

Test Dryer Savonlinna, Finland

- Built to validate dimensioning and research dryer performance
- Various types of wood chips and bark run in test batches
- Example drying result:

Brown softwood chip			
Moisture content	input	50%	
	output	20%	
Material flow	5 loose-m ³ / h		
Drying time	2 h		
Air flow	15 m ³ / s		

Test runs were performed in relatively low temperature (~50 °C). Higher temperature yields better performance.

This scale is suitable for material flows up to ~10 m³ / h

BIOMASS DRYING SYSTEMS

The new biomass drying system is based on Saimatec's long-term knowledge and technology for bulk material handling in Pulp & Paper industry.

The vertical silo type dryer is suitable for different types of biomass, for example:

- ♦ wood bark
- ♦ wood chips all varieties
- ♦ sawdust mixed in other materials
- ♦ sludges mixed with biomass.

System is a self-contained unit, including infeed silo and outfeed equipment as well as automation.

Drying process is controlled in a way that leads to good energy efficiency.

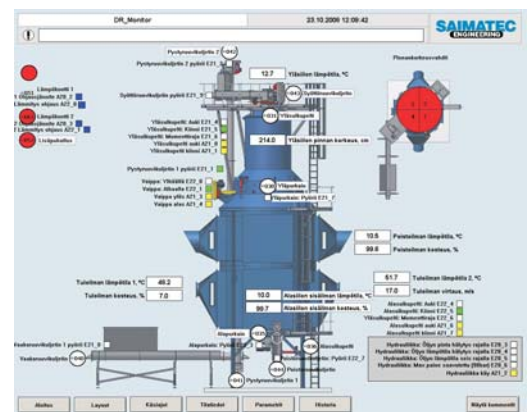
Connection to other processes

Drying energy may be received from different heat sources such as:

- ♦ CHP plants
- ♦ District heating plants
- ♦ Industrial power plants
- ♦ Independent combustion gas generators
- ♦ Hot air generators
- ♦ Steam generators, etc.

Key benefits

- ♦ No need to fine-grind material
- ♦ Drying time is sufficiently long for also coarse particles to dry
- ♦ Low temperature (typically under 150 °C) eliminates risk of volatile emissions and fire
- ♦ Low speed of the drying air eliminates the tendency of dust spreading and therefore reduces need for housekeeping.
- ♦ Compact, sealed construction also prevents dust emissions to surroundings.
- ♦ Energy efficient 2-stage drying.
- ♦ Vertical construction makes installation easier also when space is limited.



Applications

- ♦ CHP plants
- ♦ Wood pellet plants
- ♦ Biorefineries for fuel and chemical production, etc.

Technology has been thoroughly tested and dimensioning validated by the full-scale test equipment installed at our premises. Further tests with customer's own material may also be run at request.

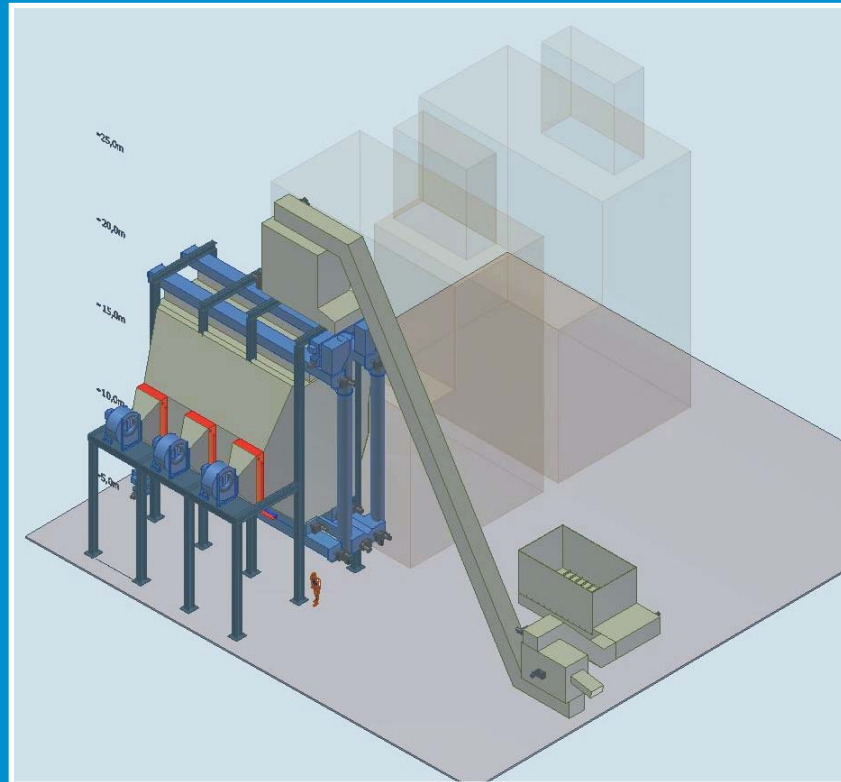
More information

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BIOMASS DRYING

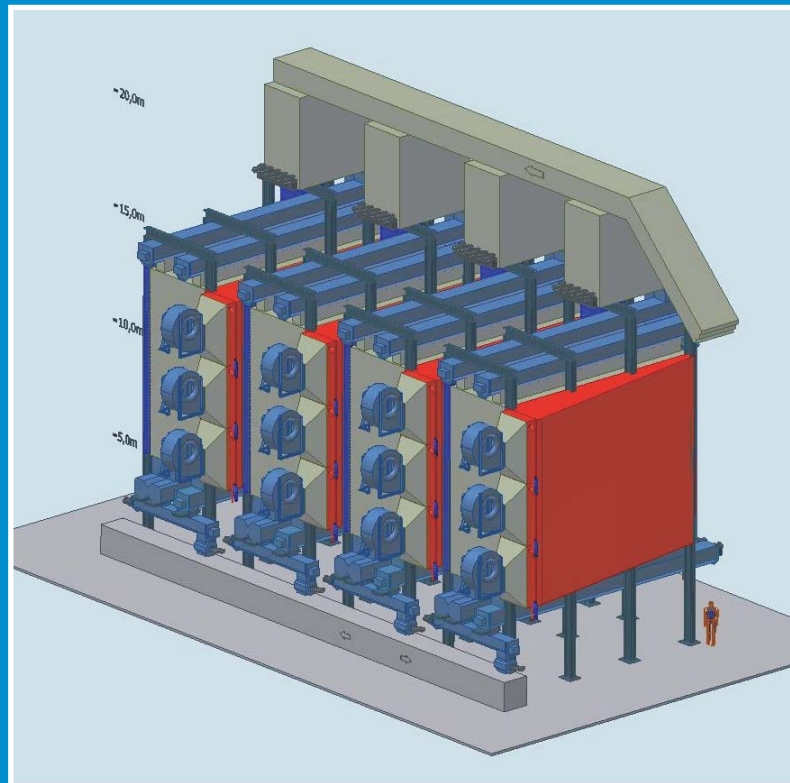
Concept for industrial scale equipment

- Material flow range: $\sim 100 \text{ m}^3 / \text{h}$



Concept for large scale production

- Material flow range: Several hundreds of m^3 / h



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