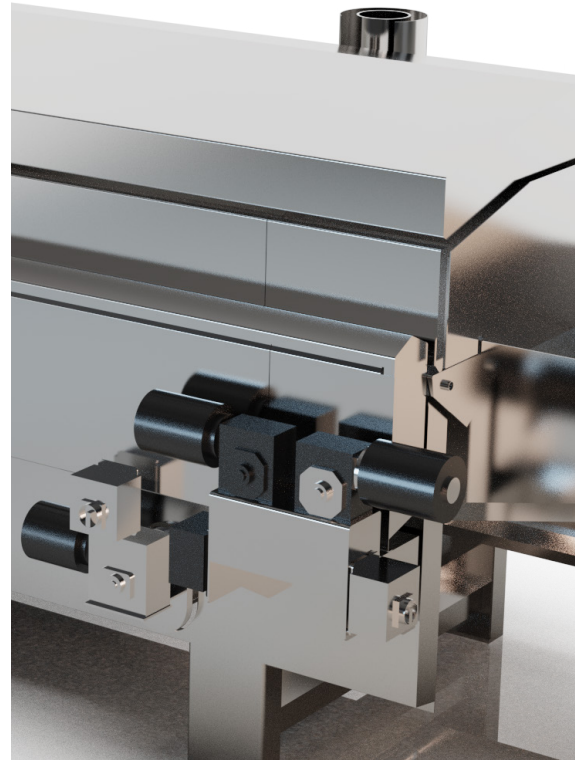


batch frying potato chip line

complete batch-fried potato chip solutions

From the humble raw potato to the finished product in a bag, TNA solutions has everything you need to deliver world-class potato chips for your customers in one place. Leverage our 40+ years of design innovation and manufacturing experience to meet your goals and exceed expectations.



everything you need in one place

single source supplier

Turn to TNA for all of your potato chip production needs, including receiving, destoning / washing, peeling and inspecting, slicing, frying/deoiling, sorting, distribution/seasoning and packaging.

tna batch-pro® 150

atmospheric batch frying at the heart of your line

The tna batch-pro® 150 is the ultimate medium output direct-fire heating batch fryer, suitable for a wide selection of vegetable chips, including potato, taro, banana and plantain. Our standard model can produce 150 kg/h. Featuring a high-efficiency, serpentine heat exchanger tube configuration, the tna batch-pro® 150 offers direct-fire heating with better efficiencies and lower operating costs.

The fryer's advanced design includes an integrated sediment removal system that extends the life of the oil and maintains product consistency. The system has automatic stirrer with independent control for linear speed and rotation speed.

reliable support

Count on us to be fast and dependable, offering full support when you need it, where you need it. From 30+ locations globally, you are never far away from a specially trained TNA expert. From process control to spare parts, maximizing your production uptime is our priority.

innovation you can taste

Our complete solutions take care of your product from start to finish. Gentle handling ensures waste is kept to a minimum, while innovative batch frying technology delivers high efficiency with lower operating costs.

Ensure consistency with our intelligent seasoning technology and bag your creations at the fastest speeds the industry has to offer.

key benefits - tna batch-pro® 150

- » Save Natural Gas costs with a fryer that uses 20%+ less gas than other technologies. Its unique, high efficiency single serpentine direct heating system releases far less heat into the sky
- » Gain tight process control and extreme recipe flexibility via our innovative supersized heating system
- » Small footprint designed to maximize production in small facilities
- » Extend oil life via advanced sediment removal technology
- » Strategically designed to deliver asset life with low maintenance requirements

standard features

- » Mirror-finished single serpentine stainless steel heating tube
- » Solid PTFE (Teflon) stirring tines
- » Fully enclosed heater, adaptable to natural gas or propane/LPG
- » Insulated fryer body of transverse formed and welded stainless steel sections, welded inside and outside
- » Stainless steel discharge belt with 12-degree discharge angle, eliminating the need for flights.
- » Level control pump with fully adjustable level sensors and tool-less detachment for cleaning process
- » Stainless steel sediment belt and auger
- » EMA 7/IP 65 control panel with 178 mm (7") diagonal touchscreen

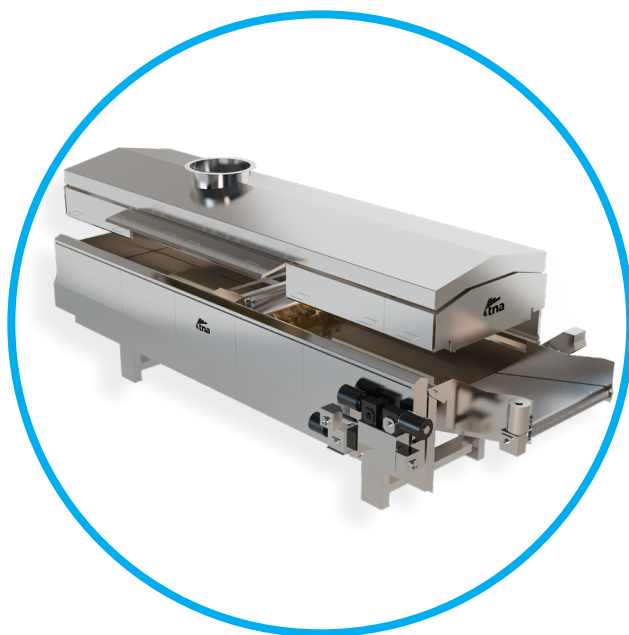
optional features

- » Course filter, belt type, with >2mm (0,08") particle size filtration
- » Stainless steel centrifugal separator with 950L/min (250 gal/min) capacity
- » Belt filter with >60µm particle size
- » Automatic slicing system
- » Accumulation de-oiling conveyor
- » Steam hood

tna intelli-flav® OMS 5 & 5.1

ensure every chip is consistently delicious

Maintain the highest possible quality seasoning operations with the tna intelli-flav® OMS 5 or 5.1. Accuracy is everything where seasoning is concerned and this innovative system ensures every single chip is perfectly coated for the perfect look, texture and taste.



key benefits - tna intelli-flav® OMS 5 & 5.1

- » Proportionally controlled flow rates to ensure consistent coverage that minimizes over and under seasoning
- » Gentle product action with optimal tumbling to minimize damage and maximise flavour coverage
- » Optimized flavour dispersion for wet and dry applications
- » Consistently delivers key quality and cost criteria of flavour, look and taste
- » Multiple feed pans for accurate mass flow control of product into the flavour drum
- » Designed to IP65 standards to facilitate maintenance and meet the highest hygiene and sanitation standards
- » A strong, high density drive for heavier load capacities (8kg, or 1600kg/hour)
- » Easy to clean, quick wipe down surfaces
- » Minimal moving parts with no belt or chains
- » Short auger feeder that does not jam or block
- » Fully integrated heated oil circulation system used to keep hard fats, such as Palm Olein or butter in liquid forms as they travel through the system
- » Easy seasoning changeover
- » Highly robust stainless-steel drum to ensure superior equipment reliability when filled with high-temperature product (exceeding 40°C/104°F)
- » Seamless integration into TNA's distribution system or your current setup
- » Improve up-time with a tool-less drum changeover and rotating touch screen that is accessible from both sides



tna roflo® HM5

distribution you can count on – horizontal or vibratory

Protect each chip in horizontal motion with the tna roflo® Horizontal Motion Washdown conveyor system - which moves product via a slow forward horizontal motion followed by a fast return horizontal motion.

Due to the machine having no vertical element, the HM5 conveyor transports product with a smooth flow, minimises flavour fall-off, ensures zero flavour build-up in the pan and provides excellent ease of sanitation.

key benefits - tna roflo® HM5

- » Easy to clean
- » Hygienic
- » Gateless operation
- » Washdown capability
- » Minimize product breakage and flavour loss
- » Self-contained integrated electronical panel
- » Variable gate opening to prevent bridging of products
- » Ideal for fragile and heavy coated products with no seasoning build-up on the pans
- » Rotational sealed bearing system for linear motion
- » Raise the pans from the product stream to support two independent flows of products with erector lifts for anti-contamination
- » Meet the demands of manufacturing flexibility with TNA's own switcheroo technology that tilts pans in different directions and reverse product flow as needed
- » Utilise tray lengths up to 20 metres (787") on a single drive (product dependant)
- » Reduce change of failure, boost reliability and increase lifecycle with drive module that has fewer parts



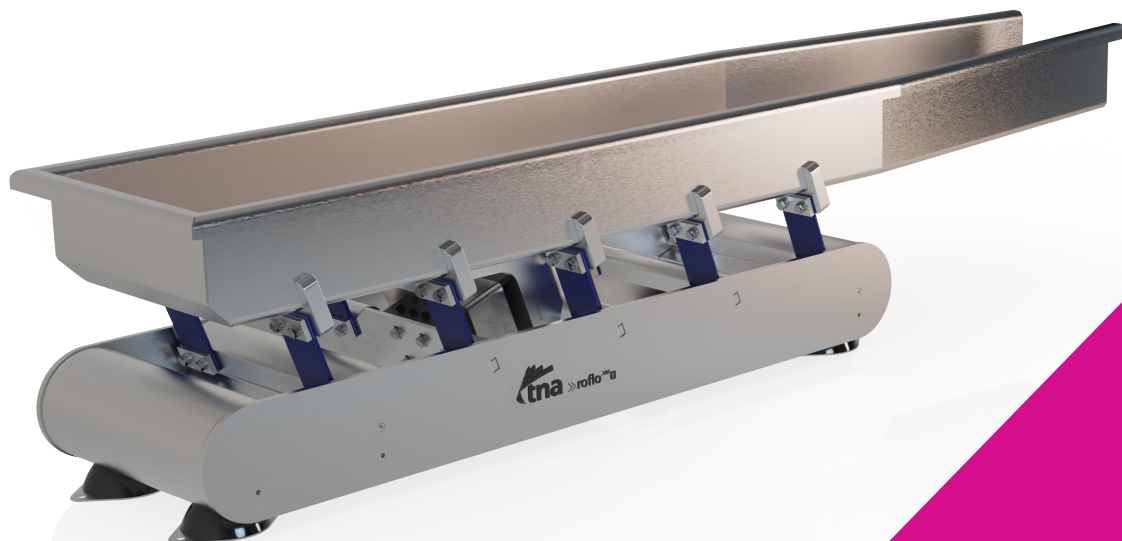
tna roflo® VM5

For vibratory motion distribution, the tna roflo® VM5 conveys product from the processing kitchen to end-of-line weighing scales and bag making equipment. Its high-performance design deploys diagonal (horizontal and vertical)

transportation method to evenly distribute products, while offering an efficient method for in-line storage, accurate weighing and metering product. Its versatile design features a variety of options to suit every potato chip production need.

key benefits - tna roflo® VM5

- » Easy to clean
- » IP66 – Washdown
- » Hygienic
- » Modularised with inhouse manufacturing & stainless steel only, resulting in shorter lead time
- » Electromagnetically driven
- » Fewer moving parts, low maintenance cost
- » Seamless integration with tna intelli-flav® seasoning system
- » Constant amplitude is maintained regardless of the load on the tray with closed loop control
- » Incline capability up to 5 degrees with no limit on distance when pans are nested together
- » Reduce TCO with low energy consumption; the system works on natural frequency with no wearing parts for a longer lifecycle and reduced maintenance requirements
- » Suits a variety of bulk densities ranging from lighter products such as Popcorn, Extrusions, Potato Chips, Tortilla Chips, to the heavier Nuts, Vegetables and Confectionery



tna robag®

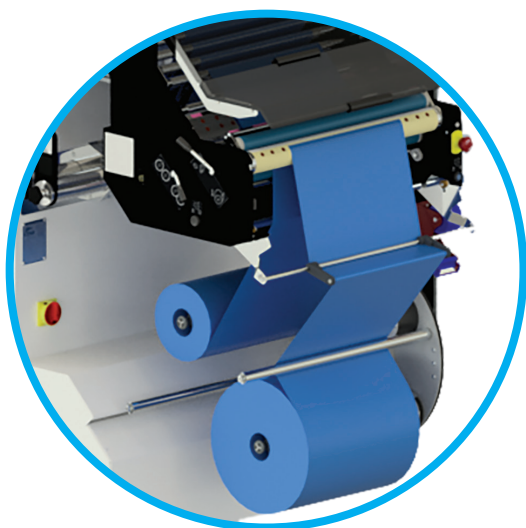
package your potato chips with precision

Pack your potato chips with the tna robag® FX 3e, an industry leading high-performance vertical form fill and seal (VFFS) packaging system, or optionally the "Perfect Pair" of tna robag® FX 3e & tna auto-splice 3.

key benefits - tna robag® FX 3e

- » The fastest – packs up to 250 bags per minute*
- » Up to 99% target output efficiency and wastage as low as 0,1%*
- » Small footprint, featuring tna's patented stripper tube closer and advanced film control features
- » Quick and easy product changeover thanks to tna's patented unload assist and auto-connect
- » One-touch recipe change function
- » Reduces maintenance cost with:
 - » Drives and controls common to the tna roflo® and tna intelli-flav® systems
 - » Smart diagnostics and remote connectivity
 - » Up to 20% reduced cabling with EtherCAT® connectivity

*subject to bag type, film, and product



key benefits - tna auto-splice® 3

- » Automatic film changeover with no interruption, increases up-time of packaging lines by up to 5%*:
 - » Produce up to 2,800 more bags per line per day*
 - » Free up operator's time
 - » Reduce film waste
- » Compact – only adds 200mm to the existing footprint

*time and production may vary according to packaging process



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With presence in over 30 locations our global experts are available to support you anytime, anywhere!