

Press Release

Making Vehicle Identity Stick

Oxfordshire based ES Technology have built an international reputation for reliability and expertise, that makes the company one of the leading suppliers of industrial laser marking and engraving systems in Europe. As a laser system integrator, ES has acquired a unique combination of laser expertise and automation design skills, enabling ES to provide complete turnkey solutions for a broad range of laser marking applications.

VIN Mark 30 Laser System

The **VIN Mark 30 Laser System** has been designed and manufactured by ES Technology to meet the specific needs of the automotive industry, for the production of tamper evident self adhesive labels.



Laser marked tamper proof labels have now replaced the traditional metal plaques which were once commonly used for vehicle VIN plates (Vehicle Identification Number). These plates were generally riveted to the inside of the engine compartment, but were extremely easy to remove thus making it possible to quickly give a stolen vehicle a “New” identity. Manufacturers now use up to 17 separate identity and information labels on a single vehicle,

each of which is self adhesive and tamper evident. These new labels are produced from materials which are ideally suited to the automotive, electronics and security fields. They cure upon adhesion so that they cannot be removed without destroying the label, and they also withstand high temperatures and are highly resistant to weathering. This change in the way in which information is attached to the vehicle brought with it the need to develop a robust and high speed method of producing the new self adhesive labels.

The **VIN Mark 30 Laser System** designed and developed by ES Technology has already been adopted by a number of major automotive manufacturers. The system uses laminate foil material manufactured by TESA and supplied in reel form. Foil material from other manufacturers can also be used, following initial feasibility trials to establish suitability and optimum laser marking parameters. The 120mm wide reel of material is loaded to a motorised dispensing mandrel on the machine. At the processing area on the machine a pair of pinch rollers, one stepper motor drive and one spring loaded are used to accurately feed and position the strip material for laser marking.

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Choice of Laser

The system developed by ES Technology to process material supplied by TESA uses a 30W CO² laser source which is fully integrated within the machine however other laser sources such as Nd Yag are available for alternative materials from other foil suppliers. The marking process is achieved using a high speed servo driven galvo head which is located above the working area of the machine.

A built in extraction and filtration system performs a dual role within this system. The primary task of the extraction system is the removal of fumes and particulate, however the extraction system is also used to generate a vacuum under the foil location area to ensure that the material remains perfectly flat during the laser marking process. Safety interlocks on the filtration system access door means that the machine will automatically stop if the access door is opened during production.

Flexible Machine Concept

The design principles and concepts of the **VIN Mark 30 Laser System** are such that the machine can be used to produce different widths of label if required, and the wide choice of laser sources means that the ideal marking solution can be found for all of the commonly used materials.

This PC controlled machine is also simple to set up and operate using the CAD & Graphics editor software suites, and a bespoke operator interface can be provided to suit each individual customers specific requirements. When installed within the customer site, the machines are linked to the customers data management system, which downloads vehicle and label information directly to the machine which then automatically populates the fields within the label generation software.



(VIN Mark 30 Laser System)

ES Technology Limited also provides **sub-contract laser marking services, after- sales servicing & parts** in addition to the **design and manufacture of laser marking systems**, built from a range of suitable manufacturers – including Rofin. ES Technology is also the exclusive United Kingdom and Irish Republic distributor for Concept Laser GmbH LaserCUSING[®] systems.

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