

WEST RIVER CONVEYORS | BEHIND THE STEEL SERIES #2

The **Impact Bed Tail Section** is a specialized component of a conveyor system, located at the tail end opposite the head drive. It's frequently placed where the belt transitions from the return side to the carrying side. Its UHMW polyethylene bars, instead of traditional rollers, provide a lower friction surface that minimizes belt wear, reduces friction and eliminates changing out seized rolls.

At the tail section, the belt is often under stress due to material loading, take-up tensioning, and directional change. A glide bar tail section protects your belt where it matters most — at the loading point. The smooth, flat surface created by glide bars ensures centered loading and prevents mistracking issues at the loading point.

Fact

Impact bed tail sections are an investment in belt longevity, uptime, and safety. Impact energy is absorbed in the loading area, reducing wear and tear elsewhere along the conveyor.

HINGED COVERS

This tail section frame is equipped with heavy-duty steel hinged covers. They protect the load section from feeders or heavy-duty loaders that could damage the area. The hinged covers allow for ease of access to the loading area, improve safety, reduce downtime, and provide dust and debris control.

TRANSITION GLIDE STRUCTURE

This tail section is equipped with five degree, 3" thick UHMW transition glide structure manufactured on-site in West River's machine shop. Glide beds are excellent for use in high impact areas because less friction is created on the belt, allowing for longer belt use than impact or steel roller structure.

TAIL SECTION FRAME

This frame is made with heavy-duty structural steel to withstand the harshest mining conditions. West River frames are built from a heavier steel than many competitors use, providing a sturdier frame for more rugged operations.

SKIRTING

Typically made from steel or vertical plates, skirting is a containment system fitted to seal the loading zone. Its purpose is to prevent fugitive dust and spillage along the sides of the conveyor. **Skirting 1** is installed on the inside and runs along the full length of the hinged lids.

Impact bed tail sections typically require a tail pulley to redirect and tension the belt. Specific pulley configuration can vary depending on the system.

TAIL PULLEY GUARDING

MSHA-approved pulley guarding is a regulatory requirement, and a best practice, for reducing injury. The covers are bolted together in a way for easy removal to quickly access the tail pulley. Grease hoses are run through the guarding for easy, central lubrication.

TAIL PULLEY + BEARINGS

The tail pulley serves as the turning point for the belt and provides initial belt tension for the system. In this application, West River used spiral tail pulleys to prevent material buildup that causes belt mistracking, cover damage, premature bearing and pulley wear, and belt slippage. The pulley is equipped with pillow block bearings which support the pulley shaft and ensure smooth rotation under heavy loads.



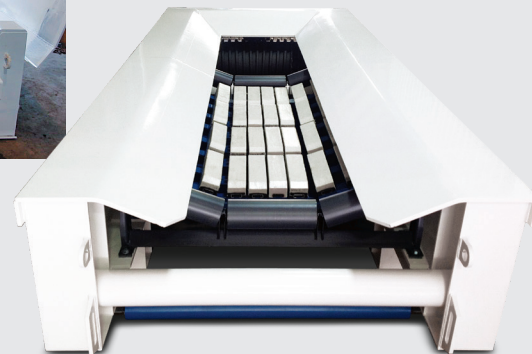
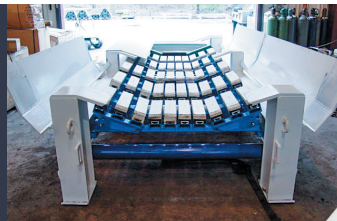
Impact Bed Tail Section

Key Differences:

FEATURE	IMPACT BED TAIL SECTION	TRADITIONAL ROLLER TAIL SECTION
SUPPORT AT LOADING SECTION	Smooth, low friction surface	Intermittent contact
IMPACT ABSORPTION	Excellent	Good — impact transferred directly to rollers and idlers
MAINTENANCE	Low	High — rollers wear faster
EASE OF REPLACEMENT	Easy — modular	Moderate — heavier
SPILLAGE & DUST CONTROL	High — impact area less abrasive	Lower — abrasive impact area
SAFETY	Improved — no rotating parts	Moderate — rotating parts
TRACKING SUPPORT	Better — flat and consistent surface	Less consistent (roller gaps cause sag)
PERFORMANCE IN HARSH ENVIRONMENTS	Excellent — resistant to corrosion and build up	Poor — rollers prone to corrosion at loading point
COST OVER TIME	Lower — less wear	Higher — more frequent replacement

IMPACT BED TAIL BENEFITS:

- Reduces belt wear in the loading zone
- Fewer spillage issues as the flat surface creates a tighter seal, causing less material spillage
- Improves ease of maintenance as glide bars are typically modular and more lightweight
- Reduced belt wear and fewer spillage issues means less unscheduled shutdowns
- Ideal for harsh environments where traditional rollers may clog
- Lowers overall cost because less downtime and wear



Impact bar tail sections with hinged lids