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FLEXO + Foil Stamping = Success Hot or Cold, Converters Deliver Brilliance & Value

Folding carton converters are increasingly being asked to provide more value-based solutions that help grab the consumer's attention. Adding hot- or cold-foil to an in-line flexo folding carton press offers converters significant flexibility to meet new challenges as well as improve their bottom-line

Today's retail marketplace is brutally competitive and highly saturated. The package is often a brand's best and only weapon in a saturated marketplace. Consumer Product Companies (CPCs) are looking for folding cartons that offer bold graphics and special effects that grab consumers' attention at the point of sale. CPCs are also requiring converters to incorporate many new features into the stodgy old box. Features such as:

- Multiple security devices.
- Innovative designs.
- Vivid colors (more shelf "POP").
- Specialty coatings.

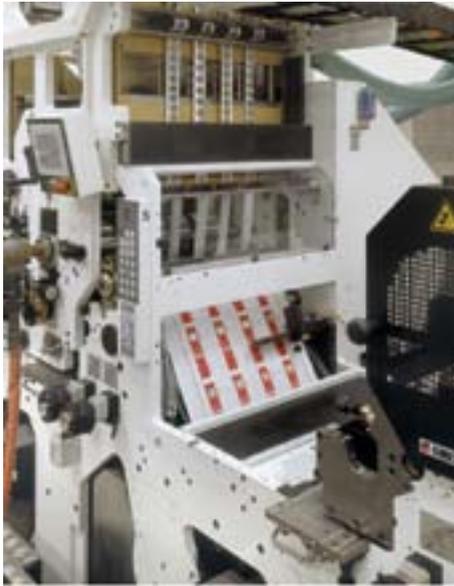
Add to this CPCs' requirements for shorter runs, just-in-time (JIT) deliveries, faster speed to market and cost-effective product differentiation, and you'll likely find yourself asking, "How is a traditional folding carton converter able to meet all of these demands?"

The latest technologies in the in-line flexo production arena provide converters unprecedented flexibility and profitability, as well as outstanding print quality. By combining the benefits of new, gearless flexo presses, with digital prepress and hot- and cold-foil in-line cassettes, the folding carton converter can offer a wide range of distinctive, cost-effective solutions.

BRILLIANT DESIGN PROSPECTS

For decades, the hot-stamping process has been used to provide packaging with an upscale, classic look, incorporating glossy metallic lettering and designs. Today, cold-foil transfer is gaining ground, not as a competitive process, but as a highly versatile supplement.

In the early days of cold foiling, cationic ultraviolet (UV) adhesives were used in the "wet" cold-foil process. Even earlier, water- and solvent-based adhesives were employed. UV dryers were required to activate the adhesive and make it tacky before nipping the foil. This proved inconsistent and challenging, especially when it came to achieving sharp edges. With the introduction of free-radical UV adhesives, which activate the adhesive through the foil after it has been nipped, the "dry" cold-foil process started



◀ A hot foil unit on a carton press.

to provide much better quality and consistency. It became widely accepted.

Using cold-transfer foil in-line in a flexo press has significantly broadened the scope of design potential. The flexibility of today's gearless press combined with slide-in cold-foil cassettes (moveable to any station on the press), means that high-gloss metallic patterns may

be created that otherwise would not be possible. Fine-line, filigree cutouts—even on a large transfer area, minute details and even halftone pictures are now viable options. Foil can be used without restrictions on large or full surfaces.

According to Sam McElree, graphics product manager, the Kurz Group, an additional wealth of design possibilities results from the ease with which cold foil may be overprinted. It may be overprinted using four-color printing, allowing for an extremely

effective combination of colors and metallic brilliance. A multitude of effects may be realized, since the overprinted color and the cold foil itself may be screened. By selecting opaque or transparent colors in conjunction with different screening values of the colors, as well as the cold foil, highly variable metallic effects and gloss levels are achievable.

Using cold foil with holographic patterns has proven to be a real attention grabber, McElree noted. Here again, overprinting offers a virtually endless range of options. Finally, overprinting silver foil with transparent colors provides almost any shade or color desired.

With the precision afforded by a gearless flexo press, cold foil can be transferred in register to the printed colors, so there is no issue concerning registration tolerances. This precise registration increases design scope. For example, it allows exact continuation of a printed motif using cold foil. The random change between foil and color printing allows the creation of attractive effects.

FLEXIBILITY IN PRODUCTION

Where metallized or holographic board is frequently used, cold foil offers additional benefits. Recent innovations in applying cold foil in-line on a gearless flexo press are entering the market as an alternative to stocking many different types of metallized and holographic substrates.

A converter can create the metallized or holographic substrate in-line on a gearless flexo press. This technology utilizes a tacky

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Examples of hot foil stamping jobs.



Examples of cold foil stamping jobs.



adhesive that is applied in a special station after the in-feed. The foil is then nipped to the adhesive and the carrier is stripped away leaving a foil covering the board where required. Further, due to the advanced registration capabilities of a gearless press, the shim (or "gap") in holographic film can be skipped to create continuous metallized or holographic board, in the press.

NO REPLACING HOT FOIL

In hot stamping, McElree explained, the foil is transferred to the surface by a combination of heat and pressure. It is this very process that provides the unique advantage of the technique.

The pressure used forms a slight depression in the substrate with a unique sense of touch. The effect of the heat used results in a special bond between the substrate and foil and also associates the hot-stamping process with a one-of-a-kind gloss level. The visual quality of hot stamping remains unequalled and consequently cold foil transfer does not offer a realistic competitive alternative.

Especially when it comes to luxury product packaging, hot stamping is still the first choice! Hot stamping can also provide a tactile impression for added sensory perception. Structural and relief stamping are pleasing to the eye and they also pos-

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sess tactile characteristics. While visual differentiation is widely recognized, tactile features still offer potential for product positioning. The hot-stamping process lends itself perfectly to this opportunity.

Recent technological innovations in applying hot foil, in-line, on a gearless flexo press, have greatly reduced the costs of hot-foil application. Some hot foil cassettes can slide into any station on the press and deposit up to six independent streams of hot foil across the web, with foil-saving capabilities for greatly reduced waste and with outstanding registration accuracy. Since the foil in-feed is programmed on the base length of the image to be printed, not on the base of the pitch between the two images, this facilitates remarkable savings on the cost of the raw material, while providing application capabilities that ensure precise registration at high production speeds. The equipment can also be used to apply holograms in register to the printed web.

Substantial savings are accrued since the streams of foil are indexed at exactly the required amount for the application, rather than matching the total linear feet of foil to the substrate. Further savings can be achieved since cartons can be nested across the web and the hot foil or holograms can be applied in register where required across the web.

This technology provides converters with a hot-foil solution for today's short-run, JIT world that the multistep, sheetfed hot-foil process cannot compete with cost effectively.

HOT OR COLD? BOTH!

Cold foil is opening doors to applications that otherwise may not have considered foil as a cost-effective option. Using new technology to apply hot foil in-line on a flexo press makes this process more competitive. Both processes have their advantages and disadvantages. Combining the latest technologies in hot/cold foil and gearless flexo presses, provides the flexibility and profitability that folding carton converters need to succeed in today's challenging marketplace.

The question is: "Which is the best process to use to deliver the brilliance and value your customer wants, with the highest profitability that you can achieve?" ■

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