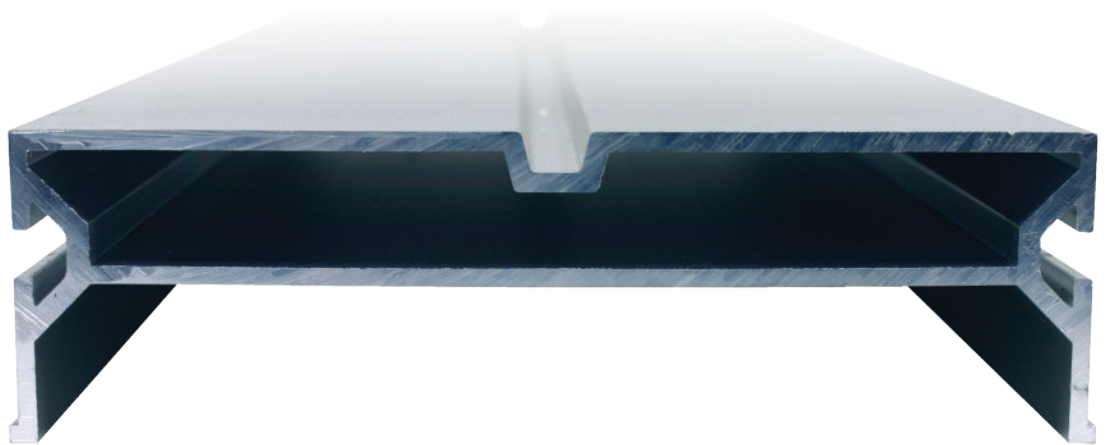


Four key innovations found in QC Conveyors' Automation Series

QC Conveyors' Automation Series was designed with a number of key goals in mind to meet the primary objective of the product: making the jobs of end users easier. It had to be reliable, simple to integrate, and easy to maintain. To achieve those goals, QC Conveyors included four key innovations in the design that have proven themselves in the ten years since the Automation Series was launched.

Single Piece Frame



The single piece frame used in Automation Series Conveyors up to 12" wide ensures long-term reliability. As a single extruded piece of aluminum, the frame maintains its alignment for the life of the conveyor, which reduces tracking problems that can lead to bearing failure and premature belt wear.

Many low profile conveyors are based on a multi-piece frame construction featuring a slider bed attached to two separate side rails. Such a design is lower in cost both to produce and to inventory. Over time, these attachments can loosen, leading to the side rails losing their alignment and skewing the pulleys at each end.

Pulley alignment is the most critical component of tracking a conveyor, so even the slightest misalignment causes the belt to track differently. Left unchecked, the belt edge becomes worn as it rubs against bearing plates, guides, and other conveyor components. In some cases it can walk completely off the edge of the conveyor.

The small bearings typical of low profile conveyors aren't designed to compensate for pulley misalignment, so they often fail when a multi-piece frame shifts. Frame misalignment can be difficult to detect, so bearings may fail and require repeated replacement before the true root cause of the issue is found.

The aluminum frame of QC Conveyors' Automation Series includes tee slots on the side that allow for stand, mount and accessory attachment. It also features a lateral cross member that prevents both lateral and longitudinal deflections.

For conveyors 18" and wider, a multi-piece steel and aluminum frame is used. A unique multi-directional fastening arrangement for joining the steel and aluminum ensures the sides will not shift over time.

Crowned Pulleys

Both the drive and tail pulleys of QC Conveyors' Automation Series are crowned, meaning they are a slightly larger diameter in the middle than at the ends. This takes advantage of the belt's natural tendency to track toward the longest part of the conveyor by ensuring the center of the conveyor is longest.



STRAIGHT PULLEY



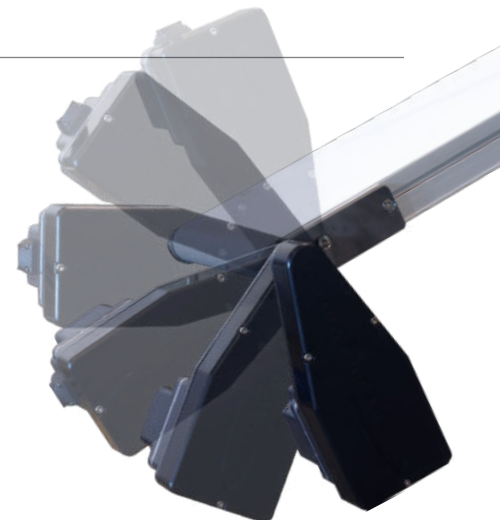
CROWNED PULLEY
exaggerated for emphasis

Crowned pulleys are the recommended method of tracking by belt manufacturers. The alternative method — tracking via a longitudinal guide commonly called a “v-guide” — is recommended only in applications where lateral forces are placed on the belt due to products entering or exiting the belt from the sides of the conveyor (Automation Series Conveyors are capable of supporting v-guide belts for these applications).

In conveyors tracked solely by v-guide, even a slight misalignment can cause the urethane guide material to rub against the guide channel in the frame and/or pulleys which causes wear of both the guide material itself and the attachment point on the carcass of the belt. V-guides add cost both to the initial belt purchase and to any replacement belts.

Movable Drive Packages

To ease integration, Automation Series Conveyors feature movable drive packages that can shift to accommodate machinery integrated with or near the conveyors. They adjust easily at initial installation or they can be changed any time application requirements change.



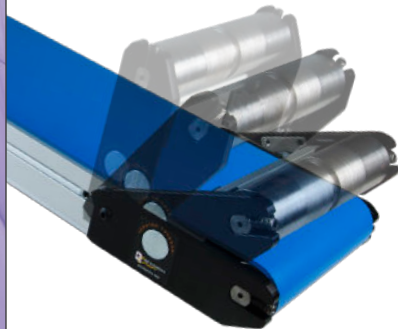
For AS40 end drive conveyors, the Pivot unit rotates around the drive pulley with a 290° range of motion allowing the same unit to function as both a bottom drive and a top drive — or any position in between — by loosening set screws, rotating by hand and retightening the set screws.

AS40-CD center drive conveyors offer a center drive unit that sits below the frame away from the ends of the conveyor, avoiding any conflicts with machinery at either end. The drive unit can be shifted along the length of the frame to accommodate particular obstacles in its environment.

Tension Release Tail

For ease of maintenance, QC Conveyors' Automation Series includes Tension Release Tails across all models. These unique tail pulleys feature push-buttons allowing the tail to be raised, thus releasing tension on the belt. Once maintenance is complete, the tail can be snapped back into place. Spring clips ensure the tail is held in place unless specifically activated by pressing both buttons simultaneously.

Unlike other low profile conveyors, this design allows *tension* to be separated from *tracking*. Any tracking adjustments made to the conveyor are retained when the tail is returned to its original position. With this feature, an operator is able to quickly wipe under the belt to clean a spill without involving maintenance staff. Additionally, it allows belt changes to be performed more quickly than traditionally-tensioned conveyors.



When tension and tracking are combined — typically by using jacking screws on the sides of the conveyor to adjust both — conveyor tracking must be adjusted each time tension on the belt is released.

With Tension Release Tails, fine tracking and tension adjustment may be made using jacking screws built into the tail. Optional rolling nosebar tails use the same Tension Release Tail assembly while reducing the tail diameter to 11mm; this allows for transfer of small parts between conveyors

These key innovations found in QC Conveyors' Automation Series have helped it to become a versatile, reliable, and proven low profile conveyor platform. Other innovations from QC Conveyors — including online configuration and quoting, five day lead times and a ten year warranty — have placed it among the most popular low profile conveyor lines in the world.