



Supported Growth and Reduced Labor for Traditional Medicinals

EXECUTIVE SUMMARY

The global health and wellness economy is a \$3.7 trillion industry and continues to grow at a rapid rate. Consumers are prioritizing the importance of maintaining both their physical and mental well-being. Health-focused consumers are more conscience than ever of the foods and beverages they purchase, gravitating towards products embedded with various health benefits, especially those marketed with a specific functionality.

Traditional Medicinals is the leading seller of wellness tea in the US and the pioneer of the wellness tea category in the US and Canada. The company's co-founder and Chief Visionary Officer, Drake Sadler, continues to embrace his passion for traditional herbal medicines. With the help of their health conscience consumers, Traditional Medicinals has "developed a unique business strategy which reduces poverty and hunger, rebuilds families and restores their self-sufficiency, and provides economic stability in the rural ingenious communities which our herbs come from", states Sadler.

Customer Challenge

Because of the rapid growth in the health and wellness industry, Traditional Medicinals continues to see a 17-18% yearly sales growth. Its well-known brands such as Nighty-Night®, Mother's Milk®, Ginger Aid®, Smooth Move®, and Chamomile with Lavender® are carried by more than 70,000 retailers throughout the United States and Canada. This growth necessitated an automated solution to streamline product throughput in their end-of-line packaging process, which before was a very manual process.

After the filling and packaging of the tea cartons, the product would move to three separate packaging lines where workers manually applied a label to the cartons for each of the eight different SKU's. The cartons were then sealed and stacked onto 8 different pallets of the same product. "We had three individual case packers in place that serviced our three packaging lines," said the Director of Engineering at Traditional Medicinals. "The case packers were old and presented a lot of issues that impacted our throughput. We wanted one automated solution that would support our growth for the next five years."

The Solution

Shuttleworth partnered with ARPAC, a manufacture of end-of-line packaging systems, to engineer a fully-automated system that supported Traditional Medicinals current and expected growth. The system took the filled & packaged tea cartons through the case packing are and then directly to the pallet-build station with virtually no manual intervention.

As the cartons moved through the packaging and filling stations, each package barcode was scanned to identify the flavor, and then sorted into 8 different lanes. The 26-foot long conveyor system was designed to sort, accumulate, and monitor the volume of the different teas flavors in each of the eight lanes. When any one lane filled up to the specified level of cartons, which was determined by a sensor on the conveyor, the cartons in those lanes would be released into the case-packer infeed.

Shuttleworth utilized their Slip-Torque® technology which provided low-line pressure that absorbed irregularities in the production flow. This technology eliminated product jams as well as damage to the tea cartons during this process. "Slip-Torque utilizes individually-powered rotating roller shafts and loose fit rollers that is powered by a continuous chain," says Regional Sales Manager of Shuttleworth. "The size and weight of the cartons determines the driving force. When the carton stops on the conveyor, the rollers beneath the carton also stop". In addition, conveyors with Slip-Torque technology have the ability to modulate the speed of separate sections of the conveyor. As the cartons move down the line, the rollers at the back-end of the conveyor could be moving faster than the ones at the front. Should the accumulation line slow or stop, the Slip-Torque conveyor system would continue to take cartons from the upstream line instead of completely stopping the line.

Once the cartons are sorted and accumulated by tea type, the conveyor system releases six cartons at a time into a case-packer infeed conveyor. The infeed conveyor is split into two lanes so that a case can be packed with two separate SKUs, twelve cartons total. Release of the cartons from the conveyor is controlled by the case-packer, which measures the accumulation in each lane and instructs the release once two of the lanes have reached the desired number of cartons per case packing cycle.



COMPANY BACKGROUND

Traditional Medicinals is an independent company that embraces sustainability, ingredient purity, and social and environmental activism. A Certified B Corporation and California Certified Green Business, we're the leading seller of wellness tea in the U.S. and the pioneer of the wellness tea category in the U.S. and Canada.



SORTING TEA CARTON VARIETIES



Once the cartons are released, a wrap-around case packer developed by ARPAC was used for packaging. The wrap around packer reduced the corrugated material used by 25%, which greatly lowered handling costs. The packer also reduced the warehouse space needed for this process as well as minimizing labor requirements. After packing, the cases were then scanned and discharged from the case packer onto another sortation conveyor designed by Shuttleworth. The conveyor routes the cases into 8 different lanes corresponding to the different product SKUs for pallet building and shipping.



SLIP-TORQUE CONVEYOR

RESULTS

Traditional Medicinals has grown over 50% since the end-of-line system was installed and has been able to support their expected rapid growth. The case packing system is rated at 19 cases per minute and has been able to run consistently near capacity at peak periods. "It is after installation, the support we get, which has been very good", states the Director of Engineering at Traditional Medicinals. "As we expand and experience new challenges, we are very pleased to have partners to help us solve those challenges."



SCANNING TEA PACKAGES

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