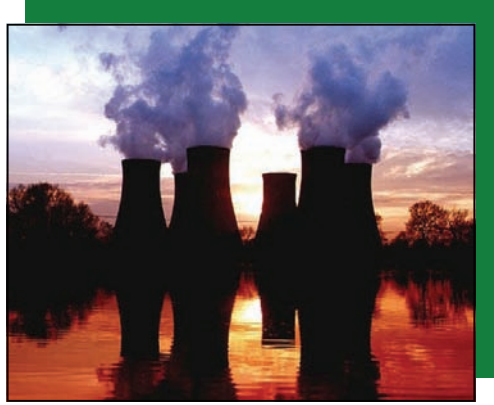


BIOMASS HANDLING SYSTEMS



Conveyor Systems for Biomass Handling

BIOMASS HANDLING SYSTEMS

Screening for a Greener Future

Many industries including power generation, cement and lime production, combined heat and energy plus the glass manufacturing process use fossil fuels such as coal or gas.

Recent understanding of the effects of the fossil fuels on the environment and changes in the control of emissions legislation's has seen a vast change in the type of fuel used in the industries. One of the prevalent alternative fuels has been Biomass.

Biomass is derived from Waste Wood, Grain Husks, Nut Shells, and Forestry Waste and among many other natural materials. Combined with more efficient firing processes the cleaner energy provides a sustainable viable alternative to fossil fuels.



New fuel, New challenges

Biomass is unique in its make-up from various materials, with that in mind, new considerations for size and consistency have to be factored. Supplied as pellets, shreds, and chips or even in the raw, the biomass could cause problems in the firing or transporting process.

Robson, have developed ATEX certified systems for conveying and screening of the material to ensure foreign material such as steel and oversized material is separated from the material flow. Designed to suit individual customer requirements, safe guards and material checking are implemented to protect the firing equipment.

Robson Screen House

Robson Engineers combined the screening and conveying technologies to develop, the Robson Screen House, which is an automated system of grading screens and metal checking and separation equipment that ensures the material is free from items that may cause damage or problems to system. The screen house is available for all Biomass Handling and Firing Applications.



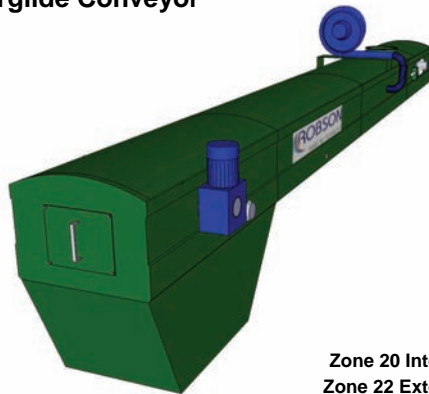
Alternative Fuel Handling Systems

Convey & Elevate

Mixing, Feeding & Crushing

Screening & Metal Checks

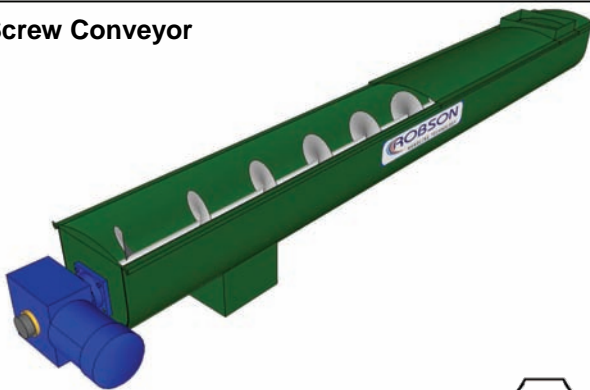
Airglide Conveyor



Zone 20 Internal
Zone 22 External



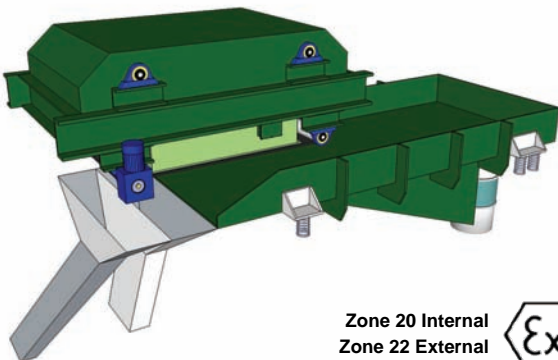
Screw Conveyor



Zone 20 Internal
Zone 22 External



Metal Separation Systems



Zone 20 Internal
Zone 22 External



Conveying and Screening Systems

Airglide Conveyors are the optimum solution for conveying granular and palletised biomass.

Frictionless movement of the belt ensures a low power consumption. Light weight Stainless Steel construction, the conveyor is ATEX rated to ensure dust explosion prevention

Troughed Belt Conveyors used for courser material such as shredded wood or coppice waste. The troughed design ensures there is no spillage.

Screw conveyors are used for the feeding, conveying, Mixing and Crushing of material. Constructed from mild and or Stainless Steel designed and built for robust reliability.

Push Floor Systems normally at base of a bunker the Push Floor system slices the material to ensure a even feed of non flowing material, such as shredded wood.

Vibration Screens to ensure that oversized or foreign objects are separated Screens are utilised. Powered by two unbalanced motors, the Screens sieve the material, transferring over sized and foreign objects to a reject chute. Springs isolate the vibration from the system ensuring safety.

Vibration Conveyors work in a very similar way to the Screens, by vibrating the material from the infeed to the discharge, with the accuracy of the vibration feeder means they are ideal for feeding and dosing applications.

Metal Separation Systems over band magnets are used in conjunction with vibration feeders to filter out metallic objects with in the biomass material, separated metal pieces are magnetically transferred to a reject chute.

Drum Magnets are used inline with in a chute the material flows over the drum, internal magnets attract the metal and transfers it to a reject chute.

Storage Solutions, Robson have the capability to design and build all types of Silo's and Bunkers, with expertise in bulk material warehousing with integral tripper conveyors and feed systems.

Lorry Load & Unload Systems, for granular material loading systems for tipper trucks and tankers and lorry unload systems with bunker feed systems and or conveying systems.

Full Turnkey Systems

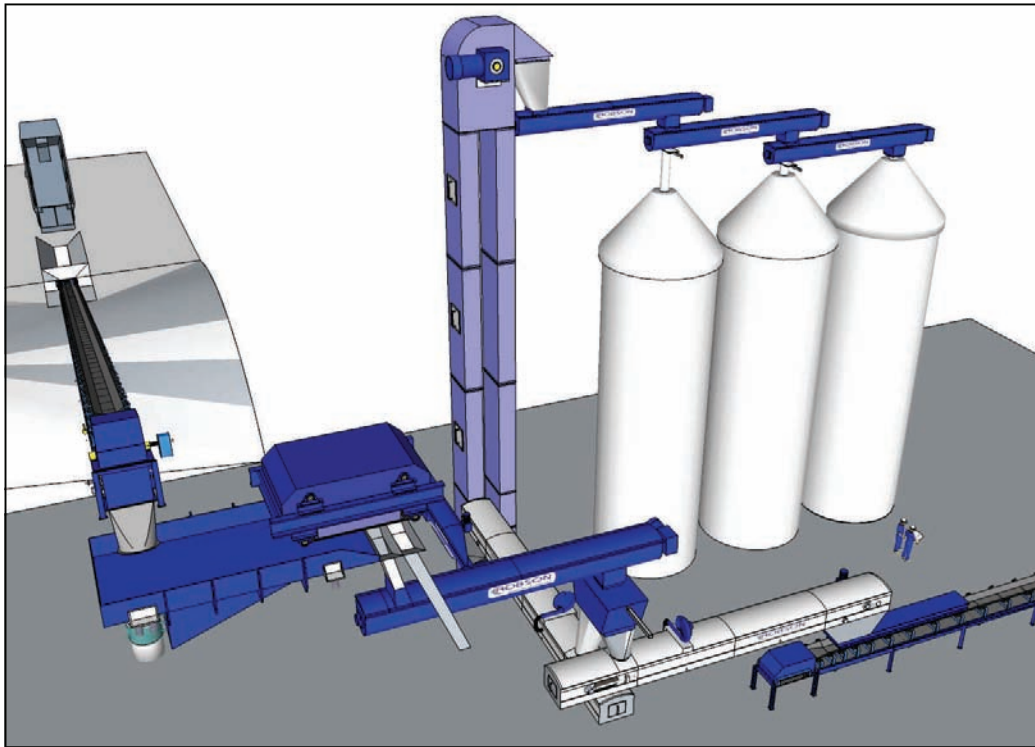
Design, Construct, Install

Bespoke Systems or Individual Items

Single Source Supply, Project Managed

Biomass Handling Catalogue

- Troughed Belt Conveyors
- Airslide Conveyors
- Belt Bucket Elevators
- Vibration Conveyors and Screens
- Chute Work & Diverter Chutes
- Metal check and Separation Systems
- Push Floor Systems
- Storage Solutions
- Lorry off Loading Systems
- Structural Steel & Fabricated Buildings



- Robust, Reliability. Using only the best components and constructed to the highest standards
- Handling Systems for Alternative Fuels
- Screw Conveyors, Belt Conveyors, Airslides, Belt Bucket Elevators, Push Floor Systems
- Turnkey Projects, Designed Engineered and Installed all Professionally Project Managed.
- Single Source Supply, including in house Maintenance and Service
- Bespoke System Design, using latest drawing packages.
- 100 Years experience of Materials Handling
- Made in Sheffield the home of Quality Engineering.



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