The Jeffrey Rader® Stoker Reclaimer

Sliding frame reclaiming device designed to keep your facility running smoothly with a constant flow of material.

Features/Advantages

Operation

Jeffrey Rader® stoker reclaimers utilize multiple moving ladder assemblies at the base of the bin to gently and efficiently convey material from the infeed zone to the stoker discharge. Designed for versatility, these systems can be configured for above-ground discharge bins, in-ground open pile reclaimers, and truck or railcar receiving applications.

The ladders are hydraulically actuated and can be configured in either a push or pull arrangement. In a push system, cylinders are positioned at the infeed end of the bin; in a pull system, they are located at the discharge end. Hydraulic pumps and motors are nearby for easy access and maintenance.

The ladders are engineered to advance material in a single direction with each hydraulic stroke. As the cylinder extends, material is pushed forward; at the end of the stroke, the cylinder reverses and the ladder's tapered trailing edge slips beneath the material. Its contoured design, combined with anti-return bars, prevents backflow and holds the load in place until the next cycle. With each reversal, the process repeats—delivering consistent, controlled movement toward the discharge opening.

Coordinated ladder sequencing ensures a consistent material discharge: as one ladder advances to discharge, the adjacent ladder simultaneously returns to its starting position—ready to engage as the first completes its stroke. The number of ladders is determined by the required feed rate and the size of the bin being discharged.

As material is advanced toward the discharge opening by the ladders, it passes through adjustable gate bars that promote controlled breakup. These bars function as a shear-opening metering gate, allowing precise tuning of the discharge rate. Their segmented configuration and optimized spacing minimize shear resistance—reducing power demand compared to a continuous-edge gate design..

After passing through the adjustable gate bars, material can be further conditioned by an optional rotating spike roll assembly, which breaks up remaining clumps or ice and completes the leveling process. The material then flows by gravity into the discharge takeaway—typically a metering screw conveyor—for controlled handling downstream.

Advantages

Material cannot permanently bridge to hamper the discharge operation.

- Material is moved gently, preventing dust and minimizing degradation into fines and pins.
- Ensures first-in, first-out movement of material for consistent turnover.
- Provides reliable, safe operation with very low wear and tear of moving parts inside the bin.