Electromechanical pressing revolutionised by ITECH engineering expertise

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

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

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

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

REDEFINING SPACER PROFILE PROCESSING

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

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

CONNECTIVITY AND INDUSTRY 4.0 INTEGRATION

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

TAURO: THE EVOLUTION OF ELECTROMECHANICAL PRESSING

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

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

SHAPING THE FUTURE OF INSULATING GLASS PRODUCTION

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

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