

INSIGHTS™

Belt Conveyor Maintenance

TECHNICAL SOLUTIONS FOR BELT CONVEYOR PRODUCTIVITY

Preventing Product Loss at the Transfer



Unguarded Hitch

With the current achievements of e-commerce in today's world, also comes the exponential growth of the parcel handling industry. However, with rampant and growing success, come challenges as well. The need to be competitively productive is at an all-time high, with every minute of lost productivity costing major players in the industry hundreds of thousands of dollars. The question is, "How can you solve your pain points in a quick and effective manner?"

One of the biggest challenges the industry faces is how to maintain a conveyor belt that runs smoothly and without interruption. Transfer location gaps and hitch conveyor gaps are areas contributing to one of the biggest causes of conveyor downtime in the parcel handling industry. The gaps can lead to foreign object debris (FOD) and small packages being caught in the gap, which leads to belt damage and product loss.

Homemade UHMW Plates



Homemade UHMW Transfer Plate

The solutions available to the above-mentioned issues have been limited, with maintenance personnel often having to resort to homemade devices made from ultra-high molecular weight (UHMW) polyurethane. However, there are serious implications involved with this practice.

The first and most concerning issue with these solutions is that it is common to see gaps of 6mm to 12mm between the belt and UHMW plates. During operation, foreign object debris (FOD) is still able to make its way into the gap, causing damage to the belt and potentially conveyed package blockages. If FOD gets caught in the gap, there could be significant damage to the belt, and the belt conveyor system structure. This damage may mean hours, if not days, of downtime for belt repair. On top of this, the bevelled edges of homemade plates can cause uneven wear and rips or tears in the belt if installed directly against the belt.

The second issue is the cost and time associated with traditional UHMW transfer plates. Most of these plates, while relatively cheap to produce, have a life expectancy of only six months. Due to their short life span, time and resources must be allocated to replace the plates regularly. The installation process can be a timely and tricky procedure. As installation of the UHMW plates is often complex, it is not uncommon for the plates to be installed incorrectly, meaning additional hours of maintenance work in the future.

A third common issue is safety. While traditional UHMW transfer plates cover the gap between two conveyors, they are not effective at reducing nip hazards or crush points at the transfer point. Most transfer plates are installed with clearances between the belt and the plate that exceed recommended OSHA guidelines, making them a serious safety risk for the operators.

While homemade UHMW plates might be the only option currently available, the reality is that they are an inefficient solution resulting in unscheduled downtime, lost productivity, and potential harm to your belt and safety of your workforce.

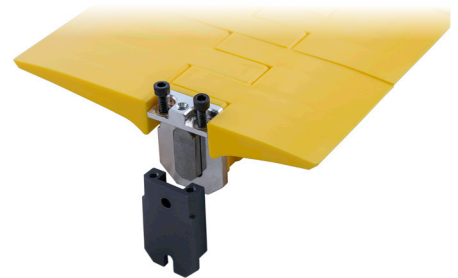
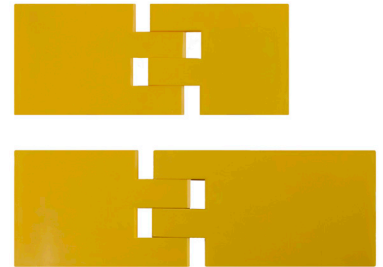
An Engineered Solution

What can I use instead of homemade UHMW plates? An engineered solution will provide you with a longer wear life, meaning less maintenance and downtime. An engineered solution with segmented plates is an even more attractive choice. In the event that FOD is caught in the transfer gap and part of the plate breaks, replacement pieces are easy to install, which means your downtime can turn from days to seconds. Engineered solutions also come in a range of sizes, meaning the perfect solution for your site is easy to select and incorporate into your belt conveyor system.

Segmented Transfer Plates From Flexco

Flexco engineers have designed and manufactured the Segmented Transfer Plate with innovative technology to create a complete solution for product loss and increased operator safety at the transfer point. The major advantage of the Segmented Transfer Plate from Flexco is the segmented design. Each plastic segment is positioned directly on the belt, which prevents product ingestion and reduces nip points and crush hazards. When installed properly, the tight seal against the belt prevents FOD from becoming lodged between the belt and the plate. In the rare event FOD does get in between the segment and the belt, the segment will lift, allowing smaller FOD to fall through. The plate can then be repaired in only 10 seconds, by simply snapping a new segment in place, resulting in no damage to the belt, conveyor structure, or packages as well as limited downtime.

- Available in a range of sizes, designed to accommodate any gap widths, from 38mm-250mm.
- Compatible with mechanical and endless belt splices.
- Bright yellow colour creates safety awareness at the transfer and makes segments easy to monitor for replacement.
- Raised ribs help reduce the surface friction on shorter transitions.



Also From Flexco:

Hitch Guards

Flexco Hitch Guards are engineered to provide a smooth transition of product over the conveyor hitch.

Mounting Systems

Choose from a Universal Mounting System, which fits most applications, or a Scanner Eye Mounting System that doesn't interfere with electronic scanner eyes, but still keeps the hitch protected.

Specially Designed Gauge

Each Hitch Guard comes with a gauge specifically designed for proper positioning in the hitch, allowing for optimal installation and performance.

