

Chain-On-Edge (COE) Alternative



Choosing the right conveyor for high quality finishing systems

When planning and designing an automated paint finishing system one of the key decisions you will make is selecting the right conveyor to transport your parts through the paint or coating system.

The choice of conveyor will have an important impact on the overall productivity, quality and efficiency of your paint finishing operation. The conveyor selection will affect: the overall space used, the size of the spray booths and curing ovens, and also the quality of finish you can expect to achieve and maintain throughout the process.

When it comes to typical high quality paint finishing, some of the common problems encountered with a typical chain-on-edge (COE) conveyor for paint finishing can be resolved with the PAC-MAX™ conveyor system.

Chain-on-edge conveyors are widely used to transport parts for painting through finishing operations. They do however, have a number of challenges that can cause reduced efficiency. Understanding these issues is important when making decisions on the type of conveyor that will best suit your particular application.

Issues with Chain-on-Edge (COE) Conveyors:

1. Carbon bushings at the hub of the traction wheel tend to wear out in the oven and seize, preventing the wheel from turning.
2. The chain lacks precision bearings allowing it to contact the steel track, creating increased friction.
3. When metal rider top-plates are used, they are subject to premature wear from dragging on the track. This drag also causes increased chain-pull and more power consumption.
4. Inclines and declines cannot be easily achieved.



TYPICAL CHAIN-ON-EDGE CONVEYOR	INVERTED PAC-MAX™ CONVEYOR
Roller chain or forged link style chain.	Wheeled Chain.
Roller chain tolerance: 0.005 in/ft. Forged link tolerance: 0.25 in/ft.	Wheeled-chain tolerance: +/- .010 in/ft. over life of the chain
External bearings are exposed, allowing paint, dust and debris to reach the moving parts.	Enclosed track design protects the moving parts from overspray and contaminants throughout the entire system.
Sprocket-type/traction wheels are high maintenance components – if not maintained this will cause conveyor jams.	Wheeled-chain – No traction wheels therefore no special corner requirements.
Extended chain pin is part of the chain – the chain will need to be disconnected in order to perform maintenance this on component.	Attachments for carriers bolt directly to the chain links.
Using a metal rider plate, cart or dolly to support the product carriers is subject to wear from dragging on the track and requires greater pulling force from the drive. This wear also shortens chain life and adds to contamination.	The PAC-MAX™ chain runs with wheels which support the chain and load.
Elevation changes must be very gradual.	Easily handles elevation changes – can incline or decline to 45 degrees.