

CONVEYORS: THE INS AND OUTS

Which Type Is Best for Your Application,
And What You Should Consider When Making A Purchase.

By: Elisabeth Cuneo, Editor

Conveying and accumulation are both so critical to the packaging line, as conveyors move product from one spot on the line to the next, and accumulation can account for machine operation downtimes. When looking to start a new line, or make upgrades to an existing one, there is much to consider when making an equipment purchase. To get insights into which type of conveyor is best for which project, we talked with the folks at Multi-Conveyor. A panel of experts weighed in on this, and more, and offered some advice to consider when purchasing new equipment.

EXPLORING THE MANY TYPES OF CONVEYING EQUIPMENT

There's vibratory, washdown, vacuum and spiral, just to name a few... which one should you choose? Which works best with what you are trying to package? Here's what the experts say:

Vibratory Conveying System

Vibrating conveyor technology is used to help settle product that may have bulked up inside of the packaging, on one side or another, due to the filling process or elevation changes in the transport of the product i.e. incline or decline. Product settling conveyors (vibratory conveyors) are commonly used to shift product for even distribution within the designated packaging container for optimum case packing or pallet stacking.

Vacuum Conveyor System

Vacuum conveyors utilize blowers or an enclosed fan to move air beneath the conveyor to cause a suction effect through a perforated conveyor belt. This, in turn, draws product down against the belt to assist in product stability in the most extreme of line speeds or elevation changes. Commonly used in conjunction with lighter-weight objects, vacuum conveyors can be incorporated in limited or isolated sections of the line as needed.

Spiral Conveyor

Rotary spiral accumulator conveyors are used to give customers that few extra minutes needed to automate a production line without stoppage, indexing or delays. The spiral provides ever so gentle product handling because the entire unit is one continuous belt with no intermediate dead plates or end-to-end transfers. Spiral designs are also capable of bottom or top loading, depending on equipment layout. To further optimize storage time, multiple interconnected spirals can be placed in-series to provide additional accumulation. Commonly used due to its smaller overall footprint, benefits include product staging; product cooling (in baking



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situations); order picking assistance in warehousing; and general accumulation.

We then asked the panel which conveying type is most used in food?

“Sanitary Conveyors - hands down. Sanitary conveyor systems are designed with stainless steel construction and are built to food industry and plant specific needs as dictated by sanitation or food safety requirements. The country's leading food and beverage producers seek out conveyor manufacturers with experienced in-house engineers that keenly understand the need for effective, easy-to-clean, CIP/COP and wash down equipment. We take the same approach when it comes to providing our customers with UL certified or approved controls. Conveyor manufacturers need to be food agency compliant to meet regulatory and food safety demands put forth by USDA, WDA, AMI, FDA, 3-A Dairy, BISSC, and more,” says the Multi-Conveyor panel.

Which conveying type is most used in beverage?

“Standard basic plastic chain and plastic belt conveyors are the ‘go to’ solution for the beverage industry. Whether packaging beverages in bottles, cans or pouches, plastic chain and belt conveyors are the most economical choice. These systems take a beating, day in and day out. The conveyor must be reliable and quality-built. Beverage conveyors need to withstand the abuse of spills and may require sanitary compliance or washdown construction. Respected suppliers may



Sanitary conveyor systems are designed for agency compliance with stainless steel construction and are built to food industry and plant specific needs as dictated by sanitation or food safety requirements.

stock pre-engineered, prefabricated systems which make them economical and readily available to ship quickly," says the panel.

TRENDING NOW WITHIN CONVEYORS AND ACCUMULATORS

I hear a lot about trends, and growing segments, especially items like bottled water, craft beer, and the overall rise in e-commerce. I asked the panel of experts at Multi-Conveyor which markets they anticipate to see growth in and they listed three.

"Food e-commerce, craft brew and cannabis seem to be hot topics right now but the trickle-down effect has yet to be realized in volume at this point. Regarding food e-commerce, according to Supply Chain Management Review¹, food and drink online sales has grown on average 21% year-over-year since 2013," sites Cheryl Miller, director of marketing at Multi-Conveyor. "A similar Harris Poll² claims that online consumer spending (groceries), including fresh produce, are on the rise as well. This market will continue to gain momentum, creating the erection of new fulfillment centers needing mass conveyor systems to accommodate mail-order packaging and shipment capability."

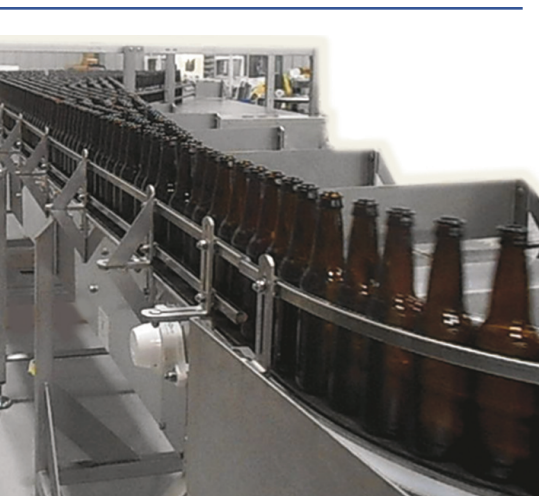
The panel continues, "The craft brew industry is booming but they're not fully automated by any stretch. Growth potential is realized when the crafters who exceed their current home-brew or smaller facility actually break out into large volume sales, distribution or, perhaps, get purchased by a national or global beer manufacturer."

"Hand-pack conveyors, tables and stations are perfect for smaller craft brewers and upcoming cannabis packagers/suppliers. We anticipate an increase in hand-pack stations used to stage product for case packaging, can-carriers, scale weighing or 6-packs to be the first indicator of growth in those markets," says Miller.

PURCHASING A CONVEYOR SYSTEM

According to the Multi-Conveyor panel, the top requests they receive from customers when purchasing a new conveyor system are:

1. Can we build a conveyor that meets their need.
2. How fast can I get a quote?
3. Is this your best price?
4. How soon can you ship?



Standard basic plastic chain conveyors are the 'go to' solution for the beverage industry.

Multi-Conveyor knows conveyors, and what is the best option for any project. It's common for customers to approach the company with a plan for their conveyor project but it then comes up with a better option.

"For nearly 75% of the projects brought to us, we opt to change at least some part of the physical layout, chain or belt types, ergonomics, or functionality to benefit the customer. It can be as simple as getting the required straight length before or after a curve,

or as complicated as a complete redraw of their system. Multi-Conveyor's vast engineering experience allows us to offer solutions

that may be more functional, cost effective, maximize productivity or save crucial floor space," reports the panel.

About Multi-Conveyor

Although known for custom conveyor and equipment solutions, Multi-Conveyor is also a leading manufacturer of standard plastic chain and plastic belt conveying equipment. Its standard conveyors are probably the most economical, quick-ship systems on the market today. The company specializes in engineered products with electrical controls, integration, turn-key solutions, and service capabilities. With a track record of thousands of quality conveying and industrial conveyor systems, Multi-Conveyor excels in sanitary, washdown, food grade and agency compliant stainless steel conveyor systems. Many are designed specifically to work in conjunction with metal detection systems, inspection, and coding systems with high volume in the frozen foods, baked products, raw and processed foods, or virtually any packaged goods industries. For more information, go to:

multi-conveyor.com

Last but not least, we asked the panel of experts for some parting advice for customers considering purchasing a new conveyor system.

The panel says, "Do your due diligence. Don't let price and delivery be the focal point of your conveyor purchase. While Multi-Conveyor excels in both of those areas, make absolutely sure the systems in comparison are quoted apples-to-apples including construction and performance. Food and beverage companies need to be sure the systems are in compliance with regulatory agencies and meet sanitary construction expectations.

Key factors that must be considered with *any* conveyor system are designs for safety, ease of use, maintenance, longevity, sanitation, quality components and how it meets the application's requirements - along with after-sales service, parts and warranty. If this research is not done up front, and a system is purchased only on lowest initial cost, a poorly performing system or retrofit could mean more money and an unnecessary headache later on in the process. There goes your perceived cost savings."

¹http://www.scmr.com/article/food_beverage_ecommerce_how_online_shopping_impacts_the_supply_chain

²<https://www.foodnavigator-usa.com/Article/2016/08/25/Harris-Poll-reveals-what-groceries-Americans-buy-online-and-why>

Learn more about Multi-Conveyor conveying solutions by visiting: www.multi-conveyor.com or visit their YouTube channel to see these solutions in action.

This article appeared in the March 2018 Issue of

Packaging
TECHNOLOGY TODAY

By: Elisabeth Cuneo,
Packaging Technology Today Editor