

## Lucy & Ethel: Pick-&-Place for the Next Generation



Founded in 1921, Wolfgang Candy of York, PA is one of the oldest family-owned and managed confectionery manufacturers in the United States. From peanut brittle to hollow chocolates, Wolfgang offers one of the most extensive arrays of high-quality chocolates and non-chocolate confections available in the marketplace. The company's picking, placing, inspecting and packaging phases of its operation were primarily a manual operation limiting the company's manufacturing efficiency, speed and consistent delivery of their high quality product. The company was initially using automation only for basic packaging flow wrapping and carton forming equipment- nothing actually handling the product. Manual labor has historically been the option of choice for many regional companies due to the challenge of meeting their customer's preferences and managing the impact to their packaging lines. These constant changes eliminated hard automation as a cost effective option.

The company concluded that a more flexible form of automation was going to be required in order to meet the dynamic growth expectations. As with many manufacturers automation was not considered an option due to the multitude of tray sizes and configurations the company produced. Most automation solutions simply were not flexible enough to handle the company's needs.

Wolfgang turned to JLS Automation, located in York, PA, a leading automation integrator in the packaging industry to research its options and design and

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implement a more agile solution using the most flexible of current automation tools. Founded in 1955 by Joseph L. Souser, JLS Automation has a legacy of successful implementation of advanced motion control technology in many industrial applications requiring precision and reliability. JLS Automation's automated packaging systems are designed and built based on the company's Design for Agility philosophy. This philosophy simply put is JLS's commitment to making its customer's operations more agile by using flexible automation tools to produce solutions that can consistently, quickly, and precisely accomplish the task at hand.

"Robert L. Wolfgang III, managing partner responsible for Food Safety and Quality, was instrumental in spearheading the effort to identify the optimal solution for managing Wolfgang's increasing production," said Ben McGlaughlin, president and CEO of Wolfgang Candy Company. "We needed a solution that would fit our available footprint and deliver a strong return on our investment and that is exactly what Rob accomplished."

Rob Wolfgang says he is enthusiastic about the customizable potential offered by the innovative manufacturing line, specified and integrated by JLS Automation. Another expectation for the robot, says Mr. Wolfgang, was speed. "We needed a system that could meet or exceed 200 pieces per minute. JLS has given us both flexibility and speed, because it is a pick-and-place system and not a dedicated, hard-engineered system. We can pick-and-place nearly anything, which gives us tremendous flexibility to deliver customized product solutions for existing and future customers."

"Manual labor has been the option of choice for many packaging operations such as confectionary manufacturing, bakeries and meat & poultry product producers because of the amount of dynamic changes that are going on in their packaging operations," said Craig Souser president of JLS Automation. "This has kept them from making investments in automating these types of tasks until now."

JLS developed a customer-centric solution for Wolfgang based on its TALON series Packaging System. The TALON system is designed to easily upgrade customers' packaging lines and maximize the customer's investment by utilizing existing equipment. The system JLS put in place for the candy manufacturer features the IRB 340 FlexPicker™ robot from ABB Robotics, an extremely flexible, fast and precise top mounted robot requiring limited floor space and capable of extremely high speeds, accuracy, and reliability.

"With new advances in flexible robotic products like the ABB FlexPicker robot companies like Wolfgang can now see significant increase in their return on investment," commented Souser.

The system JLS installed inspects and then picks and places acceptable cookies into thermoform trays which are placed on a flow wrapper infeed. The flow wrapper then wraps the trays and discharges them. The system is designed to meet FDA requirements for food contact. The two FlexPicker robots, affectionately nicknamed Lucy and Ethel by the Wolfgang employees, are top mounted delta robots with

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vacuum tooling capable of gently picking and placing the delicate cookies precisely and reliably one cookie at a time into the trays. When designing the system particular attention was taken to the handling of the cookies which have a caramel filling.

The robot and vacuum tooling needed to be precisely coordinated so that the cookie was handled gently enough to pick up the cookie without the cookie losing the caramel filling due to too much pressure. This had to be programmed carefully while at the same time still maintaining extremely high pick and place rates. The robot placement repeatability during the conveyor tracking is within 1mm which allows the cookies to be successfully placed into a very tight tray compartment. Using a vision system and the ABB PickMaster software, the IRB 340 pick and place robots accurately select perfect objects ignoring misplaced or defective items on the belt. If, for example, a cookie is defective the robot will ignore it. The extremely fast FlexPicker robot is capable of packaging up to 200 chocolate covered cookies per minute a significant improvement to the company's manual operation.

With the automated system in place Wolfgang Candy has increased production, improved quality & safety, reduced contamination issues and reduced labor costs. The company estimates that by replacing the manual system with the new automated system they have increased packaging speed by approximately 12 and a half percent. Production has increased as the system is capable of running 24/7 without the need for breaks, lunch or time off for illness. The flexibility and speed of the system has allowed the company to reap the benefits of automation while being able to make quick packaging and production changeovers as packaging and product configurations change. Employees once assigned to repetitive picking and placing tasks have been reassigned to more intellectually challenging jobs making the company more efficient & reducing labor costs.

Additionally, food safety and contamination issues are less of a concern with the reduction of human contact. Quality has improved with the use of robots that consistently perform the same task over and over without fatigue. The new automated process has allowed Wolfgang to improve production and quality and remain competitive in these challenging economic times. The company anticipates a much shorter return on investment than they have seen with other capital investments, for example a typical processing machine. That return on investment will be even shorter as sales increases and product takes off as the company expects.

"We see the addition of this new automated system as a growth opportunity," said Mr. Wolfgang. "We'll be able to compete more effectively with our Wolfgang-branded products, and there are a lot of different private label and contract manufacturing opportunities out there that we wouldn't have been able to secure without this new system."

*For more information, please visit [www.wolfgangcandy.com](http://www.wolfgangcandy.com) [1], [www.jlsautomation.com](http://www.jlsautomation.com) [2] or [www.abb.com/robotics](http://www.abb.com/robotics) [3].*

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### **Links:**

[1] <http://www.wolfgangcandy.com/>

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