# Laser marking strides see HEGLA reimagine glass identification

With the technical potential of laser marking always more extensive, a pane can now be uniquely identified and assigned its own identity even at the most basic level. In advanced configurations, operators can store data, trace product histories and even control processes simply by scanning. Here the ES-Guard Mobile from HEGLA boraident offers a practical introduction to laser marking technology - with a mobile system designed for use across various processing stations.


The ES-Guard Mobile offers a practical and professional solution to entering the world of laser marking.

## HIGH-RESOLUTION MARKING WITHOUT SURFACE DAMAGE

Markings are created using the high-resolution UniColor process, which applies an ultra-thin layer of ceramic particles through laser printing. "This marking method meets the highest aesthetic standards while also establishing the basis for digital applications," explains Dr Thomas Rainer, Head of Organisation and Development at HEGLA boraident. Logos, data matrix codes and alphanumeric characters can all be used to create customised designs. The resulting print is scratch-resistant, weatherproof and lightfast. In contrast to traditional laser engraving, the surface remains entirely undamaged, eliminating the risk of stress cracks or changes to the structural integrity of the glass.

## MANUFACTURER'S MARK: AN INTRODUCTION TO LASER MARKING

For many processors, the starting point for glass marking is the application of a manufacturer's mark. "It could be toughened glass, a shower enclosure or some other kind of special pane," notes Thomas Rainer. "This is where laser marking ticks all the boxes with its high-resolution results, appealing aesthetics and the flexibility to make instant design changes with no set-up required." Markings can be applied at any stage of processing, whether immediately after cutting or after the tempering furnace. The ES-Guard Mobile is simply moved to the required processing station ready for marking.


The ES-Guard Mobile is portable and suitable for use across various processing stations.

## DIGITALISATION WITH THE DATA MATRIX CODE

The integration of a data matrix code adds a digital

**Introducing a new era in glass marking, the ES-Guard Mobile by HEGLA boraident delivers high-resolution, non-damaging laser prints with full digital integration. Easily movable across stations, it enables traceability, real-time process control and customisation - ideal for manufacturers embracing smart, flexible and aesthetically superior glass tracking.**


When the glass ID is included in the code, the number can be read by a scanner or mobile device.

dimension to laser marking. When the glass ID from the ERP system or PPS is included in the code, the number can be read by a scanner or mobile device. Displaying information from the ERP system with the proper data authorisation unlocks additional benefits. When glass is damaged, for example, fast identification of the systems involved helps prevent further waste and promptly initiates a remake. "There are many options for using marking in production," explains the laser professional. "Some customers rely on scanning to confirm automatic completion; others use the marking to prepare shipping documents or ensure error-free system processing."

## TRACKING AND OPTIMISATION

Advanced configurations use data matrix code scanners to facilitate pane tracking. Production progress can be visualised in real time and used for cockpit displays or process optimisations. "Once printed, the marking is available throughout the product life cycle," Thomas Rainer highlights. Downstream processors also have the option of using the glass ID and data matrix code for their own applications. With proper data storage and access permissions, the information remains retrievable even years later, showing who delivered a product, when it was manufactured and how it was processed. Customers typically use this feature to link glass dimensions, fire protection certificates and product properties such as coatings.

## DATA TRANSFER FROM THE CUTTING SYSTEM OR ERP

The ES-Guard Mobile is portable and can be used across various processing stations. It is positioned next to an existing conveyor table, allowing the print head to mark the glass directly on the surface. Integration with the ERP system is supported, along with data transfer from a cutting table (via the ES-Guard Connector). Markings can be applied at any position, including in the subsequent frame profile area. Various colours are available to choose from, ranging from a subtle grey to high-contrast black.


Depending on the configuration, information from the ERP system can be displayed.

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