a significant advancement in automotive glass technology.

OLYMPIAS

Baarerstrasse 14
 CH-6300 Zug -
 SWITZERLAND
 Tel: +41-79-383-7-848
 varonos.@olympias.ch

May 14-15 2025

Glasstech Canada
Expo for Glass Industry  

Toronto- Canada

Professional Expo for Glass Industry

Organized By:



Media Partner:



info@glasstechmexico.com



www.glasstechcanada.ca





JULY 16-18, 2025

MEXICO CITY

CENTRO CITIBANAMEX

5TH



ORGANIZED BY



**Y T International
Enterprise Inc**

MEDIA PARTNERS

vidrioperfil.com
EL PORTAL DEL VIDRIO Y LA CARPINTERIA

Vidrio

**Ventanas
puertas**

glassOnline
The World's Leading Glass Industry Website

ALUMINIO
MAGAZINE

**China Glass
Network**
www.Glasschina.com

asianglass

iWay
MAGAZINE

glassglobal
Group

CONSTRUTIPS
MAGAZINE

WORLD CONSTRUCCION

**AMERICAN
INDUSTRIAL MAGAZINE**

**CONSTRUCTION
SUPPLY MAGAZINE**

GLASS BULLETIN
The Premier Magazine For Global Glass Industry

info@glasstechmexico.com www.glasstechmexico.com



Enter LUMESO: the software overhauling flat glass data



With sights on revolutionizing data exchange within the flat glass sector, software startup LUMESO was recently founded by Christian Kimmeswenger to automate communication between glass processors, suppliers and customers - all to streamline order processing, reduce errors and boost efficiency in the industry.

Making its debut in Düsseldorf this year at Europe's largest glass trade fair, Glasstec, fledgeling company Lumeso took the stage before a sizable professional audience as a new player. Founded in summer 2023 by Christian Kimmeswenger, a seasoned industry expert with 25 years of experience,

its startup goal is that of improving data exchange in glass processing by an order of magnitude. Says Kimmeswenger: "I repeatedly see how challenging it is for glass processors to transfer data back and forth. Indeed it continues to be often either entered manually or exchanged via e-mail and phone. Just recently I even came across fax orders. Too often this

process leads to errors. Lumeso addresses this problem head-on: simply put, by ensuring that everything runs faster and more reliably.”

SO WHAT DOES LUMESO DO?

A software developed specifically for companies in the flat glass sector, Lumeso aims to improve collaboration between glass processors, their suppliers, partner companies and customers. Its setup is straightforward, connecting to the company’s existing order management system via an interface - usually within just a few hours. Once installed, the system uses artificial intelligence to align the master data of articles with a neutral and standardized data set. From this point forward, communication between the involved companies is automated. Inquiries, orders, and status updates are processed in real-time, allowing customers to check order statuses at any time – whether an order has been received, is being processed, or is delayed. And if a supplier is temporarily overwhelmed, other market participants can quickly help out.

BENEFITS FOR GLASS PROCESSORS

The new solution brings a trio of key advantages:

1. The manual effort for processing orders is significantly reduced, freeing up staff to focus on more important tasks.
2. Feedback is lightning fast, accelerating the entire process.
3. Misunderstandings and errors, such as incorrect data entries, are greatly minimized, reducing follow-up costs from issues like defective production.

Early users are already having positive experiences,

which accounts for the high interest at Glasstec - not only from Europe but from countries like Australia, Brazil and the United States as well.

A WINNING TRADE FAIR APPEARANCE

Summing up the success at the fair, co-founder Georg Katzlinger-Söllradl said: “Here the interest in automated solutions has been overwhelming. We will now work step-by-step

through the list of interested parties to bring customers on board - always ensuring that the highest quality stays top of mind at every stage.”



Lumeso

Lumeso FlexCo
Peter-Behrens-Platz 2
4020 Linz - AUSTRIA
Tel: +43-677-610-77-213
georg.katzlinger-soellradl@lumeso.com
www.lumeso.com

Five Years of GUARDIAN GLASS Hybrid Vacuum IG™ Success

Enhancing its solutions for energy efficiency and acoustic insulation, GUARDIAN GLASS has introduced its Hybrid Vacuum IG™ windows in the Boulder Community Health Center West Medical Building in Colorado. A pilot installation, it demonstrates the advanced performance of Vacuum IG technology, offering superior thermal insulation and noise reduction. Now, five years after installation, the windows have proven highly effective in supporting sustainability in healthcare construction.

Located in the evolving area of East Boulder County, Boulder Community Health Center West Medical Building in Lafayette, Colorado is home to an eye clinic and surgical centre. Of these the latter consists of two operating rooms and an area for retinal laser procedures. The building can accommodate 4-5 medical practices. Hard at work attending to their patients, the occupants are likely unaware of the extent to which their professional space is a valuable location for an important advancement in building construction: Vacuum insulated glass (VIG) technology. Indeed it is Guardian Glass' collaboration with Boulder Associates that led the architecture firm to specify 318 Guardian Hybrid



Vacuum IG™ windows for the nearly 30,000 surface 1 facility. Completed in 2019, it was the first new construction project to install Guardian Hybrid Vacuum IG windows, which combine the performance of Vacuum IG

and the additional benefits of a traditional insulating glass unit (IGU).

BRAVING A HOSTILE ENVIRONMENT

This area of Colorado is known for significant

temperature fluctuations and abundant sunshine. Combined with the architect's commitment to environmental stewardship, that meant Boulder Associates had a unique challenge to balance the two - making this project

an ideal test site for an innovative, energy-efficient design. To align with the client's goals of stable interior temperatures and year-round energy efficiency, the architect collaborated closely with the Guardian Glass team





during this pilot project for the energy-efficient glazing prototype.

HOW VIG WORKS

Standard Vacuum IG™ design seals two glass panes airtight, creating a vacuum in the space between the two panes.

Guardian Hybrid Vacuum IG combines the performance of Vacuum IG with the additional benefits of a traditional IGU. With no air or gas between the panes, heat and cold have no medium by which to transfer, helping the unit deliver performance that ex-

ceeds a typical IGU2:

- **Thermal:**
While a double pane Vacuum IG unit with a second-surface low-E coating -also known as a Hybrid Vacuum IG- has an R-value of around R-4, Hybrid Vacuum IG that incorporates a second low-E coating boasts an impressive R-16 - making its overall insulation comparable to that of a wall.
- **Acoustic:**
Outdoor-indoor transmission class (OITC) is the typical measurement used to account for acoustic performance of an exterior facade as it emphasises acoustic performance in the low- to mid-frequency ranges (i.e. noise from aircraft, trains or automobiles). The higher the OITC rating, the greater the sound resistance the glazing will offer. In a typical thermally broken aluminium window system, the OITC improves from 26 for a double pane IGU to 31 for the same window system with hybrid Vacuum IG.

of the product's superior thermal insulation performance. Reducing the transfer of heat or cold through the glass helps deliver stable room temperatures and better energy efficiency to the building as compared with standard double IGU configurations. Guardian Hybrid Vacuum IG units also deliver sound insulation to help contribute to a quiet indoor environment that remains unpolluted by external noise. The Guardian Hybrid Vacuum IG units for the Boulder Community Health Center West Medical Building feature Guardian SunGuard™ SNX 62/27 low-E coating on surface 4. SunGuard SNX 62/27 low-E coated glass helps the building achieve energy-saving performance while balancing light transmission and reflectivity. The south, west and east elevation units also have SunGuard SNX 62/27 coating on surface 2 to further support the building's energy efficiency.

PROJECT DETAILS

Name: Boulder Community Health Center West Medical Building
Location: Lafayette, Colorado

Companies
Architect: Boulder Associates
Glazier: Steel City Glass LLC

Glazing Solution
Guardian Hybrid Vacuum IG™ glass4 with Guardian SunGuard™ SNX 62/27 coated glass

Footnotes

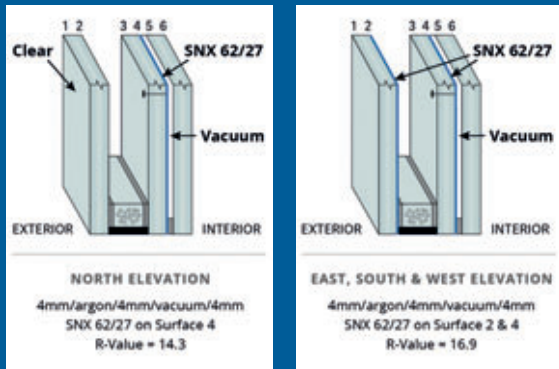
1. There are windows on the building that are not composed of Guardian Vacuum IG. That includes the corner windows that are butted together, glass doors and any window that were broken and replaced.
2. Typical IGU makeup: The commercial construction standard in North America is a 1" insulating glass unit that consists of two ¼" lites of glass separated by a ½" Argon cavity.
3. Embodied carbon claims are based on comparing glass components of a 6mm/4mm/4mm Vacuum IG hybrid versus the glass components of a 6mm/6mm/6mm triple IG. A Vacuum IG with 4mm glass can be used in place of a triple IG with 6mm glass due to the Vacuum IG's enhanced mechanical strength.
4. Guardian Vacuum IG and Hybrid Vacuum IG units are certified by the Insulating Glass Certification Council (IGCC) confirming the long-term durability of both products. (IGCC #4909, #4910). Guardian Hybrid Vacuum IG units for this project were produced in a Guardian Glass pilot facility.

IMPROVING SPACES DESTINED TO HEALTHCARE

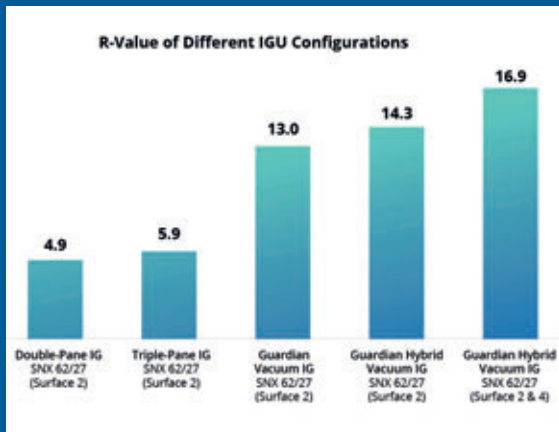
The architect specified Guardian Hybrid Vacuum IG windows for the building because

FIVE YEARS IN PEOPLE PREFER A WINDOW SEAT

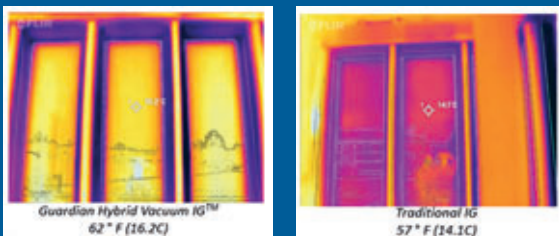
Five years after installation, each window was evaluated with thermal imaging equipment. The Guardian Hybrid Vacuum IG surface temperature was 5°F (2.8° C)



The IG configurations on the Boulder Community Health Center West Medical Building, featuring Guardian Hybrid Vacuum IG™ windows with Guardian SunGuard™ SNX 62/27 low-E coating.



Thermal performance of Guardian Hybrid Vacuum IG™ products compared to other glazing options for Guardian SunGuard™ SNX 62/27 low-E coating. Glass thickness for all options is 4mm. Double pane, triple pane and hybrid options include a 12.7mm spacer with argon.



Inside temperature of a Guardian Hybrid Vacuum IG™ unit and a traditional double pane unit installed after the original Hybrid Vacuum IG window was vandalised. Images taken at 6:30 am, overcast, 33°F (0.6°C) outside temperature. Inside temperature was 64°F (17.8°C) in unoccupied space.

warmer than the traditional IG (interior temperature of the building was 64°F). Analysis of all the windows in the building revealed that one of the Guardian Hybrid Vacuum IG™ units failed, giving the installation a 99.7 percent success rate (314/315), which is consistent with traditional IG installations. When analysed, the failed Vacuum IG had a diminished insulative performance comparable to the traditional IG but did not completely lose its vacuum.

Property manager and occupant interviews revealed the employees were very pleased with their comfort levels regarding temperature and acoustics:

- Employees noted their offices were remarkably quiet, despite the building's location adjacent to a busy road.
- Workstations by the windows were highly sought-after.
- The property manager had not received any complaints related to the performance of the windows, compared to complaints from nearby buildings where draft affected occupant comfort.
- No one commented on noticing the micro-spacers characteristic of vacuum insulated glass.

Says Guardian Advanced

IG Product Manager for the Americas, Jason Blush: "This building really showcases the combination of Guardian Low-E coatings to minimise thermal radiation and Vacuum IG for insulation performance in a high desert climate like Denver."

THE NEXT FRONTIER: TEMPERED VIG

"Having been available for over two decades, vacuum insulated glass has established its presence in the market; however, the advent of tempered VIG marks a revolutionary shift," says Blush. "The thermal performance of tempered VIG, offering R-values twice that of its non-tempered counterpart, coupled with its enhanced strength, paves the way for its application in the commercial sector. This technology is poised to help reduce energy consumption and concurrently diminish the operational and embodied carbon footprint of the built environment."



See what's possible™

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



Unique IOCCO solutions bolster automotive glass transformation

GTI: CAN YOU TELL US ABOUT THE ORIGINS OF IOCCO AND HOW IT WAS FOUNDED?

Massimiliano Iocco: MIocco is a family company founded 25 years ago by the initiative of my father after an experience of 17 years in Switzerland where he learnt construction techniques associated with steelworks. Upon returning to Italy his ambition was to create a company: in primis, he wanted one that served the local demand for spare parts - in the construction of spare parts. That was back in 1978.

GTI: How did the company start to work with automotive glass, and what led to the partnership with SIV?

MI: Already a few years before Società Italiana Vetro (SIV) was established which was the flagship company for automotive glass at the time,

a partnership was created whereby Iocco had become one of its main suppliers, SIV had sites in both Italy and Spain in those years. By supplying spare parts, Iocco slowly acquired the technology, as well as the ability to process automotive glass. Indeed the family tradition began as that technological knowhow was acquired. In that

At Dusseldorf in mid-October, GTI Senior Editor Nick Fouché interviewed Engineer Massimiliano Iocco, Managing Director of IOCCO, on his company's history from nationwide Italian supplier to global leader in automotive glass technology. This followed its more recent journey towards Industry 5.0 principles - always accompanied by an unswerving commitment to energy-efficient solutions and human-centered technology.





first generation of my father - the founder of the company, which had another name at the time- we were able to supply these systems at global level to SIV - which would be known thereafter as Pilkington. So even then the family was able to build most of its systems globally.

GTI: How has the focus of Iocco evolved with the second generation?

MI: With this second generation, which I represent, the mentality has been a bit different. Of course that mono client comfort zone could no longer reflect where the market was going. So in 2009 I left the family business and

founded a new company under the name IOCCO, which was immediately ready to work with all the major glass makers worldwide. By that time the company had started to bear the family name Iocco. However, that consolidated global footprint, even back then, demonstrated the consequential technological know-how it had known right from the start. Within two years we began working with large groups - first at European level, then at global level.

GTI: Massimiliano, explain some of the latest innovations Iocco has developed for automotive glass, especially in terms of energy efficiency and

new technologies?

MI: Well, the innovations to which you refer have resulted directly from our initial response to a discerned need to develop an identity within the glass market. We began with float glass accessories, so that's ancillary equipment which is the entire part of temperature control and internal free float glass flow traction, right up till the finished auto glass installation. So we had capabilities for the entire glass process just as a distinct element was being requested by the market which Iocco could do where it has been most strong. Indeed that's precisely why we invested as much time and capital in developing reverse engineering for that 2012-dated technology when it seemed more interesting for our future prospects and that was the bag furnace - a technology founded for both glass de-airing and assemblage. That was one of the most critical processes in automotive glass production. At the time windshields were all the rage. Now it's windshields, laterals and roof. We also invested with an open innovation mentality, with the support of both Italian research cen-

tres and Italian universities, whereupon we were able to produce a machine which can make electric vehicle glass.

GTI: Can you speak to why electric vehicles made sense back then?

MI: At that time there was a need to reduce the weight of laminated glass and to shield UV rays inside the car. Being able to lighten the car would also allow an increase in range by reducing the energy of the air conditioners. People started to speak about extra thin high-performing glass, Gorilla Glass and the like. Whereas thickness had theretofore been at the measured minimum of 1,6 mm, one started hearing of a reduction to 0,7 mm. There was also greater demand for a more technological infrastructure coming from the market. That's PDLC-based technology: films that will turn the vehicle roof opaque. Other films such as XIR will block UV rays from entering the car while others allow for interior heating. So various technologies are now entering into the mix. Bear in mind here that UV rays are carcinogenic. Also, the car will be rendered





more efficient by internal thermal control because the aircon will be consuming less energy.

GTI: Tell us more about those car roof solutions Iocco is offering.

MI: Sure. In 2015, we leveraged an earlier technology that we were revisiting then with the goal of embracing the Industry 4.0 paradigm. I am referring to the interconnection of all the devices that make up the machinery. This innovation allowed easy interaction on a single software platform. Another major innovation in the last two years has been alignment with Industry 5.0 EU directives. This has a different mission. While it is concerned with compliance with current regulations to move the plant towards decarbonization, it also aims at the Industry 5.0 goal of putting human beings at centre. This latter point is achieved in two ways: either by retraining, namely educating users to understand these new technologies, or by simplifying the technology to make it easier. We have chosen the latter.

GTI: Can you develop that point further, especially in relation to Industry 5.0 and its impact upon end-consumers?

MI: We first thought of training users by leveraging neuroscience, which certainly yielded some satisfactory results after we created virtual manuals. All said, that probably wasn't the best choice for the area in which we operate. In time we decided instead to envision AI as an opportunity - essentially by putting it at the service of human beings. To that end we've created a furnace software which includes a digital twin of our system which will simulate perfect production conditions every time there's a production change in the line - all presented to the operator in real time. This furnace element brings two important aspects. Firstly, it trains the operator. Secondly, it allows operators -also those less technologically skilled- to

first start and then manage production. That also introduces the aspect of energy saving. Why? Because when the digital twin simulates the process it gives the best thermal conditions to produce that glass - thereby troubleshooting the risk of operators potentially producing defective glass by manually raising furnace temperatures.

GTI: In conclusion then, Massimiliano: What makes Iocco great?

MI: For me that's easy to answer. At Iocco, we have achieved two fundamental goals. First, we put the customer at the centre; we know how to listen and interpret their needs by aligning them with EU directives and new market trends. Second, we have achieved a level of expertise and a supporting network that allows us to develop highly innovative solutions with maximum attention to production costs. For us, working with an open

innovation mindset is an established practice. The interest of most of our customers is increasingly to purchase the best technologies to be able to produce technologically advanced automotive glass with a focus on power consumption, product circularity, and ease of use. They are basically asking for innovative technologies in line with the EU directives on Industry 5.0. Thanks to intensive R&D work, till now with our Bags Furnaces, we've managed to produce technologically advanced laminated automotive glass with an electricity saving of more than 30 percent - all while reducing the CO2 footprint by an average of 1096 Kilograms per day.



IOCCO[®]
www.ioccogroup.com

Via Del Progresso,1
Via Enrico Mattei, 32
Cupello 66051 - Italy
Tel.: +39-0873-318330
info@ioccogroup.com
www.ioccogroup.com



Take a glance at details enhancing the living spaces!

25th
Year

WINDOW
Eurasia

25th International Window, Window Shade, Facade Systems & Accessories, Profile, Production Technologies & Machinery, Insulation Materials & Auxiliary Products Fair

www.eurasiawindowfair.com

 **UFI**
The Global Association of the Exhibition Industry

Special Section

Aluminium Profile, Facade Systems and Accessories

Special Section

Shading, Protection and Closure Systems

GLASS
Eurasia

14th Glass Products and Applications, Production Processing Technologies and Machinery, Auxiliary Products and Chemicals Fair

www.eurasiaglassfair.com

DOOR
Eurasia

16th International Interior Door and Door Systems, Lock, Panel, Board, Partition Systems and Accessories Fair

www.eurasiadoorfair.com

Scan the QR code for more information!



November 16 - 19, 2024

Saturday - Tuesday

**TÜYAP FAIR CONVENTION | İSTANBUL
AND CONGRESS CENTER | TÜRKİYE**



Window and Glass Fairs
Supported by



THIS FAIR IS ORGANIZED WITH THE AUDIT OF TOBB (THE UNION OF CHAMBERS AND COMMODITY EXCHANGES OF TURKEY) IN ACCORDANCE WITH THE LAW NO. 5174.

NEOM: A Lucrative Opportunity for The Glass Industry

Saudi Arabia's Neom development project presents potentially lucrative opportunities for glass producers. Part of Saudi Arabia's Vision 2030 plan, the Neom development spans an area the size of Belgium and includes the glass sided 500 metre tall smart city called The Line.



Saudi Arabia's Neom project offers a number of potentially lucrative business opportunities for producers of flat and hollow glass. The total area under development amounts to around 26,500 square kilometres (10,200 square miles) – approximately the same size as Belgium.

Makers of machinery for the glass industry could also stand to benefit from companies seeking to increase production capacity to meet the demands of this enormous project.

The Neom project is part of Saudi Vision 2030, a program launched by the Saudi Arabian government to prepare the nation economically, socially and culturally for the future.



THE LINE REVOLUTIONARY URBANISM

THE LINE IS COMPRISED OF A SERIES OF INTERCONNECTED MODULES, REACHING 500M HIGH.

THE CORE ELEMENTS OF EVERY MODULE ARE STANDARDIZED TO MAXIMIZE COMPATIBILITY AND DRIVE DOWN CONSTRUCTION COSTS.

170 KM
LENGTH OF THE LINE

500 M ABOVE SEA-LEVEL
HEIGHT OF THE LINE

200 M
WIDTH OF THE LINE

34 SQ. KM
FOOTPRINT OF THE LINE
2% OF CONVENTIONAL CITIES

NEOM.COM

While some might view Saudi Arabia as a desert kingdom, the south west of the nation has a more temperate climate with beaches and snow-capped mountains making the area ideal for tourism and even for industry. Indeed, Neom positions itself as a global hub for business and aims to set standards for livability too.

One of Neom's key projects is The Line, a glass sided linear smart city that will reach from the southern end of the Gulf of Aqaba eastwards 170 kilometres into the desert. The Line is one of Neom's 16 large scale developments. On Google Maps today, it is

possible today to see initial excavations for the structure's foundations.

A 2.4 kilometre first phase will provide living space for 300,000 people and is due for completion by 2030. Completion of the entire structure of The Line is expected by 2045.

Once complete, the Line will be able to house 9 million people. Residents in this smart city will never be more than 5 minutes away from local amenities. Travel from one end to the city to the other will only take 20 minutes via a high speed transit system.

The dimensions of the line, as well as its length, are striking. Not only will the main structure be 500 metres high, it will also be 200 metres wide. Quick calculations will reveal just how much glass is likely to be required for its external surfaces. Seeing as The Line is to be as energy efficient as possible, the glass panels are likely to be double, if not triple-glazed units.

Glass producers interested in supplying the project would do well to note that The Line project has generated some controversy. Indeed, companies considering involvement in the

supply of materials for the project should also pay attention to potential reputational risk issues.

All projects of this size carry risks but if there are doubts surrounding the Neom project, the completion in October 2024 of the Sindalah region should go some way towards allaying them.

The luxury resort of Sindalah, the first Neom Region to be completed, is situated on an 840,000 square metre (9 million sq ft) island in Saudi Arabia's Tabuk Province.

Clearly, the Neom series of construction projects will all require, to a greater and lesser extent, glass. In view of the location of Neom's regions, the range of glass products required will be extensive.

Less obviously perhaps, many of these developments will require decorative glassware as well as many other hollow glass products.

Find out more about the projects on the following websites:

<https://www.neom.com> and <https://www.vision2030.gov>



DAILY NEWS

Tuesday, June 18, 2024

Follow us on our social networks!



Search



Verallia commits to transition to renewable and sustainable



HEGLA borosilicate: Antibacterial glass with ultra-low finish



Vetropeak: Echoval bottle wins WorldStar Award



POLFLAM at FeuerTrutz 2024 - Where innovation meets fire



glasstec: Interview with Prof. Krasak on glass technology

DAILY NEWS

Daily news from around the world of glass: industry, economy and finance, management, projects, systems, innovations, products, events, etc.

DAILY NEWSLETTER

Over 7,600 registered users receive the newsletter - with a worldwide news service - five days a week.

VIDEO INTERVIEW

GlassOnline, Glass Industry Network (LinkedIn page) and our channel Youtube, will host and promote your company videos and video interviews to a large professional audience

FOCUS ON

A service dedicated to companies that want to publish articles in real time on case histories, special company events and celebrations, business agreements and production innovations, etc.

OUR PUBLICATIONS

All our publications are available free-of-charge in digital desktop format, iPhone / iPad and Android mobile systems or in pdf format

Company news
LISTEN LISEC podcast Season 1
6 June 2024

Company news
Falorni Tech: New development projects in Iraq
6 June 2024

Company news
CMS Open House New Technologies 2024
6 June 2024

Linked in: Glass Industry Network

Glass Industry Network
World Glass News
21.822 Followers



14,196 Impressions

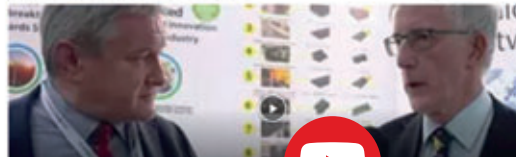


14,196 Impressions



Customers involve IOCCO in feasibility studies for whole car glass sets

Among IOCCO's contribution in the manufacture of systems for the air extraction during the lamination of windscreens, laminated sidelights and sunroofs is the notable improvement for both concept and fabrication of vacuum bag furnaces...



BAU



MESSE
MÜNCHEN



GLASSTECH ASIA FENESTRATION ASIA

20th Anniversary of The Glass Hub of Southeast Asia

11 - 13 DEC 2024

Saigon Exhibition & Convention Center Ho Chin Minh City, Vietnam

>200
Exhibitors



~4,500 sqm
Gross Exhibition
Area



New Networking
Platforms



>3,000
Qualified Buyers



50+
Visiting Countries



Exhibitor Profiles:


- Architectural Glass Profiles
- Chemical Building Products
- Curtain Walls
- Digital Products & IT
- Glass Accessories
- Glass Production & Manufacturing Technology

- Glass Products & Applications
- Hardware
- Processing & Finishing
- Solar Technology
- Sun-shading
- Window & Door System

and more >

 +65 6236 0988

 bauasia@miasia.com.sg

 www.glasstechasia.com.sg

SUPPLIERS GUIDE Yellow Pages

Reserved for advertisers | www.glassonline.com | Reserved for advertisers | www.glassonline.com

COMPANY

website

COMPANY

website



B SOLUTION

www.bsolutionsrl.com



LANDGLASS TECHNOLOGY

www.landglass.net



BANDO KIKO

www.bandoj.com



MAZZAROPPI ENGINEERING

www.mazzaroppi.com



BEST MAKINA

www.bestmakina.com



NORTHGLASS TECHNOLOGY CO., LTD

www.northglass.global



BIESSE GROUP

biesse.com/it/it/linee-glass/



HORNOS INDUSTRIALES PUJOL

www.hornospujol.com



FILTRAGLASS

www.filtraglass.com



ROLLMAC DIVISION OF GEMATA

www.rollmac.it



FOREL

www.forelspa.com



SCHRAML GLASTECHNIK GMBH

www.schraml.com



GLASS COMPANY

www.glasscompany.com



SISECAM

sisecamflatglass.com



GLASTON

www.glaston.net



TUROMAS

www.tuomas.com



HEGLA

www.hegla.com



VITROSEP

www.vitrosep.com



HELIOS QUARTZ

www.heliositalquartz.com



KERAGLASS

www.keraglass.com

Listing in this section is reserved for advertisers.

FOR FURTHER INFORMATION PLEASE CONTACT
OUR ADVERTISING DEPARTMENT:

Tel: +39 - 02 - 6630686

E-mail: publications@glassonline.com
www.glassonline.com

Listing in the "Suppliers Guide - Yellow Pages" is free of charge and reserved to advertisers. Advertisers of this issue are listed on the opening pages of this section, along with their logo, and listed in bold on the following pages. The "Suppliers Guide - Yellow Pages" promotes their products and services worldwide.

SUPPLIERS GUIDE Yellow Pages

Reserved for advertisers | www.glassonline.com | Reserved for advertisers | www.glassonline.com

Glass manufacturing and Processing

FLOAT GLASS

Sisecam

PROCESSED SHEET GLASS

Emar

Stocking, handling and movement

COMPLETE STOCKING LINES / ENGINEERING

Biesse Group

Cugher Glass
ECOL

Glaston Group

Hegla

IOCCO Group

Keraglass

Lisec Group

North Glass Technology

Schiavo
Torgauer Maschinenbau
Tuomas

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
Torgauer Maschinenbau
Tuomas

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
Torgauer Maschinenbau
Tuomas

HANDLING ROBOTS

Bavelloni
Bottero
CMS
ECOL
GPM Automation

Hegla

IOCCO Group
Lisec Group
Neptun
Schiavo
Torgauer Maschinenbau
Tuomas

HANDLING EQUIPMENT FOR FLOAT GLASS

Bovone
Bottero
ECOL

Glaston Group

Hegla

IOCCO Group
Italcarrelli
Lisec Group
Schiavo
Torgauer Maschinenbau
Tuomas

TROLLEYS AND CLASSIFIERS

Biesse Group

CMS

Forel

Hegla

Lisec Group
Schiavo
Torgauer Maschinenbau
Tuomas

TRANSPORTATION SYSTEMS/TRUCKS

Hegla

Italcarrelli
Lisec Group
Schiavo

VACUUM LIFTING EQUIPMENT

Bottero
CMS
ECOL
Fenzi
Forel
Glaston Group
Hegla
Lisec Group

Schiavo
Torgauer Maschinenbau
Tuomas

CRANE SUCTION CUPS FOR LARGE SHEETS

Bottero
Fenzi
Glaston Group
Hegla

Lisec Group

Schiavo

Tuomas

TRANSPORTATION TONGS

Bottero
Fenzi
IOCCO Group
Schiavo
Tuomas

SUCTION CUPS

ADI - Surface Group
Bottero
CMS
Fenzi
Glaston Group
Hegla
Schiavo
Tuomas

CONVEYOR BELTS

Cugher Glass
ECOL
Glaston Group
Schiavo
Tuomas

PACKAGING MATERIALS AND SYSTEMS

ECOL
Hegla
Schiavo
Vismara
ACCESSORIES

Bottero

CMS

Fenzi

Hegla

Helios Quartz
Mole Moreschi
Schiavo
Tuomas

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
Tuomas

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
Tuomas

CUTTING TABLES

Bando Kiko
Bavelloni
Biesse Group
Bottero
CMS

SUPPLIERS GUIDE Yellow Pages

Reserved for advertisers | www.glassonline.com | Reserved for advertisers | www.glassonline.com

Fenzi
Forel
Glaston Group
Hegla
IOCCO Group
Lisec Group
Schiavo
Tekno Kilns/Pujol
Triulzi
Tuomas

CUTTING OPTIMIZERS

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

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
Tuomas

ROUND OR SHAPE CUTTING MACHINES

Bando Kiko
Bavelloni
Bottero
CMS
Fenzi
Glaston Group
Hegla

Lisec Group
Schiavo
Tuomas
CUTTING ACCESSORIES

ADI - Surface Group
Ayrox
Bando Kiko
Bottero
Fenzi
IOCCO Group
Schiavo
Softeco
Talamoni
Teknik Elmas
Tesir Makine
Tuomas

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
Tuomas

CUTTING MACHINES WITH BREAKING AND EDGE DELETING DEVICES

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

GLASS CUTTING FLUIDS

Schiavo
Tuomas

ACCESSORIES

Schiavo

Schiatti Angelo
Talamoni
Teknik Elmas
Tesir Makine
Tuomas

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

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

Neptun
Schiavo
Schiatti Angelo
SGM - Special Glass
Machinery

North Glass Technology

Schraml
SKG - Skill Glass
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

SUPPLIERS GUIDE Yellow Pages

Reserved for advertisers | www.glassonline.com | Reserved for advertisers | www.glassonline.com

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
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 E MACHINES

Fenzi
Helios Quartz
DIAMOND TOOLS
Adelio Lattuada
ADI - Surface Group

Bando Kiko
Bovone
Bottero
Diamut - Biesse
Fenzi
Glaston Group
Marrose Abrasives
Mole Moreschi
Neptun
Schiavo
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
Teknik Elmas

POLISHING AGENTS

AND OXIDES
ADI - Surface Group
Bovone
Fenzi
Schiavo
Teknik Elmas

POLISHING BELTS

Fenzi
Schiavo

COOLANTS

Adelio Lattuada
Bovone
Fenzi
Schiavo

GLASS GRINDING AND BEVELLING COOLANTS

Schiavo
Teknik Elmas

SEPARATORS FOR GLASS-SOLIDS

Dieffe Macchine
Filtraglass
Immes
Schiavo
Vitrosep

ACCESSORIES

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

Washing

HORIZONTAL WASHING MACHINES

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

VERTICAL WASHING MACHINES

Adelio Lattuada
Bavelloni
Best Makina
Emar
ECOL
Forel
Glass Company
Glaston Group
GPM Automation
IOCCO Group
Lisec Group
Neptun
Schiavo

SGM - Special Glass
Machinery
North Glass Technology

Stefiglass
Teknik Elmas
Tesir Makine
Triulzi

WASHING MACHINES FOR AUTOMOTIVE GLASS

Bando Kiko
ECOL
Glaston Group
IOCCO Group
Tesir Makine
Triulzi

WASHING PURIFICATION SYSTEMS

Best Makina
Dieffe Macchine
Emar

Forel
Glass Company
Glaston Group
Immes
IOCCO Group
Schiavo

LIQUID WASHING CONCENTRATES

Schiavo

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
Marval
Neptun
Schiavo
SGM - Special Glass Machinery
Thermoseal Group
Triulzi

AUTOMATIC SEALING LINES

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

SPACER CUTTING SAWS

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

BUTYL EXTRUDERS

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

HOT-MELT EXTRUDERS

Bavelloni
Best Makina
Easy Automation
Emar
Fenzi
Forel
Lisec Group
Marval
Neptun
Schiavo
Thermoseal Group
Triulzi

POLYURETHANE EXTRUDERS

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

POLYURETHANE ENCAPSULATION

Emar
Glaston Group
Lisec Group
Marval
Schiavo

SILICONE EXTRUDERS

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

POLYSULPHIDE SEALANT EXTRUDERS

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

GAS FILLING EQUIPMENT

Emar
Fenzi
Forel
Glaston Group
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

PANTOGRAPHES

Fratelli Pezza

ACCESSORIES

Deltamax Automazione
Forel
Helios Quartz
Schiavo
Sparklike
Tesir Makine
Triulzi

Tempering

TEMPERING

FURNACES (ARCHITECTURAL GLASS)

Glass Company
Glasstech Inc.
Glaston Group
Hornos Industriales Pujol
Jinglass
Keraglass
Landglass Technology
Lisec Group
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
Mappi International
Marposs
Mazzaroppi Engineering
North Glass Technology
Satinal
Taifin
Tecnosens
Texpack

CHEMICAL TEMPERING EQUIPMENT

Glass Company

SUPPLIERS GUIDE Yellow Pages

Reserved for advertisers | www.glassonline.com | Reserved for advertisers | www.glassonline.com

R.C.N. Solutions
TK

ROBOT FOR CLEANING SILICA ROLLERS

Eurotech Way

ACCESSORIES

Deltamax Automazione

Fenzi

Glass Company

Glaston Group

Helios Quartz

Hornos Industriales Pujol

Keraglass

Landglass Technology

Mappi International

Mazzaroppi Engineering

R.C.N. Solutions

Satinal

Taifin

Tekno Kilns/Pujol

Torgauer Maschinenbau

Bending

BENDING FURNACES

(ARCHITECTURAL GLASS)

Hornos Industriales Pujol

Jinglass

Keraglass

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

Mappi International

Marposs

Mazzaroppi Engineering

R.C.N. Solutions

TK

Taifin

Tecnosens

Texpack

ACCESSORIES

Ayrox

Deltamax Automazione

Glass Company

Glasstech Inc.

Glaston Group

Hornos Industriales Pujol

Keraglass

Mappi International

Satinal

Softeco

Tekno Kilns/Pujol

TK

Laminated glass production

COMPLETE PLANTS

Best Makina

Bovone

Bottero

Forel

Glass Company

Glaston Group

GPM Automation

Hornos Industriales Pujol

IOCCO Group

Italmatic

Lisecc Group

Mazzaroppi Engineering

R.C.N. Solutions

Texpack

TK

Triulzi

LAMINATED WINDSCREEN BENDING FURNACES

ECOL

Glass Company

Glasstech Inc.

Glaston Group

Keraglass

Mappi International

Marposs

Taifin

Texpack

AUTOCLAVES

Glass Company

Glaston Group

GPM Automation

Hornos Industriales Pujol

Italmatic

Lisecc Group

Triulzi

CLIMATIC CABINS

Forel

Glaston Group

GPM Automation

IOCCO Group

Lisecc Group

Triulzi

INFRARED OVENS

ECOL

Forel

Glass Company

Glaston Group

GPM Automation

Hornos Industriales Pujol

IOCCO Group

Lisecc Group

TK

Triulzi

MANGLES

GPM Automation

PRESSES/BENDING MACHINES

Forel

IOCCO Group

Lisecc Group

Triulzi

RESIN LAMINATING MATERIALS AND EQUIPMENT

IOCCO Group

Satinal

Teknik Elmas

Torgauer Maschinenbau

EVA (ETHYLENE VINYL ACETATE)

Satinal

PVB

Everlam

Kuraray - Trosifol

Marposs

Tecnosens

PVB - SHAPING AND CUTTING EQUIPMENT

Ayrox

ECOL

Forel

Glaston Group

GPM Automation

IOCCO Group

Lisecc Group

Softeco

PVB - WIRING TECHNOLOGY FOR HEATABLE LAMINATES

Ayrox

Easy Automation

ECOL

Softeco

EVA (ETHYLENE VINYL ACETATE)

Tecnosens

ACCESSORIES

Ayrox

Bottero

Deltamax Automazione

Eurotech Way

Glaston Group

Helios Quartz

Hornos Industriales Pujol

IOCCO Group

Lisecc Group

Satinal

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

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

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

Teknik Elmas
Tesir Makine
Vismara

COLUMN DRILLING MACHINES

B Solution

Bottero
Fenzi
Neptun
Schiavo
Tesir Makine
Vismara

PORTABLE DRILLING MACHINES

CMS
Fenzi
Schiavo
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
Teknik Elmas
Tesir Makine
Vetrolux

ACCESSORIES

CMS
Fenzi
Neptun
Schiavo
Teknik Elmas

Othere quipment 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

FLOAT PLANTS / LINES (EQUIPMENT & ACCESSORIES)

Bovone
Horn
IOCCO Group

CULLET HANDLING SYSTEMS

ECOL

COMPLETE BATCH PLANTS

Zippe

VACUUM COATING EQUIPMENT AND PLANTS

Giardina Group Glass Division

Glass Company North Glass Technology

ENAMELLING EQUIPMENT AND PLANTS

Giardina Group Glass Division
Glass Company
Rollmac division of GeMaTa

DRYERS AND ENAMELING FURNACES

Giardina Group Glass Division

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
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
TecnoFerrari

SCREEN PRINTING FRAMES

COMSS

SCREEN PRINTING DRYING SYSTEMS

COMSS
Cugher Glass
Glass Company

Rollmac division of GeMaTa

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

CHAMBER ELECTRIC KILNS

Glass Company
Keraglass
Tekno Kilns/Pujol

ACCESSORIES

Deltamax Automazione
Helios Quartz
TK

Miscellaneous

AUTOMATION

Easy Automation
Horn
IOCCO Group
Marposs
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

DEIONIZING AND WATER SOFTENING EQUIPMENT

Fenzi
Forel
Glass Company
 Idrotecnica
 Lisec Group
 Triulzi

DEIONIZING AND WATER SOFTENING EQUIPMENT

Immnes

DIAMOND ROUTER EQUIPMENT - PORTABLE

Teknik Elmas
 Tesir Makine

FLAT GLASS QUALITY CONTROL DEVICES

Ayrox
 Deltamax Automazione
Forel
 IOCCO Group
 Marposs
 Softeco
 Tecnosens

FURNACES

Glass Company
 Horn
 Texpack

FURNACES / HYDROGEN GENERATORS (WATER ELECTROLYSERS)

Nel Hydrogen

GLASS COATING AND TINTING

Glass Company
Rollmac division
of GeMaTa

GLASS TREATMENT FILMS

Glass Company

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

Horn
Keraglass
 Texpack

INSPECTION INSTRUMENTS & INTENSIMETERS

Marposs
 Tecnosens

INFRARED TUBES

Helios Quartz
 Deltamax Automazione

KILNS

Glass Company
Keraglass
 Lisec Group
 Tekno Kilns/Pujol
 TK
 Fenzi

METAL ACCESSORIES

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

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
 Immnes

PUTTIES AND SEALANTS

Fenzi

QUARTZ EQUIPMENT

Helios Quartz

SHAPE CHECKING DEVICES

Easy Automation
 IOCCO Group

SHOWER ENCLOSURES

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

SURFACE STRESS MEASUREMENT INSTRUMENT

Ayrox
Glass Company
 Tecnosens

WINDSCREEN STRESS MEASUREMENT INSTRUMENT

Tecnosens

WINDSCREEN AND BACKLITES

Marposs
 Tecnosens

TESTING FOR SOLDERINGS

Ayrox
 Easy Automation
 Softeco

TESTING DEVICES OF BACKLITES ELECTRICAL HEATING

Ayrox
 Easy Automation
 Softeco

THERMAL IMAGING SYSTEMS

Glass Company
 Easy Automation
 Optris

TIN FLOAT BATH FURNACES

Horn
 IOCCO Group

TIN FLOAT BATH SIDE DETECTION DEVICES

Tecnosens

TRADE ASSOCIATIONS

Teknik Elmas
 Tesir Makine

UV LAMPS

Helios Quartz

UV PORTABLE MACHINES

Helios Quartz

WATER REPELLENT SPRAY COATING MACHINES

Best Makina



CHINA GLASS 2025

The 34th China International Glass Industrial Technical Exhibition

China International Exhibition Center(Shunyi Hall)
May 26th-29th, 2025 · Beijing

Host: The Chinese Ceramic Society
Organizer: Beijing Zhonggui Exhibition Co., Ltd.
Supporter: China Building Materials Federation
China Architectural & Industrial Glass Association
China National Association For Glass Industry

Tel: +86-10-57811261, 57811409
Fax: +86-10-57811262
E-mail: ceramsoc@chinaglass-expo.com
<http://www.chinaglass-expo.com>



WeChat ID: CHINAGLASSEXPO



FLATGLASS

2024 world directory



TP COMPACT

THE MOST COMPACT OVEN IN SIZE
IS THE MOST EFFICIENT IN PERFORMANCE

DOWNLOAD THE 2024 EDITION

0 to 680° in
60 Minutes

Start&Stop technology:
zero unproductive costs

Super-flexible Installation:
no masonry work required

MAZZAROPPI
HIGH PERFORMANCE. ALWAYS
www.mazzaroppi.com

Discover more



> Supplier Profiles

> Supplier

> Suppliers Guide -
Data Sheets

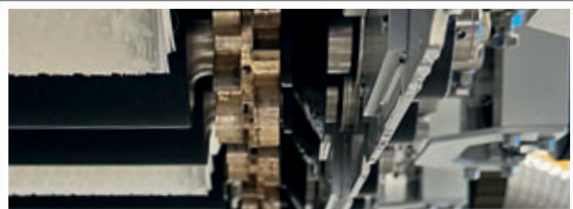
> Supplier Sales Networks

> Review
A year of News



Bestmakina

Common Language of Glass World...



www.bestmakina.com



info@bestmakina.com