

SEA VISION AND MARCHESINI GROUP LAUNCH A NEW BLISTER SERIALIZATION AND AGGREGATION TECHNOLOGY

SEA Vision and Marchesini Group are launching a brand-new solution on the market for primary pack serialization and aggregation, comprising a complete range of technologies to print, inspect and pack serialized blisters and perform aggregation with cartons, all integrated in a 4.0 environment.

The two companies decided to invest in this challenging project in order to further enhance product identification, which is a prerequisite in the healthcare industry. While today this prerequisite is respected in the case of cartons and pallets, this does not apply to primary packaging such as blisters. This means that there is still a risk of counterfeiting when it comes to drugs' primary packaging and, despite all the investments made by pharma companies to ensure that secondary packaging is traceable, there is still a hidden gap that could cause serious damage.

Occasionally, along the supply chain, during distribution or in the consumer's hands, the primary and secondary packaging are separated. Separation of the blister from its carton is considered product manipulation, creating a potential risk for the health of the patient.

The new solution designed by SEA Vision and Marchesini Group is strategic – when the blister is distributed (for example, in hospitals, pharmacies or in the consumer's hands) or used separately from its original packaging – and faces all the challenges of a project of this nature. This cutting-edge solution is the ideal choice for any pharmaceutical manufacturer that wants to anticipate future regulatory implementations and give their packaging processes added value.

A forward-looking solution

Although primary pack serialization is not yet a mandatory requirement, it is important to consider the benefits of adopting this technology in view of current healthcare industry production scenarios.

Firstly, today the technological evolution of the digital printing industry and the development of new hardware and software features have undergone a major evolution. This technological evolution can be leveraged by the pharma industry to achieve new results in terms of safety and efficiency.

Another big advantage of serializing single doses is the new frontier of reading drug information through electronic leaflets, which are available by simply scanning the patient's smartphone. Digitalization of drug leaflets makes the information very easily accessible to patients, even when the drug has been separated from its carton box.

Alu reel digital printing? In-line or off-line, the advantage is in-house printing

Today the healthcare industry has begun a major transformation: drugs are changing very quickly and are increasingly subject to marketing requirements. New forms of drug packaging featuring different artworks, product presentation with several shape variants, in ever smaller lots and patient-centric drugs. Lower production costs, greater flexibility, reduced warehouse stock and greater independence from third-party suppliers: these are just a few of the advantages of digital printing technology, which is currently the best alternative compared to traditional flexo printing.

There are different ways to print Alu reels in-house: directly in-line, with a printer installed on the blister thermoformer or using a Roll2Roll machine.

Inline printing solutions permit high-speed printing (up to 75 m/min) of the blister alu foils and maximum flexibility, not only for serialized batches, but also for printing non-serialized artwork.

In the second scenario, Alu reels are printed offline on a Roll-to-Roll machine. It can print all the different artworks needed in advance and stock them in a warehouse without having to rely on a third-party supplier.

SEA Vision software can handle both scenarios.

Inspection technology developments

For this project, SEA Vision focused its research and development on two areas: the choice of best hardware and latest-generation software development.

With regard to hardware, the Contact Image Sensor with CoaXPress interface was identified by SEA Vision as the most appropriate tool for the needs of this technological challenge. Integrated into the SEA Vision Tracker, this sensor makes it possible to:

- Homogeneously inspect web up to 367 mm with high resolution (600dpi)
- Inspect foils in a wide range of materials
- Achieve a high image transfer speed, enabling line speeds of up to 75 m/min
- Minimize the physical footprint in the machine thanks to an integrated lighting system and CIS customization for the most demanding reflective surfaces
- Cancel the shear deformation effect on the image in order to optimize print quality control, partly thanks to continuous foil dragging

In terms of software development, SEA Vision has created new algorithms for reading codes and controlling print quality and has further developed its own application in order to maximise the performance of available threads.

Marchesini Group: Integra 720V, the integrated, robotised line for packaging blisters in cartons

Integra 720V is a compact multilane blister line (up to three blister infeed lanes) with a completely balcony-style structure, comprising two sections: a blister packaging machine that forms the blisters and places the products for packaging in their cavities and a cartoning machine that packages the blisters in their cartons.

The two sections are connected by a Robocombi, a three-axis robot that is fully integrated in the line and entirely created by the Marchesini Group Research & Development departments. This high-tech arm, which feeds the blisters into the product conveyor boxes, can be programmed to execute different stacking sequences based on the blister count set and is controlled by software that permits automatic synchronisation of the transfer, tracking and stacking system. The two sections can be separated by a partition so that they can be included in environments of different classes and can be operated independently, depending on the customer's needs.

Integra 720V has an innovative pusher and counter-pusher unit, a rotary drum carton opening system to cope with very high speeds and an efficient leaflet picking and insertion system. The result is a line that can produce up to 720 blisters (made of aluminium+PVC/PVDC/PET/aluminium and other materials) and up to 500 cartons/minute (with tuck-in or glue closure and many other combinations), permitting very easy cleaning and size changing since the product loading area is separated from the electrical and mechanical parts.

Save the date for Achema 2022!

From 22 to 26 August, Frankfurt am Main will host the 2022 edition of Achema, the world forum for chemical engineering, process engineering and biotechnology held every three years.

During this very important event, SEA Vision Group and Marchesini Group will launch the following solutions for the first time: the Integra 720V complete robotized blister line, the BLA 420 CW high-speed labeller, and the complete Track & Trace software solution developed by SEA Vision.

For more information and to book your demo at Achema, visit the dedicated website: www.blistertrackandtrace.com