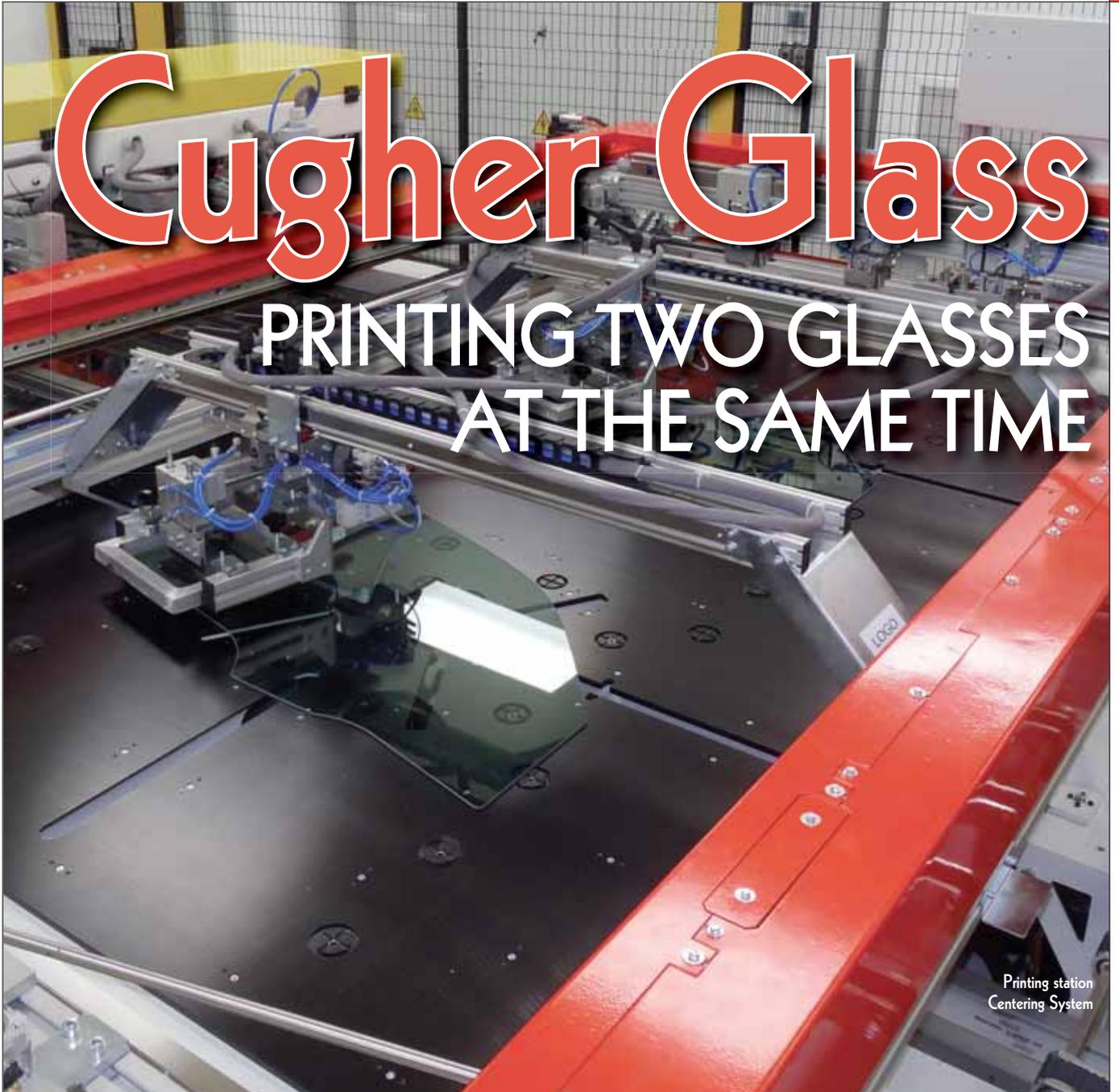


Cugher Glass

PRINTING TWO GLASSES AT THE SAME TIME



Printing station
Centering System

Being specialized is always a benefit in the glass sector, and the company in this article — Cugher Glass — is just that. Founded over 50 years ago, its product line was and is silk screen printing machines. This article shows our readers how far the company has come, presenting the machine for double glass printing, the G series special edition DLE.

THE COMPANY AND ITS SPECIALIZATION

Cugher was founded in the late 1960s and was immediately among the first companies to automate the silk screen printing process. Cugher is now recognized as one of the most innovative and technologically advanced producers of silk screen printing machines and solutions worldwide, leader in the automotive sector.

The company is specialized in the realization of turnkey silk screen printing lines, providing a wide

range of optional and complementary equipment and solutions even for the most challenging production needs, including process automation and control, IR and UV dryers, handling and storage equipment. Automatic vision and quality control systems for glass and printing, with the highest level of technology, are part of Cugher's product range, matching Customers' production needs. Cugher silk screen printing machines are able to print on symmetrical, asymmetrical, single, double and paired glasses, with standard dimensions up

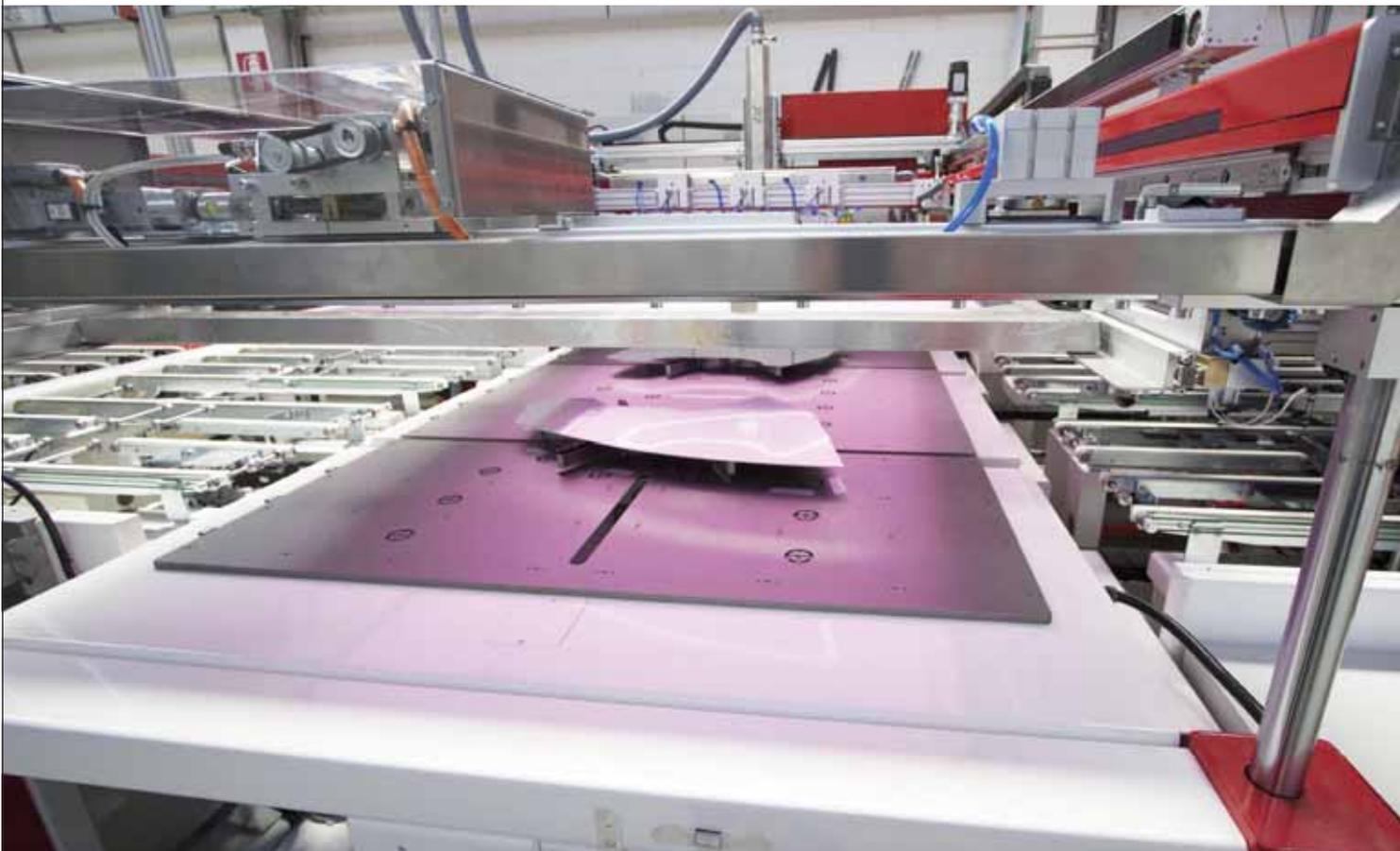
to 2,500x4,000 millimetres and thickness varying from 1.4 up to 10 millimetres. The machine's performance is outstanding: the productivity and precision levels are very high with up to 1,028 glasses per hour and a print repeatability precision of +/- 0.08 millimetres.

THE G SERIES PRINTING MACHINES

The G Series printing machines are the best solution for industrial contexts that require high automation, large production volumes, quick set up and format changeover and extreme

print precision. The glass transportation is performed by a shuttle with two independent cross shaped holders, centring is made out of the printing table. This solution enables to reach the maximum speed of the printing process for glasses with small and medium dimensions.

The system consists of one cross shaped holder with a vacuum cups system. The glass is collected by the walking beam while it is still in the centring device of the inlet conveyor; thanks to this operation it is possible to transport the glass with great accuracy.



No further glass registrations are necessary before the printing process.

G SERIES DOUBLE LITE EDITION

The G series special edition DLE (Double Lite Edition) for double glass printing has been engineered with the aim to have the maximum flexibility in a single printing line. Two small glasses (sidelites or vents) or one single big glass (backlite, windshield or sunroof) can be printed on one printing machine, resulting in important savings in terms of industrial space and cost optimization,

with a faster ROI. The machine is made up of an entry/squaring conveyor, a printing body and an exit synchronized conveyor. The purpose of the pre-centring conveyor is to perform the correct alignment of the two glasses before they are moved to the centring device.

An outstanding centring system

Its outstanding centring system has 18 axes that enable to perfectly centre all types of glass, even those with extreme shapes. This automation allows a very fast setup of the ma-

G Series Double Lite Edition — Main features

General

Printing repeatability $< \pm 0.08$ mm

Printing head

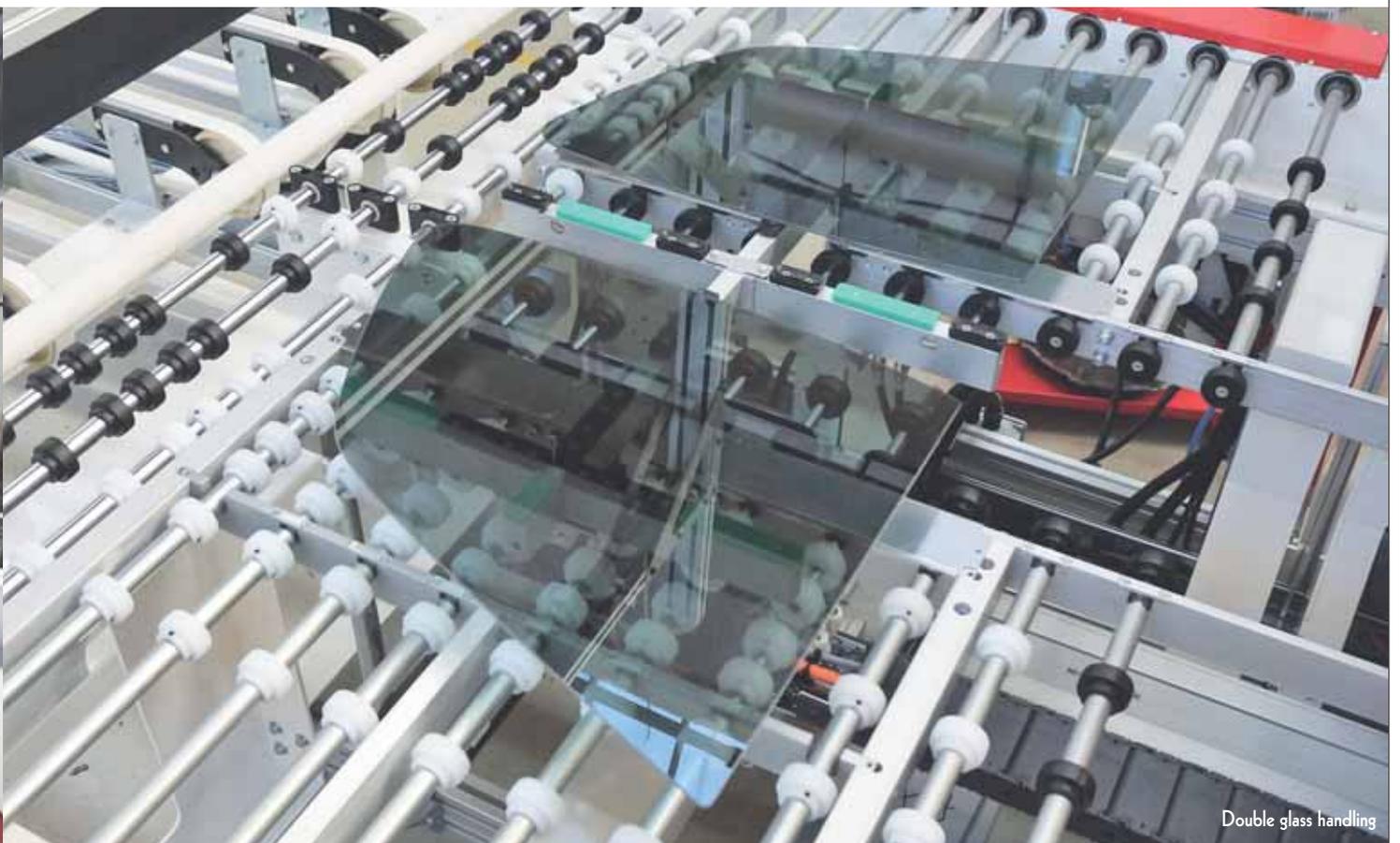
- Constant pressure during printing
- Independent speed adjustment
- Anti-drop system
- Squeegee run length auto learning

Screen

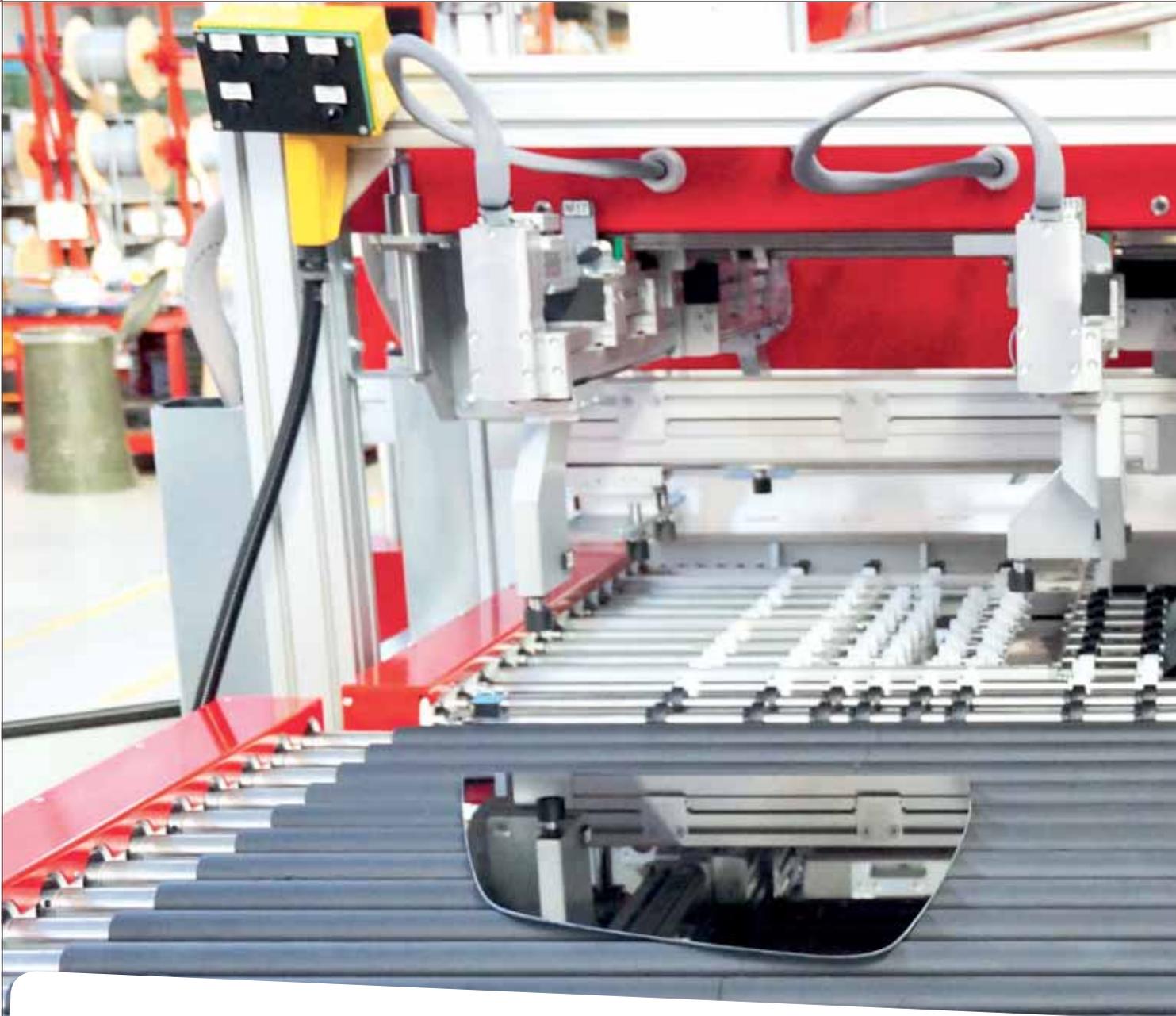
- Screen extraction without loss of register
- Automatic peel-off adjustment



SERIE G DLE		200x130	130x100
 double glass	Max	800x1300	550x1000
	Min	275x380	150x250
 single glass	Max	2000x1300	1300x1000
	Min	900x500	350x200



Double glass handling



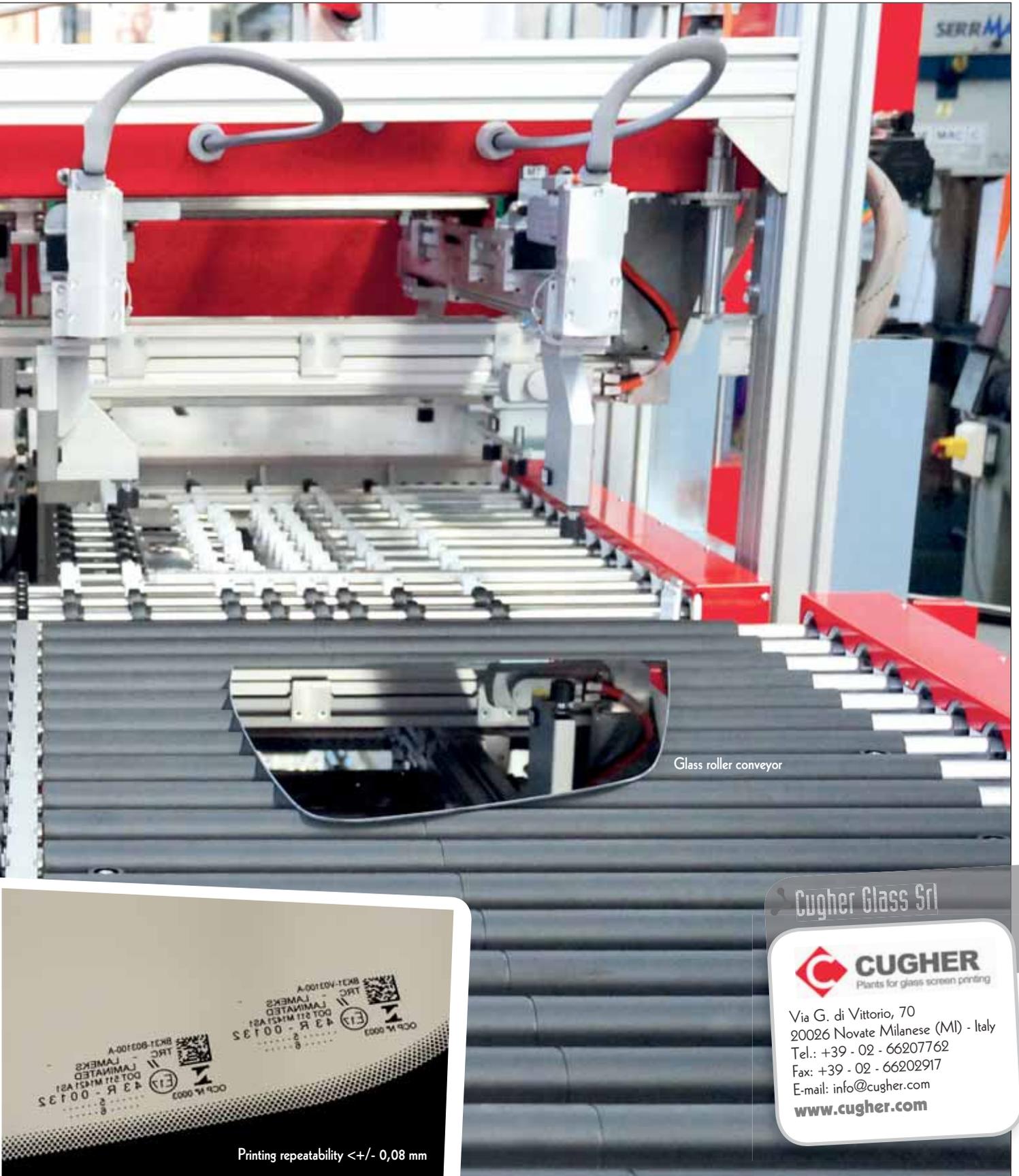
chine even with the two glasses. Since the position of the pins will be then stored in a recipe system, the operator will simply recall the recipe and the pins will position themselves automatically. Easy to use and ergonomic, it is equipped with dimensional auto-learning functions controlled by the operator panel.

Transport system to match high flexibility

To match the high flexibility of this machine with the high precision requested by the industrial process, the transport system has also been especially engineered. In case of processing two glasses, they will be collected by two walking beams while they are still in the centring device of the inlet

conveyor; thanks to this operation it is possible to transport the glasses with great accuracy. No further glass registrations are necessary before the printing process. In case of processing one single glass, the two synchronized holders will act as one big single holder (aka spider), transferring the centred glass from the

centring system to the printing table. The whole DLE silk screen printing line has been consequently projected and designed to handle both single- and double glasses, giving the opportunity to have an extremely flexible production and reducing costs. The DLE is available for different glass sizes, from vents size up to windshields.



Glass roller conveyor

Printing repeatability $\leq \pm 0,08$ mm

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