



Application note



Thermal Transfer Overprinting Addressing new confectionery packaging trends with TTO for pouches



The global pouch packaging industry has a compound annual growth rate of 4.6% and will reach \$19 billion by 2021. The confectionery sector has played an important role in this increasing trend having seen a compound annual growth rate (CAGR) of 3.4% itself. In particular, mass-market candies are shifting towards resealable flexible packaging with pouches leading the way.

The Challenge:

This recent trend to convert from conventional packaging to flexible pouches brings many benefits to the producer in terms of lower distribution and logistics costs and better shelf appeal, but 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 fits 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, who are always ready to help; no matter 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

As more and more confectionery companies look for ways to reduce waste, flexible pouches provide a lightweight, versatile and durable packaging solution. For example, packing candy in zipper pouches, removes the need for bulky cartons or tubs. Flexible pouches also help reduce transportation and storage costs, providing more compact packing options to allow more product to be packed in the same amount of space.

In addition to the operational benefits, pouch producers also gain retail advantage by providing consumers with more attractive packaging that delivers great shelf appeal.

Many practical resealable options are available including:

- Zippers
- Re-closable screw tops
- Re-usable tapes

These new sealing options help preserve product freshness and ensure consumers waste fewer products and get more value for their money.



High quality packaging demands high quality codes

Pouches improve shelf presence and provide increased branding opportunities with attractively colored, high quality artwork. Brand marketing teams aim to maximise the packaging artwork for marketing and promotional purposes and therefore want to avoid unattractive or poor quality codes that could detract from the design.

TTO printers provide 300 dpi (12 dots/mm) print quality, making them a great option for printing high-quality text or graphics that don't detract from the pouch design. They can also print very fine text for nutritional and ingredients statements. With a choice of 12 different colored ribbons, producers can find a suitable match for their packaging design.



An additional coding requirement for many confectionery producers is the need to print ingredient information. Legislation in many countries requires that specific ingredients are highlighted on the pack to assist consumers with allergies to make educated buying decisions. For example, food labeling directive EU1169/2011, requires all allergens to be highlighted in bold within the ingredients list to make it easier for consumers to find this information. TTO can respond to this need, helping producers to meet the minimum labeling requirements of the food industry globally, as well as reducing the number of pre-printed packaging film SKU's held in stock.

Whether it's to produce a code that looks like part of the artwork, or to print large amounts of variable data, Videojet TTO printers can support the need.



Pouch coding with TTO

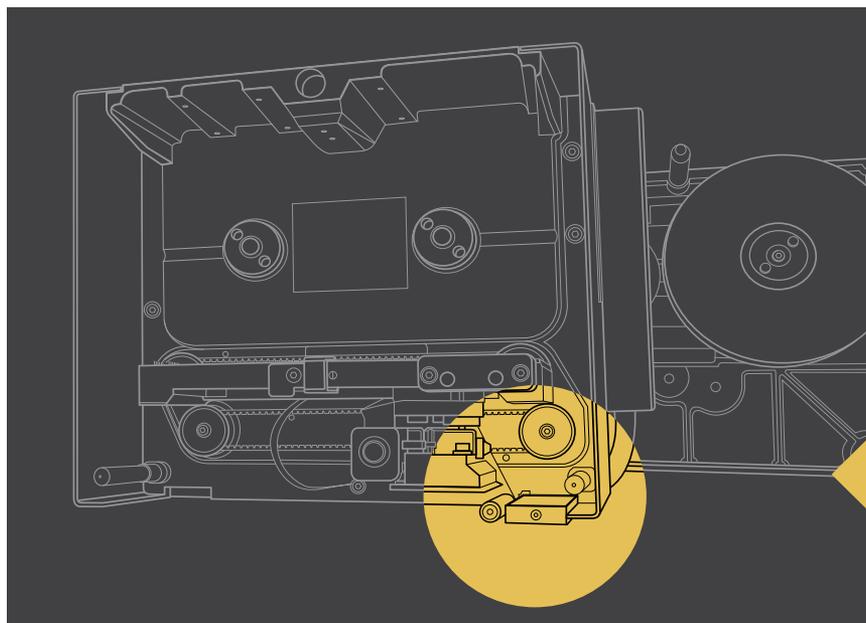
Thermal transfer overprinting is the ideal coding solution for pouch applications as it is designed to print high quality codes on flat, thin, flexible films. Printing on roll stock before pouches are formed allows the printed film to be formed into different pouch types such as zipper, 4-sided, gusseted,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

Being able to use zippers, fitments, gussets and package seals are some of the benefits of using pouches. However, all present unique challenges for thermal transfer printing 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 system for rotary pouch fillers, to allow printing before pouches are filled.

Because pouches can help to prolong the shelf life of perishable goods, many pouch machines are in a washdown environment. The Videojet IP DataFlex Plus offers an IP65 rated printer body that can go from printing to washdown with a simple cassette change in just a few seconds with no special enclosures required.

iAssure™ Integrated Code Quality Assurance technology comes as standard in the Videojet 6530 and 6330 TTO printers, and conducts printing spot checks in real time, catching certain commonly occurring print defects.*

*iAssure™ technology complements existing quality control processes. It is not designed to detect all printing errors and does not read bar codes.



Code Quality Assurance

Thermal Transfer coding operations can produce defects like the examples below. With new Videojet iAssure™ technology, common print defects like these are automatically identified.



Ribbon crease



Worn print surface



Overprint

Videojet 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 related to 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 less downtime for replenishment.
4. As operator error is 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 pouch 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 fool proof job selection. These features all add up to less chance of error and more correct coded product.
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 confectionery pouch filling line requires thoughtful planning. Videojet stands ready to help you think through the best solution for your production line. 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, a production line audit or sample testing on your substrate.

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