# Conveyor Process Control Solutions

Transfer Control for Conveyors

## Application challenges

Any stoppage on a conveyor belt will have a negative impact on productivity and profits.

The causes for less than optimal performance are varied and can often make it difficult for miners to achieve their primary objectives of meeting cost-per-ton targets, achieving a zero-harm goal and reducing unplanned downtime.

## Transfer control for conveyors

In mining, material handling is often managed through conveyors. Belt conveyors complement machines used in bulk material handling. And they are the main component in bulk material transport systems. Their length can vary from hundreds of meters to more than 20 kilometers in a single section. For large handling applications, conveyors can hold up to 50,000 tons per hour.

One of the most important capacities of mining material handling through conveyors is the efficient flow of materials at transfer points within the system.

## Transfer control challenges

Miners may face a variety of material transfer challenges:

- To avoid overloading, miners must optimize the distribution of material along the conveyor.
- Material must often be transferred from one system to another. And material transfers can be executed only if there is proper clearance.
  - For example, a chute cannot be switched to load materials to another system if it is under load.
- Some mining operations manage multiple ores and use the same conveyor to transport them, which makes the loading process even more complex.
  - To minimize the risk of mixing ores on the belt, it's standard practice to clear the entire conveyor between product runs.
  - These material flow challenges oftentimes result in less than optimal performance – and production delays.

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# Solution

## Transfer Control for Conveyors

### Tracking

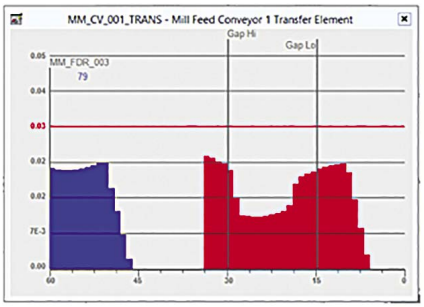
Utilize the speed, belt length, feed points and reference weightometers to accurately model the loading and positioning of product on a conveyor system. Track the distribution of product along conveyors to optimize the loading process and avoid overload.

### Gap control

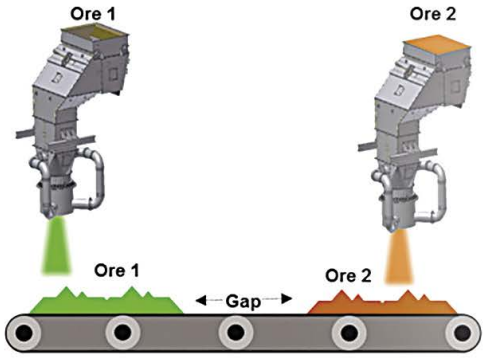
Manage loading gaps across the system. Automatically switch a chute without tripping the belt when the clearance (gap) is present.

### Manage multiple products

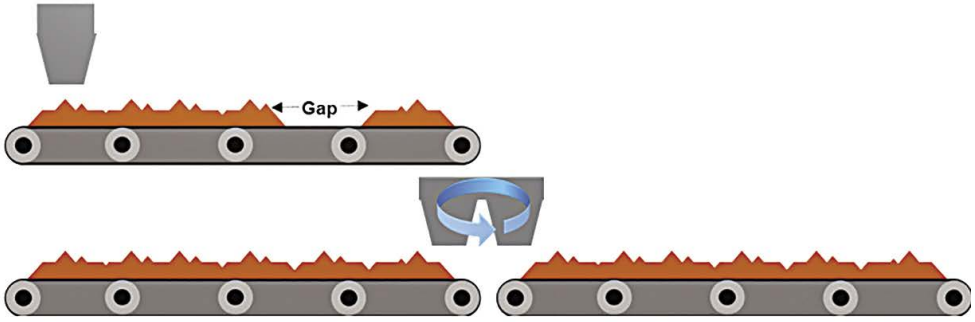
Handle multiple products on the same conveyor by creating a controlled gap between the products to increase belt throughput and operating efficiency.




Clear, visual tracking of product(s) along the conveyor makes it possible to optimize loading, efficiently switch between products, and also efficiently re-route ore.




Don't waste time and energy clearing the entire belt to switch products. Instead, create a controlled gap between the products to more efficiently prevent mixing.




Prevent material spills by only allowing chutes to switch when a proper gap is present.

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