

Reclaimers - Product Range

Sandvik reclaimers are designed to reclaim bulk materials from stockpiles at mines, ports, steel plants, power stations, etc. in a quick, efficient and orderly way. They are available in several main types, including bucket wheel, scraper and drum-type reclaimers, and in many configurations and sizes, with capacities from 500 to 20 000 tonnes per hour and more. The choice of design depends on factors such as the size and shape of the stockpile, the type of material to be reclaimed, the required reclaiming rate and the need for blending or homogenization.

BOOM-TYPE BUCKET WHEEL RECLAIMERS PR100 - PR200

Sandvik boom-type bucket wheel reclaimers are designed to reclaim large volumes of bulk material from stockpiles at mines, ports, power plants, steelworks etc. They can be mounted on rails or tracks, with exact design, boom length and control system tailored to suit the stockpile configuration, the type of material to be handled and the needs of the customer. Boom length can range from 10 to over 60 meters and the exact configuration, as well as the operational features, will always depend on the application. The following two configurations can be provided:

PR100 - PYLON TYPE

The consistent performer - combines a good ratio between machine weight and capacity. Very popular in low to medium bulk density applications and medium ore applications.

PR200 - ROCKERTYPE

Super-duty machine - minimizes the migration of the center of gravity in operation to allow very high capacities and an economic rail gauge and to keep utilizable stockyard width at a maximum.

BRIDGE-TYPE BUCKET WHEEL RECLAIMERS PR300

Sandvik bridge-type bucket wheel reclaimer designs are for a more efficient blending purpose. This can be even more improved by means of a dual bucket wheel design. They are typically used in the coal, iron-, and steel industries for reclaiming material from stockpiles where homogenization is a primary requirement. The harrows are designed to promote homogenization and direct the flow of material to the base of the pile, where it is scooped up by the buckets and discharged on to a cross conveyor that either passes through the axis of the wheel, or is connected to the bucket wheel by means of an intermediate conveyor.

PORTAL SCRAPER RECLAIMERS PR400

Full portal scraper reclaimers usually reclaim the material from the surface of the stockpile in a longitudinal direction from one side of the pile only, down the full length of the pile. They discharge the material on to a conveyor belt along the stockpile. Because of the reclaiming path from the surface, traveling portal scrapers have limited ability to homogenize the material, unless a strict and rather complicated material layering scheme is implemented. They can be a good solution for small to medium capacities and where homogenization is not a priority.

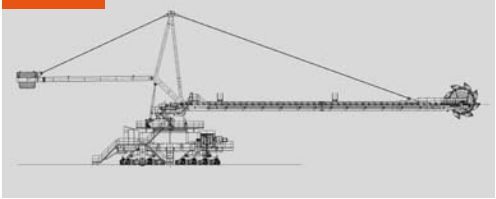
BRIDGE-TYPE SCRAPER RECLAIMERS PR500

Front-acting bridge scraper reclaimers that operate in a transverse, slice-wise manner are clearly superior to those that reclaim the material longitudinally, because they cut across the pile layers and blend the material effectively during reclamation.

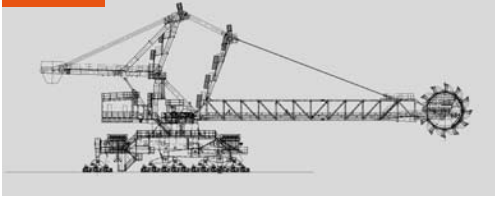
DRUM-TYPE RECLAIMERS PR600

Essentially, the drum-type reclaimer is the alternative to single- and double bridge-type bucket wheel reclaimer. It comprises a long rotating drum fitted with a large number of reclaiming buckets arranged radially along its length, into which material is fed uniformly by the harrow. The drum-type reclaimer is a good solution if good homogenizing characteristics are of paramount importance.

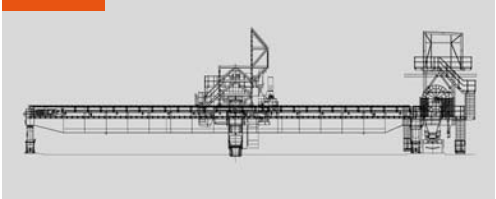
PR100



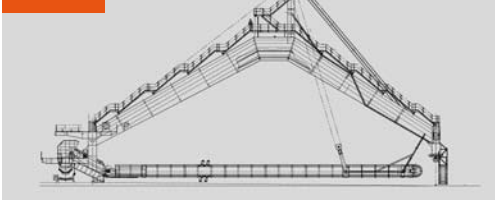
PR200



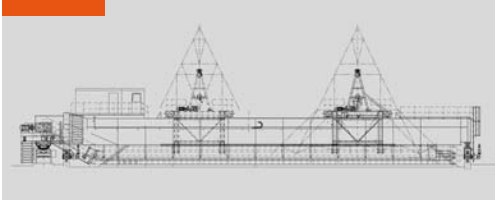
PR300



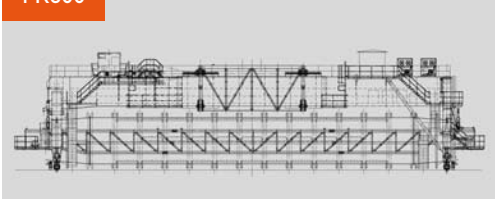
PR400



PR500



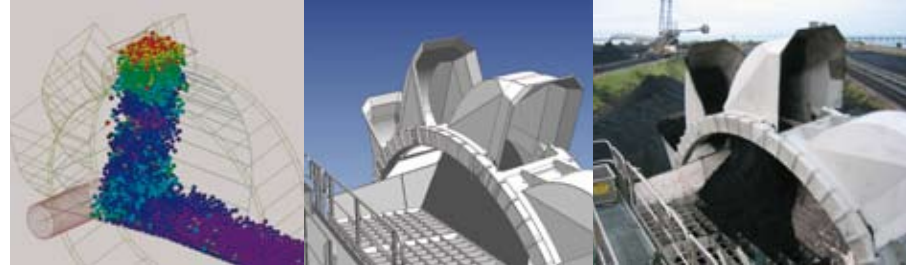
PR600



Performance Features

EXCELLENT CHUTE SYSTEMS

Technology drives our customized chute designs including 3D-modelling and discrete element method (DEM) which simulates continuous material flow ensuring optimal materials flow of dry and sticky materials at the bucket wheel chute and other critical transfer points.



LONG TRAVEL DRIVE SYSTEMS

Long travel drive systems are one of the most important components on reclaimers. Sandvik offers a variety of reliable long travel drive systems suitable for all kinds of applications and environments - equipped with automatic lubrication and advanced sealing systems of the wheel bearings.

IN-HOUSE CONVEYOR COMPONENTS

Reliability of reclaiming is one of the most important issues in stockyards - achieved amongst others through consistent functioning of conveyor components on the conveyor systems of reclaimers. Sandvik's offering includes components with an emphasis on performance and reliability for various applications. The effective and reliable running of rollers and pulleys is our long-term objective, which is supported with the entire range of conveyor components. Safety and control devices add the final touch to Sandvik's conveyor components, to be sure that both personnel and equipment are in good hands.

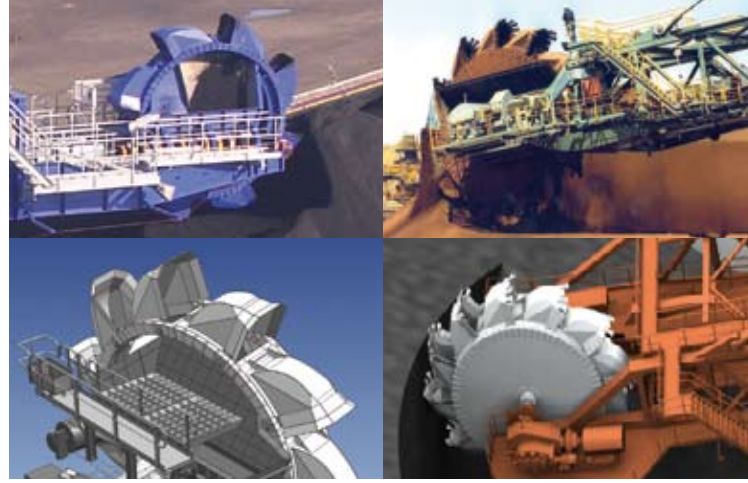


MINIMIZING DUST EFFECTS

Dust caused by the reclaiming and material transfer processes is environmentally problematic. Sandvik offers, wherever required, dust suppression systems such as water spray lines close to the bucket wheel and along the complete boom. Solenoid valves to shut off the sprays when no material is being conveyed control these sprays.

LEADING BUCKET WHEEL TECHNOLOGY

Each bulk material has different behavior with regard to cutting forces, free flowing capabilities and adhesiveness. Sandvik offers tailor-made designs for the complete range of bulk materials, to combine excellent cutting geometries with high abrasion resistance and prevention of bucket incrustations.

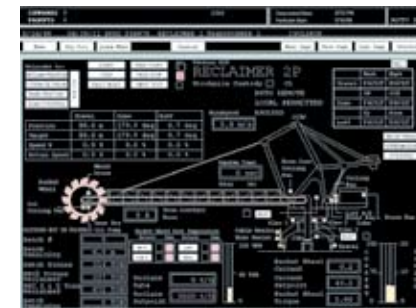


DRIVE CONCEPTS

Depending on the application, Sandvik individually designs drive concepts for each appropriate drive train. These can include electromechanical variable speed drives (VFD or VVFD), electromechanical constant speed drives with fluid coupling, as well as hydraulic drives, whatever is the most suitable drive for the field of application.

AUTOMATED CONTROL SYSTEMS

Sandvik's semi-automatic and automated control systems with its PLC (programmable logic controllers) and HMI (human-machine interfaces) gives the operator a wide range of settings and reclaiming options. This enables the operator to focus on maximizing his results in a comfortable environment.



STOCKPILE EFFICIENCY

With our long-term experience in development, design, and supply of bulk material handling equipment, Sandvik is able to offer consulting assistance for customers from the very early stage of the project by means of feasibility and viability studies as well as conceptual design and optimized stockpile-layout planning of projects. Sandvik supports the economic success of a project based on the careful selection of efficient processes and first-class equipment.

Sandvik is a high-technology engineering group with world-leading positions in selected areas – tools for metal working, advanced materials technology, and mining and construction. We employ more than 47 000 people and are represented in 130 countries.

Sandvik Mining and Construction represents one third of the overall Sandvik Group and serves a broad range of customers in construction, mineral exploration, mining and bulk materials handling. Our construction expertise covers quarrying, tunneling, demolition and recycling, and other civil engineering applications. Our mining products and services support customers on the surface and under ground, including coal, iron, copper and gold mining.

Reclaimers PR series



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