



The belt dryer Technology

OUR SOLUTION IS CENTERED AROUND ENERGY OPTIMIZATION

Among these residues is the biomass produced within forest industries, municipal organic waste, water treatment sludge and farm waste. While “wet” biomass residues or organic waste, derived as a by-product of transformation, can be used, once dried, in energy generation and qualify as a renewable source of energy. It is nonetheless usually necessary to further transform, grind, screen and press the dried form of the residue into pellets, which can then more readily be used as a replacement of fossil-based fuels for existing utilities and inside industries, farms, businesses and plants.

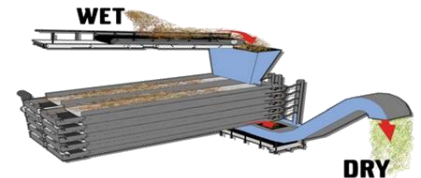
In most cases, biomass (wood bark, woodchips, sawdust, and energy chips) have to be dried before being used in pelleting, briquetting, incineration, and gasification. By reducing the biomass water content to 10-15%, its calorific value can be more than doubled from 2 kWh/kg to approximately 4.5 kWh/kg.

This reduces the transportation and storage costs, as well as creating ideal conditions for direct firing or optimum pelleting properties, both for industrial and high-grade wood pellets.

Because of the drying process, less fuel input is required to generate energy, which also reduces the pollutant emissions caused by the combustion system using wet biomass.

Applications:

- Municipal sludge drying
- Pulp and paper drying
- Mineral drying
- Seaweed drying
- Shrimps and sea fruit drying



DRYER UNIT:

The dryer consists of several separate cells, where each cell is split into 2 layers and has a thin drying surface, with a capacity of one Ton of raw material per hour.

Material is fed into the dryer by a frequency controlled rotary valve that has a buffer hopper, which is automatically refilled from an outer feeder (supplied by the end-user) when the sensor in this hopper calls for more material.

The thickness of the layers inside the dryer adjusted and optimized, as the dryer moves the material over a flat heated surface equipped with scrapers. The material moves to the end of each tray and drops to the next cell. The same procedure is repeated until it reaches the outlet conveyor.

Moisture is measured on a continuous basis, in order to automatically control and adjust the parameters of the dryer moving conveyor. Although the dryer can also be operated manually, for safety reasons, when temperature limits and other constraints are exceeded, the dryer will revert back to automatic operation.

Our belt dryer is designed to make use of both heat and air to quickly dry various forms of shredded biomass, including sludge, leaves, and flower. Material enters the system via a conveyor that is designed to control the dozing amount to the multilayer dryer while it is dried using the combinations of airflow and heat.