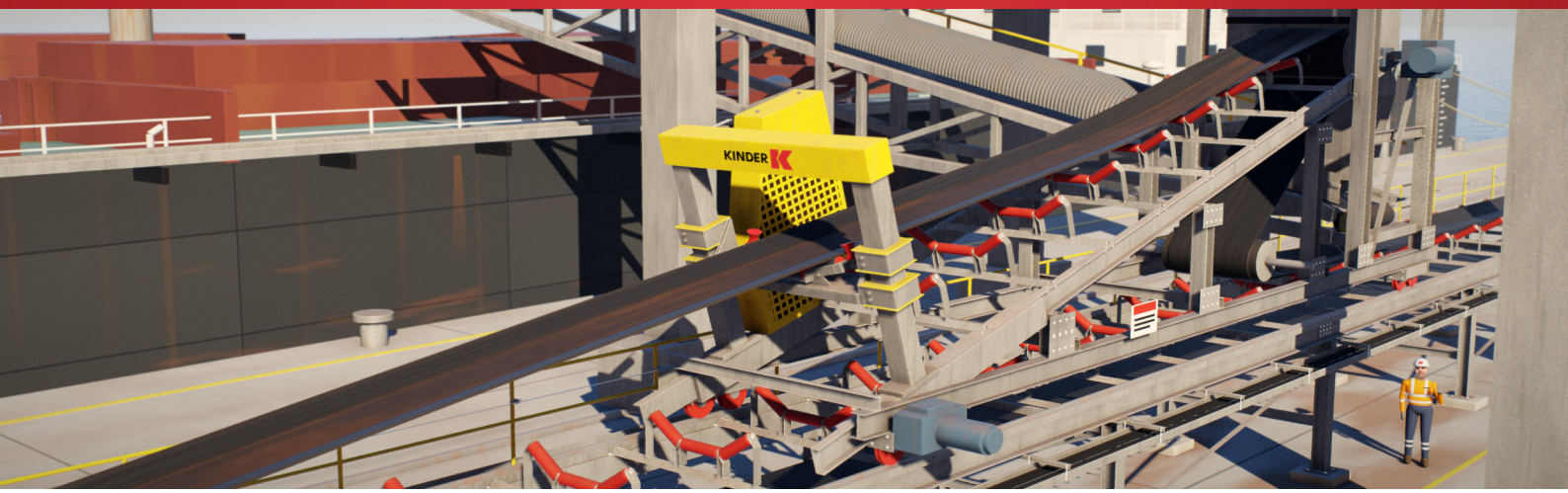
K-Commander® Adaptive Lift Tracker

Continuous belt contact. Consistent tracking control.



K-Commander® Adaptive Lift Tracker

PATENT PENDING
Aust. Provisional Application No. 2026907509

Conveyor belts can lift away from conventional tracking systems as belt tension and loading conditions change—particularly around tripper cars and concave conveyor sections.

Once contact is lost, tracking correction is lost with it, increasing the risk of mistracking, belt-edge damage, material spillage and unplanned downtime. The **K-Commander® Adaptive Lift Tracker** automatically rises, lowers and changes profile with the belt. By maintaining consistent underside contact and controlled tracking pressure, it continues guiding the belt toward a stable, centred path - even throughout lift-off events.

Designed for installation at the trailing edge of a tripper car or within concave conveyor sections, it provides active tracking where conventional fixed systems can no longer maintain belt contact.

Adaptive Tracking Through Changing Belt Conditions

The K-Commander® Adaptive Lift Tracker is a self-adjusting mechanical belt tracking system designed to follow the belt's vertical movement and changing trough profile in real time.

Its articulated three roller cradle transitions between troughed and flat configurations as operating conditions change. At the same time, a guided counterweight-controlled lifting system raises or lowers the assembly to maintain controlled contact beneath the belt.

This allows tracking correction to remain active as the belt moves through loaded, unloaded and lift-off conditions.

The system can be mounted directly to a tripper car or conveyor structure, making it suitable for new installations and selected retrofit applications.

Key Features

LIFT-OFF TRACKING
Maintains contact with the belt throughout lift-off events, allowing tracking correction to continue on tripper conveyors and concave conveyor sections.

AUTOMATIC VERTICAL ADJUSTMENT
The roller cradle rises and lowers on guided posts in response to changes in belt position and tension—without motors, electrical controls or operator intervention.

CONSISTENT CONTACT PRESSURE
An adjustable counterweight system maintains controlled pressure against the underside of the belt across changing operating conditions.

ADAPTIVE TROUGH PROFILING
The articulated three-roller cradle automatically transitions between troughed and flat belt profiles as loading conditions change.

ACTIVE LATERAL CORRECTION
Servo rollers respond to lateral belt movement and guide the belt back toward the conveyor centreline.

FULLY MECHANICAL OPERATION
The core tracking and lifting functions operate mechanically, providing a robust solution without powered actuators, sensors or electronic controls.

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40 YEARS OF INNOVATION

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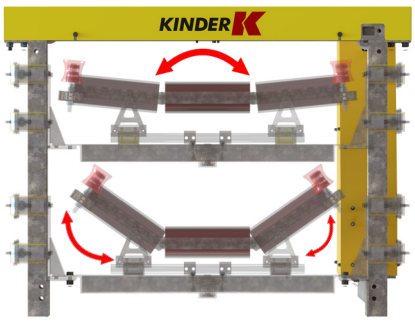
Key Advantages

Advantages	Customer Benefit
Rises and lowers automatically	No manual resets or downtime spent chasing a mistracked belt after every tripper pass or wind event.
Maintains constant contact pressure	Positive tracking control on belts that would otherwise be untrackable once lifted off their idlers.
Self-balancing counterweight design	Consistent performance across inclined and horizontal sections without recalibration.
No wind guards or hold-down rollers needed	Avoids the cost, wind-sail loading, and tripper-cart interference of traditional lift-prevention methods.
Mechanical, low-maintenance control	Simple, robust operation with no motors or electronics required in the core control system.

HOW IT WORKS

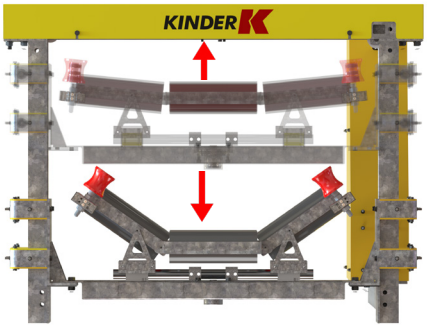
Three Rollers. Three responsive movements. Continuous Control.

At the heart of the K-Commander® Adaptive Lift Tracker is an articulated cradle carrying three trough rollers and two servo rollers. The rollers are pivotally connected, allowing the entire assembly to respond as belt loading and geometry change.



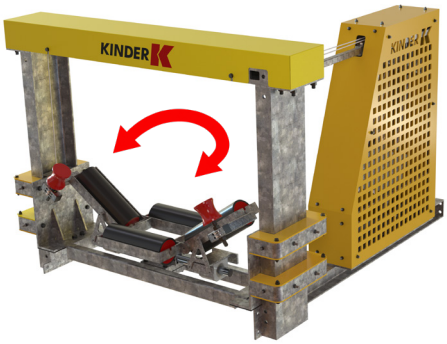
1 Adapts to the belt profile.

Under load, the roller cradle supports the belt in its operating trough. As the belt unloads, flattens or lifts, the trough rollers pivot together and the cradle automatically adjusts to the changing belt profile.



2 Follows Vertical Belt Movement

The complete cradle travels vertically along linear guide posts. An adjustable counterweight system responds to changes in the belt's vertical force, allowing the assembly to rise or lower while maintaining controlled underside contact.



3 Corrects Lateral Movement

Servo rollers respond when the belt moves away from the conveyor centreline. This produces an active corrective influence that guides the belt back toward a stable running position.

The pivoting counterweight arrangement maintains effective gravitational control across both horizontal and inclined installations, helping the system remain responsive as tripper position and conveyor geometry change.

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Built for bulk materials handling

The K-Commander® Adaptive Lift Tracker is engineered for bulk materials handling applications where belt lift-off, changing trough geometry and mistracking occur together, and is ideal for:

- Tripper conveyors.
- Travelling tripper cars.
- Concave conveyor sections.
- Inclined conveyor systems.
- Wind-exposed conveyor structures.
- Loaded-to-unloaded belt transitions.

System Inclusions

Automatic Counterweight System

Preconfigured adjustable weight plates allow the system to be tuned to suit belt tension, loading and site operating conditions.

Adaptive Roller Cradle

A complete articulated three-roller assembly that follows changing belt profiles while providing continuous underside support.

Guided Lift Assembly

Linear guide posts control vertical cradle movement, allowing the tracker to rise and lower smoothly with the belt.

Lateral Steering Rollers

Servo rollers provide active belt correction and guide lateral movement back toward the conveyor centreline.

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