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Automatic Pressure Sensitive Labeling's Flexibility Lowers Operating Costs and Increases Productivity

William Claproth
Director of Marketing Services
Label-Aire, Inc.



Pressure-sensitive cabinet-based labeling system with stainless steel construction configured for wrap label application



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Although 46 percent of North American Consumer Packaged Goods (CPG) companies are using pressure sensitive labels, many of them are applying the labels inefficiently and missing the opportunity to lower their operating costs and increase productivity.

Because of inherent flexibility, pressure sensitive labels continue to be the decoration of choice by companies over sleeve, in mold or glue labels. However, when labels are applied manually or semi-automatically instead of with an automatic labeling system, the potential to lower operating costs and increase productivity is lost. Automatic pressure sensitive labeling systems provide CPG companies with the flexibility to increase throughput, streamline product changeovers, meet application-specific challenges, and customize labeling solutions.

Increase throughput

Automatic pressure sensitive labeling's throughput capacity far exceeds hand or semi-automatic labeling's capabilities. However, companies are frequently unaware of the limitations of their current labeling methods until market demand for products escalates beyond their production rate. Rather than risk losing sales, companies incur the expense of augmenting their labor force.



Open frame labeling system with spacer wheel and chain aligners configured to label both round- and oblong containers



Automatic labeling systems afford companies the ability to implement a flexible system that can adjust to demand levels and thus meet changing market needs efficiently without increasing manpower requirements. In addition, automatic labeling systems can be designed in a product specific configuration as an inexpensive alternative for high speed/high volume requirements. In both cases, automatic systems provide consistent product labeling, ensuring that products are aesthetically pleasing and convey an image of high quality.

Throughput is increased when automatic labeling systems are designed with a zero down time configuration. The system will run with virtually "zero down time" because if a labeling head runs out of labels, a back-up or secondary applicator will automatically activate and continue applying labels while the operator reloads the original applicator with a new roll of labels. Once the secondary unit runs out of labels, the system will automatically activate the first applicator. Zero down time unit configurations can be both wrap (a single head with a single back up applicator) and front/back (single front- and back-applicators with respective back up applicators).



Open frame labeling system outfitted with a three-roller capture device for orientation labeling

There are a variety of labeling system accessories that provide customers with splicing capabilities, which reduce operator intervention and increase labeling efficiency and throughput. A non-stop dual unwinder is a high speed PLC-controlled, continuous feed unit designed to roll up to a production line and improve line efficiency. As the primary label roll reaches a defined low level condition, a low label supply sensor alerts the operator by activating a strobe light and signals the drive motor to feed the rest of the labels into an accumulation bin. The twin clamps on the splicing table can then be used to quickly splice the secondary label roll to the primary roll while the labels in the bin continue to feed the label applicator. In addition, there is an auto-splice dual unwinder, which does exactly what the non-stop dual unwinder does except that it splices automatically.



Streamline changeovers

With available tool-less adjustments for products of different diameters and extensive memory capacity in the label applicator's software, automatic pressure sensitive labeling systems make it easy to changeover from product to product. These streamlined changeovers eliminate the costs, labor requirements, waste, and downtime inherent in hand or semi-automatic labeling.



Auto splice dual unwinder allows non-stop labeling



Labeling system configured for "zero down time" prevents stoppages in labeling throughput

Application-specific challenges

Automatic pressure sensitive labeling equipment can be configured to meet many unique application challenges.

Automatic labeling was the optimal solution for an ale producer who needed to apply front and back labels to a line of specialized ales. The back label consisted of a single rectangular label while the front of the bottle consisted of a top triangular-shaped label and a separate rectangular label beneath it. The challenge was that the label roll stock had both front and back labels on the same roll in alternating positions.



Pressure-sensitive cabinet-based labeling system with stainless steel construction outfitted with a vacuumized wrap belt for single applicator front/back labeling

Reordering new labels to work with a standard front/back labeling system (two applicators, one for the front- and the other applicator for the back labels) would have cost the customer close to six figures. The solution was to implement a labeling system with a single head and a vacuum wrap belt. As the product sensor detects a bottle on the conveyor, properly-spaced front and back labels are dispensed onto the vacuum wrap belt and applied to the spinning bottles accurately to within +/- 1/32" (.8 mm) maintaining proper orientation. The result was accurately labeled bottles at speeds of up to 60 products per minute. Because of the flexibility of the automatic labeling system, the company was able to use its existing label stock without any additional costs and save even more money by purchasing a labeling system that used a single applicator.

Automatic labeling helped a company that needed its custom labels applied to the side of its packages (boxes). The challenge was that the labels were oriented on the roll stock 90 degrees to the right which meant consumers would have to turn their heads 90 degrees to the right to read the copy on the labels. The automatic labeling solution consisted of a tamp that took each label and oriented it 90 degrees so that it appeared upright. The flexibility of the labeling system enabled the company to use existing roll stock preventing the waste of tens of thousands of dollars worth of pre-printed labels.



A regional contract packager required a labeling system to effectively apply clear labels to the front and back of a variety of container shapes at high speeds. Also required was the ability to wrap apply labels to round containers. This was accomplished by outfitting a conveyor with front- and back-label applicators. For wrap label applications, a single applicator in conjunction with a wrap belt easily performs this function.

Customize labeling solutions

After a company assesses its current labeling methods, evaluates its cost/benefit, considers its present and future throughput requirements, it is prepared to work with an experienced automatic labeling system manufacturer to determine what equipment will provide an optimal short and long term solution.



Trunnion labeling system designed to handle non-stable cylindrical products such as vials, ampoules, lip balm, small batteries, etc.

By working with an equipment manufacturer with technical and application expertise, companies can develop a custom, automatic pressure sensitive labeling solution that ensures ease of label application, accommodates a variety of label sizes and designs, enabling them to meet their specific needs. Whether customization requirements are for unique packaging styles, promotional labels, regionalization of products, seasonal specials or security, automated pressure sensitive labeling has the flexibility to meet a company's needs and at the same time lower operating costs and increase productivity.

For More Information Contact:

Label-Aire, Inc.
550 Burning Tree Road, Fullerton, CA 92833 USA
714 449-5155
714 526-0208 (Fax)
info@label-aire.com
www.label-aire.com