



Application note



Snack foods

TTO design considerations for printing on stand-up pouches



In 2014, more than 165 billion stand-up pouch were produced worldwide. Manufacturers and retailers alike are attracted to the many advantages stand-up pouches offer. And the use of this flexible packaging is growing at an expected rate of 7% globally, which means we are likely to see 222 billion pouches consumed by 2018.¹

The challenge:

Many snack foods manufacturers turn to stand-up flexible pouches for flexibility, convenience and prominent shelf presence. In the snack food industry, thermal transfer overprinters (TTO) are a natural choice to code pouches, due to their high resolution print and flexibility of integration. However, the design of some other current TTO products can pose challenges in ribbon changes and production setup. Choosing the right printer design and ribbon can help reduce operation frustration and unplanned downtime, helping maintenance managers meet their OEE deliverables.

Videojet advantage:

Snack food companies around the world rely on innovative thermal transfer overprinting solutions from Videojet. The Videojet DataFlex® line features a patented and proven clutchless ribbon drive – completely software controlled to minimise human error. Without the need for ribbon control devices required by some other TTO products, the Videojet DataFlex printer virtually eliminates unscheduled downtime related to ribbon breaks or wrinkling. In addition, a simple cassette design makes ribbon replenishment quick, with minimal impact to production.

Choosing the right ribbons also makes a big difference. Videojet Ultra Grade ribbon, available in up to 1200 metre lengths, allows for extended run times with fewer ribbon changes, helping to code more products per ribbon in both high and low temperature environments. Videojet also offers comprehensive technical and integration support by the industry's largest global network of highly trained and experienced personnel.

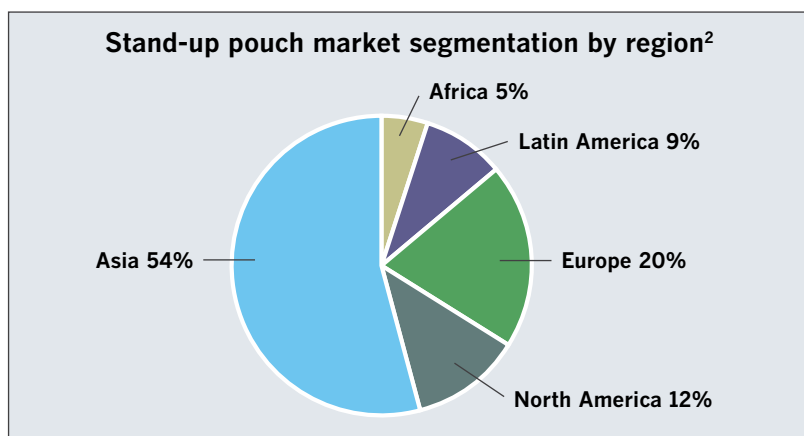
¹ <http://www.plasticsnews.com/article/20150721/NEWS/150729972/report-stand-up-pouches-expected-to-continue-growth-trend>

Pouch popularity and coding considerations



The rise of the stand-up pouch

Over the last few years, the adoption of flexible packaging has increased, particularly in the snack food industry. Thanks to its flexibility, convenience, and increased shelf-presence, the stand-up pouch has stood out from the crowd of flexible packaging. Overall consumption of stand-up pouches is expected to reach 222 billion units by 2018, with Asia leading the way.²



Stand-up pouches provide an appealing packaging format that draws the attention of consumers at the point-of-sale. Rather than being flat, the stand-up pouch's vertical presence also provides an attractive canvas for a marketer's branding effort. The shelf presence that comes with stand-up pouches is an improvement over the pillow package because the consumer is face-to-face with the package's graphics and branding efforts.

The round (hanging) hole option is beneficial to retailers such as drug and convenience stores that often hang many of their products, rather than displaying them on shelves.

Stand-up pouches also offer tremendous consumer convenience. Pouches equipped with features such as zippers and sliders allow for secure closure of unused portions. The closure benefit is essential to the increasing numbers of 'on-the-go' consumers who are looking for convenient food options to match their busy schedules. These consumers can also be more health conscious. Stand-up pouches that incorporate windows offer consumers the ability to view the product within the bag to check for quality and freshness.

As more manufacturers expand their customer base past their geographic region, extending shelf-life of the product becomes more important. Stand-up pouches can be made using multi-layered, protective laminated film that helps the product retain freshness longer, reducing expired product waste.

The box pouch, also called the inserted side-gusset pouch, is a trending packaging type within the stand-up pouch market. This form of pouch is more complicated to use during a filling process, but it offers more advantages. It offers five printable surfaces while using 12% less film than the standard stand-up pouch.³ More printable surface areas are available for brand messages. Also, in the case of many global suppliers of snack food, regulatory information can be presented in multiple languages, saving the company the need to stock different packaging material based on language.

² <http://www.plasticsnews.com/article/20150721/NEWS/150729972/report-stand-up-pouches-expected-to-continue-growth-trend>

³ "The Latest Packaging Innovation and Trends in Pouches", *Flexible Packaging*, June 1, 2015.



Selecting a coding solution for pouches

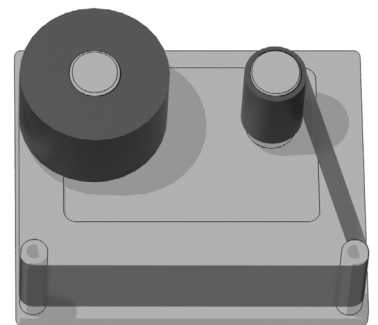
Thermal Transfer Overprinting (TTO) is the ideal coding solution for stand-up pouch applications, as it is designed to print high quality codes on flat, thin, flexible films. Printing on roll stock before the pouches are formed, or even before they are filled, provides the pouch with a high quality code that satisfies retailer and regulatory requirements. Different coloured ribbons provide marketers with multiple colour schemes when designing their pouch, while still delivering the excellent code contrast needed for information such as allergen warnings and expiration dates.

Given the popularity of TTO printers, there are a number of them to choose from. The Videojet DataFlex® line provides strong advantages over a number of its competitors.

Tension control of the ribbon is essential in helping to ensure the printhead prints on a smooth surface to provide high quality code. In the Videojet DataFlex printer, this tension is completely software controlled. Other models use wear parts such as tension pins to keep the ribbon stretched properly before the printhead makes contact. These wear parts add another point of potential failure within the printer, increasing maintenance cost and the possibility of unplanned downtime.

The Videojet DataFlex printer also combines simple design with strong uptime performance. The illustration on the right hand side depicts the simple ribbon path offered by the DataFlex TTO. Compared to other systems with time-consuming ribbon change procedures and complicated ribbon paths, the DataFlex makes it easier for operators to change out ribbon during production, thus reducing downtime.

The Videojet DataFlex ribbon cassette features an indented handle, which allows the cassette to lay flush against any surface. This makes it easier for operators to change ribbon during production. Competitive products may have a handle that causes the cassette to tilt or wobble when set down in order to change the ribbon. This type of setup makes it difficult for operators to conduct ribbon changes and can cause unnecessary production time losses.



Simple ribbon path in the Videojet DataFlex printer



Side view of the Videojet DataFlex ribbon cassette

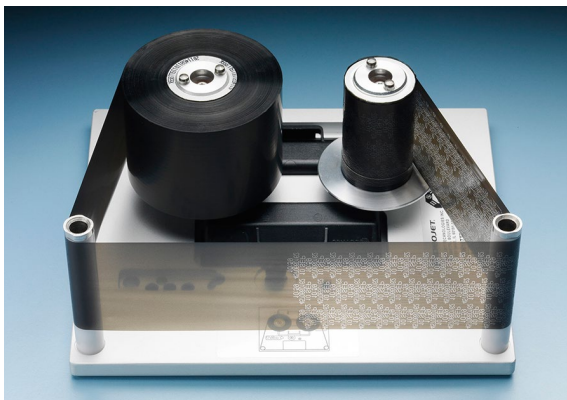


On the production line, stand-up pouches are filled at very high rates. This means every minute of unplanned downtime costs manufacturers money. Therefore, ease of use for operators is a critical feature when managers decide which TTO printer to select for their production line.

Videojet DataFlex®

The Videojet DataFlex TTO is engineered to maximise production line uptime through a number of innovative design features.

- A patented and proven clutchless ribbon drive is completely software controlled. This unique design eliminates ribbon control devices required by other TTO printers that can contribute to unplanned downtime related to ribbon breaks or ribbon wrinkling.
- Total automated ribbon control throughout the entire ribbon length results in consistent print quality and minimised ribbon waste between prints to 0.5mm
- 1200 metre ribbon length produces more coded stand-up pouches per roll, resulting in less downtime for replenishment
- Built-in Code Assurance features help ensure that the right code is put on the pouch time and time again, reducing the need for rework or waste
- An intuitive touch screen has smart 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.
- For added peace of mind, Videojet provides comprehensive technical and integration support by the industry's largest global network of highly trained and experienced field technicians and integrations specialists



The bottom line

There are a number of TTO printers on the market. Videojet DataFlex thermal transfer overprinters are designed for worry-free integration and operation to help ensure the optimal performance of your entire packaging line.

Let Videojet help you select the right printing solution to meet your production objectives and product performance needs.

Call **0800 500 3023**
Email **uksales@videojet.com**
or visit **www.videojet.co.uk**

Videojet Technologies Ltd.
4 & 5 Ermine Centre, Lancaster Way, Huntingdon,
Cambridgeshire PE29 6XX / UK

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