# Hidden Costs of Multi-Lane Coding

When evaluating multi-lane printing and coding technology for your unique form fill and seal machine requirements, it is important to have full transparency into the total cost of ownership. Like any marking and coding solution, from laser to CIJ and labeling to LCIJ, multi-lane coding solutions have hidden costs that can add up in a significant way over the life of the machine.

When comparing systems – it is helpful for a manufacturer to look at the following hidden costs that will impact their total cost of ownership.

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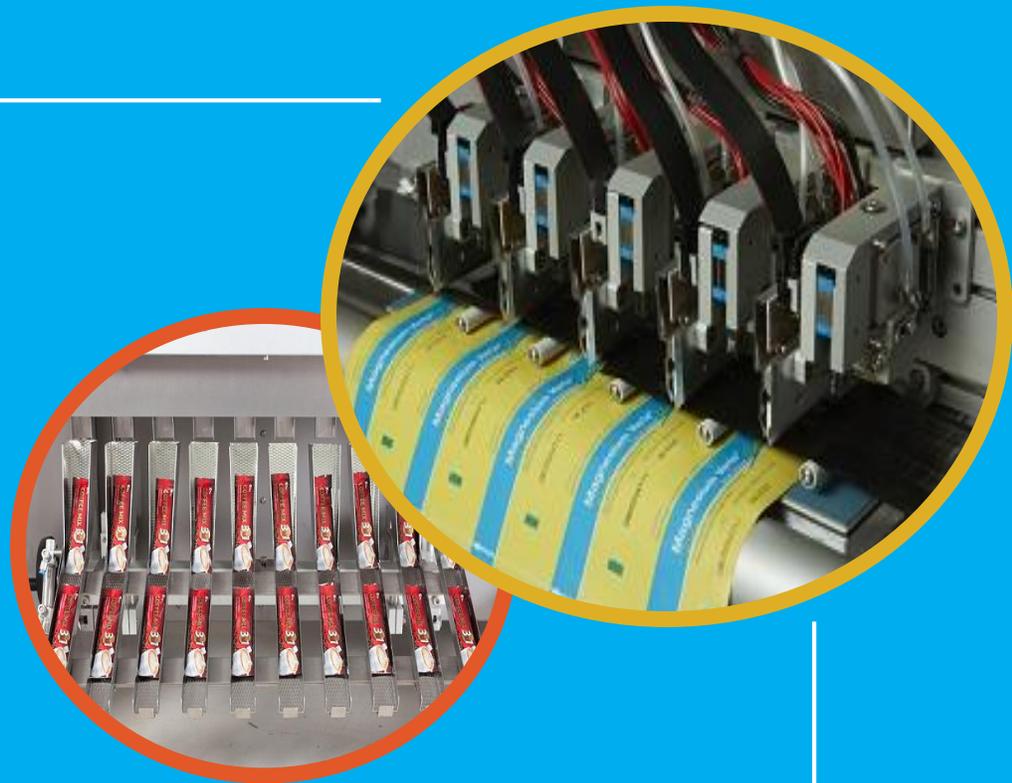
1. Unplanned downtime caused by printhead replacement

In traversing CIJ and thermal transfer overprinter (TTO) technologies, a single printhead is used to print across all lanes of product, meaning if the printhead fails the entire production line is down. Additionally, the strenuous wear of the single printhead will lead to a significantly shorter lifespan of the print engine, speed and overall throughput. To achieve higher throughputs, multiple coders may be added, however you are then trading off for a higher initial investment cost and more time spent updating messages to adjust print settings.

As an alternative to traversing CIJ and TTO systems, look for multi-lane printing solutions that utilize multiple printheads to achieve multiple lanes of print simultaneously. Printhead life is extended due to only printing on one lane versus multiple lanes on a traversing TTO which also greatly limits your throughput. In industry leading options, a printhead can be changed in less than five minutes.

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2. Consumables

The consumables found in technologies used to achieve multi-lane coding contribute to your total cost of ownership in a major way. Monitoring and replacing consumables in multiple machines runs the risk of the marking agent (ink or ribbon) running out at different times. This results in products with missing prints or wasted ink or ribbon to avoid running out at separate times. Traversing technology, on the other hand, incurs high costs to replace frequent wear and tear on moving parts like the printheads themselves.

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Compared to traversing single CIJ printers, ribbon consumables cause far less mess than inks and solvents and do not require special chemical training. To achieve multiple lanes, you will often see multiple inkjet heads or TTO machines, which means consumables need to be replaced across each single system which takes a lot of time and is a lot to manage. Avoid these pain points with multi-lane printing technologies where a single roll of ribbon is used for all the print heads. Look for options with ribbon saving mechanisms that ensure minimum gaps between prints which in industry-leading applications can result in up to a 50% reduction in ribbon waste.

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3. Preventative maintenance

The reality of traversing technologies is that additional training and maintenance will be required for upkeep. In traversing CIJ, trained personnel are required to handle chemicals and solvents. As multiple coders are added in an effort to increase your throughput, the complexity of integrating into your FFS application increases. Traversing TTO printers, which don't require ink, are easily cleaned however they cannot be easily serviced when integrated with a form fill and seal machine.

Leading multi-lane printing options do not require expert training and can have their main servicing done from the front of the unit. Opt for a printer that is easy to service on a form fill and seal application and that doesn't require additional training to save time and money investment in the long run.

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4. Product messaging changeovers

In form fill and seal applications, multiple coders are often needed to meet speed and width requirements. Multiple coders mean multiple controllers required to update messages and adjust print settings. This results in higher initial investment costs and more time spent updating messages. Serialization is also difficult to coordinate across separate machines.

In a multi-lane printing application, you don't have to compromise on consumable expenses or speed. Look for a technology that can print dynamic or static info including graphics, alphanumeric and barcodes all controlled by a single controller head. The ability to run all the print heads from a single controller generates significant cost savings and reduces manpower investment by as much as 80%.

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These are just four considerations to keep in mind when evaluating your multi-lane coding solutions. There are plenty of other marking and coding alternatives available and as a provider of CIJ, high-resolution printing, thermal inkjet, thermal transfer overprinters and labeling technologies – we are happy to answer questions or be your go-to resource.

Contact us today to discuss the best options for your operation.

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