

Drying biomass

Rolling bed dryer WB-T



Allgaier rolling bed technology – drying biomass of all kinds

The growing worldwide interest in using biomass as an alternative fuel means that innovative solutions are called for. New, frequently CO₂-neutral energy sources are increasingly competing with conventional fuels for generating heat and electricity.



Examples for the wide range of application possibilities:

- Wood chips
- Green waste
- Bark
- Digested residues
- Animal feed (e.g. lucerne)
- Marc
- Sugar beet pulp
- Bagasse
- Cereals
- Horse manure and straw

Concept of the rolling bed dryer Simple – Effective – Reliable

The extreme versatility of the rolling bed dryer is based on its simple idea of product circulation. A large bulk of biomass is permanently circulated and mixed by highly effective paddles. This basic idea combines a flow through large bulks of product for good heat transfer with continuous movement of the product for even drying results.

The drying air is supplied through a perforated plate on top of which the bulk of product is moved. Depending on the amount of ventilation, it is possible to separate fine materials such as dust, fibres and sand from the bulk material and to collect this separately, alongside the actual drying process.



Progressive solutions for energy-saving drying of goods are also becoming more and more important for other drying tasks in agriculture. At the same time, it is often crucial for residual energy to be used in order to reduce production costs.

It is a prerequisite for the moisture content of your products to be reduced to the required amount, and for the biomass to leave your dryer with the corresponding quality, an even residual moisture level and a reduced proportion of fine material and sand.

The Allgaier rolling bed dryer offers an outstanding concept especially for this, with its ideal mixture of the product at the same time as cleaning of the bulk material during lengthy retention times.

The product cleaning which takes place in parallel with drying means that the calorific value of the residual biomass is increased, and the ash content is reduced.

The concept makes it possible to use residual energy in a very wide range of applications – especially low temperature waste heat between 80 or 100 °C and about 160 to 180 °C.

The concept of the Allgaier rolling bed dryer is deliberately based on using commercially available standard components, and represents a reliable solution at the same time as offering maximum availability and minimum maintenance costs.

Applications

The high quality of the dried output products means they are suitable for direct firing and pelletising/briquetting as well as for more demanding processes such as gasification or torrefaction of biomass.

The cleaning effect of the dryer means that the rolling bed offers you decisive advantages over conventional dryer types, especially for high-quality products such as cereals, animal feed, smoke-wood or bedding.

As a reliable apparatus, it additionally safeguards the high availability of your systems.

Advantages of the rolling bed dryer

The Allgaier rolling bed dryer combines the experience with and advantages of other dryer types in an optimised solution, and eliminates the disadvantages of other, conventional dryer types such as belt dryers, drum dryers or fluidised bed dryers.

- Trouble-free operation even with difficult or large grain sizes, or grain sizes with a tendency to cause jams
- Universal application for numerous products
- Good mixing of the bulk product and even residual moisture
- Cleaning effect for optimum product qualities
- Use of residual energy of all kinds
- Sturdy construction for high availability and low maintenance costs

Trial system

Our technology centre is available for tests on your specific product, allowing you to gather personal experience. The dryer in our technology centre has a capacity for 1 m³ of product, which offers sufficient volume for realistic tests.



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