

### Next-level automation sees BOVONE raising the bar - again

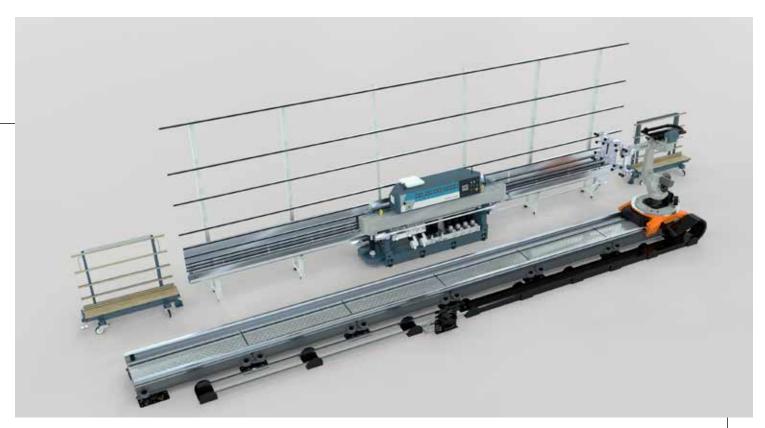
Poised as ever to reaffirm its commitment to more sustainable glass processing, BOVONE is now all set to showcase three cutting-edge solutions at Vitrum: the EVATHERM lamination oven, ELB fully-automatic edgers and a compact 7-axis robotic system - a stellar trio of smart technologies that blends precision,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



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

### **EVATHERM:** SIMPLICITY AND **EFFICIENCY IN EVA FILM LAMINATION**

Bovone's new EVATHERM oven is designed to opti-



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

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

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

Key benefits here include:

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

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

# ELB FULLY AUTOMATIC: ADVANCED CONTROL AND CONTINUOUS PRODUCTIVITY

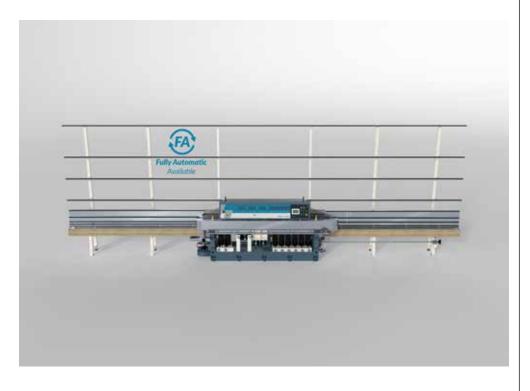
Bovone's ELB Fully Automatic machine range was developed to meet the rising demand for automation, standardi-



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

#### **THESE INCLUDE:**

- Automatic grinding wheel wear compensation, with motorized spindle adjustment based on configurable parameters (linear metres, electric absorption, or both);
- Intelligent tool replacement alert system, which notifies the operator in advance to avoid unscheduled downtime;
- Simplified wheel change, with automatic spindle lowering and return to



position without sample glass;

 Fast setup, thanks to quick recall of stored recipes.

The ELB FA series suits a variety of production contexts, both as stand-alone

machines and integrated into Bovone's BRS robotic systems for fully-automated, high-throughput work cells. The vertical integration between machine and software helps reduce human error, ensures production continuity and simplifies the management of mixed or variable batches.

### TOWARD A MORE CONCRETE AND INTELLIGENT GLASS INDUSTRY

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







Laminating oven for eva technology

- » **Dual-Chamber Design** for Maximum Flexibility
- » 10" Touch-Screen Interface: Control at Your Fingertips
- » Convection Heating for Uniform Thermal Distribution
- » Energy-Efficient Operation with Just 45 kW Power Usage
- » Versatile Dimensions to Accommodate Diverse Sizes, even with curved glass

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