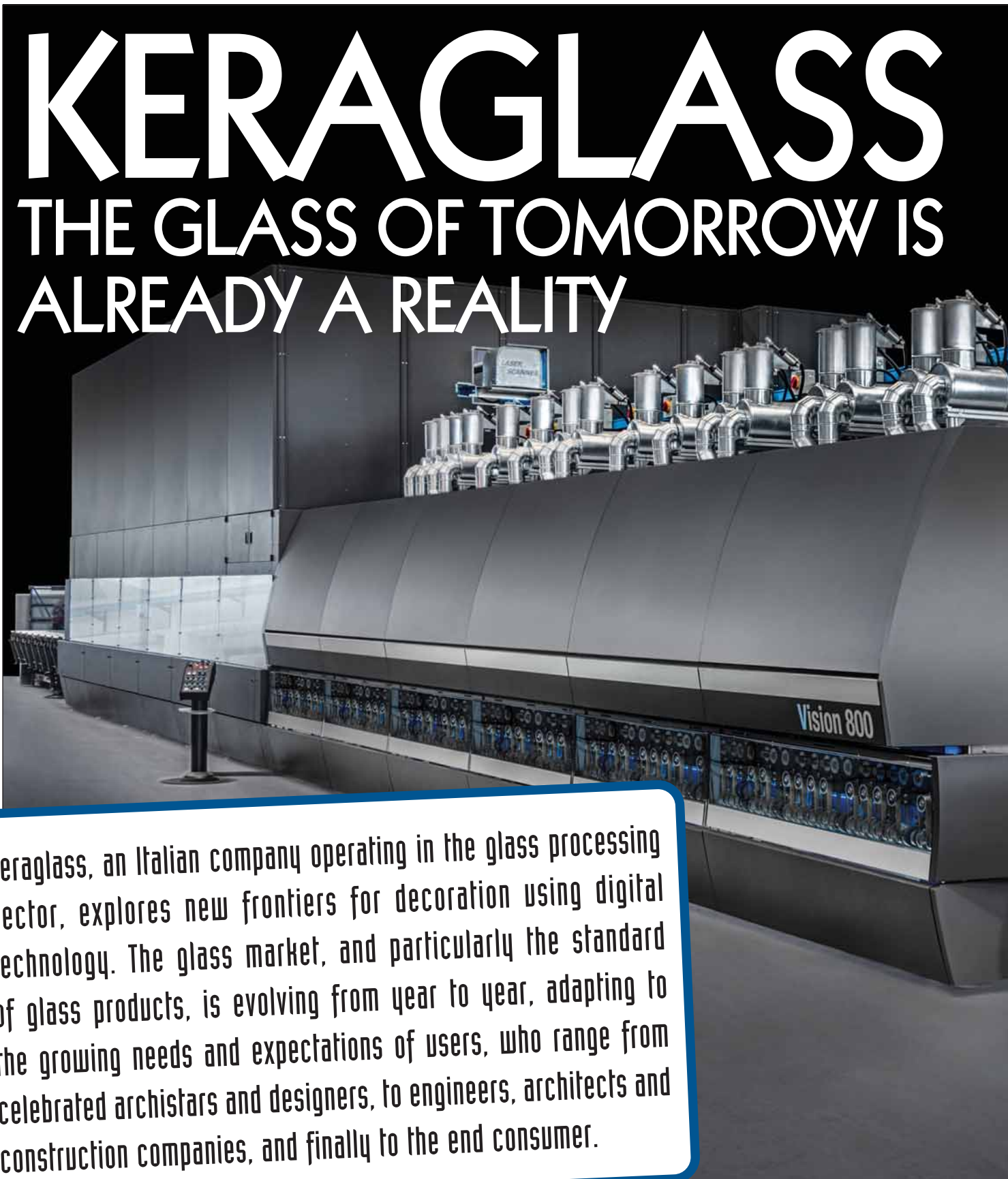


KERAGLASS

THE GLASS OF TOMORROW IS ALREADY A REALITY



Keraglass, an Italian company operating in the glass processing sector, explores new frontiers for decoration using digital technology. The glass market, and particularly the standard of glass products, is evolving from year to year, adapting to the growing needs and expectations of users, who range from celebrated archistars and designers, to engineers, architects and construction companies, and finally to the end consumer.



A **N ALL-AROUND APPROACH**

There is a legitimate expectation of quality, to which Keraglass provides a prompt and comprehensive response.

The Italian firm has always adopted an all-around approach towards the market, offering advanced tempering, lamination and decoration solutions.

All this while adhering to the principles of Industry 4.0 connected manufacturing, because the potential of digital technology is a distinctive and winning element in the development of products and solutions that meet the emerging needs of customers. This applies even in the glass processing sector, where, especially in decoration, the use of digital printing is a new fron-

tier that is yet to be fully explored.

A NEW GENERATION IN DECORATION

Keraglass is already a prime mover of this change, particularly with two of its latest production lines: IPlotter Line (the multi-pass digital inkjet plotter line with drop-on-demand technology, which is ideal for the architecture and furniture sectors); and Dinamica (the multi-pass and single pass line unveiled in 2019 and optimised for the automotive and household appliances sectors).

DINAMICA

Dinamica is an innovative, high-tech glass decoration system that is perfect for the kind of integrated process employed in latest-generation manufacturing.



Dinamica combines the flexibility of digital printing with the high-speed performance typically associated with traditional screen printing. Flexibility and speed, a combination that meets and satisfies the requirements of the most exclusive design projects, particularly in the home appliances, interior design and automotive sectors.

The revolutionary Dinamica digital printing system allows faster reproduction of any image on glass surfaces.

'MULTI-PASS' AND 'SINGLE PASS'

The operator can choose between two printing types: 'multi-pass' or 'single pass'. With multi-pass printing, after an automatic alignment phase the glass sheet is immobilised and scan printed, with the option of setting a different colour printing sequence. With the single pass process, the printing unit is fixed, and it is the glass that moves under the print

heads, allowing the application of a single 'coat' in multiple colours. The constantly recirculated ceramic ink allows rapid repeat print jobs, thus guaranteeing constant availability and exceptional flexibility of use.

I PLOTTER

No less impressive is iPlotter, the digital ink jet plotter using drop-on-demand technology, which was conceived and designed specifically for printing on glass sheets using dedicated inks, and which is especially suitable for reproducing drawings, images and photographs for the architecture, automotive and furnishing sectors. This ceramic ink printer is capable of reproducing any type of image on glass sheets, obtaining a resolution of up to 2880 dpi in the HD model. All with top performance in terms of production flexibility, fast design and execution, as well as easy management

and maintenance. Available in a new version incorporating up to 24 print heads that can operate with different inks and effects; iPlotter offers space – in both the physical and figurative sense – for any idea or application need in the present or future.

iPlotter can be integrated into a production line that starts with the glass sheet loading phase and ends in unloading with the print already dried and the glass ready for lamination or tempering. All in a fully automated system that includes print head cleaning.

Latest generation manufacturing

iPlotter and Dinamica thus enhance the Keraglass range of glass decoration products, which is intended to provide an integrated process for latest-generation manufacturing. Although the sector's transition to Industry 4.0 is not yet complete, Keraglass is ready to seize the opportu-

nities and advantages of the digital technology transformation, once again placing itself at the forefront of the global market.

AUTOMATIC SCREEN PRINTING AND ENAMELLING MACHINE

Alongside this new digital frontier in glass printing, Keraglass uses the Decoglass automatic



screen-printing machine, which is particularly indicated for large-sized glass (processes sheets up to 3210x6200 mm) and the Rainbow enamelling machine, capable of grading the thickness of the glaze based on the desired effect.

TEMPERING OF THE FUTURE

But glass is not solely about aesthetics. Insulation power and efficiency are still priority characteristics. Vision 800 from Keraglass is a tempering furnace that has pushed the boundaries of what is possible, adopting innovative solutions that are destined to become the standard of the future. Solutions that have led to a result never achieved before in terms of the emissivity of large sheets of low-E glass: $e = 0.01$. A reduction in transmittance, with a consequent

increase in thermal insulation power, makes the glass panes processed by Vision 800 ideal for modern buildings, which are increasingly energy-efficient and environmentally sustainable.

Convection system

At the base of these extremely high-performance results is a convection system with a highly innovative concept that involves blowing air preheated to 700° through a network of stainless steel blowing tubes arranged above and below the rollers, with adjustable convection mapping and intensity according to the composition of each individual glass pane.

Single-step process control

The optical distortion effects of the heating and cooling processes are thus minimised. An equally innovative live monitoring system,

Supervision Intelligent, oversees the entire Vision 800 machining process. Through Supervision's 'hands and eyes', the operator can control every single step of the process and intervene if necessary. It provides a safe and linear path that leaves no room for nasty surprises.

FLEXIBLE LAMINATION - COMBI AND DELUXE

Completing the broad range of Keraglass products are lamination machines such as the Combi laminating kiln, a multi-level system divided into independent chambers capable of handling flat and curved glass of various dimensions, shapes and thicknesses. It incorporates high chambers dedicated to special treatments such as screen-printed glass or lamination of glass

with marble or ceramics. And, last but not least, Deluxe, the complete, fully automatic PVB laminating line, equipped with a pre-furnace, furnace, two roller presses and buffer-conveyors that enable high productivity. The line is available in different sizes, enabling it to process large sheets up to jumbo size and cover the full gamut of architectural glass products.

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