

Driving industry 5.0 glass innovation through CMS technology

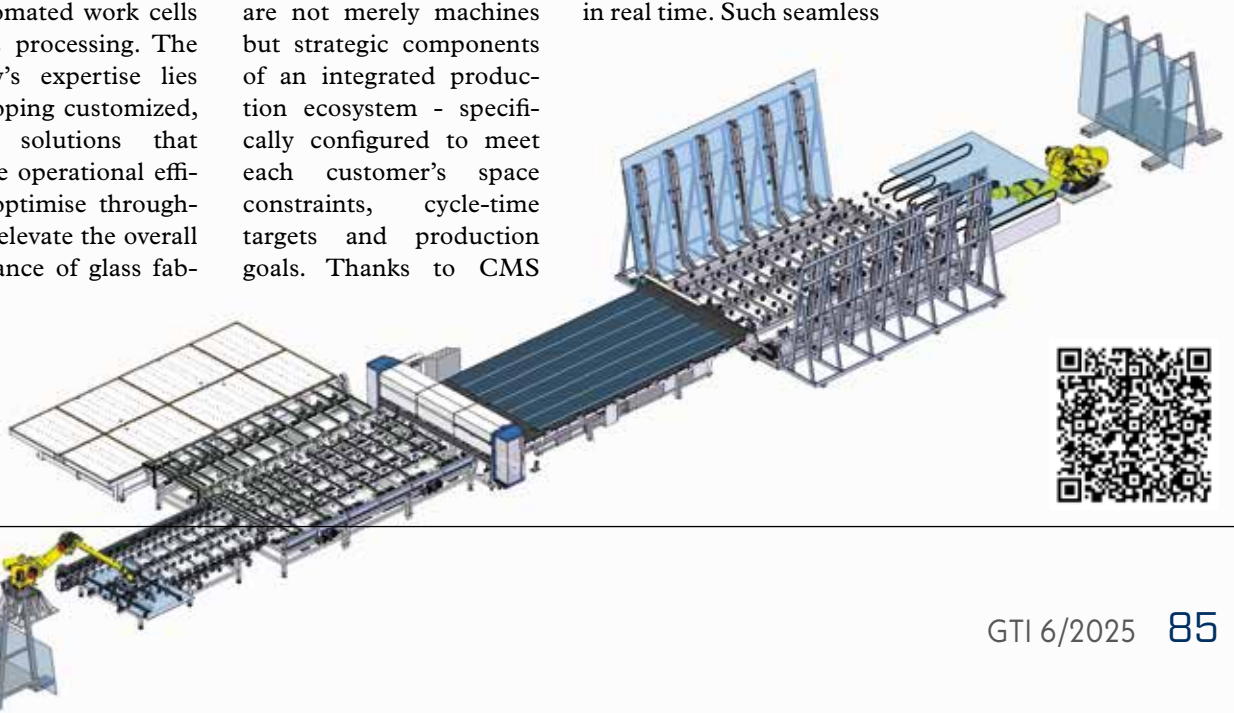
In customised automation and with 25-plus years of innovation, CMS has revolutionized glass fabrication. Its intelligent, fully-integrated systems combine precision engineering, digital connectivity and Industry 5.0 principles - all to enhance productivity, safety and sustainability while transforming glass processing plants into smart, efficient and future-ready manufacturing environments.

For over two and a half decades, CMS has stood at the forefront of innovation in the design and manufacture of special machines and automated work cells for glass processing. The company's expertise lies in developing customized, turnkey solutions that maximise operational efficiency, optimise throughput and elevate the overall performance of glass fab-

rication plants worldwide. Each CMS system is engineered to ensure flawless edge and internal processing with exceptional precision. These solutions are not merely machines but strategic components of an integrated production ecosystem - specifically configured to meet each customer's space constraints, cycle-time targets and production goals. Thanks to CMS

Connect -the company's proprietary digital platform- data from every phase of the production process can be collected, analyzed and acted upon in real time. Such seamless

connectivity allows manufacturers to optimize consumption, minimize waste and sustain peak performance - establishing the foundation for intelligent





and responsive automation. By fully-integrating with company networks and ERP systems, CMS automation aligns naturally with the principles of Industry 5.0 - combining the power of smart manufacturing with human-centered flexibility and environmental responsibility.

WHY A CMS AUTOMATED SYSTEM?

Choosing a CMS automated system means investing in a solution that's engineered for measurable performance and lasting value. Each installation delivers maximum return

on investment through truly tailor-made automation that adapts perfectly to the customer's production needs. Once operational, CMS lines can achieve up to an 85 percent reduction in operator time - freeing personnel for higher-value tasks and optimizing workflow efficiency. The integration of CMS Active and CMS Connect digital services provides complete process visibility - enabling seamless data exchange and control across the entire plant. Every operation benefits from unmatched repeatability and precision, ensuring consistent

quality, stability and reliability over time. Furthermore, CMS automation prioritizes comprehensive safety, with all activities contained within fully protected, sensor-equipped enclosures - offering both peace of mind and exceptional productivity.

RETHINKING GLASS HANDLING IN THE MODERN PLANT

In most glass fabrication facilities, moving sheets from racks to machines remains a labour-intensive, low-value operation - one that also carries risk if glass breaks during handling. For smaller produc-

tion runs - typically around ten daily batches of lightweight panels under 25 kilograms- manual management may still be viable. However, as the scale and weight of the glass increase, CMS's automated handling solutions become not only safer but also far more economical. These customised loading and unloading systems are designed to accommodate diverse glass sizes and shapes - even in batch-one production, where every piece differs from the next. CMS automation can handle sheets weighing up to 250 kilograms and measuring up to 3300



mm x 2000 mm - all with optimum consistency and care.

INSIDE THE CMS AUTOMATED CELL

A typical CMS automatic loading cell consists of an articulated robot, a specially designed End of Arm Tool (EOAT) for glass movement, a control panel with intuitive management software and a suite of safety devices. Similarly, the CMS unloading cell integrates an articulated robot, EOAT, dedicated control software, safety systems and an advanced paper spreader - a unique fea-

ture developed entirely in-house by CMS.

WHAT IS A PAPER SPREADER?

The CMS paper spreader is an intelligent device engineered to automatically place strips of paper between stacked glass sheets on racks. This innovation not only eliminates a repetitive and delicate manual task but also allows operators to focus on higher-value operations. The system ensures precise, uniform paper placement - even on large glass panels that would otherwise be difficult to reach manually. By reduc-

ing handling time and improving safety, the paper spreader embodies CMS's commitment to continuous process improvement.

AUTOMATION FROM THE FIRST STEP

CMS delivers fully-automated glass processing cells where operators simply load a rack of raw-cut glass and collect another filled with finished, washed pieces. Such systems can integrate referencing and transfer units, interconnect multiple machines - from cutting tables and CNC centres to waterjets and washers - and pro-

vide synchronized data flow across the production line. Every CMS solution is conceived with the customer's productivity, quality, footprint and return on investment at its core - ensuring that automation not only serves the process but reshapes the future of glass manufacturing itself.



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