Hidden Costs of
End of Line Coding

When evaluating end of line coding technology for your unique production line, it is important to have full transparency into the total cost of ownership. Like any marking and coding solution, from laser to continuous inkjet (CIJ) to thermal transfer, end of line coding solutions – large character inkjet (LCIJ) and labeling – each technology has 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. Consumables

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The consumables found in end of line coding technologies contribute to your total cost of ownership in a major way. For large character ink jet, keep in mind the costs associated with ink and printheads. In typical corrugated carton printing environments, the tiny nozzles of ink jet print engines can become blocked. This occurs on average every 1.5 years and the engine must be thrown away and replaced.

For case labeling technologies, factor in the costs for labels – the larger the label, the higher your cost per mark. Specifically, in pneumatic labeling systems, you'll also need to factor in the cost of air, energy consumption and maintenance costs related to pneumatic systems. Unpredictable, unfiltered air supplies found in pneumatic label applicators disrupt the efficiency and performance of air supported tools and machinery.

1. Consumables, cont.

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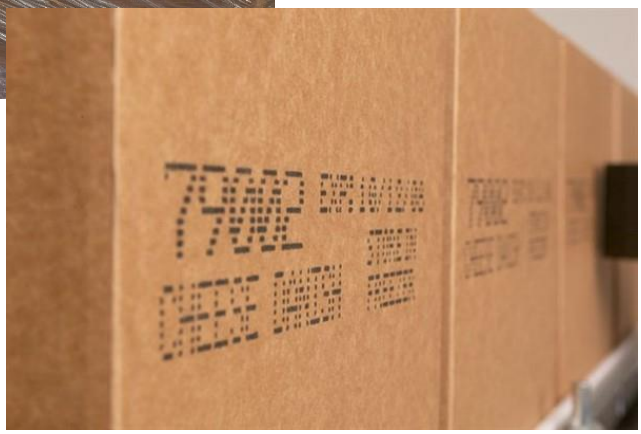
To cut down on your consumable expenses, LCIJ printers that offer repairable printheads instead of throwaway will help lower your cost of ownership in the long run. Industry leading technology can last as long as 10 years or 300 billion firings. Or, if your line utilizes case labeling, look for all-electric labeler options which cost up to 50 - 90% less to run when compared to pneumatically driven systems.



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2. Inconsistent print or labeling quality, or print degradation

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When it comes to case coding, if cartons have been printed incorrectly or weren't fully marked due to one of your printheads running out of ink, you're looking at one of two scenarios. Either your line operators invest time in reworking those mis-marked cartons by running the same cartons down the line a second time, or the corrugate is scrapped completely. The same goes for when labels don't contact the carton properly. If the case is not identified appropriately, it requires rework and wastes label consumables. In all of these scenarios, it is costing you time, money and throughput.

Look for high-resolution LCIJ systems with low ink LED indicators at the printhead level to alert line operators before fluids run out. In labeling solutions, all-electric applications will once again ensure repeatable and reliable operation – no longer putting your production at the mercy of questionable consistency of plant air lines. Prioritize selecting a system with smart sensor tamp pad options that can alert operators when products are missed or labels have failed multiple attempts to apply to the substrate.

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3. Product changeovers

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Shorter runs for customized products at the request of retailers results in experiencing product changeovers up to 3x or more on each line in a single shift. Accommodating this demand means spending more time changing over the line settings or creating a new message than running the product. This has led to the trend of easy changeovers being valued more than high speed lines in order to keep downtime to a minimum.

For both LCIJ and label applicators, place value in options that emphasize ease of use driven by simple, user-friendly touchscreen displays that utilize warning symbols and dialogue boxes to alert users of errors. These features will cut back on the need for skilled labor to diagnose problems. Selecting printers with storage for multiple messages and job settings will also reduce user error when product messaging needs to be changed mid-production.

4. Preventative maintenance

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Due to corrugated dust, glue and airborne contaminants often found in end of line production environments, the small nozzles of ink jet printers can often get blocked, requiring purging and cleaning of the ink jet faceplate. This can occur one or more times per day depending on the quality of corrugate and the printing environment. In some ink jet systems, purging and cleaning requires 5 – 10 minutes of manual intervention and downtime.

Similarly, pneumatic labeling systems require additional maintenance expenses for adjustments and monitoring. Pneumatic systems have vacuums that require filters to keep plant air clean and dry. When clogged, the filters must be cleaned then readjusted to avoid the failure of parts relying on consistent air flow to function. Another hazard typical of plant air is that the labeler, if utilizing a tamp mechanism, will strike the product as hard as the air is set to. Over time this causes wear and tear, affecting precision and production line speeds.

4. Preventative maintenance, cont.

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To limit the amount of preventative maintenance on your line and save capital in the long term, evaluate LCIJ options with a printhead auto-cleaning system. Best yet is an auto-cleaning feature that can be set to customer defined intervals so that operator shutdown procedures are greatly reduced. All-electric case labelers eliminate downtime related to routine adjustments of key air supported tools and machinery crucial to efficiency and precision, limiting routine adjustments and the possibility of actuator failure due to inconsistent air. Opting for a system that utilizes servo motors enables gentle contact between the labelers and the product when applying labels, guarding against wear and tear which saves money and time spent adjusting the machines over time.

These are just four considerations to keep in mind when evaluating your end of line 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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