

Sustainability in motion: inside EMAR's manufacturing commitments

Blending Italian engineering with cutting-edge innovation that's reshaping glass processing, EMAR enjoys a global reach - all while offering real-time support as it commits itself to a robust ethos of sustainability. Here we examine the technology, philosophy and future-focused impact of a group that's earned its name for providing tailored, high-performance solutions to empower glass manufacturers the world over.

A LEGACY OF PRECISION AND GLOBAL REACH

EMAR Group stands as a pillar of Italian engineering excellence in the design and manufacture of machinery for flat glass and insulating glass unit (IGU) processing - a shining beacon on the industry landscape that's been visible for over three decades now. Renowned for its commitment to innovation and customer-centric support, the company continues to set benchmarks in performance, precision and reliability. Operating out of a modern production facility spanning more than 4,000 square metres, EMAR has cultivated a global presence that today reaches over 50 countries, accounting for 90 percent of its total business activity. Founded on the principles of innovation and uncompromising quality, EMAR Group has consistently invested in research and development as a strate-





gic pillar. This long-term vision has resulted in cutting-edge machines that not only meet evolving production standards but also anticipate future industry demands. Across its history, EMAR has produced over 5,000 machines and systems, many of which have found homes in the most advanced insulating glass production lines worldwide. The company's international reach is built on a robust network of carefully selected distributors, all of whom are trained through rigorous technical programmes to provide seamless and professional support. In Italy, EMAR operates directly with its own expert personnel and proprietary equipment, ensuring service interventions within 24 hours - an operational benchmark that continues to enhance its reputation for

dependability.

TAILORED ENGINEERING AND DIVERSIFICATION

Tailored manufacturing is one of EMAR's most distinctive qualities. A large share of the company's machinery is custom-designed for foreign and domestic dealers seeking to expand or complete their production systems. The result is an ecosystem of solutions that adapts fluidly

to individual client requirements - delivered with the craftsmanship and precision expected of Italian engineering. Specialisation extends beyond glass processing. EMAR has also developed and supplied sophisticated systems tailored for the photovoltaic industry, including machinery built to client specifications for the production of solar panels. This diversification reflects the brand's ability to evolve with the broader energy and architectural landscapes, while maintaining its core focus

on flat glass. Driving these technological advancements is the company's R&D division, E2LAB, a dynamic hub continually enhancing the performance and efficiency of EMAR's machinery. Mechanical, technical, electrical and electronic aspects of machine design are perpetually refined, with particular attention paid to both usability and aesthetic design. From operator safety to visual clarity and intuitive interfaces, every detail is considered to align with both functional and visual excellence.

ENGINEERING EXCELLENCE AND GLOBAL EXPORT





Premium materials are selected for each build, ensuring that every EMAR machine delivers durability and performance without compromise. This commitment to craftsmanship, combined with attentiveness to market and customer needs, results in machinery that offers exceptional value - both in terms of operational efficiency and return on investment. Since its inception in 1990, the company has designed and produced high-performance machines for flat and insulating glass with a distinct passion. More than 90 percent of these machines are exported globally, supporting businesses in over 50 countries. The portfolio includes horizontal and vertical

washing machines, complete production lines and auxiliary units - each proudly bearing the hallmark 'Made in Italy.' A testament to EMAR's ecological commitment is EMAR Solar, a dedicated division focused on sustainable energy. This arm of the company handles the complete lifecycle of photovoltaic systems - from design and installation to grid integration and post-deployment optimization. Clients also benefit from a dedicated online portal, where real-time monitoring tools provide continuous insight into the performance of their solar infrastructure.

CONNECTED SUPPORT AND SCALABLE SOLUTIONS

But EMAR offers more than machinery; it offers enduring partnerships through a connected support philosophy. All automatic lines are engineered to maintain continuous connectivity with the Group's technical team via a standard internet connection. This capability allows real-time diagnostics, immediate assistance and consistent operational uptime - ensuring clients remain productive, safe and supported. With its 'always by your side' approach, the company provides peace of mind to its clientele. Remote monitoring enables technicians to troubleshoot and even bypass certain sensors to maintain workflow during critical moments, effectively minimizing downtime and maintaining production momentum regardless of geographic location.

TAILORED SOLUTIONS FOR EVERY BUDGET

Catering to a diverse market,

EMAR Group offers an extensive portfolio that includes advanced automatic lines, semi-automatic machines and the accessible Eco series. This range enables businesses of varying scales to access high-quality machinery suited to their specific financial and operational needs. The Eco series, in particular, represents an ideal balance between affordability and uncompromised performance - ideal for companies seeking to optimise their production capabilities while maintaining budget discipline.

INTELLIGENT LINES FOR A SMARTER FUTURE

Among its most recent technological achievements is EMAR's suite of modular automatic lines tailored for double-glazing applications. These lines feature integrated panel presses, gas loading systems and remote monitoring capabilities, designed to accommodate units up to 2500 mm in height.



Customisable by nature, the lines are composed of 4-metre modules, allowing precise configuration for a broad spectrum of production requirements. Anti-cut rollers with integrated friction components promote smooth glass handling while prioritising operator safety. The washing system, built in powder-coated stainless steel, measures 2.9 metres and is constructed for longevity and corrosion resistance. With six 160 mm brushes rotating on steel shafts and aluminium supports, the washing performance is thorough and reliable. The three-zone water management system features independent tanks, pumps and stainless-steel internal parts - engineered to minimise consumption by recycling wastewater across compartments. Thermostat-regulated heating elements are standard across the entire series. Energy conservation is further enhanced with a drying fan housed in an insulated casing that includes a damper for airflow control, reducing energy usage during machine idle states. Fully adjustable working speeds are maintained via an electronic control system that ensures consistent torque, regardless of glass weight or thickness. This is complemented by an inverter-controlled transport mechanism that shortens glass transition times, thereby enhancing productivity. An integrated LED inspection lighting system enables operators to



ALWAYS CONNECTED

detect even the most minute defects in real-time. In addition, laser sensors manage profile alignment, while oil-dampened pneumatic pistons adjust automatically based on glass thickness. These features allow groove positioning to occur seamlessly without manual adjustments, regardless of dimensional variations. The system's measurement module instantly calculates necessary parameters for gas volume, streamlining an often complex stage of production. The 3.6-metre panel press incorporates anti-cut rollers and a mobile surface that operates on recirculating ball bearings for smooth motion. Spiral clamps connected by a high-precision belt ensure exceptional alignment, even for large-format glass. Pressing operations are managed electronically, using a brushless motor to apply micro-adjustments in torque. The result is precise force modulation based on dimensional feedback - monitored and managed through intelligent, self-regulating software. User interaction is facilitated through the EASY TOUCH control panel, a touchscreen interface designed for in-

tuitive navigation. Operators can oversee every stage of the production process, fine-tune machine parameters and monitor performance metrics with ease. The fixed exit module, stretching four metres in length, carries glass on anti-cut rollers secured to friction systems. This zone also features a self-learning mechanism that automatically measures pane dimensions, adjusting gas loading operations accordingly. The control panel offers further configurability and the entire system is engineered for modular integration with additional equipment.

INNOVATION AND SUSTAINABILITY: A FUTURE-FOCUSED PARTNER

By integrating innovation, customisation and responsive service, EMAR Group has positioned itself as a trusted partner for companies striving to modernise their glass processing operations. Whether deploying fully automated lines or streamlined entry-level systems, clients benefit from the company's enduring commitment to precision, performance and adapt-

ability. Real-time connectivity features help to ensure production never falters, while eco-conscious design elements -from water-saving mechanisms and thermal management systems to energy-efficient motors and inverters- underscore the company's commitment to sustainability. In doing so, EMAR not only reduces the environmental impact of glass production but also lowers operating costs for end-users. From its foundations in Italian manufacturing excellence to its present role as a global innovator in flat glass technology, the company continues to deliver robust, reliable and forward-thinking solutions. For those seeking a partner grounded in technological prowess, environmental responsibility and unwavering customer focus, EMAR Group offers an exceptional path forward in the evolving world of glass production.

EMAR
GROUP

Via Del Lavoro 2/B
20060-Pozzo D'Adda-MI
ITALY
Tel. +39-02-90967625
info@emar.it
www.emar.it