

a **TNA** case study

99% of target output

Italian snack manufacturer expands portfolio with TNA's turnkey solutions. "As the popularity for batch-fried chips grows in Italy, we need a reliable, high performance frying system that can help us grow our market share, as well as uphold our rigorous quality standards. FOODesign's batch-pro 12 system is the best batch-frying technology on the market and will help us do just that."



PREZIOSI FOOD

snacks

Based in Melfi, Southern Italy, Italian snack manufacturer Preziosi Food (Mitica) had a clear objective in mind: to enter the batch-fried chips market. Finding a supplier that could deliver consistent quality, flexibility and performance for every section of the production line, including frying, seasoning and packaging, was essential to maintain the level of quality for which the company is known.

challenge 1.

high performance frying

Looking to invest in a brand new line for batch-fried chips, Preziosi Food needed a high performance frying system that efficiently cooks thicker potato slices and delivers the ideal colour, texture and flavour for

the perfect chip. In addition, Preziosi Food was also looking to meet specific production targets. This meant it required a system that could fry high volumes of product without raising operating costs.

solution 1.

automated, direct-fired tna batch-pro® 12

The company found the answer in FOODesign (from TNA) and its automated, direct-fired batch-pro® 12. Ideal for cooking a range of root vegetables, including potatoes, the system's innovative continuous oil filtration system helps remove both fine and large particles to ensure Preziosi Food's chips are cooked in the freshest oil possible. Oil management is essential to high performance frying and chip quality. When cooked, potato slices take on 23 per cent of the oil, meaning 77 per cent remains after the batch is complete. The remaining oil is subsequently filtered out and blended with fresh oil to return levels to 100 per cent.

Alongside continuous oil circulation, full temperature control is also maintained through constant and zone control systems, essential for optimal heat regulation in the cooking and frying process. As such, overheating of the oil, and any subsequent caramelisation and browning of the product, is prevented, and the company is able to achieve a consistent chip colour. In addition, the system's quick heat recovery capabilities, the FOODesign direct-fired batch-pro 12 optimises

production by ensuring the oil returns to optimum frying temperature quickly and efficiently. As a result, Preziosi Food now processes 230 kg/hour of finished product. Vincenzo Bove, Preziosi Food's technical and operations director, commented: "As the popularity for batch-fried chips grows in Italy, we need a reliable, high performance frying system that can help us grow our market share, as well as uphold our rigorous quality standards. FOODesign's batch-pro 12 system is the best batch-frying technology on the market and will help us do just that."

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challenge 2.

seasoning consistency

Seasoning plays an important role in a product's overall taste, texture and appeal. Once the flavour for the new product line was decided, Preziosi Food required a flavouring system that could coat irregular shaped products consistently and with ease for optimum taste and appearance on every chip produced. In addition, application accuracy was a key consideration for the snack manufacturer. Applying an incorrect level of seasoning can have a significant

impact on both input costs in terms of raw materials and wastage costs from rejected products that are either over or under seasoned. The company was also looking for a seasoning system with the flexibility to meet its future flavour requirements. With plans to expand its range and add additional flavours to the new line, it was crucial the system would be able to handle the required seasoning type and perform fast flavour changeovers when required.

solution 2.

a responsive variable mass seasoning mechanism

In light of these requirements, TNA installed its on-machine seasoning (OMS) system, the tna intelli-flav® OMS 5, to apply seasoning to Preziosi Food's salted range of batch-fried chips. Featuring a responsive variable mass seasoning mechanism with dynamic vibratory weigher, the tna intelli-flav OMS 5 directly controls oil spray and powder flow into the drum. This enables an accurate, proportional amount of seasoning to be evenly applied to the product for improved coverage and flavour dispersion, meeting Preziosi Food's objectives for a high quality, evenly seasoned end product.

Further performance benefits are achieved through the enhanced position of the scarfplate on the tna intelli-flav OMS 5 infeed. Mounted to the edge of the drum, the scarf better directs the product into the spraying and flavouring area, providing even seasoning for every batch of chips. Additionally, the scalloped infeed conveyor design allows more product to enter the seasoning drum, while also helping to control product direction for greater seasoning accuracy and reduced waste. This helped Preziosi Food achieve cost savings and ultimately increase profitability. Through its innovative design, TNA's OMS equipment is fully integrated with spray and flavour injection

systems which are suitable for both wet, dry and slurry seasoning applications, offering Preziosi Food the ultimate flexibility for its forthcoming needs. Furthermore, the tna intelli-flav OMS 5 is designed so all parts that are in contact with the flavourings can be cleaned and replaced within a few minutes. This ability to clean equipment and perform product changeovers in the shortest amount of time will not only allow Preziosi Food to adhere to food safety guidelines, but also maintain profitability by keeping downtime to a minimum.



challenge 3.

top bagging performance

In an effort to take efficiency to the next level, Preziosi Food was looking to replace its existing bagger with an automated packaging system that was easy to use, while also optimising throughput rates. With a relatively limited amount of space available, a key

deciding factor for the manufacturer was system footprint. As a result, it was imperative for the new system to maximise the company's processing space and resources.

solution 3.

unrivalled speeds & efficiencies

The tna robag® FX 3ci was the obvious solution, reaching unrivalled speeds of 180 bags per minute (bpm) while offering efficiencies of up to 99 per cent of target output. For Preziosi Food, adding the tna robag FX 3ci to their production facilities meant doubling productivity. In addition to meeting their throughput objectives, tna's robag FX 3ci also enhances packaging accuracy with a rotary jaw design that uses impulse sealing technology. As a result, the new system now helps Preziosi Food ensure high quality, consistent packaging for optimum consumer appeal, as well as reduced packaging film waste, translating into significant cost savings.

Peter Pellizzari, regional sales manager at TNA, said: "When Preziosi Food approached TNA, they were looking for an innovative packaging solution that positioned them at the forefront of the batch-fried chip market. At TNA, we provide our customers with the right solutions to fit their specific production requirements – and Preziosi Food was no exception. With little floor space available, we not only provided them with a system that allows them to make the most of the resources available, but also meets their

requirements in terms of product throughput and bag quality." "Having carried out extensive research, we were very familiar with the TNA brand and the quality of products offered by the company." commented Vincenzo Bove.

"The tna robag FX 3ci meets all of our expectations in terms of performance and simplicity, as well as providing additional benefits like keeping waste to a minimum. I'm convinced the new system will enable us to meet the local market's increasing demand for batch-fried chips head on."

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single supplier – full integration

“For a quality-focused company such as Preziosi Food, maintaining consistency throughout the line is essential.” added Bove. “However, finding one supplier that can deliver high performance standards for such a wide range of products is no mean feat. To ensure maximum output, we needed all machines to work together seamlessly. The TNA equipment installed in our plant works in perfect synergy alongside each other and offers us the flexibility we were looking for.”

Bove continued: “Adding a new line meant significant financial growth for our company. For this reason, TNA’s support throughout the installation process was invaluable, helping to keep the project on-time and within our budget constraints. The products and services offered by TNA are truly unique, providing exceptional quality from a single source. Furthermore, the company’s commitment to innovation and customer service is what really makes TNA stand out from the competition. We made the right choice with TNA and are looking forward to future partnerships.”



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.