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ARBO Spreading Technology

Custom Tailored Vibratory Applicators and Toppers

ARBO has been working for many years on developing spreaders. Various manufacturers approached ARBO to help them find the best equipment for their individual needs. To spread toppings and seasonings onto edibles is a common task in the snack food industry. Many times the toppings are as expensive or even more than the base product itself. To reduce waste, the toppings should be delivered with a minimum vertical drop and placed onto the product itself, not in between the lines of product.

The ability to perform these tasks with ARBO's vibratory tray feeders in gravimetric or volumetric mode has given ARBO's customers the edge!

Each spreader is developed with the final design determined by the product conveyed, the desired number of lanes, their widths and distance from the production line. From one feeder with a wide tray or several lanes, by itself or several in a row over the production line, ARBO can help you solve your application.

ARBO spreaders are applicable to many different industries. With gravimetric controls are capable of a 2 Sigma performance of $\pm 1\%$ or better, depending upon material and flow rate.



Fig. 1 Production Flow

Standard drive/tray combinations (Fig.1) were adapted to feed sidewise onto the conveyor. The tray outlet is cut at a 45° degree angle. This volumetric spreader is placed at only 0.5" height over the conveyor!



Fig. 2

Fig. 2 illustrates another volumetric topper, with standard drive/tray arrangement (tray above the drive). This tray is segmented into three (3) feeding lines by two (2) fingers. It will place the toppings on the product only, not in between the product lines.



Fig. 3 the "Seasonator"

Fig. 3 illustrates an inverted ARBO drive model AF 15, driving a 5-lane tray.

This arrangement permits mounting the spreading tray above the product with minimal clearance.

With this design it is possible to construct modular volumetric or gravimetric machines to cover up to 16 or 24 lanes, depending on width.

Several such tray/drives can be combined to feed any number of product lines, over any conveyor width. This spreader can be built as a volumetric or gravimetric (LIW) machine.

Each drive is controlled individually to ensure identical feed rates across the entire width of the machine. Controls modes are local or remote, via PLC.

Figure 4 illustrates an inverted ARBO drive mounted above a 400 mm wide, waterfall type tray.

A conveyor is used to demonstrate the system's capabilities to add toppings from less than 1" height!

The conveyor belt can be used to move different shape baking or packaging trays or your product at different speeds for a uniform spreading of your toppings.



Fig. 4

This volumetric quad seasonator probably represents the ultimate in precision vibratory applicators.

