



DON'T BE THROWN A CURVE: UNDERSTANDING BELTED CONVEYOR VS. LIVE ROLLER CONVEYOR IN CURVE APPLICATIONS

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Curved conveyors are an integral part of conveyor systems. They provide direction changes within a facility and keep the products moving to their final destination.

Don't be confused by curves when selecting a conveyor type. Benefits and applications remain the same when using a curved or straight conveyor. Both straight and curve types work well; selection of belted or live roller depends on the application and product type. Let's review the benefits and applications of belted and live roller conveyors.

What is a Belted Conveyor?

Belted conveyors consist of two (or more) pulleys rotating with a belt looped around them. Rollers or slider beds underneath the belts support products. The belt is in contact with the product to move it, and it can be constructed of thermoplastics, metal, rubber, fabric, or leather. The type of belt material used is determined by the product conveyed or the environment (wet, cold, hot, etc.).

What is a Live Roller Conveyor?

A live roller conveyor is comprised of rollers directly in contact with the conveyed product. These conveyors are a very common and economical solution for many different industries and applications. They are ideal for firm, flat-bottom cartons. In curved applications, the rollers are tapered so the product maintains its orientation through the curve.

Belted Conveyor vs. Live Roller Conveyor Applications

The primary difference between the two types of conveyors is that a belted conveyor maintains better control of the product being conveyed. The increased friction the belt provides gives the package much less slippage, and it does not move as much on the conveyor bed.

Packages on curved live roller conveyors tend to move while making the turn and can bump into the guardrail, possibly causing a change in orientation. Curved belted conveyors will maintain the product's orientation and placement on the conveyor. This may be important if you are using scanners in the facility. We'll delve into more about the uses for specific applications.

Belted Conveyors

Irregular sized and small products. Irregular sized and small products, such as gravel, screws, and other loose items, are not able to travel over the live rollers because they can fall between the rollers. They must travel on a belt.

Changes in elevation. Since belted conveyors provide more friction and stability for the product conveyed, they are a great choice for inclines and declines. Cleats can be added to the belt to convey loose items on inclines.

Bagged products. Bagged products do not have a flat-bottom; therefore they convey best on belted conveyors. The uneven distribution of product or weight can get caught between the rollers and can cause a bumpy ride for the product. Bags of loose material will likely conform to the shape of the rollers and hinder their ability to convey on rollers. A belted conveyor will offer a smooth ride when transporting animal food, polybags, etc.

Scanners. Scanners are used with belted conveyors and are supported on slider beds for smooth transport. This allows the scanners to get the best read as possible. The scanners help with routing for the next package destination and warehouse control system integration.

Gapping and tracking. Gapper conveyors are used to improve throughput and accuracy during sortation. A gapper creates the gap between the cartons by running at a different speed than the conveyor adjacent to it. They are belted conveyors with slider beds because they offer the most product control and reduce slippage to maintain the gaps.

Live Roller Conveyors

Package stops for traffic control points. Steel pins or blades can be manually or pneumatically raised between the rollers to create a physical stoppage of products. The stoppage may be for traffic control, removal, quality inspection, etc.

Diverting wheels. During sortation, divert wheels are used to move the packages onto another path. The wheels rest in between rollers and are raised and lowered to divert products to another route.

Lift bars. Lift bars are used with live roller conveyors because the bars can fit in between the rollers. The bars raise cartons from the conveyor for a secondary operation, such as assembly, and lower them back down. They can also be used to lift a product and rotate it to change its orientation on the conveyor.

Underneath scanners. The space between the rollers can be used for a scanner eye to scan a barcode on the package from underneath the conveyor. Scanning the package from multiple directions eliminates the need for exact orientation and placement of the barcode.

Remember, belted and live roller conveyor applications are not affected by curves. Don't let the curve fool you: the benefits remain the same depending on the application. Contact a **Hytrol Integration Partner** and find the best solution for your system with either conveyor type.

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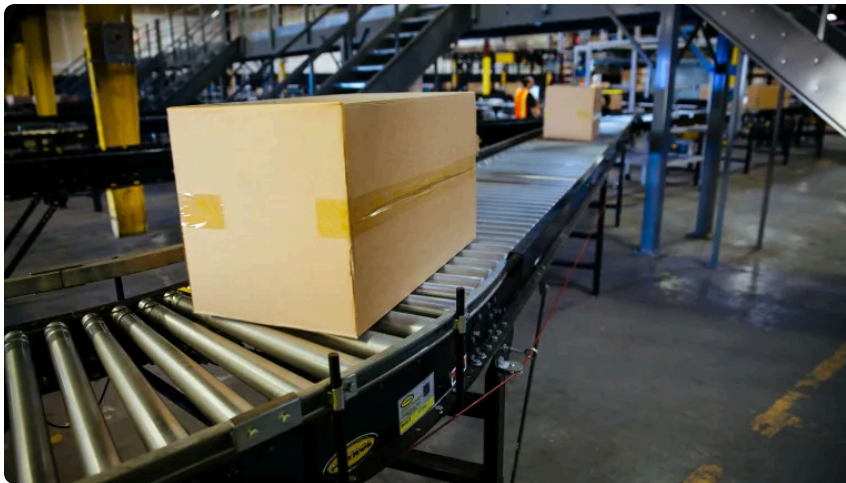
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