Thermal Transfer Overprinting

Meeting the needs of food pouch coding with TTO

In the past 3 years, the global pouch packaging industry has grown by over 16% with predictions showing growth of up to 40% by 2017. With this growth in pouch packaging comes new coding opportunities for using TTO to enhance your brand and to streamline and reduce your film inventory.

The Challenge:

This recent trend of converting from conventional packaging to flexible pouches brings many benefits to the producer in terms of lower distribution and logistics costs, and improved shelf appeal. However, the conversion may also require additional capital investment including new coding solutions. Many brand managers find the print quality from traditional analog and low-resolution digital coders detracts from the aesthetics of the pouch design. Additionally, the packaging team must identify coding solutions that compensate for the inherent variation in thickness of the unfilled pouch due to the zippers, gussets, and other fitments that can be up to 4.5mm thick, which is unique compared to conventional packaging designs. With the array of coding options available, identifying a coding solution that complements the high quality of the new packaging designs can be a daunting task.

Videojet advantage:

Videojet offers a range of thermal transfer overprinting (TTO) products with features specifically designed to address the challenges outlined above. A simple software setting can retract the thermal transfer printhead up to 4.5mm, ensuring that virtually all resealable pouch types can be coded with ease. Applications running on rotary machines can benefit from a bespoke traversing bracket that automatically positions the TTO printer depending on whether or not the rotary machine is stationary or indexing. When stationary the printer is moved close to the pouch to print on the film; and when indexing the printer moves away from the pouch to avoid contact during rotation. Additionally, Videojet ensures our customers receive the most comprehensive technical and integration support by providing the industry's largest global network of highly trained and experienced field technicians and integration specialists. These specialists are always ready to help, regardless of where in the world that support is needed.

Pouch coding with TTO

Thermal transfer overprinting is ideal for coding onto pouches, as it is designed to print high quality codes on flat, thin, flexible films.

The appeal of flexible pouches for food products

Flexible pouches provide a lightweight, versatile and durable packaging solution that can help reduce waste and provide savings. For example, packing food products in zipper pouches can remove the need for space-consuming bulky cartons or tubs. This allows the product to take up less space. Flexible pouches can also help reduce transportation and storage costs.

In addition to the operational benefits, manufacturers moving to pouches can also gain greater appeal at the point of purchase with more attractive options for their packaging.

Helping to preserve freshness and deliver value to consumers with the opportunity to open and then reseal their product, many pouch packages offer different closures. These range from zipper tops to recloseable screw tops or adhesive tape closures.

High quality packaging demands high quality codes

Pouch packaging can improve shelf presence and provide increased branding opportunities with attractively coloured, high quality, preprinted visuals. Brand marketing teams aim to maximise packaging artwork for marketing and promotional purposes and therefore have interest in high quality codes that won't detract from the visual design of the packaging.

Providing exceptional print quality, thermal transfer overprinters deliver 300 dpi print at 12 dots/mm. This resolution provides for high quality text and graphics that are sure to not detract from visual packaging design. They can also print very fine text for nutritional and ingredients statements. And with a choice of 12 different coloured ribbons, producers are sure to find a match for their visual packaging design.
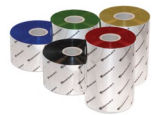
Legislation in many countries requires that allergen information be highlighted on packaging to assist customers with making informed buying decisions. For example, the pending food labelling directive EU1169/2011, will require all allergens to be highlighted in bold within the ingredient list to make it easier for consumers to find this information. Both flexible and digital, a TTO system can help producers meet these global requirements with a print on demand solution. And by customising messaging with each run, producers also have the opportunity to reduce the number of preprinted packaging film SKU's held in inventory.

Pouch coding with TTO

TTO is an ideal coding solution for pouch applications as it is designed to print high quality codes on flat, thin, flexible films. Printing on roll stock before pouches are formed allows the printed film to be formed into varying pouch types such as zipper, 4-sided, gusseted, stand-up, etc.

Being able to use zippers, fitments, gussets and package seals are benefits of using pouches. However, all present unique challenges for TTO in the packaging line, especially if they are already part of the package before they are printed. Videojet has custom brackets available for pouching machines, including bespoke traversing systems for rotary pouch fillers to allow printing prior to filling.

By using a simple software setting, users can benefit from a printhead that retracts between 0.5mm and 4.5mm, helping ensure that virtually all resealable pouch types can be coded without any interference to their seal.

Because pouches can help to prolong the shelf life of perishable goods, many pouch machines are in a washdown environment. Videojet's IP DataFlex offers an IP65-rated printer body. This construction allows quick transition to washdown with only a few seconds required for a cassette change. And no special enclosures are required.

Zips — Printhead retracts to avoid zips — Pouch film flow
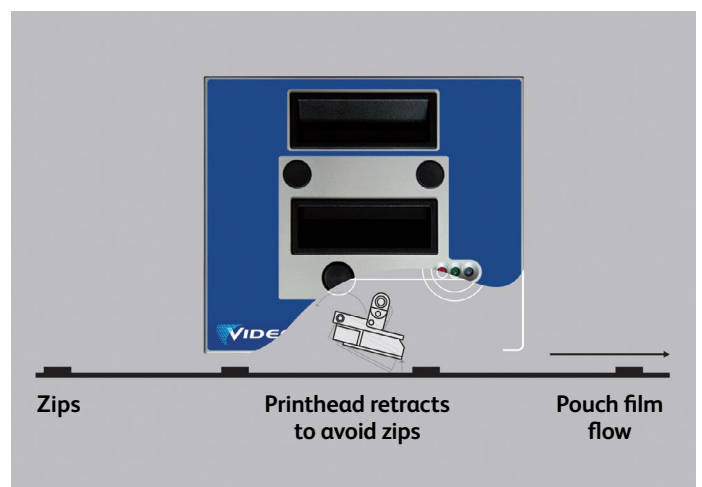
A simple software setting can retract the thermal transfer printhead up to 4.5mm

Videojet's DataFlex® thermal transfer overprinters are engineered to maximise production line uptime and support waste reduction goals through a number of innovative design features:

1. The DataFlex line features a patented and proven clutchless ribbon drive which is totally software controlled. This unique design eliminates the ribbon control devices required by other TTO products — devices that can contribute to unscheduled production downtime associated with ribbon breaks or ribbon wrinkling.

2. Total automated ribbon control from beginning to the end of the ribbon roll results in consistent print quality and minimises ribbon waste between prints to 0.5mm.

3. A 1200 metre ribbon length produces more coded pouches per roll of ribbon and subsequently reduces downtime required for replenishment. .

4. As operator error is usually the most common cause of coding errors, the DataFlex line makes it fast and simple to get codes right, and practically impossible to get them wrong. Built-in Code Assurance features ensure the right code is going onto the right product time after time, helping to eliminate the need for rework or scrapped product.

5. The intuitive, easy-to-use touch screen interface has intelligent data rules to help operators select the correct code. To further aid the reduction of operator error, a USB scanner option is available to provide fast, easy and foolproof job selection. These means less chance of error and more products coded correctly.

6. The DataFlex thermal transfer overprinters also have multiple power saving options that can be configured to match individual production needs.
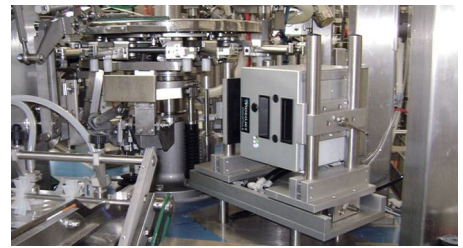
The Bottom Line

Implementing high quality coding on your pouch filling lines requires thoughtful planning. Videojet stands ready to help you think through the best solution for your production. We work closely with the major OEMs to help ensure your printers will integrate seamlessly into your packaging lines and that your coding process is perfectly suited to meet your business needs.

Ask your Videojet representative for more guidance including a production line audit or print sample testing on your substrate.

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