

President of FTA Europe
lays out agenda for second term

Flexo Gravure Global

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adoption of sustainable packaging**

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Focused like a laser on the future

Italian company SEI Laser introduces more applications for the package printing industry.

Michael Buchsbaum

The Italian company, SEI Laser, provides additional solutions for flexible packagers within the converting market. Offering a new platform, the SEI flexible packaging division conducts laser cutting, scoring, micro and macro-perforation on a variety of plastics, nylons and laminated films. The company is also keenly focused on helping to reduce food waste through advanced packaging concepts while increasing the sustainability of current packaging systems. Matteo Maffeis, sales manager of the flexible packaging division of SEI Laser, provides an overview of the company, its offerings and solutions in the packaging arena, and shows how laser technology is helping to solve sustainability challenges.

Pointing the Way

Since 1982 SEI Laser has been developing laser technology for industrial uses. Currently, the company offers a wide range of laser solutions for customers in the lighting, visual communication, graphic arts, paper converting, labelling, flexible packaging, folding carton, fashion, interior design, furnishing, automotive, engineering and electronics industries.

An example of window packaging created with SEI Laser Packmaster CW (Cross Web)



Source: SEI Laser

SEI Laser designs and manufactures systems with galvanometer scan heads equipped with CO₂ and solid state laser sources for marking. This includes flat-bed plotter systems with interpolated coordinate axes equipped with CO₂ and solid state laser sources for cutting and marking and other OEM systems. All systems use the Icaro proprietary software which operates on a Windows platform, making them easy to interface even with the most evolved CAD-CAM versions on the market.

As a leader in Italian laser technology and design, SEI Laser specializes in the manufacture of integrated solutions specific to applications based on contemporary laser technology. The solutions that the company has developed for the converting market ensure high-performance, and modular, flexible platforms that can be expanded and upgraded to suit different fields of applications including “Flexible Packaging”, “Labelling”, “Folding Carton”, and “Paper Commercial & Graphic Arts”.

Origins of the SEI Flexible Packaging system

SEI Laser developed the Flexible Packaging system to satisfy the needs of flexible packaging converters which includes a new line

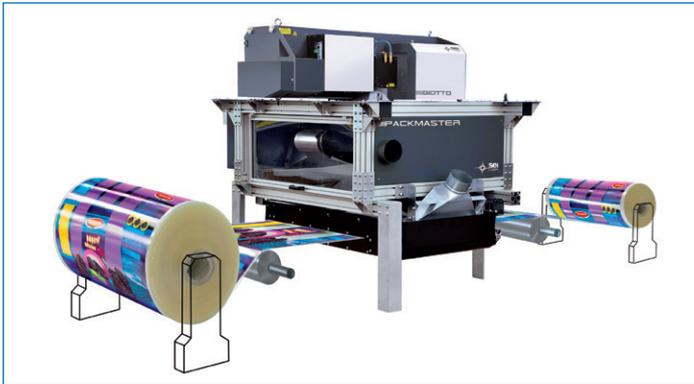
of laser systems that have been designed for laser cutting, laser scoring, and the macro and micro-perforation of different materials such as PE, PET, PP, nylon, PTFE, laminated film, and paper.

SEI Laser solutions for flexible packaging can help to add value to a company’s packaging, giving its customers a substantial degree of differentiation in an increasingly crowded market. The company’s laser systems have four key aspects. In terms of quality, the main laser related features are the precision selective material removal power, the laser perforating capability and the repeatability of the process. SEI Laser’s highly productive lasers can cover over 500 m/min (1640 fpm). The built in flexibility of the all-digital process allows a rapid work change and a significant reduction of downtime and costs (which is not possible in the case of traditional mechanical methods). Lastly, in terms of sustainability, the easy-open solution reduces food waste and environmental impacts—all serious issues that concern many end users.

Packmaster cross-web and Packmaster web-direction

SEI’s laser systems allow the creation of different innovative solutions in the flexible packaging world, including easy opening, window packaging, and micro/macro perforation for breathability and microwave cooking of a given product. The new range of laser systems – all designed and built in-house – are capable of laser cutting, laser scoring, macro and micro perforation of flexible single or multilayer films in different materials including paper, PE, PET, PP, nylon, PTFE and laminated films.

The company’s flagship solution is the Packmaster CW (Cross Web), a system with fairly compact dimensions that is placed directly in the production cycle of existing printing, slitting and laminating machines. It is available for webs up to 1800 mm (71”) and can reach up to 400 m/min (1312 fpm) while cutting, scoring and micro perforating with galvo scanning heads. With Packmaster CW, the operator can create windows that are in-



The Packmaster CW (Cross Web) laser system is designed to implement easy-opening, window packaging, easy-ventilation, breathing and MAP



Source: SEI Laser

Source: SEI Laser

creasingly used in the paper packaging laminates-to-film, or the easy opening for diapers packages or pet food packaging, micro-perforations for salad, tomatoes, chicken pouches or all those micro-incisions and punctures for cooking food in the microwave oven. This technology is perfect for all packaging converters in the food and health-care industries.

Additionally, the fully digital process allows an immediate job change with a considerable reduction in downtime and lower costs since it is no longer necessary to use a mechanical die-cutting process. Since this solution is able to create any type of geometric shape, lasers inside the cutting area are able to draw ever more complex geometries that would simply be

impossible to achieve with a traditional process of cutting/die cutting directly on the laminator.

SEI Laser manufactures a closed system, the only interface provided on the machine is for emergency control. This solution was integrated because it provides greater process standardization and does not imply any type of action for the machine operator. The system is equipped with a method of vapour suction and a lower cassette for the recovery of waste material.

The second solution, a little simpler and allowing for even more space savings, uses the Packmaster Web direction. With a width of up to 1800 mm (71") and speeds over 500 m/min (1640 fpm) for applications requiring continuous perforations for easy opening, Packmaster creates micro-perforations with controlled diameters and hatches when used longitudinally in the web running direction. The laser also allows operators to write directly on the packaging, for example customizing flexible packaging with unique codes, production batch numbers and/or expiration dates.

The Packmaster WD (Web Direction) laser system allows for easy-opening, ventilation and material breathing solutions

Endless laser possibilities

However, at the end of the day, the application's possibilities are endless. Looking to the future, window packaging and re-sealable packaging options will increase significantly. This means that it will be possible to reduce food waste and environmental impacts across a variety of applications. These are certainly issues which deeply concern today's consumers.

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