

a **TNA** case study

30% boosted output

TNA keeps snacks food manufacturer one step ahead with turnkey packaging system. The installation of the tna robag® FX 3ci offered Keystone the flexibility it needed for its range of packaging services, while the tna intelli-weigh® omega 314 delivered high speed accurate weighing, increasing ROI for customers. Combined with the tna intelli-read® 3, a revolutionary barcode scanner installed to maintain rapid packing speeds, these turnkey solutions helped Keystone maximise space in its transition to a new building.



snacks

Based in Easton, Pennsylvania, Keystone Food Products produces and co-packages a wide variety of natural and healthy unique corn-based snacks from tortilla chips to snack mixes, popcorn and extruded snacks. In order to maximise workspace, boost productivity and meet further customer demand, Keystone sought several new start-to-finish packaging solutions to revolutionise its production line.

challenge 1.

improve packaging solutions

As a producer and co-packer of a range of corn-based snacks, Keystone needed a flexible, high performance packaging solution that could easily be integrated into its existing production line. In addition, the growing market requirement for smaller bag sizes meant

Keystone needed to expand the plant's manufacturing capabilities to address this customer demand while still maintaining profitability. Keystone was confident that the tna robag FX 3ci exactly met its needs.

solution 1.

turnkey packaging system

The tna robag FX 3ci allows for any jaw configuration (single, flat, double or triple) or size giving Keystone the exact flexibility for its range of packaging services. In addition this turnkey packaging system easily integrates with existing equipment due to TNA's comprehensive project management services. With performance improvements of up to 30% in both output and the reduction of rejects, this state-of-the-art packaging system also significantly increased the speed and precision of the entire production, helping Keystone to optimise performance while catering to the demand for smaller bags.

Furthermore, the tna robag FX 3ci does not require any mechanical adjustments when changing product or film. This was a particularly important benefit for Keystone who required a simple, yet efficiently-designed machine to facilitate the switch between different bag formats and products. Even more performance increases can be realized by upgrading the jaw set up, leaving Keystone fully prepared for the future.

challenge 2.

accurate weighing and improved product verification

Keystone needed a highly accurate weighing system that would ensure that only the exact amount of product would be included in the bag. The company needed a system that would avoid raw material waste but also one that would allow them to produce an increased number of units from the same quantity of material, delivering a better ROI for their customers. In addition Keystone required a more automated verification system to enable it to stay at the forefront of innovation and maintain premium quality standards.



solution 2.

virtually eliminate the influence of external vibration

The tna intelli-weigh omega 314 proved to be the most effective solution to Keystone’s challenges. It combines strain gauge load cells with digital filtering to virtually eliminate the influence of external vibration, allowing for high speed weighing with superior precision. As a result, discrepancies between bags are negligible, enabling Keystone to deliver the quality standards its customers expect. The modular design of the tna intelli-weigh omega 314 also enables quick and easy troubleshooting and maintenance. It also enhances product flow, ensuring that an efficient and reliable weighing process is maintained.

To address the requirement of a new verification system TNA installed its intelli-read 3 – a revolutionary barcode scanner that enabled Keystone to maintain rapid packaging speeds while ensuring that its products are checked to the highest standards.

The solution automatically scans the bar code on the film and cross checks it to verify that the correct product is being processed. With a new fully automated barcode scanning system in place, Keystone was not only able to speed up the bagging process, but is now fully assured that only products at the right weight and with the correct packaging, leave the plant.

“Increasing our production capacity was a priority for us, but we were also looking for innovative and efficient solutions that would be flexible enough to fit our limited space”, comments Bill Corriere, chief executive officer at Keystone. “We saw the answer in TNA. The company’s high performance solutions enhanced our manufacturing capabilities, while its expertise enabled us to make the most of our production and ensured a seamless integration with our existing lines.”

challenge 3.

maximising plant footprint

Keystone wanted a system that would increase its production capacity in the limited space that was available. Because the previous production set-up was fragmented, an important part of the installation process was to analyse the arrangement and provide more continuity in the way Keystone’s equipment was laid out. Another key challenge was to adapt the layout to the plant’s low ceiling height.



solution 3.**complete project management services**

Through its complete project management services, TNA designed and installed a single platform, incorporating three new packaging machines. This holistic view from start to finish, enabled TNA to optimize the plant's surface area, allowing Keystone to save both space and time. Installing the tna intelli air® was the perfect fit to address the low ceiling height and smaller space. This state-of-the-art distribution system has a small footprint and gently transports bags and other light weight packed products along a bed of air. The tna hyper-detect® metal detector also enabled Keystone to maximise the available floor space. Its patented design allows the metal detector to be positioned much closer to the multi-head weigher, reducing machine height and dramatically increasing the speed at which the bagger can produce finished bags. The system offers improved metal detection capabilities, while eliminating degradation in product transfer to ultimately deliver safe product throughout and minimise rejects.

**forward-thinking solutions**

From the start of the project to its completion, Keystone expressed its desire to plan for the future with flexible, lasting and sustainable production solutions. "Right from the beginning, it became clear that TNA was the right partner for us. Over the years, they really understood what our business objectives were and how we could innovate and maintain a competitive edge. We're extremely satisfied with the equipment that TNA has provided us and these systems will play a critical role in driving our business forward," adds Bill Corriere. "Over the years, we have developed a strong relationship with Keystone, comments Toby Steward, regional sales manager at TNA. "For the installation to be successful, we spent a lot of time with Keystone to get a good grasp of both their current and future plans. Once we fully understood their needs, we were able to tailor our systems to their specific requirements, providing them with flexible, high performance solutions that will meet their long term production needs."

TNA solutions is a global leader in food processing and packaging solutions, committed to helping people succeed responsibly in a changing world. With over 40 years of experience, TNA's global team of experts have installed more than 14,000 systems in over 120 countries. The company creates and sustains solutions that help customers realise goals and exceed their expectations, with performance, responsibility, and a customer-centric approach at the core of the business. A collaborative, consultative approach ensures measurable results and lasting success, with solutions designed to evolve and perform over time.

As an inclusive partner, TNA supports a growth agenda that goes beyond business, emphasising its commitment to people, prosperity and the planet in harmony. TNA is a powerful advocate of social justice, and aims to support children in disadvantaged communities through education, healthcare, and social enterprise programmes, through the humanitarian initiatives undertaken by the Nadia and Alf Taylor Foundation.

