Six Reasons to Automate Your Food Processing Plant

Lately, food manufacturing and processing has been featured quite a bit in the news, and more consumers have recently become keenly aware of the requirements of strict hygiene, and how it relates to food safety. The solution to satisfying this need is strategically implementing critical technology into the food manufacturing process. Better visibility and transparency of food and beverage product sourcing and manufacturing can and must be achieved through technological advances. In this time of “Consumer 2.0”, buyers are even more savvy and rational in their purchases, preferring to take a long-term view and putting more thought into what goes on their shopping list.

Industrial robots and automated manufacturing systems have entirely transformed almost every industrial sector, improving productivity and operational efficiency to an unprecedented level.

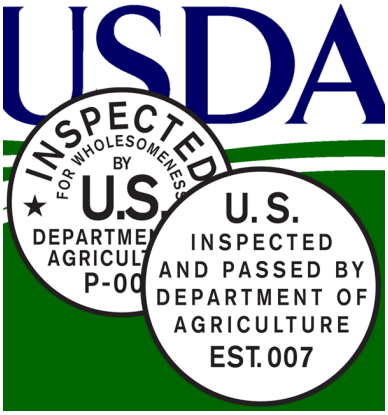
The food industry, however, has been a bit slower to jump on the automation bandwagon, mainly due to food products differing significantly in shape and consistency.

The differing characteristics of these items, plus the variety of complex production procedures, has made it challenging to develop economically viable automation solutions.

The world is currently focusing on hygienic safety measures more than ever before. Automation brings this, as well as error-free production, transparency, and consistent quality. These factors are critical to maintaining a brand’s excellent reputation and keeping both retailer and end user satisfied. As a bonus, automation makes it much easier to adapt to the consumer’s rapidly changing requirements. Streamlining production processes through technology is a surefire way to meet or exceed market expectations.

Modern food processors and packagers continue to add automated ovens, cutting and forming machines, mixers and blenders, sorting equipment, filling and wrapping equipment, and other machinery to the assembly line. In the past, workers would sit at the line, but now they can stay safely (and hygienically) in a control room, ensuring everything continues to flow smoothly.

There are several factors to consider when selecting automation for food manufacturers and processors – hygienic design among the top few. Meeting USDA safeguards requires machinery with specific characteristics such as impervious surface finishes, non-corrosive parts, no cracks or crevices, toxin-free materials, and high durability.



Automated processing and packaging systems connect various components in a plant, enabling managers to control the entire process and gather valuable data. Following are six reasons why the food industry should invest in automation technology:

1. Consistent Quality

The implementation of modern technology is inevitable when it comes to consistently producing high-quality products. Automated processing and packaging give operators greater control, which means a producer can deliver the same quality of products, and the same product, time after time.

2. Improved Traceability

Traceability has gained much attention as it allows a manufacturer to track production and if necessary, quickly recall products. It is important to be able to trace the history of products at any and every stage in the process, and to track down product information such as raw materials intake, processing procedures, packaging data, distribution channels, etc. By adopting automation and streamlining traceability, a manufacturer can cut improve both regulatory compliance and key operations.

3. Improved Safety

When machine vision and automated systems work together, managers get a more granular view of every step in the process. For example, if the need arises to modify safety standards, it is a smoother transition to the new procedure, because the process needing change can be isolated.

4. Brand Protection

Automation is an important approach to brand protection. Food producers rely on their brand's reputation to maintain a good relationship with the end consumer. A single product recall can be enough to force a plant closure, resulting in chaos for the entire supply chain while an investigation takes place (from food growers to the end users), and definitely negatively impact the goodwill of a brand.

5. Improved Personnel Safety

Improved employee safety is a huge advantage of automation, as operators no longer need to perform hazardous tasks such as picking up heavy objects or duties with repetitive motion, or other potentially dangerous or monotonous tasks. When these types of tasks are performed by robots and other automation solutions, employees are kept safer. Automation frees up employees to focus on more important projects and value-add demands, better utilizing their talents.

6. Flexibility

Automation allows manufacturers to be more nimble and adapt to changing production needs (such as retooling for new products), as well as changing regulatory compliance requirements. These changes can quickly and easily be programmed into the automation software, reducing the need for costly personnel training.

Automation in the food manufacturing and processing industry continues to increase competitiveness through improved efficiency and productivity, as well as cost savings. Automating production lines makes them more flexible and efficient, and becoming a more efficient part of the supply chain is a game-changer.

Delta Technology is an automation engineering company specializing in designing automation solutions that streamline complex production processes and makes them more profitable. Reach out to us for a free consultation and see how we can help you improve the productivity and efficiency of your food processing plant.

About Delta Technology:

Delta Technology has been the integrator and the manufacturers' strategic partner of choice for robotics, automation, and custom manufacturing solutions since 1997. We are proud to employ Industry 4.0 methodologies to creatively and expertly design, engineer, and build custom industrial automation solutions to solve the most complex manufacturing challenges.

We partner with our customers to clearly identify their challenges and understand their goals. Based on our findings and our extensive experience in manufacturing, we design and engineer the best custom solutions for them.

We specialize in:

- Design, engineering, fabrication, and assembly of custom industrial automation and robotics solutions
- Cutting-edge and modern lean automation and lean robotics
- Machine-control software development
- Integration of automation equipment
- Vision-guided robotics, inspection systems, and adaptive controls