



**HEAT AND CONTROL**

®

# Potato Chip Processing Systems



Since the inception of industrial snack food production, Heat and Control and potato chip manufacturers have met every challenge to achieve higher capacities, lower production costs and superior product quality.



## SNACK EXPERTISE

Most of the world's potato chips are produced with Heat and Control equipment. Every machine features innovative technology developed through years of experience in delivering snack food systems around the world. Built for decades of reliable operation and low lifecycle costs, Heat and Control systems consistently deliver unique quality for every snack brand.

## FROM A TO Z

From raw potato preparation to frying, seasoning, packaging and inspection, Heat and Control provides all the equipment and services required to make the highest quality natural potato chips, kettle-style chips, sticks, formed chips, and other potato snacks.







## POTATO UNLOADING + STORAGE

Raw potato handling is simplified with an integrated series of equipment to unload, store, clean and size potatoes prior to processing. Truck dumpers, dirt removers, potato pumping water flume systems, Gentle-Flo® transport and bin storage systems handle large volumes of potatoes easily and gently. Or select a system to fill and dump crates and precisely meter potatoes to processing.

## BATCH PEELER

Multi-stage, tandem or individual batch peelers deliver excellent peeling control and high yields.

## CONTINUOUS PEELER / WASHER

Peel and clean potatoes and other root crops. Abrasive rollers quickly remove peel while water sprays rinse away debris. An internal auger controls dwell time for accurate yield control.

## INSPECTION TRIM CONVEYOR

Rotate potatoes for thorough inspection and defect removal. Options include single or double lanes, movable cutting boards and scrap removal conveyors.

## SLICER FEEDER

Deliver a continuous and even flow of potatoes to each slicer. Unique design features reduce waste and produce uniform slices.

## SLICING

Heat and Control systems utilize slicers from leading manufacturers to suit capacity and unique product requirements.

## SLICE WASHING + BLANCHING

For new and storage potatoes, every system delivers optimal washing. Choose Pre-Washers or Speed Washers to quickly remove surface starch and slicing scraps, yet minimize fresh water usage. For high sugar potatoes, use a hot water drum Washer / Conditioner or Injection Blancher to produce finished potato chips with a consistently light color. All washers and blanchers are designed to separate slices, eliminate clusters and feed a mono-layer of slices across the width of the fryer for uniform cooking.

## DE-WATERING

Removing surface water and slicing scraps from potato slices is critical for high energy efficiency and clean fryer operation. Patented AirSweep® technology combines vacuum and blow-off action for maximum removal of moisture before frying.



‘the world’s **most popular** potato chips are produced with Heat and Control equipment’







## FRYING

Heat and Control fryers produce most of the world's potato chips, sticks and formed products. Each fryer system is engineered for optimal performance and productivity.

Oil inlets, outlets and other components on continuous fryers are computer modeled to assure uniform oil flow with precise temperature and product control.

Batch fryers utilize full hood enclosures with Oil Mist Eliminators, clean-in-place systems, and continuous fines removal for energy efficiency and clean operation.

- Single and Multi-Zone continuous fryers
- Formed potato chip fryers
- Batch fryers with automatic Chip-Stirr® system
- Vacuum fryers

## OIL MANAGEMENT

Superior oil quality produces the best potato chips with a long shelf life. Every component of a Heat and Control system is designed to maximize oil quality. Careful control of oil heating, filtration, cooling and storage, with rapid oil turnover rates, results in low levels of free fatty acids for the freshest product possible.

### Heating

Whether the fryer is direct or externally heated, a variety of heat exchangers are available using natural gas, thermal fluid or steam. All deliver gentle, yet rapid oil heating and extremely responsive temperature adjustment to changes in product load to maintain consistent product quality.

### Cooling

Gain additional production time and cooking control by quickly cooling oil before sanitation. Automatic oil cooling systems reduce thermal damage to the oil and minimize delays between production and sanitation.

### Filtration

Total system oil volume is filtered each minute in all continuous fryer systems. Batch fryers are also available with continuous oil filtration. Rapid removal of product particles is essential to preserving oil quality. It also eliminates unsightly carbon specks on product and reduces fryer cleaning time. Filters for large particles or micron-size fines are integrated into each system depending on fryer requirements.





## CHIP DE-OILING

Remove surface oil from batch and continuously fried chips. Heated oil stripping systems and centrifuges are available to reduce the oil content of just-fried chips to satisfy consumer demand for healthier snacks.

## FRYER SUPPORT MODULE

Significantly reduce the time and cost of fryer system installation by centralizing oil pumps, filters, valves, piping and other components on a Fryer Support Module. Fully piped and wired to single-point utility connections, the module is quickly set in place and connected to the fryer to simplify maintenance, reduce piping runs and floor space requirements.

## POLLUTION + ENERGY MANAGEMENT

Sustainable efficiency and environmentally safe operation are key design elements. Choose from a variety of solutions that reduce pollution and maximize energy-savings.

- KleenHeat® Pollution Control Heat Exchanger
- Heat Recovery System
- Booster Heater
- Oil Mist Eliminator
- Water-saving and drain water reduction
- Starch recovery

## CONTROL + INFORMATION SYSTEMS

Rely on the same company that designs and builds the processing line to also supply operating and data management controls. As a certified systems integrator and hardware supplier, Heat and Control provides user-friendly controls utilizing widely available industry software. With access to all critical data points, these systems provide the responsive control and operating feedback to maximize productivity and help plan for greater efficiency.

## INFORMATION THAT MATTERS

Information That Matters® (ITM) delivers production line information metrics in real-time to plant floor dashboards, computers or smart phones. The dashboard continuously shows the health levels of the system via large displays.

ITM systems present information in an easy to understand format so operations and maintenance personnel have the tools necessary to improve line performance.



Allen-Bradley

Processing & Packaging Systems

PanelView Plus 1000

12/19/201\*

Recirculation

Weigher Module #2

11:30:23 AM

Weigher Module #2 Operate

WM Started With Seasoning



Weigher Stop



Seasoning Disable



Laser Disable



Drain



All Auto



Fine Tune



Bag Speed



Bag Weight



Help



Home



Menu



Operator



Back



Recipe Select



Exit



Previous



Next



Touch Zones

Recipe:  
Bag Size (g):  
Bag Speed (bpr)  
Total (kg/hr) Se



## TECHNICAL SUPPORT

Pre- and post-sale support includes rapid-response service and parts shipment, applications assistance, engineering, installation and operator training. With more factory-trained service technicians in more locations, Heat and Control provides the industry's most responsive and experienced technical support.

## DEMONSTRATION + TESTING

Try out a selection of the latest processing, seasoning, coating, conveying, weighing, packaging and inspection technologies in one of Heat and Control's many demonstration centers. Evaluate performance, develop new products, refine formulation and identify the equipment that produces the desired result.

## NOTES

**HEAT AND CONTROL**



Over 65 Years of innovation and world-class service.

- Snack Systems
- Process Prepared Systems
- French Fry Systems
- Seasoning + Coating Systems
- Conveying Systems
- Weighing + Packaging Systems
- Inspection Systems
- Control + Information Systems

With manufacturing facilities and sales offices worldwide, Heat and Control supports manufacturers with experience, expertise and resources to develop the most efficient solutions for any production challenge.

JOIN THE CONVERSATION



[www.heatandcontrol.com](http://www.heatandcontrol.com)



Processing + Packaging Systems