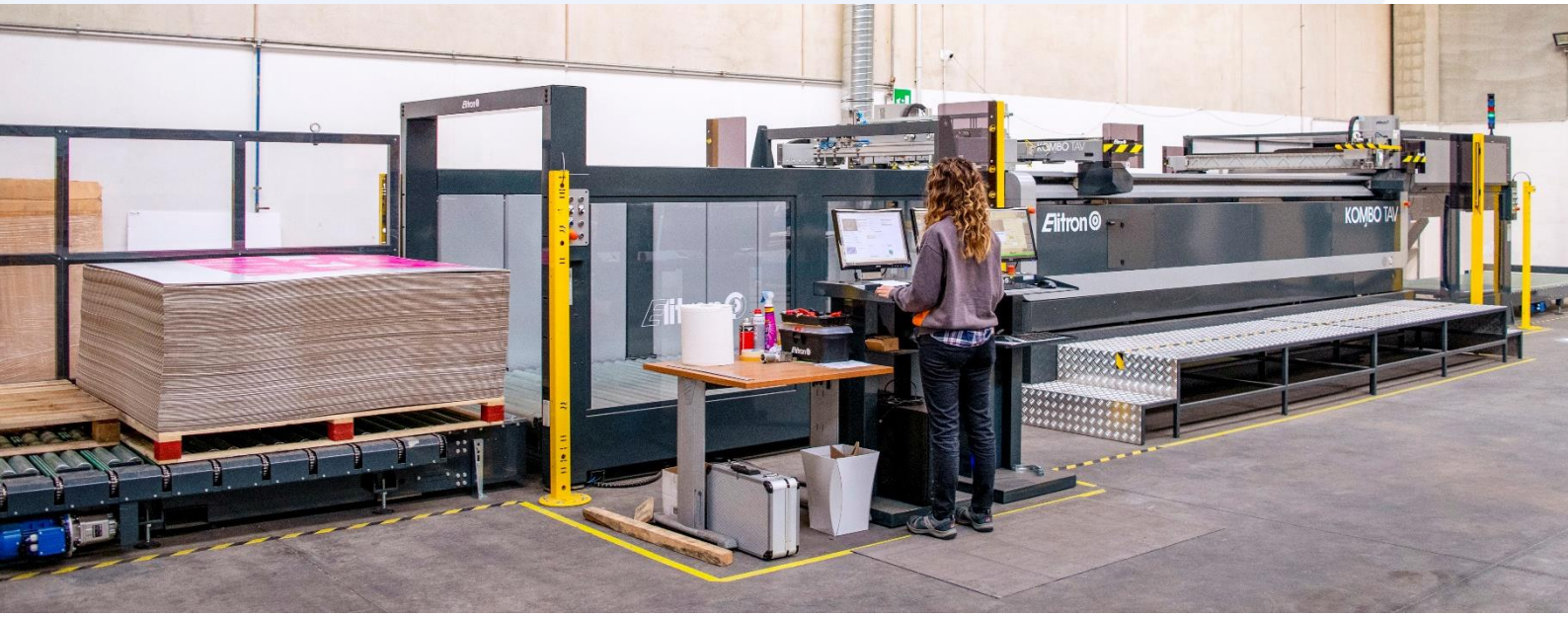
Specialized in the on-demand production of corrugated displays, in the last year the Roman company introduced HP Scitex 17000 and Elitron Kombo TAV

SiEnergie industrializes 100% digital printing and die-cutting of POP materials

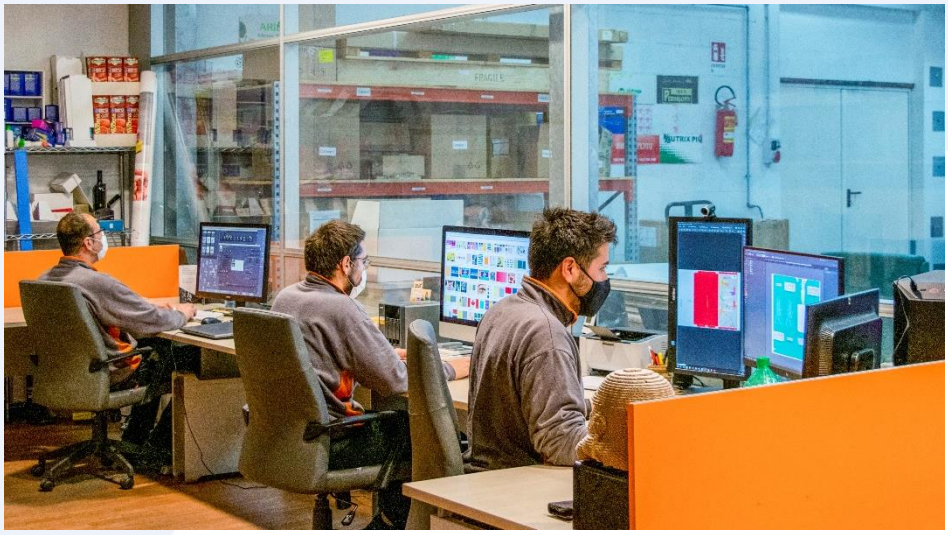
Translated from an article written by Lorenzo Villa, Italia Publishers

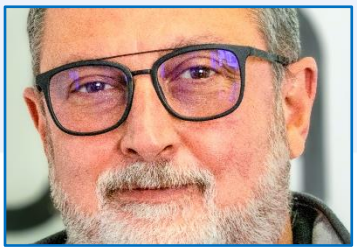


The SiEnergie adventure begins in 2006, when Riccardo Schioppa, a salesman specialized in POP cardboard materials, transformed his passion for creating displays into a business.

«Talking with customers, I perceived the need for projects other than those offered by traditional suppliers», tells Schioppa. «The use of cardboard was in its infancy, and few had the skills and tools to process it».

At the beginning, the competition was made up of box factories, and some traditional printers, and cardboard was perceived as a poor material, unsuitable for printing quality graphics and images.





Riccardo Schioppa
President of SiEnergie

"We have reset the manual operations, and we remove the scrap from the entire pallet after die-cutting, making the operator's job easier."

«We knew the corrugated cardboard well, we sensed its potential as a sales support tool, and we understood its environmental benefits early on», explains Schioppa.

«Furthermore, we did not have the legacies that have slowed down the run of many box factories».

SiEnergie purchases a Zünd G3 cutting system and internally manages design and prototyping, entrusting the production of medium and large batches to external suppliers. Soon, the just-in-time production becomes a must and, in 2015 the company purchases the Engico Aqua industrial inkjet printer, with water-based inks for corrugated cardboard.

«Production partners were slow, attention to the environment was poor and the quality questionable. So, we spontaneously decided to ban plastic and print with green inks», tells Schioppa.

In 2017 Gianni Schioppa, Riccardo's son, joins the company, followed in 2019 by the new partner Giuliano Balzarotti, with 40 years of experience in the field of POP materials. Their priority is to streamline workflows, increase production capacity and quality. To this end, a second Zünd G3 is introduced in 2019 and, in early 2020, an HP Scitex 17000 printer, followed in February 2021 by an Elitron Kombo TAV automated digital cutting line. SiEnergie today develops a turnover of 5 million euros (2020) with a team of 14 people.

Forerunner in digital packaging

Until a decade ago, producing corrugated cardboard packaging and displays with digital tools was anything but obvious. Yet, from the very beginning, SiEnergie's mission is to offer a professional paper converting product, breaking free from traditional processes.

«Analog technologies have evolved, and HD flexo has improved quality, but the reaction times of the corrugated operators remain biblical», says Riccardo Schioppa. «By adopting a digital flow, however, tomorrow we can deliver an order that we receive today by noon».

SiEnergie defines itself as a “paper converting tailoring”, characterized by extreme flexibility, capable of reacting to production peaks and also taking advantage of unplanned orders.

«The greatest satisfaction is working on a different project every day, and at the same time having a smooth workflow», explains Balzarotti. «By managing the engineering, working on nesting and optimizing formats, we easily move from the counter display to the more complex cardboard island».

Automated printing and cutting

Having reached significant volumes of printed cardboard, in 2019 SiEnergie examines the offer of industrial-grade multi-pass inkjet printer suppliers and identifies HP Scitex 17000 as

the platform suitable for its needs. The flagship of HP's UV multi-pass range, capable of feeding sheets up to a maximum size of 1.600x3.200 mm, is equipped with automatic cardboard loading and unloading directly from the pallet.

Thanks to the multi-sheet feeding (up to 4 side-by-side sheets) SiEnergie can easily print even the typical offset formats, including 70x100 and 120x160 cm, with productivity ranging between 640 and 870 m^2/h, in “Display” and “Packaging” mode respectively.

For processing, the company uses corrugated cardboard E, EE, B, EB and flat cardboard, all FSC certified. For runs over 1,500-2,000 sheets, SiEnergie uses the HP PageWide T1100 installed in 2016 at the premises of its partner Ghelfi Ondulati. With such firepower, upgrading the finishing becomes a priority.

«We had to prevent the cut from turning into a bottleneck, or worse, a huge load of manual activities with costs out of control» says Balzarotti.

The choice of Kombo TAV

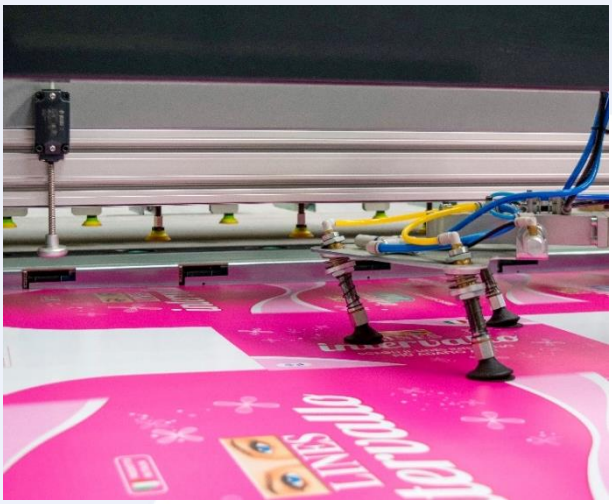
Although SiEnergie has three analog die-cutting units, the time and cost of die preparation, and the limitations in sheet formats that can be fed, make analog finishing incompatible with digital processes. For this reason, SiEnergie identifies in Elitron Kombo TAV the most suitable digital cutting solution to guarantee reduced delivery times and economic sustainability, both on small and medium quantities.

«Some manufacturers have developed loading and unloading units, with robotic arms or feeder, but Kombo TAV is the only cutting system designed and built specifically for cardboard products production», says Balzarotti.

SiEnergie chooses the “Full Automation” configuration, equipped with motorized roller conveyors for cardboard handling, allowing to preload more pallets.

Thanks to Airo Panel technology, Kombo TAV picks up the cut sheet without attachment points, and stacks it accurately on the collection pallet.

In this way, we have zeroed the manual operations, and we can remove the scraps from the entire pallet after cutting, facilitating the operator's job», explains Balzarotti.



Ready for in-line production

SiEnergie consistently employs three technicians in the design and prepress department, while four operators manage the two Zünds G3, the HP Scitex 17000 and the Elitron Kombo TAV. A lean team, sufficient to handle the pallets of neutral, printed and cut cardboard, which, however, is destined for further rationalization.

«If we only had HP 17000 and Kombo TAV, two operators would be enough. If the units were connected by roller conveyors, we would go with one», says Schioppa. «It is not utopia, but a project that we are working on together with Elitron».

Giuliano Balzarotti
Co-owner of SiEnergie

"We had to prevent the cut became a bottleneck, or worse, a huge load of manual activities with costs out of control."

To support the growth of orders and volumes, and the expansion of the business abroad, SiEnergie plans to build a plant based on lean production, investing in new printing and finishing systems. The company aims to completely replace analogue die-cutting with digital systems and is considering the purchase of a second Kombo TAV.

On the qualitative side, the Elitron platform has already tried to match traditional creasing.

«We try to be flexible in both short runs and higher volumes», concludes Gianni Schioppa. «If some customers commission up to 20 thousand counter displays from us, it is due to our ability to create them on-demand, even customized and in multiple languages».

HP Scitex 17000 and Kombo TAV currently work around 10 hours a day, and they are also used for night processing without operator supervision, increasing the overall productivity and profitability of SiEnergie processes.

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