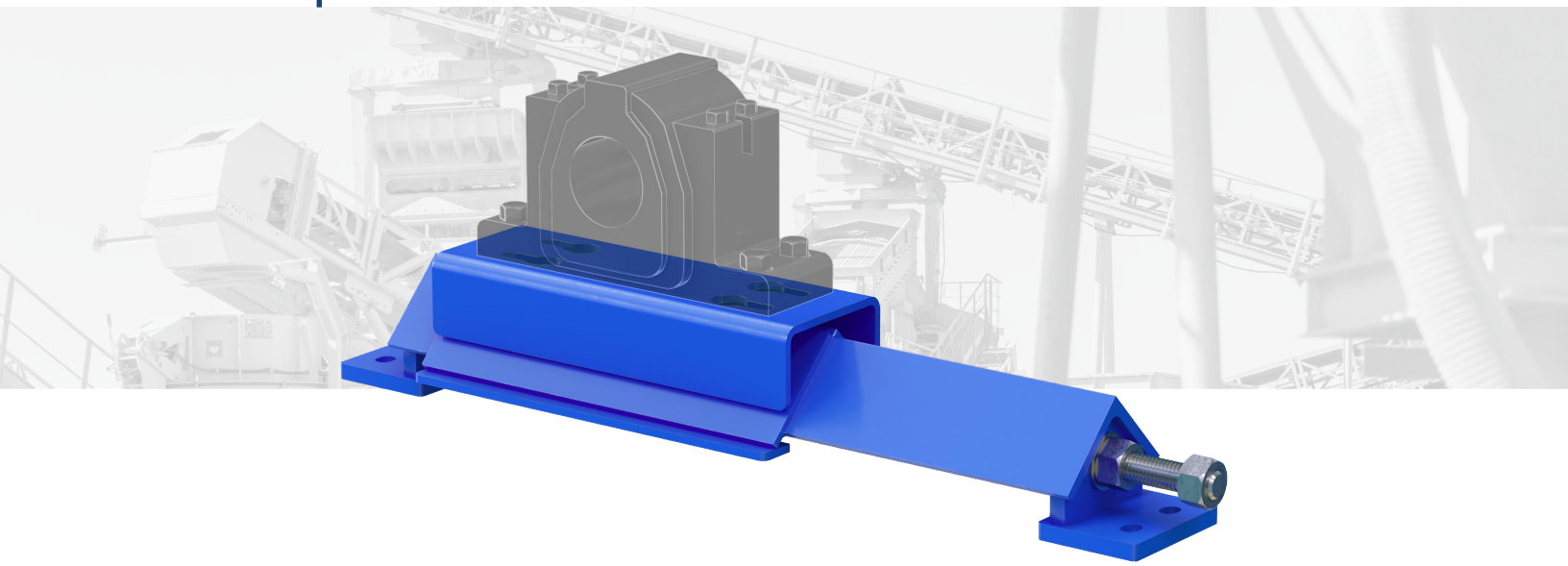
Conveyor Belts

Take-Up Frames



Keep your employees safe while extending conveyor belt life and increasing yield

A belt conveyor that is properly designed with take-up frames can have several benefits for both employee safety and conveyor system maintenance. Maintaining proper tension on the belt is crucial to prevent inefficiencies caused by belt slippage at the drive pulley and reduce belt sag, which can affect the product life of the belt and components. Martin take-up frames can provide tension to the belt throughout the conveyor system, extending the life of the belt, reducing maintenance costs, and increasing yield.

Extend conveyor belt and component life

Reduce maintenance and operate safely

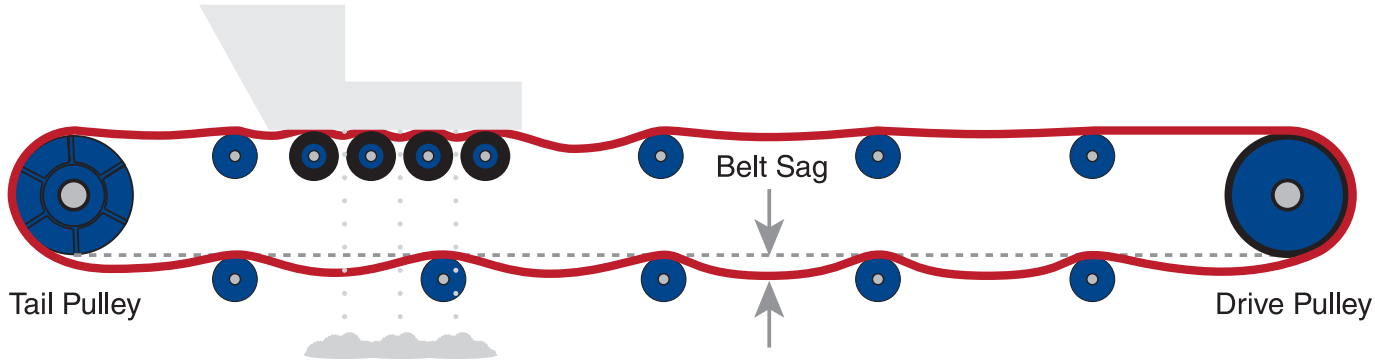
Reduce costs and unplanned downtime

Extend conveyor belt and component life

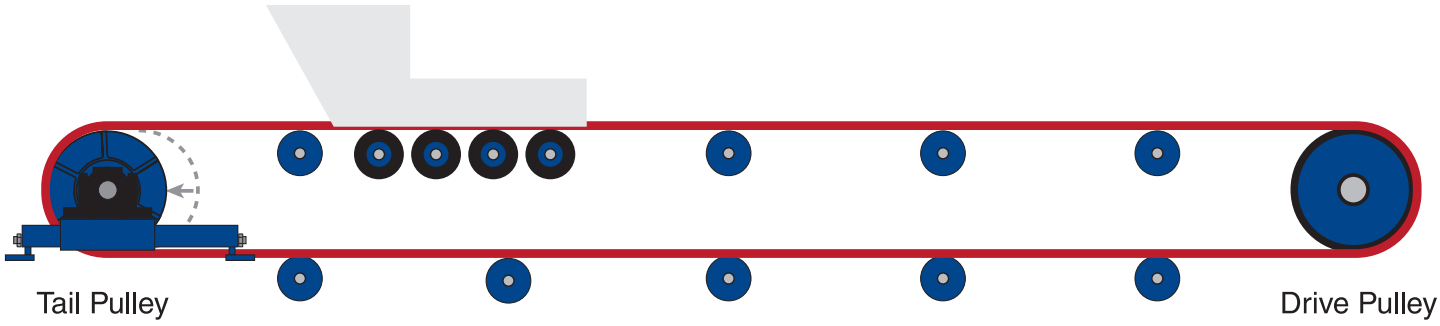
Reduce belt sag

Maintaining adequate belt tensions on a belt conveyor with take-up frames can reduce belt sag. Take-up frames are used to account for 2-3% of belt stretch on belt conveyor systems typically less than 150 feet in length, measured centerline of head pulley to centerline of tail pulley. Tension on the belt is crucial to prevent inefficiencies caused by belt slippage at the drive pulley and reduce belt sag, which can affect the product life of the belt and components. Belt sag can result in loss of conveyed material through gaps between the belt and skirting at the load zone. The drawing below displays a comparison of a belt conveyor with and without using a take-up frame to maintain belt tension.

Without take-up frame



With take-up frame



Tensioning belt with take-up frame

Video

Reduce maintenance and operate safely

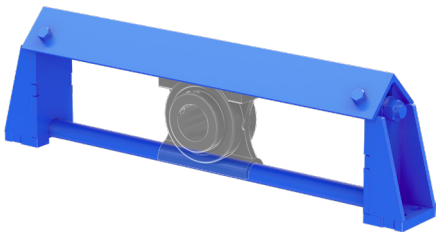
Prevent belt slippage

Optimal belt tension is crucial for the efficient and safe operation of a belt conveyor. When the belt is not adequately tensioned, it can slip on the drive pulley due to loss of traction, causing the belt to lose speed. Frequent slipping of the conveyor belt can also cause premature wear of the belt and pulley lagging, resulting in frequent replacements of expensive components. This not only increases the costs associated with replacing the belt but requires more downtime for maintenance, which can lead to potential accidents around the conveyor causing reduced productivity and profitability.

Reduce costs and unplanned downtime

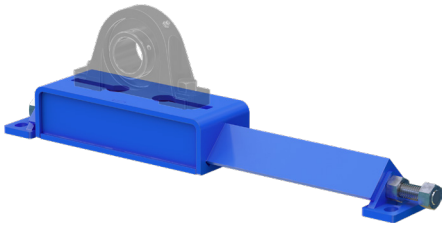
Stock configurations and compatibility

Martin's industry-leading manufacturing quality and technical expertise provide the user with more opportunities to select the perfect fit for any industrial application. A large inventory footprint with a wide range of interchangeability with other manufacturers allows users to reduce costs and unplanned downtime by ensuring readily available, on-hand inventory and offering customized solutions for optimal performance.



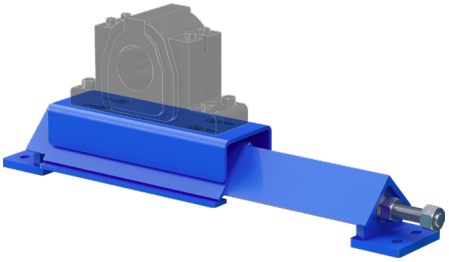
Top Angle Take-Up Frame (MTA)

- Used in medium and heavy applications
- Threaded rod/screw is protected by angle iron to prevent damage from material spillage
- Top angle bearings can be provided with frame upon request
- Top-mounted



Light/Medium Duty Take-Up Frame (MLD)

- Designed for medium duty applications
- Solid, one-piece bearing mount; pre-slotted for 2-bolt pillow block bearings
- Pillow block bearings can be provided with frame upon request
- Top-mounted



Heavy-Duty Take-Up Frame (MHD)

- Constructed of minimum ¼" steel for heavy applications
- ACME threaded rod/screw standard on all sizes
- Bearing mount drilled per order to accommodate any brand and series of pillow block bearing
- Pillow block bearings can be provided with frame upon request
- Top-mounted

Take-up frame interchange and bearing compatibility

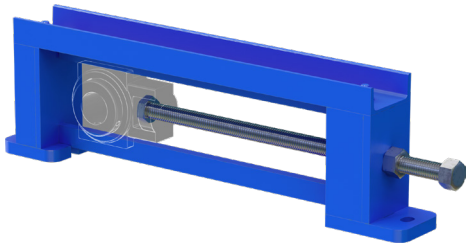
Literature

Reduce costs and unplanned downtime

Stock configurations and compatibility

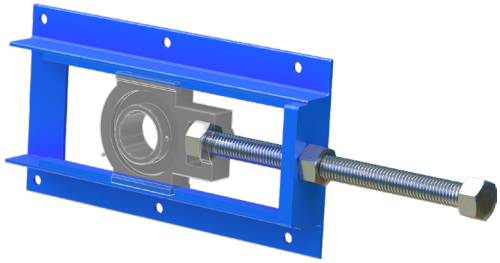
Center Pull Take-Up Frame (MCP)

- Foot-mounted frame allows for simplified installation and adjustment in a variety of applications
- All-threaded rod attaches directly to the center of the housed bearing unit
- Wide slot roller bearings can be provided with frame upon request
- Top-mounted



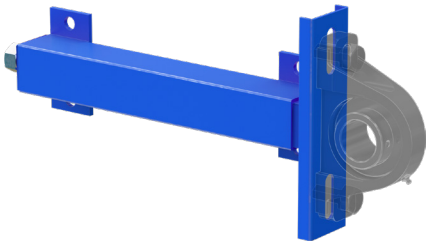
Wide Slot Take-Up Frame (MWS)

- Compact frame design, typically mounted horizontally on the side of the structure and used where space is limited
- Wide slot ball bearings can be provided with frame upon request
- Side-mounted



Tube Take-Up Frame (MTTU)

- Suitable across various applications and portable equipment
- Telescoping tubes create sealed area to protect threaded rod/screw
- Can be bolted or welded to the conveyor structure; allows for unsupported extension of the pulley beyond the structure
- Pre-slotted for 2-bolt pillow block bearings
- Pillow block bearings can be provided with frame upon request
- Side-mounted



Take-Up Frame Comparison

Take-Up Frame	Shaft Size Range*	Bearing Style	Bearing Type	Travel Distance *2-3% of conveyor length*	Conveyor Mounting Position
Top Angle (MTA)	1 15/16" - 3 15/16"	Top Angle	Roller	12" - 48"	Top
Light/Medium Duty (MLD)	up to 3 7/16"	Pillow Block (2-Bolt)	Ball	6" - 48"	Top
Heavy-Duty (MHD)	1 15/16" - 5 15/16"	Pillow Block (2-bolt or 4-bolt)	Roller	12" - 60"	Top
Center Pull (MCP)	1 7/16 - 3/15/16"	Wide Slot	Roller	12" - 36"	Top
Wide Slot (MWS)	1/2" - 2 15/16"	Wide Slot	Ball	6" - 30"	Side
Tube (MTTU)	up to 3 7/16"	Pillow Block (2-Bolt)	Ball or Roller	6" - 48"	Side

** See bearing compatibility reference (QR code) for the shaft size range per bearing type*

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