

# A Revolution for Smarter Seasoning

By combining a small footprint horizontal motion conveyor with a gentle motion tumbler, Heat and Control has produced an integrated seasoning system that delivers precise feed rates and optimum throughputs for greater bagging efficiency.

**T**O SEASON snacks, many manufacturers use weigh belt systems and vibratory feeders. While effective, weigh belt systems can be very costly and require high levels of maintenance and sanitation control. Vibratory systems frequently encounter product buildup and can be difficult to clean.

An alternative solution has been developed by Heat and Control, Inc. which combined a tumble drum with its FastBack cross feed horizontal conveyor into a single compact system called the FastBack Revolution On-line Seasoning System. The company says this innovation offers manufacturers superior feeding control and seasoning coverage, coupled with ease of use and economical operation.

The FastBack conveyor uses a simple but effective product sensor that accurately measures and adjusts the seasoning application rate to provide just the right amount of seasoning. In a patented Excalibur delivery module, seasoning is dispersed without the constant adjusting and clogging of piccolo tube augers or the seasoning buildup vibratory feed systems are noted for.

The integrated design between conveyor and delivery module con-

centrates the main seasoning flow and then disperses it out for even



*Removing the tumble-drum on the FastBack can be done by hand, thanks to a no-tools band style clamp.*

product coverage and the elimination of skips in the product stream. And the Excalibur unit can be removed in seconds without tools, simply by unlatching the unit for fast seasoning changeovers.

## Low breakage with or without seasoning

Through the study of tumbling cycles, Heat and Control has combined just the right ratio of tumble action and gentle handling to properly mix the seasoning and base product and

*Right: The FastBack Revolution On-line Seasoning System consistently achieves superior product coverage.*

provide superior seasoning coverage. Weighing just under 13.5 kg, the built-in tumble drum is easily removed with a no-tools band style clamp for sanitation and flavour changes. In addition, a built-in hook makes removal and reinstallation a simple, one person job.

A unique feature of the Revolution system is that the conveyor and tumbling system is all one unit and therefore do not have a drop step between the two, making the overall system gentler to product. In addition, the tumbling action

may be turned off independently of the conveying action when non-seasoned products are run, eliminating any breakage caused by the tumbling action.

The flex wall seasoning auger/dispenser gently massages the sea-



soning toward the auger to help prevent worm holes and dry spots caused by clumping of seasoning. The liner can be easily removed for superior sanitation, and comes with a full 5-year warranty.

### Direct Control System and Auto-Feed-Adjust

The Direct Control system automatically measures the product going into the system and adjusts the seasoning application rate based on an operator's setting. This system is standard with all Revolution systems or may be upgraded to a PLC driven recipe system.

The FastBack Revolution seasoning system incorporates a special controls architecture that not only simplifies operator inputs but also allows the entire system to be custom configured on-site without the need for special programming.

Another Heat and Control exclusive feature is the optional Auto Feed Adjust which ties the seasoning and the scale/bagger together through a control system that monitors and optimises both the scale/bagger performance and the seasoning system performance. AFA automatically finds just the right product throughput rate to achieve the highest levels of performance from both systems and continually monitors and adjusts these levels without the need for operators to move photoeyes or tweak the throughput ranges, etc.

AFA, in conjunction with the other features above, overcomes one of the biggest problems associated with On-Machine type systems. Most systems either have good seasoning on-time but starve the scale, causing missed cycles; or they slightly overfeed the scale, causing the seasoning system to stop and start and provide sporadic seasoning application. AFA monitors, finds and adjusts the proper rate automatically to optimise both the scale and the seasoning systems, saving thousands of dollars each year. AFA requires either a FastBack 50E cross feed conveyor or Revolution Gate and Recipe driven control system.

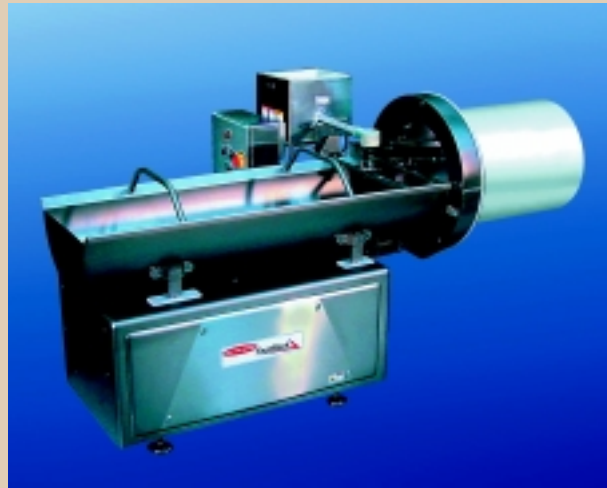
### Simple operator control

Operator input is extremely simple; for direct control systems, the operator sets the desired seasoning application rate via a digital readout on the local panel, checks for seasoning in the hopper, and turns the unit on. The



## Design features of the FastBack Revolution On-line seasoning system

- 1) Sensors used for continuous product measurement never come in contact with the actual product, thus eliminating weigh-belt tracking, sanitation and maintenance issues.
- 2) FastBack Excaliber seasoning delivery module provides a continuous curtain of seasoning to the product without the problems associated with clogging auger nozzles and the adjustments they require. In addition, the FastBack technology provides this benefit in one single component, as opposed to two on vibratory systems, thus eliminating another source of expense and potential failure.
- 3) The FastBack Excaliber, unlike vibratory units, removes easily without tools for sanitation and cleaning, and does not have the seasoning buildup issues associated with vibratory units.
- 4) The FastBack seasoning system utilises a direct drive tumbler that eliminates chains or belts and provides a more



robust and maintenance-free drive system.

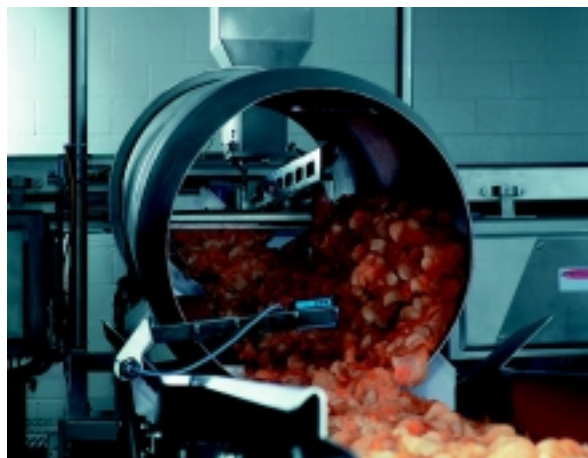
- 5) The discharge edge is free of flights, making cleaning easier and allowing for a centre discharge in both rotation directions, as opposed to an off-centre drop-style discharge. This further prevents breakage and spill points.

measuring system automatically measures the base product, and using this information and the operator's selection of seasoning rates, applies the correct amount of seasoning to the system. Fluctuations in the product flow are automatically measured and seasoning rates are automatically adjusted.

For the optional Recipe system, operator input is also simple, requiring only three inputs to the touch panel screen during normal operation. The operator simply chooses the seasoning line they want to change on the graphic panel display showing the distribution and seasoning system, inputs the bag size and bag speed or the kg/hour of output required by that

line, chooses a seasoning recipe and then presses Start.

Once the above operator inputs are made, the system and its con-



trol logic take over and do the rest, constantly adjusting and monitoring base product input. The operator input for bag size and bag speed or

for throughput in kg/hour determines the correct throughput settings for the Revolution unit.

Based on the instantaneous flow rate of product, and the manual seasoning setting or selected seasoning recipe, the FastBack seasoning applicator modulates its seasoning output to meet the exact demands of the base product, never too much or too little. The operator has the ability to manually adjust the seasoning amount based on actual tested QC results. This too is extremely simple, requiring only a percentage increase in the manual input or input into the main seasoning screen for that line and recipe.

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