Metso:Outotec

Customized replacement and retrofit solutions

Stacker reclaimer upgrades

Slew bearing,
Bucket wheel and drive,
Travel bogie system



Metso:Outotec

Stacker reclaimer upgrades

Significantly improve **reliability, maintenance efficiency**, and **safety** with our range of customized replacement and retrofit solutions.



As your production goals evolve, so should your equipment. For the latest technoloy and efficiency, you don't have to look very far. Your existing assets have the potential to take on significant improvements. We offer a variety of upgrades aimed to maximize the performance of your stacker/reclaimer.

Ask about our full range of retrofit options and custom stacker reclaimer solutions.

The Metso Outotec solution

Metso Outotec can help you understand which parts on your stacker reclaimers are worn down, close to failing, or need immediate replacement. We can also recommend upgrade and refurbishment options to get your machines back up and running as they were designed. These include:

Slew bearing

- Cannon ball style slew bearing, Truck-on-ring rail and inverted trucks, Live-roller or wheel-on-ring rail, Other proprietary designs

Bucket wheel and drive

- Bucket, Bucket wheel drive, Split bearing and shaft

Travel bogie system

- Bogie, Drive, Electrical / Positioner, Rail clamp, Structural, Replacement program

Why partner with Metso Outotec

As an OEM, Metso Outotec has been designing equipment, parts, and retrofit solutions for apron feeders for more than one hundred years.. We've combined the best features from our industry-leading legacy brands with modern technology to bring innovative and reliable solutions. With the use of advanced engineering tools, we ensure accurate and superior manufacturing that meet Metso Outotec's strict standards and tolerances.

Brands we support

- Metso Outotec, Svedala, McDowell Wellman, Mukand McNally, McNally Wellman, McNally Pittsburg, Strachan & Henshaw, Stephens Adamson, Dravo.

*Also available for select non-Metso Outotec equipment

More for your apron stacker reclaimer

Our experts can support you with inspections for key components, parts installation and repairs, as well as life cycle services including long-term service agreements.

Benefits

- Maximize equipment performance with a cost-efficient solution
- Gain new functionality with modern technology
- Ensure equipment reliability and longevity
- Improve ease and timeliness of maintenance activities
- Reduce safety risk

Stacker reclaimer replacements and upgrades

Slew bearing

Replacing the slew bearing & components is one of the most challenging jobs on a stacker/reclaimer. We are here to help!

Your challenge

A slew bearing is a rotational rolling elements bearing that supports and allows yard machines to operate on a horizontal axis. The slew ring assemble is located between the non-rotating base frame and the rotating slew deck structure. There are many used in almost all yard machine applications. Many different types of bearings have been applied to yard machines over the years as technology and requirements have evolved.

Wear and tear from years of services on the slew bearing, the centerpiece of slewing machines, can cause a myriad of problems. As the bearing races wear both vertically and laterally, issues such as:

- Structural interference, Machine instability, Range of motion restrictions. Slew drive damage can affect the availability of your machine

Waiting too long to change the slew bearing can result in lengthly, unplanned downtime for your operation.

The Metso Outotec solution

Upgrade or replace your slew bearing - You've got options

With proprietary and commercial options available, our experts will help you determine which slew bearing is best suited for your needs.

Replacements

A great replacement option is a "cannon ball" style bearing, which is one of our proprietary in-house designs. Can also replace other OEM bearings and slewing arrangements, such as truck-on-ring rail, or wheel-on-ring rail. Option to convert these types of machines to proprietary cannon ball design to extend the service life of the slewing components. With a yearly structural/ mechanical inspection plan, we can track bearing wear and bolt torque control to determine when to repair or replace any component

Upgrades

Metso Outotec is capable of providing the following improvements to your existing slew bearing:

- Extended life cycle by improving material chemistry on the races. Eliminated "ball-on-ball" wear with the addition of plastic spacers between the balls. Optimized load carrying capacity through advanced engineering simulations and retrofit solutions. Simplified bearing installation with an improved segmented design

Additionally, as part of a yearly structural/ mechanical inspection plan, we can help track bearing wear and bolt torque control to determine the appropriate time to repair or replace any component.

Discover our service portfolio:

mogroup.com/products-and-services/services/









Stacker reclaimer replacements and upgrades

Bucket wheel

Replacing the bucket wheel can be one of the most difficult and hazardous jobs on a stacker/reclaimer. We are here to help!

Your challenge

The bucket wheel and drive are responsible for reclaiming the material for your operation along the stockyard.

Wear and tear from years of service can cause a myriad of problems if not properly addressed and maintained.

- Preventative maintenance
- Replacing bucket wheel components
- Anticipating failures
- Avoiding unplanned downtime
- Ensuring safety of operators

The Metso Outotec solution.

We offer a variety of upgrades aimed to maximize the performance of your stacker/reclaimer Incorporating modern technology without major investment.

Bucket

- Convert from a cell type bucket wheel to cell-less bucket wheel
- Reduce spillage from a cell-less type bucket wheel with the addition of a customized trough
- Add liners to buckets and chutes to increase the operational life of the equipment
- Bucket profile can be redesigned to optimize fill capacity and cutting into the pile with an improved angle of attack
- Torque link with shock absorbers can be added to improve shock loading and avoid stress on the drive gearbox

Bucket wheel drive

- Complete gearbox rebuild can be assembled and tested in a Metso Outotec approved shop
- Drives can be retrofitted with modern commercially available planetary reducers with VFD's or low speed, high torque hydraulic motors with high precision in speed control. Hydraulic arrangements allow for weight relief at the boom tip
- Add a secondary catch to the drive unit to eliminate any risk of the drive falling to the ground in the event of an accident. A platform or wire rope catch can be added to secure and make sure the drive is caught

Split bearing and shaft

- Upgrade existing bucket wheel shaft bearings to a split bearing for ease of maintenance
- The process is simplified and costly maintenance for replacement is eliminated. The bearings can be replaced or repaired in a matter of hours rather than days
- Redesign bucket wheel hubs from tapered to straight with a shrink disc and possibility to add a sleeve to shaft to extend its life
- Can replace an older style tapered shaft and hub with a new straight shaft and hub that utilizes a shrink disc connection
- Thread the end of the shaft and provide a safety nut for added security of the bucket wheel

Discover our service portfolio:

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Stacker reclaimer replacements and upgrades

Travel bogie system

Your existing assets have the potential to take on significant improvements.

Your challenge

The bogie travel system is responsible for sharing the load of your machine and controlling the movement along the stockyard.

Wear and tear from years of service can cause a myriad of problems if not properly addressed and maintained.

- Preventative maintenance
- Replacing travel system components
- Anticipating failures
- Avoiding unplanned downtime
- Ensuring safety of operators

Replacing the travel bogies can be one of the most difficult and hazardous jobs on a stacker/reclaimer. We are here to help!

The Metso Outotec solution

We offer a variety of upgrades aimed to maximize the performance of your stacker/reclaimer Incorporating modern technology without major investment.

Bogie

- Shaft mounted motor-reducer
- Rocker pin design for faster replacement
- Eliminates multiple location specific travel/idler bogies and create a universal design that will work anywhere on the machine

Drive

- New variable frequency drive system for the travel function on your machine
- One VFD can be used to control individual travel motors, based on preference
- Option to upgrade from DC to inverter duty AC brake motors or implement SCR variable speed drives while keeping the existing DC drives
- Smooth and controlled acceleration and deceleration when moving along the yard rails

Electrical/Positioner

- Laser positioning system can replace traditional encoder sensor to eliminate moving parts
- Provides accurate position readout in the stockyard in the harshest operating conditions
- More consistent readings, eliminates wheel slippage effect, wheel wear effect, and bad readings from inclement weather
- Enhanced RFID sensors and mounted RFID reader

Rail clamp

- Modern, commercially available, self-contained unit that mounts either directly to the machine's structure, or off one of the bogie assemblies
- Fail-safe functionality of the rail clamps can be restored for guaranteed safety

Structural change and Replacement program

- Bogies rebuild process

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Metso Outotec is a frontrunner in sustainable technologies, end-to-end solutions and services for the aggregates, minerals processing and metals refining industries globally. By improving our customers' energy and water efficiency, increasing their productivity, and reducing environmental risks with our product and process expertise, we are the **partner for positive change.**

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